AUTHOR'S PREFACE.

The English translation of my *Practical Course in Ear Training* has been made at my special request, by one of my best pupils, Mr. Le Roy B. Campbell, a highly-gifted musician from N. Clarendon, Pa., U.S.A.

This translation represents clearly the German text, together with all the examples contained in the original.

I certainly am under great obligations to Mr. Campbell for his diligent and intelligent work and wish to extend to the young man my heartiest thanks.

Dr. S. Jadassohn.

TRANSLATOR'S PREFACE.

In the translation of this book, I have endeavoured to make use of language that any pupil can easily understand at first reading, and have also tried to use *a correct nomenclature*, as regards musical terms. [A point sadly neglected in our every day conversations in, and out of the class-room.]

I trust this work will receive the attention, in the musical world, that it merits, for no side of our musical Education is slighted as much as is *Ear Training*.

In conclusion I wish to thank Dr. Jadassohn for his ever ready assistance.

LEIPZIG, June 8, 99. **Le Roy B. Campbell.**

PREFACE.

Previous to my call as teacher in the Royal Conservatory of Music — Leipzig, I gave private pianoforte lessons. My pupils were simply practicing music as a drawing-room accomplishment. Most of them were not especially gifted, but some were far enough advanced to play pieces requiring no small amount of technic, with steady rythm, and intelligent expression.

None of my pupils had ever received any instruction in *Ear Training*, and only a few were able to recognize the simplest intervals.

I made it a point to test every pupils knowledge of pitch at the first lesson, and start them immediately with my exercises in *Ear Training*, continuing step by step in each succeeding lesson. I was certainly surprised at the results, but was still more astonished, to find that so many actually gained *Absolute Pitch* through exercising their faculty for Relative Pitch.

It required but a few moments during each pianoforte lesson, and besides was very interesting to the pupils.

In a short time my pupils found that they enjoyed a masterpiece of music at first hearing much more than formerly.

The pupils became aware that *the ear was their best Teacher*.

I found the same thing true of my classes in th Conservatory as in my private teaching, viz., that the pupils faculty for hearing, musically, had been sadly neglected. Their practical and theoretical studies alone were not sufficient to remedy this inadequacy, so I made use of my method in *Ear Training* as set forth in this book, and always with satisfactory results.

A knowledge of Harmony is not presupposed, in following this method; however pupils will gain an insight into the nature of chords and their many combinations in a practical manner. When the course in *Ear Training* has preceeded Harmony, or when both are studied at the same time, the pupil's Harmony-lessons will mean much more to him than they would otherwise.

A teacher is not absolutely necessary if the pupil can be assisted by some one who can play the very easiest exercises. *For this reason is this book especially adapted for self-instruction.*

I herewith place my method of *Ear Training* before the musical public, and I sincerely hope it will be welcomed, and will be of great benefit to all students and lovers of music.

Dr. S. Jadassohn.

TABLE OF CONTENTS.

CHAPTER I.

ABSOLUTE AND RELATIVE PITCH.

A person, having a perfect conception of every tone in its true position, is said to have *absolute Pitch.* Such a person is able to sing the pitch indicated by any note, to which one might point on a page of music.

It is a matter of fact that some musicians, beginning the study of music at a very early age, acquire absolute pitch almost immediately; while others, though equally gifted in other respects, do not possess so true a tone conception. It is sometimes gained later in life, but frequently never, since it may seem to some, as not especially necessary in their profession.

The fact, that musicians beginning their studies early in life, are more liable to acquire absolute pitch than those beginning later, can be explained in this way: — The impressions formed in childhood are stronger and more lasting than those formed at any other time of life; consequently musicians, beginning their studies at an early age, receive such a strong impression of tone material, that they not only become enabled to discern the relation of one tone to another in melody and harmony, but also the tone-coloring of the different instruments in the orchestra, together with their absolute pitch.

The faculty in children for discerning absolute pitch, shows itself in various ways; some recognize only the tones with which

they come in contact in their daily exercises, viz., those of the middle octaves. They cannot tell the pitch of the higher or lower tones *without* some hesitation, as it is necessary for them to make a comparison of such high or low tones with those already familar. Again there are children, who can tell high or low tones seemingly without any reflection; though in this case the supposition is admissible that they make a very quick comparison with known tones. — It is a fact generally conceded, that it is far more difficult to distinguish the extreme high or low tones. For instance the intonation of low tones at the piano, is often imperfect through being tempered; and with extreme high tones, sounded alone, there is such a decided lack of volume as to make it difficult to give the correct pitch.

It is interesting to note the many ways in which absolute pitch reveals itself with different musicians. Pianists become so thoroughly acquainted with their instrument, and its particular tone-coloring, that their capacity for absolute pitch is limited to the piano alone. Others can tell you the pitch of a tone played by any orchestral instrument; also the pitch of bells — whistles — etc. They will immediately note the difference in the pitch of pianos (should any difference exist) when traveling from one country to another — "It is said of Mozart, that when yet a mere child he remarked to his father, that he liked his friends clavier better than his own for it was a quarter of a tone higher in pitch. On testing the pitch of the two instruments his statement was found to be true". Some can tell the pitch of a staccato touched tone as well as from one held out some length.

Many can hear a two- or three-voiced chord, consonant or dissonant. To some it is easier to hear a whole chord than a single note; others hear a chord better it arpeggioed. Still others can hear a dissonance not forming any chord (as *c-c♯-d*) — A great many musicians possess a certain *fundamental tone* firmly fixed in their mind, from which they derive all other tones.

A few musicians, who possess all these characteristics are nevertheless unable to sing a tone in its true pitch, should you designate a certain one on a page of music. On the contrary

there are many who can give the pitch instantly of any tone played or sung, besides being able to sing any tone indicated. Others can do this but require a momentary reflection.

From the facts already stated it appears that absolute pitch manifests itself in various ways. — Now, to those who have not this absolute pitch, let it be said, that it can be acquired with no great amount of work, by a systematic study of the rules and regular daily practice of the examples contained in this book.

One gains absolute pitch, in this case, by exercising his knowledge of *Relative pitch.*

RELATIVE PITCH.

Relative pitch is the relationship any given pitch bears toward some foundation tone. —

Nearly all persons possess Relative Pitch to a certain degree. One, anticipating the study of music, should at least be able to discern a unison from an interval; a major triad from a minor triad; and to sing two or three diatonic tones after having heard them.

In studying pitch, one must follow a well regulated method. Begin by acquiring a thorough knowledge of intervals. — *This is indispensible for all singers*; not only solo singers but for the singing lessons in the public and private schools. The teacher must not be content if the children simply learn to sing a melody by ear, for in that case they would never gain independence enough to make good chorus singers. They should learn to sing two- and three-part songs.

Following the usual custom for singing part-songs in the public schools, the teacher divides the school into two or three divisions and drills each division to sing their own part. This is a very poor proceeding, for pupils with naturally high voices are made to sing low parts, which necessitates the use of chest tones, and as a consequence many voices are ruined forever.

If the pupils have had a good drill in intervals and Relative Pitch, the teacher will find many naturally low voices, who can read these low parts quite well.

A pupil should first learn to imitate a tone sung or played by the teacher. If he is not able to do this through lack of ear or diseased vocal organs, he should be excused from the singing lesson, as it only disturbs the others.

For all ear training purposes a perfectly pitched instrument is indispensible. — A *piano, organ,* violin, or an accurate Tuning-fork. It would be a good plan if every pupil would carry a Tuning-fork on his person. A neat little Tuning-fork has been invented, which can be worn as a watch-job.

This is perhaps one of the handiest devices, and is recommended to every pupil. It enables one to exercise his faculty for absolute pitch on any tone he happens to hear, also to measure the distance of intervals, and helps to fix a *fundamental tone* in his mind.

All ear training exercises are very fatiguing in the beginning, and a few moments practice two or three times a day is sufficient. Repeat the same exercises many times, and always begin the practice by testing your ability to remember a certain *fundamental tone.* Then from this tone, locate the pitch indicated by the first note of the exercise. The tone (*a*) same as the Tuning-fork, is suggested as a good one for a fundamental tone, but this depends on the voice of the pupil. A pupil with a low voice would find a lower tone more suitable.

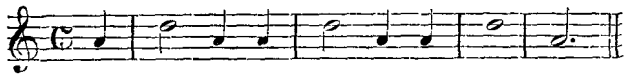
Whatever pitch is chosen for this fundamental, we cannot emphasize too strongly the importance of always prefacing your practice, and each exercise with this tone.

CHAPTER II.

THE PITCH OF CONSONANT INTERVALS.

We will first consider the perfect consonances.

THE PERFECT FOURTH.

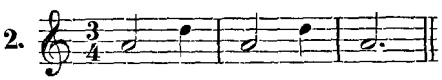
1. 

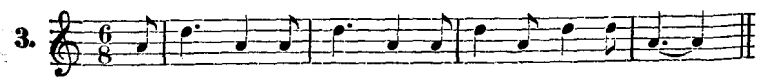
The teacher should name the two tones, explain the difference in pitch of the interval, and play or sing the exercise once or more. If the teacher gives the tones on the piano, the pupil should not see the key board. It is a good plan to practice ear training exercises with the eyes closed; it insures better attention, besides the ear is more acute.

When the pupil thinks he has the exercise clearly in mind, he should be required to sing it correctly in time, and intonation, using the syllables (*la*) — (*ré*) — or (*a*) — (*d*) or simply with (*la*). If the pupil cannot sing, let him try and imitate it on the piano or write it in his tablet.

The course of instruction cannot be the same with all pupils; some require more repetitions of an exercise than others, but we find this true in all studies; so in classes, the more talented pupils simply have to wait until their less-gifted companions are ready to go on.

When an exercise is quite mastered, then the teacher may change the rythm but not the key.

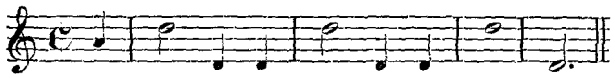
2. 

3. 

Do not go farther until the pupil has learned perfectly these first three exercises. Never be in a hurry with these beginning-exercises, but fix firmly in the mind every interval "and when you become old they will not depart from you".

Examples 4, and 5, will furnish practice on the perfect fourth and octave.

4.



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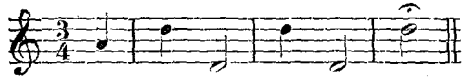
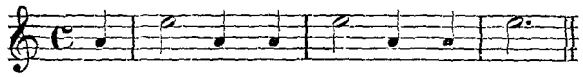


The perfect fifth should now be taught.

6.



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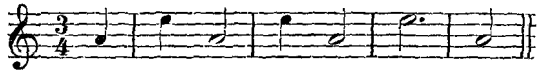
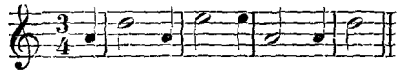


Examples 8, and 9, combine the fourth and fifth.

8.



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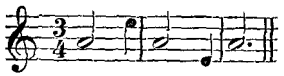
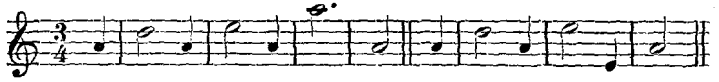


Example 10, combines the three intervals — fourth, fifth, and octave. First practice the first four measures, after which the last three, and finally the whole exercise together.

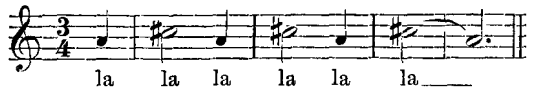
10.



We will next consider the Imperfect Consonances, each interval should be carefully explained.

THE MAJOR THIRD.

11.



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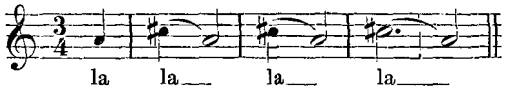
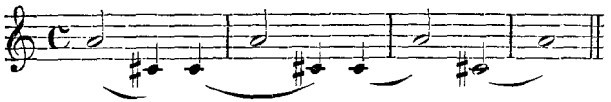


The pupil should be instructed as to the use of the sharp (♯). The syllable (*la*) should be used in singing these exercises. Observe the slurs in singing or playing.

THE MINOR SIXTH.

13.



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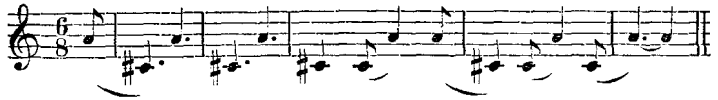
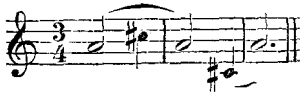


Explain the relation a minor sixth bears to a major third.

15.



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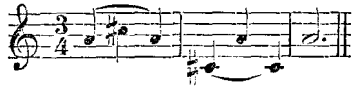
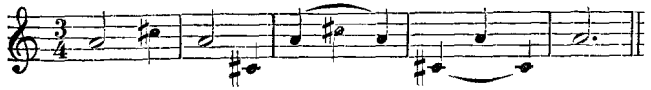


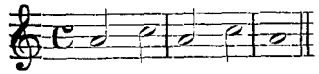
Later.

17.



THE MINOR THIRD.

18.



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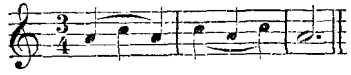
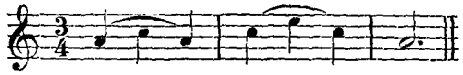
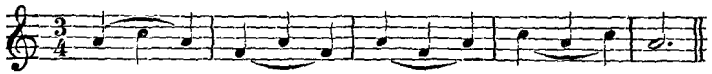
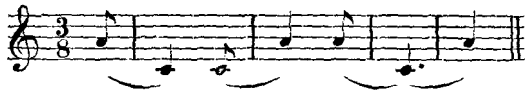


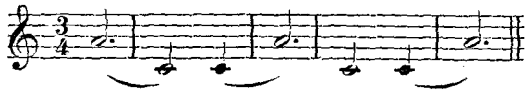
THE MINOR AND MAJOR THIRDS.

20. 

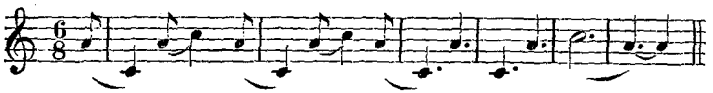
21. 

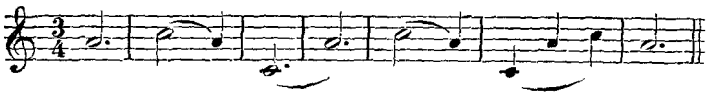
THE MAJOR SIXTH.

22. 

23. 

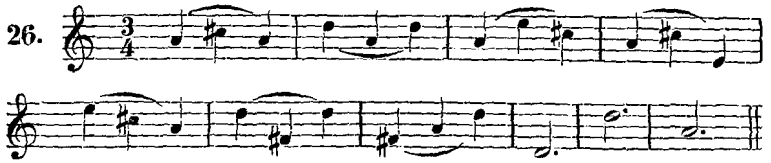
THE MAJOR SIXTH AND THE MINOR THIRD.

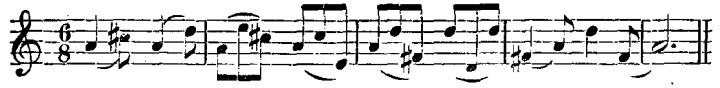
24. 

25. 

These twenty-five exercises are not considered learned, until the pupil, after hearing the pitch (*a*), can sing or play each interval thus far explained.

These intervals should be reviewed frequently, and other exercises, like Ex. 26, and Ex. 27, with different rythm, may be supplemented.

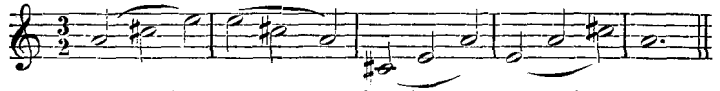
26. 

27. 

The teacher should next explain the major and minor triad.

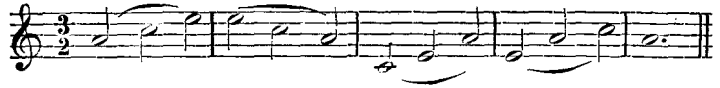
MAJOR TRIAD.

Explain the terms — fundamental — first inversion — second inversion.

28. 

Fund. position, first invers., second invers.

MINOR TRIAD.

29. 

Fund. position, first inv., sec. inv.

Of course these triads may be formed over other fundamentals. They are to be sung and played in all three positions. The pupil must receive thorough drill on these triads, until he can sing the triad in any inversion, or sing promiscuously the tones as the teacher may indicate.

For example, the teacher gives the (*a*) and tells the pupil it is the third of a triad. The pupil must sing the fundamental or the fifth. In the same manner he may regard the (*a*) as the fifth in some triad, then he must find the third and fundamental. Or, to (*a*) sing the upper perfect fourth—the lower perfect fifth. He can also regard the third of a triad as an upper minor sixth, or a lower major third.

Still another drill, the teacher gives the pitch, and requires the pupil to sing the upper major sixth -- The lower perfect fifth — The lower minor third — The upper major third — The upper perfect fourth — etc.

CHAPTER III.

THE DISSONANT INTERVALS.

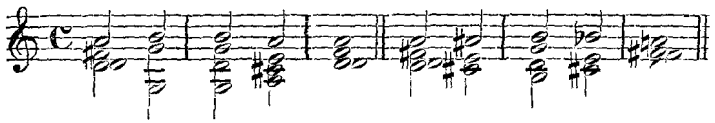
The dissonant intervals should next be explained in the following order:

THE MAJOR SECOND.

The major second is very easy to pitch. No doubt the pupil has known *this* interval from the beginning of his musical studies; nevertheless a review of it here will not be amiss, for some pupils are not always able to discern a whole step of a major second, from the half-step of a minor second, or augmented prime. To bring the major second plainly before the pupil, the scale does not suffice.

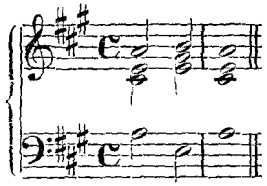
The best way is this, viz., show a pupil, that between one tone of a major second, and the other, there is always to be found a chromatic half-step. The following example makes this clear.

30.



The teacher may play Ex. 30, and later follow it with Ex. 31, and Ex. 32, both of which give practice on the major second. At first accompany the exercises with an instrument, but later they should be sung unaccompanied.

31.



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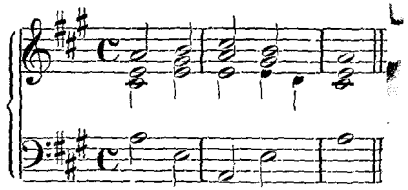


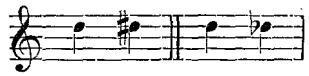
Practice each exercise separately at first, and later both together as one complete phrase of five measures.

THE MINOR SECOND.

The minor second is the smallest interval used in music, and is formed through the small half-step. The difference in pitch between (*d*) and (*e*) is one whole step. It also comprises two so-called half-steps; one is a large, the other a small half-step.

To illustrate. —

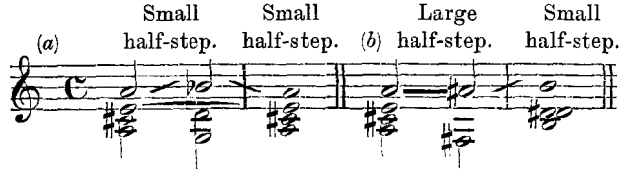
The whole step is to be thought as divided into nine parts — 1 to 9 respectively; then the small half-step is to contain four of these parts and the large half-step five parts. The latter can also be thought as the chromatic alteration of a tone, by either augmenting or lowering it — (Ex. *d* to $d\sharp$ — *d* to $d\flat$).



Later we call this interval — *d* to $d\sharp$ — an augmented prime.

The small half-step will be from (*c*) to ($d\flat$) or from ($c\sharp$) to (*d*). The pianoforte or organ has but one key to represent ($c\sharp$) and ($d\flat$). — They have the tempered tuning. By playing Ex. 33, the pupil can be made to feel the difference in pitch of the large and small half-steps.

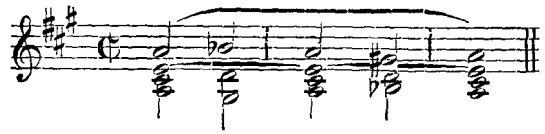
33.



In these two exercises the ($b\flat$) and ($a\sharp$) are enharmonic tones on the pianoforte or organ, yet surrounded with different harmonies as at (*a*) and (*b*) the pupil cannot help but feel ($b\flat$) nearer to (*a*) than ($a\sharp$).

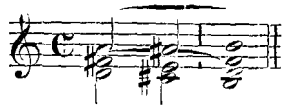
For the intonation of all other instruments than pianoforte or organ, the wider, or lesser difference in pitch, of the small and large half-step is regarded.

The Teacher must give attention that the ($g\sharp$) in Ex. 34, is intoned very acutely.

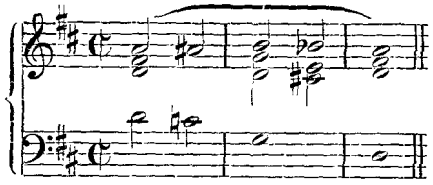
34. 

THE AUGMENTED PRIME.

This interval, first of all, must be practiced *in connection* with the minor seconds, found in Examples 35, 36, and 37. At first practice it ascending, as in Ex. 35, then descending, as in Ex. 36, and finally, both directions as in Ex. 37.

35. 

36. 

37. 

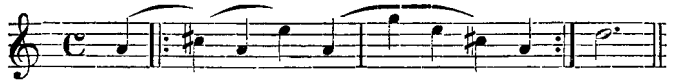
THE MINOR SEVENTH.

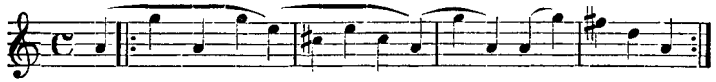
The minor seventh is easily perceived; perhaps in the dominant chord of the seventh one may see it to the best advantage. The fundamental and the seventh, the extreme tones of the chord, form the minor seventh.

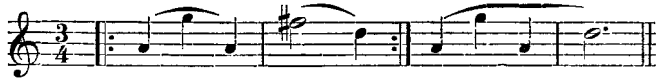
The other intervals of this chord are already known to the pupil as major third, perfect fifth, and minor third.

38. 

The pupil should now practice Examples 39, 40, and 41.

39. 

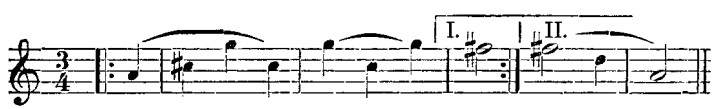
40. 

41. 

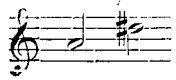
Following these exercises, we next take up the diminished fifth.

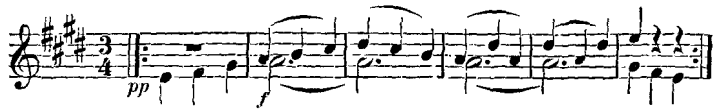
THE DIMINISHED FIFTH.

This interval we also find in the dominant chord of the seventh, between the third of the chord, and the seventh, as shown in Ex. 42.

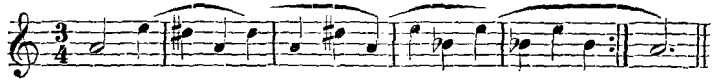
42. 

THE AUGMENTED FOURTH.

On the pianoforte or organ, the augmented fourth sounds like the diminished fifth, although it is a totally different interval. The upper voice has the character of a leading tone, so must always be led upwards. The pupil will notice, that in a scale, for instance the (*c*) scale, between the fourth degree and seventh, there is to be found the interval of an augmented fourth One should practice this interval at first in the following manner. The teacher begins the (*e*) scale, playing *e*—*f*♯—*g*♯—*a* holding the last-named tone (*a*). The pupil continues by singing diatonically four whole steps, ascending as far as (*d*♯) then descending to the (*a*) once more. He will now have the tones of the interval in mind, and should be able to sing the two pitches (*a*—*d*♯)  as shown in Ex. 43.

43. 

Ex. 44, may follow:

44. 

For further exercise of the augmented fourth and diminished fifth, practice Ex. 45.

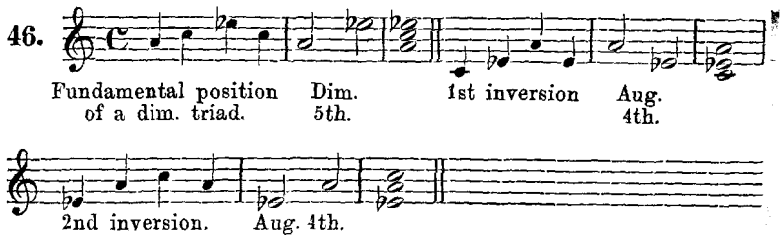
45. 

The perceiving and distinguishing both intervals, of the augmented fourth and diminished fifth, is not so difficult. Show the pupil that the two intervals are found in the different inversions of the diminished triad.

Explain clearly this triad, that it is formed with two minor thirds one upon the other. Build the chord first in the fundamental position; perhaps using *(a)* for the fundamental. The pupil will see that the fundamental, and the upper note of the triad, form the interval of the diminished fifth. One may also use other fundamentals in forming this triad.

Better explain by the use of an instrument, or the voice, as simply writing it does not suffice.

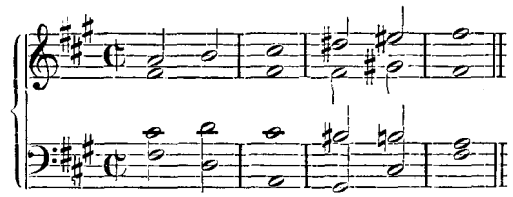
The pupil having become adept in the use of the diminished triad in fundamental position, may now be shown how the interval of the augmented fourth is to be found in the inversions of this same diminished triad.

46. 

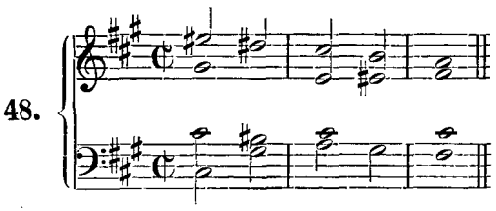
THE AUGMENTED FIFTH.

The teacher should explain this interval through the use of the augmented triad, which is formed with two major thirds one upon the other. From the fundamental to the upper note of the triad is to be found the interval of the *augmented fifth.*

It has the distance in pitch of four whole steps. One can find a diatonic progression of four whole steps in the melodic minor scale ascending. The teacher should accompany the singing of these tones as in Ex. 47.

47. 

One may begin with the upper tone of the interval as in Ex. 48.

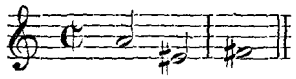
48. 

The pupil should be made acquainted with the harmonic relation of the two tones forming this interval, as contained in the augmented triad.

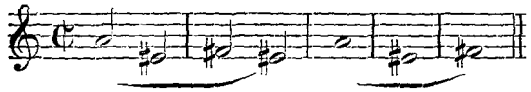
49. 

THE DIMINISHED FOURTH.

This interval can be found in the inversion of the augmented triad. It will be found quite easy to pitch from the upper to the lower tone.

50. 

On the contrary from the lower tone to the upper tone, it is very difficult to pitch. The following exercise shows the interval in *both directions*, and should be carefully *practiced*.

51. 

The *leading up character* of the upper tone of the augmented fifth, and the lower tone of the diminished fourth, shows clearly that these intervals are not to be confounded with the upper minor sixth and the lower major third, although they are enharmonic intervals.

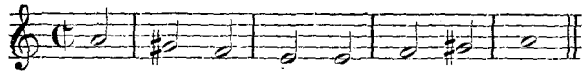
The pupil will also better comprehend the character of a leading tone through this upper tone of the augmented fifth, and the lower tone of the diminished fourth, led up as they are in Examples 47, and 51.

In the same manner is to be explained the augmented second.

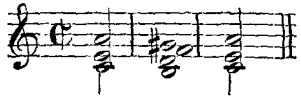
THE AUGMENTED SECOND.

This interval is enharmonic with the minor third.

For its practice the nearest small half-steps are to be used. As in Ex. 52.

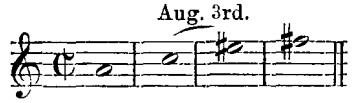
52. 

The augmented second is to be found in the first inversion of the chord of the diminished seventh. Ex. 53.

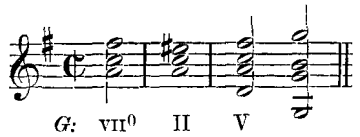
53. 

THE AUGMENTED THIRD.

The augmented third can occur in a minor triad with its fifth chromatically raised as in Ex. 54.

54. 

This chord may be formed on the second degree of the major scale. It is mostly used in connection with the diminished triad or the dominant chord of the seventh as in Ex. 55.

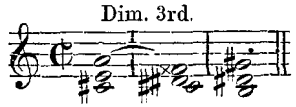
55. 

Other connections are possible by modulating.

The augmented third must always be led upward to the nearest chromatic tone. In a melody the augmented third seldom, if ever, occurs as descending, and there are but few instances of it ascending. It can do no harm to practice the interval at any rate. Ex. 54.

THE DIMINISHED THIRD.

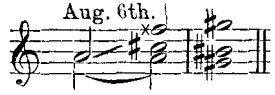
The diminished third occurs occasionally, but only from a higher to a lower tone.

56. 

THE AUGMENTED SIXTH.

The fundamental and the upper tone of an augmented sixth chord form this interval.

The interval is to be found in melodic structure very rarely. It may occur in the following manner. Ex. 57.

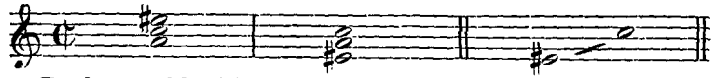
57. 

THE DIMINISHED SIXTH.

This interval is to be found only in the second inversion of the chord shown in Examples 54, and 55.

It does not occur in melody.

58.

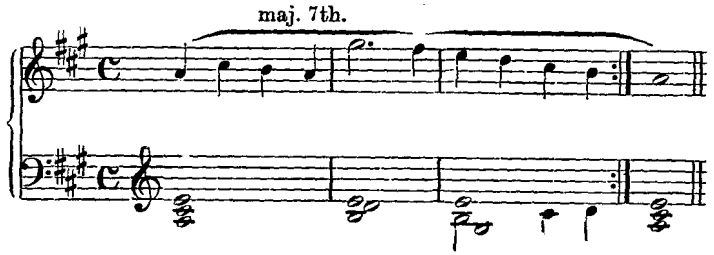


Fundamental Position 2nd inversion Dim. 6th.

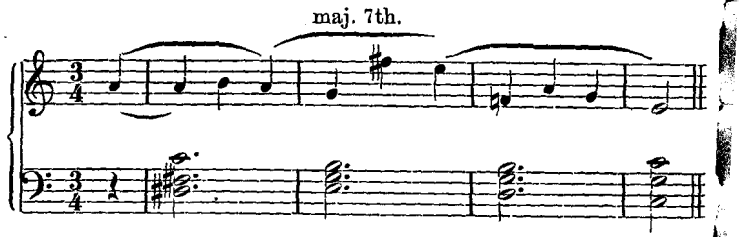
THE MAJOR SEVENTH.

The major seventh is difficult to pitch, either upward or downward. Examples 59, and 60, furnish material for its practice.

59.



60.

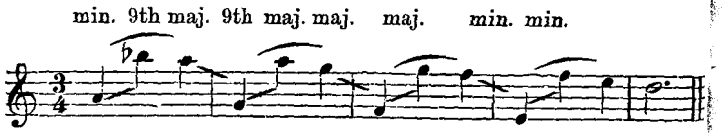


We will now consider a few of the more distant intervals.

THE MAJOR AND MINOR NINTH.

These intervals are not as difficult to pitch as the major seventh. They are to be practiced as follows:

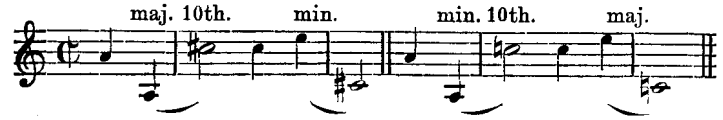
61.



THE MAJOR AND MINOR TENTH.

These intervals occur in melodic structure only in instrumental composition. They are of a bold character and easily perceived.

62.

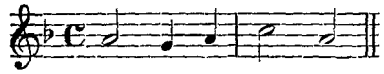


The pupil has now had a careful drill in all the intervals, and we suggest as an excellent practice, that the teacher play short easy melodies very slowly, while the pupil, simply from hearing, endeavours to write them in his tablet. This exercise should be practiced frequently.

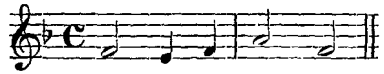
CHAPTER IV.

PREPARATION FOR PERCEIVING A TWO-VOICED CHORD, BOTH TONES SOUNDING AT THE SAME TIME.

The exercises for learning to perceive two-voiced chords should be practiced with the pianoforte or organ. One may begin with the following preliminary exercises. If the pupil has not yet fixed a *fundamental tone* in his mind, the teacher must sound it (usually (*a*)). The teacher should then play each short exercise in a slow rythm. The more talented pupils will name both voices instantly; for those less clever, play the exercise still more slowly. If they are then unable to recognize the two tones, the teacher should tell them the first tone of the upper voice, and play this one part by itself as in Ex. 63.

63. 

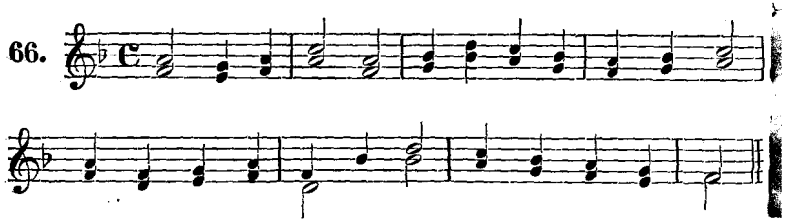
When the pupil has named these tones, then continue in the same manner with the lower voice as in Ex. 64.

64. 

As soon as the pupil has named the tones in the way just explained, the teacher should then play both parts in the following manner.

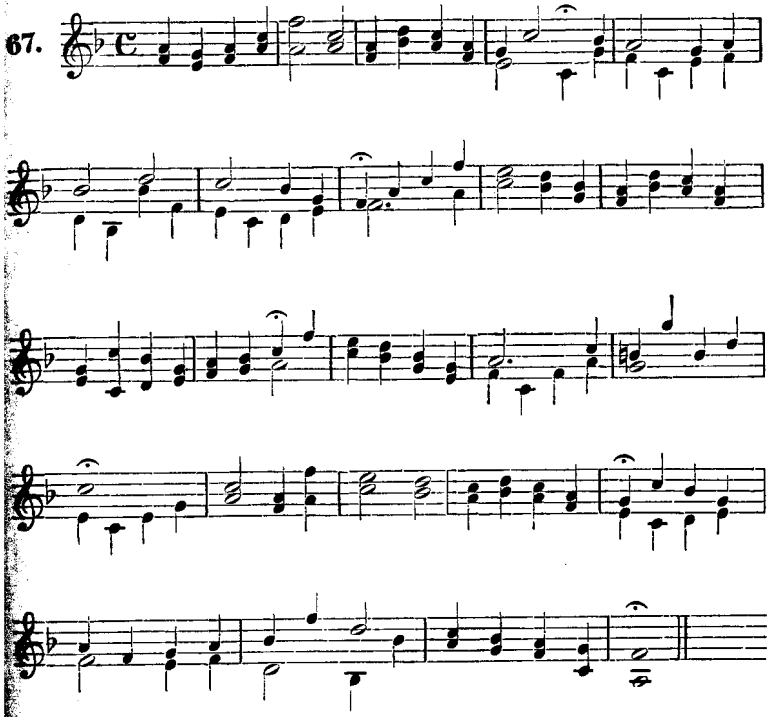
65. 

The teacher should now take up the next two measures and proceed as before — then play the four measures together. When the pupil knows these first four measures well enough to play or write them from memory, continue with the last four measures. Ex. 66.

66. 

Other short phrases of the same character should be formed, using only consonant intervals, and they should contain no modulations. If the pupil can manage with surety these eight measure-phrases, then continue with longer phrases; these may contain modulations to near related keys. It is best to proceed with two measures at a time, and after each group of four measures, he should write them from memory. These groups

or divisions of the exercise are indicated by the hold (𝄐) as in Ex. 67.

67. 

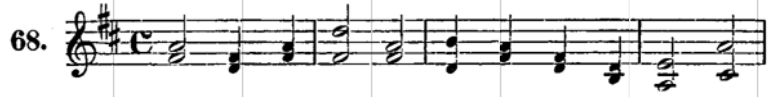
For further practice one may transpose Examples 66, and 67 into other keys.

CHAPTER V.

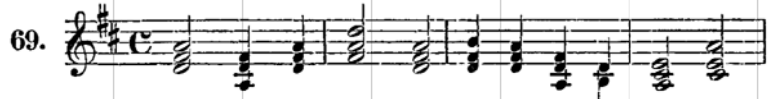
THE PERCEIVING OF A THREE-VOICED CHORD, THE THREE TONES SOUNDING AT THE SAME TIME.

Dissonant intervals will occur in three-part writing. If the pupil has a knowledge of Harmony, he will perceive the relation and connection of three-voiced chords easily and will be able to name the pitch of each tone. One should begin by using very easy exercises, avoiding modulations. The pupil should name the tones of the chord in the following order; first the lowest voice, then the middle voice, and the upper voice last. It may be of advantage to practice on an exercise with two voices at first, and when he can name the tones of the two-part phrase, then add a third voice as in Examples 68, and 69.

68.

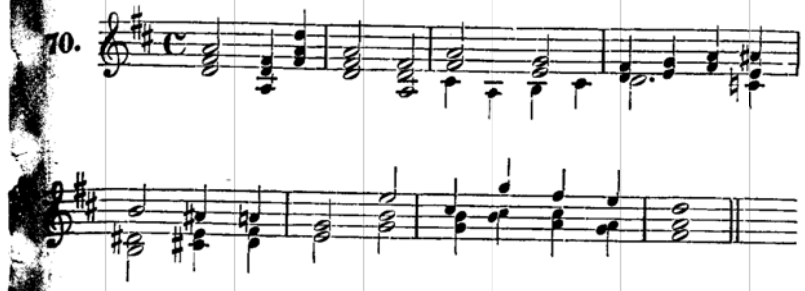


69.



These exercises become more difficult when the examples contain dissonant intervals or altered chords or modulations as shown in Ex. 70.

70.



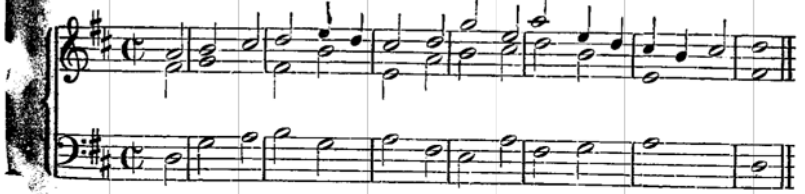
More difficult exercises may be supplemented, but they should always be short melodic phrases; also metrically and periodically correct, and in good three-part writing.

Such exercises are easier to be remembered, and the pupil should be able to write and play them from memory.

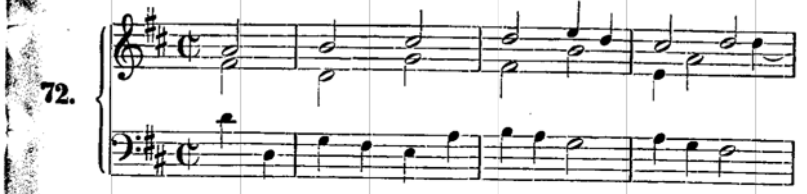
When the voices show an independent leading, *i. e.* contrapuntally written, it is still more difficult to follow each voice.

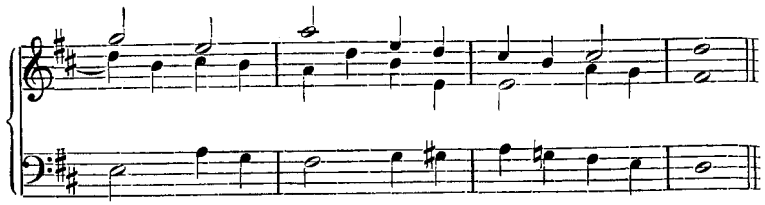
One should go on gradually; for instance, take a cantus firmus in the soprano, and add a simple counterpoint in the lower parts. When the pupil can name the tones in such a phrase, then add a more florid counterpoint. Use the same cantus firmus as in Examples 71, and 72.

71.

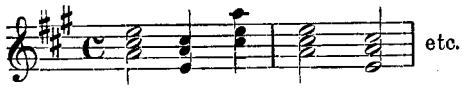


72.

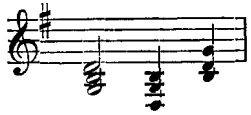




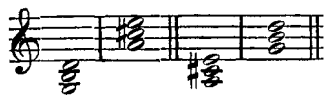
After these exercises have received sufficient attention in the original key, transpose them into other keys in the following order. First transpose to the key of the dominant or upper fifth beginning as Ex. 73, etc.

73.  etc.

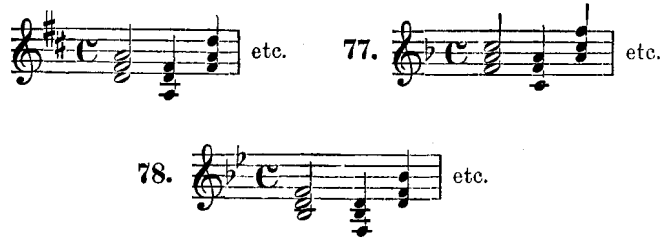
Later play it in (*D*) major again, and then transpose to (*G*) major as Ex. 74, etc.

74. 

Once more repeat the exercise in the original key, (*D*) major, then transpose to (*G*) major; this time going to the key of the upper fourth, and lastly transpose to (*A*) major, but in the lower fourth instead of the upper fifth. Other exercises of this nature are to be practiced until the pupil can recognize these triads on (*D*, *A*, and *G*) whenever he hears them and in their true position. For these beginning exercises the triads should be used in close position with the fifth in the upper voice. The triads of (*A*) and (*G*) are to be given within the distance of a seventh or ninth Ex. 75.

75. 

These chords may be given later less distant, and in other keys. After this the examples are to be transposed into the keys of the upper minor third, and the lower major third. Examples 76, 77, and 78.



Do not always play the exercises in the same order as regards the key, but change about; for instance, play them first in the order given viz. Examples 76, 77, and 78, then arrange them in another order 78, 76, 77, and so on in various successions.

After such preparation the whole Ex. 70 may be practiced in any of the keys used thus far. Most pupils will give the true pitch; the more gifted ones will answer surely and instantly, while others are sometimes mistaken. Less talented pupils will however, with more practice, learn to discern the tones as well as their more gifted companions.

Next transpose Examples 70, 71 and 72 in the keys of the upper major third, and the lower minor third, *e. g.*: from (*D*) major to (*F*♯) and (*B*) also vice versa, from (*D*) to (*B*) then (*F*♯). The pupil will learn to hear the true pitch of these same triads in seven keys, viz; *B*, *B*♭, *D*, *F*, *F*♯, *G* and *A*.

Transpositions into other keys as (*C*), (*D*♭), (*E*♭) etc. may follow at the teachers option.

CHAPTER VI.

THE DEPENDENCE OF DISSONANT CHORDS.

In teaching the intervals one is led to remark, that the perfect consonances are easier to perceive than the imperfect consonances and the dissonant intervals.

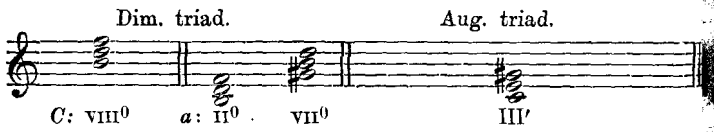
The difficulty is still greater if the chord contains two dissonances as one finds in chords *with four tones.*

The major key contains but one dissonant triad; this is the diminished triad on the leading tone of the scale.

This chord formed with two minor thirds, one upon the other, contains the dissonance of a diminished fifth from its fundamental to the upper note of the triad.

The minor key shows three dissonant triads, two are formed like the triad which we just cited on the leading tone of the major scale. In the minor scale we find these two on the second degree and leading tone respectively; the third triad is found on the third degree, and is formed with two major thirds one upon the other, having from the fundamental to the upper note of the triad the dissonance of an augmented fifth.

79.



Every chord containing four tones (chords of the seventh) is a dissonant chord. In the major key we find two chords of the seventh, each containing two dissonant intervals.

These are the chords of the seventh found on the fifth and on the leading tone of the scale; they contain in the fundamental position the diminished fifth, and minor seventh.

Their inversions show the dissonant intervals of the augmented fourth, the diminished fifth and the major second.

Other chords of the seventh in the major key, show in their fundamental position only one dissonance; the dissonance of the

seventh and in the inversions a second. On the contrary the minor key shows five chords of the seventh, each containing two dissonant intervals.

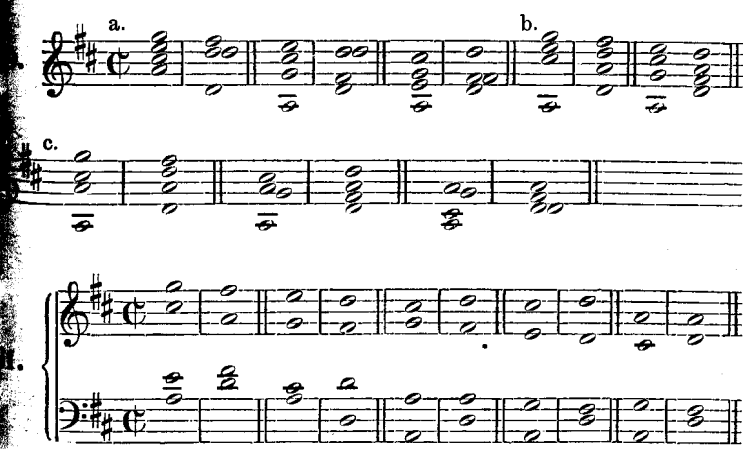
Every dissonant chord seems, as it were, in a state of unrest, *i. e.* it has an apparent longing which is not satisfied until it is resolved to some consonant chord.

When two or more dissonant chords follow each other in succession, the last one must be led to a consonant chord. The exercises for learning to hear dissonant chords and their resolutions, should begin by use of the dominant chord of the seventh in its fundamental position; it should also be written in close position and resolved to its natural resolution.

THE DOMINANT CHORD OF THE SEVENTH IN FUNDAMENTAL POSITION.

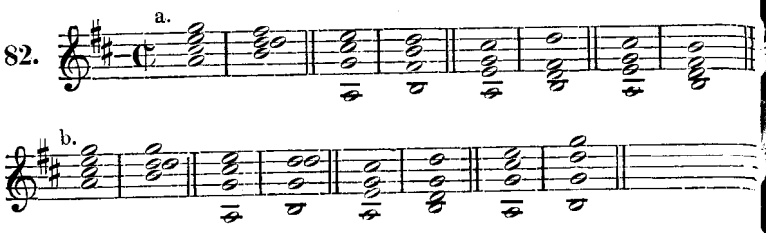
ITS RESOLUTION TO CONSONANT CHORDS.

Exercise 80, should be practiced two measures at a time, after which take up each division as indicated at (*a*, *b*, *c*). The exercise should also be given an octave higher, an octave lower, and in open position. When the pupil has fixed each step thus clearly in his mind, then transpose the exercise into other keys.

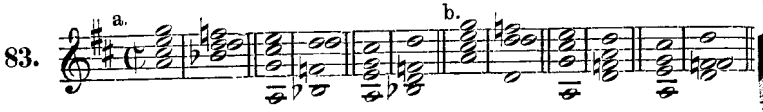


After the natural resolution of the dominant chord of the seventh, to the triad on the first degree or tonic, has been practiced, other resolutions may be introduced as shown in Examples 82 to 87. These examples should be given later in open position and in different keys.

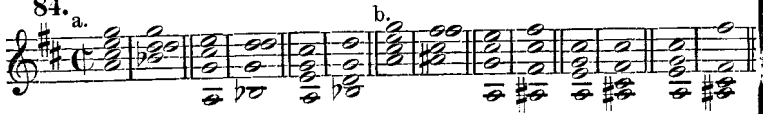
82.



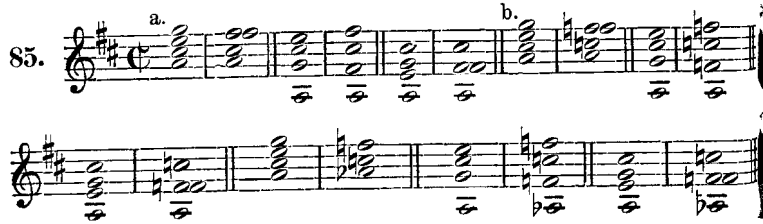
83.



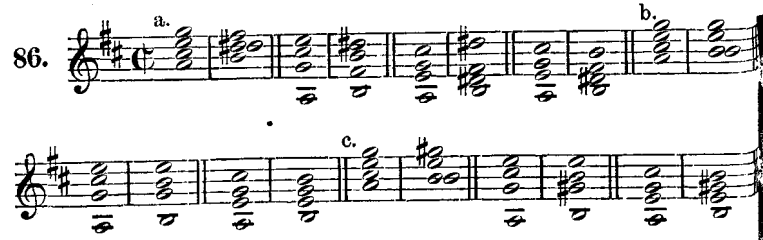
84.



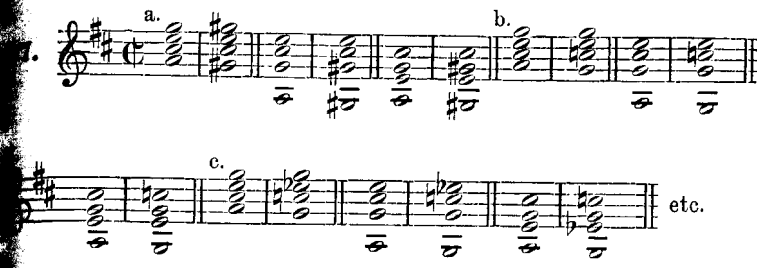
85.



86.

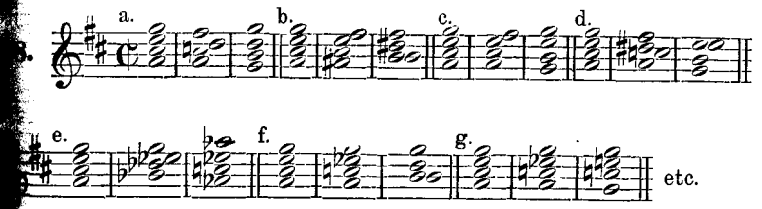


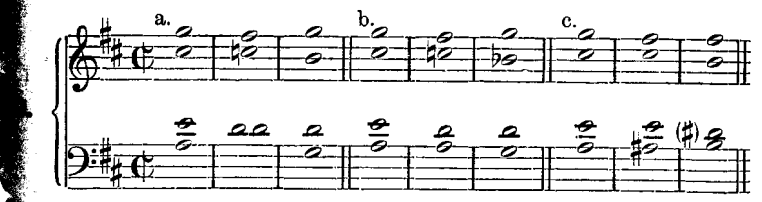
7.

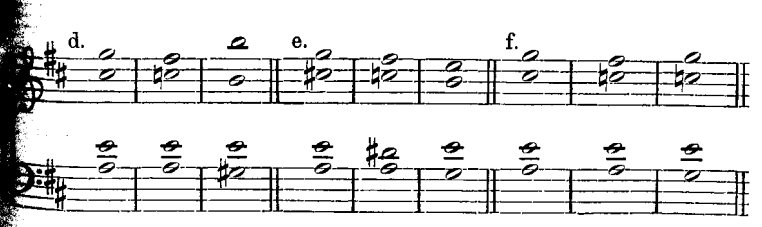


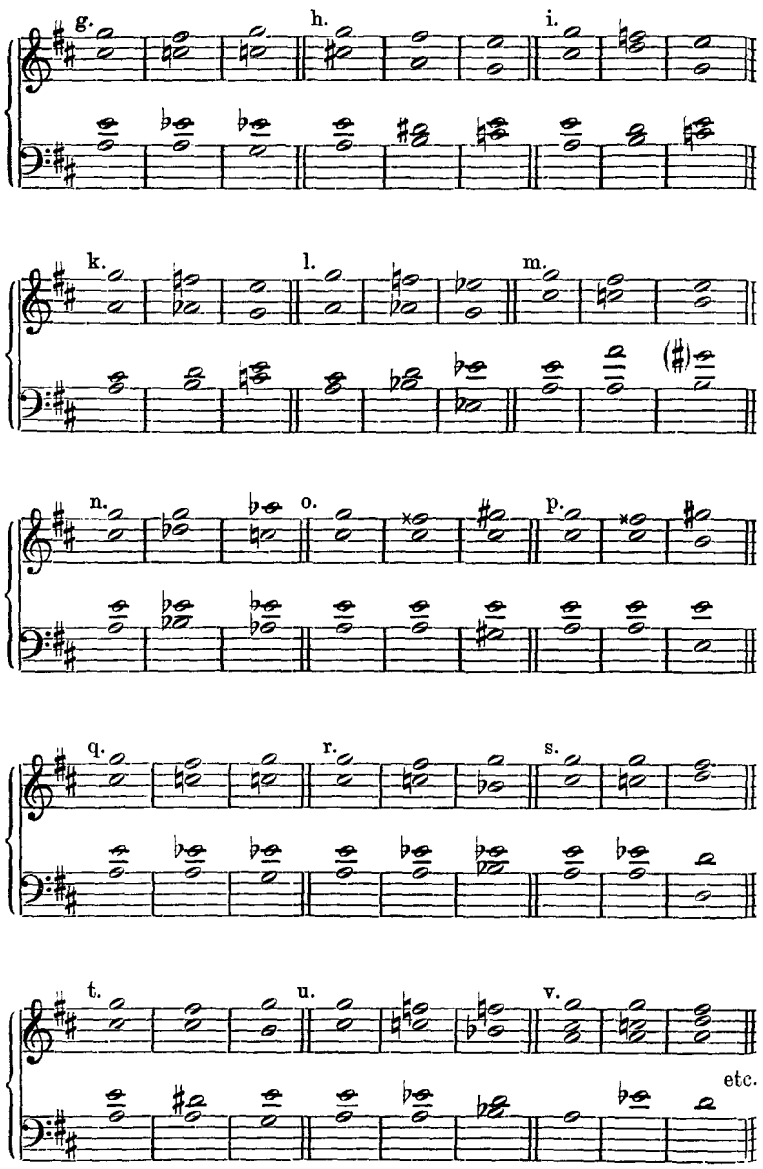
HE RESOLUTION OF THE DOMINANT CHORD OF THE SEVENTH TO DISSONANT CHORDS.

The divisions indicated by the letters (*a*, *b*, *c*) should be acticed separately at first and in the original notation, but ter may be transposed into other keys.





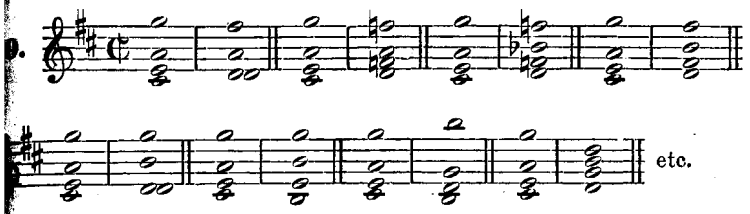




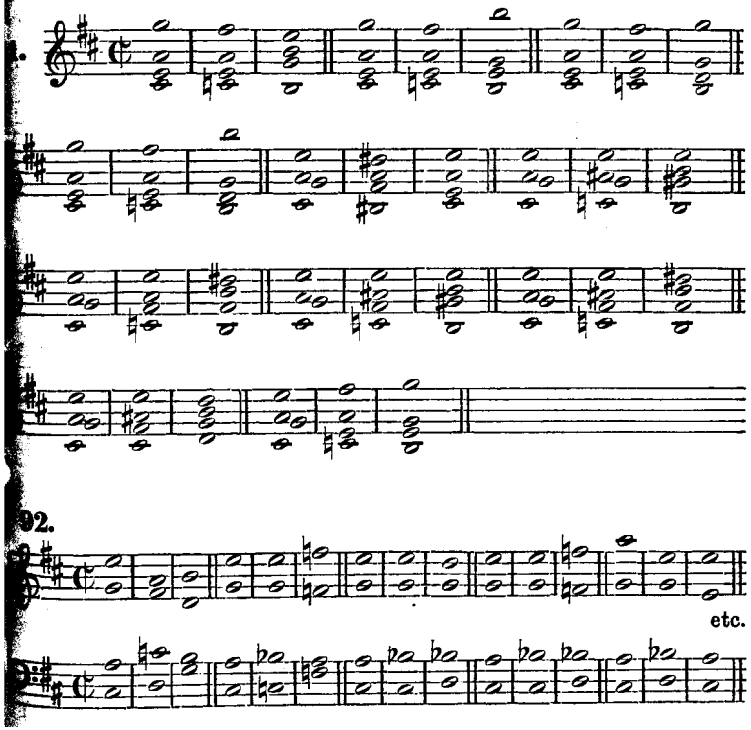
After these exercises may follow:

THE INVERSIONS OF THE DOMINANT CHORD OF THE SEVENTH WITH THEIR RESOLUTIONS.

FIRST INVERSION WITH RESOLUTION TO CONSONANT CHORDS.

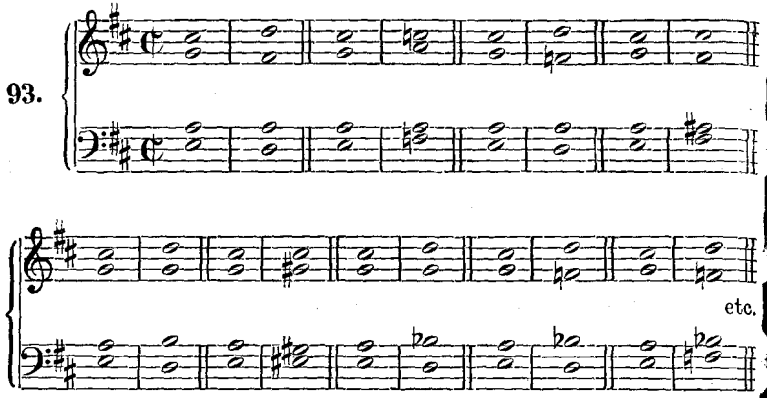


THE RESOLUTION TO DISSONANT CHORDS.



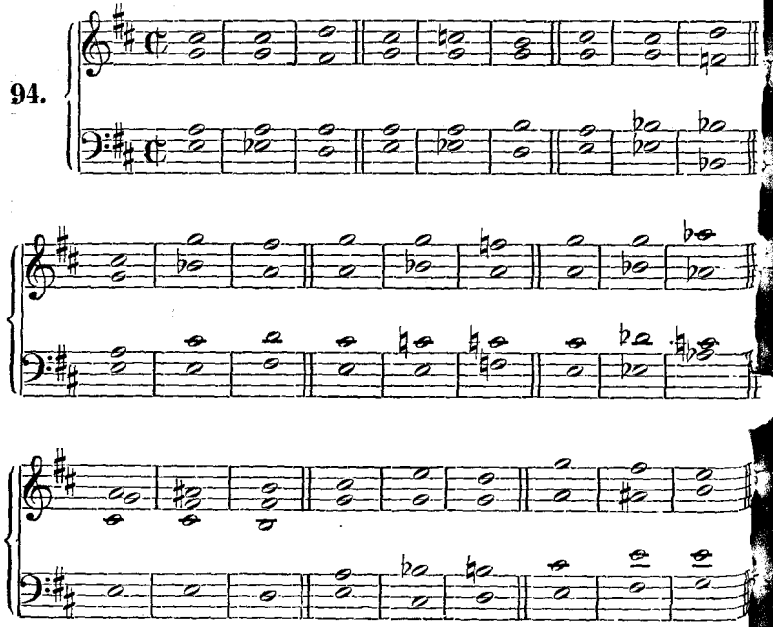
SECOND INVERSION WITH RESOLUTION TO CONSONANT CHORDS.

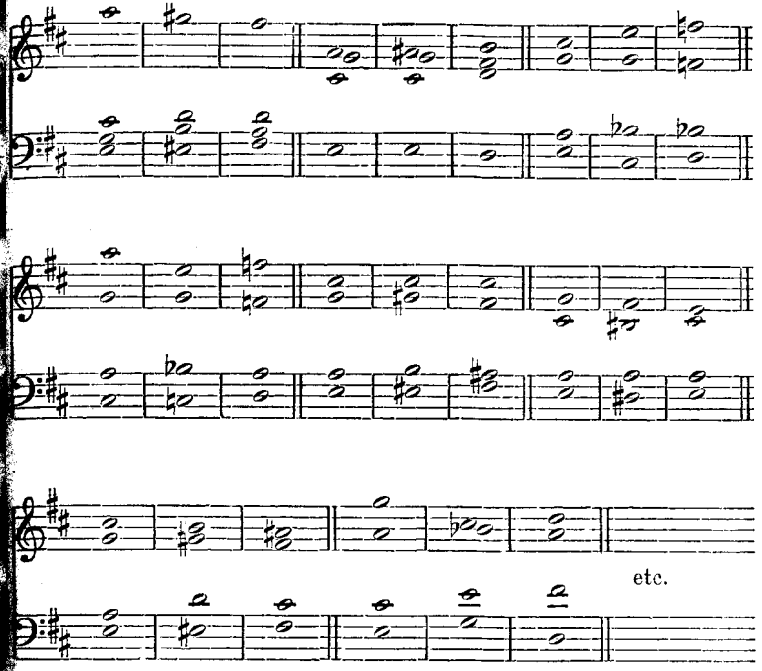
93.



THE RESOLUTION TO DISSONANT CHORDS.

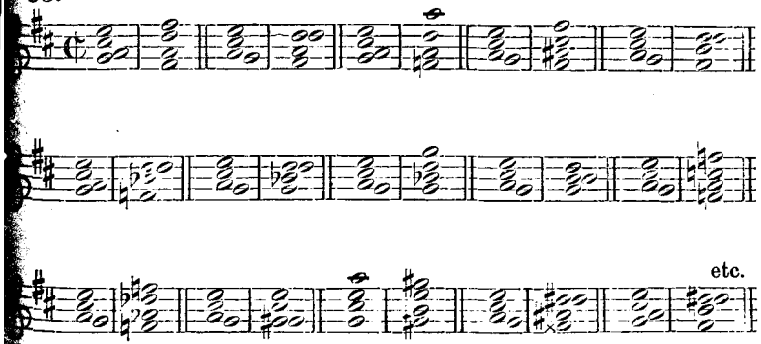
94.





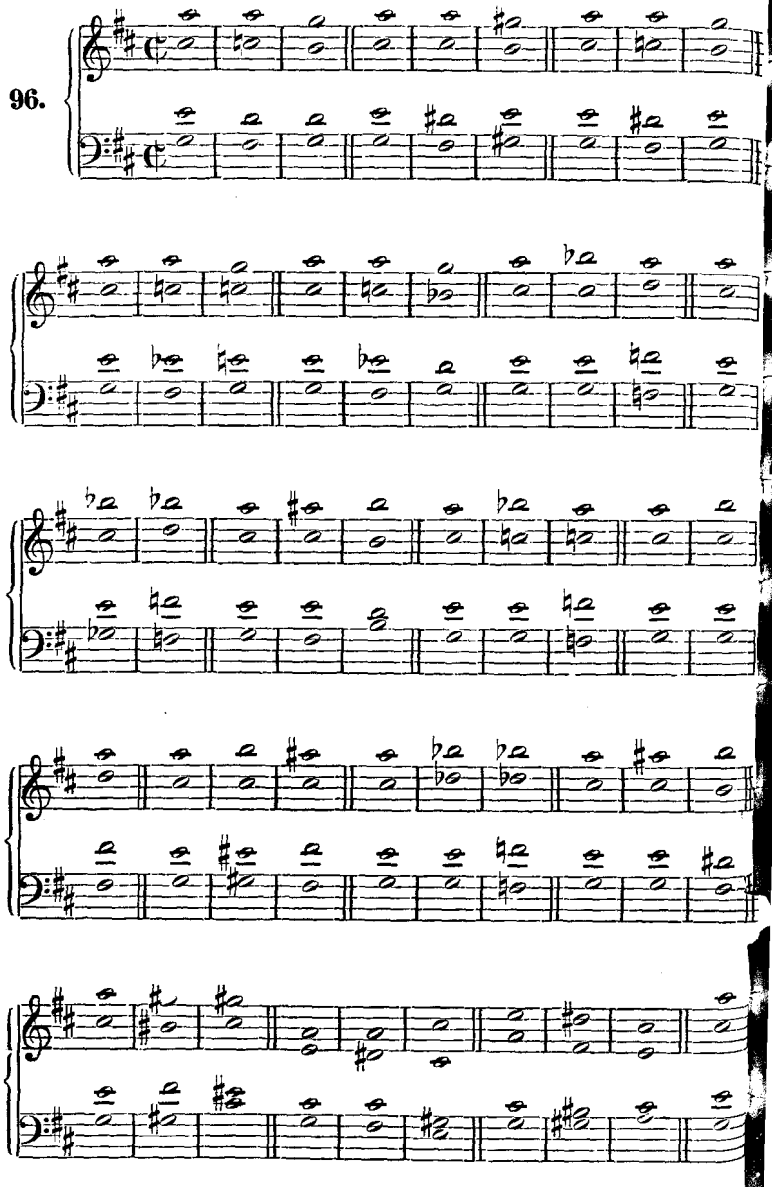
HIRD INVERSION WITH RESOLUTION TO CONSONANT CHORDS.

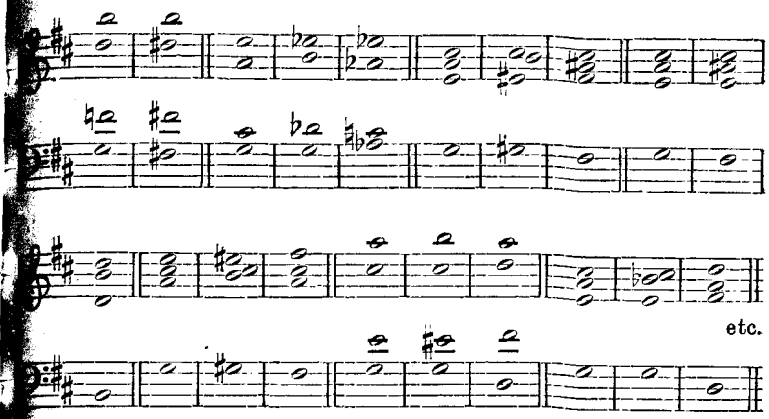
95.



THE RESOLUTION TO DISSONANT CHORDS.

96.





etc.

CHAPTER VII.

THE PECULIAR NATURE OF THE SECONDARY CHORDS OF THE SEVENTH.

In the foregoing exercises from 80 to 96, the pupil has heard many strange chords of the seventh unknown to him. These are called secondary chords of the seventh.

Separate exercises for chords of this nature, and their various resolutions, are not needed, but it is necessary to explain the different structure of these chords with their natural cadencing resolutions. By hearing such progressions played frequently, the pupil will soon learn to recognize them.

There are six species of secondary chords of the seventh, viz: —

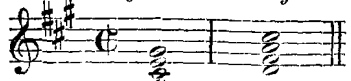
Major triad with major seventh.
Minor triad with minor seventh.
Diminished triad with minor seventh.
Diminished triad with diminished seventh (called the chord of the diminished seventh).
Augmented triad with major seventh.
Minor triad with major seventh (very seldom used).

The pupil will observe, that the chord of the seventh met with most frequently is the dominant chord of the seventh; it is always found on the fifth degree of the scale — both in major and minor. This chord has a major triad and a minor seventh. We have already shown the cadencing resolutions of *this chord in* Examples 80, 81, 90, 93, and 95.

Secondary chords of the seventh with major triad and major seventh are to be found in the major key over the first and fourth degrees, and in the minor, over the sixth degree of the scale.

Chord of the 7th with maj. triad and maj. 7th.

97.

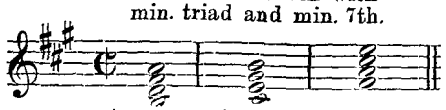


A: I_7 IV_7
E: IV_7 *f*♯: VI_7
c♯: VI_7 *D*: I_7

Four chords with minor triads and minor sevenths are to be found; three in the major key over the second, third, and sixth degrees, and one in minor, over the fourth degree of the scale.

Chord of the 7th with min. triad and min. 7th.

98.

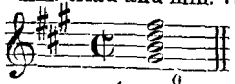


A: II_7 *A*: III_7 *A*: VI_7
f♯: IV_7 *E*: VI_7 *D*: III_7
D: VI_7 *H*: II_7 *E*: II_7
G: III_7 *g*♯: IV_7 *c*♯: IV_7

The chord with diminished triad and minor seventh, is to be found in major over the leading tone, and in minor over the second degree of the scale.

Chord of the 7th with dim. triad and min. 7th.

99.

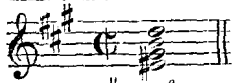


A: VII^0_7
f♯: II^0_7

The chord of the diminished seventh is to be found only in minor over the leading tone.

Chord of the 7th with dim. triad and dim. 7th.

100.



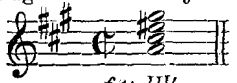
f♯: VII^0_7

The chord of the seventh formed with an augmented triad and a major seventh, is an ambiguous chord; it is to be found in minor over the third degree of the scale, but it is most frequently built over the first and fourth degrees of the major, and over the sixth degree of the minor scale with its fifth altered. This chord will receive more attention later.

The cadencing resolution is the same in major and minor.

Chord of the 7th with aug. triad. and maj. 7th.

101.



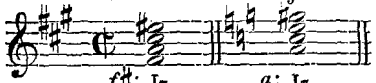
} original chord as found in *f*♯

f♯: III'_7
A: I_7
E: IV_7 } The chord as found
c♯: VI_7 } by altering the fifth.

The chord with a minor triad and a major seventh is to be found only over the first degree of the minor scale.

Chord of the 7th with min. triad. and maj. 7th.

102.



f♯: I_7 *a*: I_7

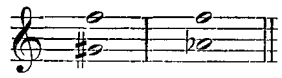
The natural resolution of a secondary chord of the seventh is effected in the same manner as the dominant chord of the seventh, viz. the fundamental skips upward a fourth or downward a fifth; the seventh is led downward a step or a half-step as the case may be; the third generally ascends, and the fifth can be led either up or down.

There are a few exceptions to the foregoing statement; one, the chord with diminished triad and minor seventh allows a two-fold resolution; another, the chord of the diminished seventh has no cadencing resolution. We will explain more about this chord on page 42 — The Chord of the Diminished Seventh.

If the resolution of a chord of the seventh is effected to another chord of the seventh, the last one must be led to a consonant chord. Since the seventh in all these chords, except the chord of the diminished seventh, is a dissonant interval, it must be prepared; that is, the same tone as the seventh must appear in the previous chord as a consonant interval, and in the same voice, so it will admit of being tied over, as seventh in the *chord of the seventh.*

The seventh in the chord of the diminished seventh needs no preparation because it is not a real dissonance. In fact it is not a dissonance at all, since the interval of a diminished seventh is enharmonic with a major sixth, and a major sixth is an imperfect consonance.

103.



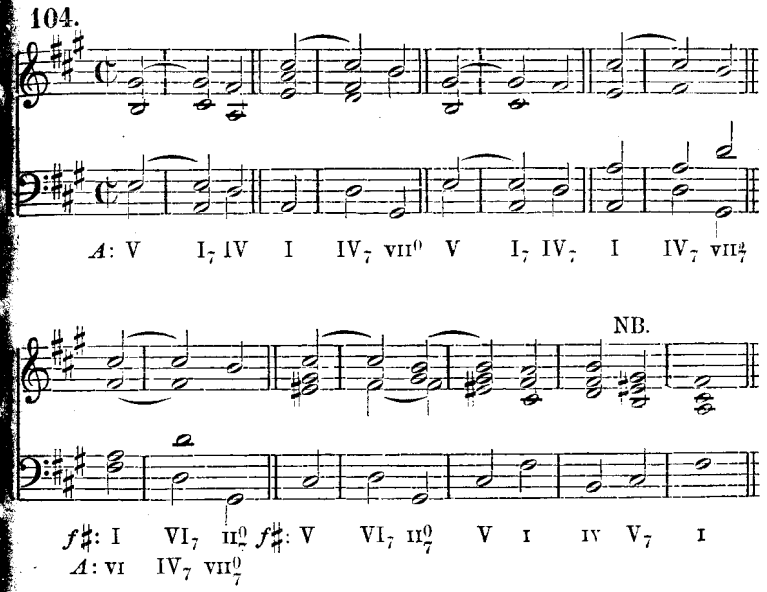
We may further hold that the diminished seventh is really *more* consonant than the major sixth; for according to true intonation, the distance in pitch of the first named interval is smaller than the latter.

From Ex. 33, it will be seen that the ($g\sharp$) in Ex. 103, is nearer (a) than the ($a\flat$). The interval (a) to (f) is the same in both chords, therefore the distance in pitch of the interval ($g\sharp$) to (f) is smaller than the interval ($a\flat$) to (f).

The dissonant character in the chord of the diminished seventh comes, not from the diminished seventh, but from the diminished fifth of the chord. (Although the diminished fifth is a dissonance it needs no preparation).

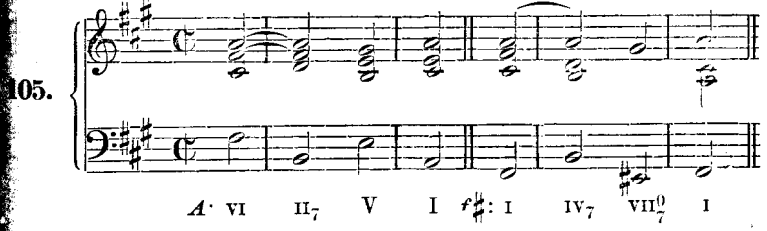
CADENCING RESOLUTIONS OF THE FUNDAMENTAL POSITION FOR THE CHORDS OF THE SEVENTH WITH MAJOR TRIAD AND MAJOR SEVENTH.

104.

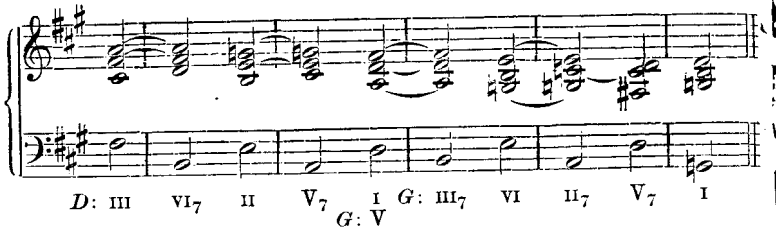


CADENCING RESOLUTIONS OF THE CHORDS WITH MINOR TRIADS AND MINOR SEVENTH.

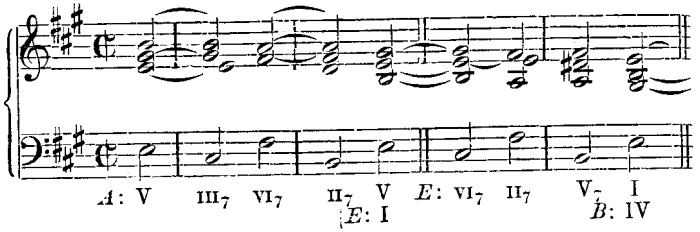
105.

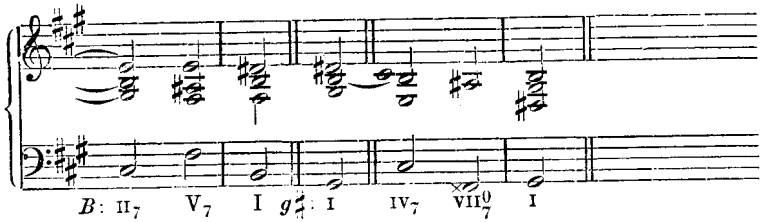


NB. The preparation of the seventh at NB. is not necessary; in the most of cases the seventh of Dominant chords of the seventh may enter without preparation.

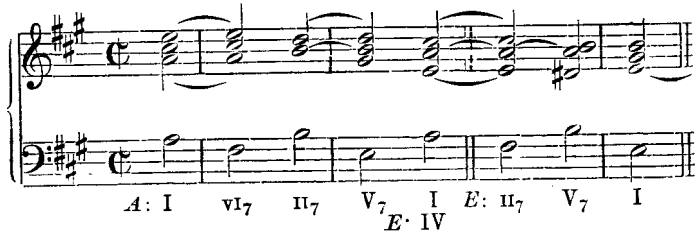


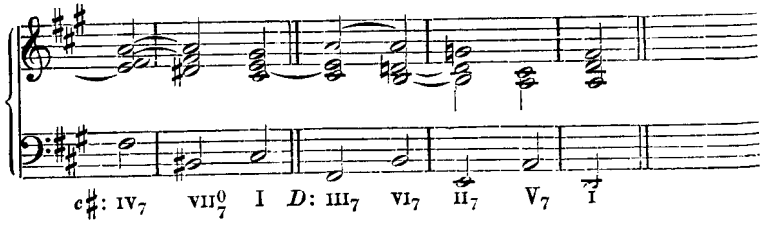
106.





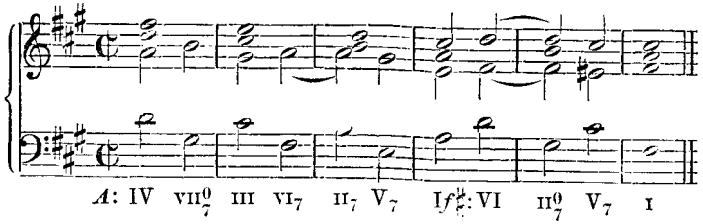
107.





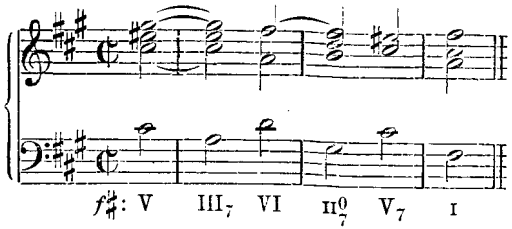
CADENCING RESOLUTIONS OF THE CHORD WITH DIMINISHED TRIAD AND MINOR SEVENTH.

108.



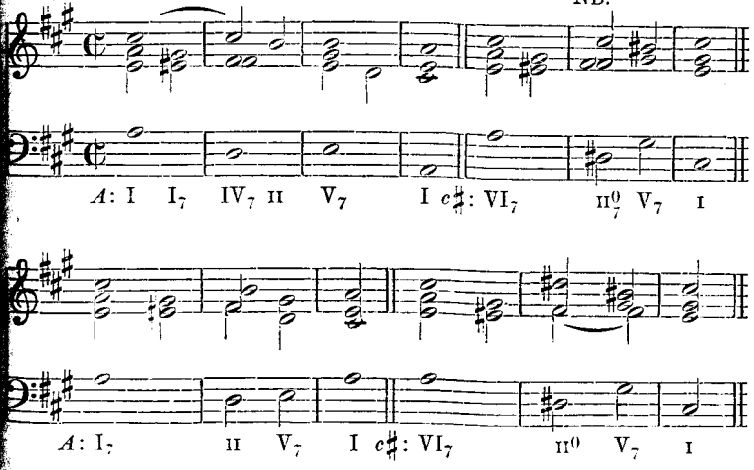
CADENCING RESOLUTIONS OF THE CHORD WITH AUGMENTED FIFTH AND MAJOR SEVENTH.

109.



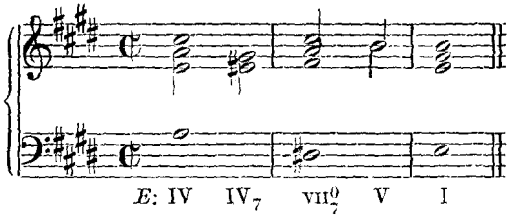
110.

NB.



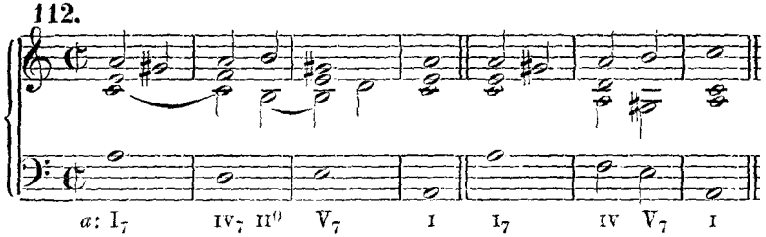
At (NB.) the diminished fifth of the chord is omitted.

111.



CADENCING RESOLUTIONS OF THE CHORD WITH MINOR TRIAD AND MAJOR SEVENTH.

112.

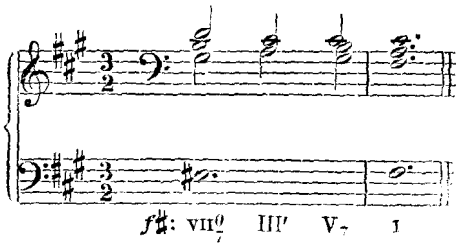


THE CHORD OF THE DIMINISHED SEVENTH.

A cadencing resolution of this chord is not possible, in the way that the root skips upward a fourth or downward a fifth; in this case (*b*) in the chord (*b*), (*d*), (*f*), (*a*♭) [key of *c* minor], would be led upward to (*e*♭) which is an augmented fourth and is bad voice-leading.

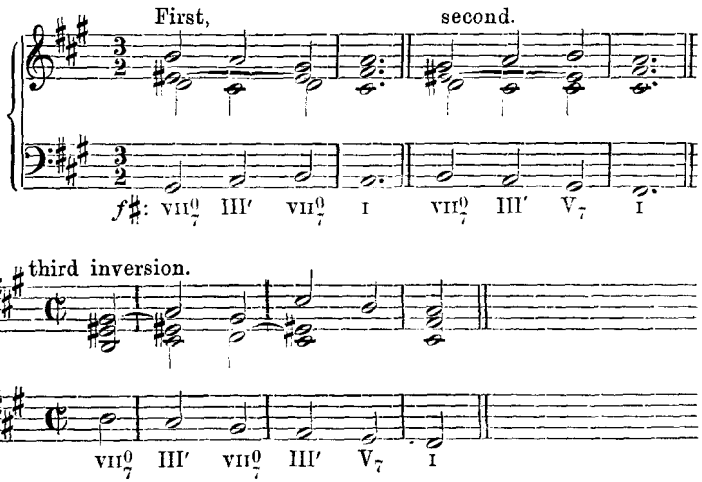
Neither would a skip of an augmented fifth downward help the matter. However a cadencing resolution *can* be effected perhaps as in the following example:—

113.



The inversions of this chord may have such cadencing resolutions as those shown in the next Example:

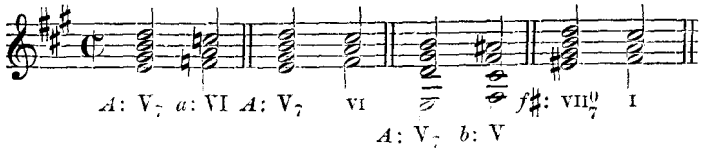
114.

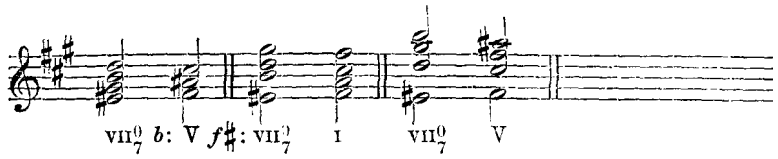


Although such progressions as Ex. 114, are not to be regarded as true resolutions, since they always lead to a dissonant triad containing an augmented fifth. Without this interval the triad over the third degree minor, would never be recognized. A good progression was possible in Ex. 110, where the diminished fifth was omitted from the chord, but this was an exceptional case (see [NB.] in Ex. 110).

The chord of the diminished seventh is of such an ambiguous character, that its employment must receive special attention. It may be resolved, like the dominant chord of the seventh, to a major or a minor triad, but its resolution must always be to a triad, one half-step above the fundamental. The dominant chord of the seventh may be led in a similar manner to a major or minor triad, either a step or a half-step higher than its fundamental (see Ex. 115).

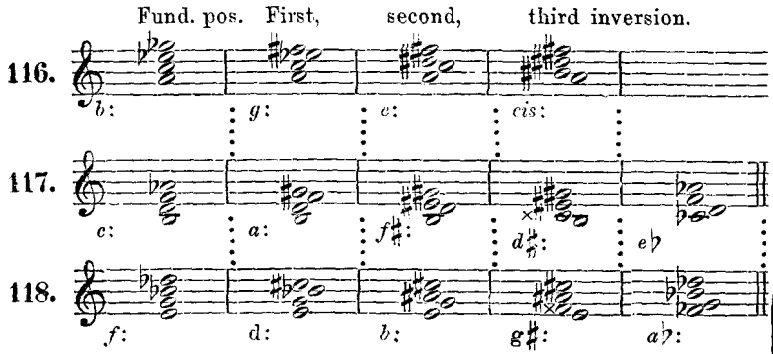
115.





In the chord of the diminished seventh one cannot distinguish, through the ear, the fundamental position from the inversions, because the augmented second and minor third are enharmonic intervals. The inversion can only be recognized after the resolution into the next chord.

Only in consequence of the notation, one could regard every fundamental position as an inversion and vice versa (see Examples 116, 117, and 118).



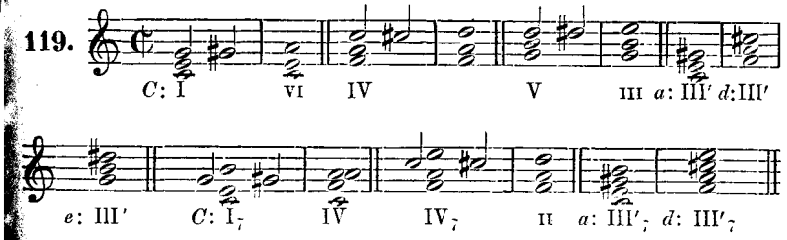
The chord of the diminished seventh permits — like all chords of the seventh — of many other progressions than those shown in Ex. 115. Further exercises in these chords are not needed, since in the previous examples is to be found a sufficient variety of resolutions. However the examples may be transposed into other keys, also an octave higher or lower for exercises in hearing.

CHAPTER VIII.

CHORDS WITH ALTERED INTERVALS.

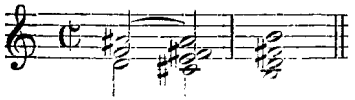
The minor triad with raised fifth as built over the second degree of the major scale, and the dominant chord of the seventh with raised fifth, are really the only chords that can be considered as strictly altered chords; others are only equivocal.

Of course one may raise the fifth in any major triad or chord of the seventh which has a major triad and major seventh. Chords formed in this manner are, in major, simply derivative chords, but in minor on the third degree of the scale, we find the original chord belonging solely to the key.



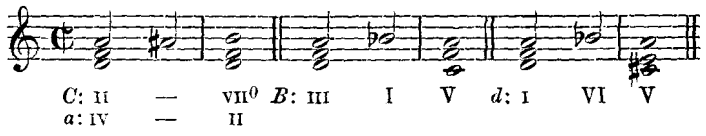
Whereas the minor triad with augmented fifth in major and minor, is to be looked upon purely as an altered chord; it can be seen as such very clearly by continuation of the altered fifth chromatically to the next tone above. As mentioned before it can be formed over the second degree major, also over the fourth degree of the minor scale. No matter in which voice the altered fifth appears, it invariably has that decided *leading up* character and must ascend to the next available tone.

If the altered fifth is tied over into the next chord, then it is changed to a leading tone and ascends — see following Ex.



Again if the altered fifth is enharmonically changed, it loses the character of a leading tone since the chord is not dissonant. Ex. 120.

120.

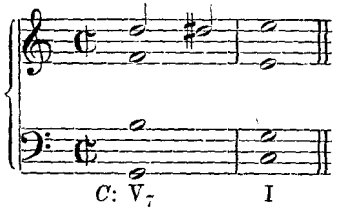


CHORDS OF THE SEVENTH WITH ALTERED FIFTHS.

THE DOMINANT CHORD OF THE SEVENTH WITH ALTERED FIFTH.

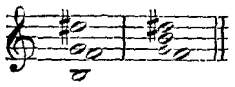
This chord is only to be used in the major key since the altered fifth must always be led upward.

121.



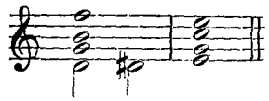
We often find it used in the first and third inversion as Ex. 122.

122.



The second inversion of this chord should always appear in open position. The tone forming the interval of the perfect fifth, should in most cases immediately preceed the altered fifth — as 5, 5♯ — see Ex. 123.

123.

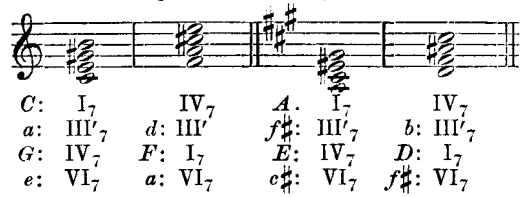


There are two other chords of the seventh with altered fifth, which may be formed over the first and fourth degrees of the major scale; also over the sixth degree of the minor scale.

These chords are only of use in the major key as altered chords, derived from the original one; but in the minor key we find the original chord every tone of which belongs to the key. One may use these chords both in the original and altered forms.

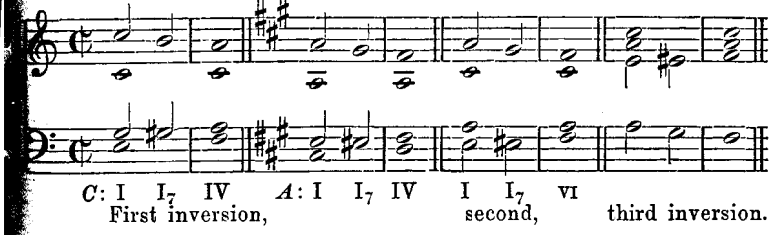
Chords of the seventh with altered fifths (aug. triad. and maj. 7th).

124.



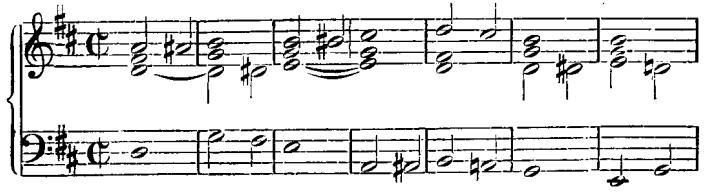
The inversions of these chords are not often used; the first inversion occurs sometimes with the altered fifth immediately preceeded by the perfect fifth. The other inversions seldom if ever occur.

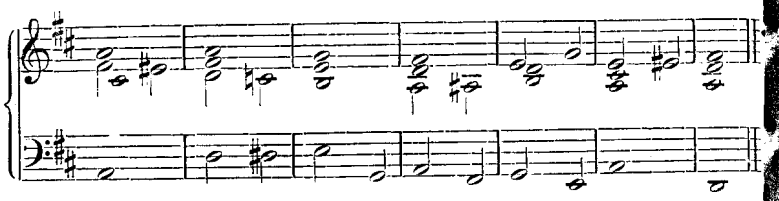
125.



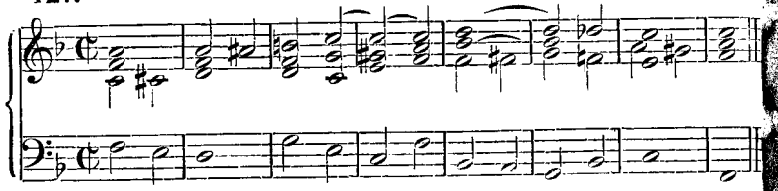
The following exercises for hearing with chords already explained should receive considerable attention.

126.

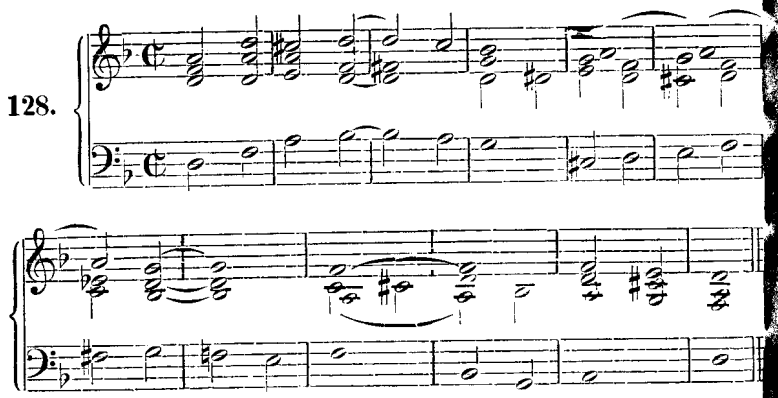




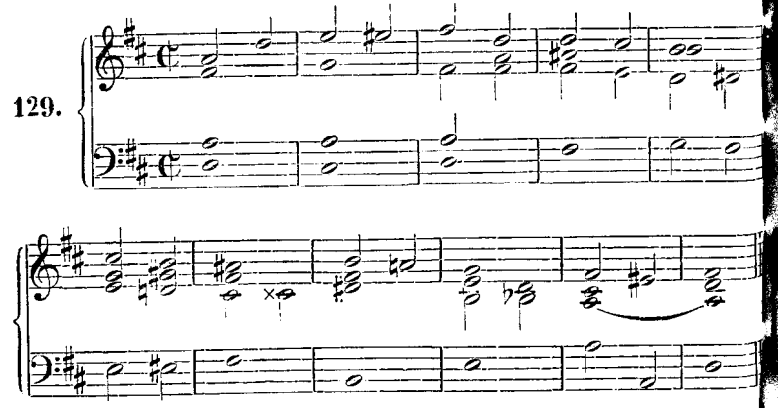
127.



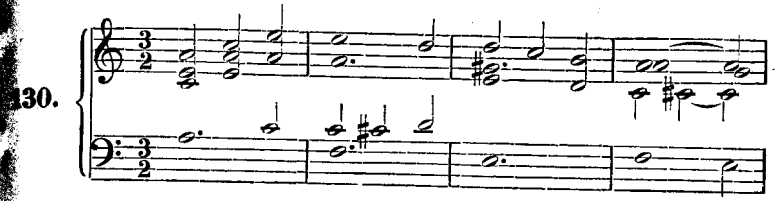
128.

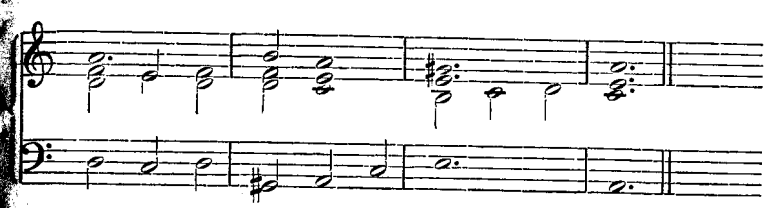


129.

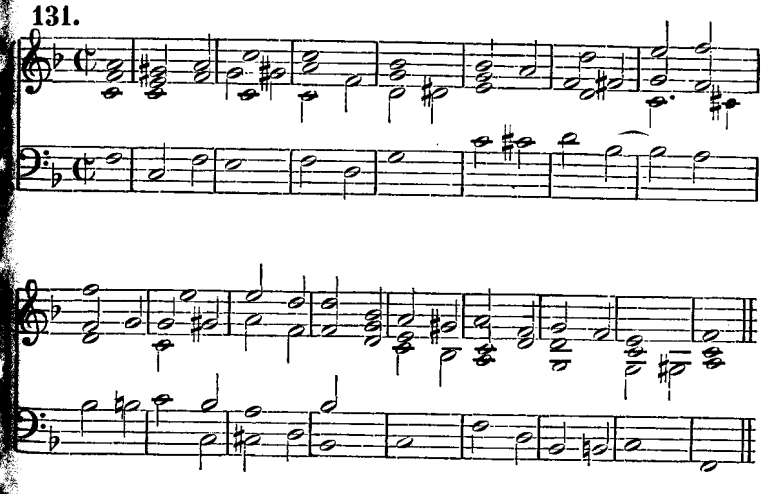


130.

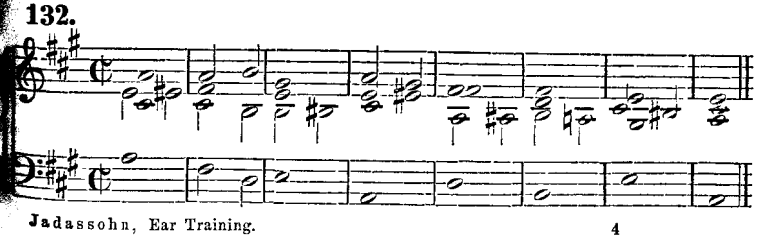




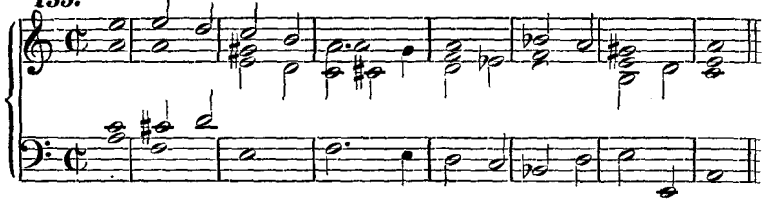
131.



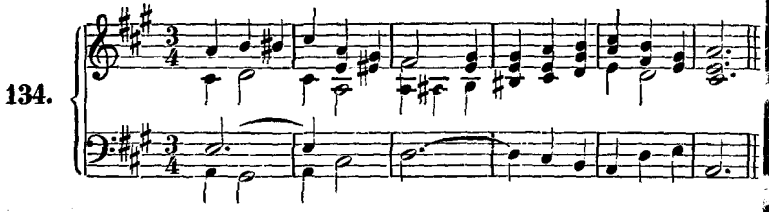
132.



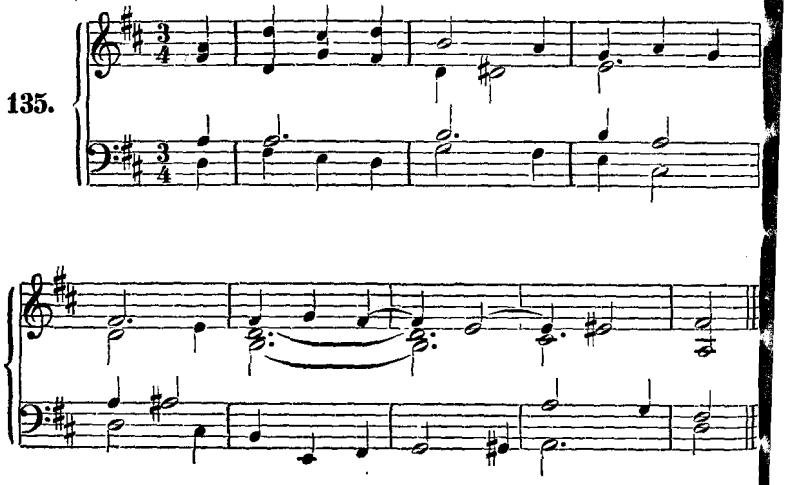
133.



134.



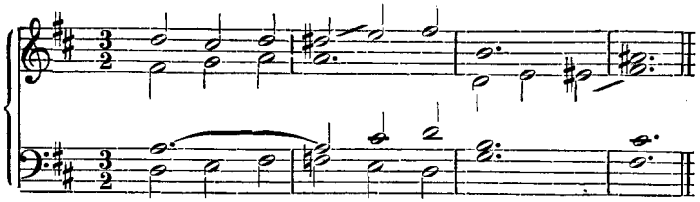
135.



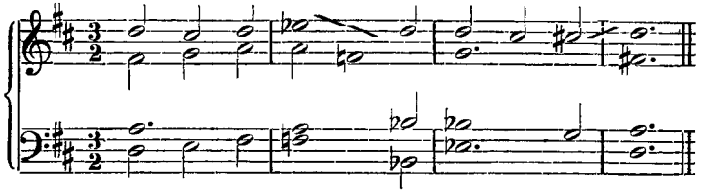
THE CHORD OF THE AUGMENTED SIXTH (6+)

The *chord of the augmented sixth* sounds like a dominant chord of the seventh with its fifth omitted, but shows its peculiarity as an altered chord through its resolution.

136.



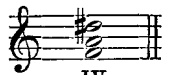
137.



Notice in Examples 136 and 137, that the augmented sixth (*d*♯) must be led up to (*e*) while the seventh (*e*♭) is led downward to (*d*).

Any minor triad becomes an augmented sixth chord if the fundamental is chromatically raised one half-step. Each one of these chords can be resolved to four different keys as at NB. in Examples 139, 140, 141, and 142.

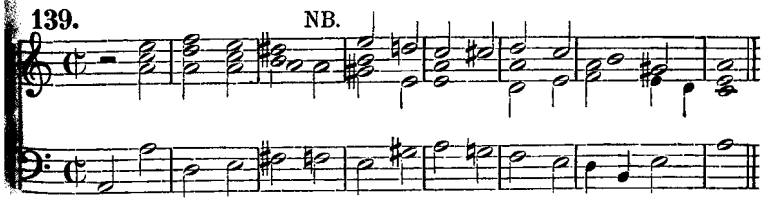
138.



a: IV
C: II
F: VI
d: I

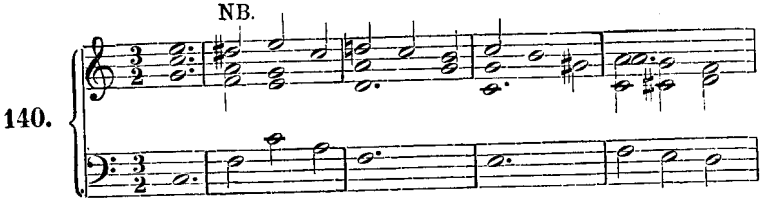
The following examples, given as exercises for hearing, show the chord of the augmented sixth (marked NB.) in the keys of (*a*) minor, (*C*) major, (*F*) major and (*d*) minor.

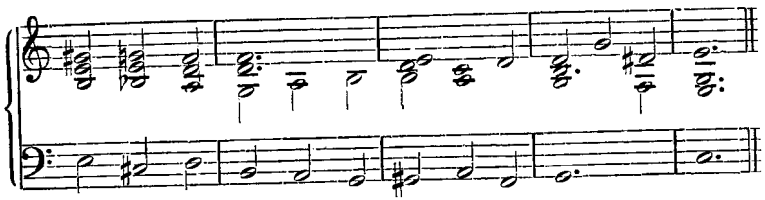
139.



NB.

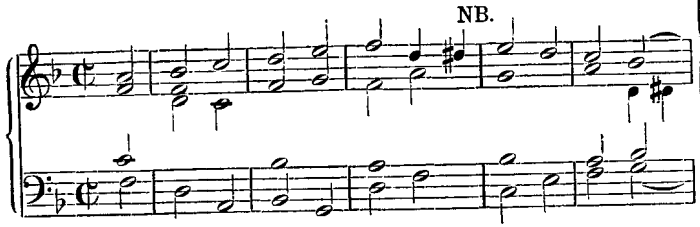
140.

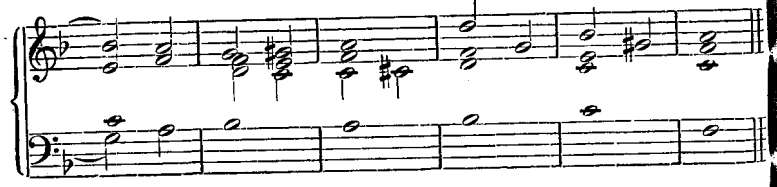




NB.

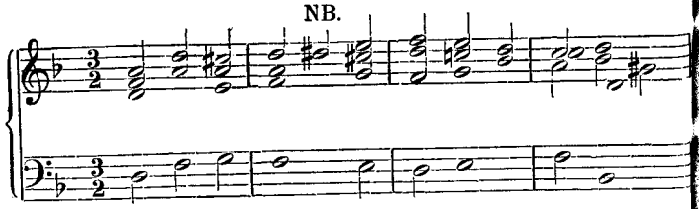
141.

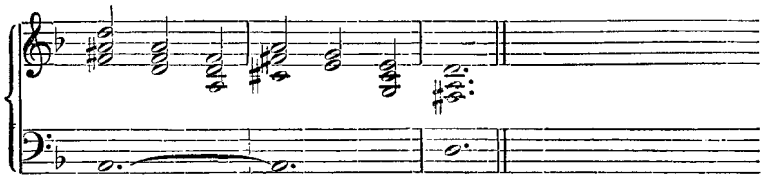




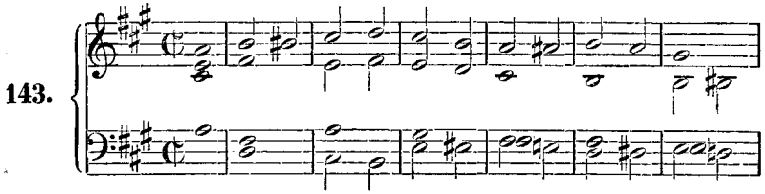
NB.

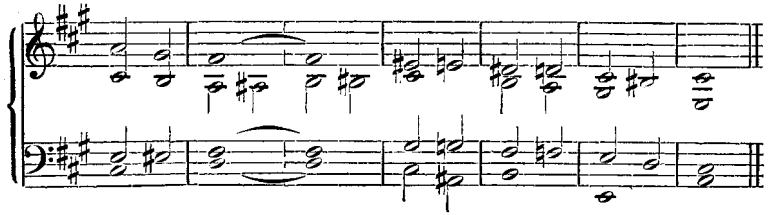
142.



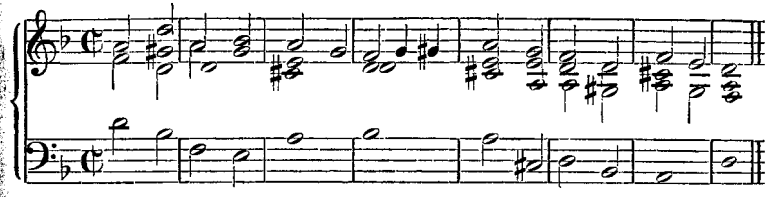


143.





144.

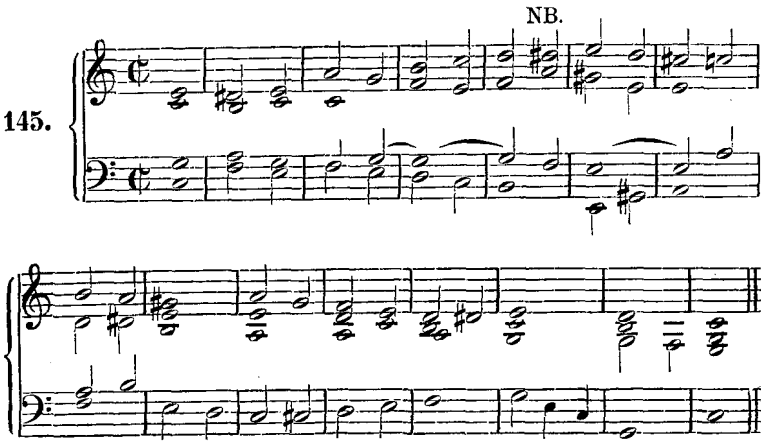


THE CHORD OF THE SEVENTH WITH ALTERED THIRD.

This chord may be formed in major over the leading-tone of the scale, and in minor, over the second degree; it is used mostly in the second inversion, and in this inversion it is known as *the augmented six-four-three chord* $\binom{6+}{4}_{3}$.

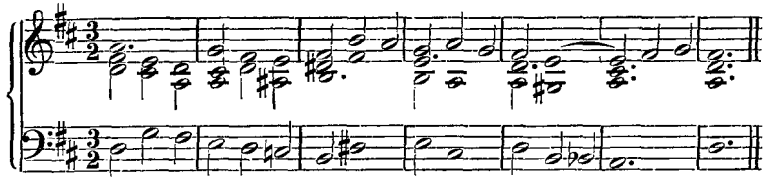
In this inversion the chord may be used in either close or open position. In the fundamental position it can only be used in open position. The first and third inversions occur but seldom in open, and less frequently in close position. The following example contains the chord twice in the second inversion, and once (5th measure NB.) in the fundamental position.

145.

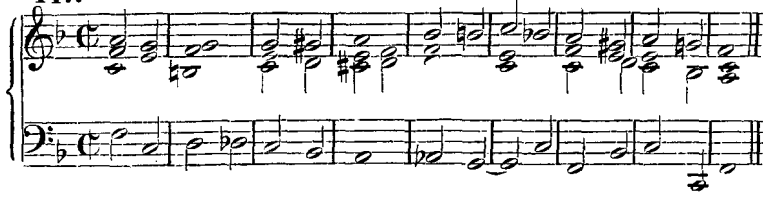


The following examples, given as exercises for hearing this chord, contains different progressions and resolutions; also in a modulatory manner.

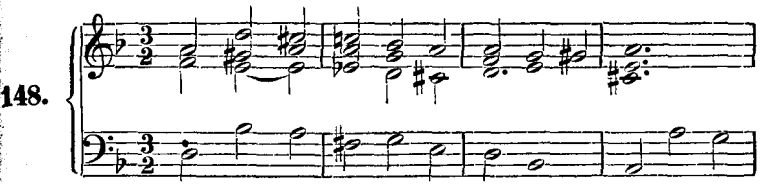
146.

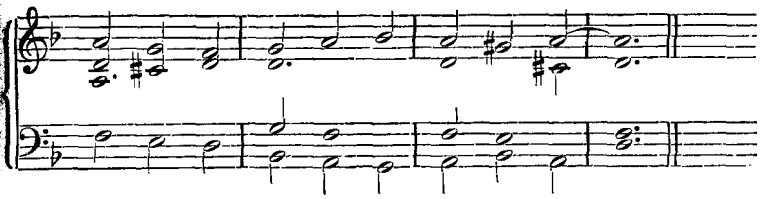


147.

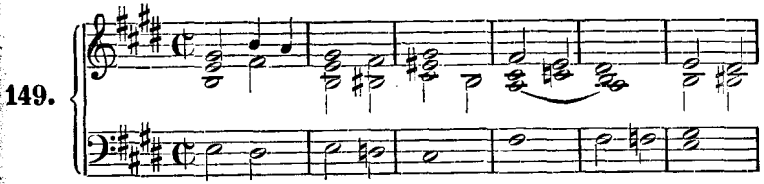


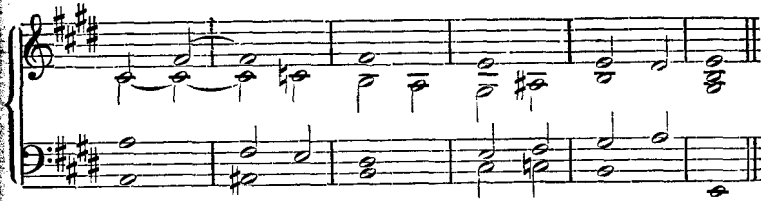
148.



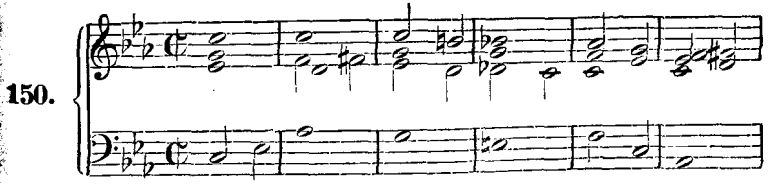


149.

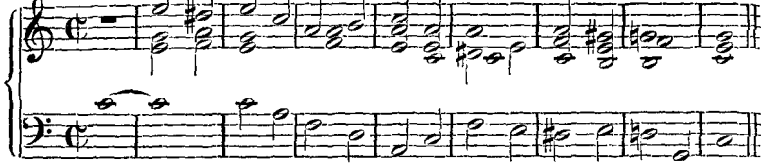




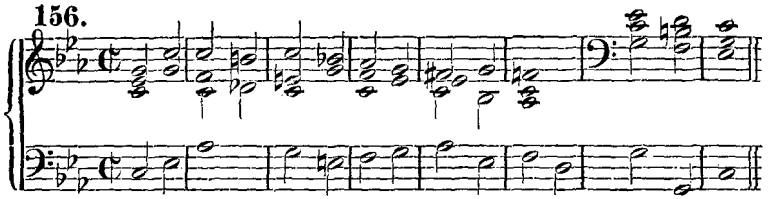
150.



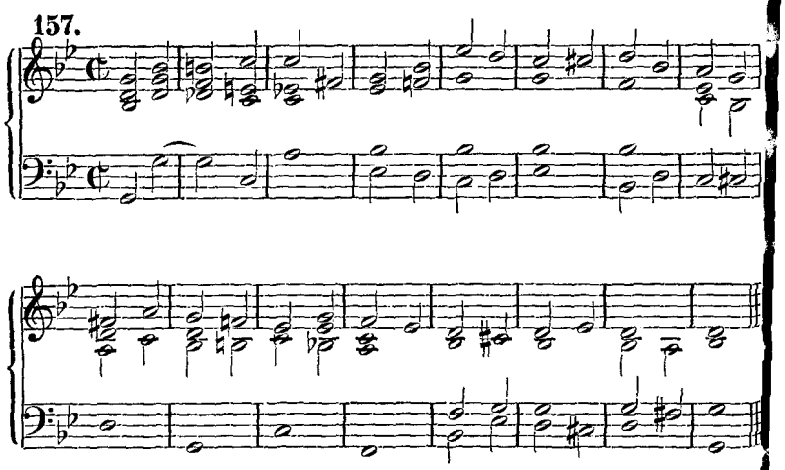
155.



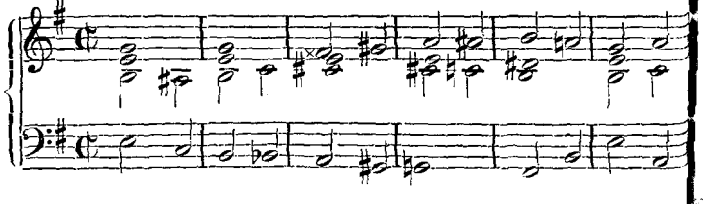
156.

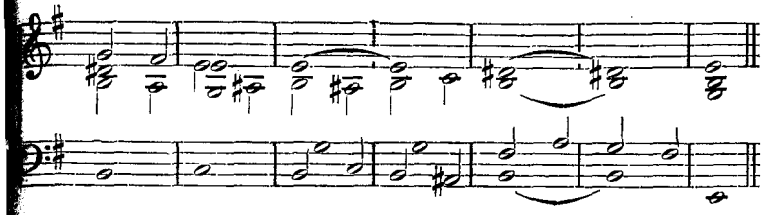


157.



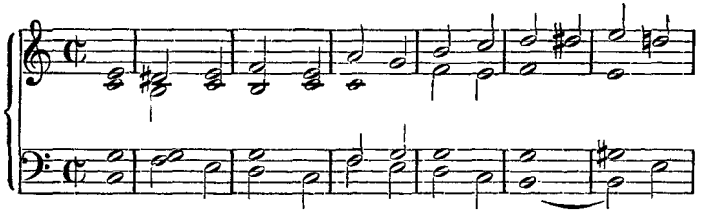
158.

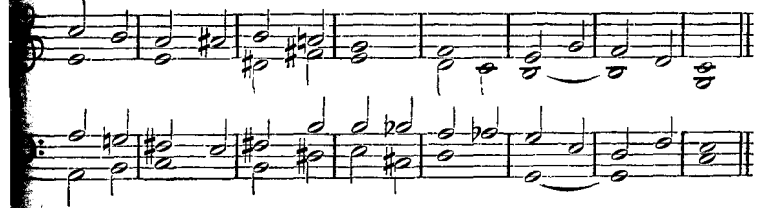




In the foregoing Examples 119 to 158, the pupil has had a reat amount of material for exercising his ability to recognize ltered chords. The ear should become accustomed to hear rrectly all these chords, and for still further practice on gmented sixth chords, we give the following examples.

9.





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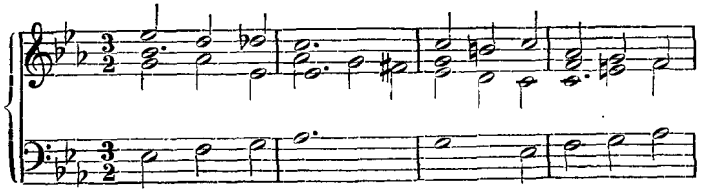

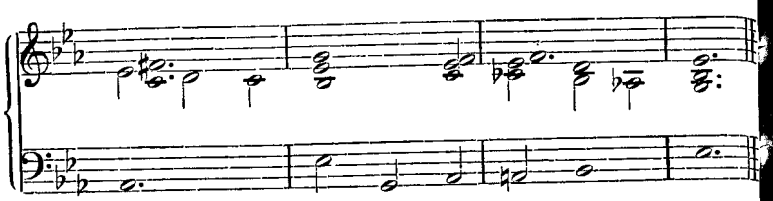

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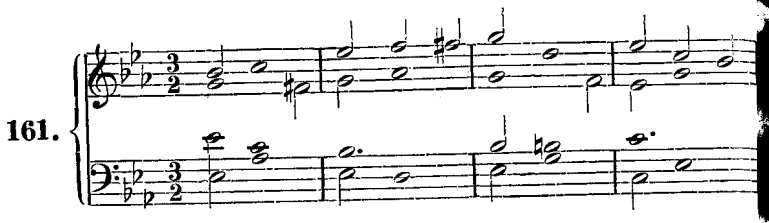

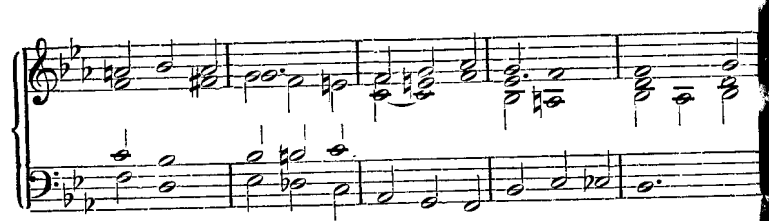

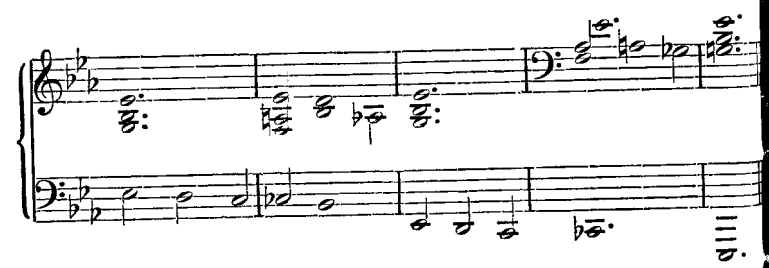

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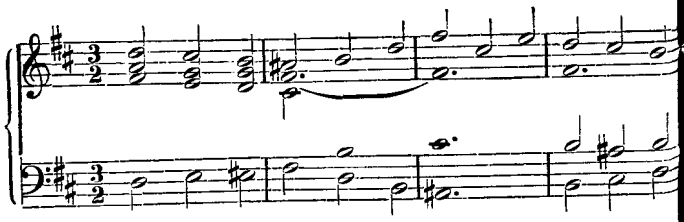

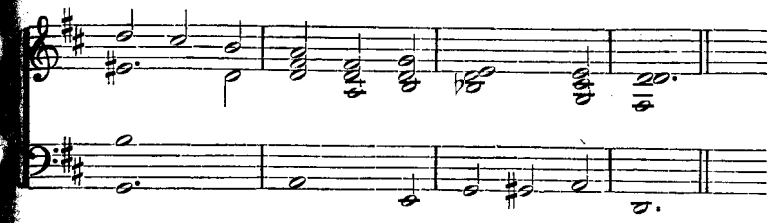

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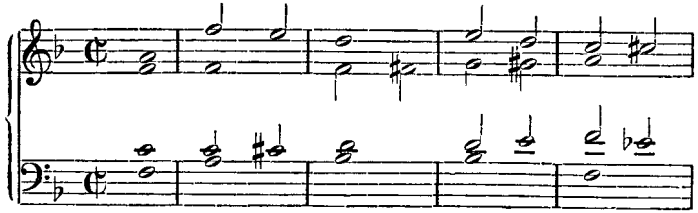

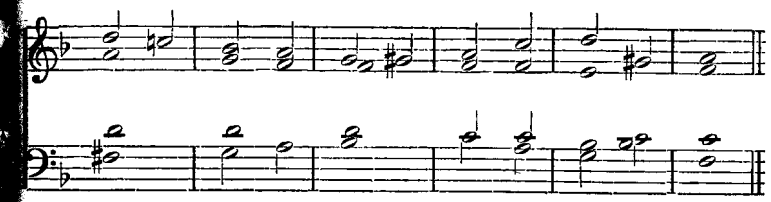

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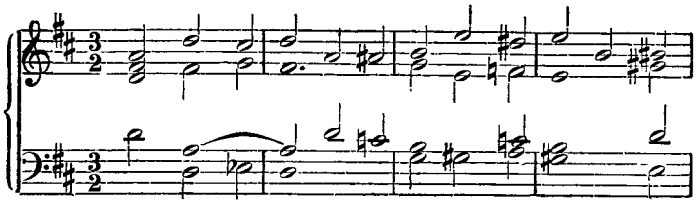

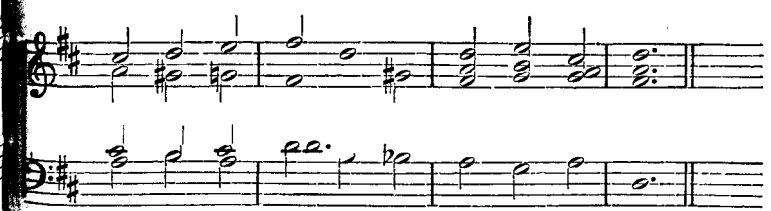

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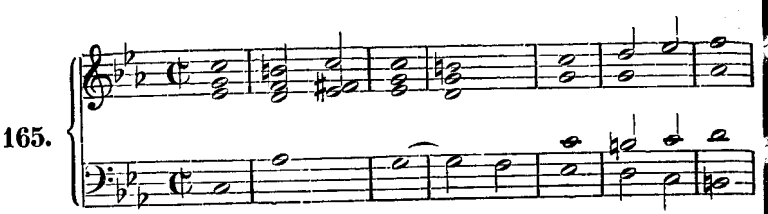

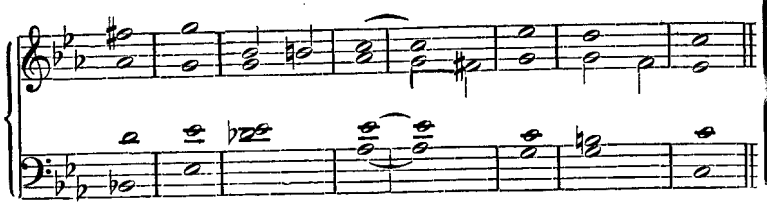

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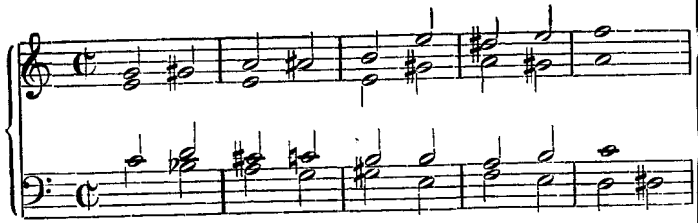
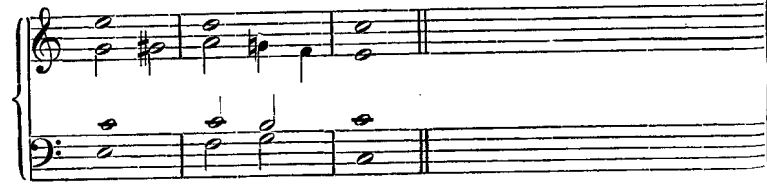
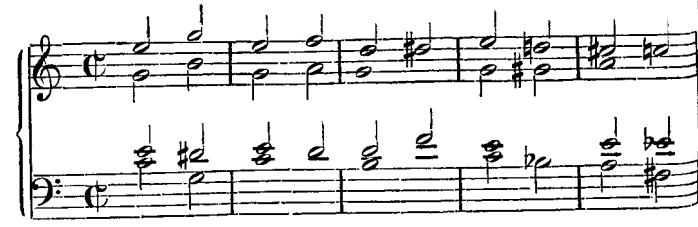
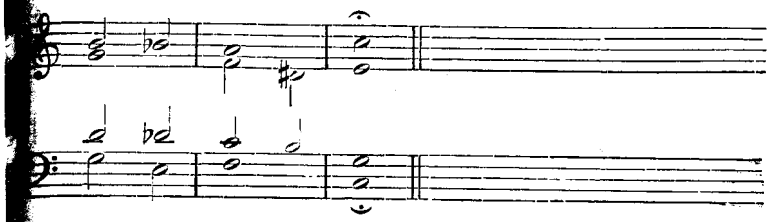




167.





CHAPTER IX.

DISSONANCES NOT PERTAINING TO A CHORD.

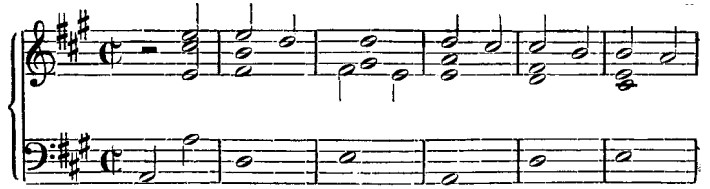
THE SINGLE SUSPENSION.

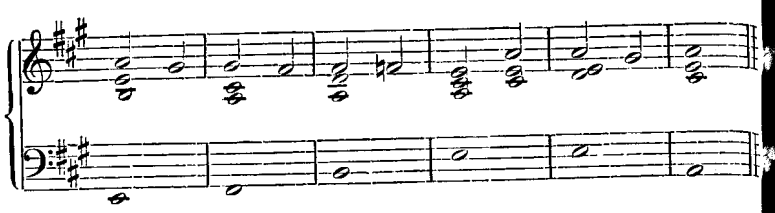
The suspension, like a seventh, is a dissonance and for this son, must be prepared and resolved.

The resolution is generally effected in leading the suspended ice a step or a half-step downward.

In some instances a suspension sounds similar to a dis- ant chord, but in most cases it is given a very accute dis- ance.

Examples 168 to 184, contain suspensions in different voices. en the teacher plays these examples for hearing exercises, suggest that he give the notes of the suspension a noti- ble accent.





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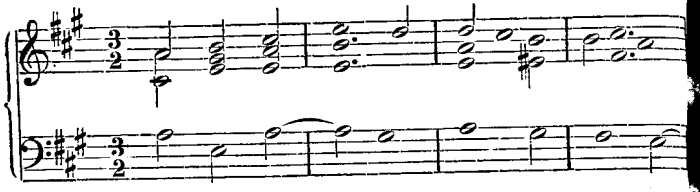

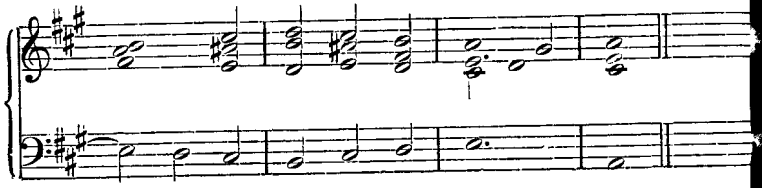

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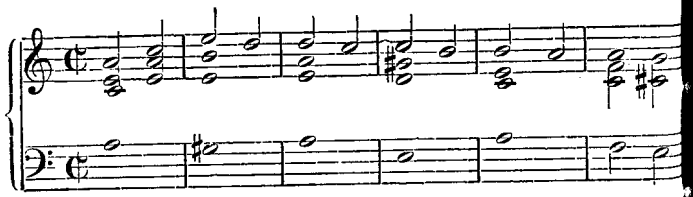

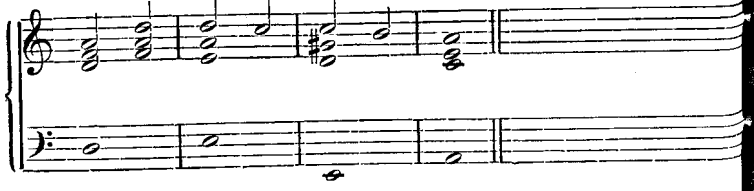

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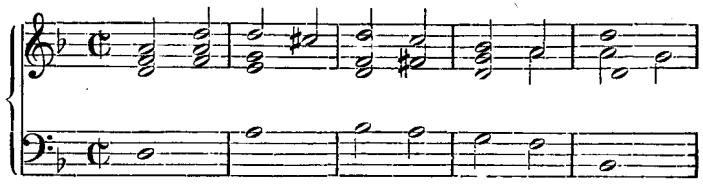

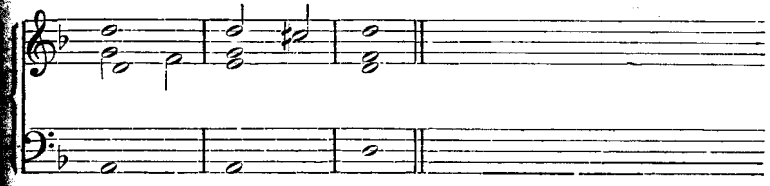

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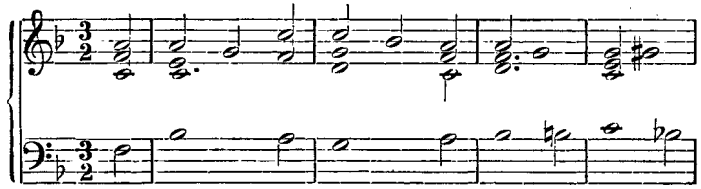

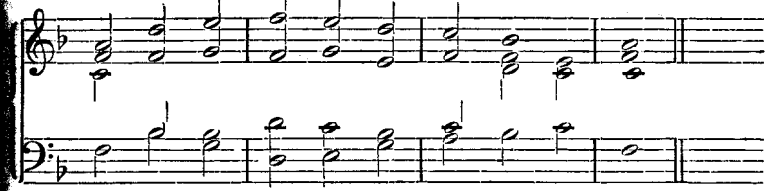

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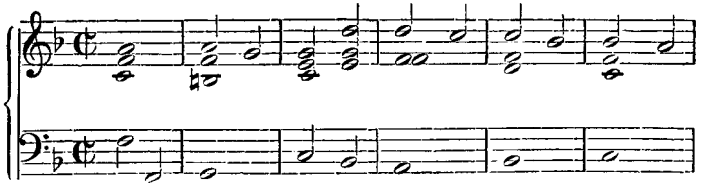

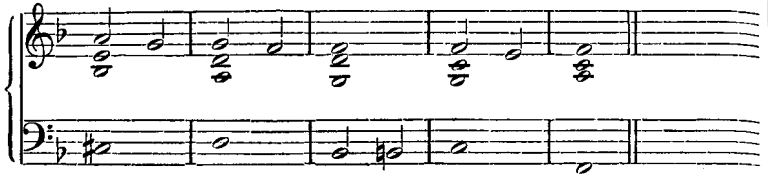

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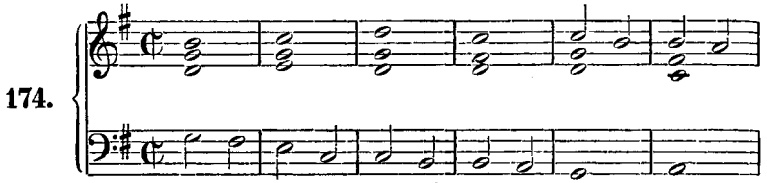

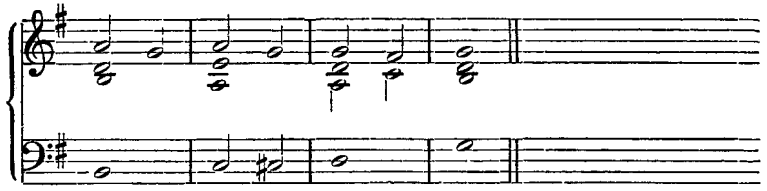

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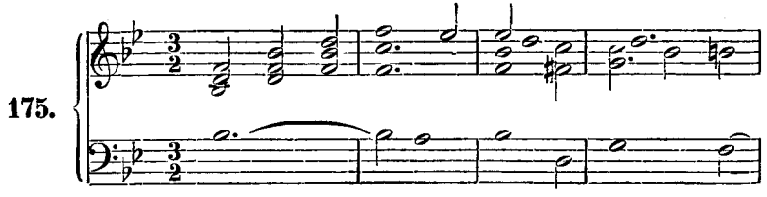
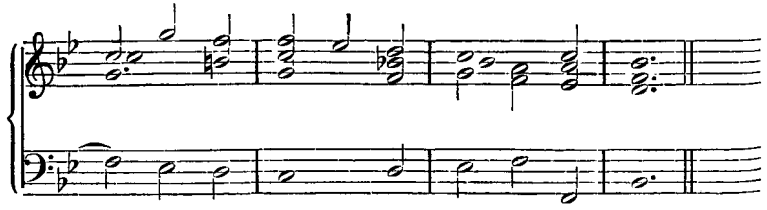
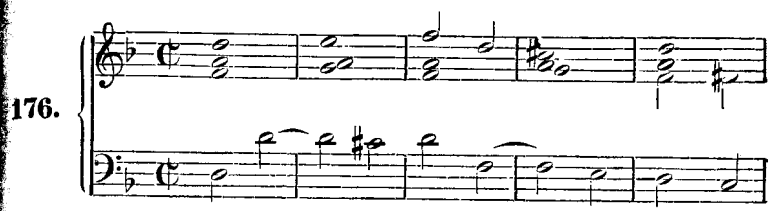
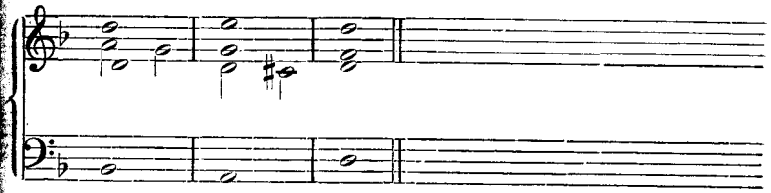




176.





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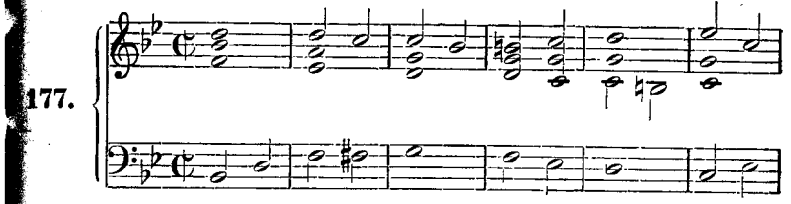

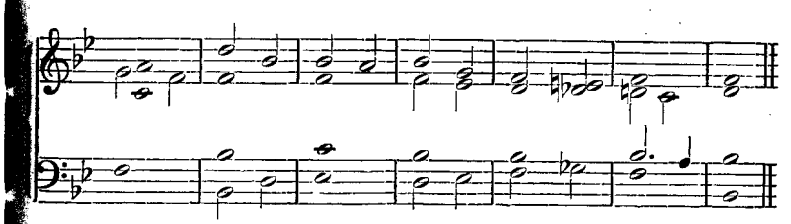

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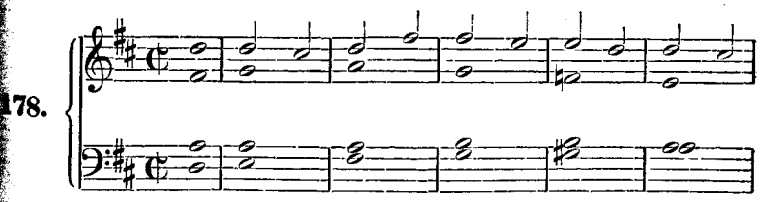

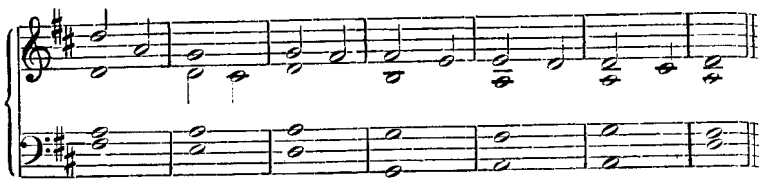

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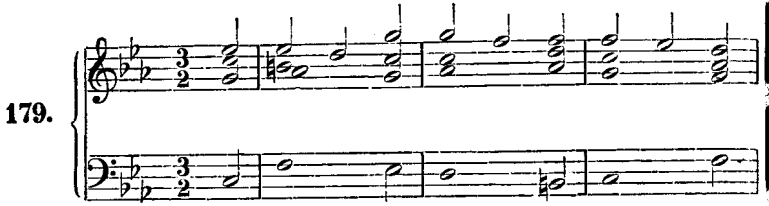

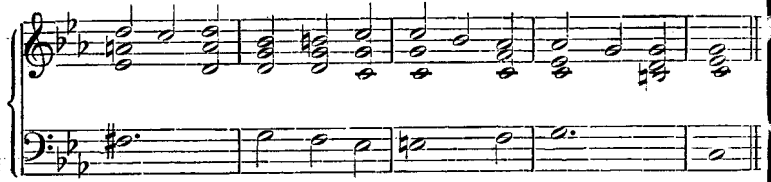

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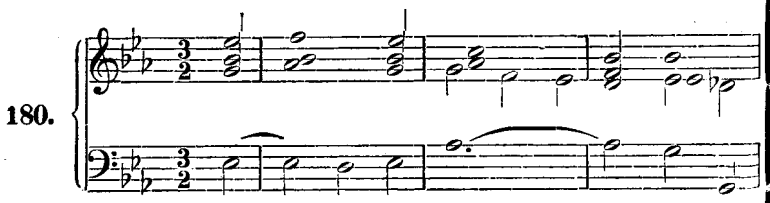

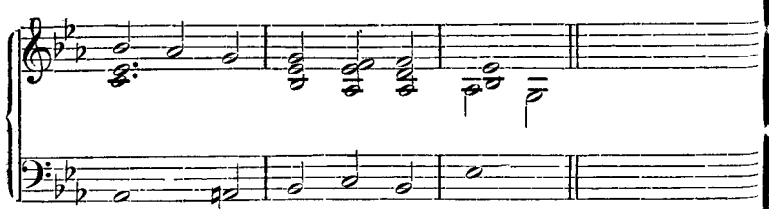

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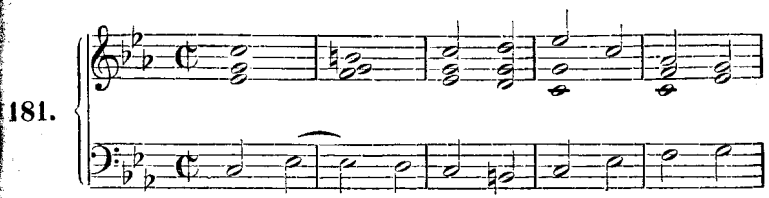

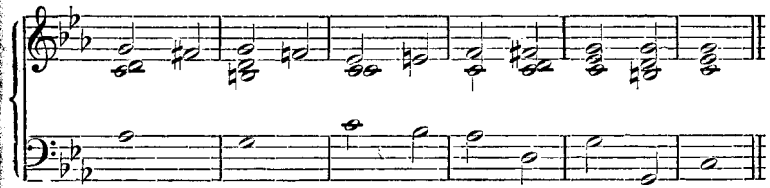

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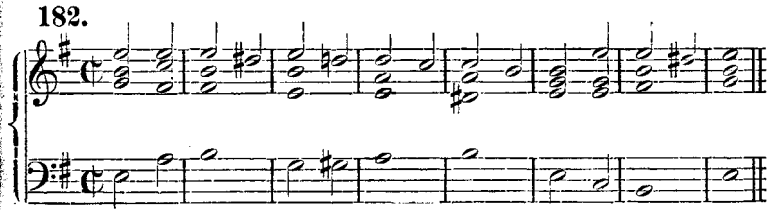

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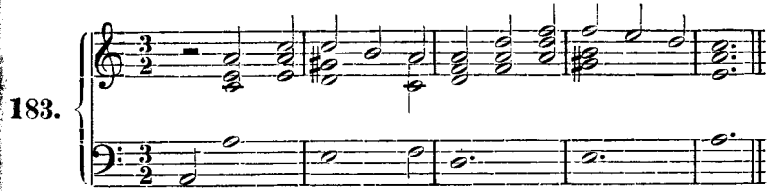
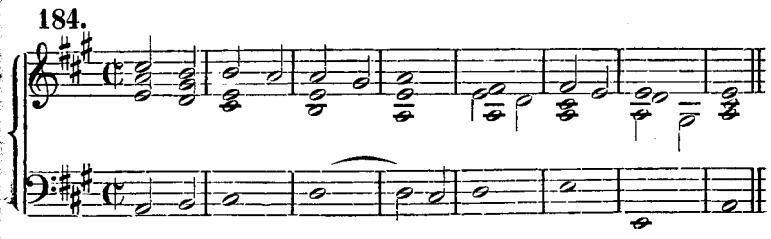


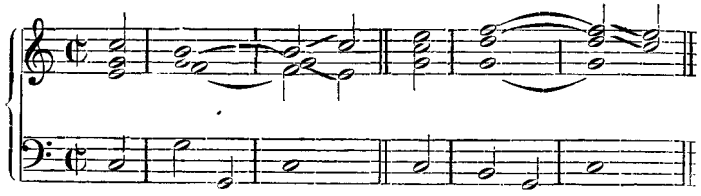
184.



TWO- AND THREE-VOICED SUSPENSIONS.

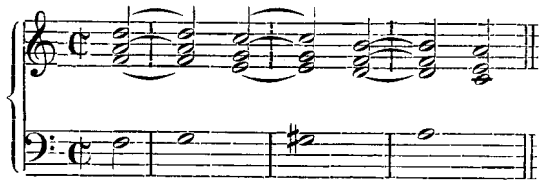
Two- and three-voiced suspensions are still more dissonant than single suspensions. In the double suspension the two voices are led downward as in the single suspension; though often one voice ascends, and the other descends.

185.



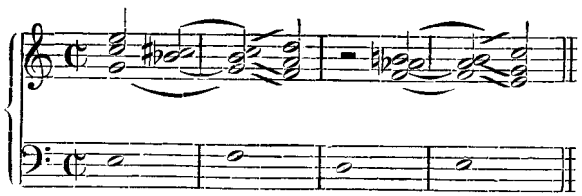
In the three-voiced suspension all three voices may be led downward as in Ex. 186.

186.



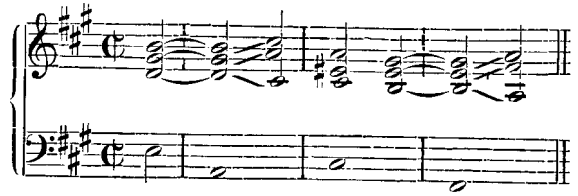
More frequently two parts are led downward and the third voice upward (see Ex. 187).

187.



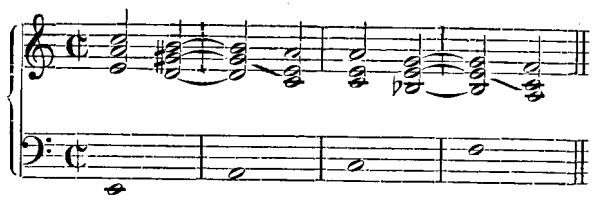
In some cases two voices are led upward and the third downward (Ex. 188).

188.



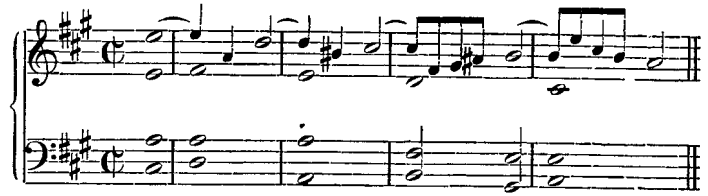
The tones of the suspension sometimes skip downward to the resolution as in Ex. 189.

189.



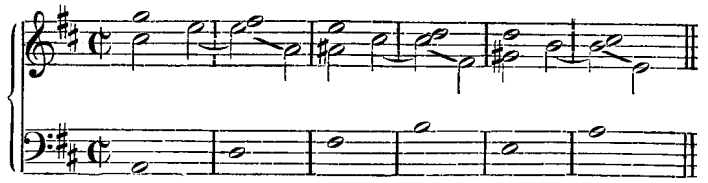
Between the suspension and the resolution one or more tones may be inserted; these tones may be harmonic or foreign to the chord of resolution (see Ex. 190).

190.



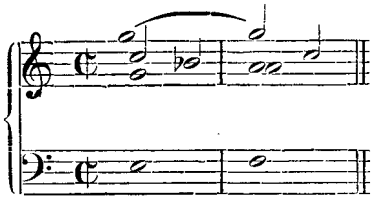
In three-part writing the tone of resolution may sometimes be omitted by the tone of the suspension skipping to some other tone in the chord of the resolution (Ex. 181).

191.



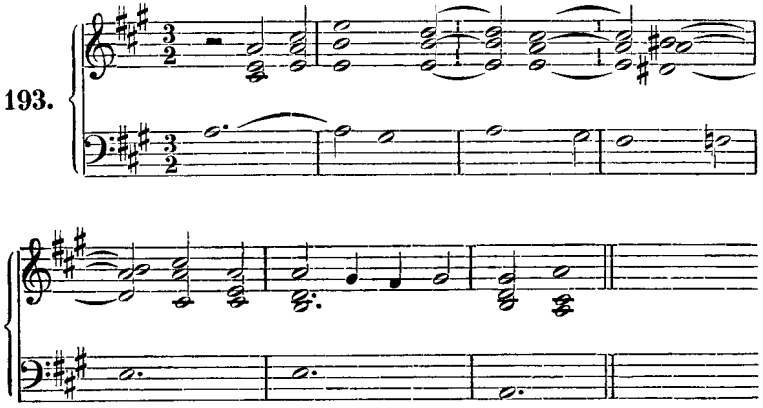
This can also occur in four-part writing as in Ex. 192.

192.

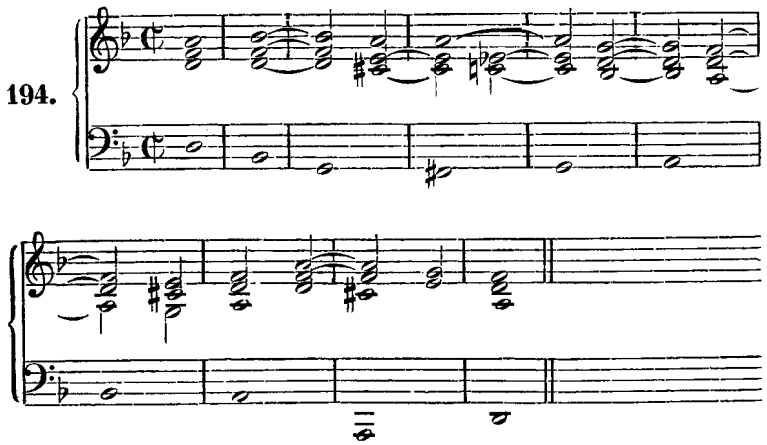


Examples 193 to 199, will furnish practice in hearing suspensions.

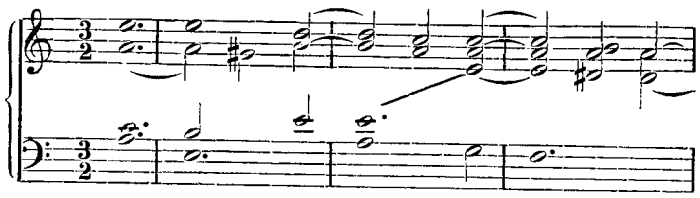
193.

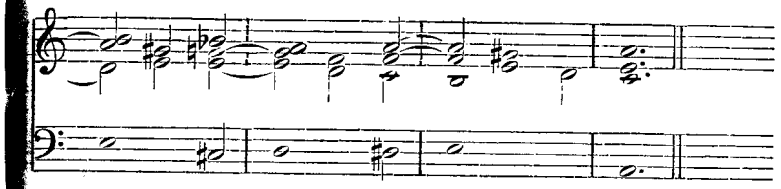


194.



195.





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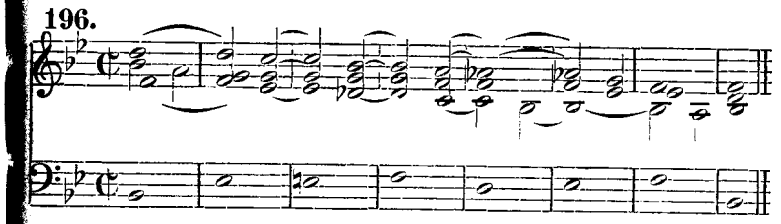

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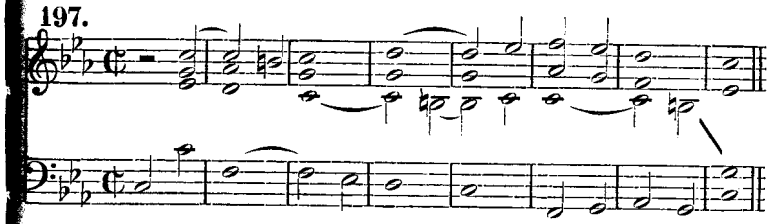

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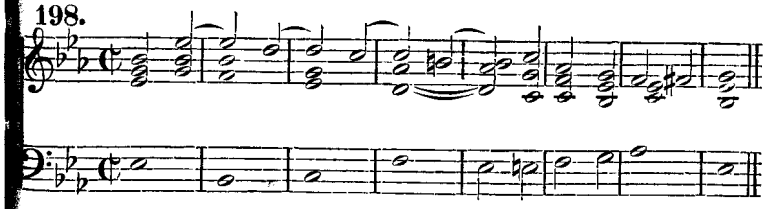

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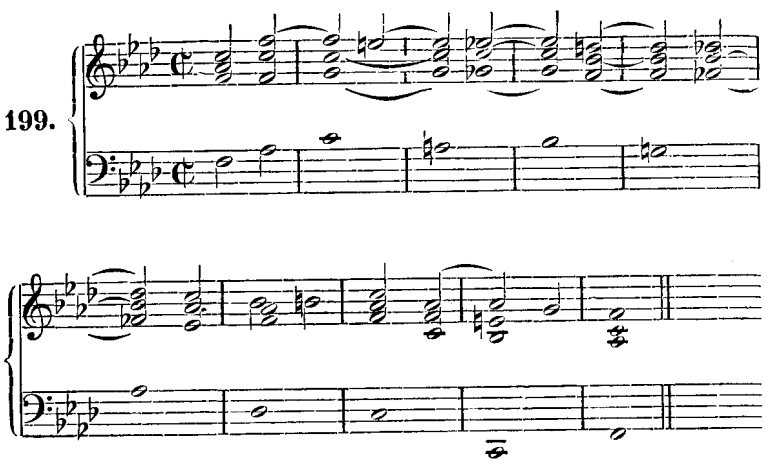
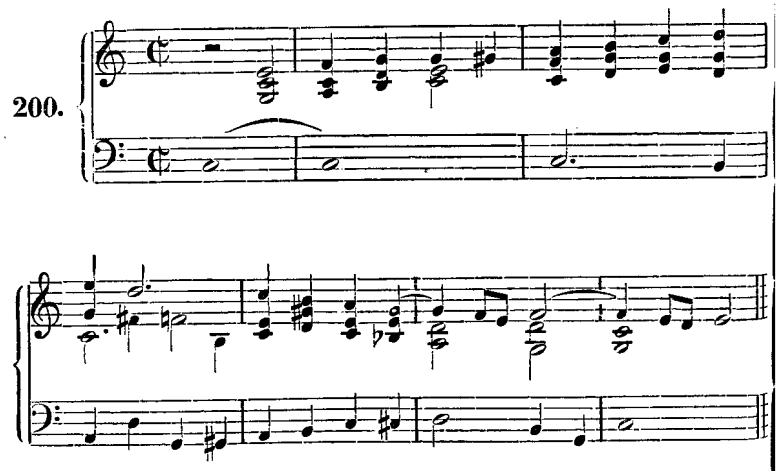


DISSONANCES NOT PREPARED.

Dissonances not prepared are the passing and changing notes, and may enter without preparation.

Changing notes and unprepared suspensions occur more often in free style than in strict contrapuntal writing. A few examples are given for practice in hearing unprepared dissonances.

200.



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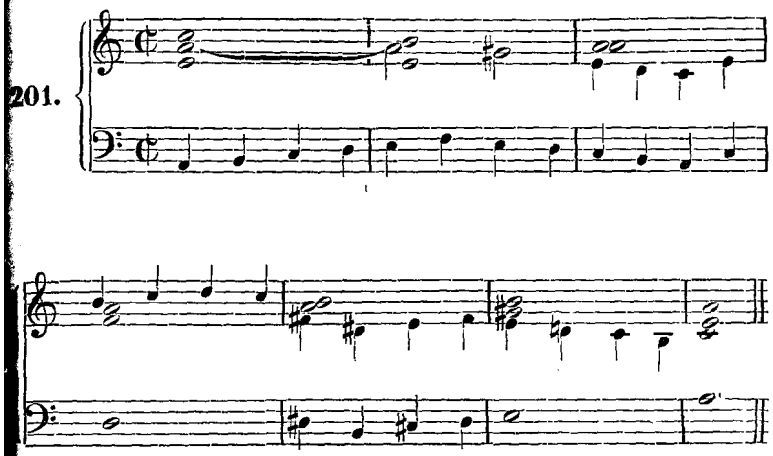

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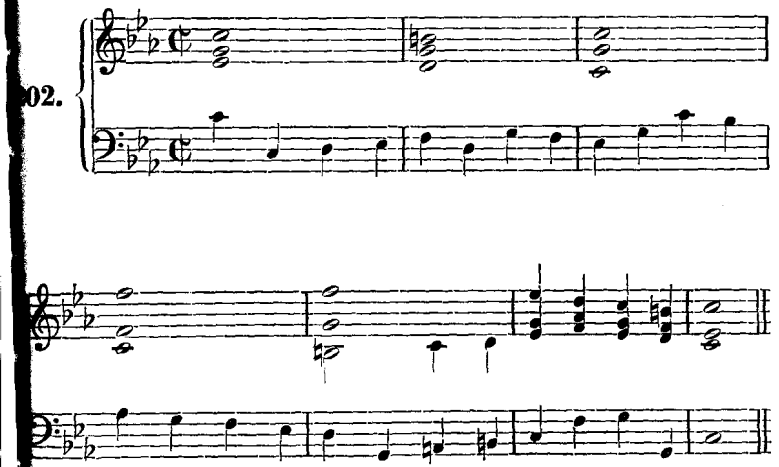

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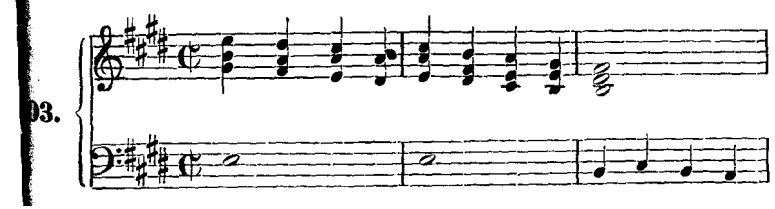

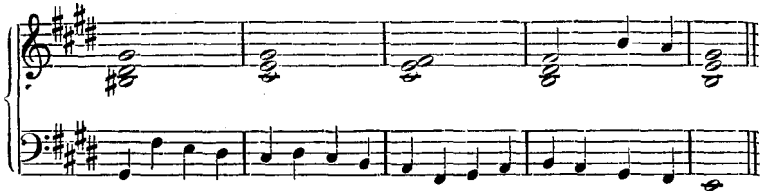

After the pupil has learned to hear the consonant and dissonant chords, together with their various accidental formations, and their connections in the examples contained in this book, he will be able to follow intelligently, and to perceive clearly, any piece of music, which he may hear. It will not be difficult for him to distinguish the tone-coloring of the individual instruments used in the orchestra, even in ensemble-playing.

If one would have more than a vague idea or impression of music, they should hear it in this way, and it is not an impossibility by any means, to accomplish this end. By hearing a piece of music in this manner one will acquire a real knowledge of it; his musical intelligence will grow; he will be greatly benefited musically; and by perceiving music in such a way, he will have the purest enjoyment, and the greatest delight of art.

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