NEW AND ENLARGED EDITION.

LOGIER'S SYSTEM

OF

THE SCIENCE OF MUSIC,

HARMONY,

AND

PRACTICAL COMPOSITION.

PRICE SEVEN SHILLINGS AND SIXPENCE.

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LONDON: BOOSEY & CO., 295, REGENT STREET.
NEW YORK: WILLIAM A POND & CO

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A BIRD'S EYE VIEW

OF THE

RUDIMENTS OF MUSIC,

AND AN

EXPLANATION OF MUSICAL CHARACTERS,

BY

JOHN GREEN.

Preliminary information intended to precede *Logier's System of the Science*, supplying all that is necessary to be known before studying that work.

It is the written language of music which we here propose to explain, and of that merely and simply the *characters* employed in writing it. Many different nations employ, in writing their language, characters peculiar to themselves: the Roman character is very generally employed by European nations, America, &c.; but there is no one universal character, any more than there is one universal language, *excepting only that of music.* Painting and sculpture are, indeed, universally understood, as they closely imitate Nature; but the written language of music is completely artificial; and its general adoption is the strongest proof of the excellence of the invention, at the same time that it is the most happy means of extending throughout the world a knowledge of this softener and solace of the human race.

Let us take up a music-book—we see a page filled with various characters, lines, and points, utterly unintelligible to the uninitiated, although the practised musician will read and understand it, nearly as well, as if he actually heard the very sounds therein depicted.

We see the same characters pervade every music-book, whether written for one nation or another, or for any of the various musical instruments or voices. We consequently conclude that these characters are suited to all the circumstances incidental to written music, and that they are so contrived as to be read by every musical nation.

Let us now examine more closely into this page—first observing what are the most striking peculiarities, the characters most conspicuous and most frequently employed.

The most remarkable circumstance is the continual employment of the five lines ruled across the page: upon these five lines are written all the other characters; for this reason they are called the *Staff* (in French—La Portée), as bearing all the notes in music. *Notes!*—What are they? A bank note is the *representation* of a sum of money; a musical note is the *representation* of a musical sound.

Those are notes which you see written upon the staff. *Some of the stems are turned up, and some down;* this is of no consequence whatever, being merely a matter of convenience in writing. *Some of the heads are white, and some black;* this applies only to the *length of time* which each note shall continue to sound.

Then again, some of the stems are returned once, twice, or thrice—or several stems are attached together by one, two, or three marks; all this applies also—*only* to the length of time which each particular note should be heard.

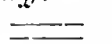
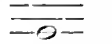
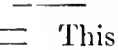
In fact, the essential point is only the exact situation of the *head* of the note upon the staff, *i. e.* upon or above what line it is written.

But, after having ascertained this, it is a natural question—*What* sound does the note then represent? Only imagine how extremely difficult it must once have been to describe, in a letter to a friend, any particular sound: you might send something which would produce the same sound, but you could not describe it in words without some such invention as this, the value of which, on a closer examination, you will be able to appreciate.

Let us see how, by means of this staff, we are enabled to *note down* any—nay, every sound.*

But first—*How many sounds* are there? And how have we agreed to name them? A stranger will be surprised to hear that there are only *seven* musical sounds, which are distinguished by the first seven letters of the Roman Alphabet, ascending thus, step by step: A. B. C. D. E. F. G. called a *scale*,† also sometimes *gamut*.‡ If we ascend still higher, the sounds will only be a repetition of these first seven, but more acute, shriller, or, as we may say, smaller (a. b. c. d. e. f. g.); and thus we may continue to ascend to the highest conceivable sounds, which will only be miniature likenesses of some of the original seven. As the notes of this scale descend, the sounds represented are lower, deeper, more grave, &c.

Well then, here is a *note* . What *sound* does it represent? Certainly *none* in particular. Because it is *not written upon the staff.*

Let us place it on the staff:  Here it is written on the second line. (These lines being always counted upwards.)  What note is it now? That is still a mystery;—but we will furnish a *key* to it.  This new character the French call *clef*, or key. It was originally a  and still bears some resemblance to it.

What sound does the note above written now represent? G—because it is written on the second line, with the G clef placed on that line.

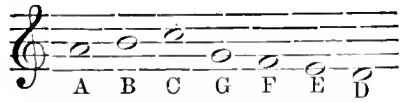
This G clef then, on whatsoever line it may be written, determines the name of every note which may be written upon that line. Were this clef placed on the first line, a note written on the *first* line would be called G; but in this country it is generally placed upon the second line; and we will shortly enquire into the reason for this preference.

* This word must always be understood as a *musical* sound.

† From *Scala*, a ladder or staircase.

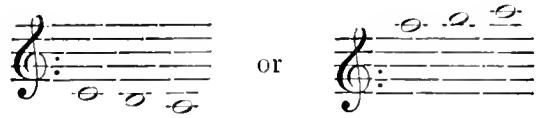
‡ From *Gamma* (the Greek letter G) and *Ut*, the Latin syllable used, in singing, for the note C.

The situation of G (the last of the seven sounds) being thus determined, the Musical Alphabet commences with the note immediately above it, thus:—



This principle being once adopted, we may ascend or descend still further, according to the compass of different voices or instruments.

If we wish to represent sounds lower or higher than the staff of five lines will admit, it is evident that we shall be obliged to enlarge the staff by adding more lines; and it has been found convenient, when more are wanted, to make them *legère*, or light lines (*ledger* lines), to be used only for the particular occasion, preserving the staff apparently of five lines only, thus:—



Even after all this, we require something further—something to fix and determine the actual sound or pitch of some one note, from which we may find the rest.

In ancient choirs, boys and females were supposed to sing easily only the notes contained within the Treble* or G staff, *i. e.* not ascending higher than G, nor descending lower than D.



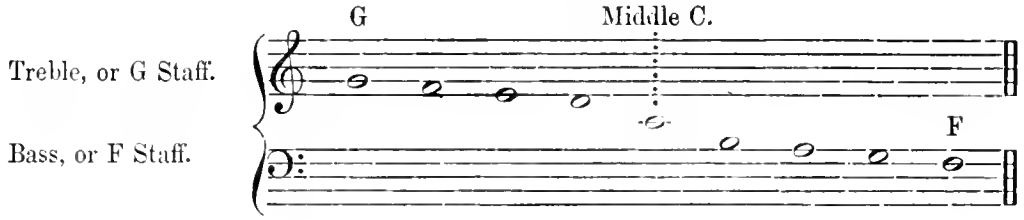
This is something towards the point, but still a very doubtful mode of deciding the pitch, though for a long time the best that could be had.† Afterwards, by some fortunate concourse of circumstances, all nations adopted the same arrangement of the keys of the harpsichord (pianoforte) and similar instruments; and from frequent communication, artists of every country constantly *comparing notes*, all these instruments are found to be constructed and tuned so as to vary very little from one and the same pitch; thus, by a reference to the pianoforte, we are enabled to describe, with sufficient accuracy, any particular sound.

It will, perhaps, be sufficient for our present purpose to state, that, before the addition of the extra keys, the key in the *middle*—equally distant from both ends of the pianoforte key-board—was C (called *Middle* C); and the note which represents it is written upon a line exactly in the

* In early times of counterpoint, voices of different compass were classed in four distinct divisions, at the distance of a third above each other, expressed by the bass clef placed upon four lines, one immediately above the other: the lowest of these was called the *Tenor*, the next *Contra Tenor*, the third *Motetus*, and the highest Triplum, or Treble; of which latter term this was the origin.

† We are now enabled to ascertain precisely a pitch, which must be the same all over the world. It is known that a *musical* sound may be produced by alternately stopping and opening a current of air with sufficient rapidity; and as the rapidity is increased, so is the *pitch* of the sound elevated; so that if 200, in a second of time, produces a certain sound, 400 will produce its octave above, and *vice versâ*.

middle between the treble staff and the bass staff. The bass clef we have not yet noticed; but here it is, exhibited at the commencement of the lower staff:—



This Bass Clef was originally an *F*, since corrupted in its shape; and it may be placed (like the G clef) upon *any* line, deciding the name of any note there written to be F; but its situation on the *fourth* line is preferred for the same reason that the G clef is placed on the second, that is to say, in order that a regular continued scale may be written from the highest note to the lowest, by bracing together two staves, as is usual for music intended for the pianoforte or any other instrument, comprising so extensive a compass.

Middle C here becomes a conspicuous note, and we find it generally referred to where precision is necessary: a lady is rarely required to sing any note lower, and a gentleman with a bass voice is as rarely required to sing any higher.

These two clefs, the Treble and the Bass, would evidently answer every purpose; and it is only to spare the trouble of using both, that *another clef* has been employed, for voices whose compass is immediately *between* the bass and treble, for which, without this contrivance, either both clefs must be used, or too many ledger lines, thus:—



Therefore a character was devised,  and sometimes , to represent middle C, 

On whatsoever line is placed this character (which is called the C Clef), on that same line must be written the note intended to represent the sound, *middle C.*

If this clef should be placed as above (on the middle ledger line), it would be unnecessary, *middle C* being written upon that same line if either the treble or the bass clef be used; but if we

place this C clef upon the first line, then *middle C* must be written two notes higher than with the treble clef, and every other note, of course, the same: in such case, the above Example would be written thus:—



The two latter are the situations in which this C Clef is most commonly used.

It may be thought that too much has been said regarding this C clef—but its employment is a subject of much public discussion at the present moment, and is well deserving attention.

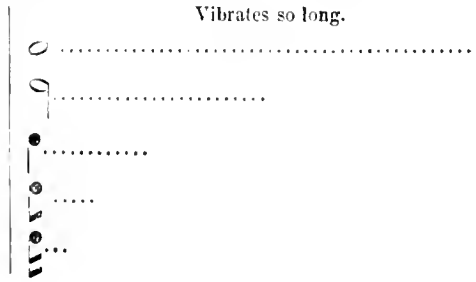
It will be borne in mind that our object is merely to make the reader acquainted with the characters employed in writing music. Scarcely any thing more than what we have already noticed was necessary for primitive Psalmody, consisting of a succession of simple notes, all of equal length; but when it was found expedient, for melodious effect, sometimes to dwell longer upon one note than another, it became necessary to measure the time, and decide how much should belong to each particular note. Many contrivances were resorted to, but the plan now adopted is in use over all the civilized world, from its simplicity and the ease with which it is written, thus:—

A Semibreve || 𝅝 is our longest note, and may be held (*i. e.* the sound may be continued) as long as the performer or composer pleases.¶

A Minim 𝅗𝅥 is held only half the time of a semibreve.

A Crotchet ♩ half the time of a minim, and

A Quaver ♪ half that of a crotchet.



Even in modern Psalmody, we never see the time subdivided further than this; but having once established the principle, that half a crotchet is represented by returning the stem once, we

* *Soprano*—from Supra, upper; for the highest voices.

† *Mezzo Soprano*—almost the highest; now nearly in disuse.

‡ *Counter Tenor or Alto*—a man's voice; higher than the tenor; sometimes, a female voice lower than usual.

§ From Teneo, I hold. Formerly, the tenor was considered the chief part, and usually sustained the subject of the air.

|| The old Notes were A Large, A Long, A Breve or Short, and this Semibreve or Half a Breve. The improvement upon the points of Guido is attributed to John de Muris, an advocate of the Parliament of Paris, in the 14th century.

¶ Maelzel's Metronome (or Time Measurer) enables us to mark precisely the degree of rapidity intended, instead of employing the vague terms, Andante, Allegro, &c, still partially in use. Indeed, a yard and a half of fine string, with a weight at the end, would form a pendulum sufficient for the purpose, the wall upon which it may be hung being graduated to mark the various lengths required. Another is a deal rod with a scale marked upon it, and having a moveable weight.

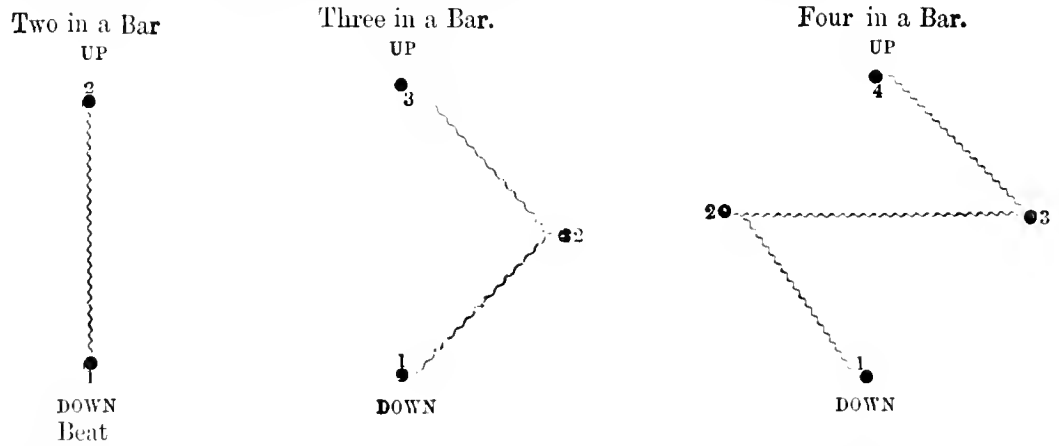
may subdivide that again by making two returns and that again by a third and so on without limit. When several notes of the same kind successively occur, they are, as may be said, tied together by the tails.

A quaver is equal in time to two *semi*quavers (or *half* quavers) and it is also equal to four demi-semiquavers

After having thus contrived to indicate by the *shape* of the note the proportionate length of time belonging to it, we might suppose that nothing further was necessary; and, indeed, it was some time before *Bars* (which we perceive drawn across the staff) were in general use.*

They are found, however, to assist the performer very much; especially in concerted pieces, where several persons perform together in concert: a director is enabled to keep the whole together, by audibly or visibly marking the commencement of each bar, which is called *beating time.*

The method of beating time with the hand may be thus explained:—

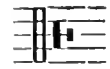


Whatever number of notes are contained in a bar (*i. e.* in the space between two bars) must, in the performance, occupy exactly the same time as those in any other bar in the same piece.†

A *Double Bar* denotes the end of a strain: that strain must be repeated if the double bar be dotted on the left hand or This repeat generally includes all as far back as to the next double bar, which, in this case, will have dots on the right hand, to give an early intimation but, if there be any doubt, composers give some further directions, as Da Capo (to the head), or thus D C also sometimes thus S *Al Segno.* back to this sign.

* The old madrigals were written entirely without them.

† The commencement is sometimes an imperfect bar, which will be found completed by another imperfect bar at the end of the strain, which may thus be repeated without any interruption to the time.

To show the end of the piece, the double bar is sometimes marked thus  and sometimes the word *Fine* is added beneath.

Bars are sometimes *scored* across many staves, even from top to bottom of a page which may contain the parts for many different instruments, all of which are intended to be played together, as in an orchestra. This is called *writing in score*—the several staves being bound together by a *Brace* } and whatever number of staves *that* embraces are considered as only one line of music.

The *Time Mark*, placed at the commencement of every composition, determines what shall be the contents of each bar. Of these there are several in use.

C or ¢ indicates the most *Common Time*, the value of a semibreve in each bar.

Figures indicate fractional parts of a *semibreve*.

$\frac{3}{4}$ means *three fourths* of a semibreve, *i. e.* three crotchets in a bar; one crotchet being *one* fourth of a semibreve.

$\frac{2}{4}$ means *two* crotchets in a bar, and $\frac{6}{4}$ *six* crotchets, &c., &c.

The *eighth* of a semibreve is a quaver; therefore

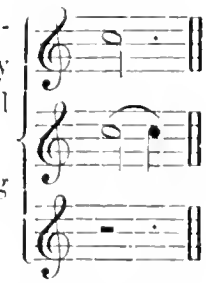
$\frac{3}{8}$ means *three* eighths of a semibreve, *i. e.* three quavers in a bar.

$\frac{6}{8}$ means *six* quavers, and $\frac{9}{8}$ *nine* quavers in a bar, &c., &c.; the upper figure indicating the *number* in a bar, and the lower figure signifying *the description of note*.

Sometimes it is required that one part (or performer) shall remain silent for some portion of the time; therefore, some characters are necessary to represent *silence*, corresponding with the time of the different notes: these are called *Rests*.



A *Dot*, placed after a note or rest, lengthens its time one half. This contrivance was not absolutely necessary; for the same effect would be produced by writing the note which corresponds with half its own length, instead of the dot, and *binding* the two together by a curved line, which is in this case called a *Bind*.



Sometimes two dots are employed (called a *Double Dot*), the second dot being half the value of the first.

A *Sharp*, ♯ raises a note half a tone, and is supposed to have been originally a double *f* (*ff*), the first note made sharp being F.

A *Flat*, ♭ which lowers a note half a tone, is supposed to have been a ♭, round or soft (in French Bè mol), in contra-distinction to

A *Natural*, ♮ (Bè dur) a Gothic *hard* B, which brings any note back to its natural state, after having been made ♯ or ♭.

A *Double Sharp* × raises a note two half tones. A *Double Flat* ♭♭ lowers a note two half tones.

The *number* of sharps or flats, placed at the beginning of a staff, is called the *Signature*, as it is the *sign* by which the key or scale is known; if there are none, the composition is said to be in the natural key, and would be played on the white keys only of a pianoforte. It may be said to be only by accident that these characters are made use of any where, except at the commencement of the staff; when they do thus occur, they are called *Accidentals.*

Each ♯ or ♭ in the signature affects the note throughout the piece.

Many of the characters which we see in modern Music, are employed to describe the mode of performance—mere matters of taste: *Curved lines* are variously used for this purpose.

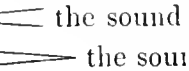
A *Bind*, or *Tie*, is drawn from one note to another of the same sound—in this case, the sound of the first is continued, without intermission, the length of time indicated by the second.

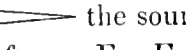
A *Slide*, or *Slur*, is drawn over several different notes, and directs the passage to be played smoothly, without interruption.

A *Slide* over three notes, with a figure 3, indicates that those three notes must be played in the same time as if there were only two

Staccato; when the notes are marked with little *dots* or *dashes* over each, they are to be played short and abruptly, as if you were playing upon *sticks.*

A *Pause* 𝄐 prolongs the note or rest over which it is placed, beyond its proper value; creating a pause in the time at the discretion of the performer.

Crescendo  the sound to be gradually *increased.*

Diminuendo  the sound to be gradually *diminished.*

P—*Piano* or soft. F—*Forte* or loud.

The *Appoggiatura* is a small grace note, written *before* the essential one, from which latter the time given to the appoggiatura must be deducted; this depends entirely upon the taste of the performer, who is not guided by the kind of note in which the appoggiatura is written.

The *Passing Note* is written *after* the essential one, from which it takes its portion of time.

A *Shake* tr. A *Turn* ∾ .—Embellishments difficult to be described by words.

8va.....under Bass Notes, implies that the octaves below should be played with them; when written *above treble* notes, it means that the passage should be played an octave higher.

Marks of abbreviation are generally employed to spare the trouble of writing again the same group of notes or passage, when immediately repeated, thus:  for a group of quavers;  for a group of semiquavers, &c. These, however, are seldom used in printed music.

A SYSTEM OF THE SCIENCE OF MUSIC,

HARMONY,

AND

PRACTICAL COMPOSITION.

THE SCALE, OR MUSICAL ALPHABET.

Music may be considered as a language, whose alphabet consists of only seven sounds; by the different combinations of which, all musical effects are produced.

When these seven sounds are arranged in the following order, they are called collectively

A SCALE.

Ex. 1.

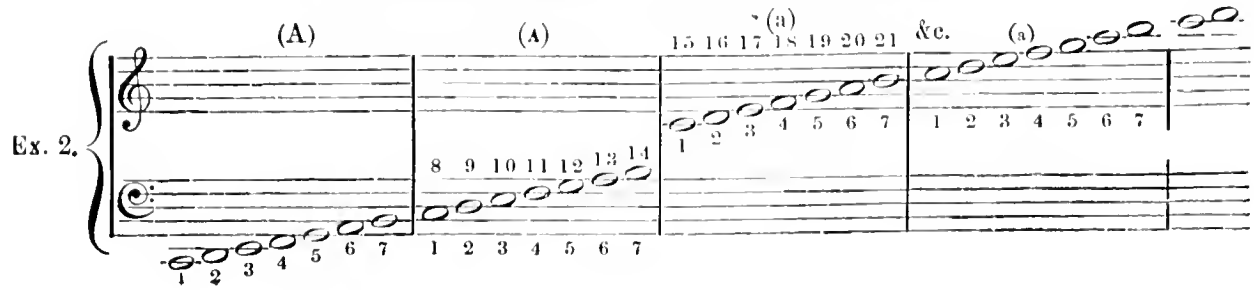


The *eighth* sound (or octave) bears the same name as the *first*, and must be considered merely as a repetition of that sound. In the same manner, were we still further to ascend in the scale, the 9th would be a repetition of the 2nd, the 10th would be a repetition of the 3rd, and thus we might continue to repeat every note of the scale or musical alphabet.

This, perhaps, may be more clearly understood by reflecting that, in ordinary language, we always consider any letter as the same in sound, whether it be written large or small, A a or a; thus the following example (being the notes representing the white keys of the pianoforte) is merely an extension of the scale, or

A continued repetition of the first seven sounds.

Ex. 2.



Now let us minutely examine Example 1, which is called

THE DIATONIC SCALE.

On looking at the keys of the pianoforte, we perceive that between the first note C, and the second note D, there occurs a black key, which is called C sharp.*

Thus, then, we say,—It is a *whole tone* from C to D, because there is a note half way between them, called C sharp.

From D to E is also a *whole tone*, because D♯ occurs between them.

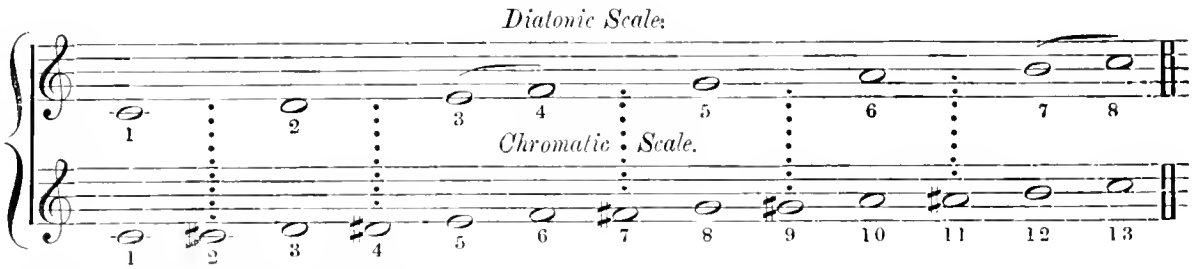
From E to F is only a *half tone* as there is *no* sound between them.

From F to G is a *whole tone*.

And so with the rest, except from B to C, which we find is only a *half tone*.

To show this at one view, let us again write the scale; and, wherever a whole tone occurs, we will insert the sound which intervenes; the whole will then appear, as in the lower staff of the following example, thus forming a scale of half-tones, called the Chromatic Scale.

Ex. 3.



The Pupil is requested to take particular notice how, by the method of conveying instruction here pursued, matter continually produces *new matter*, as is exemplified in the above production of the Chromatic Scale; we see that, in demonstrating the construction of the Diatonic Scale, we have unconsciously, as it were, produced a new one, containing twelve *half* tones.

Definition of the Diatonic Scale.

Should it be asked, "What is a Diatonic Scale?" it may be described thus:—

"*A Diatonic Scale consists of seven sounds, and an eighth, which is merely a repetition of the first. The progression of these sounds is by whole tones and half tones, and the half tones occur between the 3rd and 4th and between the 7th and 8th*†."

We shall in future consider this progression as a model for all Diatonic Scales, at whatsoever note they may commence‡; and

"*The note with which a scale commences we shall call the key note.*"

Each sound of the Chromatic Scale may be employed as a key note§; and as that scale contains twelve sounds, it accordingly gives us twelve key notes, on which we may construct twelve scales.

* When we place a (♯) before a note, that note is raised a *half tone*. The gamut-board would be found useful.

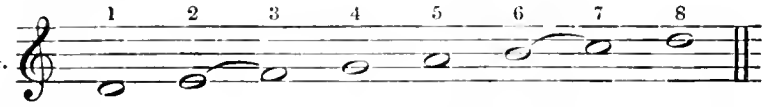
† A satisfactory reason for this progression by tones and half tones, and the foundation on which it is established, shall be given hereafter; at present, the Pupil could derive no advantage from being made acquainted with it.

‡ *To the Teacher*.—This, of course, has reference only to major scales, hereafter to be explained.

§ Here, again, new matter is produced, arising out of the *Chromatic Scale*.

The Diatonic Scale of C (Ex. 3) is called the Natural Scale, because produced from the white keys only of the pianoforte,* in which the half tones are found in their proper places. If, however, we select any other of the twelve sounds of the Chromatic Scale as a *key note*, the half tones of the scale arising from *that* key note will *not* be found in their proper places; for instance, let us select D as a key note, and write the scale as in Ex. 4. If we examine the sounds of that scale, we shall find that (as it stands at present) the half tones *do not* occur where they ought, according to our model; on the contrary, we find them between the 2nd and 3rd, and between the 6th and 7th, as marked by the curved lines.

Ex. 4.

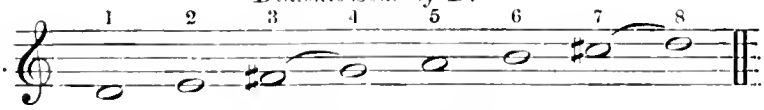


In order to preserve the progression as prescribed by our model, it is necessary to raise the F and C a half tone by placing a ♯ before each of them, and thus the half tones will be thrown into their proper places, and produce the Diatonic Scale of D perfect.

Here we see how the necessity of employing the sharp originated, and why *two* are required in the scale of D.

Diatonic Scale of D.

Ex. 4.



Recapitulatory Questions.

How many sounds are there in the Diatonic Scale? Seven!

How many in the Chromatic Scale, and how do they proceed? Twelve! and they proceed by half tones.

How many keys are there, therefore, as far as you know? Twelve!

Whence do they arise? From the Chromatic Scale!

The Pupil should here form other Diatonic Scales according to the prescribed model, and may be thus encouraged to reflect on its construction: take, for instance, the key of F♯, and having written the notes of that scale, simply as they follow in their ascending progression (that is without sharps), let him be asked to demonstrate that six sharps are necessary to preserve the half tones and whole tones in their proper places; he will reply thus:—

"From F♯ to G is only half a tone; but, as between the first and second must be a whole tone, I will raise the G a half tone." (Here he places a ♯ before G.) "From G♯ to A is a half tone; but it must be a whole tone: I will, therefore, place a ♯ before A. From A♯ to B is a half tone; and *so it should be*. From B to C is but half a tone; I will, therefore, raise C a half tone. From C♯ to D is again a half tone; D must be raised half a tone. From D♯ to E is again a half tone; I shall, therefore, raise E and make it E♯; and as E♯ is the same sound (on the pianoforte) as F, both sounds being represented by the same key,† F will require a sharp in order to raise it a half tone; and thus we preserve the half tone between the 7th and 8th of the scale."

* There was a period when the key board of the organ was not furnished with *black* keys. Emanuel Bach, in his Pianoforte School, says: That his father (Sebastian Bach) told him that there were organs in Saxon time which had no black keys: from which circumstance have arisen the Ecclesiastical Scales. The late Mr. Clementi told the author that he had played upon Spinnets which had only two black keys, viz. F♯ and C♯.

† This is called an enharmonic change, more fully explained in Ex. 10 and 11.

Proceeding in this manner, every scale which the pupil writes may become an instructive lesson for the exercise of the reasoning faculties, which, by being thus early brought into action, will not only produce in him a desire for higher attainments, but encourage and stimulate him to increased mental exertion.

In order that he may acquire the utmost facility in these mental exercises, he must be encouraged to construct those scales which require *double sharps.** In doing this, it is only necessary to keep in mind that the scale of C is *perfect*, requiring no sharp; if we raise the *key note* of that scale a *half tone*, it follows as a matter of course, that each note in that scale must likewise be raised a half tone, in order to preserve the progression of the *original* model; and, as the Diatonic Scale contains *seven* sounds, *seven* sharps will be required. By observing these rules, we come to the conclusion, First: that if we construct a scale which requires *more* than 7 sharps, all *above* that number must be double sharps. Secondly: That as the *first* note made sharp (as in the key of G) was F, so the first note made *double sharp* (as in the key of G♯) must be *F also.*

How many sharps are required in the scale of G♯? (Reflection of the Pupil.) "The key of G has one sharp; but as I have raised G a half tone to G♯, I must add seven sharps; the key of G♯, therefore, has eight sharps."

How many double sharps? One.

What note requires the double sharp? F.

Pursuing the same course of reasoning, we find that the key of A♯ will require ten sharps; and thus we may proceed round the whole circle of keys with double sharps.†

As the perfect recollection of the number of sharps ‡ required in any key is absolutely necessary, and as the difficulty of recollecting them *all* has often been found almost insurmountable, even by those gifted by nature with a tolerably good memory, it is presumed that the following simple and infallible method of overcoming this difficulty cannot be too highly appreciated. The advantages resulting from it, even at the present stage, must be evident to the learner; but they will be still more so when he shall have been introduced to the study of modulation. Indeed, it would be almost impossible to make progress in that branch of the science, unless he were acquainted with this peculiar method. He is, therefore, recommended (above all things) **not to** neglect taking advantage of this happy discovery, which may be learned in half an hour, although the explanation of it in writing appears to require many words.

Easy Method of impressing on the Memory the Number of Sharps *belonging to each Key.*

The *left* hand of the Pupil being held open with the palm turned towards him, and having given the name of C to the wrist, let him call The Thumb . . . G.

The first finger . . . . . D.

The second finger . . . . . A.

The third finger . . . . . E.

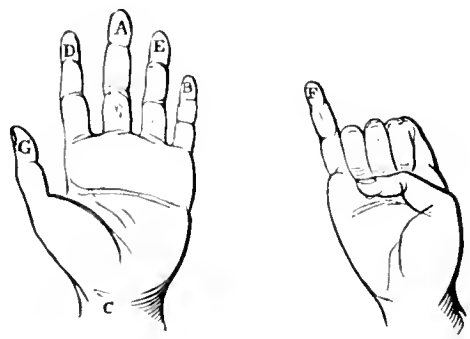
The fourth finger . . . . . B.

The fourth finger of the right hand (to complete the circle) we shall call F.

* To spare the trouble of writing two sharps, a cross (x) is used to represent a double sharp.

† Bacon says "that which goes beyond practice leads to perfection."

‡ As well as *flats*, as shall be shown hereafter



By holding up the thumb of the left hand (G) *alone* (closing the rest of the hand), we are instructed that the key of G requires only *one* sharp.

Without removing the thumb, let the first finger (called D) be added; these *two* fingers point out that there are *two* sharps in the key of D.

When the second finger A is added to the other two, we are reminded that A has *three* sharps.

How many sharps are there in the key of E? (Here the Pupil adds the third finger E to the former and answers) *Four.*

How many sharps in the key of B? (Here the fourth finger is added and the answer is) *Five.*

How many in F♯? The fourth finger F of the *right* hand is added, and the answer is) *Six.*

How many sharps in C? (Pointing with the *right* hand to the wrist of the *left*, the Pupil answers) *None!*

Thus, the *number* of sharps required in each key has been discovered; but how shall we ascertain *which* of the notes of the scale require sharps? The answer is, By precisely the same method.

How many sharps in the key of G? One.

Which note requires the sharp? (Hold up the fourth finger of the *right* hand, and answer) F!

How many sharps in the key of D? (Answer) Two.

What notes require sharps? Answer (holding up the fourth finger of the right hand) F, (and then pointing to the left wrist) and C.

The next (according to the *order* in which the *notes requiring sharps* present themselves) will be G, D, A, E, B; and should we proceed to *double* sharps, the first double sharp would be F; then C, then G, D, A, &c., &c.

It will be observed that hitherto sharps only have been used; the Pupil shall now be introduced to *flats* also. Preparatory to which, however, it will be necessary that he accompany us once more back to Ex. 3, and examine it.

There, because the Diatonic Scale *ascended*, it produced an *ascending Chromatic Scale;* and as the half tone which followed C could be no other than C♯, &c., &c., *these* auxiliaries, called *sharps*, first naturally presented themselves. But suppose we were to *reverse* this order of things, and make the Diatonic Scale *descend*, what would be the result? A *descending* Chromatic Scale.—

And, as in the *ascending* Chromatic Scale, the notes producing the half tones were *raised* by sharps; so, the notes in the descending Chromatic Scale producing the half tones, must be *lowered* by *flats*. This points out the use of flats.

Ex. 6.

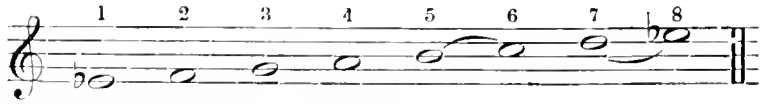


Now let us examine the above Descending Chromatic Scale.

From C to B is a half tone. From B to A is a whole tone; the black key which lies between them being half a tone below B, must be called B♭, (instead of being called A♯, as in the *ascending* Scale.) From A to G is a whole tone; the black key which lies between them is here called A♭ and not G♯. And thus proceed with the rest.

Each of the sounds of the *descending Chromatic* Scale may (like those of the *ascending*) be employed as a *key-note*. Let us take E♭ as a key, and proceed in the examination of the scale; as follows:—

Ex. 7.



What is the distance from E♭ to F? A whole tone.

Is this correct? Yes. Why? Because between the first and second must be a whole tone.

From F to G? A whole tone. Is this correct? Yes. Why? ———

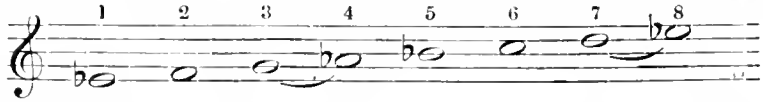
From G to A? A whole tone—Is this correct? No.

Why? Because between the 3rd and 4th should be a half tone.

How shall we reduce it to a half tone? By placing a flat before A.

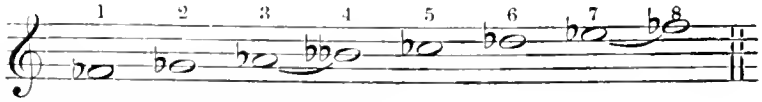
Thus proceeding with the rest, the scale of E♭ is perfected, as in the following Example:—

Ex. 8.



As the formation of a scale requiring flats must now be clearly understood, no difficulty can possibly arise in writing a scale on any given key note. In the following example a Double Flat is required.

Ex. 9.



Why is a double flat placed before B?

Because it is necessary to lower the B two half tones; from A♭ to B♮, being *three* half tones, whereas it should be only one.

Thus the pupil may proceed through all the scales with single and double flats.

Method of impressing on the Memory the Number of Flats *belonging to each Key.*

The order of the *flats* will be found to be merely the *reverse* of that of the sharps; that is: instead of proceeding from the left hand to the right, we commence with the *right* and proceed to the *left;* still, however, calling the fingers by the same names as heretofore. Thus, then, beginning with the fourth finger of the right hand F (not F♯), we next take the fourth finger of the left hand, which shall now be called B♭—then E♭—then A♭—and so on with the rest.

The following interrogatories will render this matter clear:—

How many flats are required in the key of F? (The Pupil, holding up the fourth finger of the right hand, answers) One flat.

What note requires to be made flat? (Here the Pupil, holding up the fourth finger of the left hand, answers) B♭.

How many flats in the key of B♭? (The Pupil, holding up the fourth finger of the right hand and the fourth finger of the left hand together, answers) Two flats.

What notes require flats? (The Pupil, holding up the fourth and third finger of the left hand, answers) B♭ and E♭.

What key has six flats? G♭.

What notes are flat? B♭, E♭, A♭, D♭, G♭, and C♭.

The *Double flats* are found in the same manner as the double sharps, viz., by adding seven. For instance: the key of F requires one flat, therefore the key of F♭ will require eight flats;—and as the key of E♯ has three flats, so, on the same principle, the key of E♯♯ has ten.—The first note made flat is also the first to be made *double* flat.

ENHARMONIC CHANGES.

In analyzing the Diatonic Scale, ascending (Ex. 3), and descending (Ex. 6), we find that each sound on the pianoforte may have two different names; for instance, the black key between C and D is, in the *ascending* scale, called C♯ (being a half tone above C); but in the *descending* scale, the same key is called D♭ because it is the half tone below D.—The half tone between D and E in the *ascending* scale is called D♯, because it is the half tone above D; but, in the *descending* scale, the same key is called E♭. This is called an *Enharmonic* Change.

Whole scales may thus be changed enharmonically, as in the following Example:

It is of importance that the pupil should here be made to understand, that though the sounds of both these scales are the same*, yet that the reading and playing of the scale of D♯ (being encumbered with nine♯'s) is attended with difficulty; whilst the scale of E♭ may be performed with comparative ease †.

Ex. 10.



* But only on instruments with keys, like the Pianoforte, Organ, &c.

† This shows the use of Enharmonic Changes, and the reason why composers employ them in their works.

For general purposes, this explanation might suffice; but, in order to show the inquiring and more advanced pupil the ground upon which these Enharmonic Changes, and the necessity of employing them, rest, let him examine the following two rows of figures.

The *upper* row, with sharps proceeding from left to right, represents the twelve intervals of the ascending Chromatic Scale; while the *lower* row, with flats proceeding from right to left, represents the twelve descending intervals of that scale.

Ex. 11. { *Sharps*.... 0. 1. 2. 3. 4. 5. (6.) 7. 8. 9. 10. 11. 12.
Flats..... 12. 11. 10. 9. 8. 7. (6.) 5. 4. 3. 2. 1. 0.

If we examine the upper row of figures, it will be evident that the key of C (marked by a cypher when enharmonically changed, will become D 𝄫, and require 12 flats.

The key of G with one sharp ,, A 𝄫 ,, 11 flats.
The key of D with two sharps ,, E 𝄫 ,, 10 flats.
And thus continue to the end.

Now commence the exercise from right to left, with the lower row of figures representing the descending Chromatic Scale with flats:

The key of C, enharmonically changed, will become B♯, and require 12 sharps.
The key of F ,, ,, ,, ,, ,, E♯ ,, 11 sharps.
The key of B♭ ,, ,, ,, ,, ,, A♯ ,, 10 sharps.

Thus it is clearly shown that any key with a certain number of sharps will, when changed enharmonically, require as many flats as will make that number *twelve*. The key of C♯ having *seven* sharps, its enharmonic change D♭ must have *five* flats. The key of D♯ having nine sharps E♭, its enharmonic change must, therefore, have three flats. We find that when we arrive at 6 from opposite points, the sharps and flats are equalized; for G♭ requires six flats, and F♯ requires six sharps; therefore to commence a composition with more than six flats or six sharps would be useless; and to change enharmonically a key with *few* flats or sharps to one requiring *many*, would be absurd; because the practical use of enharmonic changes is to prevent, in the course of a composition, the accumulation of either sharps or flats; a precaution more especially necessary when extraneous modulations are introduced.

Reflections.

Before we proceed further, let us reflect how, from the simple investigation of a Diatonic Scale, new matter has presented itself at every step—springing up, as it were, almost spontaneously. Let us examine the root from which all the matter in the preceding pages has emanated, and the process by which we have been enabled to trace that matter in its development.

It is first asserted that the Diatonic Scale consists of tones and half tones, and that the half tones must be between the 3rd and 4th, and the 7th and 8th. We are desired to prove this fact. In doing so, we discover a new scale of half tones, twelve in number, which we call a *Chromatic Scale*, in the formation of which it is found necessary to employ certain agents to raise some notes a half tone; these we call sharps. We have given a name to the *first* sound of the original scale; we have called it a *key note*. We find that *each* note in the Chromatic Scale may be employed as a *key note*, upon which a scale may be constructed. Thus, *twelve* scales are immediately presented to our view. But here we find that when one of these notes is selected as a key note the intervals of the scale arising from it do not proceed

according to the original model. The necessity, therefore, of employing a greater or lesser number of sharps, according to the key which may have been thus selected, is evident.

Presently we find that a scale may *descend* as well as *ascend*.

A *descending Chromatic Scale* is thus produced. A new agent must now be found which shall *lower* a note half a tone, and thus we are introduced to the flats. We find that each note of this *descending* Chromatic Scale also may be selected as a key note upon which a scale may be constructed. In some scales double sharps and double flats are required, which render the reading of music difficult; to avoid which, *enharmonic changes* are found to be necessary.

We have now arrived at the close of that part which treats on the construction of the Diatonic Scale.* The author trusts he may not be charged with having said *too much* upon this subject; for when we consider the innumerable musical works which have already emanated, and are daily being extracted from this inexhaustible source, we are struck with a sense of its importance, which demands our closest investigation, and merits all the attention which we can bestow upon it.

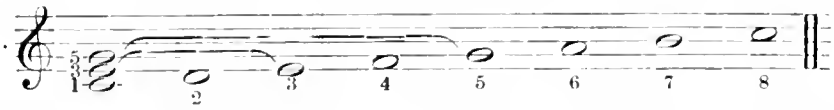
THE COMMON CHORD.

Having already compared the Musical *Scale* to an *Alphabet*, we shall now consider a CHORD as a WORD in the language of music. A combination of letters selected from the alphabet forms a *word;* a combination of sounds selected from the scale forms a *chord*.

Thus, if we select the 1st, 3rd, and 5th from any scale, and write them over each other (as in the following example) the combination of these sounds will form a chord, usually called a common chord.† If this chord be played so that the sounds are heard simultaneously, the effect upon the ear, with respect to music, will be very like that produced, with respect to language, by pronouncing a word after having spelled it; thus, M a n, *Man*.

The Common Chord extracted from the Scale.

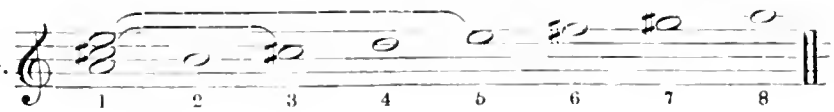
Ex. 14.



Whatever *Common Chord* we propose to write, let us (in order that it may be clearly understood) first write the scale of the key note of that chord with the necessary sharps or flats; and then selecting the 1st, 3rd, and 5th sounds, place them each over the other, as above.

The Common Chord of A extracted from the Scale.

Ex. 15.



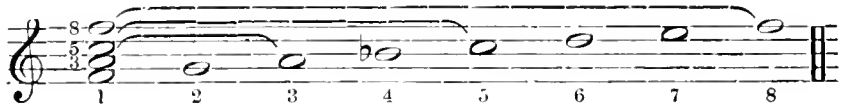
* This subject is more elaborately treated at Ex. 61.

† This is the combination most *commonly* met with. See also Ex. 63, where this combination (as consisting of the harmonics) is shown to be *common* to every musical sound

To the combination shewn in the preceding example, may at any time be added the 8th (or octave), it being merely a repetition of the 1st, thus :—

Common Chord of F.

Ex. 16.



These examples (it will be understood) are only *specimens* of Common Chords, showing the manner of their construction ; it is not expected that the pupil should rest satisfied with these alone as practice ; on the contrary, he should write the scales with single and double sharps and flats through all the keys, and extract the chords according to the rule.

Whilst proceeding with these exercises, let the Pupil *audibly** pronounce each chord, *commencing always* with the *lowest* note ; then the 3rd, and after that the 5th ; thus : the chord of C is C, E, *and* G. Let him not say C, *G*, and E ; for by so doing he will inevitably frustrate a very important object here contemplated, and which in due time shall be explained. Let the common chord, therefore, at all times, *without any exception whatever*, be pronounced in this manner, laying a peculiar emphasis on the word *and*, preceding the last note.

Having attained sufficient facility in extracting the common chord from the scale, the Pupil may write the chord from reflection only ; thus for instance, if the chord of E be required, let him write E, and then at once add the 3rd and 5th to it as they arise : E, G, *and* B (as at I).

Ex. 17.



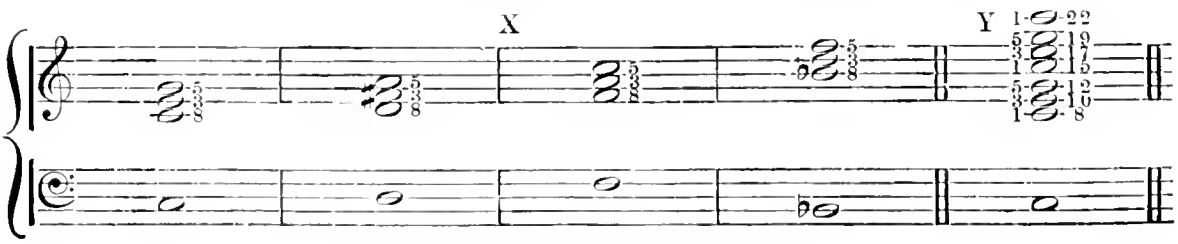
But as the key of E requires *four sharps* ; it follows, of course, that the G in that chord must have a sharp placed before it (as at II) ; thus the chord of E is not E, G, and B ; but E, G♯, and B. The same rule must be observed with respect to all common chords.

BASS OF THE COMMON CHORD.

Every chord is supposed to have a bass, called the fundamental bass, upon which it is founded, and which is always the same as the first note of the scale from which the chord is extracted. Thus the bass to the chord of C is C. The bass to the chord of D is D, &c., &c.

Henceforth the bass notes of the chords shall be written on a separate staff, thus :—

Ex. 18.



* This makes a forcible impression on the memory.

It has already been shown that the 8th sound of the scale is but a repetition of the 1st; and, as the bass may now be considered as representing 1, we shall in future figure the chord 8, 3, 5, as exhibited in the preceding example.*

It will be of very great advantage to the Pupil, in the progress of his future studies, that he should be able to write correctly and without hesitation any common chord proposed to him; and he is strongly recommended to make himself perfectly master of this by frequently writing common chords on basses which he may propose to himself; in pronouncing them, let him be careful to follow the instructions already given for that purpose, remembering the word "*and*" before the *last* note of the chord.

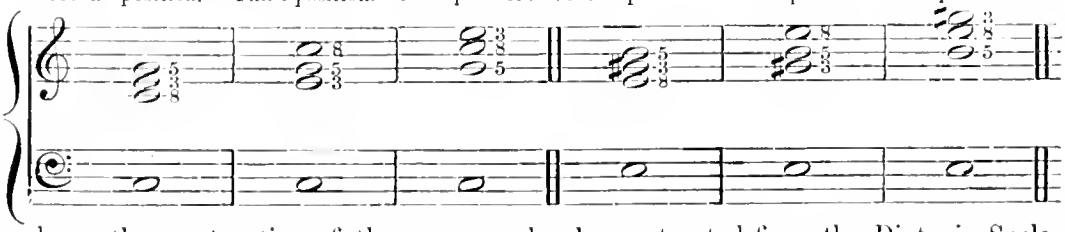
The Three Positions of the Common Chord.

This chord consists of three sounds beside the bass, viz., 8, 3, 5. These three sounds are written over each other, and may change their situations in such a manner that each may alternately appear in the *upper*, *lower*, or *middle* part of the chord.

Heretofore the 5th has always appeared in the *upper part;* and when this is the case, we say the chord is in the 2nd position. When the 8th is in the upper part, the chord is in the 3rd position; and when the 3rd is in the upper part, it is in the 1st position.†

Second position. Third position. First position. Second position. Third position. First position.

Ex. 19.

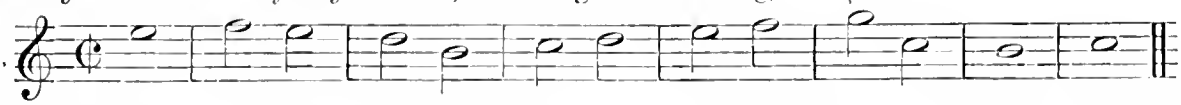


Having shown the construction of the common chord as extracted from the Diatonic Scale, and also its three positions, we shall proceed to point out the method of employing it in composition.

First, let us explain the distinction between MELODY and HARMONY: Although both owe their origin to the same source, and are inseparably united, yet they require to be clearly distinguished.

Melody is a succession of single sounds, ascending or descending, thus‡:—

Ex. 20.



Harmony is a succession of combined sounds or chords, ascending or descending, as in the following example, which exhibits a portion of the preceding melody harmonized.

Ex. 21.



* Should it be asked why do we not figure the several notes of the chord according to their real distance from the bass, viz. 8, 10, 12, as in Ex. 18, Y?—Answer. As the 8th is a repetition of the 1st, so the 10th is a repetition of the 3rd, and the 12th a repetition of the 5th, &c., &c. (See Ex. 2.)

† How this arrangement has arisen will be seen at Ex. 63.

‡ The whole of the Diatonic Scale is a melody, and as such it will be treated when we begin to harmonize.

A scale has been compared to an *Alphabet* (Ex. 1.) A chord to a word (Ex. 14); and if we pursue this analogy a little farther, we may compare a *succession of chords* to a sentence. Now, between the various words which compose a sentence there must necessarily subsist some connexion, in order to produce sense; so it is with a succession of chords; there should subsist some connexion in order to produce a proper effect. The connexion required is, that in an immediate succession of any two chords there shall be found one sound which is common to them both.*

In the preceding Example, at *a*, we perceive, by the curved lines, the links which constitute the chain of harmony. In order that the Pupil may form a just estimate of the necessity of this connexion in a progression of chords, the same melody is exhibited at *b*, accompanied by chords indeed, but without any of the connecting links above mentioned. Let the pupil play these two exercises and compare the different effects.

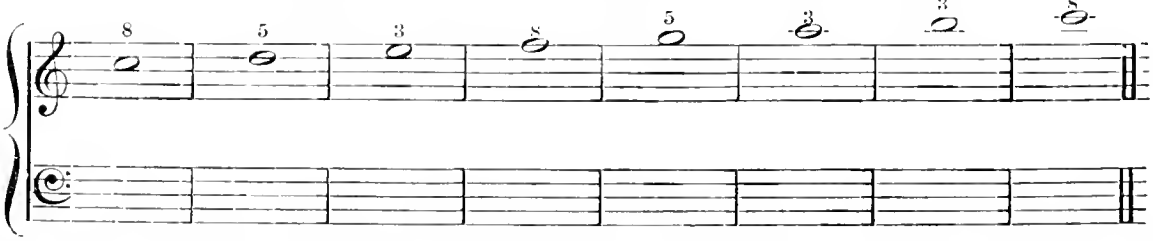
It shall now be shown how a melody may be harmonized so that this necessary connexion of the chords shall be effected; and that each note of the melody shall have its proper chord, and the whole its appropriate harmony.

The first step towards this object is to discover the proper fundamental basses; but how is this to be done? The melody itself shall point out the way; and the basses being thus found, they, in return, shall furnish the harmony with which that melody shall be accompanied.

DISCOVERY OF THE FUNDAMENTAL BASSES.

Let us take the scale as a theme to be harmonized; and, in order to find the fundamental basses, let us write over the notes the figures 8, 5, 3, as in the following example†:—

Ex. 22.



The figure 8, placed over the first note, points out the bass to be an octave or eight notes below; the 5 over D discovers the bass of this note to be a fifth below; and so on with the rest, which when completed, will appear thus‡:—

Ex. 23.



* There are, however, exceptions to this general rule, which shall be explained in the proper place.

† A reason for this arrangement will be seen in the introduction to Modulation, Ex. 64 and 65.

‡ The simplicity of this method, and the ease and certainty with which the Pupil is thus enabled at once to discover the true basses to the scale, and the harmony subsequently arising from them will be still better appreciated when he arrives at the harmonization of melodies

In the preceding example it will be perceived that there are only *three* bass notes; C is employed four times, G twice, and F twice. Each of these three fundamental basses has its peculiar name.

The first is called the *Tonic*, which is always the same as the *tone* which gives the name to the scale; for instance, the preceding example is in the scale or key of C, therefore the Tonic is C.

The second fundamental bass is called the *Dominant*. It is the same as the fifth sound in the ascending scale, and may easily be found by repeating the chord of the Tonic, as the last note of that chord (viz. the fifth) is always the Dominant. Thus the chord of C is C, E, "AND" G. G is therefore the Dominant to C.

Again, the chord of D is D, F♯, "AND" A.

Q. What is the Dominant to D?—A!

Q. Why?—Because A is the last (or 5th) note of the chord of D.

And thus may be found the Dominant to any key.*

The third fundamental bass is called the *Sub-Dominant*; it is the fourth note of the ascending scale, and may easily be discovered and recollected, as being a whole tone *under* the Dominant.

If the Dominant be G, what is the Sub-Dominant?—F.

Why?—Because F is a whole tone below G the Dominant.

By way of exercise, the basses to other scales should now be found according to the same method as in Ex. 23.

The pupil having been thus shown how to find the proper fundamental basses to the scale, he shall now be taught *which* of the intervals of the scale are accompanied by the *Tonic*, which by the *Dominant*, and which by the *Sub-Dominant*.

First let him write a scale and add the fundamental basses as already directed; then let him remove the figures 8, 5, 3, and write in their places the figures from 1 to 8 over the different intervals of the scale, thus:—

Ex. 24.



Having done so, he will discover

The first rule of Harmonizing.

The 1st, 3rd, 5th, and 8th, of the scale are accompanied by the Tonic.

The 2nd and 7th, ,, ,, *by the Dominant.*

The 4th and 6th, ,, ,, *by the Sub-Dominant.*

* The Pupil will now see the motive for urging the necessity of pronouncing the chord as stated Ex. 16, and of emphasising the word *and*; for, had the common chord been pronounced in any other way, this result could not have been attained.

To show the mode of exercising upon this rule, let us take, for instance, **the scale of A.**

Our first enquiry must be,

What are the names of the three fundamental basses accompanying this scale?

The key being A, the Tonic must be the same A.
The chord of A is A, C♯, *and* E; the Dominant therefore is E.
A whole tone below E is D; the Sub-Dominant therefore is D.

Having written the scale of A, we proceed to write the basses according to the above rule, reasoning thus:—

A the first of the scale, is accompanied by the Tonic A.
B the second ,, ,, by the Dominant E.
C♯ the third ,, ,, by the Tonic A.
D the fourth ,, ,, by the Sub-Dominant D.
E the fifth ,, ,, by the Tonic A.
F♯ the sixth ,, ,, by the Sub-Dominant D.
G♯ the seventh ,, ,, by the Dominant E.
A the eighth ,, ,, by the Tonic A.

By this process we have found the proper basses to the scale of A

Ex. 25.



Pursuing this method, the pupil may find the fundamental basses to all the scales as far as six sharps and six flats; making use, in future, of what is called

The Signature.

This is the *sign* by which the *key* is known, *i. e.*, the number of flats or sharps belonging to it, being placed at the commencement of each staff, instead of being written before each note.



It will be admitted, that without a certain degree of ready practice, it is in vain to expect much advancement. Unless the student of arithmetic have the multiplication table at his fingers' end, he will make no great progress; so it is precisely with respect to portions of the subject on which we have been treating. For instance, the common chord of any note, with the *sharps or flats necessarily belonging to it*, should be pronounced with as much readiness as a school-boy would

answer the question, how many are four times four? How easy it is for him to impress upon his memory the sharps and flats, so as at all times, quickly, and unhesitatingly, to declare their number and order in any key! He needs but to extend his hand and he will behold the whole system; afterwards to forget them, is utterly impossible. More of this by and by. We shall here endeavour to bring to the recollection of the pupil what he has already learned, and suggest the following mode of proposing questions which he is supposed to answer without hesitation.

Q. Of how many sounds consists the Diatonic Scale?—Seven, besides the 8th, which is a repetition of the 1st
Q. Where are the half tones found?—Between the 3rd and 4th, and between the 7th and 8th.
Q. How many sharps in the key of A?—Three.
Q. What notes are sharp?—F♯, C♯, and G♯.
Q. What is the chord of E?—E, G♯, and B.
Q. How many fundamental basses are there?— ————
Q. What are their names?— ————
Q. Tell me the Tonic, Dominant, and Sub-Dominant, in the key of A?—The Tonic is A, the Dominant E, and the Sub-Dominant D.
Q. What notes of the scale are accompanied by the Tonic?—The 1st, 3rd, 5th, and 8th.
Q. What by the Dominant?—The 2nd and 7th.
Q. What by the Sub-Dominant?—The 4th and 6th.

The above form of question and answer tends chiefly to exercise the memory.

The following mode brings into action the *reflective* faculties, it introduces a mental exercise which will be found highly interesting, and useful in after life for other purposes than the mere advancement in the science of music; it is calculated to stimulate the reasoning powers, compelling, as it were, the mind, before it arrives at a satisfactory conclusion, to pass through certain evolutions and reflections.

Supposing the key to be F, what is the bass to E?

(*Reflection of the pupil.*)—In the key of F,—E is the 7th of the scale.—The 7th of the scale is accompanied by the *Dominant*.—The Dominant in the key of F is——. Here mentally repeat the chord of F, thus, F, A, "and" C. The last note of the chord is the *Dominant*, therefore *C is the bass to E.* This process should be observed at all times when the Dominant is to be discovered.

Suppose the key is E♭—what is the bass to C?

(*Reflection of the pupil.*)—In the key of E♭—C is the 6th of the scale.—The 6th of the scale is accompanied by the *Sub-Dominant*—The Sub-Dominant is A♭—therefore *A♭ is the bass to C.*

Suppose the key is B—What is the bass to C♯?

(*Reflection of the pupil.*)—The key is B—C♯ is the second of the scale—the 2nd of the scale is accompanied by the *Dominant*—the Dominant in the key of B is F♯—therefore *F♯ is the bass to C♯.*

But what will be the bass to that C♯ if we change the key to D?—A. Q. Why?————

Suppose we change the key to G, what then will be the bass to C♯?—No bass can then be found to C♯, because C♯ is not one of the notes of the scale of G.

The pleasing and attractive form in which the pure elementary principles of harmony and composition are thus conveyed to the pupil, is calculated not only to accomplish the object proposed but also materially to improve the understanding

To find the Fundamental Basses to Melodies.

Hitherto we have taken only the ascending scale as a Theme or Melody, to which we have added the fundamental basses; we will now depart from the rigid observance of that plan, and select such intervals of a scale as shall, in their progression, form a pleasing and effective melody.

Let us suppose that the pupil is required to find the proper basses to the following :—

Ex. 26. A.



In order to accomplish this, it will be necessary to enter upon the following reflections.

"The melody is in the key of C, and as E, the first note in the melody, is the 3rd of the scale, I shall write the figure 3 over that note." As D is the 2nd of the scale, I shall write the figure 2 over that note; and so with all the rest, thus :—

Ex. 26. B.



The next step will be to call to mind the three fundamental basses of that key; thus,

The key is C, therefore

The Tonic is C, which accompanies the 1st, 3rd, 5th, and 8th of the scale.
The Dominant is G, ... 2nd and 7th of the scale.
The Sub-Dominant is F. .. .. 4th and 6th.

Let the pupil now write the fundamental basses according to this rule (as laid down in Ex. 25), and the melody thus accompanied will appear as in the following example :—

Ex. 26. C.



Q. Why is D (the 2nd note) accompanied by G?—Because the 2nd of the scale is accompanied by the Dominant, and the Dominant is G.

Q. Why is C (the 3rd note) accompanied by C?—Because the first of the scale is accompanied by the Tonic, and the Tonic is C.

Q. Why is A (the 10th note in the Melody) accompained by F?—Because A is the 6th of the scale, and the 6th is accompanied by the Sub-Dominant.

Q. Why is F (the 11th note) accompanied by F?—Because F is the 4th of the scale, and the 4th is accompanied by the Sub-Dominant.

After having acquired, by sufficient practice, a readiness in distinguishing what interval of the scale each note is, the pupil may dispense with writing the figures over them, and at once write the bass under each note as he proceeds with the examination; as thus with the following Ex.

We perceive this melody is in the key of F: by the signature—one flat.

The first note, F, is the 8th of the scale, and requires the Tonic F.
The following note, G, is the 2nd of the scale ,, the Dominant C.
The next note, F, is the 8th of the scale ,, the Tonic F.
E is the 7th of the scale ,, the Dominant C.

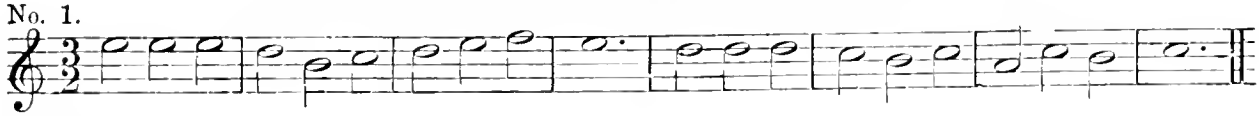
Ex. 27. I.



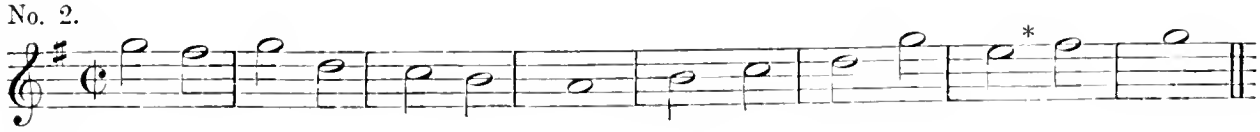
That the pupil may become perfectly familiar with this subject, and attain the utmost facility in writing the fundamental basses to any given melody, he is here presented with a variety of themes in different keys, which, having first served as exercises similar to the above, may afterwards be fully harmonized, when he has been made acquainted with the mode of adding the chords.

Themes for Exercise on the First Rule of Harmonizing.

No. 1.



No. 2.



No. 3.



No. 4.



No. 5.



* Progression of the melody from the 6th to the 7th of the scale, to be referred to in a future Exercise.

No. 6



No. 7.



No. 8.



No. 9.



No. 10.

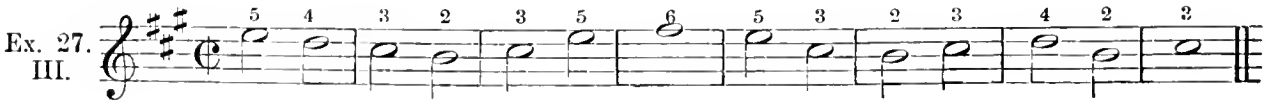


After having employed all the above themes, should the pupil be desirous of further practice, it is only necessary to *change the signature* of any one, by which the intervals of the scale will be changed, whilst the notes themselves remain unchanged: and thus a new Exercise is produced.

Ex. 27. II.



Ex. 27. III.



At II the theme is in the key of C. Let us suppose the pupil to have already accompanied it by its proper fundamental basses, viz., C, G, and F. If he afterwards changes the signature as at III, the key will then be A; the fundamental basses of which are A, E, and D.

The signature being thus changed, the same melody will require other fundamental basses; for instance, the note E at II is the *third* of the scale of C; C (the Tonic) is therefore its proper bass. The *same* note E, however, at III, is the *fifth* of the scale of A, and requires A (the Tonic, as its bass.

Q. How is F (in the 4th bar) at II accompanied?—A. By F the Sub-Dominant.
Q. Why?—A. Because F is the 4th of the scale of C.
Q. How is F in the 4th bar at III accompanied?—A. By the Sub-Dominant D.
Q. Why?—A. Because F in this example is the 6th of the scale of A

It has been stated (page 12) that the melody, by means of the figures 8, 5, 3, points out the way by which we discover the fundamental basses, and that, in return, the fundamental basses will point out the harmony to the melody.

To exemplify this, we shall again resume the *Diatonic Scale*, as it exhibits, in a prominent degree, the harmony in a *connected* and *combined* form.

The scale having been written with its fundamental basses (as in Ex. 25), let the pupil add the remaining intervals of the chords which are indicated by those basses.

Ex. 28.

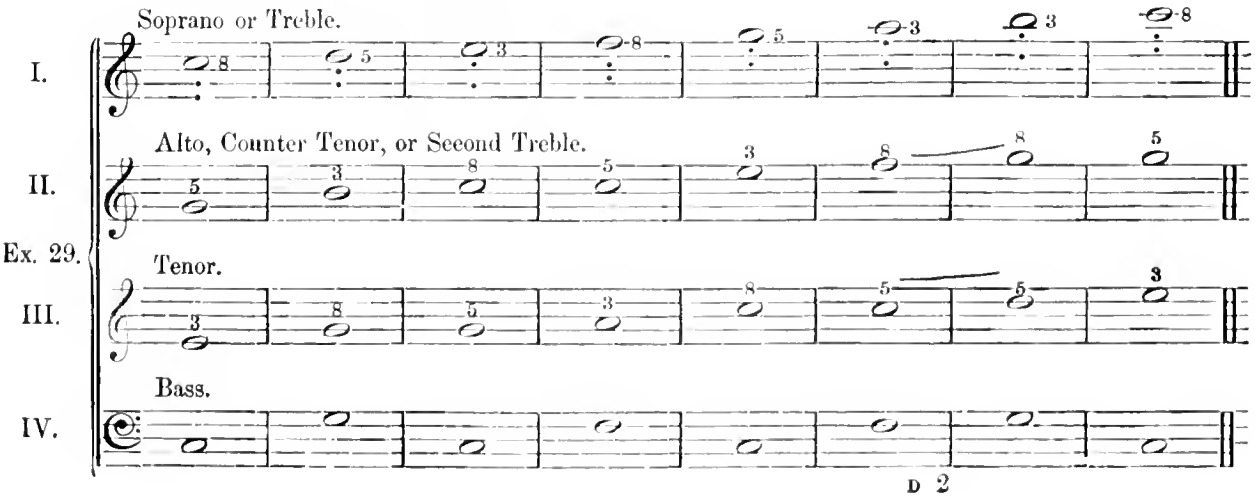


The first bass note is C ; the chord of C is C, E, and G. Here C the 8th (one of the intervals of the chord) is already in the melody ; we have therefore only to add the 3rd and 5th ; these intervals should be written immediately *under* the note of the melody, and thus the chord will be complete ; always taking care that the note which belongs to the *melody* be the *highest* note, and to write the other notes of the chord underneath as near to it as possible.

To proceed ; let the pupil point to the second bass G, and (having pronounced the chord G, B, and D) write first the note G, then B, and (as the D is already in the melody) merely point to the note and say "D." By a close observance of this method, all mistakes will be avoided.

If we examine the above Ex. 28, we shall perceive that, by adding to the melody the chords pointed out by the fundamental basses a *progression* of *chords* is produced : as each of these chords consists of four notes, four *rows of notes* are thus produced : and, as each *row* forms a *distinct melody*, four melodies appear, each different in its progression, but all uniting together, forming a pleasing combination of harmony. Thus :—

Ex. 29.



In the foregoing Ex. the four distinct melodies, being written each upon a separate staff, is called *a harmony in four parts.*

The dots, as they appear in the upper staff at I, mark the places from which the notes composing the other parts at II and III have been taken.*

CONSECUTIVE FIFTHS AND EIGHTHS.

Let us return to Ex. 28, and particularly examine the *chain of connexion* between the chords as marked by the curved lines.

It will be perceived that the G in the first chord forms a part of the second, and that the same note forms a part of the third chord also. The C in the third chord is the connecting link with the fourth, fifth, and sixth; but *no* connecting link is found between the sixth and seventh.

Here then (according to what has been observed concerning the necessary connexion of chords) the sense of the sentence is, as it were, interrupted; and, on being played, the passage will produce a corresponding effect upon the ear.

That such a progression of harmony is *incorrect* and *ought to be avoided,* has been already noticed in the observations following Ex. 21.

At the 6th note of the scale in Ex. 29, we find (in the alto) an F which is marked with an 8, as being the eighth, or octave, to the bass note; and *in the same part* (the alto) the note *immediately following* is also an octave to the bass note. These are *consecutive octaves.*

At the 6th note of the scale, also, we find (in the tenor) a C, which is a fifth to the bass note; and *in the same part, immediately following,* is also a fifth to the bass note. These are *consecutive fifths.*

To prevent Consecutive Octaves.

In Ex. 30, at I, are consecutive octaves. Let the note which is an *octave* in the *first* chord be *continued* in the *second* chord, as at II, and that note will then become a 7th: thus consecutive octaves are avoided.

Why the 7th may thus be allowed to be heard in the second chord at II, shall be explained presently.

* Supposing four persons to sing or play this progression of harmony: the *first* person would sing all the *highest* notes of the chords (which, in this example, form the *scale* of C.) This we call the *first* part.

The *second* voice would take the range of notes next underneath.

The *third* voice would take the range of notes next above the bass.

And the *fourth* voice would take the bass, or lowest row.

The *alto* and *tenor* parts, as written in this example, are not intended to represent the real *pitch* of those voices; to do this, would require a different arrangement, calculated, at present, only to puzzle the learner and obscure the subject. For the same reason also, their *peculiar* clefs are not introduced. If these two *parts* be played or sung an *octave lower*, all will be right.

† As a matter of course, an 8th and a 5th may be used in every chord; but the same interval ought *not* to appear twice in the *same part* in *immediate succession.*

Ex. 30.



To prevent Consecutive Fifths.

Observe this simple rule—whenever the fundamental bass *ascends one degree*, the 5th of *that* bass must *not* be *allowed* to *ascend* to the 5th of the following bass, as at III; but must *descend* one degree, as at IV. Thus the C, being the 5th of the bass F, having *descended* on the bass G (with which it now forms a 3rd), the consecutive 5ths are prevented; but as we have already a 3rd in the principal melody, it becomes necessary that we should ascend again to the nearest note of the chord, viz., the 5th, as at V.

Consecutive 5ths and 8ths* are both avoided at VI, where the harmony proceeds to a close; the 7th descends to the 3rd of the last chord (the Tonic), whilst the 5th descends to the 8th.

On this subject we will say no more at present; indeed, it would be rather injurious than otherwise to enter more minutely into it here.

The student is recommended to reflect upon what has hitherto been said; and, by exercising himself on subjects in which consecutive 5ths and 8ths arise, he will not only impress this matter upon his mind, but acquire a facility in writing which will be found exceedingly useful in his future studies. The three last notes of any scale will answer this purpose, as the *fundamental bass there ascends one degree.*

Let him here add the alto and tenor (as in Ex. 29) to the themes which he has accompanied with fundamental basses only, and prevent the consecutive 5ths and 8ths, as directed above.

To dwell a little longer upon the delightful simplicity of the first steps in this science, we will, for a little while, postpone the subject of the Dominant 7th, to point out the diversified effects to be produced by different methods of playing the same chord, which, if occasionally introduced in subsequent Exercises, will render them more amusing, as well as instructive.

Diversification of the Common Chord.

In a word of three syllables, each syllable is separately pronounced; yet it is still only one word. In a similar manner, each of the three notes of a common chord may be separately sounded, without in the least altering the nature of the chord.

* It may be observed, that these objectionable progressions will occur wherever the fundamental bass and principal melody ascend together one degree.

Ex. 33.



As the common chord consists of three intervals, it may be varied or diversified in *six* different groups, by employing the figures which represent the notes, in this order: 8, 5, 3, 8, 5.

To form the first group, take the first three figures, commencing at 8 (as below at *a*.)

For the second group, take the three figures commencing at 5 (as at *b*.)

And for the third group, take the last three figures, commencing at 3 (as at *c*.)

a.	8	5	3
b.	5	3	8
c.	3	8	5

For the next three groups, reverse the above order; beginning at the last figure (5), and proceeding from right to left; then commencing at the 8, and lastly at the 3.

In this manner we will proceed to diversify the chord of C, writing, on an under staff, the fundamental bass, and, on an upper staff, the six diversifications; the same process serving for each of the three positions.

Ex. 34.



When a scale, or any other melody, has been harmonized, the chords may be thus diversified, selecting some one variation or *group* of notes as a *model*, and continuing the *same* through all the chords of the exercise.†

The following is a melody in four parts, to which is added an accompaniment, taking for the model of diversification, the lowest, the middle, and then the highest note of each chord.

Ex. 35.



† This will be found to be also a very useful exercise for young pianoforte players.

* This is a mark of abbreviation, denoting that the preceding group of notes must be repeated.

a Consecutive 5ths and 8ths avoided.

The harmonized scale of C, employing the different diversifications, as in Ex. 35.

Ex. 36.



Other scales and melodies may now be taken to extend this practice, by which the student will thus early acquire ideas, as well as a facility in varying his exercises.

Preliminary Observations on the Chord of the Dominant Seventh.

Let it be observed that our harmonies at first consisted entirely of Common Chords, *i. e.*, chords composed only of the intervals of the 3rd, 5th, and 8th; until (in avoiding consecutive octaves) we introduced a *new* interval, viz., the 7th: which (as its name implies) is the 7th note *above* the bass.*

This 7th we call the *Dominant* 7th; because, whenever it is introduced into a chord, that chord immediately becomes a *Dominant Chord,* and leads the ear to expect the Tonic.†

It is also called the *fundamental* 7th, for a reason which will be explained hereafter.‡

It is likewise called the added 7th; because it may be added to any common chord.§ For instance, in Ex. 30, VI, to the chord of G we have *added* the fundamental 7th, F, which 7th is a whole tone below the 8th. This common chord of G, by the addition of this 7th, becomes a *Dominant Chord,* and proceeds to the chord of its Tonic, C.

N.B.—It is in this progression of the chord of the Dominant to its Tonic, that *each* interval has its *particular course* appointed, which is called *its resolution:* a satisfactory explanation of which will be afforded in its proper place.

* Observe, this 7th is *not* the 7th *of the scale;* it is a *whole tone* below the 8ve of its bass.

† See philosophical explanation, Ex. 63.

‡ See Ex. 67, bar 1, last chord. It is sometimes called the flat 7th, in contra-distinction to the 7th of the scale, which is a sharp 7th

§ *To the Preceptor.*—A Major chord, of course.

It is stated above that the interval of the fundamental 7th may be added to any common chord; whenever this addition is made, it is usual to place the figure 7 over or under the bass of that chord (see Ex. 37 *a*), and this is called *figuring the bass.*

Every bass note is supposed to be always accompanied by its common chord, according to the signature; therefore it is not necessary to figure the bass, except when some *addition* is made to that chord, or some *alteration* is required, such as any interval of the chord requiring a sharp, flat, or natural. Thus, at Ex. 37 *a*, because the fundamental 7th to C is B♭, we have placed a flat before the 7; and, in the same Ex. at *b*, because the 5th requires to be made flat, we place the figure 5 over the bass, with a *flat* before it.

But when the 3rd of the chord requires a flat, then a flat alone, without a figure, is sufficient; it being understood among musicians that a *flat, sharp,* or *natural,* (without a figure) placed over a bass note, shall always be considered as applying to the third of the chord. (See the sharp alone in Ex. 38.)

Ex. 37.



When any other interval of a chord requires *a sharp,* then, in figuring the bass we spare the trouble of writing a sharp, and merely make a slight dash through the head of the figure which represents the interval, as the 5 in the following Ex.

Ex. 38.



It may be asked, "Why is a bass figured at all?" The answer is, "That a figured bass represents, in an abbreviated form, those chords which constitute a musical composition." This is, in fact, THOROUGH BASS. The thorough bass player is required to play the chords thus represented by figures, as if they were actually printed, as they are in the above Example, from which, if the Pupil will remove the treble staff, and play the chords from the figures alone, he will be a *thorough bass player.* Perhaps he may wonder at this, so little having been said upon the subject; yet the little that has already been said may be considered as containing all the elementary principles of

THOROUGH BASS!!

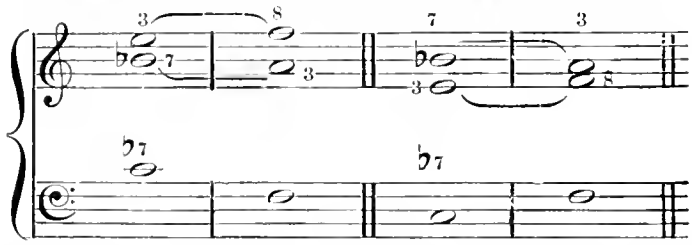
It has been shown (Ex. 37 and 38) that the interval of the Fundamental 7th may be added to any common chord.

When this addition is made, the chord becomes a *Dominant Chord*, and a power is communicated to it, by the addition of that interval, which almost irresistibly propels the harmony towards the Tonic.

This impulse towards the Tonic arises principally, if not altogether, from the effect produced by the 3rd and the 7th of the Dominant Chord when heard together; the former (viz. the 3rd) having a *tendency* to *ascend* a half tone to the 8ve of its Tonic; whilst the latter (the 7th) has an equal *tendency* to *descend* a half* tone to the 3d of its Tonic.

Resolution of the 3rd and 7th of the Dominant.

Ex. 39.



These two intervals exercising so powerful an influence over its progression, *the chord of the Dominant or Fundamental 7th* may justly be viewed as the main-spring of the whole machinery of harmony—it *governs* and directs all—the name of *Dominant* is, therefore, given to it with great propriety.

After what has been said, it may be considered *as a law*, that the several intervals of this chord, which is called the *Resolution of the Dominant 7th*, should proceed thus†:—

The *bass*..... to *ascend* a *4th*, or *descend* a *5th* to its Tonic.
The 3rd of the chord to *ascend* a *half tone*..... to the 8th of its Tonic. (*a*)
The 7th—————— to *descend* a *half tone*..... to the 3rd of its Tonic. (*b*)‡
The 8ve—————— to *remain in its place*, and thus become the 5th of its Tonic. (*c*)
The 5th—————— to *descend* one degree..... to the 8th of the Tonic. (*d*)
The 5th may, however, be allowed sometimes to *ascend* to the 3rd of its Tonic. (*e*)

Each interval resolved.

Ex. 40.



* We will not anticipate an observation which may be made at Ex. 70, b; and 72, &c. which is explained at Ex. 158.

† The Pupil is requested particularly to attend to what is here said, as very frequent reference will be made to it.

‡ *To the Preceptor*,—When the key is Major, of course.

Allowing, then, the intervals of the chord of the Dominant to proceed as it appears itself to *dictate*, we shall find the succeeding chord will always be its Tonic, as at *f* in the preceding Ex*.

Resolution of the chord of the Dominant 7th in its various positions.

Ex. 41.



In resolving the Dominant Chord, let the Pupil first dispose of its 3rd, which must ascend a half tone, and keep in mind that the note to which this 3rd proceeds will be the 8ve of the Tonic: then resolve the 7th, next the 8ve, and, last of all, the 5th.

As it is of essential importance that he should be very well exercised in the *use* of this *Fundamental 7th* and its *resolution*, we will commence a course of exercises calculated to bring into *practical* operation what has been said in explanation of Ex. 40.

We shall begin with the chord of C, at bar 1, Ex. 42.

That Chord, when heard (being merely a common chord), produces no desire to proceed to any *particular* chord; we may proceed, if we please, to the chord of G (as at 2), or to any other chord, and return again to C (as at 3); the ear seems perfectly indifferent upon the subject.

The case, however, is greatly altered, when to that chord of C we add the 7th, B♭ (as at 4). Then an immediate desire manifests itself to proceed to the chord of the Tonic F. By these two *important intervals* of the Dominant Chord (the 7th and the 3rd) we are *now*, as it were, *compelled* to allow the harmony to proceed to the Tonic at 5. The 3rd being determined to *ascend* a half tone, and the 7th to *descend*, whilst the 8th and the 5th of the chord are passively carried along to the place of their destination.

At 5, we see that the chord of the Tonic F arises, as it were, spontaneously out of the resolution of the chord of the Fundamental 7th at 4.

Practical application of the Resolution of the Dominant or Fundamental 7th.

Ex. 42.



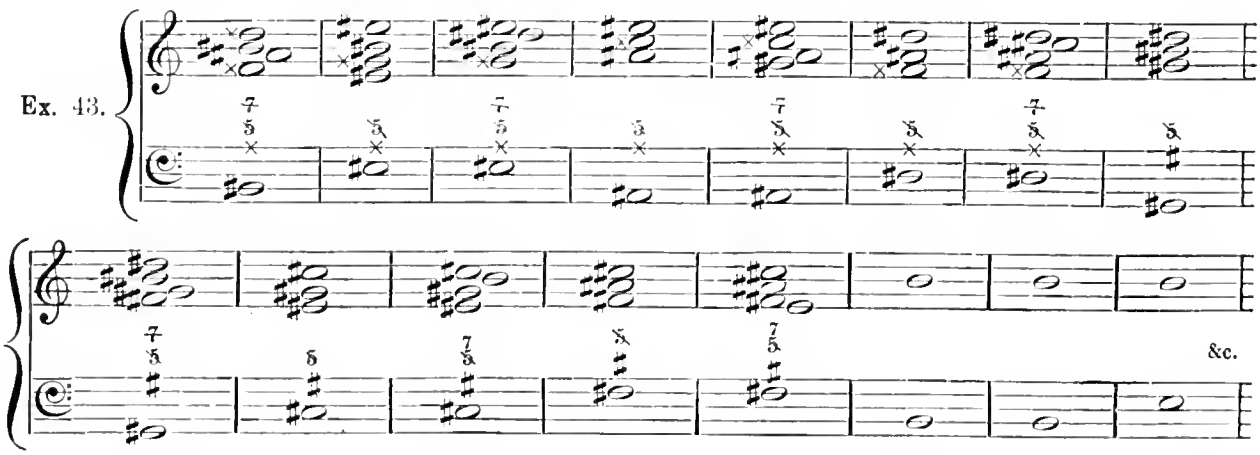
*. *To the Preceptor.*—See Exception, Ex. 282.

At 5, the ear would have come to a perfect state of rest; we might have ended the exercise there, but the 7th (E♭) having been added to the chord (at 6), it becomes a Dominant, and the ear requires the harmony to proceed to the Tonic B♭ (as at 7), and thus we may extend the exercise by continuing this process through all the keys with single and double flats.

However difficult the above exercise may *seem* to the eye of the young student, let him rest assured that it is only so in appearance, and not in reality. The process is exceedingly simple, especially to one who has made himself acquainted with the flats and sharps by the easy method shown at page 5.

If the pupil writes a similar exercise (as in the following Ex. 43), commencing with B♯, it will carry him through all the keys with single and double sharps and flats, ending in D♭♭. This he is strongly recommended to do, as it will be found an excellent introduction to exercises in modulation.

Ex. 43.



In concluding the subject of the resolution of the Fundamental 7th, we shall make the following additional remarks.

By the introduction of this 7th, the progression of harmony acquires a more decided character, and produces, in effect, a certain degree of light and shade, of which a progression of mere common chords is incapable; thus, the necessity of perfectly understanding how to employ that chord to advantage, cannot be too strongly enforced. To multiply examples is unnecessary; but it is strongly recommended to the Pupil, frequently to play the preceding exercise, with and without the 7th; by which means the ear will be early accustomed to compare and judge of the difference of effect.

HARMONY IN FOUR PARTS.

An instance of this has already appeared in Ex. 29, which is generally called *writing in Score.* Each part being written upon a separate staff, its progression is more clearly distinguishable than when all the harmonies are compressed into two staves, as they are always written for the pianoforte.

In our remarks on Ex. 29, we partially entered upon the subject of writing in four parts, taking the scale for a theme. The Pupil was afterwards (page 21) directed to add the alto and tenor to those themes which he had accompanied with fundamental basses, and to present the consecutive 5ths and 8ths as shown in Ex. 30. We will now proceed to harmonize a melody, in four parts, in order to make him acquainted with *another* method of preventing consecutive 5ths and 8ths.



The consecutive 5ths and 8ths appear in the above Example, in the 7th bar, where the note E♭ in the alto (instead of being changed into a 7th, by the ascending of the fundamental bass) descends to the 5th of the succeeding Dominant Chord; whilst, at the same time, the 5th (B♭) in the tenor ascends to the 7th. Thus, the alto and tenor cross each other, or, in other words, interchange places; and the rule, that "*the same interval ought not to appear again in the same part in immediate succession,*" has been observed.

This, as well as the preceding, method of preventing consecutive 5ths and 8ths may be employed at pleasure.

The Pupil may now, by way of exercise, re-harmonize in Score some of the themes already given; not forgetting to mark each interval of every chord with its proper figure; let him *especially* keep in mind, that the harmony which has been employed to accompany these themes has, up to the present time, consisted of *common chords,* only except at the 7th of the Scale, to prevent consecutive 8ves.

As the importance of the chord of the Dominant 7th, together with its decided character, and the vast influence it exerts in guiding the harmony, dispensing light, shade, and energy through the whole, have already been fully explained, it shall now be shown *how* and *where* this new and powerful auxiliary may be introduced in a harmony of four parts.

The question first naturally arises, to *which* of the chords of the three fundamental basses may we add it? and *where* shall we find room for this new interval?

Answer.—We can introduce it in *any* chord, *provided* the chord immediately following be its Tonic. Thus then arises the rule,

"*When the bass proceeds from Dominant to Tonic, we may introduce the 7th upon the Dominant.*"

Let us now examine by this rule Ex. 46, and discover which of the basses will admit of a 7th.

Q. Can we introduce a 7th on the first note, B♭?—A. No; because B♭ is not the Dominant to F, which immediately follows it.

Q. Can we introduce a 7th on the second note, F?—A. Yes; because F is Dominant to the note, B♭, which follows.

Q. Can we have a 7th on B♮, the third note?—A. Yes; because B♮ is Dominant to E♮, the following note*.

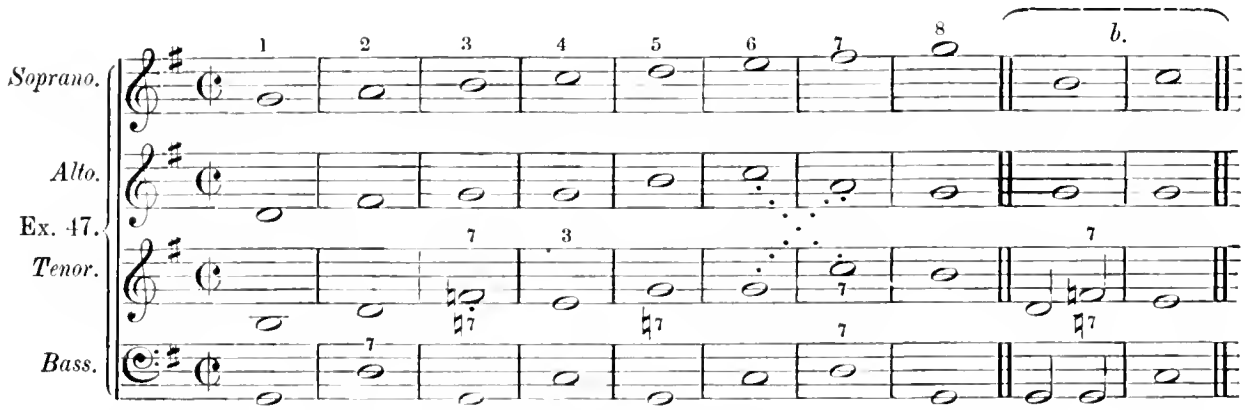
Thus let the Pupil proceed through the whole example, writing the figure 7 over such basses as will admit of a seventh being added.

Let us now inquire *in which of the four parts* must the 7th be written?

Ans. "*In that part where its resolution is found.*"

As the Dominant 7th resolves into the 3rd of the Tonic which immediately follows, we have only to look forward to that chord, and "wherever in the four parts its 3rd is written, in that *same* part write the 7th." Thus, in the following Example, 47 (bar 3), the 7th is written in the tenor part.—Why? Because the 3rd of the following chord is there.

In the last bar but one, the 7th has been introduced in the tenor. Why?—Because the 3rd of the following chord is there.



In adding the 7th to any chord, it is necessary to remark, that, as the harmony consists of only *four parts*, one of the parts must be expunged to make room for the 7th. Thus, in the above example (bar 3, tenor), the 5th has been expunged, as marked by a dot, the 7th, F♮, being introduced in its place. It will therefore appear that whatever interval happens to be found immediately preceding the 3rd of the Tonic chord, must be taken away to make room for the 7th.

Q. Upon the bass D (bar 2) can we have a 7th?—Yes.

* We are not here speaking of the Dominant belonging to *the key* only; but the Dominant of any bass

Q. Why?—Because D is the Dominant to the note G, which follows it.

Q. In which part should this 7th be introduced?—In the soprano.

Q. Why?—Because the 3rd of the following chord is there. This is true; but if we were to introduce the 7th *there*, we should be obliged (in conformity with the rule just given) to expunge the note A (which occupies that part) and write C, the 7th, in its place; and in doing so, we should alter the original progression of the scale or melody given as an exercise. Let us suppose that *we are not permitted to do this.* In such a case, we are necessitated to omit the 7th altogether; although, from the progression of the bass, it might be admitted.

In bar 5, a similar circumstance occurs; the 3rd (E) of the following chord (bar 6) being in the principal melody, we cannot introduce the 7th.

The Pupil should now exercise upon scales in other keys, avoiding consecutive 5ths and 8ths by the two different methods, and always introducing the 7th wherever the progression of the bass and the melody will admit of it. Melodies which have already been harmonized with common chords only may now answer this purpose, the Pupil proceeding always according to the routine already pointed out—thus:—

1st. Write the basses.
2nd. The common chords.
3rd. Prevent consecutive 5ths and 8ths.
4th. Discover the Dominants proceeding to their Tonics, and mark them with a 7.
5th. Introduce the 7ths.

Example of a Melody harmonized in four Parts, with the Fundamental Sevenths introduced.

Ex. 48.



The Pupil is recommended carefully to examine the above example; first, to make his own remarks on what has taken place at every bar; and afterwards to compare them with the following observations.

Bar 1.—Though the *first* bass note *is* the Dominant to the second, still the 7th is not introduced, because the 3rd of the following chord is in the principal melody. Moreover, it is not usual

to commence with the chord of the 7th, although there is no absolute law against it*. In this first bar, also, where the bass *ascends one degree*, the consecutive 5ths and 8ths are prevented by the *second* method, that is, by the crossing of the parts.

Bar 2.—In the alto, appear two 8ths in immediate succession. How can this be allowed? Because *that* part (the alto) and the bass proceed by *contrary* motion†.

Bar 5.—There appear to be two chords over *one* bass note; but these are merely the *same chord* in two positions.

Bar 7.—The figure 7 is placed over the *first* note only of the bass. It must be understood that a line drawn from any figure and extended over other bass notes, signifies that the interval which that figure represents shall be continued in all the chords over which the line is extended.

Now let the Pupil pause and reflect on the progress which he has hitherto made, and on the effect he was enabled to produce by the application of the materials with which he has already been furnished; and as this will be productive of the best effects, and cannot be too early or too frequently put into practice, let us take a retrospective view, commencing with Ex. 20—21, where

Melody and Harmony having been described and illustrated, we proceeded to the discovery of the fundamental basses (Examples 22 and 23), by which we found that, in Example 24,
The 3rd, 5th, and 8th of the Scale were accompanied by the Tonic,
The 2nd and 7th ..... by the Dominant,
The 4th and 6th ..... by the Sub-Dominant,
which we called "*the first rule of harmonizing.*" By this rule we were enabled to write the fundamental basses to a scale or melody (Ex. 26, 27). The chords were then added (Ex. 28), producing a harmony of *four parts*, subsequently appearing in score in Ex. 29.

In preventing consecutive 8ths, we were introduced to a new interval (the Fundamental 7th, Ex. 30), which was afterwards interwoven, and variously employed in producing new effects and in avoiding the monotony which, from a too frequent succession of common chords, would eventually arise.

Having now availed ourselves of all the variations of effects resulting from the application of the three fundamental basses, according to *the first rule*, let us see whether we cannot produce a still greater variety, by some change in their *application*.

We shall find that an opportunity presents itself, arising from the introduction of the Fundamental 7th (as in Ex. 48).

On examination, it will be perceived that the 4th of a scale is, in fact, the Fundamental 7th of the Dominant of that scale; consequently we *may* accompany the fourth of the scale by the Dominant, as its bass, *provided* that the fourth, on this occasion, in its progression, *descends one degree*‡. This we shall call

The Second Rule of Harmonizing.

* See Ex. 52.

† This may be considered as a general rule, "When one part *ascends*, while another *descends*, they proceed by contrary motion".

‡ Why this proviso is necessary, will be evident when we consider the progression of the 7th, which, in its resolution is required *to descend one degree.*

"*When the 4th of the Scale descends one degree, it may be accompanied by the Dominant* *."

Ex. 49.



At *a*, the 4th is accompanied by the Sub-Dominant, as heretofore; at *b*, by the Dominant.

Here we see that, by a *new application* of one of these fundamental bases (viz. the Dominant), a new effect is produced, not only as it respects the interval of the 4th *itself*, when heard in conjunction with the intervals of the Dominant Chord, but also as regards the *new* progression of the alto and tenor. Compare I. with IV. in the following Example.

The Second Rule illustrated in Four Parts.

Ex. 50.



At I, the 4th of the scale (F) descends one degree to E, and we have accompanied it by the *Dominant*, G. When the 4th of the scale in descending is thus accompanied, let the 3rd of that chord (the Dominant) be written in the alto, and the 8ve in the tenor, as at I; otherwise the 3rd of the chord will be excluded at II, or the concluding chord will want its 5th, as at III. In both these cases one of the chords would be incomplete, which should be avoided. It need scarcely be stated that, when the fourth of the scale *ascends*, it *cannot* be accompanied by the Dominant, because its progression would be contrary to the resolution of the 7th†.

Observations.

Although the primary object in introducing the *second rule* is to produce variety, and open a more extensive field for the employment of one of the fundamental basses, yet, another and important object is also attained by the employment of that rule.

* Instead of the Sub-Dominant.

† An apparent exception to this rule shall be explained hereafter.

It is a general principle in harmonizing an air, that the *key* of that air should be established and impressed upon the ear as soon as possible; this can be effected only by the introduction of the Dominant. The *second rule* affords us this opportunity. See Ex. 51 *a*, where, the fourth of the scale *descending*, we have accompanied it by the *Dominant*, by which the key becomes established; but at *b*, where the 4th again descends, we have accompanied it by the *Sub-Dominant*; the necessity of establishing the key here no longer exists, and it would have exhibited a want of taste as well as judgment, had we *again* accompanied it by the Dominant, as will be evident if we examine the harmony at *a*, and compare it with that at *b*.

These few observations, if carefully attended to, will suffice for the present to show how the Pupil may employ the second rule with propriety and effect.

Ex. 51.



When the fourth of the scale is repeated and then descends, it is good to employ both the fundamental basses—*first* the Sub-Dominant, and then the Dominant. (See the following Ex. *a*.) But let the Pupil be careful he does not employ the Dominant *first*, and *then* the *Sub-Dominant*; for in that case the Fundamental Seventh could not be resolved. (See *b*.)

Ex. 52.



It is not usual to commence a composition with the chord of the seventh (although there is no absolute law against it). Should we, however, be inclined at any time to introduce the Fundamental Seventh on the *first chord* of a melody, it will be better to let the chord be first heard as a common chord, and introduce the seventh only on the latter part of it (as in the tenor at *c*).

In order clearly to ascertain the variety which has been produced simply by the introduction of the second rule, the Pupil should harmonize *the fourth of the scale descending* by both rules alternately, noticing particularly the change which takes place in the inner parts.

Themes for Exercise on the Second rule.*



The intelligent student must, ere this, have observed that when only the *first* rule of harmonizing was employed, no judgment was necessary in selecting the fundamental basses, and finding the harmonies: the question was simply—"What part of the scale is such a note, and what is its fundamental bass?"

But, by the introduction of the second rule, the case is very different; because, as the fourth of the scale in *descending* has now the advantage of being accompanied by *two basses*, and as a choice is thus presented in selecting either one or the other, the *judgment* of the Pupil is required to be exercised in this selection.

* The figures placed over the notes point out the rules to be employed; 1-2, thus placed over a note, denotes that both rules are to be employed.

† See Ex. 57 and Remarks; also, page 33.

‡ See Ex. 52 (*a*).

Hitherto, as far as regards harmonizing airs, he has been, as it were, in *leading strings; now* he is beginning, it may be said, *to walk alone;* and as this is the *very first step* towards the cultivation of his judgment, let him exercise it in harmonizing the preceding melodies—remembering that, even when the *fourth* of the scale *does descend* one degree, he is not *obliged* to accompany it by the Dominant; this is left entirely to his own judgment: but when it *ascends*, he is *obliged* to accompany it by the *Sub-Dominant only**.

We are now to suppose the Pupil to have harmonized the preceding melodies according to the second rule—that he has played them—examined the different effects—and attained a certain degree of facility in judging correctly and readily as to the best mode of employing the three fundamental basses. Thus prepared, we shall proceed to show him how, by a new and varied application of *another* of the three fundamental basses, the harmony may be still more enriched and improved, and a greater variety of effect produced.

In the preceding examples, the *fourth* of the scale came under consideration; in the following, the *eighth* of the scale shall be our object. We are aware that, according to the *first* rule, the *eighth* of the scale is accompanied by the *Tonic*; but it shall now be shown how *that* interval (under certain circumstances) may be accompanied by the *Sub-Dominant* instead of the *Tonic*.

This we shall call

The Third Rule of Harmonizing.

"*When the eighth of the scale is* repeated, *it may be accompanied by the* Sub-Dominant (*instead of the* Tonic)."

Ex 53.



At *a*, in the above example, the chord of C being *repeated* five times, a very *monotonous* effect is produced by the application of the *first* rule *only*. This, however, is avoided by the employment of the first and third rule alternately, (as at *b c*.)

Although this rule has reference *particularly* to the *eighth* of the scale when *repeated*, yet it *may* occasionally be employed where that interval is *not repeated* (as at *d* and *e*); but, as the effect produced at *d* is rather harsh and unsatisfactory, the rule should, on such occasions, be used sparingly. The effect, however at *e* is good.

* See Retrospect, page 45, and Ex. 58 D, Bar 1

What was stated respecting the effect produced upon the *alto* and *tenor* by the application of the *second rule* (see Ex. 50), may be applied here also to the *third* rule: by the latter, it will be perceived, we are enabled still more frequently and *effectively* to avail ourselves of the powerful influence of the Fundamental Seventh, by which the *whole texture* of the harmony becomes more firmly connected and amalgamated, and also, (as has been stated before) the inner parts become, in their progression, more flowing and melodious.

All this will be evident, if the Pupil play and then carefully examine the preceding Example, comparing the *monotonous* effect produced by the *first* rule at *a*, with the *diversity* of effect which arises out of the employment of the *third* rule at *b* and *c*. However, he must not rest here; let him also carefully examine and compare the *variety of effect* produced in the progression of the melodies of the alto and tenor by the *different application* of the third rule at *b* and *c*.

The Pupil is most particularly recommended not only to notice well what has been said, but also (in order that the value of these rules may be still more permanently impressed upon his mind and thus *practically established*) to harmonize a melody by the *first* rule *only* (see Ex. 54, I), and then harmonize the *same* melody by the three rules (as in Ex. 54, II); and, if he carefully examine and compare them, he will be surprised to find, that all the variety of effect hitherto produced has arisen solely out of the *different* application of two of the three fundamental basses only.

Melody harmonized according to the First Rule *only, to be compared with* Ex. 54, II.

Ex. 54. I.



Same Melody harmonized according to the three Rules.

Ex. 54. II.



Nothing, perhaps, is better calculated to impress upon the mind of the Pupil the value and importance of these rules than the preceding Examples, which he is strongly recommended to examine and investigate with respect to the effects which they produce. In order that he may derive all the advantages which the Examples thus afford, let him not pass through this examination *hastily;* on the contrary, let him compare the two, bar by bar: for instance, let him take the first bar of I, and compare it with the first bar at II. *Play each of these bars, and mark the difference of effect produced.* Having done so, let him play and compare the *alto* and *tenor* of each Example; observing the effect of each. The advantage resulting to the Pupil from this process is incalculable; because it will (even at this early stage) make him acquainted with the practical part of that harmony, without which all his theoretical knowledge is useless.*

We shall now proceed to explain Ex. 54, II.

In bar one, the seventh is introduced in *the alto.* Why? Because its resolution is in that part; and it is thus introduced only on the latter part of the chord, in order that the harmony may commence with the common chord of the Tonic.†

In bar two, the seventh is introduced in the tenor. Why?

three ....soprano.
four .....tenor.
five .....alto.
six .....tenor.

N. B. Where one Dominant Chord is immediately succeeded by another, the third of the *first* Dominant *needs not ascend*, but may descend and become the seventh of the following Dominant Chord, as in bars 4 and 5 alto. This may be considered as a general rule‡.

The following melodies, although written expressly as exercises for the *third* rule, are so constructed that the *second* rule can be introduced with equal advantage. They should be harmonized by the Pupil in a variety of ways; and, in doing so, he may be considered as having entered upon the *second step* in the improvement of his judgment with respect to effect.

Themes for Exercise on the Third Rule.

No. 1.

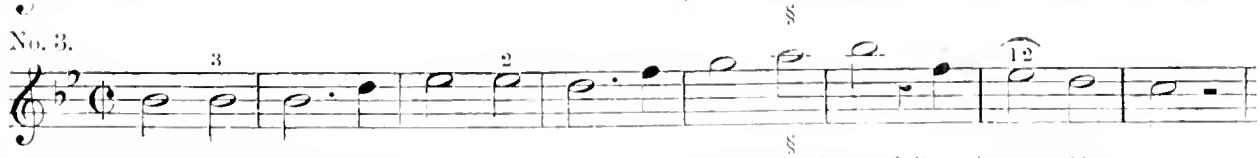


No. 2.



§

No. 3.



§

* See Retrospect, pages 43 to 45.

† See also Ex. 52 *c*, and Remarks, page 34.

‡ Observe how a similar progression is treated, Ex. 56, bar 5, where the 3rd of the Dominant in the alto has *ascended first* to the octave, and afterwards *descended* on the same bass to the 7th; also, bar 10, in the tenor, same Ex.

§ See consecutive 5th and 8th, Ex. 46.



We shall now explain

The Fourth Rule of Harmonizing.

"*The Fifth of the Scale may be accompanied by the Dominant.*"

Hitherto the *fifth* of the scale has been accompanied by the *Tonic* only; but, as by the *fourth rule* (as shall be shown presently) we are enabled to accompany *that* interval with two basses, a still greater variety will be thus introduced into the harmony; chiefly so, when the fifth of the scale is frequently repeated, or heard in notes of long duration.

In the following example, at bar 1, the fifth (D) being four times repeated, we have, upon the *second* D, introduced the *fourth rule*; and thus the monotony, which by the employment of the *first rule* only would have been unavoidable, is here prevented; a great similarity appears to exist, in this particular, between the *third rule* (Ex. 53) and the *fourth*; as will be perceived, if we compare bar 1 in the present Example with bar 3; in which latter, the octave being five times repeated, the third rule has been opportunely introduced to prevent monotony, similar to the fourth rule at bar 1.

At 5. is shown how the *fourth rule* may be employed, although the fifth is not *repeated.*



Let the Pupil now carefully examine the following exercise, in which the preceding *four rules* will be found combined; and, in order that he may discover, without any difficulty, how and where each rule has been introduced, figures are placed over the notes (as in the Themes), pointing out the particular rule that has been employed.

The Four Rules combined.

Ex. 56.



At bars 1, 9, and 10, E♭ (the fifth) being a note of long duration, we have employed the first and fourth rules alternately; thus monotony is prevented and variety introduced.

N.B. When the fourth or the third rule is employed, the *seventh* will be found in the alto.

Observe the progression of the inner parts, arising out of the application of this rule.

At bar 3, the *fourth* of the scale (D♭), in descending, is enriched by both the Sub-Dominant and Dominant harmonies. Had that interval been accompanied by the first rule *alone*, we should have deprived ourselves, not only of these harmonies, but also of that very important interval, the Fundamental Seventh.

In bar 5, the eighth, being repeated, has been accompanied alternately by the *first* and *third* rule. By the employment of the latter, the seventh appears in the *alto*. Examine bars 6 and 7, and observe the different effects produced by the same progression of intervals—by the *first* rule at 6, and by the *second* rule at 7. Which of these would the Pupil prefer? !!

It will be exceedingly improving to follow up what has been here said, by *harmonizing* the above (or any other melody) in a variety of ways. For instance: let it be *harmonized* first by the *first rule only*; and at that stage compare the progression of the harmony (especially of the inner parts) with the above example.* Afterwards, harmonize it again by the *second* rule, comparing *that* harmony with the *former*. Then by the *third* rule, and, lastly, by the *fourth* rule, the Pupil still continuing his observations and remarks as he proceeds. *Then*, and perhaps *not until then*, WILL HE HAVE LEARNED WHAT THESE FEW SIMPLE RULES ARE CAPABLE OF ACCOMPLISHING !!!†

* See specimens, Ex. 54, I, II.

† See Retrospect, pages 43 to 45, and Ex. 58, B, C, D.

Themes for Exercise on the Fourth Rule.

No. 1.



Enough has now been said upon this subject to guide the choice on all future occasions: we shall only add, that, in harmonizing a melody, *each* interval should be carefully examined, in order to discover whether it admits of *two* basses; and, if so, which of them will be most effective.

The following specimen may probably suffice to show the process of reasoning in the selection of the basses.

Ex. 57.



Let us suppose that, in the course of a melody, the fourth of the scale were to appear as in the above example. How ought we to accompany it?

The *first* F (bar 1) we would accompany by the *second rule* (the Dominant), because the *second* F (bar 2) ascends, and therefore we are *compelled* to accompany it by the *Sub-Dominant*; it is evident, therefore, that, had we accompanied the *first* F by the *Sub-Dominant*, we should have deprived ourselves of the variety produced by the harmony of the Dominant, which would have been an error in *judgment*, inasmuch as neither of the basses are absolutely wrong.

Would it be permitted to accompany the descending fourth at *a* by the first rule?

No! because it would produce consecutive eighths with the preceding chord; therefore the fourth can here be accompanied *only* according to the second rule; viz., by the Dominant.

* See consecutive 5th and 8th, Ex. 46. How prevented.

CHARACTER OF THE FOUR PARTS IN HARMONY.

This will show us that, whilst only the *first* rule for harmonizing a melody was known, little reflection was necessary to accomplish the end; but now we are led to consider the consequences of every step we take: the melody must be carefully examined; a certain degree of foresight and circumspection employed in forming the plan for the succession of the several basses; and, finally, the judgment is called on for the selection of those which are calculated to produce the best effect.

One reflection is here very satisfactory; viz. that, though it is possible we may err in mere matters of *taste*, we are sure, by attending to the rules, to be always *grammatically* correct, and that a moderate share of care in the application of those rules already given will produce results which could be little anticipated by those who have studied harmony by any other process.

Definition of the peculiar Character of the four Melodies in a Progression of Harmony.

In order clearly to comprehend this subject, it is necessary again strongly to impress upon the mind of the Pupil the importance of the chord of the Fundamental Seventh, and the almost irresistible influence which it exercises over the whole body of harmony. That chord not only invigorates and gives life to the whole, but each interval of the chord, having its own peculiar progression,* communicates to the melody of which it forms a part, a character also peculiarly its own.

The soprano progression is produced, and distinguished from the rest, by the two intervals of the Dominant Chord which proceed *direct* to the octave of the succeeding Tonic; viz. the third ascending half a tone, or the fifth descending. (Ex. 58. *a.*)

The alto progression is distinguished by the interval which remains in its place and becomes a fifth in the succeeding Tonic chord. (*b.*)

The tenor progression is distinguished by the interval which proceeds direct to the third of the Tonic, whether *descending* from the seventh, or *ascending* from the fifth. (*c.*)

The bass † progression is that interval which ascends a fourth, or descends a fifth; or, in other words, that which proceeds directly from Dominant to Tonic. (*d.*)

Ex. 58.



* Any deviation or departure from the established and settled progression of each of its intervals can only be considered as a *licence*, employed to produce some peculiar effect. See false cadences ——— suspended cadences ——— equivocal modulation ——— and deceptive modulation.

† The fundamental bass, of course.

The Pupil is here assured, that however *unimportant* the preceding matter may appear, it is nevertheless of very great importance. Let him keep in mind, therefore, what has been just said, and he will be enabled to enter still more fully into the nature and spirit of the preceding rules, and the principle on which they are founded. With *some* of the advantages resulting from their application in harmony he is already familiar; but how comprehensive they are in their object, and how productive (when judiciously applied) in effect, can only be discovered and appreciated by those who will *carefully study and practise them!!*

It will be found that, in harmonizing a melody by the *first rule*, each of the four parts retains its peculiar character throughout. (See Ex. 48, where the seventh is always found in the *tenor*.)

From this it is evident that, had we continued to harmonize by the first rule only, *monotony* must have been the result.* By the application of the other rules, however, a variety of effect is produced by an *interchange of character* among the four parts.

This peculiar *interchange* of character may, perhaps, be more clearly distinguished by directing the attention especially to that part wherein the seventh of the Dominant is found.

In Ex. 50 I,

The *tenor* character (the seventh descending into the third of the Tonic) is in the *soprano* part.
The *soprano* character (the third ascending into the octave) is in the..... *alto* part.
The *alto* character (the eighth remaining in its place) is in the .....*tenor* part.
The *bass* retains its own character.

N.B. The above interchange of the parts has been effected by the *second rule*.

We may hereafter have occasion to observe more at large on this characteristic distinction of the four parts: at present, we shall content ourselves by giving the following table, to show the various interchanges which are effected by the application of the four rules.

When harmonizing by the *First Rule*, the 7th will be in the tenor.
3rd.....soprano.
† 8th.....alto. (Ex. 47, 48.)

When harmonizing by the *Second Rule*, the 7th will be in the soprano.
3rd.....alto.
8th.....tenor. (Ex. 51.)

When harmonizing by the *Third Rule*, the 7th will be in the alto.
8th.....soprano.
3rd.....tenor. (Ex. 54. II.)

When harmonizing by the *Fourth Rule*, the 7th will be in the alto.
8th.....soprano.
3rd.....tenor. (Ex. 56.)

* It is true that by inversion this monotony might be obviated; but we are not advanced yet so far.

† This admits of a slight exception; see Ex. 47, bar 2, where, the 5th being in the soprano, the 3rd is in the alto See also Ex. 48, bar 1, where consecutive 5ths and 8ths have been prevented.

From all that has been said upon this subject, it is quite evident that, without the aid of the Fundamental Seventh, we should have been without any light to guide us on our way through the mazes of harmony. Without the aid of the four rules for harmonizing, we should have remained ignorant of the variety which has been produced through their *instrumentality;* for, let it be remembered, without a single addition to the three original fundamental basses, and without having changed a *single note* of the melody, we have (merely by attending to the rules) been enabled to effect not only *new* combinations in harmony, but likewise *new progressions* in the *alto* and *tenor*, which (when we arrive at Inversions) shall be introduced into the bass also.

A concise Retrospect of all the Four Rules in harmonizing, with a few precautionary hints for preventing improper Progressions, which might occur by an injudicious and indiscriminate introduction of those Rules on some occasions.

It has been stated elsewhere,* that, when only the first rule of harmonizing was employed, no judgment was necessary in selecting the fundamental basses: the Pupil, at that stage, was (it may be said) not a *free agent;* for every note in the melody, according to *that* rule, had its specific bass appointed; from which he was not allowed to deviate in the slightest degree.

By the introduction of the *second Rule*, however, his sphere of action became in some degree enlarged†: *two* basses, under certain circumstances, might then be employed to accompany the *same* interval of the melody; and as a *choice* was thus presented to him, he had to make a selection; and as the *proper* selection depended on his *own* judgment, so the employment of the *second Rule* was the first step towards forming that judgment.

In illustration of this, we shall suppose the Pupil—in his first effort to harmonize by these Rules—to reason thus:—"*Here is the 4th of the scale* (for instance), the fundamental bass of which *is the Sub-Dominant*‡"—He would then carefully examine the progression of that interval,—whether it *ascended* or *descended one degree.* If it *ascended*, then only *one* bass—*no choice;* but if it *descended one degree*—*two* basses—viz. Sub-Dominant and Dominant §.—"Which of these shall I employ?"—(For let it be remembered that, although the *fourth* may descend one degree, he is not *compelled* to employ the Dominant; that would counteract the very object contemplated.)

Suppose that the melody at I in the following Example were presented to him to be harmonized. Probably he would reason thus, and say—(pointing at bar 1)—"Here is the 4th of the scale; *it descends* one degree; I will accompany it by the *second Rule*"—(the Dominant.) (See II. bar 1.)



* See bottom of page 31. † See pages 32 to 34. ‡ Referring to the *first Rule*, which must constantly be kept in mind, because the others emanate from it. See first rule of harmonizing, page 13. § See second rule, p. 32.

(Pointing at 2, he would say)—"Here the 4th descends again; but I will now accompany it for the sake of variety by the *first Rule* (the Sub-Dominant); and at 3 by *both* basses."

This, it is presumed, will suffice to show what may be effected by small means: viz. the employment of the *second Rule*.

By the introduction of the *third Rule*,* the sphere of action—already enlarged by means of the second Rule—became still more extended, and formed the second step towards the improvement of his judgment.

Finally—by the addition of the *fourth Rule* † he was altogether emancipated and set at liberty from the trammels in which he was bound by the observance of the *first Rule*.

Let the Pupil, however, remember that in proportion as this liberty opens an extensive field for the exercise of his mental faculties, so, in the same proportion, will he be liable, (unless caution be observed,) to fall into error; for, to be acquainted with rules, to know when and where they can be employed, and (we shall add) even a knowledge of the variety of their effects, is not sufficient; care also must be taken, when they are employed, that the *purity* of the harmony be preserved—that no improper progressions (consecutive 5ths and 8ths) be allowed to make their appearance. To preserve this purity in the harmony, observe the following

Precautionary Hints respecting the employment of the FOUR *Rules.*

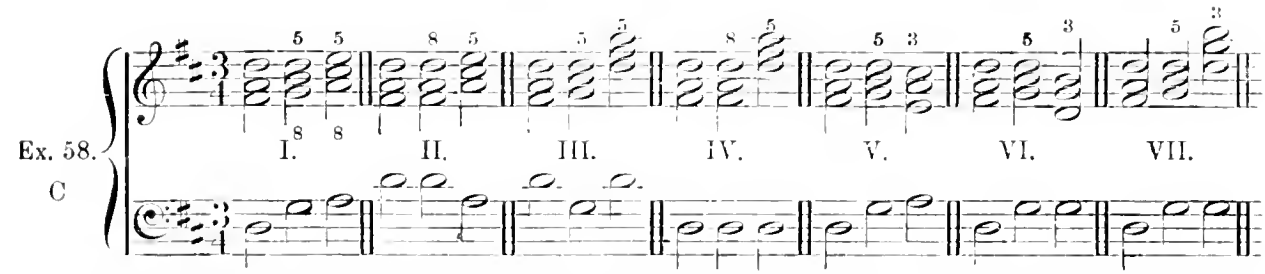
We will commence with the Third Rule.‡

Let us suppose the Pupil about to harmonize the following Example 58 C. I. He would reason thus, saying—"This is the 8th; its proper fundamental bass, according to the first Rule, is the *Tonic*‡: but as the 8th is here *repeated*, I *can* accompany it by the *Sub-Dominant*.§ Is it proper to do so? for though the 8th *is* repeated, does it follow that I *must* necessarily accompany it by the *Sub-Dominant?* If I do, may it not effect the purity of the harmony? How shall I know?"

These are questions of no small import. The answer is: *Examine carefully the progression of the melody;* see whether *the interval immediately following the 8th will* (when accompanied by its proper bass) *produce either a consecutive 5th or an 8th. Should this be the case, the* FIRST RULE ONLY MUST BE EMPLOYED.

At I, in the following Example, the 8th *is repeated*, and accompanied by the *third Rule;* but, as that interval is followed immediately by E (the second of the scale, which requires to be accompanied by the Dominant,) the employment of the Third Rule is here improper, because consecutive 5ths and 8ths are thus inevitably produced. Under these circumstances, the *first Rule only* must be employed (as at II.)

* Page 35. † Page 37. ‡ See page 13. § Page 35.



At III, the 8th is *repeated*, and accompanied by the *third* rule; but this note is *immediately followed* by A (the 5th of the scale), and as *that* interval requires the *Tonic*, consecutive 5ths and 8ths are the result; therefore, the *first Rule* only can be employed (as at IV). Let the Pupil examine and make his own observations upon V, VI, VII.—Q. May the *third* Rule be here employed with propriety?

Hints respecting the Employment of the FOURTH RULE.

Looking at the following Ex. 58, D I, the Pupil would say—"This is the 5th of the scale; its proper bass (by the first Rule) is the Tonic; but as the fifth of the scale is here *repeated*, I may accompany it by the Dominant." (Whether we should do so, will depend upon the intervals which follow.) This fifth A is *repeated;* yet, in consequence of the interval which immediately *follows*, it would be highly improper to accompany it by the *Dominant;* because, as G, the 4th (which here ascends), *must* be accompanied by the *Sub-Dominant*,* consecutive 5ths and 8ths would be the inevitable result.

The case is very different at II, where, the 4th having descended one degree (thus admitting the introduction of the second Rule), the fourth Rule may be legitimately employed upon the 5th of the scale.

At III, the *harmony* (though similar to that at I) is correct; because it proceeds by a motion contrary to that of the bass.



In conclusion, it may be well to observe, that the above hints, if carefully attended to by the Pupil, will not only guard him against gross faults, into which young composers are liable to fall, but they will also add greatly to his *practical* knowledge as regards the introduction of these rules with the best effect: and further—the reflections and reasons which are here supposed to direct him in the choice of proper harmonies, although stated in a few words, contain the *germ* of many reflections which, by analogy, may be applied to other purposes besides music.

* See Exampl 57, and Remarks.

Major and Minor.

It has been our object, from the commencement, to lead the mind gradually to the attainment of harmonizing a melody in four parts. We have therefore carefully avoided all matter which could in the least interfere with our object, or cause the slightest embarrassment.

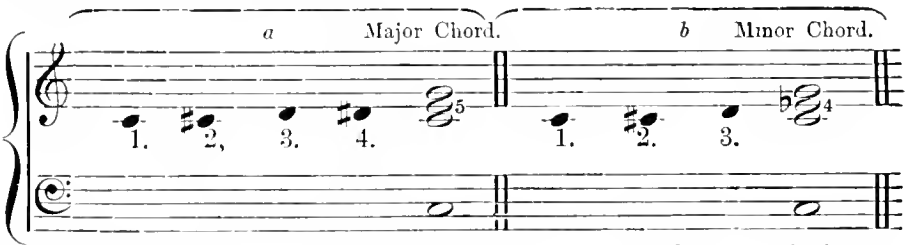
The Pupil may now be informed that every exercise in which he has hitherto been engaged was written in what is (technically) called "the *major* key," in contradistinction to that called "*minor*." But, before we proceed to the subject of the major and minor *keys*, it will be proper to explain the construction of

MAJOR AND MINOR CHORDS.*

These terms, Major and Minor, refer here to the third of the chord only, which is major or minor as it may contain a *greater* or *less* number of semitones.

All the chords hitherto written have been major, containing *five* semitones in the third, commencing with the key-note, and calling that one.

Ex. 59.



The *minor* chord contains in its third, *four* semitones only (*b*), which, as it has one semitone *less* than the major, is called *minor*.

All chords are understood to be major, if not otherwise marked or expressed.

To change a *major* into a *minor* chord, we have only to *lower* its third a semitone, and the chord becomes minor; thus :—

What is the chord of C?	Answer—C, E, and G.
What..... of C *minor?*	————C, E *flat*, and G.
What is the chord of D?	Answer—D, F♯, and A.
What..... of D *minor?*	————D, *F*, and A.
What is the chord of E♭?	Answer—E♭, G, and B♭.
What..... ..... of E♭ *minor?*	————E♭, G♭, and B♭.

In order to accustom the ear to distinguish the difference of effect, a chord should be frequently played alternately major and minor.

Ex. 60.



* See Ex. 157, where the nature and origin of the minor scale are fully treated upon. At the present stage, it would not be advisable to enter upon the subject.



Having now fully explained the construction of the minor chord, we will here show, though the subject will be hereafter resumed,

How to find the Number of Sharps or Flats belonging to any MINOR *Key.*

For this purpose, it is only necessary to ascertain the third of any minor chord; and whatever sharps or flats are required by *that third* (if taken as a major key note), the same number are required for the minor.

At I, the chord of C minor is C, E♭, and G; the third of this chord is E♭; the key of E♭ requires three flats; *therefore* the key of **C** *minor* requires three flats.

At II, G minor requires two flats. Why?—Because its third (B♭) requires two flats.

Why does the key of E minor require one sharp?—Because the chord of E minor is E, G, and B: G is the third; G requires one sharp; therefore E minor requires one sharp.

The Relative Major and Minor Keys.

It is necessary to mention that each *major* key stands in intimate relationship with a minor key, called its *relative* minor. This *relative* minor is always found four semitones *below* the key-note of its major *; and has for its signature always the same number of sharps or flats as its major.

What is the relative minor to C? Answer—A minor.
Are there any sharps or flats in A minor? Answer—No. Why?—Because the key of C major has none.
What is the relative minor to F? Answer—D minor.
How many flats has D minor? Answer—One flat. Why?—Because F, its relative major, has one.
What note is flat? Answer—B♭.

The following Example exhibits a regular progression through the whole circle of *major* and *minor* keys. It commences with the key of C major and its relative minor, proceeding through the keys requiring flats, which gradually increase in number until, arriving at E♭ minor (six flats), that chord is changed enharmonically to D♯ minor (six sharps); after which, by sharps (which gradually decrease in number) the progression returns to the *original key.*

* The Pupil may find this minor key on the pianoforte by counting four semitones from the key-note to the left-hand counting the key-note one.

Ex. 61.



In examining the preceding Example, we perceive, from the beginning to the end, not only a beautiful symmetry and regularity pervading the whole, but also a *double* union of intervals—*two* of them always remaining undisturbed,—as shown by the curved lines.* The same union likewise subsists between the *relative minor* and the chord which *immediately follows it;* the whole progression forming a chain of harmony unequalled in any of our former exercises.

The Pupil is strongly recommended to practise it on the pianoforte, as it forms the groundwork on which may be constructed an almost infinite number of passages and variations, serving, subsequently, as materials for more extensive exercise. This will in some measure appear, if we examine the specimens exhibited in the following Examples, which, though few in number, are sufficient to show the extensive variety of effect which may be given, even with only simple common chords.

No particular rule, as to the construction of all the variety of passages arising thus from a progression of chords must here be expected; as it would be calculated rather to cramp than to assist and expand the inventive faculty of the Pupil. Let him learn to choose for himself.

Ex. 62. *A few Specimens of Variation which may be employed in Performance.*



* Why this close union subsists between the chords in this progression will be better understood when we arrive at Ex. 67.

ORIGIN OF MELODY AND HARMONY,

THE DIATONIC SCALE, FUNDAMENTAL BASSES,

AND

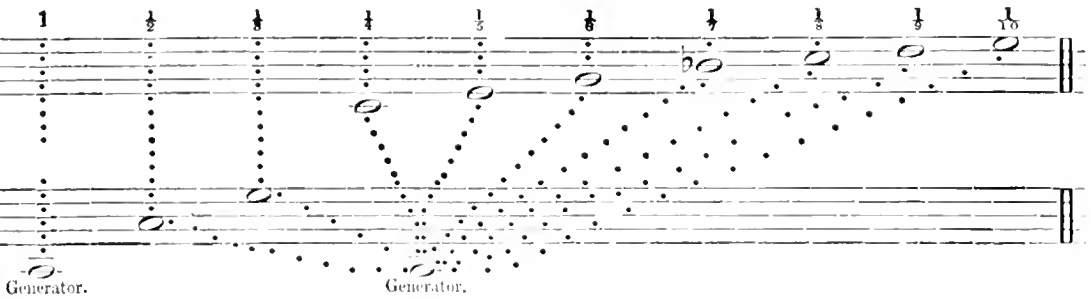
MODULATION.

When a musical string is put into vibration, we may imagine that we hear only a single sound; but, on listening attentively, we shall discover that the principal sound, particularly if it be one of the deep tones of the Pianoforte, is accompanied, though faintly, by other sounds, called its "*Harmonics.*"

By all sonorous bodies (a bell, for instance) the principal sound and its harmonics are produced at the same time, and are all heard at once; but by wind instruments (as the French Horn, Trumpet, etc.) they are produced separately, so as to be distinctly analyzed; and these prove to be exactly the same, in order and proportion, as those produced by the vibration of a musical string. Thus a tube or string, whose *lowest* sound is C, will introduce the following

Harmonics.

Ex. 63.



These are the sounds in the order in which they are actually produced from the tube of the French Horn, etc., etc.*

The lowest sound we shall call the foundation or generator of all the rest, which are called its *Harmonics*, and which appear to be, as it were, regular portions or fractional parts of the *generator*.

The *first* note above the *generator*, being the octave C, may be considered as one half of the *whole tube;* in fact, one half of this tube would really produce, as its lowest note, this very octave C.

By the same rule, G would be produced by a tube which should be only *one third* the size of that which produced the generator, and so on with the rest, as marked in the Example.

* In this Example we see at one glance the chord of the Fundamental Seventh, Progression, Modulation, Melody, and Harmony

To illustrate this still further, let us extend a musical string over two bridges until its grave sound be the same as that produced by the *tube* C. If we then place another bridge exactly in the middle, *each half* will produce the octave of the whole. If we divide the *same string* into *three* equal portions, *each* of the three portions will produce a G; and so with all the other divisions.

Referring to the scale of the *Harmonics* in the preceding example, it will be remarked, that they are produced in a succession of gradually diminished distances from each other, until they end in a progression of whole tones—a real *Diatonic Progression*, thus:

The note first appearing above its generator is the 8th.

The next is a 5th above that

The distance to the next is a 4th, and the next a major 3rd, etc., etc.

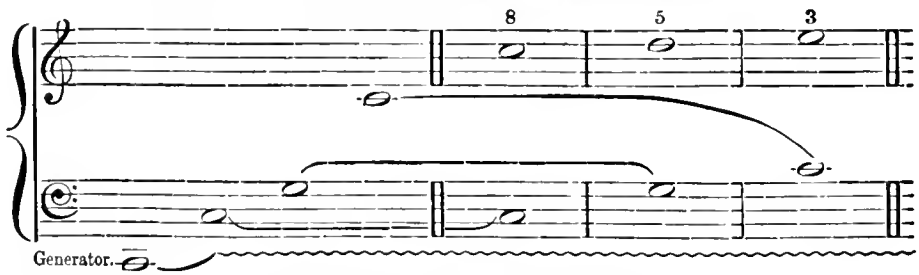
All the sounds, as far as E (the last note in the Example), are perfect and satisfactory to the ear.

Let us now take the *three last sounds* produced by the tube, as a scale or melody, and endeavour to harmonize it. How are we to proceed? We must discover the fundamental basses; but by what means?

Let us take, as basses, the *three first sounds* produced by the same tube, and our object is accomplished.

Scale of Three Sounds with its Fundamental Basses.

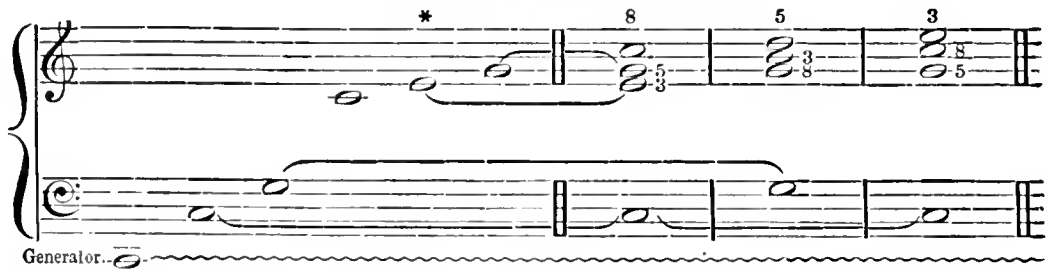
Ex. 64.



The fundamental basses being discovered, we shall now add the chords.

Scale of Three Sounds Harmonized.

Ex. 65.



Referring again to Example 63, let it be observed that amongst the Harmonics of C, the 7th sound is B. This is not the seventh note of the scale of C, but the *fundamental 7th*, being a whole tone below the 8th.†

* It will be observed that the chord of C, formed by the Harmonics in Ex. 65, is not complete until the appearance of the 3rd (E), and therefore when the third is at the top, we shall call it the first position of the chord; when the 5th (G), appears at the top we shall call it the 2nd position of the chord; and with the 8th at the top, the 3rd position. (See p. 11.)

† See preliminary observations on the dominant 7th, page 23.

When the chord of C is heard with this seventh added, it at once assumes the character of a dominant chord, and thus produces an irresistible inclination to proceed to its tonic. *The ear acknowledges*, in the 7th, a decided tendency to *descend*,* and in the 3rd, an equal tendency to *ascend* into the nearest sound of the chord which immediately follows.†

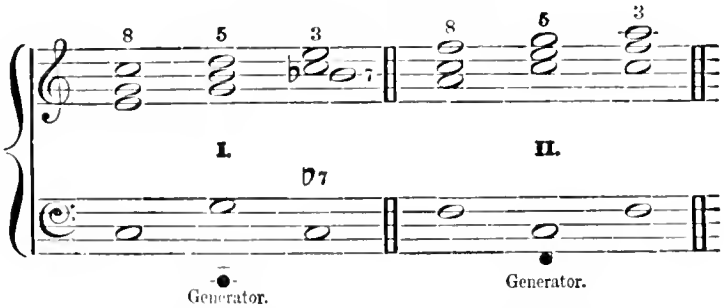
Therefore, after having harmonized the scale of three sounds produced by the harmonics of the tube C (the last of which is accompanied by the chord of C), were we to bring the 7th sound prominently forward, and add it to this chord of C (as in the following example, 66, I.), we should be irresistibly forced to the chord of F (as at II.).

Thus, were we disposed to extend the scale further than these three sounds at I., the next sound, as here pointed out, must decidedly be F, as in the following Example.

Having ascertained that our next bass note can be *no other* than F, let us take that sound as a *new* generator, and treat it exactly as we did the preceding one, C. We have only to consider this new generator as a tube of smaller dimensions, and it will give us, amongst its harmonics, a melody or scale of three sounds. viz., F, G, A; to which let us write the basses, as pointed out in example 64, and we shall form a scale of six notes, properly harmonized.‡

Scale of Six Sounds.

Ex. 66.



We have now six notes, and, if we desire to extend the scale still further, to what note must we next proceed?—to B♭——Why?—To answer this question let us apply the same reasoning which guided us in discovering the second generator, F.

The generator of the *last* scale of three sounds being F, let us add the 7th to the last chord, and the bass F, thus becoming a dominant, will lead us to B♭. and thus we gain a third scale of three sounds, viz., B♭, C, and D (as in Ex. 67, A, bar 3.) Here also another 7th may be added to the last chord of this scale, which will lead us to the scale of E♭ (bar 4); and thus we might continue to proceed, adding scales of three sounds *ad infinitum*. §

* See Ex. 40 (*b*.)

† See Ex. 40 (*a*.)

‡ The figures 8 5 3, 8 5 3. placed over the six notes in the above example, will explain the principle upon which the finding of the Fundamental Basses in Ex. 23 is established.

§ It appears clear, from this examination, that no scale can naturally consist of more than *three sounds*, for which there are only two fundamental basses required. The sub-dominant, which we have hitherto employed, appears now to be really the generator or tonic of its own scale.

Natural Succession of Scales of Three Sounds, Harmonized.

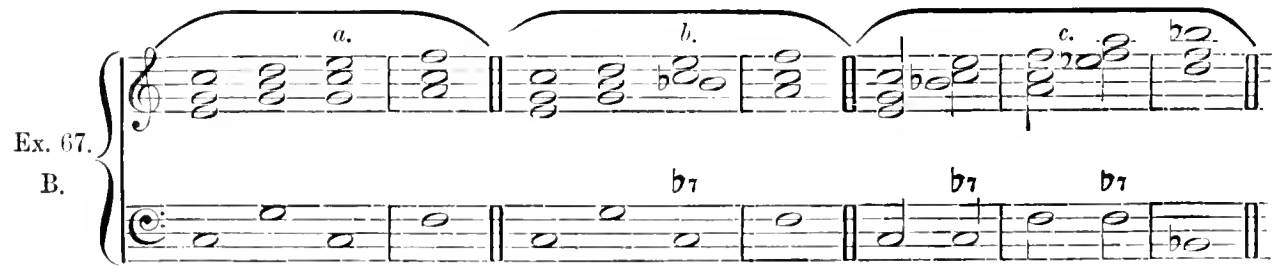


PROGRESSION AND MODULATION.

When the Harmony moves from one scale of three sounds to another, *without* the aid of the chord of the fundamental 7th, we shall call it simply a *Progression.* (Ex. 67, B, *a.*)

When it thus moves by *the aid* of the chord of the fundamental 7th, we shall call it *Progression and Modulation.* (*b.*)

But when it proceeds directly from the *first* chord of a scale to the *first* chord of the following scale, or, in other words, from key to key, by the aid of the chord of the fundamental seventh, we shall call it *Modulation.* (*c.*)



These subjects will be resumed in their proper places; meanwhile let us apply what has been already said, in an examination of the *diatonic scale,* with which this work commences.



In the preceding example, the first three sounds, C, D, E (I.), are in the key of C. The harmony moves by *progression*, until it arrives at the third sound, E.—Here, however, by the introduction of the fundamental 7th, (B♮,) on the chord of C, a modulation to F takes place. (II.)

When we arrive at the sixth sound, (A) the ear, as far as regards the harmony, feels no natural inclination to return to the *original* key, as we have *modulated out of that key*; yet, if we are determined so to do, we may return to it, but only by the *same means*, viz., *Modulation*; and, as we modulated to F by C (the dominant of F), so we modulate back to C by G, (the dominant of C.) (III).

It will now be perceived that, *in this case*, the seventh note in this scale could not be B♭, as found in example 67. It must here be B♮, because the dominant chord of G, thus introduced, requires that its third should be *major*, and ascend a half tone to its tonic, C.*

The pupil will now see the reason why the diatonic scale (concluding upon the note from which it set out) requires the half tones to be between the 3rd and 4th, and 7th and 8th.†

Thus we complete a scale of eight sounds, commencing and ending in the *same* key. Had we, on the contrary, after arriving at the sixth sound, (A) proceeded as in Ex. 67, A, we should have diverged still farther and farther from the key from which we set out; and, pursuing that course, we should never have been able to arrive again at the original key.

It will now be evident to the pupil why it became necessary to stop the modulation at the sixth sound. Here, also, he will discover the cause which produced the consecutive 5th and 8th between the sixth and seventh of the scale; for, had we continued the order of progression pointed out in Ex. 67, A, these consecutives could never have occurred.

MODULATION.

We shall now enter more fully on the subject of modulation; it is one of great importance, and, in order that the pupil may be impressed with a correct idea of its nature and object, and of the extraordinary influence which it exercises in a well constructed composition, it is only necessary to observe, that those works which lay the strongest claim to excellence have derived it in a greater or less degree from this inexhaustible source; more especially with reference to modern compositions.

Here we shall observe that *progression* stands in strong contrast with *modulation*; for, whilst the *former* moves and ranges amongst the chords immediately connected with the key (in other words, its generator), or such as are related to it, the *latter* at once carries us out of that key to another. The principle by which we are to be guided in modulation, as well as the course to be pursued on every occasion during our progress, is pointed out by Nature herself. This fact has now been so well established, that it may perhaps be superfluous to refer to it again. But let us keep our guide in view, and she will not permit us to go astray.

It may be remarked, that although modulation embraces such an important branch of harmony, and occupies a position of so much consequence, yet the principle on which it is founded is exceedingly simple.

The Rule of Modulation.

The *dominant* of *the key to which we intend to modulate, must be introduced immediately before that key.*

* See Ex. 40. † See page 2, Ex. 3.

By way of illustration, let us select the three first bars of example 61, which contain a *progression* through all the major and minor keys.

Ex. 70.



How shall we change the exercise of *Progression* at X., in the above example, into one of *Modulation*—what says the rule?

Place the dominant, E (I.), before the chord of A minor, and the dominant C (II.), before F, and thus the *progression* will be changed into *modulation* at Z.*

Let us again illustrate this by the following interrogatory. Suppose we are in the key of F, and would modulate to the key of D minor, what bass must we introduce before D? Answer, A.

Q. Why?

Because A is dominant to D, whether that key be major or minor.

Q. We are now in the key of D *minor*, and would modulate to B♭? what bass must we introduce before B♭?

Answer, F.

Q. Why?

Because F is dominant to B♭.

In the preceding example we have shown:

1st. The nature of *modulation*, by placing it in contradistinction with *progression*.

2nd. The rule by which *modulation* is to be effected when the key has been *proposed* by the Preceptor.

But let it be remembered that it is one thing to find the *Dominant* when the key to which it is *proper* to modulate is proposed by the Teacher, and quite another thing when the pupil himself is required to find the key to which he may modulate.

The Rules by which he may accomplish this object shall now be given; and we will here again repeat what we have so frequently endeavoured to impress upon the mind of the pupil, that *Nature alone is our instructress;* if, on a former occasion, *this fact* has been clearly evidenced, then the present investigation will still more clearly demonstrate that the principles of *Modulation* emanate from the same *source*.

It has been shown elsewhere that Nature, in developing the Principles of Harmony, in the vibration of sonorous bodies, etc., etc., produces *certain sounds*, which, in their progression, not only form melodies,‡ but also form a union amongst themselves *as chords*, with which these melodies are accompanied.§ These *chords* in their *Progression*, thus forming harmony, participate in this unity, much in the same manner as do the sounds of which the chords are constructed.‖

* When we modulate to a minor key, the 7th will descend a *whole* tone, instead of half a tone. See page 25.

Let us keep in mind that, whether we modulate to a *Major* or *Minor* key, the *Dominant* chord *must always be Major.*

‡ See Harmonics, Ex. 63, 64, § Ex 65. ‖ See Harmony in four parts, Ex. 29.

This will be rendered plain by the following Diagram :—

Scale	c	d	e	f	g	a
Chords	8	5	3	8	5	3
	5	3	8	5	3	8
	3	8	5	3	8	5
Fundamental Basses	c	g	c	f	c	f
Generators		C			F	

If we examine the *upper* row of the *horizontal* figures, commencing with 8, 5, 3 (which point out the true fundamental Basses),* we shall find, by looking from C, at the figures 8, 5, 3, *downwards*, that they are the *same* figures, and express the identical intervals, or sounds, of the common chord of *that* note.†

If we commence at D, the *second* note in the scale, the *horizontal* figures will be 5, 3, 8. The *last* figure (8) is the *first link* which unites the *first Generator* to the *second.* Looking *downwards*, the *same figures* express the common chord of the bass of *that* note.

Let us commence at E (the third note in the scale). 3, 8, 5, are the *horizontal* figures ; the two last of which, 8, 5, form two links more in uniting the *first Generator* with the *second.* We shall find the *same* figures express the intervals, or sounds, of the notes of that chord by looking downwards.

Here we find that the *generator* C is as closely interwoven with the *generator* F, its *dominant*, and *harmonies*,—as C, the former, is with *its dominant, and harmonies.* The *first* of these *generators* is the *dominant* to the second generator, F.‡ Whether we view these figures *horizontally, obliquely,* or *perpendicularly*, they *always* form the common chord, as produced by the vibration of a string, etc.

From what has been stated, would it not appear that there are *certain keys, also*, which stand in as immediate *relationship* with each other as the aforesaid chords do in their *progression?* And that this is the fact, shall be fully and practically demonstrated as we proceed.

That *modulation* can be effected only by the *dominant chord of the key to which we modulate*, is pointed out to us by Nature, and illustrated at Ex. 67, B, and 70.

The *discovery*, therefore, of a dominant, by which we shall be enabled to modulate *from* a *given key* to *one* of *those* which stand in *relationship* with *that given key*, is a matter of the first importance ; and it may be said that in this consists the whole mystery of *modulation.*

Considering the subject in this point of view, then, let us examine the *chord* of the key, from which we are about to modulate, and see whether we can discover a sound in that chord, which, by

* Se Ex. 64. † Ex. 65.

‡ Do we not here clearly perceive the origin of the Tetrachord as well as the Hexachord of the ancients; the former ending with the *fourth* sound, and the latter with the sixth? See Ex. 67, A and B. And whether Guido was the discoverer of it or not, one thing is certain :—that those scales and their harmonies are as old as Creation itself.

being employed as a *dominant*, will guide us to a key with which the *given key* stands *related;* and as such *dominant*, when once discovered, stands in the same relation as the *branch* does to the tree, or a child to its parent, no doubt could exist as to the relationship subsisting between the given key and the *dominant so found*. Now, that these dominants may be discovered *thus*, will be evident if we attend to the following simple process.

We shall suppose ourselves, for example, to be in the key of C: the pupil wishes to know to what key he may modulate.

Ex. 71.



Let him select the 3rd (E) of the chord C, in bar I.—Write it in the bass (at 2), add the chord of the fundamental 7th, and resolve it (at 3). By this process, he is enabled to modulate to a key which stands in the closest relationship with the *given* key; viz., its relative minor, **A.**

Q. Why? Because the 3rd of the chord of C is E, and E is dominant to A.*

Observe, we are now in the key of A minor; but how shall we return to the *original* key of C? Does the *chord*, from which we selected our *first* dominant, furnish any note by which, as a dominant, that object may be effected?

Yes; the pupil has only to select the 5th, G, of that chord, and, as G is dominant to C, he is enabled to modulate back again to the original key of C (at 5).

From what has been shown above, the intelligent pupil may perhaps have already anticipated that—selecting the octave C (the key from which we originally modulated) as a dominant, will enable him to modulate to F, the subdominant† (at 7), and by again selecting the 5th, (G) of the original key, modulate back to C.‡

Thus an important and unerring principle in modulation is established, viz., *that—*

A major common chord contains within itself the germ of three modulations:

1st. A modulation to its Relative Minor, as above at Bar 3.
2nd. ———— to its Sub-dominant, ———— 7.
3rd. ———— back to its own key, ———— 5—9

The following *General Observations* require to be carefully attended to by the pupil, as we shall have frequently occasion to refer to them.

* See Ex. 75. The above modulation may be considered as the first fruits arising out of this fruitful soil.

† See Ex. 74.

‡ That the 5th of the chord cannot be employed thus at the commencement will be self evident, when we consider that *that* 5th is the dominant of its *own* key, which, while it governs the key, effectually prevents a modulation out of it.

(*m*) When we select the 3rd of a *major key* we *ought* to modulate to a *minor* key.* See bar 3.
(*n*) ——————— the 3rd of a *minor* key ——————— to a *major* key. ——— 5.
(*o*) ——————— the 8th of a *major* key ——————— to a *major* key. ——— 7.
(*p*) ——————— the 8th of a *minor* key ——————— to a *minor* key. ——— 10.

Ex. 72.



For further illustration of what has been said, we shall now proceed to give a short practical Exercise on this interesting subject—preparatory to which it will be necessary to state:

1st. That we may *commence* our Exercise with *any key*, and select for dominants *any* interval of the chord we please, *except the* 5th of the tonic.——Why?—Because that interval is the *dominant* of the *existing key*, and therefore cannot, of course, carry us *out* of it;‡ but, when we have, by either of the other two intervals, modulated out of a key, *then* the 5th enables us to modulate immediately *back* to that key. See Ex. 71; where (at 3) we modulated to A minor, and (at 5) returned to the original key.

2nd. When a modulation out of the original key has been effected, and we desire still further to *continue* the modulation, then the key at which we *have* arrived must be treated in *the same manner* as if we had commenced with it. See Ex. 72; where (at 3) we modulated to A minor; and *then*, selecting the 3rd of that chord, modulated (at 5) to F, etc.

The following Exercise commences in the key of G; the first *three* chords proceed by progression.§

At 3, we have selected the octave, and modulated to C major. (Why to C major? ‖)

At 6, we have selected the 5th of the original key (viz., D) and modulated *back* to G.

At 7, we have selected the *major* 3rd (B), which modulates (at 9) to E, the relative minor of C. (Why to a *minor?* ¶)

At 9, we have chosen the 8th, E, and modulated (at 11) to A *minor*.—(Why to a *minor?* **).

Here we have selected the 3rd, C, and modulated (at 13) to F *major*.—(Why to a *major?* ††).

The rest of the example, it is presumed, will be understood without any explanation. †

Ex. 73.



* Because it is the *relative* minor. † See inversions of the first seven bars of this Ex., at Ex. 88, D and E.
‡ See note, bottom of p. 56. § See Progression and Modulation, page 52. ‖ See observations (*o*) before Ex. **72.**
¶ See observation (*m*). ** See observation (*p*). †† See observation (*n*).



If the pupil has carefully attended to the preceding matter—studied the examples—and reflected upon all, he must, ere this, have observed how clear, how explicit, *the rules* are which Nature unfolds for our guidance in this branch of the science; and, whether we contemplate them abstractedly as to their beauty and symmetry, or listen to the effect which they produce when played, we cannot but admire and wonder at that *simple source* from which all emanate.—The truth of this observation will be better understood as we *proceed*; because, as yet, we have introduced as specimens, such modulations only as are derived from the *intervals* of a *tonic* chord; but, as the intervals of the chords of the *dominant* and *subdominant* may be employed in a similar manner, a *system of Modulation* will be developed, which, when thoroughly understood and carried out into practice, cannot fail to prove highly interesting and satisfactory to every lover of music.

In Ex. 71, all the modulations arising from the intervals of the tonic chord were exhibited, in order that the pupil might thus be enabled at *once* to form a general idea of the principle upon which this system of modulation is established.

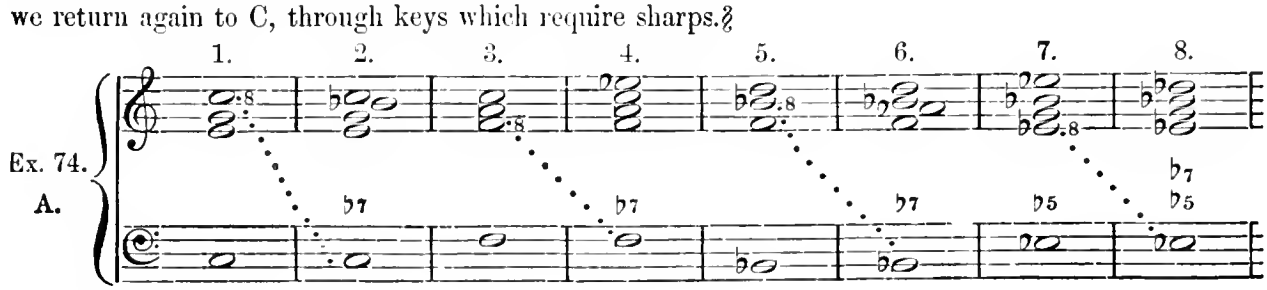
In the following examples, however, the modulation arising from the 3rd and 8th of *this* chord shall be treated separately, as he will thus be enabled still more clearly to distinguish the peculiar effect of the modulation produced through the instrumentality of either one or the other.

We shall commence our

Modulation by selecting *the Octave of the Tonic* as *a* DOMINANT.†

By pursuing this process, we continue to modulate to the *sub-dominant* of the original key (or, in other words, to a key which is a 4th above‡ that from which we set out), and are led through the whole of the keys which require flats, until (after having made an enharmonic change at G♭) we return again to C, through keys which require sharps.§

Ex. 74. A.



* Except the 7th.

† This is the first modulation, as pointed out to us by Nature (see Example 67, A).

‡ Or 5th below, which is the same.

§ If the Pupil, however, chooses to continue the exercise *without* making an *enharmonic change* (which, by way of practice, will be very useful), it will conduct him through all the keys requiring *double flats*, and he will arrive at D double flat.



In the preceding example we commence in the key of C *major*, and select the Octave C (at 1). C is dominant to F, therefore we modulate to F *major* (at 3). Here we select the Octave and modulate to B♭ major (at 5). An enharmonic change* takes place (at 13) from G♭ to F♯, and thus, by continuing the same process, we modulate back to C.

We shall now select the *same* interval, viz., the Octave from a *minor* key, the effect of which will be found very different to that of the preceding Example.

In the following Ex. we commence in the key of A *minor*, and select the Octave A. A is dominant to D ; we therefore modulate to D *minor*.†

The process in the following Example is similar to that in the preceding, with this exception that the modulation proceeds through MINOR keys, and in the former through MAJOR keys :

Ex. 74. B.



The Pupil is particularly recommended to *play* all these Exercises, in order that he may become practically acquainted with their various effects.

We shall now continue our

Modulation by selecting the THIRD of *the Tonic* as a DOMINANT.

By pursuing this process we are enabled to modulate through all the *major* and *minor* keys. §

We shall here repeat the *observations* made after Example 72, as they are of importance.

When we select a *major* 3rd, we ought to modulate to a *minor key*.

When we select a *minor* 3rd, we ought to modulate to a *major key*.

* See page 7, Enharmonic.

† See Inversions of the first eight bars of the above Exercise, Ex. 88, F.

‡ This is the second modulation arising out of this principle. See Example 71, and explanation.

§ See Example 61, where those keys are exhibited in progression, and compare *that* Example with 75.

Ex. 75.



N.B.—Let the pupil finish this Exercise himself.

It has been stated (page 58) that the intervals of the chord of the *Dominant* and *Sub-Dominant* may likewise be employed *as* Dominants.

It is necessary to bear in mind what has already been stated in pages 45 and 55. From what has been there shown by several practical illustrations, it appears evident that the *same connexion* which is found to exist between *intervals* forming the *chord* of the *Tonic*, exists also between the three *Fundamental Basses—Tonic, Dominant*, and *Sub-Dominant*.

If this fact be kept in view, it will at once be understood how it is that those keys, which are related by MODULATION to the *Tonic*, (as shown in the preceding Example) must necessarily be related by *Modulation* to those keys which arise out of the intervals of the *Dominant* and *Sub-Dominant* also; although not in the *same* degree of *affinity* as those which immediately emanate from the chord of the *Tonic*. With this view, we shall now proceed to select the intervals of the *dominant* chord, recollecting that the *fifth* and third only* can be employed as dominants on this occasion.

Modulation by selecting the *fifth of the Dominant* as a DOMINANT. †

It is necessary, when modulating thus, that the dominant of the key from which we modulate be *constantly kept in view;* because *here* we have no *visible* intervals from which to select our dominants, as in the preceding Exercise.

The *dots* in the following Example point out the dominant of the key, and also the *fifth* of that dominant which is here selected as a *dominant*.

Ex. 76.



By this process we modulate from a given key to its Dominant; for instance, from C (1) we modulate to G; from hence to D (7), and thus we may modulate through the whole circle of keys.

* Why cannot the 8th be thus employed? Because that interval is the dominant to the key from which we set out.

† This is the third modulation arising out of this principle.

TO THE PUPIL.*

Explain how you can modulate from C to G.

At (1) I am in the key of C, the dominant of which is G (2.) The 5th of G is D (2.) D is dominant to G (3), *therefore* I can modulate to G (4.)

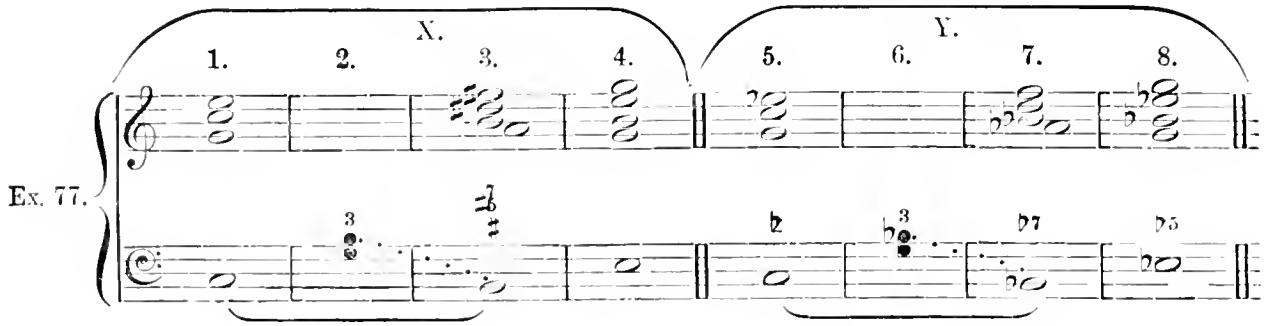
By a similar process we have modulated to D†.

OBSERVATION.

When we modulate from a *major* key, as above, we *again* modulate to a *major* key (X).

When we modulate from a *minor* key, we again modulate to a *minor* key (Y). Let the Pupil *play* the above Exercise, and compare the effect produced at (X) with (Y).

Modulation by selecting *the third of the Dominant* as a DOMINANT. ‡



N.B.—By this process we modulate to the key of the third above.

Explain how you modulate from C to E minor.

At (1) I am in the key of C major, the dominant of which is G (2, see dot). The 3rd of G is B (2, see dot). B is dominant to E (3) ; therefore, etc., etc.

N.B.—When we select the *third* of the *dominant* (as in the preceding Example), no *connecting link* is found between the key *from* which we modulate and the subsequent dominant; yet, to that *very circumstance* we are indebted for a beauty and effect which—when mingled with other modulations—is quite peculiar to itself; it is highly characteristic of boldness and independence. ‖

OBSERVATION.

When we are in a *major* key, and modulate as above, we proceed to a *minor* key, X.

But when we are in a *minor* key, we modulate to a *major* key, as at Y. N.B.—In the *latter* case, the third *thus selected* must *always be considered* as MINOR.

The following Example exhibits a mixed Modulation, arising from the intervals of the *tonic* and *dominant* chords.

* As the bass in the above Modulation *ascends* one degree, it is necessary that the harmony proceed by contrary motion, to prevent consecutive 5ths and 8ths.

† This method of tuition will, on all occasions, be found most efficacious ; it throws the student back upon his own resources, and compels him to reflect.

‡ This is the fourth Modulation arising out of this principle.

§ When we modulate thus, let the 5th of the chord *ascend*.—N.B The 7th may, on this occasion, be permitted to ascend to the 5th, the octave being omitted.—See Ex. 88, G.

‖ See Weber's Overture to the Freyschütz.

Ex. 78.



At 1, has been selected the 3rd of the tonic, a major chord modulates to minor.
At 3, ——————the 5th of the dominant, from a minor chord, modulates again to a minor at **5.**
At 5 ——————the 8th of the tonic, ——————to a minor at 7.
At 8 ——————the 3rd of the dominant. ——————to a major at 9.
At 10 ——————the 8th of the tonic, from a major chord, ——————to a major at **11.**
At 12 ——————the 5th of dominant, ——————to a major at **13.**

We shall now continue our

Modulation by selecting the *octave of the Sub-Dominant* for *a* DOMINANT.*

N.B.—Here, as well as in the preceding modulation, we have no *visible* intervals from which to make our selection; therefore the *Sub-Dominant* of the key from which we modulate must be carefully kept in mind.

Ex. 79.



Pupil.—At X, bar 1, I am in the key of F♯ major, the *sub-dominant* of which is B (2). B is dominant to E, and therefore I am enabled to modulate from F♯ to E (3). The *sub-dominant* of E is A (4); A is dominant to D (5); therefore, etc.

OBSERVATION.

When we modulate thus *from* a major key, we modulate again *to* a major key, X. (See *o*, p. 57.)

And from a minor again *to* a minor key, Y. (See *p*, p. 57.)

By this process we modulate to a key which is a *whole* tone *below* a given key; for instance, from F♯ at 1, we modulate to **E**, at 3, from E to D, etc.

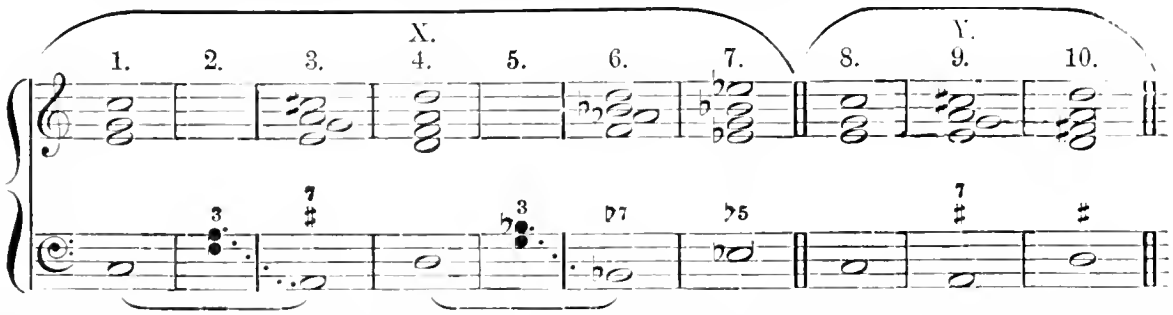
The pupil ought to continue this process through all the major keys, as at X, and through all the minor keys, as at Y; and by making an enharmonic change, he will return again to the original key. (See Example 74, A, which bears a strong resemblance to this.)

* This is the fifth Modulation arising out of this principle.

We shall now continue our

Modulation by selecting the *third of the Sub-Dominant* for a DOMINANT.*

Ex. 80.



Pupil.—I am in the key of C (bar 1), the sub-dominant of which is F (2, see dot). **A,** the 3rd, is dominant to D (3), therefore I modulate to D minor (4).

OBSERVATION.

1st. In selecting the *major* third (2) of the *sub-dominant,* we modulate to **a** *minor* key (4†.) We may indeed occasionally modulate to a *major* key (as at 10); the former, however, as being the *relative minor* to the *sub-dominant,* is preferable; it produces the better effect.

2nd. It is necessary to observe that when the key is minor, the chord of the *sub-dominant* requires to be a *minor* chord *likewise* (5.) And, further, that when we select the minor 3rd of the sub-dominant, we modulate to a *major* key (7).‡ For example, at 4, we modulated to D *minor,* the sub-dominant of which is G; and as this must be a *minor* chord, we have been enabled, by selecting the third, B♭ (6), as a dominant, to modulate to E♭ major (7).

It has now been shown that, by selecting the intervals of the chords of the *three fundamental basses, dominants* may be found by which, without the slightest apprehension or chance of a mistake, we are enabled to *modulate,* not only direct to those keys which arise out of, and are immediately related to the *tonic,* but to *those* also which are derived from the dominant and sub-dominant.

The following Exercise may be viewed as an epitome of all the preceding. It contains the six Modulations arising out of the intervals of the above three chords. When all these six Modulations are introduced in immediate succession, the Exercise will conclude in the *same key as that from which it originally set out.*

Ex. 81.



* This is the sixth and last Modulation arising out of this principle.
† See (*m*) page 57. ‡ See (*n*) page 57.

The preceding example begins and ends in the key of C.

At 1, we have selected the 3rd of the sub-dominant, and modulated to D minor at 3.
— 3, ——————— 5th of dominant, ——————— A minor at 5.
— 5, ——————— 8th of the tonic, ——————— D minor at 7.
— 7, ——————— 3rd of the tonic, ——————— B♭ major at 9.
— 9, ——————— 3rd of dominant (a) ——————— D minor at 11.
— 11, ——————— 8th of sub-dominant (g) ——————— C major at 13.

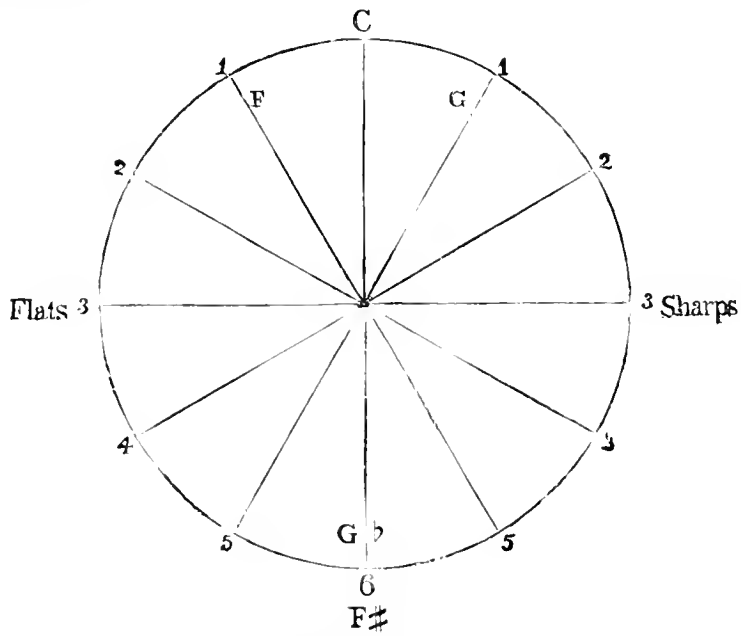
It matters not in *what key* the pupil commences the Exercise, or the order in which he chooses to select his dominants; if he but carefully attend to the directions pointed out, he will assuredly be guided back to the key from which he set out.*

TWO KEYS TO WHICH NO DIRECT MODULATION CAN BE EFFECTED.

On a critical and careful review of the preceding Examples, we find that, with the exception of *two keys*, we have been enabled to modulate *direct* to all the others, whether *major* or *minor*. The *first* of these exceptions refers to the key which is *diametrically opposite* to the one in which we then find ourselves; *the other is a half tone below that key.*

It is curious to observe how *Nature* has excluded these two very Modulations, which would produce upon the ear an effect at once harsh and discordant. No *interval* is found among the chords of the three fundamental basses, which enables us to modulate *direct* to their keys. This is a remarkable fact; which, when coupled with what has been said immediately preceding, Example 81, may serve as an additional proof (if it were necessary) of the unerring principles on which these Modulations are established.

In order to illustrate what we mean by a key *diametrically opposite* to another, let us draw a circle and divide it into twelve equal portions, placing C, the natural key, at the *top*, which, if we please, we may call the north pole. The portions on the right, gradually approximating from the east to the south pole, may represent those keys which have sharps; and those on the left by the west, the keys which have flats.



* The pupil is recommended to *play* these Modulations with variations, as exhibited in Example 56.

Here it is plain that, when we proceed towards the *right*, the key diametrically opposite to C is F♯; but, when to the *left*, the opposite key will be G♭. If we consider this circle as representing the map of the world, then F♯ or G♭ are the *antipodes* to C; G the antipodes to D♭; etc. In order, therefore, to discover the antipodes to any given key (requiring *sharps*) it is only necessary to deduct the number of *sharps* which the key requires from six, and the *remainder* will point out its opposite key with *flats*. For example: G has one sharp; deduct one from six, and five remain; —what key requires five flats? Answer, D♭. Then *that* is the *opposite* key.

The key of B has five sharps; deduct five from *six*, and one remains:—What key has one flat? Answer, F. (See page 8.)

What is the opposite key to E♭? Answer, A. Why? Answer, E♭ has three flats—*three* from *six*, and *three remain*. The key of A requires *three* sharps, and *that* is the opposite key to E♭.

Again, N.B. 1*st*. *To keys which are diametrically opposite to each other, Nature has forbidden us to modulate.*

2*d*. *To the key which is found a* HALF *tone below a given key* (the second objectionable key) we *cannot* modulate *direct*, because the *Dominant*, which is required for this purpose, is *that very diametrically opposite key* to which we are not allowed to proceed directly either by *Modulation* or *Progression*.

A few practical Exercises, founded on the preceding rules, shall now be given; and if the pupil is desirous to make himself *practically* as well as *theoretically* acquainted with his subject, he ought to study and play them with variations, as in Example 62, and let it be kept in mind that theory and practice must be *inseparable companions*.

The following Example exhibits a course of Modulation arising from an uninterrupted employment of *the 3rd of the subdominant;* and though the 3rds, selected here as dominants, are major (which would direct us to modulate to minor keys*), yet, for the sake of showing the effect thus produced, we have modulated to *major* keys† indifferently‡.

Ex. 82.



By the above process, we continue to modulate by *whole tones* ascending— that is, we modulate from the key of C to the key of D, from D to E. And although a *chromatic scale* is thus produced through the intervention of the dominant, yet we must not confound this chromatic Progression with a *Modulation* through the chromatic scale.§

* See observation (1,) Ex. 80. † Let the pupil himself say which of these Modulations he prefers.

‡ See observation on Ex. 83. § See Ex. 84.

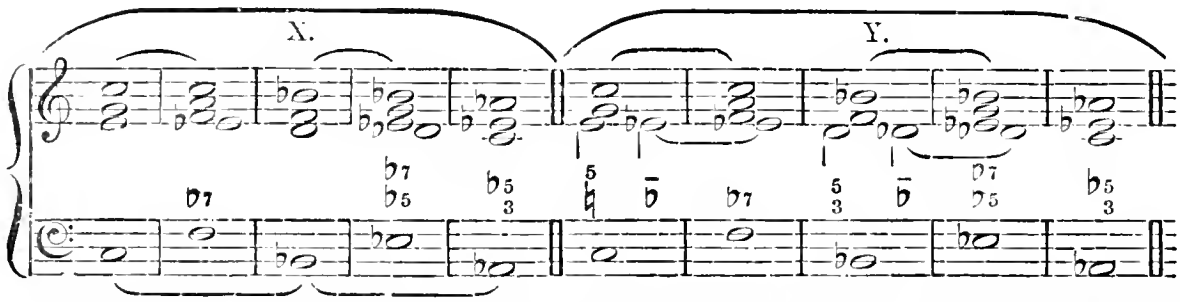
Let the pupil continue this Exercise until he arrives again at the original key.

The above Example, at Z, shows how a *minor* chord may very effectually be changed into a *major*; thus not only producing variety, but preparing the ear for the Modulation which follows. This will be more clearly understood in the explanation of the following Example.

We shall now select *the octave of the sub-dominant.*

This process enables us to modulate by *whole tones descending*—that is, from C to B♭, from B♭ to A♭, etc. etc.

Ex. 83.



In Example 82, at Z, in modulating by whole tones *ascending*, we changed a *minor* into a *major* chord. In this Example, at Y, we have changed a *major* into a *minor* chord, because we are modulating by whole tones *descending*. This process of changing a major chord into a minor, or vice versa, affords an *additional* connection between the *preceding* tonic and *succeeding* dominant, prepares the ear to hear the following Modulation, and softens any harshness of effect which might be produced when modulating to keys remote from the original one, called *extraneous*, as in the following Example where we have modulated to a key within *one point* of that which is *diametrically opposite*—viz. from C to D♭. Had the chord of C continued *major*, the Modulation to D♭ would have been *extraneous;* but, by making that chord *minor*, the Modulation to D♭ is no longer extraneous, because we modulate *not* from C *major* to D♭, but from C *minor* to D♭.

Ex. 84.



If we continue this process, a *modulation* by *ascending* major semitones will be produced.* We have selected throughout the 3rd of the *sub-dominant*, and have thus modulated (at 3) to D♭; but as the *major* semitone which follows D♭ is E♭♭, it becomes necessary (in order to prevent the accumulation of flats) to change D♭ *enharmonically* into C♯ (4,) and thus modulate to D (5) instead of to E♭♭; from hence to E♭ (6), then to F♭ (7); here, again, an *enharmonic* change must take place; F♭, at 7, therefore is changed to E♮ (8), from whence we modulate to F, instead of G♭♭.

N.B We have changed the major chord (bar 1) into a minor; and this process has been observed at bars 5 and 7. When a note is raised or lowered a half tone, and its position on the staff is thereby altered, it is called a *major semitone*,

* See observation on Ex. 80.

but when a note is raised or lowered a half tone, without changing its position on the staff, it is called a *minor* semitone; thus, from C to D♭ is a major semitone; from C to C♭ is a *minor semitone*.

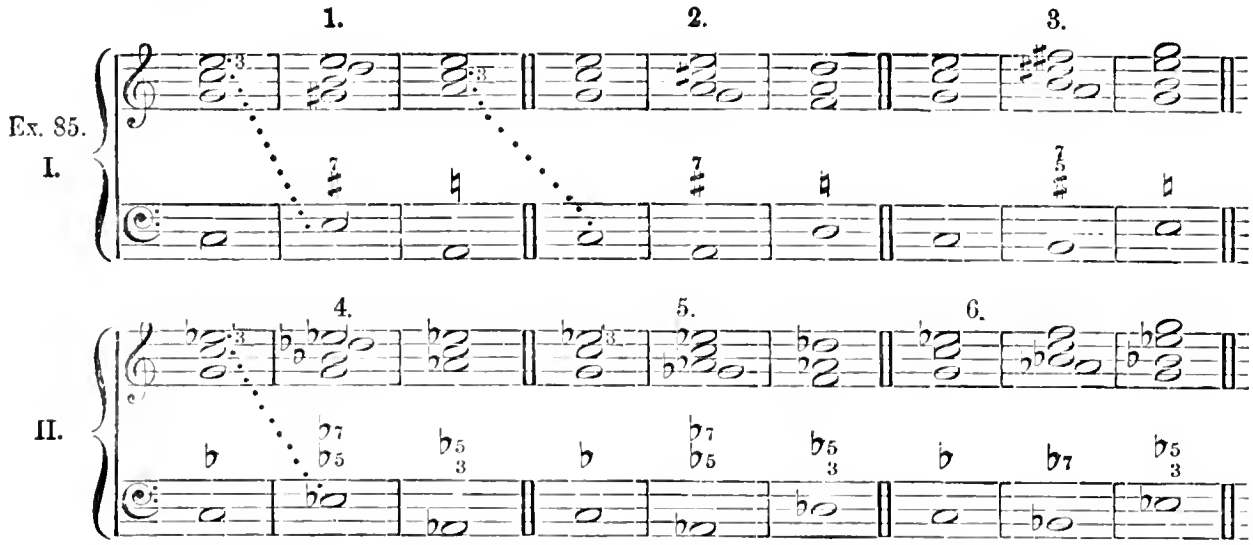
The pupil should continue to pursue the same process until he arrives again at C. It is an exercise well calculated to show, not only the *use* of enharmonic changes, but also how indispensable they are when modulating into *extraneous* keys.

It may have been remarked that, in selecting our dominants, we had especial regard as to whether the chord from which they were selected was *major* or *minor*. As this is a matter of importance, we shall proceed to point out those keys which are more *immediately* and *directly* related to *major*, and those related to *minor* keys.

If the pupil has carefully examined Examples 67 to 72, and comprehended what has been stated with reference to them, it will be clear that were we to set out from a *minor* key, the Modulation would be different from that which would flow from a *major* key.

For instance—

Ex. 85.

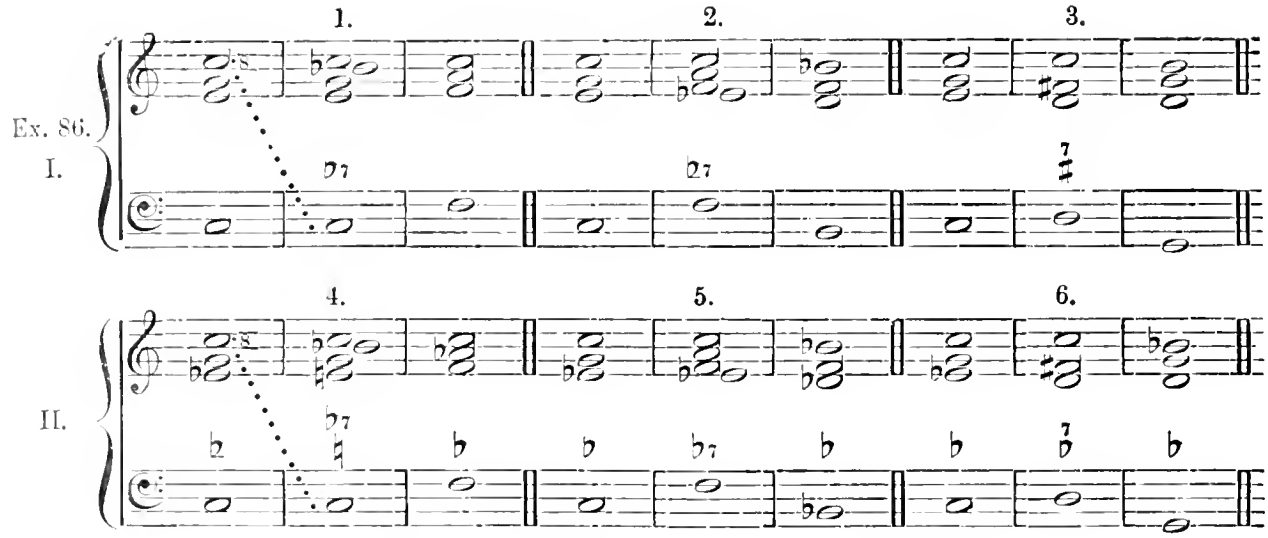


At 1, the key is C *major*,	we have selected	the 3rd E,	and modulated to A minor.
But at 4, the key is C minor	——	E♭	—— A♭ *major*.
At 2, the key is *major*	——	the 3rd of Sub-dom. A,	—— D minor.
But at 5, the same key is minor,	——	the 3rd of Sub-dom A♭	—— D♭ *major*.
At 3, the key is *major*	——	the 3rd of the Dom. B	—— E minor.
But at 6, the key is minor	——	the 3rd of the Dom. B♭	—— E♭ *major*.

N.B. At 3 and 6, the 5th of the Dominant Chords has (for the sake of effect) been permitted to *ascend*; in consequence of which, the 3rd in the Tonic Chord, which immediately follows, is doubled.

In the above Example, the 3rds only have been selected as Dominants to show their influence; it has already been shown * that the octave of the Tonic, the octave of the Sub-dominant, and also the 5th of the Dominant, exercise a similar influence, although not quite *so decided*. Instances of these are given in the following Example :—

* See observation on Ex. 72, 76, and 79.



At 1 the key is C *major*, we select the 8ve of the Tonic C and modulate to F *major*.
But at 4, the key is C minor. ——————————C —————— F minor.
At 2, the key is *major* ——————8ve of Sub-dom. F —————— B♭ *major*.
But at 5, the same key minor, ——————————F —————— B♭ minor.
At 3, the key is *major* ——————5th of Dom. D —————— G *major*.
But at 6, the *same* key minor, ——————5th ——D —————— G minor.

The two preceding Examples (85 and 86) plainly show (especially when played, and on *comparing* the different effects produced by I. and II.) how very much a Modulation is influenced in its course by the key from which we set out, whether that key be major or minor. They also teach us, that were we simply to *change* a major key (to which we had modulated) into a *minor*, the *whole course* of Modulation would at once receive an entirely *new* impulse and direction; that is, in the latter case (minor), we should be directed to those keys which are *immediately related* to the *minor* (II. 4, 5, 6); and, vice versâ, by changing a minor key into a major, we should modulate to those keys which stand in relation with *the major* (I.—1, 2, 3).

We shall now suppose the pupil placed at the pianoforte, and about to pursue a practical course of Modulation.

He is already aware that he may modulate *direct* to any key except two; (the reason has been shown in page 35.) We shall suppose him to be in the key of C; and instead of asking himself, as heretofore, "To what key can I modulate?" let him at once say, "I *will* modulate to such or such a key."—We shall suppose him to have chosen F. His next inquiry would be: What is the Dominant of F?——Answer, C. From whence have you derived the Dominant?——Answer, From the octave of the Tonic.

I am now in F, and will modulate to E♭. What is the Dominant?—— Answer, B♭. From whence is that Dominant derived? Answer, It is the Sub-dominant of F.

I am in E♭, and will modulate to its relative minor, C. What is the Dominant to C?——Answer, G. From whence is that Dominant derived?——Answer, From the third of the Tonic.

I will modulate to G minor.—The Dominant is D. From whence do I derive that Dominant? (See Ex. 76, y.)

I will modulate to B♭.—the Dominant is F. From whence is that Dominant derived? (See Ex. 77, y.)

I am in B♭.—Can I modulate to E? No; because the key of E is diametrically opposite to B♭. (See Circle of Keys, page 37.)

And thus he may continue his Exercise.

If the principle on which these Modulations are founded be well understood, no further illustration will be required; nor will the pupil experience the slightest difficulty or embarrassment in his Exercise; that is, provided he is quick and ready at finding the *Tonic* to any given *Dominant.**

It must now be manifest to the student what an inexhaustible variety of Modulation may be produced by the application of the preceding simple rules; and, as they are based on an unerring law of Nature, the learner can never go astray;—it is *impossible;* nothing is left to chance—nothing to guess at. Let the pupil avail himself of the extensive power of Modulation now placed within his reach, varying his selections from the different intervals according to his own taste; and, by following his guide carefully, he must produce ever new, and only the best, effects; all harsh and *extraneous* Modulation being *totally excluded* by the rules themselves. The following Example may serve as a specimen of the effective employment of the preceding rules of Modulation; and it will be observed, that in this instance we have not confined ourselves to mere Modulation, but have occasionally introduced *Progression.*† This intermixture of *Modulation* and *Progression* will greatly add to the general effect, and prevent the monotony which would otherwise occur.‡

It will be observed that, in writing the *variations* in this Exercise, we have not confined ourselves to the simple intervals of the chords, as in Examples 35, 36, 62; on the contrary, we have employed them in such a manner as to form a *variety* of passages, to the construction of which the pupil is advised to pay particular attention. Neither have we written the chords in that simple form in which they appeared in the preceding Examples, but, in order to make the Exercise as useful as possible, we have written the *same* chords in different positions; and, to add still more to the general effect, some of the intervals have been doubled;§ and, if they are played thus on the pianoforte, whilst another performer plays the variation an octave higher, the effect will be found pleasing.

To make this matter still more interesting, a few *notes* have been introduced into the variation, which *do not form a part* of the harmony, called "Passing and Auxiliary notes,‖ into an explanation of the nature of which it is not at present necessary to enter; the subject will be fully considered hereafter.

* This habit may easily be acquired, by simply recollecting that, in keys with *sharps*, the Tonic has always *one* sharp *less* than the Dominant; and, in keys with *flats*, the Tonic has *one flat more*.—Thus, if the Dominant is D, the Tonic will be G. Why?——Because D has *two* sharps, and G but *one*. If the Dominant be F, the Tonic will be B♭. Why?——Because F has one flat and B♭ has two flats.

† These Progressions are pointed out by the letter P.

‡ *To the Professor.*—It must be kept in mind that, up to the present time, we have been entirely confined to Fundamental Harmony; when we arrive at Inversion, our field of operation will be vastly enlarged; but how, extensive will that field be when we arrive at the Inversions of the Chord of the 9th, Equivocal Modulation: etc., etc.

§ Doubling of Intervals in accompaniments is permitted, and Consecutive Octaves arising thus, as in the present instance, are never considered as such; but we must be careful not to confound this writing *accompaniments* with writing in four real parts, where every interval, we know, has in its progression its place distinctly pointed out. See Ex. 56, etc.

‖ A few of these notes are pointed out by a mark, thus.×

Exercise on Modulation and Progression.





Note.—X, Y, W, Z, show the different ways of doubling some of the intervals of this chord.



References to Examples from which the above modulations have been selected.

1. Ex. 74 (A), 8ve of Tonic.—II. Ex. 75, 3rd of Tonic.—III. Ex. 76 (Y). 5th of Dominant—IV. Ex. 79, 8ve of Sub-Dominant.—V. Ex. 77 (Y), 3rd of Dominant.—VI. Ex. 80, 3rd of Sub-Dominant.

AN ESSAY

ON

INVERTED BASSES.

If the pupil has carefully studied and comprehended the matter contained in the preceding examples, he must have observed that the harmony employed heretofore has been derived from the vibration of a sonorous body*: this harmony we call *Fundamental;* because it is the basis and foundation, the solid and primitive rock, it may be said, upon which rests the entire superstructure of musical composition. The bass of this is called the *Fundamental Bass,* in contradistinction to that which is called the *Inverted Bass,* with which the pupil shall now be made acquainted.

He will have noticed the peculiarity of the fundamental bass with respect to the progression of its *intervals,* as compared with the progression of the intervals of the rest of the harmony; for, whilst the former performed its evolutions by extended distances, such as 4ths and 5ths, the latter did so by 2nds and 3rds. This fact should be well kept in mind; and the pupil is recommended to review once again what has been said on the peculiar character of the *four parts* at page 41.

It is evident that, were none but *fundamental* basses to be employed, a great monotony would be the result; not only in the bass, but in the other parts also.

By the employment of the *four rules* in harmonizing, without the addition of a single fundamental bass, very considerable and important changes *have* been effected, and variety produced, not only with regard to the harmony as a whole, but likewise as respects the individual *melodies* of the soprano, alto, and tenor.† However, although these rules have the power to influence the immediate *progression* of the *fundamental bass,*† yet after all, they can produce ONLY *common chords* and chords of the *fundamental* 7th: *all that could be effected therefore* (as far as *fundamental harmony is concerned*), *has been effected.*

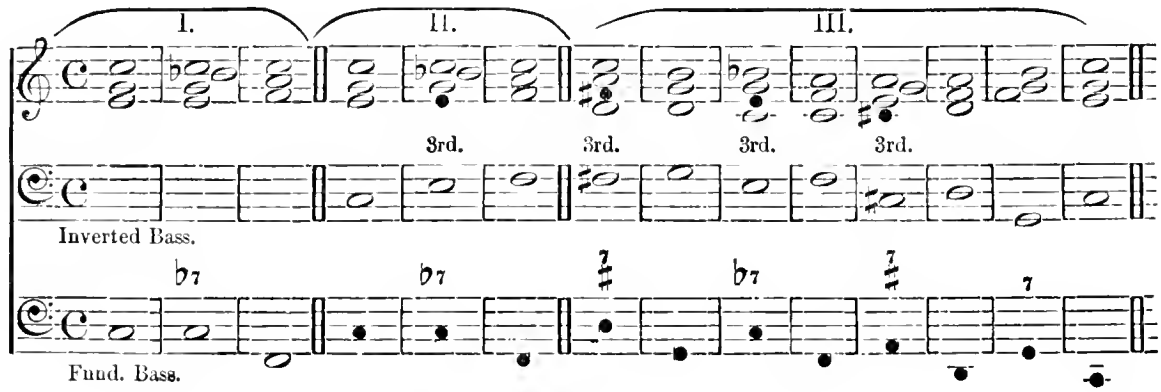
Our object shall now be to show how the *characteristic difference,* still existing between the progression of the bass and that of the other parts, may be removed; how the bass may be incorporated with the harmony so that it shall lose (for a time at least) its individuality—that all monotony shall disappear—*new* effects be elicited—and the whole harmony assume an aspect differing from any of the former, yet *without altering the fundamental progression* on which it is established.

It has been made clear that, by the employment of the four rules, the *fundamental 7th* appears sometimes in the *soprano,* sometimes in the *tenor,* sometimes in the *alto,* but *never in the bass.*‡ If this fact be kept in mind, the pupil will almost anticipate what is now proposed for his consideration, namely, how to find a bass which shall in its progression assimilate with, and partake of the character of, the other parts of the harmony, yet without destroying, in a single instance, the foundation upon which the harmony has been constructed. An example will make this plain.

* Ex. 62. † See Ex. 54, I, II. ‡ See Ex. 56.

We shall suppose the pupil to make a modulation from C to F, as in the following Ex.

Ex. 87.



At I is a modulation by *fundamental basses*, and no similarity of progression is perceivable between the bass (as it proceeds from tonic to dominant) and the other intervals of the harmony.

But if we take E, the *third* of the dominant chord (as at II), and convert that interval into *a bass* note, a similarity will be effected, for the bass E will then proceed by *one degree* to the tonic F.

Thus a *new* bass note is found; which in its progression *assimilates* with the rest of the parts, without changing the nature of the *fundamental harmony*, and also produces a *new* and important effect. A bass note, *thus* chosen, we shall call an *inverted bass;* and as this *inverted bass* occupies now the *fourth* or lowest part of the harmony, the fundamental bass must be expunged, as it forms no longer a portion of the four parts. The intervals, also, which are thus chosen for inverted basses (and which are pointed out by dots) must *not* be allowed to remain in the chords from which they are taken.

As the 3rd of the chord is the *first* interval which presents itself immediately above the fundamental bass,* so when *that* interval is chosen as an inverted bass, we shall call it

The First Inversion of the Fundamental 7th.†

Let the pupil now, by way of exercise, make a few modulations, first by the *fundamental bass*, and then choose his inverted bass, as shown in the above example.

When he has written such modulations, by the *first* inversion as at III—played them, and formed his judgment as regards the *difference* of *effect* between fundamental and *inverted* basses, he may be introduced to other inverted basses; but, before we proceed, it will be necessary to enter a little more minutely into the nature of

* See construction of the common chord.—Example 14.

† Why the chord of the fundamental 7th is first selected for inversion, rather than the *common* chord, is, that the pupil may at once enter upon a course of practical modulation by inversion, which the latter would not have afforded.

FIGURING INVERSIONS.

Figuring the Inverted Bass.

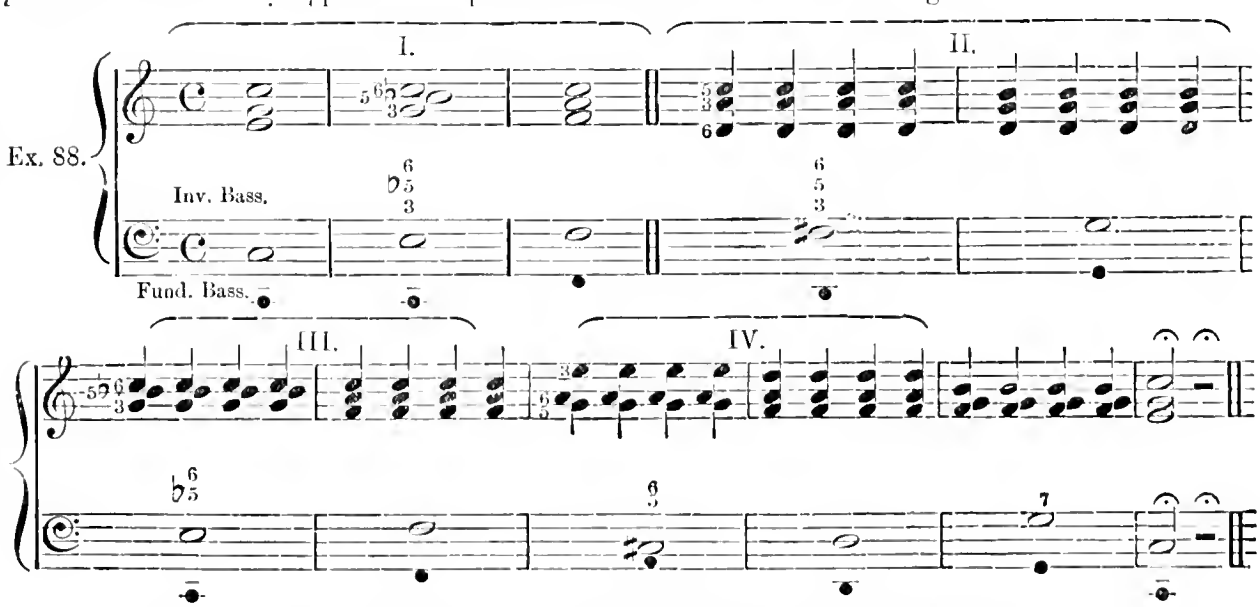
It has been stated elsewhere* that every bass is supposed to be accompanied by its common chord, and therefore requires not to be figured; but this, let it be well kept in mind, applies to fundamental basses *only*. With respect to inverted basses, the case is widely different; for, although the *notes* of the chords remain the same, yet the *names* of the intervals, with reference to the *inverted* bass, are *not* the same; *they* must now be counted from the *inverted* bass, and figured accordingly: in fact, it is only *now* that the real figured bass commences; and the *necessity* of figuring the bass *thus* will be evident. For instance, let us suppose the *fundamental basses*, at II (in the preceding Ex.), together with their chords, were removed—and that we were required to play the chords to the three bass notes, C, E, and F—the performer would play three *common chords*; but this is *not* the intention of the composer; for it is intended that the *inverted* bass E shall represent the *chord* of the *fundamental 7th* of C, and not the *common* chord of E. Here, then, we perceive the *absolute necessity* of figuring the Bass, so that it shall truly represent the chord intended†.

Let us now ascertain what figures are required to be placed over the bass E, in order that it may express the dominant chord of C.

At I, in the following Example, the inverted bass is E.
From E to G is a 3rd (original 5th of the fundamental harmony).
From E to B♭—♭ 5th (original ♭ 7th ———————————).
From E to C — 6th (original 8th ———————————).

The *first* inversion, therefore, of the dominant chord is figured thus—$\flat\frac{6}{5}_{3}$;‡ no matter in *position* the chord may appear. Compare I with II and IV in the following Ex.

Ex. 88.



* See page 24. † This is called playing from figured basses.
‡ The 3rd, in figuring this chord, is generally dispensed with, except when it requires an *accidental*. See III, IV.

At I, the 8th of the fundamental bass is in the soprano expressed by 6.
At II, the 7th _____ 5.
At IV, the 5th _____ 3.

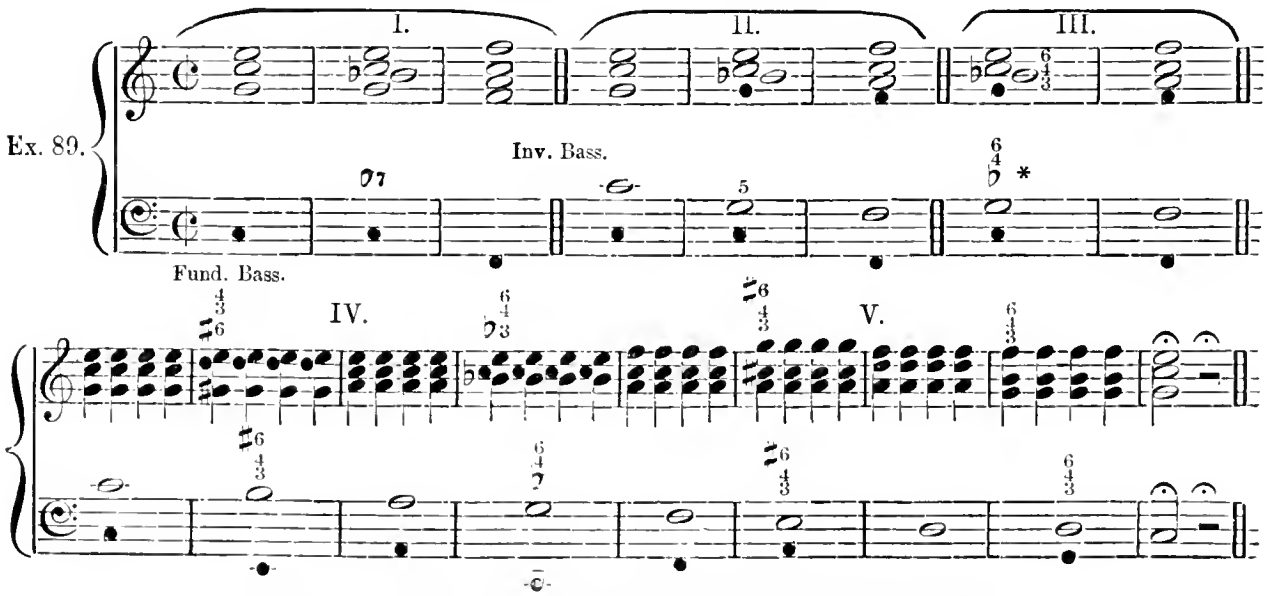
N.B.—Where any interval requires a ♯, ♭, or ♮, the corresponding figure must be marked so likewise, as has been already explained in page 24.

The reason why we have been so *circumstantial* in the *explanation* of the *first* inversion is because we are now arrived at a very important branch of the practical science; and it is necessary that the pupil should, at the very *outset*, obtain a clear and comprehensive view, not only of the characteristic difference which exists between *fundamental* and *inverted* harmony, but also of the mode of employing them with propriety and effect.

From what has been stated, it is clear, that if the 3rd of the chord can be employed as an *inverted Bass*, the 5th of the chord may be thus employed also.

In the following example, at I, the dominant chord appears *fundamental*. At II, the 5th (G) of the dominant chord C has been selected as an *inverted* bass; and as the 5th of that chord is the *second interval* which presents itself above the fundamental bass, we shall call it

The Second Inversion of the Dominant Chord.



Figuring of the Second Inversion of the Dominant Chord.

At III, From the *inverted* Bass G to B♭ Tenor is a 3rd (original 7th of the fundamental chord).
From ———— G to C Alto is a 4th (original 8th ———— ————).
From ———— G to E Soprano is a 6th (original 3rd ————————).

The second inversion, then, is always figured $\frac{6}{4}_{3}$, in whatever order the intervals of the chord may appear.

* See page 24, tenth line.

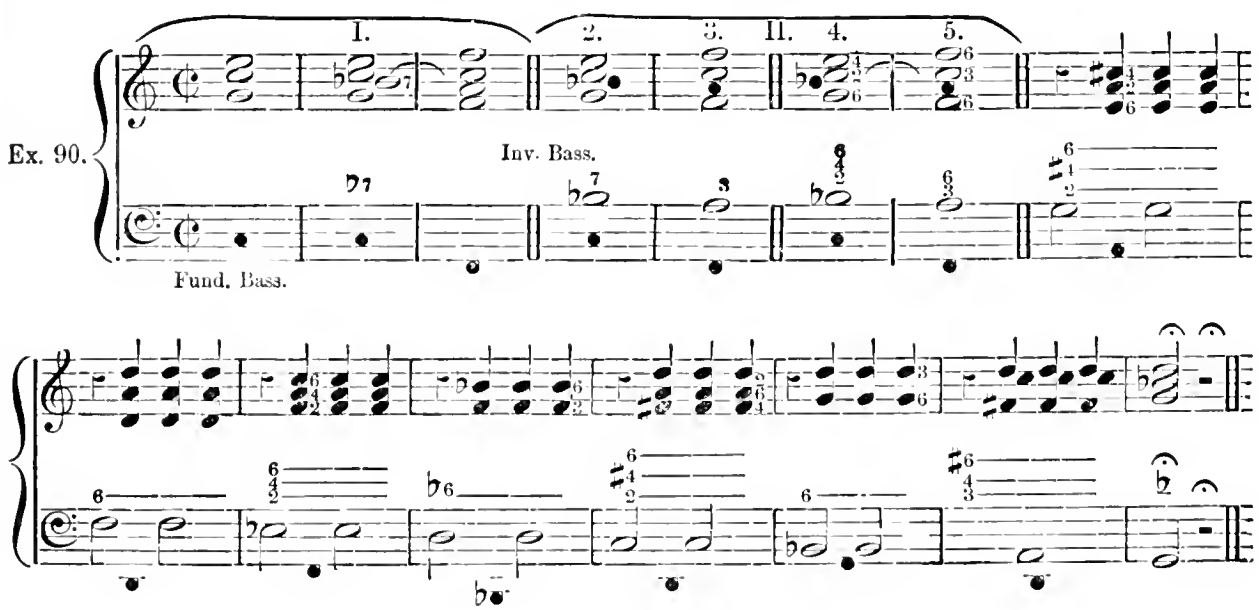
At 4 the figure 6 has a dash through the head, thus, $\not{6}$; because G♯ (the interval which this 6 represents) has a ♯ placed before it. The same occurrence takes place at 5.

The pupil should now, by way of exercise, write an extensive modulation by the second inversion, and then employ both the 1st and 2nd according to his own discretion, *carefully figuring the bass*, and observing to mark the ♯, or any accidental that may occur; he should then play the whole, marking well the *difference* of the effect produced by the different inversions.*

We shall now proceed to the explanation of the *Third inversion* of the *fundamental 7th;* it is not improbable that the intelligent pupil, if he has carefully attended to the preceding exercises, may have already anticipated the subject, reasoning thus: If we can take the 3rd and 5th of the dominant chord as an *inverted bass*, why not take the 7th of the chord *also?*

In the following Example, at I, we have again made a modulation from C to F, by the fundamental bass; and, by selecting the 7th at 2, as an inverted bass, have produced

The Third Inversion of the Dominant Chord.



Figuring of the Third Inversion.

At II. From the inverted bass B♭ to G in the tenor, is a 6th (original 5th in fundamental harmony).

From ———— B♭ to C —— alto, — 2nd (——— 8th ————————)

From ———— B♭ to E —— soprano, 4th (——— 3rd ————————)

* When the pupil is able to perform modulations with ease and facility (during the performance of which he should fix his eye as much upon the figures as on the notes), he may try to play *without* the *notes* of the treble, by covering them with a slip of paper; thus he will learn (if he desire it) to play from figured basses. See remarks at bottom of page 24.

The third inversion, therefore, requires to be figured $\frac{6}{4}$,* no matter in what order the intervals of the chord may appear.

N.B.—Let the pupil be careful always to expunge from the chord the interval which is chosen for an inverted bass, and which is pointed out by a dot.

It will have been observed that the bass notes of the 1st and 2nd inversion, in their progression, have always proceeded to the *tonic* or fundamental bass; but not so with the third inversion; because the fundamental 7th (which is the third inversion) descends. as it ought to do, into the 3rd of the *following tonic* chord, where it produces the *first inversion* of the common chord. This is figured $\frac{6}{3}$; because, as at II, 5,

From A (now an inverted bass) to F is a 6th, originally the 8th of the fundamental harmony.
From A ——————— to C — 3rd, ——— 5th ——————
From A ——————— to F — 6th, ——— 8th ———————

The pupil may therefore consider it as a *general* rule (for the present, at least) that the chord of the $\frac{6}{4}$ should be followed by the chord of the $\frac{6}{3}$; † (*first* inversion of the *common chord*).

The remainder of the Example shows the same chord in *different* positions.

We have now gone through the *three inversions* of the dominant chord; and we believe that nothing has been omitted that could tend to bring the matter in a more clear and intelligible form before the eye of the pupil, or better impress it upon his understanding. Experience, however, has proved that it is possible to know a thing and not understand it—that we may understand and comprehend it, and yet not be able to put it in practice. It is therefore absolutely necessary that the student should put into *practice* what he has here learned. To this end, he should write various exercises in modulation, employing the *three* inversions with occasional *fundamental* basses; let him then play these exercises carefully, listening attentively to the effects produced by the different inversions, mixed with *fundamental* progression. Such a practice cannot be too strongly recommended; because not only is it calculated to improve the ear, but to give quickness to the eye in reading music at first sight (particularly if the modulation be sometimes extraneous). It teaches to play from figured basses almost intuitively; in one word, it is the ground-work of composition, engendering musical ideas, which subsequently may be carried out so as to produce a regular, finished composition; particularly when these exercises are played in *various measures* of time,‡ intermixed with cadences,§ by which they assume a rhythmical form, which is the very life and soul of a musical composition.

On this latter subject we shall treat hereafter; for the present, let the pupil follow the advice here given, and he will be well repaid for his trouble.

* It is sometimes $\frac{4}{2}$ when the 6th does not require an accidental; and sometimes with a 2 only.
† It is usually figured with a 6 only, unless when the 3rd requires an accidental.
‡ See Rhythm. § See Cadences.

The following interrogatories will tend much to impress the matter upon the mind of the student:—

Q. What do you understand by fundamental harmony?—It is the harmony derived from nature, and is the basis upon which all inverted harmony rests. See Example 63.

Q. What do you understand by inverted basses?—Such basses as are *derived* from fundamental harmony.

Q. How are these basses found?—By choosing intervals out of the fundamental harmony, and converting them into bass notes.

Q. What effect does this arrangement produce?—It prevents *monotony* in the *bass*, and gives uniformity of progression to the whole harmony, producing a new and striking effect.

Q. How many inversions does the chord of the fundamental 7th, or dominant chord produce?—Three.

Q. What is the *first inversion* of the dominant chord, and how is it figured?—By taking the 3rd of the dominant chord as the *inverted bass*, we have the *first inversion*. The inverted bass is figured $\frac{6}{5}$, and ascends a half tone to its tonic. Example 87, II.

Q. What is the *second inversion*, and how is it figured?—By choosing the 5th of the dominant chord as an *inverted bass* we have the *second inversion*. It is figured $\frac{6}{4}_{3}$, and descends a whole tone to its tonic. Example 89, III.

Q. What is the *third inversion*, and how is it figured?—By choosing the 7th of the dominant chord we have the *third inversion*. It is figured $\frac{6}{4}_{3}$, and *descends* into the 3rd of the following tonic, producing the chord of the $\frac{6}{3}$ (the first inversion of the *common* chord). Ex. 90.

Q. Is it permitted to let the *interval* which has been chosen as an inverted bass remain in the chord?—No; it must be expunged.

Q. Why?—Because it would produce *consecutive* octaves.

In order that these inverted basses may not draw away the attention of the pupil from the simplicity of the fundamental harmony, or lead him to imagine that *new chords* have been introduced*, it will be necessary to impress upon his mind that, though *new effects* have been produced by the introduction of the *inverted* basses, yet not the slightest addition has been made to the *original number* of our chords.

Much will depend upon his having clear views on this subject. *Let it be remembered*, that the harmony arising out of the *fundamental* basses remains just the same as heretofore. Whenever an interval of a chord is converted into a *bass note*, that bass note must not be considered as *the* bass, but only as one of the four parts or melodies of which, at *that* time, the inverted bass is the *lowest* part, for the *real* bass is the *fundamental* bass.

It follows, therefore, that as all the *intervals* of the *harmony* of the fundamental bass are *governed* in *their progression* by the motion of *that* fundamental bass; so, the inverted bass (as one of its intervals) is, in its progression, as much subjected to the control of that fundamental bass as if it had remained a *simple interval* of the chord.

Why the intervals of the inverted bass require to be figured has been already shown. The following exercise on modulation by *inverted* basses will place all that has been said in a still clearer point of view; we shall reserve the former order of our procedure, and *instead* of writing the harmony of the *fundamental* bass *first*, and then selecting the inverted bass, we shall choose the *inversions first*, and afterwards the harmony.

* Those who have studied harmony in the usual way will understand what the author means.

Preceptor: Modulate from the key of C to D minor.

The pupil now writes the chord of C, as in the following Example at **1**, and the fundamental basses, as at 2 and 3, expressed by *dots*. This is the *first* step.

Ex. 91.



Q. *By the pupil.*—By what inversion? *Preceptor.*—By the first inversion.

The pupil now writes C♯, the third of the dominant chord (at 5) as the inverted bass, which (as 3rd of the dominant) ascends immediately to D (at 6). This process may be considered as the *second step.*

Q. How is the first inversion of the Dominant Chord figured? A. By $\frac{6}{5}$.

(Here the pupil figures the bass as at 8.)—This is the *third* step.

The pupil now writes the chord of the fundamental 7th over the figured bass, as at **10**; and then resolves it, as at 11. This is the *fourth* and last step, and completes the proposed modulation from C to D minor by the *first* inversion.

Let it be kept in mind, when we are about to write the chord to an *inverted* bass *thus*, that the intervals ought not to be named after the *figures* by which they are represented in that *inverted chord*, but they must still be called by the *original* names which they had in the fundamental chord; *just as if no inversion had taken place. If this direction be carefully attended to* (which is indeed, as shall presently be shown, of much consequence), *it will exceedingly simplify the process of modulation by inverted basses, and remove all that intricacy which, by any other process, is unavoidable.*

In order to prove this, we shall take the chord of the fundamental 7th as an example. That chord, we know, contains *three* intervals, or notes, besides its bass, viz., 3, 5, 7. It admits, therefore, of *three* inversions; and as *each* of these intervals, in each of these inversions, when figured, must necessarily appear under *three different* names, it is evident that much confusion may arise unless prevented by the above process. For instance:—

The *original* 8th.	by the 1st inversion will appear as 6. —— 2nd ———— 4. —— 3rd ———— 2.
The original 7th.	by the 1st inversion will appear as 5. —— 2nd ———— 3. —— 3rd ———— in the bass.
The original 5th.	by the 1st inversion will appear as 3. —— 2nd ———— in the bass. —— 3rd ———— 6.
The original 3rd.	by the 1st inversion will appear in the bass. —— 2nd ———— 6. —— 3rd ———— 4.

Now, all this apparent confusion and perplexity vanishes the moment we pursue the process which has been pointed out, viz., calling *intervals* uniformly not only by their original fundamental names, but with reference to their progression also; for example—at bar 10, in the preceding example, we should ask ourselves the question—

Where is the 3rd?—In the *Bass*. How must the 3rd proceed? (Do not say the *bass*.) It must *ascend*.

Where is the 7th? (Do not say the 5th.) In the *Tenor*. How must the 7th proceed?—It must *descend*.

Where is the 5th? (Do not say the 3rd.) In the *Soprano*. How must the 5th proceed?—It must *descend*.

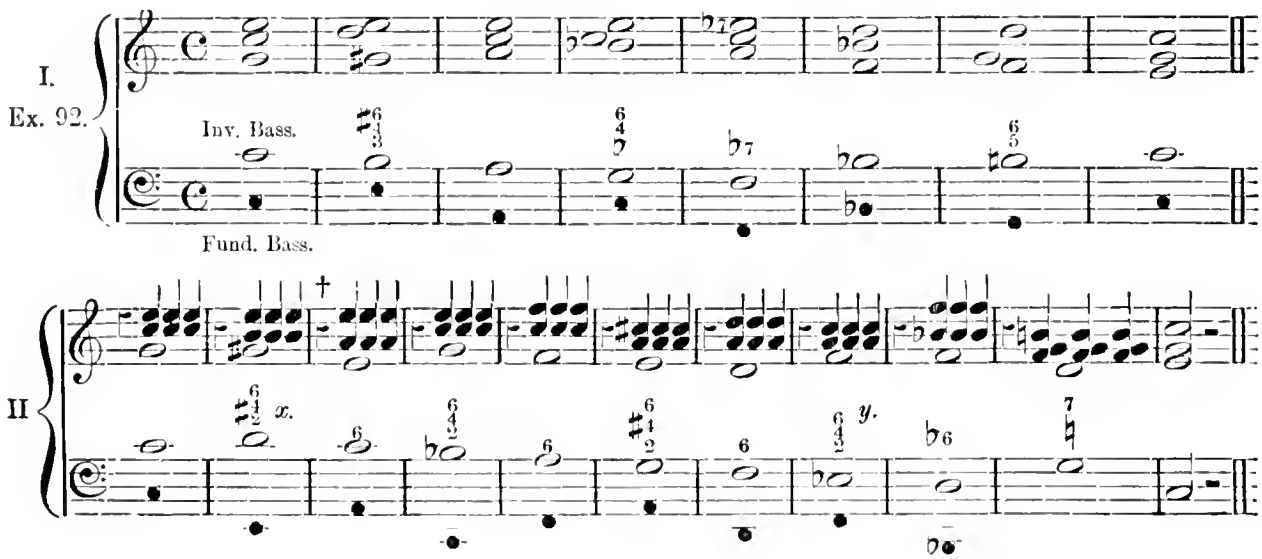
By this means the subject is exceedingly simplified, as the attention is constantly directed to the intervals of one chord only, viz., the chord of the fundamental 7th*.

The pupil may proceed thus through a whole course of modulation; having proposed to himself the keys to which he intends to modulate, he first writes the fundamental basses, and, having made his selection of *inverted basses* and figured them, adds the harmony.

That some idea may be formed of the variety of effect which *inversions* produce, when contrasted with *fundamental* progressions, we will select some of the preceding examples, the modulation of *which* shall be rigorously preserved whilst the *three inversions* are employed in various ways.

We shall first select Example 72, and employ the 2nd inversion $\frac{6}{4}_{3}$.

It will be observed that the *same modulations* which occur at I are again employed at II, but there the *third* inversion $\frac{6}{4}_{2}$ is used instead of the second. The few additional bars are introduced merely for the purpose of concluding the exercise in the original key.



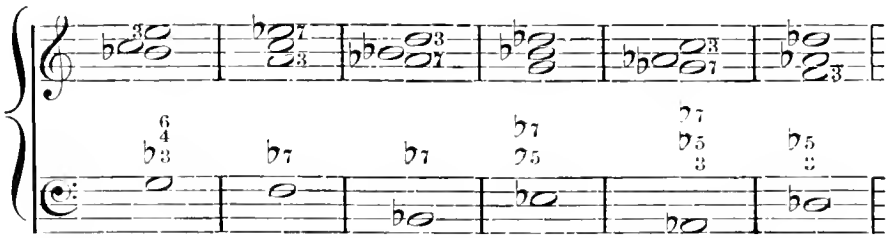
That the pupil may reap the full advantage of the following exercises, it is absolutely necessary that he should *re-examine* and *play* all the previous examples of *fundamental modulations* thus selected for inversion, in order that his ear may be impressed *again* with the effect produced. He will thus at once perceive the great difference of effect between *fundamental* and *inverted basses*, not only as regards the harmony as a whole, but also the melodious progression of the

* Those only who have already made harmony their study will appreciate the simplicity of this arrangement.

† In order to make the harmony more complete, the 3rd (G♯ at *x*) has been permitted to fall to the 5th, and the 5th (C at *y*) to ascend to the 5th of the following tonic.

basses themselves; and it is for this reason that we have chosen to select examples, with the effect of which the pupil has already been made acquainted. Let him compare the bass of Example 72 with that of the inverted bass in the above Example 92.

When two or more *dominant* chords follow each other *immediately* (as in the preceding Example bars 4 and 5), the 3rd of the *first* chord need *not* ascend, because the *dominant* does not *then* proceed to the *tonic*, but to *another dominant*. In this case the 3rd of the dominant *descends* a minor semitone, and forms the fundamental 7th of the *following dominant*. The present deviation respecting the regular *ascending* progression of the 3rd of the dominant chord to its tonic (let it be remembered) can only be permitted in a *succession* of *dominant* chords, as shown above. (See the N.B. page 37, and Example 54, II, bars 4 and 5, where the alto, instead of *ascending* to the octave, proceeds to the 7th of the following dominant.) If we continue modulating from *dominant* to *dominant*, it will produce a *protracted modulation*, of which the following is a short specimen; but this shall be more fully explained when we treat on that subject.



Example 72 again selected, employing the First Inversion, $\frac{6}{5}$, and ending in D minor.

Ex. 93.



The pupil will observe that the *highest* part, or *soprano*, of example 73 (which is here selected for exercise), is converted into the *bass* part of the following Example.

Ex. 94.



If we write the *inverted bass part* of this example in the *soprano*, and the *soprano* in the *bass* (as in the following example), an interchange of parts will be the result. Such an interchange of parts is called *double counterpoint* in the *octave*. We mention this circumstance here (merely by the way) to show the great importance of possessing a sound knowledge of *fundamental* harmony, and what may be effected by a proper application of *inverted* basses.

The bass of the preceding Example 94 written in the soprano, *two* octaves *higher*, with the soprano written in the bass, *one* octave *lower*.

Ex. 95.



The following is selected from Example 74, A, with mixed inversions which the pupil will figure, and then add the alto and tenor.

Ex. 96.



The following is selected from Example 74, B. The soprano of that example is here converted into a bass. N.B.—The figuring of the bass will be occasionally omitted in succeeding examples—

Ex. 97.



By way of exercise, the pupil may let the parts of the first two Bars in this example *interchange*, as in Example 95.

* When we modulate as in Example 77, X, *no inversions* should be employed, because the effect produced by the fundamental bass will be more characteristic of the boldness which that modulation is intended to express.

The fundamental 7th may, on occasion, be permitted to *ascend* to the 5th of the following tonic. See Weber's Overture to Freyschütz—vivace movement, bars 37. 38, and 39.

In the following exercise the soprano of Example 82 has been converted into a bass, which the pupil will figure and then add the harmony.

Ex. 98.



As a few specimens of inverted basses given in the preceeding Examples will suffice to show how they may be employed, we shall proceed to explain

The Inversions of the Common Chord.

This may be effected in a very few words; for, as the pupil is already acquainted with the *first* inversion of that chord*, it only remains to explain the *second.*

It is clear, that as the common chord contains only two intervals besides the bass, it can have only two inversions. In the following example, at 1, appears the fundamental chord.

At 2, the first inversion (6th), the third of the chord having been selected.

At 3, the second inversion ($^6_4$), the 5th of the chord having been chosen as the inverted bass.

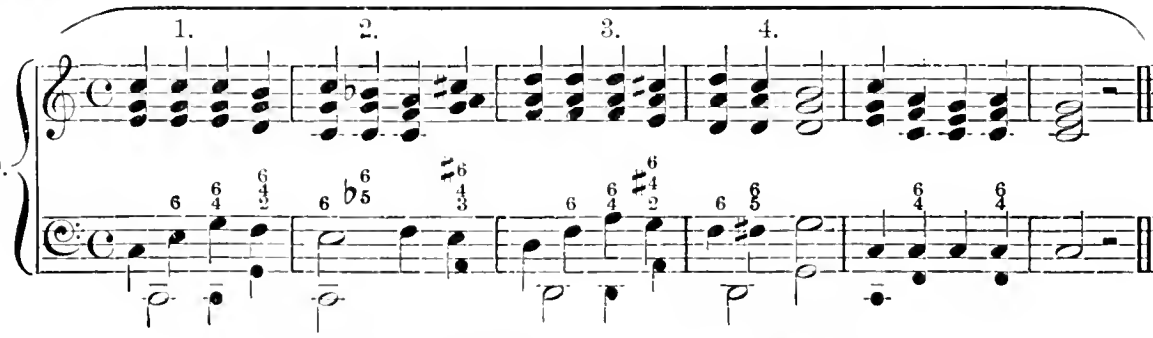
Ex. 99.



It would be waste of time to enter more fully into an explanation of these inversions, after the exercises through which we have gone. The following example will suffice to show their practical use.

I.

Ex. 100.



* See Example 90, Bar 5, 7, 9, and 12, and Explanation in page 78.



N.B. The chords of the $\frac{6}{4}$, at I, are of *doubtful* origin, as shall be shown when we treat on *discords by suspension*. Those at II and III are *perfectly legitimate*.

When we employ the first inversion of a *common chord*, it is *not absolutely necessary* to remove the 3rd from the chord, unless it affects the purity of the harmony. In the preceding Example at 2, the 6th (*i.e.*, the original 3rd) is doubled. This doubling of the 6th arises from the resolution of the preceding chord; but it may also appear as at 4, where E, the 5th of the dominant chord, ascends to F.

Hints respecting the Figuring.

In figuring the first inversion, a 6 is sufficient, unless the 3rd with which it is accompanied requires an *accidental*. In that case, it is only necessary to place *the accidental* alone, in place of the figure 3, thus: 6, 6, 6. ♯ ♭ ♮

The second inversion must always be figured $\frac{6}{4}$.

When the figures requiring accidentals are *sharp*, they are marked with a line across, or a ♯ before them.

When the accidentals required are *flats* or *naturals*, they are placed before the *figure*, in the same manner as they are placed before the *note*.

ON EMPLOYING INVERTED BASSES IN HARMONIZING MELODIES.

It has been already shown how *Inversions* may be employed *in Modulation*;—it shall now be pointed out how these Inversions may be employed in *harmonizing Melodies*. In this latter the Pupil will not experience the least difficulty, provided he has paid strict attention to the former. He will immediately perceive that he is already in possession of all the essential matter here required. However, before we proceed, it will be necessary to recall attention to what has been said at page 41, and exhibited in Example 58, A.

We there explained the *peculiar character* of each of the four parts, and how (from the application of the four rules of harmonizing*) they became *interchanged* amongst themselves,

* Page 32 to 40.

producing an agreeable diversity of effect; in which interchange, however, the bass *did* ***not*** participate*.

We will now take a melody and harmonize it with fundamental basses *only*--write the chords on an upper staff, leaving a blank staff for the inverted bass, add the 7ths to the dominant chords, and take care that they are properly resolved. (See Example 102, I.)

Having harmonized the melody thus, our object is next to select from the harmony some of the intervals with which to construct a melody in the inverted bass. A few rules shall be given to assist the Pupil in this selection; for the present it will suffice to direct his attention to the dominant chords *only*, because the resolution of the intervals of that chord will be quite sufficient to point out the path which the inverted bass is to pursue.

Rules for constructing an Inverted Bass.

Ex. 101.



RULE I.

(*a.*) When the 5th of the dominant chord is in the soprano, select the 3rd as the inverted bass $\frac{6}{5}$.

This will produce a soprano progression in that part.

RULE II.

(*b.*) When the 3rd is in the soprano, select the 7th for the inverted bass $\frac{6}{4}_{2}$.

This will produce a tenor progression in that part.

RULE III.

(*c.*) When the 7th is in the soprano, select the 3rd as the inverted bass $\frac{6}{5}$.

This will again produce a soprano progression in that part.

RULE IV.

(*d.*) When the 3rd is in the soprano, select the 5th as the inverted bass $\frac{6}{4}_{3}$.

This will also produce a soprano progression in the bass.

* The pupil is strongly recommended to refer once again to what has been stated in the *Introduction to Inverted Basses* (page 73); it will materially assist him in comprehending the subject upon which we are now about to enter.

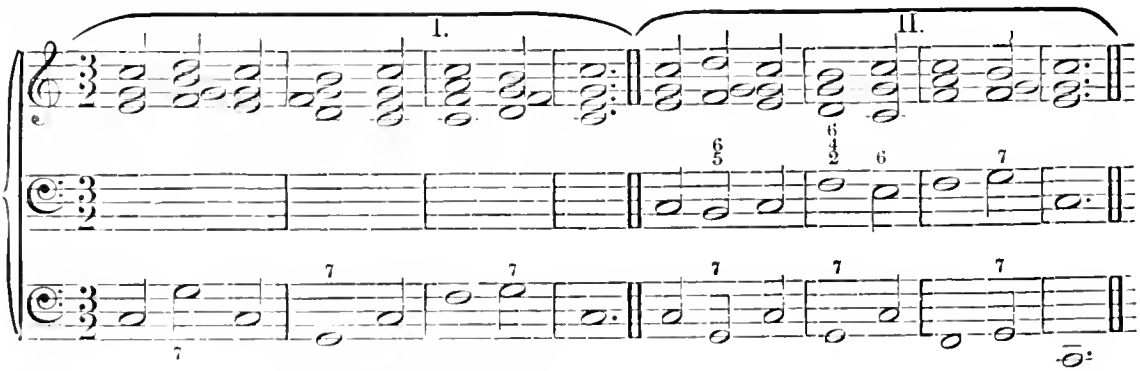
RULE V.

(*e.*) When the 8th is in the soprano, select the 3rd.

N.B. When the above rules cannot be employed, use the fundamental bass.

We shall now proceed to the construction of the inverted bass for the vacant staff in the next Example at 11, by employing the *First and Second rules only.*

Ex. 102.



The *first* chord is not a dominant chord—use the *Fundamental* bass.

Second note :—What interval is in the soprano? The 5th.

Select the 3rd of that chord for the inverted bass; expunge B from the chord, and write it in the vacant staff, where it must ascend to C in the following chord. Soprano progression. (See Example 87.)

Fourth note :—What interval is in the soprano? The 3rd.

Select the 7th (tenor progression); compare the harmony at I with that at II. The pupil will observe that the monotonous effect produced by the fundamental bass at I has, in some measure, disappeared at II, by the introduction of the first inversion $\frac{6}{5}$, and the third inversion $\frac{6}{4}_{2}$ with its resolution; in other respects, the harmony of the exercise remains as it was before.

We shall now harmonize another air, and introduce the third and fourth rules.

Ex. 103.



At *b*, the 3rd is in the soprano—select the 7th. 2nd Rule.

c, the 7th ——————— select the 3rd. 3rd Rule.

d, the 3rd ——————— select the 5th. 4th Rule.

e, the 1st inversion of the common chord, arising out of the resolution of the preceding dominant chord.

At bar 4, the 7th is not introduced until the latter part of the chord*.

At bar 7, although the 3rd is in the soprano, we are not allowed to employ the 3rd inversion; because it is a general rule, that a composition should begin and end with the fundamental tonic chord: had the 3rd inversion been employed, the Exercise would have finished with the chord of the 6th.

* The reason of this will be more fully explained when we treat on Periods.

The pupil should now harmonize a few melodies, according to these simple rules; after which, he may venture upon a more extended field of operation as regards the construction of inverted basses.

Our constant desire is to produce variety; but as it is clear that a continued application of the preceding rules respecting inverted basses, however effective for the present, must *ultimately* produce a certain degree of monotony, we shall, in the following exercise, exhibit some specimens of the *variety* of ways in which the inversions of the *dominant* chord, as well as those of the *common* chord, may be effectively employed.

Ex. 104.



At *a*, first inversion of the dominant chord, $\frac{6}{5}$, _____ Soprano progression in the Bass.

b, third inversion _____ $\frac{6}{4}$ $\frac{}{2}$, _____ Tenor progression „

c, first inversion of the common chord, 6, arising from the preceding 3rd inversion of the dominant

d, second inversion of the *common* chord, $\frac{6}{4}$, _____ Alto progression in the Bass.

e, first inversion of the common chord, 6.

f, second inversion of the *dominant* chord, $\frac{6}{4}$ $\frac{}{3}$, _____ Soprano progression „

Observation 1.—The Soprano and Bass, being the extreme parts of the harmony, are always the most conspicuous (that is, they are more easily distinguished than the inner parts); therefore to them are *generally* given those intervals which are considered to produce the best effect, or contrary motion. See bars 3, 9, 11, 14, and let the Pupil well notice the gradual descending bass in bars 9, 10, 11.

Observation 2.—At *f*, bar 3 and 11, the 5th is in the soprano and, according to the *first* rule, the 3rd should be selected as the inverted bass; but, as that interval in its progression *ascends*, we have chosen the 5th for variety, by which not only a flowing melody is procured in that part, but also *contrary Motion*.

Observation 3.—It has been shown, at page 30, in what part of the harmony the fundamental 7th may be introduced; the reason was there stated, also, why that interval could *not be* admitted at that time, although the progression of the fundamental bass would permit its introduction; however, having now arrived at *Inversions*, that interval may be very effectively employed, though its introduction can be considered only as by licence; because the 7th, so introduced, will appear in a part of the harmony where the 3rd (its *proper* resolution) is NOT found, and which in such case will necessarily be doubled. See (*f*), bar 11, where D♭ (the 7th) appears in the *Tenor*, and resolves on C the 3rd; and as that C is found also in the soprano, the 3rd of the tonic chord is doubled. At bar 9, the licenced 7th appears in the inverted bass, and the 3rd is consequently doubled in *that* part and in the soprano.

Observation 4.—We are aware that the chord of the 6th (first inversion of the common chord) has heretofore arisen out of the resolution of the 3rd inversion of the dominant chord*. At bar 14, however, that inversion, in order to procure a flowing and melodious progression in the bass, has been introduced *unconnected* with the dominant chord.

Observation 5.—An *Inversion* may be *interchanged* with another inversion, and thus produce a more melodious progression in the different parts: see bar 12, where the 2nd inversion is followed by the 3rd. Observe the interchange of intervals between the alto and bass.

It would be imprudent to enter here into all the minutiæ of this fertile subject; sufficient has been said to direct the intelligent student how to proceed; let him only harmonize and *reharmonize* Ex. 104, in the variety of ways with which he is already acquainted, and then his own experience will probably teach him more than all that could be said upon the subject.

Observation 6.—It has already been observed, that a strict adherence to the rules, as exhibited in Ex. 101, may occasionally be dispensed with, when it is our object to produce variety—contrary motion—or a more effective melody in the bass; however, when we do thus depart from

* See Ex. 90, bars 5, 7, 9.

the observance of these rules, a slight departure from the established progression of some of the intervals of the dominant chord will also take place. This will be evident by examining the following.

Ex. 105.



At *a*, 1st rule, all is right.

At *b*, the 5th is in the bass, and *ascends*. Here we have proceeded by *contrary motion;* but the 3rd in the alto must, in consequence, *descend* on the 5th of the following tonic, to preserve the harmony complete.

At *c*, the 7th is in the bass, for variety. The 3rd ascends, but the alto and soprano are doubled.

Observation 7.—A word concerning the 6*th of the scale* descending, when it is preceded by the 7th.

We know that the fundamental bass of the 6th of the scale is the sub-dominant; now were we to accompany that interval *thus* in *descending*, after having been preceded by the 7th, consecutive 5ths and 8ths would be the immediate consequence (as in the above Example at *d*); to avoid this, the fundamental bass of the 7th of the scale, instead of descending from the *dominant* to the *sub-dominant*, should *ascend* a whole tone to the relative minor of the key (as at *e*).

The following is a practical illustration of all the preceding observations.

Ex. 106.





At *a* (bar 1), the 5th in the soprano *descends;* we have selected the same interval for the inverted bass (second inversion), an have made it to *ascend**, producing a good effect and *contrary* motion. Compare this with bars 11 and 17.

At *b*, *c* (bars 5 and 6), the 7th of the scale *descends* to the 6th; we have, therefore, accompanied the latter interval by the *relative minor of the key*†; the same occurrence takes place at bars 13 and 14‡.

Let the Pupil remember that, although our principal object in constructing an inverted bass is to produce a *flowing* and *graceful* melody in that part, as also an amalgamation of all the parts—yet the *peculiar character* of the bass, which consists in fundamental progression, must constantly be kept in view; see bars 5, 6, 7, 8, 9, 10, which are all *fundamental* progressions.

He is recommended to read the remarks which have been made at the end of the Treatise on Modulation by fundamental basses, pages 47-48; and on all occasions to *play* what he may write; and in order to produce a variety of effect, he should arrange the same exercise in a variety of ways, of which a few specimens are given in the following examples. This, in fact, will constitute *an elementary introduction to extemporary performance.*

* See Observation 5; also Ob. 2.

† See Observation 7.

‡ It will be perceived that on all these occasions a fundamental 7th has been introduced upon the dominant chord of B♭, as if it actually proceeded to its tonic; this may here be considered as rather *premature*, but it greatly improves the harmony, and will be fully explained hereafter. See False Cadences.

EXERCISES ON INVERSIONS.

In the following Example is shown how the three inversions of the dominant chord *only*, with its resolution, may be employed so as to produce variety.

Ex. 107.



It will be perceived that the melodies at bars 1, 2, 3, contain only two sounds each; but the *monotonous* effect of the harmony at bar 1, is removed at 2 and 3, by employing other inversions.

We shall now give an exercise in which will be found *two distinct* bass-parts to the *same* melody, where the above mode of selecting inverted basses is put into practice. Of course it is unnecessary to observe that these two inverted basses are *two distinct exercises*, and are not intended to be employed at the *same* time. Each of them should be taken separately, employing the *same* melody, and then adding the two other parts of the harmony.

Ex. 108.



On looking over the second bass part of the above Example it will be perceived, in the latter part of bar 2, that had the F♯ continued to the end of the bar, it must have ascended to G, producing consecutive octaves; instead of which, it *first ascends* to the 5th of its *own* chord, and *then descends* to G. Meanwhile the 5th, A, in the melody, also divides itself into two notes, and, instead of

descending from A to G in the next bar, it *first* proceeds to the 3rd (F♯) which the bass has quitted, and afterwards ascends one degree to G. As the use of this interchange of intervals is of considerable importance, and as frequent reference will be made to it, we have been more than usually careful in directing the attention of the Pupil to it; and to impress it still more upon the mind, we add the following:—

Ex. 109.



In the above example it will be perceived, 1st, that this interchange takes place during the continuance of the chord; 2nd, that the different intervals, after this interchange, wherever they may be found, proceed to their destination as pointed out by the resolution of the chord of the fundamental 7th. For instance, Bar 1, the inverted bass, G♯, ascends to the 5th, B, and then descends to A; whilst at the same time the 5th, B, in the alto, descends to the 3rd, G♯, and *then ascends* to A.* Bar 2, the reverse has taken place.—Bar 3, the inverted bass ascends from the 3rd to the 7th, where it resolves into the 3rd; *remark the progression of the soprano.*

This may suffice to show the principle on which these interchanges are performed; we shall now harmonize a simple melody, to show their practical use and effect.

Ex. 110.



Bar 1, the bass interchanges with the alto; at 3 and 4, with the soprano.

N.B.—It is not absolutely necessary that on these occasions the *identical intervals* of the chord should interchange places:—see second part of bars 3 and 6.

* The importance of this interchanging of parts will be still more evident when we arrive at *passing notes.*

EXERCISES ON INVERSIONS.

It will now be necessary to make a few observations on the 2nd and 4th rules of harmonizing, in order to show how these rules may, under certain circumstances, be employed in a more extended form than heretofore.*

We are aware that "when the 4th of the scale descends one degree, it may be accompanied by the dominant;" we shall now add, that *the 4th of the scale, although it may not* immediately descend one degree (resolving upon the 3rd of the succeeding tonic chord), yet, provided it proceeds to any of the *other* intervals of *that* chord before its final resolution, it may still be accompanied by the dominant.

Ex. 111.



At *a*, the 4th of the scale, although it does not descend one degree, is still accompanied by the dominant; because it descends to the 3rd of that chord, and then resolves.

At *b*, the 4th has *first* descended to the 5th of the dominant chord; the inverted bass takes up the 4th of the scale, and descends *one* degree.

At *c*, the 4th has descended to the 8th of the dominant chord.

At *d*, the 4th has first ascended to the 8th of the dominant chord, returned to its place, and then proceeded according to the original rule.

Observation on the Fourth Rule of accompanying the Scale.

The rule says, "when the 5th of the scale is *repeated*, it may be accompanied by the dominant." Under certain circumstances, however, that interval may be so accompanied when it is *not* repeated; as in the following example.

Ex. 112.



It will be remembered that this rule, as well as the others, was given to produce variety of effect; it was to remove monotony in the harmony; the very expression, "when the 5th is *repeated*,"

* See also retrospect, page 43 to 45.

shows the nature of the rule. It is evident also that, were the rule in the original form continually to be applied, the very evil which we desire to prevent must inevitably make its appearance. This will be readily comprehended by those who have carefully reflected upon the preceding matter.

The following example will exhibit in a practical form what has been stated respecting the extension of the second and fourth rules of harmonizing.

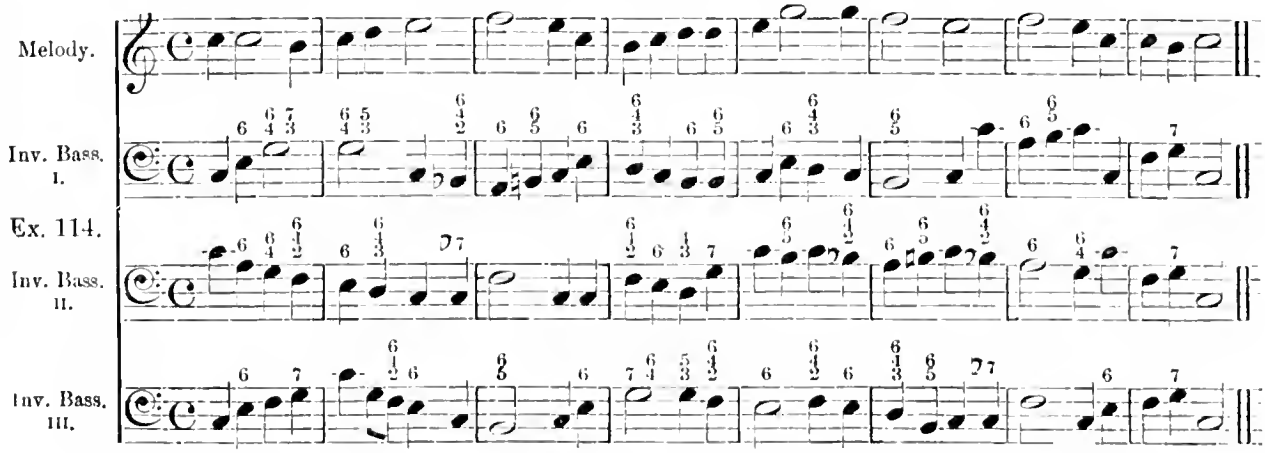
Ex. 113.



At *a*, second rule. At *b*, fourth rule.

The example which here follows may be considered as a specimen of the various ways in which an inverted bass may be constructed, and the four rules employed.

Ex. 114.



If each of the above bass parts be taken as a separate exercise, and the alto and tenor added (see Example 108), the Pupil will then be able to judge of the difference of effect, arising not only from the rules for the choice of inverted basses, but also from the four rules of harmonizing (see page 36 to 39).

Too much attention cannot be paid to what is here noticed, as it is only by comparison and a strict attention to the difference thus produced that the judgment can be exercised and formed, and the taste improved.

The preceding exercise should not be regarded as merely technical, but also as intellectual; for example, here is a simple melody, it has no claim to beauty, elegance, or expression, as to its progression or rhythmetical form: this melody, however, becomes the prolific source of others;* each of which, in its turn, may also become the source of many more, and so on *ad infinitum.* When this fact presents itself to our mind, that all this can be effected through the instrumentality of only three chords, and these produced by nature, a wide field, indeed, is open for reflection.

To give examples of all the variety which these rules so abundantly supply, would be quite impossible; we shall only remark, in conclusion, that if the Pupil keeps in mind the *original* principle of fundamental basses,—*from whence they have emanated,—the four rules of harmonizing* (as arising out of the dominant chord), the *variety of effect* produced through their instrumentality—*their modulation* (that inexhaustible mine of musical wealth!), the introduction of *inversions* (causing an amalgamation of the four parts, by which a new character is infused into the whole harmony); furthermore, if he reflects that the *originating cause* of all this can be traced to the simple *vibration of a string, etc.,*—that it is not the invention of *Man,* but the simple operation of nature; he cannot but perceive that the matter, *thus* considered, is of a higher order than the mere putting together of a few chords for the purpose of gratifying the ear. He will find that, abstractedly considered, it is a subject perfectly capable of creating *a real and absolutely intellectual enjoyment.*†

* Mark the three inverted basses, which may all become bass melodies, and then be reharmonized.

† It will be seen how much more our ideas on this subject will be enlarged when we arrive at modulation by the intervals of a melody.

AN ESSAY
ON
DISSONANCES
BY SUSPENSION.*

HITHERTO we have employed only such harmonies as are derived from the common chord, and the chord of the fundamental 7th; we shall now proceed to introduce some intervals which do not form any part of that harmony.

In order that the pupil may have a clear view of the subject on which he is about to enter, it is necessary that he should take a retrospective view of the several processes by which the variety of effect, up to the present time, has been accomplished. Thus—

He must have perceived, after the discovery of the fundamental basses,† that the harmony arising from them consisted of *common chords only*;‡ that this harmony was afterwards enriched by the fundamental 7th; and that thus (another interval being added to the harmony) a *new* effect was produced.§ He must have observed that the four rules of harmonizing,‖ modulation, inversion in modulation,¶ and, last of all, inversions in melodies,** all formed a chain of causes and effects, unbroken by a *single link;* and that all this resulted—*not* from a Theory suggested by *man* —but from a system founded in *nature*, as exhibited in Example 63.

It shall now be shown how a *new* effect may be introduced into the harmony, by means altogether differing from those which have been hitherto employed for that purpose.

We have already stated that our harmony up to the present time has consisted of *common* chords, and the chord of the fundamental 7th, with their inversions, and our experience has sufficiently shown the variety which these chords alone, by a judicious management, are capable of producing; yet, as the constant recurrence of these (however diversified or dissimilar in their progression) must ultimately tire the ear, means have been found to remedy this defect by introducing intervals into the harmony, which *do not* constitute either a portion of the common chord, or that of the fundamental 7th.

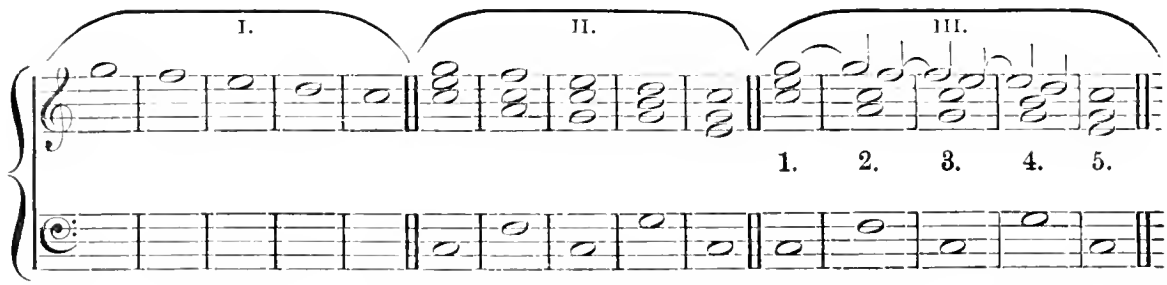
We shall endeavour to illustrate this by the following example:—

Suppose we were required to harmonize the melody as at I. According to the first rule of harmonizing it would appear as at II.; and, if it were played thus, the ear would rest *perfectly contented. Not so* at III. Why? Because the sound G, at bar 1, instead of immediately descending to F, is continued in bar 2, and the ear experiences a certain degree of disappointment—a degree of pain—it desires to hear the F, and when the F at *last arrives*, a certain degree of pleasure is experienced; which, although purchased at the expense of a little pain, we have no objection to experience again on the same terms.

* Dissonances by retardation shall be explained hereafter.

† See page 12. ‡ Page 19. § Page 23 to 29. ‖ Page 31 to 39. ¶ Page 74 to 96. ** Page 87 to 95.

Ex. 112.



The interval which produced this effect is called a *Dissonance*,* and the chord to which it is attached—a *Discord*.

When an interval of a chord is thus kept back in a gradual *descending* progression, as at III., we shall call it a *Suspension*, or a *Dissonance* by *Suspension*; for example:—

At III., as G suspends the 8th (F), we shall call it the *Dissonance* of the 9th.

as F———— 3rd (E), it will be the *Dissonance* of the 4th.

as E———— 5th (D), it will be the *Dissonance* of the 6th.

These comprise *all* the Dissonances by Suspension.

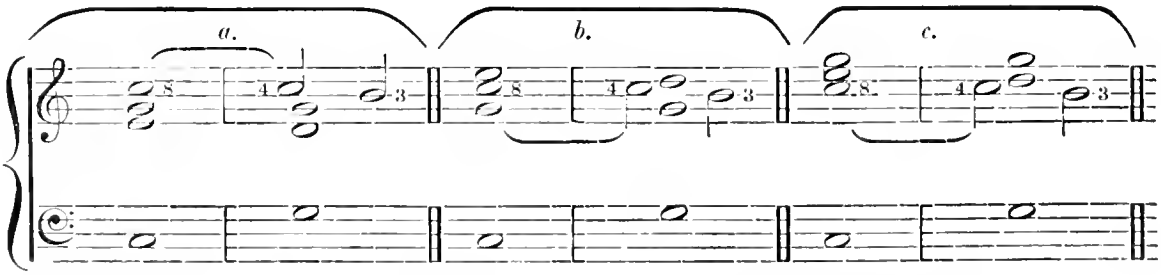
The following Example exhibits the Discord of the 4th, in its different positions, produced by *suspending* the 3rd:—

At *a*, the dissonance is in the soprano.

At *b*, ———————— alto.

At *c*, ———————— tenor.

Ex. 113.
I.



The discord of the 9th, in its different positions, is produced by *suspending* the 8th, thus—

II.



* The intervals of a common chord—3rd, 5th, and 8th—are called Consonances; any *other* interval, therefore, is a Dissonance

N.B.—We are not here speaking of intervals arising from inversions.

The discord of the 6th, by the *suspension* of the 5th, in its three positions :—

III.



It will be perceived, that in Example 112 (III.) the sounds which produce the discords present themselves *naturally* in the progression of the *descending* scale; they are *first* heard as *Consonances*, after that as *Dissonances*, and *then* (after having *descended*, or—in other words—*proceeded* to their respective places from which they had been detained) again form *Consonances*. From this circumstance arises the

Rule for the Preparation of Dissonances.

(A.) *In whichsoever of the four parts a Dissonance appears, in* THAT PART *also it must first be heard as a Consonance.* Or, in other words, thus :—In whatever part the interval appears which is to be suspended, in the same part also must be *prepared* the Dissonance which suspends it.

Resolution of Dissonances or Discords.

(B.) In whichsoever part the *Dissonance* appears, in *that part* it must *descend* by one degree into the *same Consonance*, which was suspended.*

This is called the *Resolution*, or *resolving the Dissonance.*

For instance, in the preceding Example 113,

At I.,	*a*	the dissonance of the 4th is prepared in the soprano by the 8th,				{ a *consonance*, and resolved into the 3rd in the same part.
	b		alto			
	c		tenor			
II.,	*a*	9th	in the soprano	5th,		8th
	b		alto			
	c		tenor			
III.,	*a*	6th	in the tenor	3rd,		5th
	b		soprano			
	c		alto			

Dissonances by Suspension in the ASCENDING *Scale.*

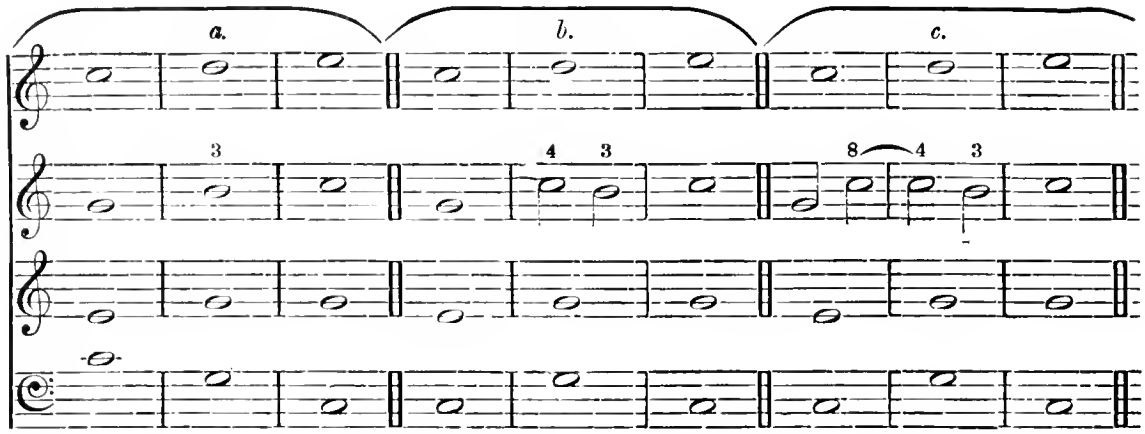
Were we to introduce dissonances *only* when the scale or melody gradually *descends*, the above rule for the preparation of dissonances would be quite superfluous; but, as this is not always the case, we shall now, instead of taking the *descending scale*, employ the *ascending*, in which dissonances will not be found *naturally* prepared.†

* This rule admits of a slight exception, which shall be explained in its proper place.

† Dissonances which are naturally prepared in the *ascending* scale are called retardations, which will be found fully explained hereafter.

In the following example, at *a*, the harmony *ascends*, and consists of ***Concords*** only :—

Ex. 114.



At *b*, the dissonance of the 4th is introduced in the *alto*.

Q. Why in the alto? A. Because the 3rd, into which it resolves, is found in that part. See A, page 99.

Q. Is it here prepared? No.

At *c*, the dissonance is prepared in the *same* part where it afterwards resolves. In order to obtain this preparation, we have divided G (the semibreve of the preceding chord) into two minims, and have allowed it to ascend to C (the 8th), as the proper preparation of the dissonance of the 4th.*

All the above observations as to *preparation*, etc., etc., apply equally to the other dissonances.

The nature of dissonances having now been explained, it shall be shown *how* and *where* they can be introduced; and let it be well kept in mind, that, in doing this, we are to be guided ***solely*** and *alone* by the *progression of the fundamental bass.*

We shall commence with

The Dissonance of the 4th.

(C.) *When the fundamental bass ascends a fifth, or descends a fourth (which amounts to the same.†); the Dissonance of the 4th may be introduced, prepared by the 8th, and resolved into the 3rd.‡*

In order that the pupil may have a correct idea of the preparation and resolution of *this* dissonance, and the manner of employing it effectively, we shall for the present deviate a little

* See A, page 99.

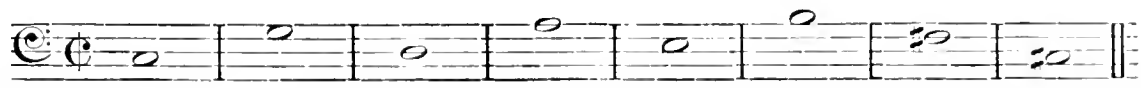
† In order to avoid mistakes and repetitions, with regard to the progressions of the fundamental bass, on these occasions, we shall always say—the bass *ascends a 5th*, although the bass may in reality descend a 4th, because ascending a 5th or descending a 4th produces the *same note*.

‡ See Example 113, 1

from the plan hitherto pursued; and, instead of harmonizing an air, we will select that progression of fundamental basses which will admit of its introduction in a regular and unbroken series.

The following Example at I. exhibits a continued progression of basses, 5ths ascending, or 4ths descending.

Ex 115.
I.



To which, at II., common chords or concords have been added. This we shall call a *consonant harmony* or *harmony of concords*, in *contra-distinction* to that which is produced by a progression of Dissonances, called *dissonant harmony*, or a harmony of discords.

II.



The chords having been written as in the above Example,* and the 3rd of each chord particularly distinguished by the figure 3, the pupil must examine the *progression* of the *bass*, reasoning thus:—

The bass proceeds from C to G (ascending a 5th), consequently I may have the dissonance of the 4th.

Here he should write the figures $\frac{5}{4}\,\overline{3}$, or simply 4 3, the figure 4 representing the dissonance, and the figure 3 its resolution.†

From G to D, a 4*th descending*; from D to A, a 5*th ascending*. Thus let him go through the entire exercise, and figure the bass accordingly. He may then proceed to introduce the dissonances, as in the following Example, reasoning thus:—

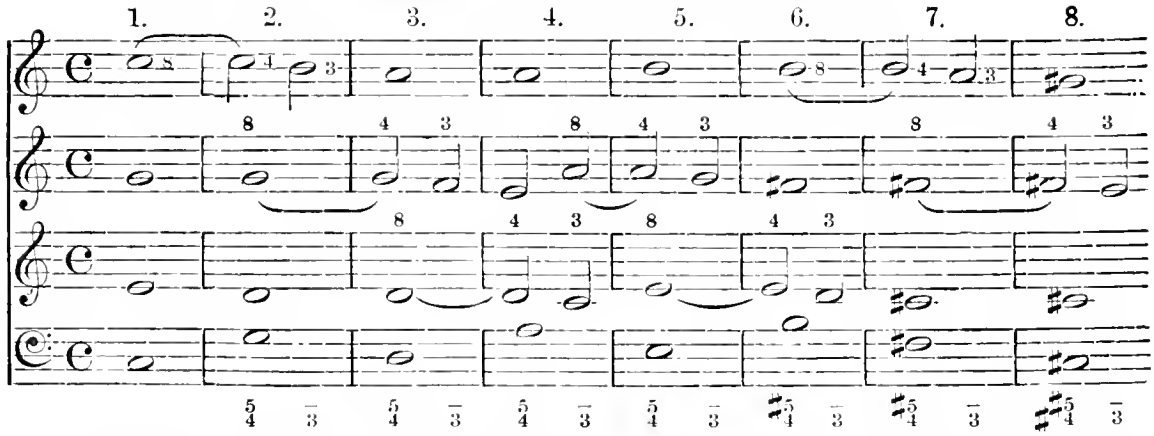
* In writing the chords, the pupil must avoid all skipping.

† Some composers, in figuring this chord, write only 4 3, except when the 5th requires an accidental, thus $\frac{\sharp 5}{4}\,\overline{3}$ $\frac{\flat 5}{4}\,\overline{3}$ $\frac{\flat 5}{4}\,\overline{3}$.

N.B.—The dash after a figure shows that the note to which it refers is to be continued whilst the others are progressing.

Exercise on the Dissonance of the 4th, prepared by the 8th.

Ex. 116.



Q. Here (pointing to G, bar 2) I can introduce the 4th; but in which of the four parts should I write it?

A. Where the 3rd (its resolution) is found; namely, in the *soprano*, bars 2 and 7.

For the same reason the Dissonance must be written in the alto at bars 3 and 8, and in the tenor at 4 and 6.

Observe, that in bars 2, 3, 4, 6, 7, 8, the Dissonances lie already prepared, in the same part where the resolution is found, because the *melody descends;* but at bars 4 and 5 the case is different, the melody *ascends;* the alto, therefore (in order to *prepare* the *Dissonance*), is obliged to *ascend* in bar 4 to the *octave*.*

Let the pupil now write an exercise himself as here pointed out, the chords of which may either be major or minor, or a mixture of both.

N.B.—A progression of fundamental basses ascending uninterruptedly by 5ths (or descending by 4ths), will conduct us through all the keys with sharps; and, if no enharmonic change is introduced, will necessarily carry us as far as the key of B♯.†

The pupil is strongly recommended to play these exercises, carefully observing the different effects produced between the *consonant* and *dissonant* harmony; and, by way of exercise, to take the fundamental basses of melodies already harmonized, write the chords to them as pointed out above, figure the bass, and then introduce the dissonances where the progression of the bass *will admit* of it.

To show the importance of the dissonance of the 4th, and the value of the simple rule by which we introduce it into *practical* composition, we shall here exhibit a few specimens in three parts.

Exercise, showing how the Dissonance of the 4th may be employed for the purpose of imitation.‡

Ex. 117.



* See Example 114, *c*.

† N.B.—Not by modulation.

‡ *To the Professor*—We feel, however, that, in doing so, we are rather travelling out of our usual simple course.



At bar 1 the soprano ascends to G, to prepare the Dissonance at bar 2, where it resolves into the 3rd. The soprano continues thus to prepare the Dissonance until it arrives at bar 7, where the strain ends in B minor.

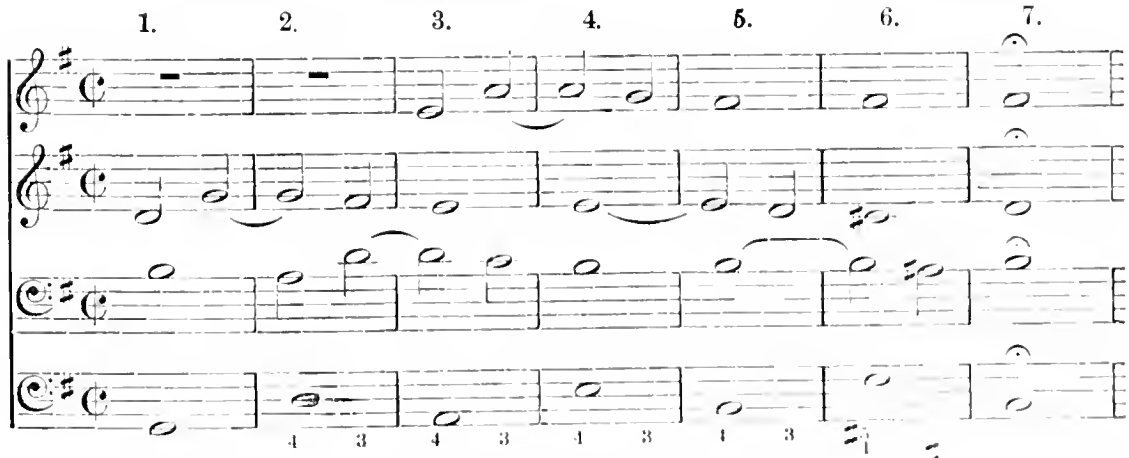
Now let us observe that, whilst the soprano ascends in bar 1 to G, to prepare the Dissonance at 2, the alto performs a similar operation by ascending in bar 2 to D, to prepare the Dissonance at 3; and, whilst the soprano thus continues to prepare and resolve the Dissonance, the alto proceeds in a similar manner, and follows the soprano a 4th lower,* until at the 6th bar, as has been stated already, the strain ends in B minor.

At the 8th bar, the *alto* commences and continues the same melody which the soprano commenced at bar 1, and the soprano takes up the subject of the alto at bar 9. The soprano now continues to follow the alto a 5th higher as far as the 13th bar, where, by a few modulations, the harmony is carried back to the original key.

We shall here exhibit the same exercise in four parts, where the tenor participates in the imitation.

Exercise of the Dissonance of the 4th, in four parts, employed for the purpose of imitation.

Ex 118.



†

* When two or more parts move thus, it is called *Imitation*. When each part is imitated as above, it is called a canonical imitation or canon. The first 7 bars contain a canon in the 4th below, and from the 7th to the 13th a canon in the 5th above.

† To prevent ledger lines, the tenor part is here written in the bass clef.



This will suffice to show what may be effected by the simple rule, viz. *When the fundamental bass ascends a 5th, etc., etc.* We shall now proceed to the introduction of

THE DISSONANCE OF THE 9TH.

(D.) *When the fundamental bass ascends a 4th (or descends a 5th), the 9th may be introduced, prepared by the 5th, and resolved into the 8th.*

As this is the *same* progression which is required in *modulation* (viz. from dominant to tonic), we shall make a few modulations, for the purpose of introducing this dissonance.

Exercise on the Dissonance of the 9th, prepared by the 5th.

Ex. 119.



At *a*, the *tenor* proceeds from the 3rd to the 5th of the chord† to *prepare* the 9th, which appears at *b*, where it resolves into the 8th.

Q. Why does that dissonance appear in the tenor? A. Because its resolution is found there.

At *c*, the soprano has ascended to the 5th of the chord to prepare the 9th, which appears at *d*, and resolves into the 8th.

At *e*, the alto performs the same process.

* To be more fully explained by and by.

† Let it be kept in mind that the intervals are here always counted from the *fundamental* bass.

As the bass at *g* has *ascended a 5th*, we introduce a 4th, prepared by the 8th.

N.B.—It will have been remarked, that where the 3rd ascends to the 5th of the chord, to prepare the 9th, the first inversion, $\frac{6}{5}$, is employed, to preserve the harmony complete.

We shall now return to our three original fundamental basses, and harmonize the *ascending* and *descending* scale, introducing both the 9th and 4th wherever the progression of the bass will permit.

Ascending and Descending Scale, with Dissonances of the 4th and 9th.

Ex. 120



The Fund. Bass. is occasionally represented by the dots.

From *a* to *b*, from *d* to *e*, from *i* to *k*, from *n* to *o*, and from *o* to *p*, the basses *ascend by 5ths*; consequently the 4th prepared by the 8th may be introduced.

From *b* to *c*, from *c* to *d*, from *e* to *f*, from *g* to *h*, from *m* to *n*, from *p* to *y*, the basses *ascend by 4ths*; consequently the 9th is prepared by the 5th.

Q. The bass, at *h*, has ascended a 4th; why have we *not* introduced the 9th?

A. As a *dissonance* is the representative of the *consonance* into which it subsequently resolves, it is clear that the *consonance* and the *dissonance* which suspends *that* consonance cannot be permitted to appear at one and the same time; we must therefore be very careful, when the 9th, for instance, is introduced in one part, that the 8th does not appear in another part of the *same* chord at the *same time*. This remark, of course, applies to all other dissonances whatsoever; see *x*, where the *suspension* of the 8th in the *alto*, and the octave in the soprano appear on the *same* chord at the same time.

Q. Why has not the 3rd of the dominant chord, at *p*, ascended?

A. For the same reason as stated already; in order to make room for the 9th,* the 3rd in this instance has been permitted to *descend* to the 5th of the tonic.

We shall now introduce

The Fundamental 7th, combined with the Dissonances of the 9th and 4th;

Preparatory to which, it will be necessary to point out some peculiarities concerning these dissonances worthy of observation.

1st.—The fundamental 7th is derived from *Nature*, and therefore requires no preparation. (See Example 63).

2nd.—Dissonances, being *artificial*, must always be prepared.

3rd.—The fundamental 7th does *not* resolve upon the *same* bass.

4th.—Dissonances do resolve upon the *same* bass.†

The fundamental 7th partakes of the nature of a consonance as well as of a *dissonance.*

As a *consonance, requiring no preparation.* As a *dissonance,* requiring to be *resolved.*

Dissonance of the 4th, prepared by the fundamental 7th.

The fundamental 7th, therefore, considered as a *consonance*, may prepare a *dissonance;* that is, the 7th, before resolving into the 3rd, may be *suspended*, producing the Dissonance of the 4th; and thus when the bass proceeds from the dominant to its tonic, the dissonance of the 4th may be introduced, prepared by the 7th.

In order to exhibit this dissonance in a practical form, we shall again make a few modulations.

Exercise on the Dissonance of the 4th, prepared by the fundamental 7th.

Ex. 121.



* When we arrive at *ascending* dissonances, called retardations, these licenses (as they are called) will be dispensed with.

† Exception to this rule shall be shown hereafter.

At *a*, the 7th has *prepared* the 4th in the *tenor*, which at *b*, resolves upon the same bass into the 3rd.

At *c*, that dissonance is thus prepared in the *soprano*; at *e*, in the *alto*; and at *g*, in the *tenor*.

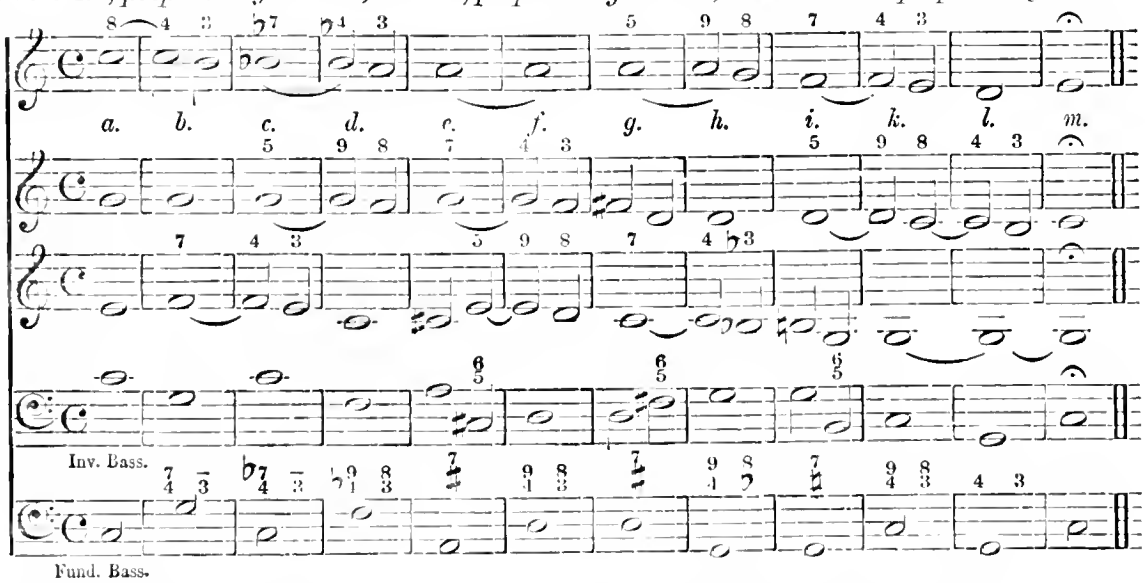
The pupil is recommended (by way of exercise) to make a few modulations*, introducing the dissonance of the 4th, thus prepared by the fundamental 7th.

If we examine Example 119 and 121, we find that the progression of the bass in modulation (from dominant to tonic) is the same as ascending a 4th; and hence it follows that *both* these dissonances, viz., the 9th prepared by the 5th, and the 4th prepared by the 7th, may be introduced conjointly upon the *same* bass, thus forming a progression of

Compound Dissonances of the 4th and 9th.

Exercise on the 4th, prepared by the 7th; the 4th, prepared by the 8th; and the ninth prepared by the 5th.

Ex. 122.



At *b*, bass *ascends* a 5th, Dissonance of the 4th prepared by the 8th, in the soprano.

At *c*, bass ascends a 4th, or from dominant to tonic; the 4th prepared by the 7th.

At *d*, *both* Dissonances appear in the soprano and alto.

At *f*, in the alto and tenor.

At *h*, in the soprano and tenor, etc.

Observe the *interchange* of intervals between the *tenor* and *inverted* bass at *e*, between the *alto* and *inverted* bass at *g*, and between the *tenor* and *inverted* bass at *i*.

The following is an example of accompanying, on the pianoforte, a harmony comprising discords; it contains all the harmony of the preceding example, and the pupil is recommended to play it.

N.B.—The figures point out the *preparation* and *resolution* of the Dissonance.

It will be observed that some of the intervals of the chords in the bass are *doubled*; in doing so, however, care has been taken that none of them, thus introduced, appear as suspensions elsewhere in the harmony.†

* See Part III, on Modulation.

† See Obs. page 105, and *z*, at the end of Example 120.

Ex. 123.



In the preceding Examples, it will have been noticed that a *particular* progression of the fundamental bass has been especially selected for the purpose of introducing the Dissonances; that object having been effected, we shall now return to our original plan of harmonizing a melody; and then (guided by the progression of its fundamental basses) introduce such Dissonances as those progressions will admit of.

A Melody Harmonized with Dissonances.

Ex. 124.



The consecutive 5ths, between the tenor and bass, and the consecutive 8ths, between the alto and bass, as the harmony proceeds from bar 5 to 6, are avoided by the bass moving **by contrary motion**—that is, the bass DESCENDS, whilst the other **two** parts ASCEND.

We shall analyse the foregoing Exercise by a few interrogations.

Q. (Bar 2). By what rule are you enabled to introduce here the dissonance of the 4th?

A. Because the fundamental bass *ascends* a 5th.*

Q. Why does the dissonance appear in the soprano?

A. Because the 3rd of the chord (its resolution) is found there.†

Q. (Bar 3). By what rule have you here introduced the 9th? and why does it appear in the soprano?

A. Because the fundamental bass there *ascends* a 4th, consequently I can introduce a 9th;‡—it must appear in the soprano, because its resolution (the 8th) is found there.

Q. On what principle have you introduced the 4th in the same bar, for the bass does not *ascend* a 5th?

A. Because F, the *dominant*, proceeds to its *tonic* (B♭), we can have a 7th. This 7th prepares the 4th (in Bar 2), and is resolved, in conjunction with the 9th (in Bar 3).

Q. But how can the 7th, which partakes of the nature of a dissonance, *prepare* a dissonance?

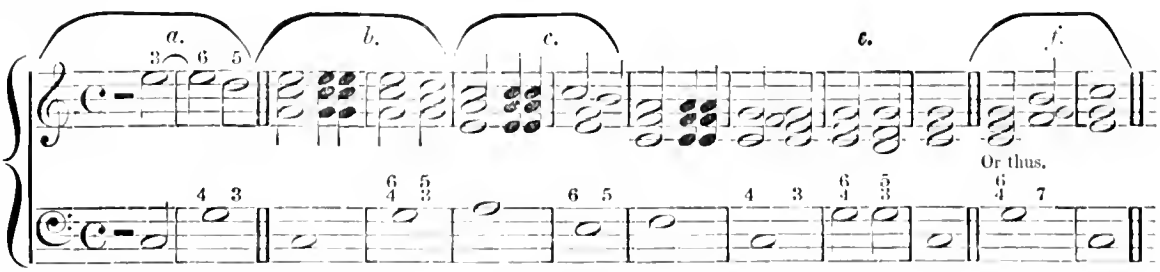
A. Because the fundamental 7th partakes of the nature of a *consonance* too, as it requires *no preparation*; § the fundamental 7th may therefore *prepare* a dissonance.

Dissonance of the 6th, prepared by the 3rd.

The pupil is aware that, when the fundamental bass ascends a 5th, the dissonance of the 4th may be introduced.‖ It shall now be shown that, when the bass ascends *thus*, the dissonance of the 6th may likewise be introduced; consequently both these dissonances may be employed conjointly.

In the following Example at *a* and *c* is exhibited the simple dissonance of the 6th, prepared by the 3rd, and resolved into the 5th, as already shown at page 99; at *b* and *e*, both these dissonances appear conjointly.

Ex. 125.

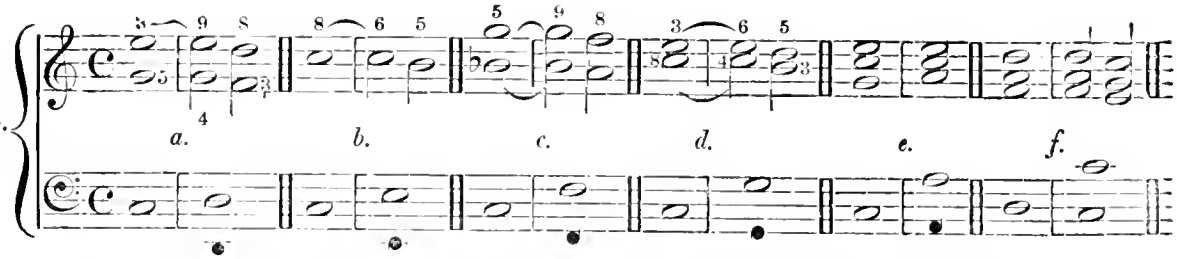


The above exercise is a *practical illustration* of the manner in which these discords may be employed with the best effect.

It has been shown, and cannot too strongly be impressed upon the mind of the pupil, that the introduction of dissonances are in every case regulated by the progression of the fundamental bass; and, in order that he may see the utmost extent to which a dissonant harmony may be carried, we shall here give an example which exhibits every progression of which the fundamental bass is capable, and, consequently, every dissonance by suspension that can be introduced into harmony.

* See page 100, C. † Page 99, B. ‡ See page 103, D. § See page 106. ‖ See page 100, C; also page 99.

Ex. 126.



a, when the fundamental bass *ascends* a 2nd, the { 9th prepared by the 3rd. / 4th ——— 5th.

b, ——— 3rd, —— 6th ——— 8th.

c, ——— 4th, — { 9th ——— 5th. / 4th ——— 7th.

d, ——— 5th, — { 6th ——— 3rd. / 4th ——— 8th.

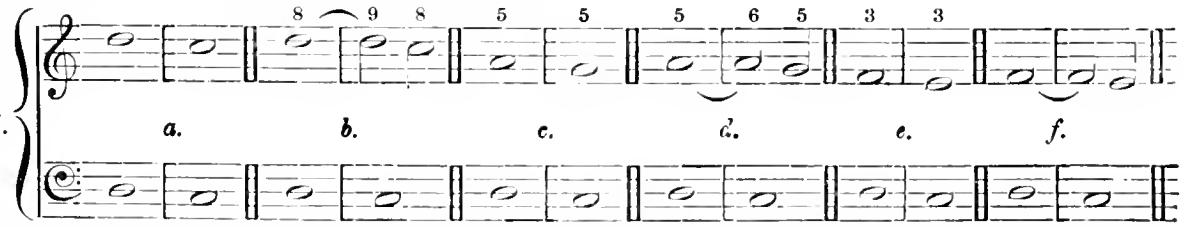
e, ——— 6th, *No Dissonance.*

f, ——— 7th, – { 9th prepared by the 8th. / 6th ——— 5th. / 4th ——— 3rd.

N.B. Ascending a 7th, or descending a 2nd ——— 6th, ——— 3rd } amount to the same thing. ——— 5th, ——— 4th }

It appears by the above Example at *f*, that when the bass *descends* a 2nd, we can introduce the 9th, 6th, and 4th. But it is only the 4th that can in this instance be permitted to appear legitimately; for, as the suspension is the representative of the consonance into which it resolves, it is manifest, were we to prepare the 9th by the 8th, that the ear, anticipating the resolution, would be impressed with the approach of consecutive octaves; for instance—

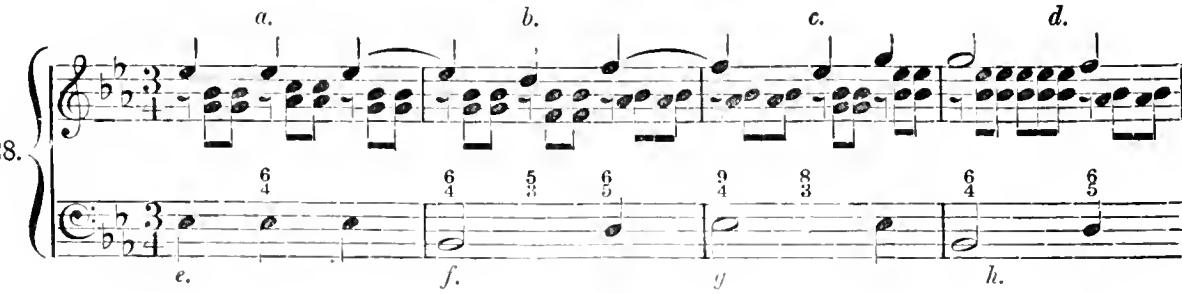
Ex. 127.



At *a*, in the above example, we find consecutive octaves; at *b*, 9th prepared by the 8th—can this be permitted? at *c*, consecutive 5ths; at *d*, 6th prepared by the 5th—can *this* be permitted? at *e*, consecutive 3rds; at *f*, 4th prepared by the 3rd—this is perfectly correct.

The following exercise is a melody harmonized with dissonances; and, if the soprano be sung or played, the inner parts may be considered as an accompaniment.

Ex. 128.





At *a*, the chord of the $\frac{6}{4}$ appears by *inversion*, and at *b* and *d*, by *suspension**; at *e*, the 9th is prepared by the 5th; at *f*, *g*, prepared by the 3rd.†

It will be necessary, before we pursue our subject of dissonances further, to make the pupil acquainted with what is called the

Accented and Unaccented Part of a Bar.

To enter fully on this matter at present would be out of place; all that it is necessary for our purpose now to state is, that in a bar of common time, whether it contains two minims, two crotchets, etc., or their equivalent, the first part only is called *accented*, and the second half *unaccented* (as in the Example I.). When a bar contains three minims, three crotchets, etc., or their equivalent, then the *last* portion is called *unaccented* (at II.).

Ex. 129.



It is a general rule, that dissonances should be prepared on an *unaccented* part of a bar (Example 130, *a*), appear on the *accented* part (*b*), and be resolved on the *unaccented* (*c*), and that the note which prepares the dissonance be at least of the same duration of time as the dissonance itself.‡

Ex. 130.



It is necessary to observe, that these rules have reference chiefly and primarily to compositions of the old school, the *strict style*, as it is called§ (in contra-distinction to what is called the *free style*,‖ the latter of which does not demand a very close observance of them. The following example is an illustration.

* See Example 133, *a*, *b*, and explanation.

† See Example 126, *a*.

‡ Never were there rules which admit of more exceptions, or are less regarded, especially in the composition of modern music, than the above.

§ Church music, fugues, etc.

‖ Modern music in general, sonatas, concertos, songs, etc.

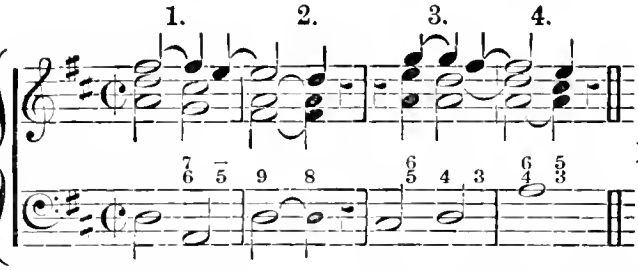
Ex. 131.



Here, although the Dissonances are prepared on the *unaccented* part of the bar, and by notes of equal duration with the Dissonances themselves, yet they do not (except at the 5th bar) resolve (strictly speaking) on the *unaccented* part of the bar.

The following example exhibits a still stronger illustration of what has been stated, for, at bars 1 and 3, the 6th is prepared upon the accented (instead of the un-accented), and is struck on the un-accented, (instead of the accented) part of the bar.

Ex. 132.



Ex. 133.



This deviation from the strict rule of preparation and resolution of Dissonances, may be considered as the medium between the strict and free* styles of writing.

From what has been shown above, it is clear than there are *two* chords of the $\frac{6}{4}$, one arising out of the second *inversion* of the *common* chord,† and another out of *suspensions*.‡ They may, however, be easily distinguished, as the *former requires* neither preparation nor resolution, and the latter requires both. This distinction is clearly demonstrated in Example 133, where at *a*, the chord of the $\frac{6}{4}$ by inversion (being derived from a concord) prepares the discord of the $\frac{6}{4}$ at *b*; and thus the nature of each chord, and its origin, is immediately discovered.

As frequent opportunities will hereafter present themselves for illustrating this subject, we shall at once proceed to the *inversions of discords;* and let it be observed, if the pupil has well understood and practised what he has learned of inversions (as explained throughout Part IV), he will not experience the slightest difficulty in comprehending the subject upon which he is now going to enter.

With respect to the *figuring* of the inverted basses with dissonances, the pupil is advised to read with attention what is stated at page 116 and 117 on that subject.

We shall select the ascending and descending diatonic scales for our next Exercise, presupposing that the pupil himself has harmonized it with inverted basses, that he has carefully examined the *progression* of the fundamental basses, has ascertained where dissonances may be introduced, and figured the basses, as shown in all the preceding examples; then let us ask the following questions.

* The free style even admits dissonances of every description unprepared, although they are generally resolved.

† See Example 99. ‡ See 126, *d*.

Ex. 134.



Q. What dissonance can we introduce in the second bar? A. The fourth.

Q. Why? A. Because the fundamental bass ascends a fifth.

Q. In which of the four parts must the dissonance appear? A. In the *inverted* bass.

Q. Why? A. Because the third of the chord is there.

Q. How has the 4th been prepared? A. By the *octave* in the preceding chord.

Q. Has the 4th resolved properly? A. Yes: it has descended into the 3rd* of the chord.

Q. How has the 4th been prepared in bar 4? A. By the fundamental 7th in the preceding chord.†

Q. From where have you that 7th? A. G, the bass, is the dominant to C, and thus a 7th may be introduced at 5; the dissonance appears again in the inverted bass at 8 in the tenor, prepared by the 7th.

Q. Why has the 4th *not* been introduced at bars 3 and 6, as the progression of the fundamental bass would permit? A. Because the 3rd of the chord is in the soprano; and were we to suspend it in the tenor (where, in fact, that dissonance would be prepared by the 7th), then the 3rd, as well as its suspension, would be heard together.‡

Let the pupil now introduce the dissonances into the descending scale.

Ex. 135.



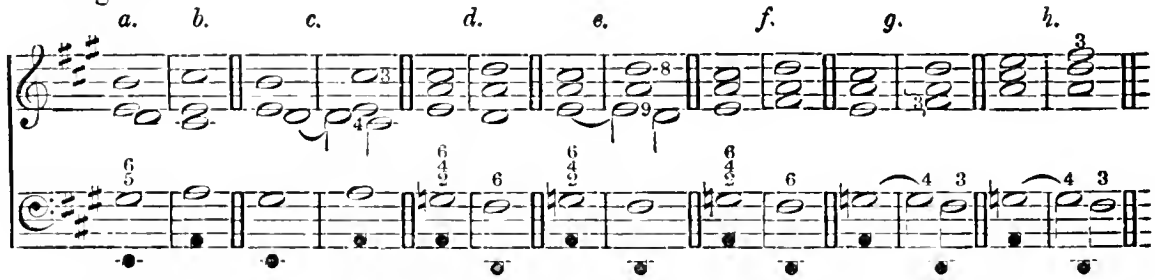
In the above Exercise, bar 3, the dissonance of the 9th is prepared by the 3rd; and at 4 and 7 the dissonance of the 6th is combined with the fundamental 7th. This mixture of dissonances is very effective.

That the *dissonance* and the *consonance* which it *suspends* must never be heard together, has been stated more than once; nevertheless, as an error in this particular is easily committed when

* See page 99, B. † See Example 121. ‡ See page after Example 120, *x*.

dissonances are introduced into inverted basses (especially when a licensed 7th is employed), the pupil is advised to pay great attention to the faulty progressions which are exhibited at *c*, *e*, *g*, and *h*, in the following exercise.

Ex. 136.



At *a*, a licensed 7th appears in the tenor; which, at *b*, has descended into the 3rd, and thus far all is correct; but, at *c*, that 3rd is suspended, whilst, at the same time, the 3rd is heard in the soprano. At *d*, the 5th is in the tenor, and descends into the 8th, *as it ought*;* but at *e*, the 5th, instead of descending to the 8th, suspends that interval, whilst the soprano has ascended to it, and thus the 9th and 8th are heard together. At *f*, all is right; but, at *g*, the 3rd appears in the tenor, whilst the inverted bass suspends it at the same time. At *h*, licensed 7th in the inverted bass, 3rd in the soprano—wrong.

The following melody is harmonized with various dissonances.

Ex. 137.



In bar 4, the alto, after having resolved the 9th, ascends immediately to the 5th, to prepare the 9th in bar 5. This ascending to the 5th was a necessary step, as the melody ascended.†

At bars 7 and 9, the 4th is prepared by the 5th. Why? Because the fundamental bass ascends *a second*.‡

At bars 7 and 9, the fourth is prepared, but the 6th is *un*-prepared; this progression is called a cadence, which will be found explained at Example 138, *c*.

N.B.—It would tend very much towards the improvement of the pupil (not merely as it regards dissonances, but in other respects also), were he to *re*-harmonize the above Exercise, *without* dissonances or *inverted basses*, proceeding after that to add the inverted basses and dissonances, and then to compare his *own* production with the original exercise.

We shall now (at least for the present) discontinue to harmonize melodies with dissonances, and proceed through a short course of modulation, into which they shall all be introduced; preparatory, however, to this it will be necessary that the pupil be made acquainted with a certin pro-

* See Example 134, bars 4 and 6. † See Example 114, and observations. ‡ Example 126, *a*.

gression of chords called a Cadence, which, when heard towards the end of a composition, or judiciously interwoven with modulation, is calculated to conduct the ear gently to a state of repose.

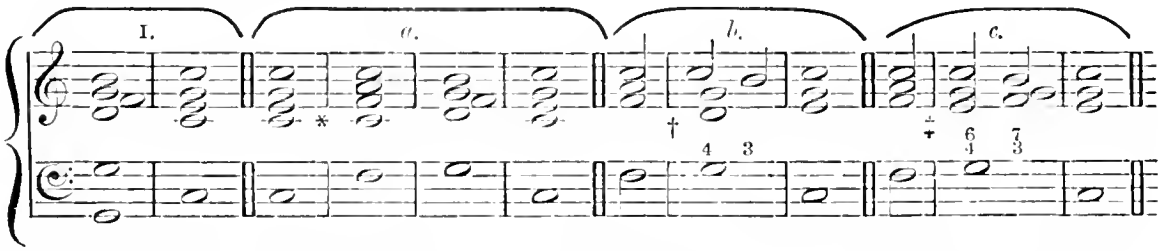
There are several species of cadences; the most simple of these is—

The Perfect Cadence,

When the chord of the fundamental 7th, or dominant chord, proceeds direct to the tonic.

All the others may be considered as auxiliaries, preparing the way, and leading to this, by which a final close is ultimately effected.

Ex. 138.



At I., is exhibited a perfect cadence, with which the pupil is fully acquainted (excepting, perhaps, only the name).

It must have been observed, that by a continued course of modulation the ear is kept in a constant state of excitement, approaching absolutely to a painful sensation, so that it becomes desirous of rest. To stop suddenly, however, upon any tonic, or key, at which we may have arrived, would be anything but satisfactory; therefore, when we may have modulated to any key, and desire to come to a decided and satisfactory close, there the ear must be gradually prepared and soothed into a quiescent state, by the introduction of a few chords, so constructed that they shall not only have a tendency to conduct to a state of rest, but shall also be calculated to produce a strong impression of the key in which it is intended the close shall take place.

The only chords suited for this purpose are those of the sub-dominant and dominant, for it will be found that these chords, together with that of the tonic, embrace all the intervals of the diatonic scale, so that, in fact, by hearing these three chords at the close of a modulation, we receive an impression of every interval of the key in which we thus desire to conclude. The above cadence, at *a*, is a specimen.

However, as a frequent recurrence of these chords would produce monotony, the dissonance of the 4th is introduced (as at *b*), which, in some measure, removes this objection.

On account of the frequency of the final cadence, composers have not only been induced to seek for every possible variety, but sometimes have even endeavoured to avoid it.§

In seeking for this variety, some liberties have been taken; for instance, the dissonance of the 6th has been introduced unprepared, producing thus the discord of the $\frac{6}{4}$ (*c*). Another liberty was subsequently taken with the chord of the sub-dominant, by adding to it the 6th, and calling it "the chord of the added 6th," ‖ omitting the chord of the $\frac{6}{4}$ altogether, as in the following Example 139 (*d*).

* Example 141, bars 1, 2, 3. † Ditto, bar 42. ‡ Ditto, bars 12, 13.

§ From this circumstance have arisen those cadences called false, imperfect, etc., all of which shall be explained in their proper places.

‖ The pupil must not consider this chord as the first inversion, $\frac{6}{5}$, of the fundamental 7th. *See other side.*

Ex. 139.



N.B.—The 5th in the chord of the added 6th is generally prepared, as if it were a dissonance. Sometimes the 5th of the sub-dominant chord is omitted, and the added 6th doubled (*e*); and sometimes the octave is employed instead of the 5th (*f*). N.B.—When the key is minor, then the chord of the sub-dominant must be minor too (*f*, *g*).

Figuring Inverted Dissonances.

Having explained the nature of such cadences as are immediately necessary for our purpose, we shall now show their practical use in a course of modulation, in which shall be introduced every dissonance, as exhibited in Example 126.

A few hints respecting the proper figuring of inverted basses when dissonances are introduced, as also the principle upon which this figuring is established, shall first be given; and to this it is requested the pupil will pay strict attention.

First of all, let him remember that, besides the bass, there are only *three* intervals which form the common chord, 8, 5, 3; and as each of these intervals, in its progression, may be suspended, it is clear that there can be only three suspensions, viz., 9th, 6th, and 4th: that all dissonances by suspension (in whatever form they may appear) are comprised in the above.

The 8th, suspended by the 9th, which may be prepared by any consonance *except the 8th.*

5th, ———————— 6th, prepared by any consonance *but the 5th.*

3rd, ———————— 4th, may be prepared by *any* consonance, as also the fundamental 7th.

From this view of the subject, it is evident that, were no other than *fundamental harmonies* employed, the figures exhibited above, together with the fundamental 7th, would suffice to express every chord required in harmony.* But, as these chords may be inverted,† it follows, when an inversion takes place, that the *name*, as well as the *figures* of the original intervals,‡ must be changed also; and were we to employ no dissonances, *then* the figures which are required for the purpose of expressing the three inversions of the fundamental 7th, and the two inversions of the common chord, would suffice to express every chord in music§; but, as the intervals which arise from inversions may be suspended, it follows that the suspensions must necessarily require to be figured also.

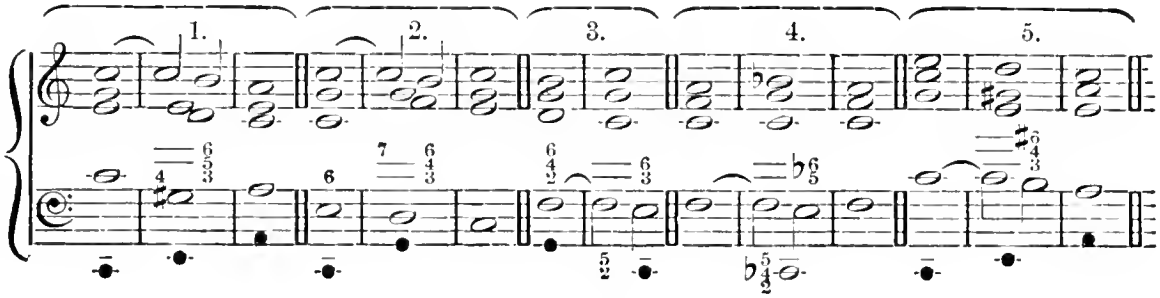
Under these circumstances, it is evident that an entirely new kind of figuring would become necessary; and chords, the figuring of which in their simple inversions were easily understood and as easily remembered, would now become so complicated and involved, that unless some means were found to remedy this evil, great embarrassment would be the consequence. To this end it was found advisable to figure the dissonance *only*, and then to extend lines back over the bass from

* See page 80, below. † See Inversions, Part IV. ‡ Intervals of the fundamental bass.

§ The chord of the fundamental 9th excepted, which shall be explained in its proper place.

those figures the intervals of which remained unsuspended, and thus the inversion of the chord, in its simple state, would instantly be recognized. We shall illustrate this.

Ex. 140.



In bar 1, is exhibited a modulation from C to A minor by the *first* inversion. Here we have introduced the dissonance of the 6th,* but (in consequence of the inversion) it requires to be figured with a 4, and thus the chord would require to be figured $\frac{6}{5}_{4}$, quite a new chord to all appearance; however this ambiguity is prevented by the mode alluded to.

At 2, we have the second inversion of the dominant chord, in which we have introduced the dissonance of the 4th, which (in consequence of the inversion) is figured 7, thus $\frac{7}{4}_{3}$, another apparently new chord, would be presented, but avoided as in the Example.

At 3, 4, the dissonance is in the bass, and therefore its resolution only requires to be figured. Some composers do not express this chord by lines, but figure the dissonances from the bass $\frac{5}{2}$, $\frac{5}{4}_{2}$.† Both methods are here exhibited.

At 5, we have the same modulation and dissonance as at 1; here, however, the dissonance is found in the bass. This chord would require to be figured thus, $\frac{5}{3}_{2}$; another *new* figuring which is avoided as in the example.

What has been said, as regards the *method* of figuring the above dissonances, when inverted, may be applied to all the other dissonances when inverted.

With these few observations, we now present the pupil with the following Exercise, in which he will find much useful matter and practical information. Let him make it a matter of study, and then play it: above all, let him examine most *minutely each progression* of the fundamental bass, for by it the whole mass of harmony is guided and directed. Let him remember that it is by this means—and *this alone*—that he can clearly understand the matter contained in this and all preceding Exercises, and thus be enabled hereafter to put into practice that knowledge which he has already acquired, and which, perhaps, will at a future time be to him an inexhaustible source of enjoyment, gratification, and delight.

Very few of the inverted basses are figured; *this* the pupil (we believe) will be able to accomplish himself, from the previous information afforded upon the subject, especially as the fundamental basses are figured throughout.

* Q. Why? A. Because the fundamental bass ascends a 3rd.

† See Ex. 134, bars 2, 5.

Exercises on Modulation, Dissonances, and Cadences.

Ex. 141



The letters refer to cadences. A. See Ex. 138, *a*. D. See Ex. 138, *c*. E. See Ex. 138, *f*. G. See Ex. 138, *g*.

* See Ex. 140, 5. † See Ex. 140, 3. ‡ See Ex, 110, 2.



C. Ex. 138, *d*. F. Ex. 138, *f*. * See Ex. 110, 1.



B. E., 138, *.

* Ex. 140, 3.

EXTENDED HARMONY.

It will have been observed that hitherto our harmonies have been written so that between the soprano, alto, and tenor, no space was left for the introduction of any other part.

A harmony thus constructed we shall call

Compressed Harmony.

Ex. 142.



If we examine the three positions of the common chord (at I), we find that in the *second* position of the chord (*a*), the 3rd is placed immediately under the 5th; in the *third* position (*b*), the 5th is immediately under the octave; in the *first* position (c), the octave is immediately under the 3rd. If, however, we remove the 3rd from the chord at (*a*), and place it an octave lower (as at *d*, II), we shall find that the alto (at *a*) has changed place with the tenor (at *d*);—that is, the note which was the tenor (at *a*) occupies a place next the soprano (at *d*). If we remove the 5th of the chord (at *b*), and write it an octave lower (as at *e*), a similar change takes place; and so with the octave (at *c* and *f*).

This new arrangement of the intervals of the chord we shall call

Extended Harmony.

By which a new and striking effect is produced. Compare the following harmony at I and II.

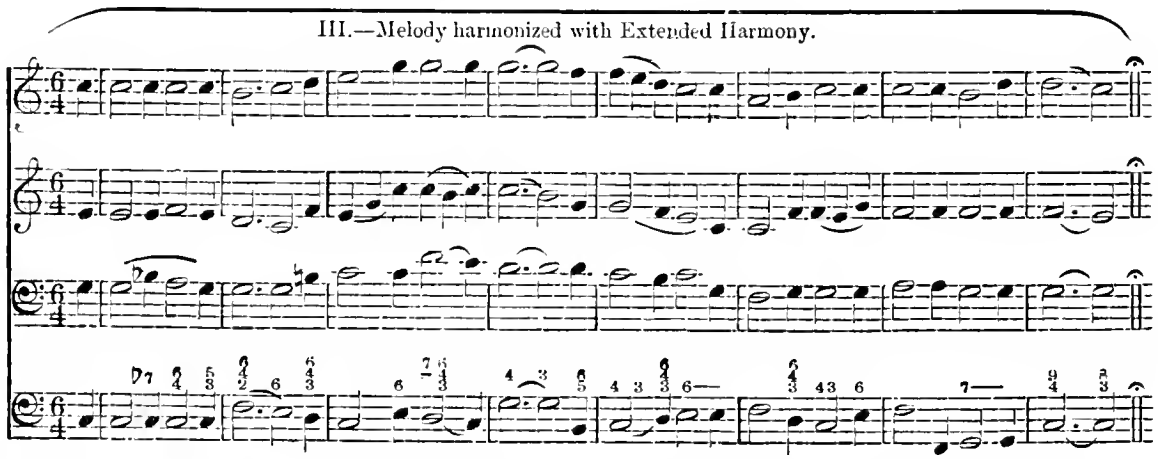
Ex. 143.



In the preceding Ex. (at I) is exhibited *compressed harmony* as usual, which (at II) appears *extended;* the original *alto* (at I, *a*) is transferred an octave lower to the *tenor* (at II, *b*); and the original tenor *(c)* simply becomes the alto (at *d*).

The effect produced by the *new* distribution of the two parts will be better understood by playing the alto and tenor together without the other parts, first as at I, and then as at II; but that the pupil may still more clearly comprehend the nature of *extended harmony*, let him harmonize the following Exercise (143, III) in *compressed harmony*, and play it,—then play it in *extended harmony* as it now stands, and compare the different effects: this is the only legitimate way of forming a correct judgment, and it cannot be too carefully studied*.

Ex. 143.



N.B. As the alto, when transposed thus an octave lower, is rather too *low* to be written in the *treble clef*, it will be more convenient (in order to avoid ledger lines) to write that part, at least for the present, in the *bass clef*, as in the Example†.

We shall now suppose the pupil engaged in harmonizing a melody in compressed harmony, which he intends shall subsequently be changed into extended harmony; in this case, the two following rules must be carefully attended to.

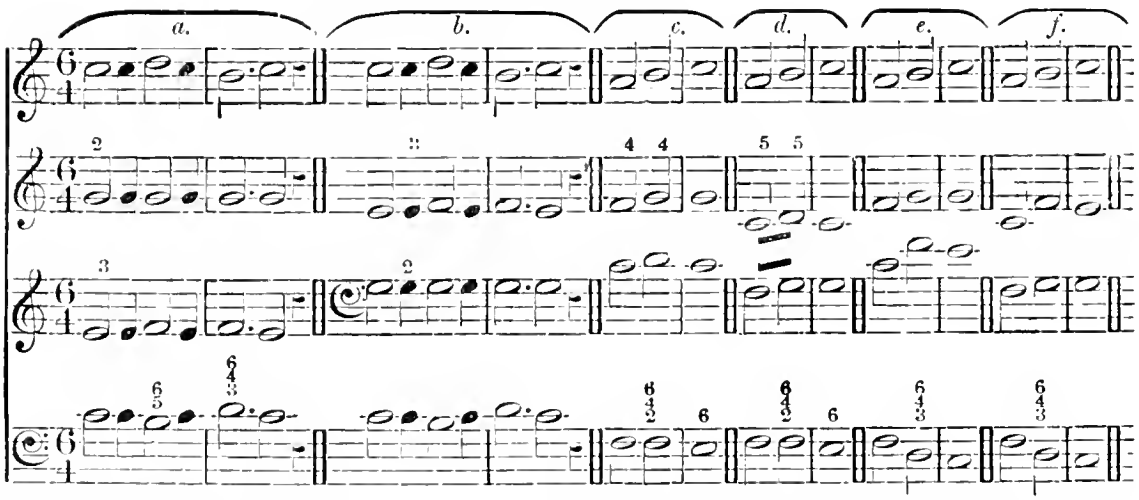
First, "*The bass part must not approach the Alto nearer than an Octave,*"

otherwise, the *alto*, when transposed into the tenor (an octave lower), will be found *below* the *bass;* and thus the *tenor* will in fact become the *bass*. This is clearly shown in the following Example, where the bass (in the compressed harmony at *a*) is *nearer* than an octave to the alto; in consequence of which, the tenor (at *a*) is found below the bass (at *b*), and the harmony (as far as regards its inversion) changed.

* A melody harmonized with extended harmony may be played by two performers on one pianoforte, producing the effect of a quartet.

† It may be here noticed that almost all our modern arrangements for soprano, alto, tenor, and bass, are confined to the two clefs, soprano and bass.

Ex. 144.



By this interchanging of parts, it is evident that a 4th must become a 5th; therefore in the *compressed* harmony observe this

Second Rule, "*Consecutive 4ths must be avoided;*"

for, when the harmony is afterwards extended, these consecutive 4ths will become consecutive 5ths, which are not allowed.

For example:—at *c* (compressed harmony), are consecutive 4ths, which, at *d* (extended harmony), become 5ths.

The improper progression (in the present instance) arises from having selected the *third* inversion of the fundamental 7th as the bass. By employing the second inversion (as at *e*), this faulty progression is avoided (as at *f*).

If the pupil carefully attends to these *two rules*, he may, without the least apprehension of making mistakes, re-harmonize his former exercises with extended harmonies, and thus produce new and unexpected effects.

Several other advantages result to us from this extension. For example:—when a melody *ascends* or *descends* by great intervals (as in the following Example at *a*), the skipping of the chords, which naturally arises from compressed harmony, is not only avoided by a partial *extension* (as at *b*), in the following Example, but a smooth and flowing progression of the inner parts is obtained; the superior effect of which, when contrasted with that at (*a*), needs scarcely be noticed.

Ex. 145.



When the melody falls by a great interval (as at *a*, in the following Example), the alto, in order to obtain a smooth progression, is permitted, but sparingly, to cross over the soprano (as at *b*).

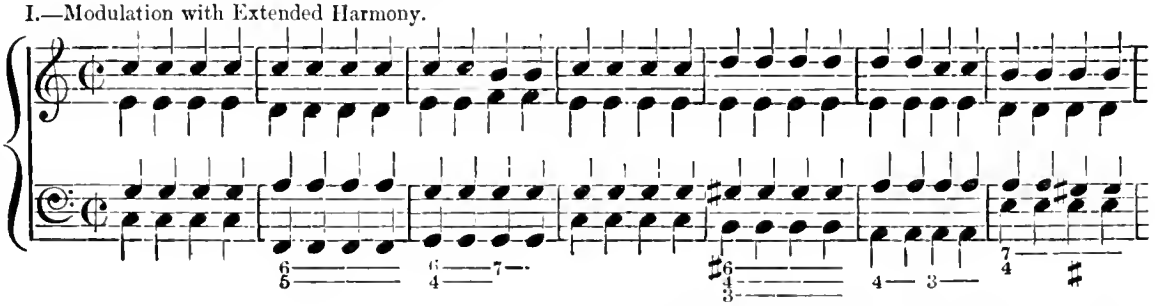
Ex. 146.



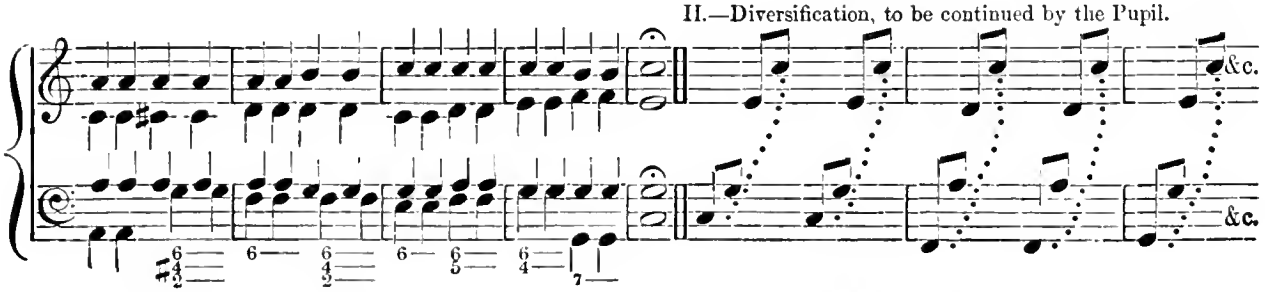
This will suffice to show the nature of *extended harmony*, and its application; and whether we employ it to prevent skipping, or for the purpose of interchanging the parts (as exhibited in Ex. 143), it will be found a most *important auxiliary*. The best advice that can be given the student, in order to make himself fully and practically acquainted with the extraordinary diversity of effect thus produced, is to *re-harmonize* his former productions with *extended* harmonies, and then to play them*. A few modulations written by him thus (as in the following Ex. at I), and played, will be found exceedingly useful; particularly so, if they are first written and played in compressed harmony. This extended harmony may be diversified, as at II†.

Ex. 147.

I.—Modulation with Extended Harmony.



II.—Diversification, to be continued by the Pupil.



* See note †, page 3.

† See also Ex. 36 and 62

MAJOR AND MINOR.

It has already been stated that a *major* key stands closely allied to another called its "*relative minor**"; and that it is by the 3rd of a chord we discover whether it is *major* or *minor*†.

If we carefully examine Ex. 63, we shall find that the harmonies there exhibited, as they arise from the vibration of a string, do *not* produce a *minor* but a *major* chord‡.

We shall now proceed to explain

THE MINOR SCALE.

Its Origin, Construction, and Harmonies.

This will be found a most interesting subject, inasmuch as it opens to our view a new and unbounded field of harmony. It is true the student is not altogether unacquainted with the nature of *minor* chords as regards modulation; but it is only when major and minor chords are employed conjointly in harmonizing melodies that their effect can be fully appreciated.

The major scale is derived from nature, as already shown: but the *minor* scale is partly *artificial;* it is evident that a *union* of these two scales must produce an effect altogether different from that which has hitherto preceded; and of which the pupil is not at present capable of forming an adequate conception.

The minor scale, then, as already said, is *artificial;* but, in explaining its construction, we shall as much as possible keep in view, and take for our model, the major (or original) scale as produced by nature.

If we examine the scale of three sounds in Ex. 65, we find that the third or last sound is the same as the 3rd of the chord of its *generator* (as appears also in the following Example at *a*).

As the tonic chord§ has a *major* 3rd, and as the third sound of that scale is a repetition of the 3rd of the tonic chord, the *scale* is major.

Ex. 148.



Should we give the tonic chord a *minor* 3rd (as at *b*), then the scale, according to the above principle, will be a *minor* scale; for the third sound in *that* scale is a repetition of the 3rd of the tonic chord.

* Page 47, Ex. 61. † Ex. 59. ‡ See page 50, 51.

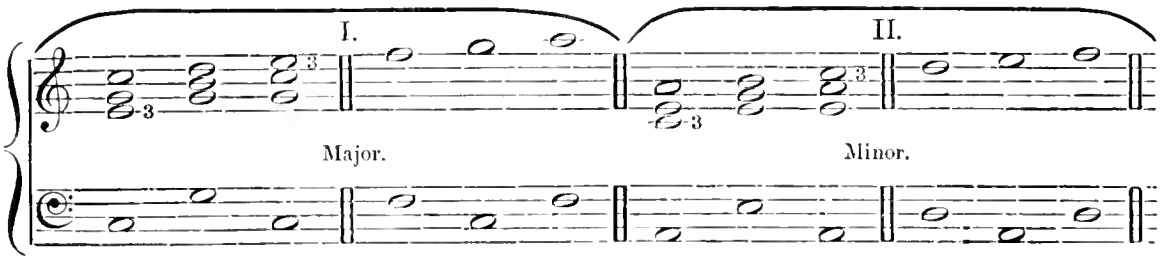
§ The *first* chord of a scale we shall call the *tonic chord.*

"*Minor Scale of Six Sounds.*"

In constructing this scale, we shall pursue the same principle as that by which we were enabled to construct the major scale*.

The following Example (at I) exhibits the *major scale* as we *first* discovered it, and in which all the chords are *major;* but at II, the chords are all *minor*, the effect of which (when compared with the original scale at I) is very far from being satisfactory.

Ex. 149.



Let us try whether we can modify this scale so that, whilst we retain the impression of the minor key, we shall still in some measure keep in view the principles by which the major scale was established. In order to effect this object, it will be necessary that we change ONE of the minor chords, at II, into major; but, as the *first* and third chords *must* be *minor*, it is clear that the second chord *only* can be made *major*, see (*a*) in the following Ex.; that the second chord is the one which ought to be major is evident also from its being the dominant proceeding to its tonic, and necessary to establish the key.

Ex. 150.



Having arranged the harmony of the first scale of three sounds according to this principle (as at *a*), the second scale must be arranged exactly in the same manner (as at *b*). Thus, by a union of the two scales (at *a* and *b*) a scale of *six* sounds with its proper harmonies is produced.

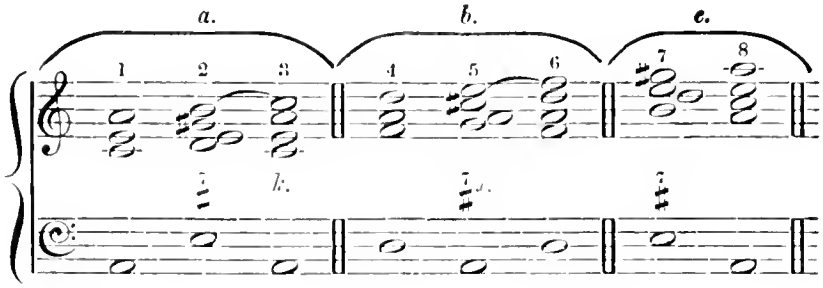
Here, however, we find that a modulation to D minor has taken place; and, as we modulated to that key by its dominant A, so we must modulate back to the original key of A minor by its dominant E, and we are furnished with the two last intervals of the scale of A minor, viz.: G♯ to A†, at the same time, clearly showing the reason why from the 6th to the 7th of a minor scale must be a

* See page 51.

† The pupil is strongly advised to read very carefully what has been stated upon that subject at page 53.

tone and a half. Thus, then, we have a complete scale, artificial in its construction—inasmuch as it is composed of major and minor chords.

Ex. 151.



If we examine the preceding minor scale, we find that the *second, fifth,* and *seventh,* are accompanied with *major* chords—*characteristic* of the *major* scale; and, as the basses of these chords are dominants, the fundamental 7ths are added*.

If it should be asked Why is the fundamental 7th *not* added to the third chord (*k*), that *bass* being dominant to D? We answer, it is true A is dominant to D, but because the 3rd is *minor* it is not a *dominant chord* (for every dominant chord requires a *major* 3rd), and consequently the fundamental 7th *cannot* be added. Not so at (*x*), for there the chord is major, and the 7th *may* be added.

If we further examine this *minor* scale, we find that the distance between the 2nd and 3rd, 5th and 6th, 7th and 8th, are *semitones,* and between the 6th and 7th a *tone and a half.* These are all distinguishing characteristics of the minor scale; *but especially the progression between the 6th and 7th;* the wailing and melancholy effect thus produced is peculiarly suited to express deep sorrow and grief. The 6th of this scale is sometimes *raised a semitone,* to *avoid* this progression of three half-tones; but is it not thus deprived of one of its most essentially characteristic beauties? and is not also the preponderance of minor chords weakened, by one more than necessary being made major?

Having now explained the minor scale on fundamental principles, we shall take that scale and its harmony (as it appears in the last Example) for our guide, and harmonize a melody according to its principles; preparatory to which, it is only necessary to state that the rules are (with very few exceptions) the same as already taught in the preceding part of the work; that is to say, the four rules of harmonizing†, the adding of dissonances, &c. &c., are all applicable here; the only additional rules refer to those parts of the scale which require *major* chords—as follow:

"*The second and seventh of the scale must always be accompanied with major chords.*"

"*The fifth of the scale may be accompanied with either major or minor.*"

* See page 29.

† See page 16, 31, 35, 38. We are desirous to draw the attention of the student to these *four rules* of harmonizing, in order that he may see their applicability to the harmonizing of minor melodies.

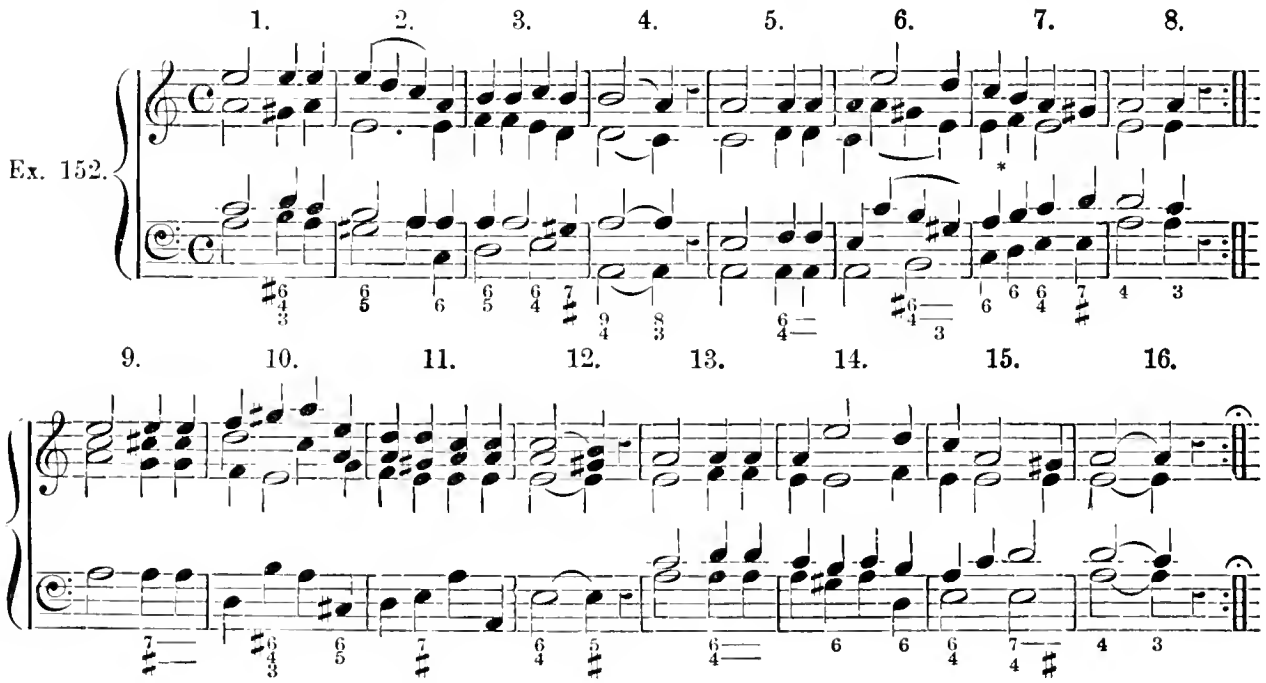
With respect to the accompaniment of the 5th, some judgment and caution are necessary; because, as the *fifth* of the scale and the *fifth* of the tonic (or key chord) are the same intervals, a mistake in the selection of the harmony of that interval, with reference to major or minor, might easily be committed; however, by a little reflection and practice, this may hereafter be effectually avoided. For further explanation the pupil is referred to Ex. 164.

It must not be expected that *minute* directions will be given how the pupil should proceed on all occasions; that would indeed be impossible; he must put into practice the knowledge he has acquired, and exercise his own ingenuity; if he does so, and carefully examines the exercises with which he will be furnished as he proceeds, it will be a wonder if he misses his way.

The following is an illustration of what has been stated, and we will analyse it.

A Minor Melody harmonized with Extended and Compressed Harmony.

Ex. 152.



The exercise commences with the 5th of the scale, which *must* have a *minor* chord; why it *must* be thus accompanied requires no explanation. N.B. As the 5th is here repeated, we have employed the fourth rule of harmonizing*.—At 2, the second rule has been introduced†, because the fourth of the scale descends one degree. Bars 3, 7, 15, cadences‡. At 4, dissonance of the $\frac{9}{4}$. At 5, the octave being repeated, the third rule is employed§. At 6, the fifth accompanied by a minor chord. Why? Because the second part of the minim is accompanied by the fourth rule, which requires a *major* chord; had the fifth been accompanied by a *major* chord, then *two* major chords would have followed each other in immediate succession, which for the present should be avoided.

At 9, a 7th by license is introduced in *compressed* harmony; at 10, the harmony is *extended*, to prevent skipping‖. By the

* See page 38. † Page 31. ‡ See cadences, page 116. § Page 35.
‖ See page 4, Ex. 145.

introduction of this licensed 7th, the harmony of the succeeding tonic chord is of course deprived of its 5th, which, however is amply compensated by the *effect* produced by the 7th. Compare the effect produced at bar 5 in *extended* harmony with 13 in *compressed*.

The attention of the student is particularly directed (at 10) to the progression from F to G♯; the peculiar effect this progression produces has already been alluded to in page 127, Ex. 151.

It has been generally remarked, and with great truth, that *one* example often effects more towards elucidating a subject than pages of explanation; we shall, therefore, give a few specimens, showing how certain portions of the preceding melody may be variously harmonized; more especially with regard to the *accompaniment* of the fifth of the scale, as exhibited in the following Example.

Ex. 153.



Bar 17. The fifth of the scale accompanied by a major chord. Compare this harmony with bar 6.

Bar 18. The fifth, accompanied *first* by a *minor*, and then by a *major* chord. Compare as above.

Bar 20. In order to preserve a flowing melody in the bass, the 7th in the tenor is permitted to *ascend*. This liberty, however must be used sparingly. Compare the progression of the bass at 19 and 20 with that of the alto, 21, 22.

These specimens also exhibit several modes of extending the harmony. It will be observed that, in bars 22, 23, 25, it is extended beyond the limits pointed out in Ex. 143; nevertheless, it may be employed thus with very great effect. Compare these specimens from bars 19 to 20 with bars 9, 10, 11.

To enter into a full explanation of these various specimens would only tend to frustrate our design, which is, that the student should examine and judge for *himself*, and become practically acquainted with *that*, which no specific rules can ever convey:—viz., *general effect*.

Let it be observed, that no *new* rules have here been introduced; all has been effected by the simple application of the "*four rules* of harmonizing," with which the student was before familiar.

We shall now proceed to introduce a most important chord in harmony: viz.

THE CHORD OF THE MINOR NINTH.

It will be in the recollection of the student, that, when we explained the resolution of the chord of the fundamental 7th*, we were particularly anxious to draw his attention to *two* intervals of that chord: viz., the 3rd and 7th; the *former* of which *ascended* a semitone *direct* to the octave of the tonic, whilst the *latter descended* a *semitone* to the 3rd of the succeeding chord. It is a fact worthy of notice, that when these two intervals are heard together, in the situation represented at (*a*) in the following Example, an *immediate* and powerful tendency to attract each other is manifested between them†.

Ex. 154.



When these *two* intervals, however, are placed in a reversed position (as at *b*), then how *opposite* the effect!! no sympathy is manifested between them; no desire to approach each other; indeed a contrary feeling is exhibited:—a desire to separate; to fly off in opposite directions.

It is by these *two* intervals, *ascending* and *descending* by *semitones*, that the whole mass of harmony is guided and directed†.

Now let the student mark well—when the 7th descends a *semitone*, the chord into which it descends will be a *major* chord (*a*, *b*); but, when the 7th descends a *whole tone*, the chord into which it descends will be a *minor* chord (*c*, *d*).

In this latter case it is evident, that, in consequence of the 7th descending a *whole* tone, the *equilibrium* which subsisted, as it were, between these *two* parts before, is now destroyed; and, in order to *restore* it, some other interval must be found, by which this object shall be accomplished; in other words, an interval must be added to the chord of the fundamental 7th, which (whilst the 3rd *ascends* a *semitone*) shall *descend* a semitone; and as the 7th in the first instance indicated the approach of a *major* chord, so the interval sought for shall be calculated to indicate the approach of a *minor* chord.

Here the question arises,—*where*, and *how*, shall we find this interval?—We answer,—by applying once more to that inexhaustible fountain from which we have obtained all our previous knowledge.

In examining Ex. 63, we find that the harmonics of the generator produce not only a *common* chord‡, the chord of the *fundamental* 7th, and a scale with its fundamental basses;—but the

* See page 25, also 41.

† The truth of this observation will be attested by every intelligent vocalist and performer on wind and string instruments (not the pianoforte).

‡ A *major* chord (let it be remembered), not a *minor*

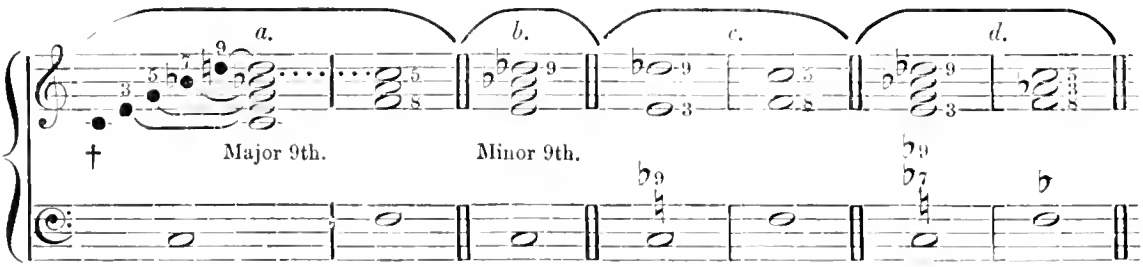
chord of the fundamental 9th also; and this 9th, let it be well observed, is a *major* 9th. See the following Ex. 155 (*a*).

The student is requested to pay particular attention to what follows.

That nature furnishes a *major* chord, and that a major chord may be changed into minor by lowering its 3rd a half tone, has already been shown*: now (referring to the following Ex.) let us proceed upon the same principle with the 9th; and, as we have lowered the THIRD of the common chord a semitone, and made it *minor*, let us lower the NINTH a semitone and make it likewise *minor* (*b*); it will then descend a *semitone* upon the 5th of the tonic (*c*), whilst the 3rd ascends a *semitone* to the octave, and thus the equilibrium of these two intervals in their progression is preserved.

The whole of the chord of the minor 9th is exhibited at (*d*). It will be observed, that at (*a*) the major 9th descends into the 5th, a *whole* tone, whilst the 7th descends but a *half* tone, producing a major chord; but *that* at (*d*), whilst the minor 9th descends a *half* tone into the 5th, the 7th descends a *whole* tone into the 3rd, producing thus a *minor* chord.

Ex. 155.



Having fully explained the nature of the minor 9th, and from whence it is derived, and having shown the *necessity* of its introduction, we shall now proceed to point out

"*How practically to incorporate the* MINOR *9th with the Chord of the Fundamental 7th.*"

As the *minor* 9th will be found a *major* semitone‡ above the octave, it is only necessary to *remove the octave*, and insert in its place a note a major half tone higher, and *that* note will be the minor 9th. As this minor 9th (like the fundamental 7th) requires no *preparation*§, we shall call it

The Fundamental Minor 9th‖,

which may be introduced into any dominant chord.

At (*e*) in the following Example, II, is the chord of the fundamental 7th; the octave is marked to be expunged.

f. The minor 9th is inserted in its place.

g. The minor 9th is resolved, descending a semitone, into the 5th of the following chord.

* Page 46. † See Ex. 63.

‡ A note, raised or lowered a semitone without changing the name of that note, is called a *minor* semitone. A note, which changes its name when thus raised or lowered, is called a *major* semitone.

§ Thus it may easily be distinguished from the dissonance of the 9th by *suspension*, which requires *preparation*.

‖ Or *chord* of the minor 9th; the fundamental 9th; or simply the minor 9th; by which the whole chord is to be understood

h. The chord in different positions.

i. The 9th is resolved on the *same* bass into the *octave*, like a *dissonance* by suspension.

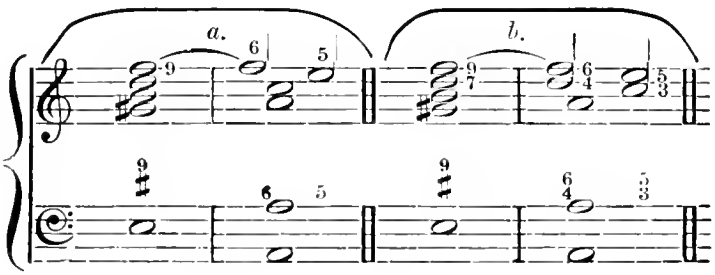


As the minor 9th resolves into the 5th, another *dissonance* of the 6th presents itself, prepared by the 9th; the rule for which is:

"*When the fundamental bass ascends a 4th, the dissonance of the 6th, prepared by the 9th, may be introduced.*"

See the following Example, at *a*; and, as the same progression of the fundamental bass admits of the 4th prepared by the 7th*, these two dissonances may be combined, as at *b*.

Ex. 156.



Before we proceed to the *inversion* of the fundamental chord of the minor 9th, the student is recommended to exercise himself on that chord, by modulating through all the *relative minor keys*; a specimen of which is given in the following Example. Previous to entering upon that exercise, however, a few preparatory questions like the following will be found useful.

Q. How do you discover the *minor* 9th?
A. The minor 9th is found a major semitone above the octave.
Q. What is the minor 9th to G? A. A flat.
Q. Why is it not G sharp?—For G sharp and A flat are represented by the same key on the pianoforte?
A. Because G sharp is *not* a major semitone above G, but only a *minor* semitone; it would be a *sharp octave* to it.
Q. What is the minor 9th to B flat? A. C flat.
Q. What ——————— G sharp? A. A natural.
Q. What ——————— D sharp? A. E natural.
Q. What ——————— E flat? A. F flat.

* See Ex. 121

Modulation through the Relative Minor Keys with the Minor Ninth.

Ex. 157.



N.B. A modulation (such as the above) consisting entirely of *fundamental* chords of the minor 9th, is not very grateful or soothing to the ear; quite the contrary, indeed; but, when judiciously introduced, these chords produce effects quite electrifying.

Inversion of the Chord of the Minor 9th.

As the chord of the fundamental 7th contains *three* intervals besides the bass, and may therefore be inverted *three* times*, so the chord of the fundamental 9th, because it contains *four* intervals beside the bass, may be inverted *four* times.

It is necessary to observe that any inversion of the fundamental 7th may at once be converted into an inversion of the minor 9th by merely removing the interval which represents the octave, and writing in its place a note a major half tone higher; as in the following Example.

Chord of the 7th. Chord of the minor 9th. First Inversion. Second Inversion. Third Inversion. Fourth Inversion. Ditto.

1. 2. 3. 4. 5. 6. 7. 8.

Ex. 157.



At 1, the chord appears as the chord of the *fundamental 7th*, with the octave marked to be expunged.

At 2, the octave is expunged, and the 9th, E flat, written in its place; which 9th resolves on the 5th of the following tonic chord at 3.

At 4, this chord appears in the *first* inversion. D, the octave (which would here appear as a 6th), is expunged, and the minor 9th put in its place, which, in consequence of the *inversion*, requires to be figured with a 7. The chord is called the *diminished* 7th†.

N.B. Had the minor 9th not been introduced, it would have been the chord of the $\frac{6}{5}$.

At 5, is exhibited the *second* inversion, $\frac{6}{5}$.

N.B. Had the 9th not been introduced, it would have been the chord of the $\frac{6}{4}$.

At 6, third inversion, $\frac{\sharp 4}{\flat 3}$ or $\frac{\sharp 4}{2}$.

N.B. Without the 9th, it would have been $\frac{6}{4}$.

At 7, *fourth* inversion. As the 9th itself is in the inverted bass, we need only figure the original 3rd, thus: ♯2 (sharp 2nd), as at 8.

* See Part IV, on Inversions.

† Because this 7th is one semitone less than the fundamental 7th. N.B. This chord has been most unaccountably mistaken for a *fundamental* chord. See page 129, minor 9th, and Ex. 154.

Having now shown the *four* inversions of the chord, it will be necessary to make a few observations upon each of them.

Observation I.

As the essential intervals of the fundamental 7th are the 3rd and 7th*, so those of the minor 9th are the 3rd and 9th†; by *these two latter* intervals we are always enabled clearly to distinguish the chord of the fundamental 7th from that of the minor 9th and its inversions; nevertheless, the fundamental 7th must not be omitted when we write that chord; for, the *omission* of that interval would deprive the following tonic chord of its 3rd.

Observation II.

The 3rd and 9th must therefore be continually kept in view; and, under whatever figures these two intervals may be represented in the various inversions, they are at once recognized; for, the 3rd will always require a mark of *elevation* (such as a sharp or natural), and the minor 9th one of *depression*. In one word, these two intervals are always marked by accidentals of an *opposite nature* (which can never occur in an inversion of the fundamental 7th), and therefore *must* always be figured; the other intervals of the chord need not to be figured, unless they require accidentals; for instance, in the preceding Example, at 4 (*first* inversion), the original 3rd, F sharp, is in the inverted bass; all, therefore, that is required is to figure the 9th, which is here represented by a ♭7.

At 5, *second* inversion, the ♯6 represents the original 3rd, F sharp; and the ♭5 represents the original 9th, E flat.

At 6, *third* inversion, the ♯4 represents the original 3rd (F♯) and the ♭, the original 9th (E flat).

At 8, *fourth* inversion, the ♯2 represents the original 3rd, F sharp; and the inverted bass that of the 9th, E flat.

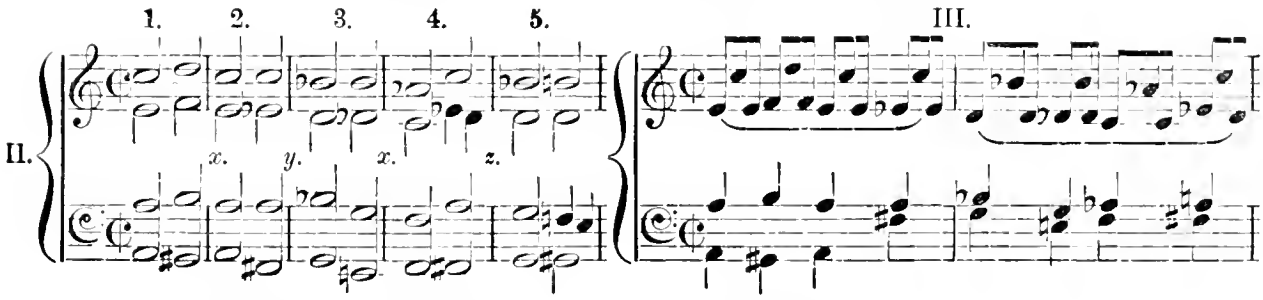
We shall now illustrate what has been said on the preceding Examples, by giving separate Exercises on each of the inversions.

Exercise on the Chord of the Diminished 7th.



* See Ex. 154, *a. b.*

† See Ex. 155, *c.*



It will be observed that, at bar 4, 5, the 9th, instead of descending into the 5th of the succeeding tonic, descends into the octave on the *same* bass; and thus the chord of the minor 9th is changed into the fundamental 7th*. See Ex. 155, II, *i*.

N.B. This Exercise, as well as the following, the student is advised to play.

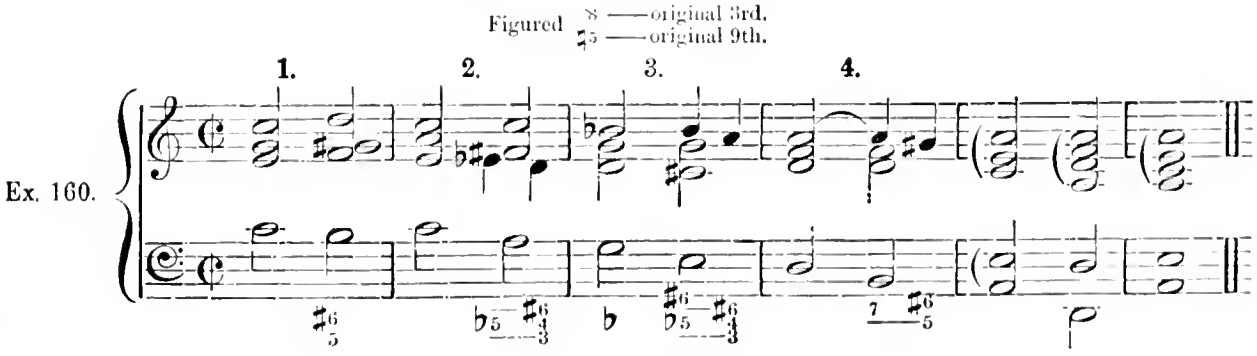
At II, the same Exercise with extended harmony. The tenths between the tenor and bass produce a good effect.

N.B. The tenor from 2 to **3** has *ascended*, by which the 3rd of the chord is doubled, which produces a good effect; especially in a minor key.

At III, the same Exercise diversified, which the pupil is required to finish himself, and then play.

N.B. It is necessary to observe, that an *imperfect* 5th is always allowed to *precede* or *succeed* a *perfect* 5th in consecutive progression; the law is only against a consecutive progression of *perfect* 5ths. Let this be well kept in mind. The consecutive 5ths between the tenor and bass, therefore, in the above Ex. (*x*) are permitted; this may, however, be easily prevented, as at *y* and *z*.

Exercise on the Second Inversion of the Minor 9th.



In the above Ex. the 5th (B) in the inverted bass, bars 1, 2, instead of *descending* as usual, *ascends*, to prevent the *appearance* of consecutive 5ths between the tenor and inverted bass.

* Partaking of the character of the 9th by suspension

Exercise on the Third Inversion of the Minor 9th.

Figured ♯4 ——original 3rd.
♭3 ——original 9th.

Enharmonic change.

Ex. 161.



The only observation which we shall make upon the preceding Exercise is that, at bar 1, the note B, the original 5th (but here the 6th from the inverted bass), instead of *descending* upon A, the octave, *ascends* in bar 2, to E the 3rd of the bass*. By thus proceeding, the 3rd of the *inverted* bass is doubled, which produces a very good effect. Let the student write this exercise in extended harmony and play it. The commencement of it is as follows at II; to which the student may add such dissonances as he finds most effective.

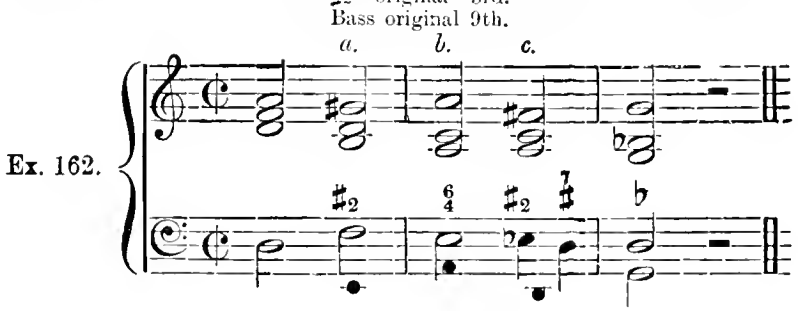
Extended Harmony.



Exercise on the 4th Inversion of the fundamental 9th, or Sharp Second.

♯2 original 3rd.
Bass original 9th.

Ex. 162.

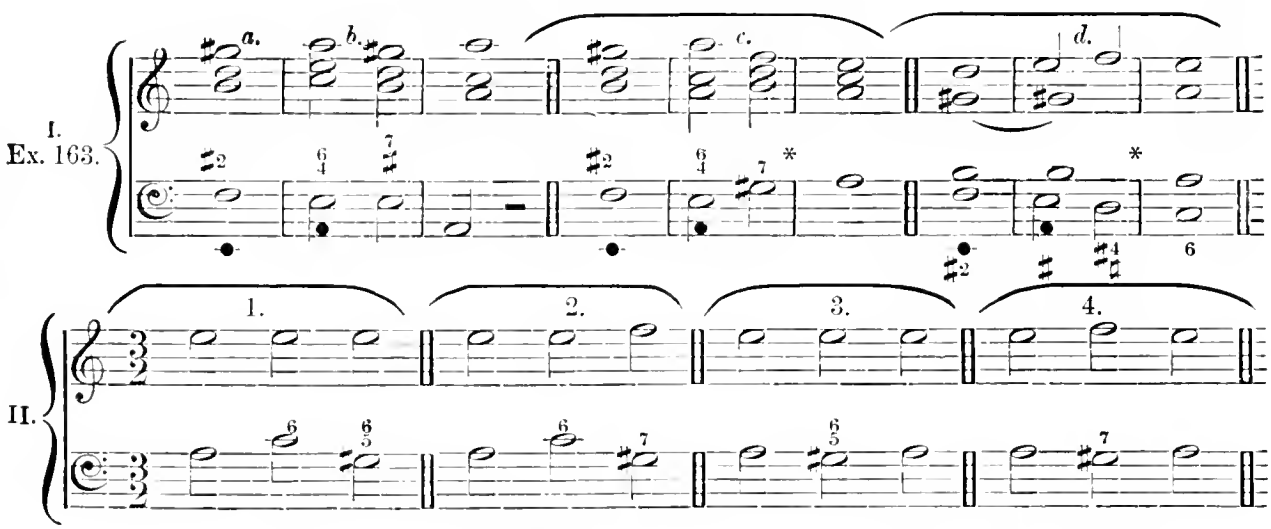


At *a*, the 9th being in the inverted bass, resolves of course upon the 5th of its tonic (*b*), and produces the second inversion of that chord, ($^{6}_{4}$†). At *c*, we have the ♯2 again; here, however, the 9th resolves into the octave. When the chord of the ♯2 resolves into the $^{6}_{4}$th, it produces the effect of the $^{6}_{4}$ by *suspension*, which is not very *satisfactory*. The following Example shows several modes of avoiding this.

* This process may always be adopted when the dominant chord is in the 2nd position, and the 3rd inversion employed

† See Ex. 158, bars 7 and 8.

Ex. 163.



In the preceding Ex. at *b*, the *resolution* of the chord $\frac{6}{4}$ is treated as an *unprepared*† discord by suspension. At *c*, nearly so; because the $\frac{6}{4}$ is *not* resolved upon the *same bass*, but is immediately followed by an inversion. At *d*, another method.

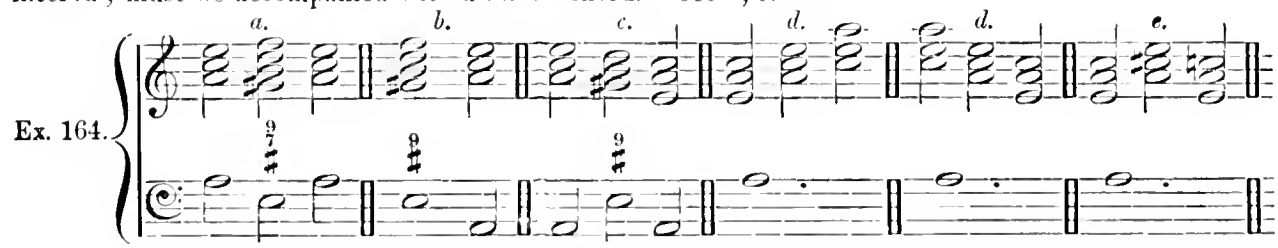
We shall now introduce the student to the

FIFTH AND LAST RULE OF HARMONIZING.

"*When the Sixth of the Scale descends one degree, it may be accompanied by the Dominant, to which it will be a Minor 9th*‡."

When the above rule is employed, the 5th of the scale, whether preceding or succeeding that interval, must be accompanied with a *minor* chord. See *a*, *b*.

Ex. 164.



In like manner, should the fourth of the scale, in descending, be accompanied by the dominant, then the *fifth* of the scale immediately preceding that interval must also have a minor chord, *c*.

When several intervals of the chord of the tonic immediately succeed each other in a melody, they *must* all be accompanied by *minor* chords (*d*); and it would, therefore, be incorrect to accompany the 5th as at *e* §.

N.B. When the fourth rule of harmonizing is employed (which we know refers to the 5th of the scale), that interval may be changed into the 6th, and then accompanied by the *fifth* rule. For example, the key is A minor, the 5th of the scale is E; and, as that 5th is *repeated*, we have accompanied it according to the fourth rule‖, viz., by the dominant (see Ex. 163, II, 1). At 2, however, we have changed the 5th (E), previously accompanied by the dominant, into the 6th (F), and then accompanied it according to the *fifth* rule. At 3 and 4 is exhibited a *similar* process, which is *preferable* to the *first*.

* See N.B. page 135. † See Ex. 133.

‡ This rule could not be introduced sooner, as it is founded upon the chord of the minor 9th.

§ See page 128—Observation on the accompaniment of the 5th in minor scale, and Ex. 152.

‖ See page 38.

Let us now harmonize a few melodies in minor keys.

In order to show the variety which may be produced in harmonizing even by the chords of the tonic and dominant only, when aided by the minor 9th, the following melody is constructed so that *no other* harmony is required but what arises out of the progression of these two chords (as will be seen by the fundamental bass), assisted by a few dissonances which naturally present themselves in the course of that progression.

Air harmonized with the Minor 9th.

Ex. 165.



Bars 2, 11, the *fifth* rule of harmonizing is introduced. The melody at 7 and 8 in the soprano is imitated in the bass, at bars 8 and 9.

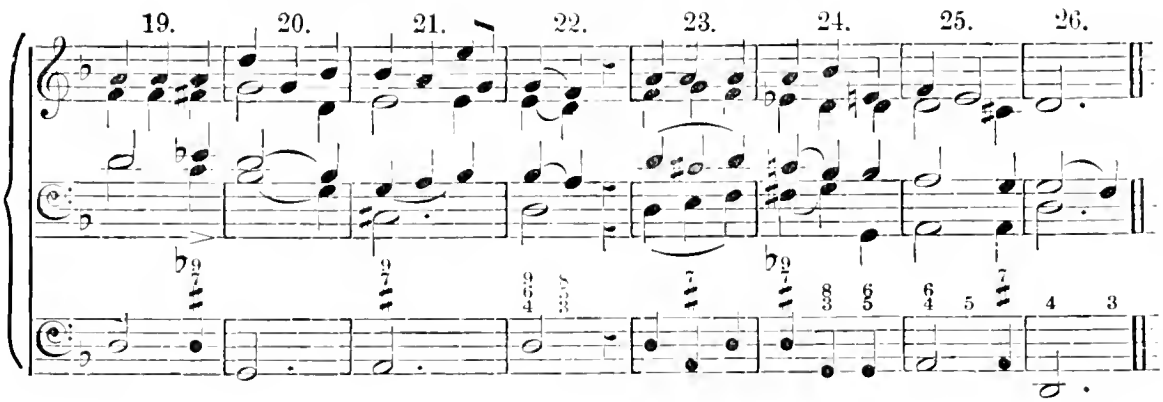
Bars 9 and 10 in the alto are imitated in the bass. 15, 16.

Bars 9 and 10 in the tenor are imitated in the soprano, 15, 16.

The Dissonance of the 4th, bar 2 (tenor), combined with the *minor* 9th in soprano (arising out of the fifth rule), will be found very effective. The gradual *descending* progression of the alto from the 9th to the 10th bar, whilst the tenor thus *ascends* to the 9th, is very effective, and produces two melodies, which are subsequently imitated by the soprano and bass (bars 15, 16). At 15 is the fourth inversion of the minor 9th.

* In bars 3–7 we have employed first the 8th and *then* the 9th, by which a more melodious harmony is produced in the tenor. In Ex. 160, and others, we permitted the minor 9th to descend into the octave; here this progression is reversed. At bar 9, the minor 9th in the *alto* descends to the 8th, whilst the 8th in the *tenor* ascends to the 9th. These interchanges amongst the parts never fail of producing a good effect.

Ex. 166.



This Ex. exhibits the second part of the preceding melody, and is so constructed as to admit the harmony of the *sub-dominant;* which will be found a great addition to the general effect.

In the latter part of bar 19, the 5th of the scale is accompanied by a *major* chord; and, as it thus becomes a dominant, we are enabled to introduce the fundamental 7th and minor 9th.

Let this be particularly remembered, as much depends upon it; for, had the fifth of the scale at 19 been accompanied by a *minor* chord, then all the advantages which we have derived from the 7th and 9th would have been lost: we would reiterate, let this be well kept in mind.

The remarkably smooth and flowing progression observable throughout all the parts, is in a great measure, to be attributed to the introduction of the minor 9th.

If the pupil examines and *compares* the harmony of bar 19 with that at 23, he will perhaps better comprehend and more fully appreciate the importance of the rule: "*The 5th of the Minor Scale may be accompanied by either a Major or Minor Chord.*" And no less important is the fourth rule of harmonizing, viz.: "*The 5th, when repeated, may be accompanied by the Dominant.*"

Again we would reiterate—Compare THE SIMPLE MELODY OF BARS 19 AND 23; then the harmony, and then the rules by which it has been effected.

CHANGING MAJOR MELODIES INTO MINOR,

FOR THE PURPOSE OF HARMONIZING.

The themes which are furnished in the former part of this work* may be changed into minor in the following manner: first, by merely altering the signature; in this case, the *name* of the key remains *unchanged.* By way of illustration, let us take a theme written in C major; we will change it into C minor†. How? By placing three flats as a signature‡, and then, by raising the 7th of the scale (wheresoever it may appear) a minor semitone, the theme will be in a *minor* key. In the key of C minor, the 7th is B flat; we therefore place a natural before it, to raise it a half tone.

Secondly, the major key may be changed into its relative minor by merely transposing it a minor 3rd lower; in that case, the *name* of the key is changed, but the *signature* remains *unaltered.*

Q. Suppose we were to change theme No. 2, page 17, into minor, according to the *first* case, what signature would be required?

A. Two flats; and *f*, being the 7th of the scale, should be raised a semitone.

* See page 17, 24, 37, 40. † Called irrelative minor. ‡ See page 17.

Q. Suppose we change it into minor according to the second case, what signature will it require?

A. The signature will remain as it now is; but the theme must be transposed a minor third lower, and D be raised a *semitone*, as being the 7th of E minor.

When a theme has thus been changed into *minor*, the *five* rules of harmonizing may be employed.

In pianoforte music, especially, the minor scale is frequently employed as a mere *passage of effect;* in this case, composers have agreed sometimes to raise the 6th of the scale a *half* tone in *ascending* (*a*); but, in *descending*, to *lower* the 6th and 7th a half tone (as at *b* in the following Ex.), some authors write the *descending* scale as at *c*, preserving thus the *true* and *genuine character* of the minor

Minor Scale, arising out of Passing Notes.

Ex. 167.



This apparent anomaly arises from the scale on these occasions being chiefly composed of *passing* notes*, of which, in the present instance, the common chord of A minor is the foundation.

We shall here *harmonize* the minor scale descending; employ the minor 9th, and add such dissonances as may produce the best effect.

Ex. 168.



In the above Ex. we have taken advantage of the 5th rule of harmonizing, by accompanying the 6th of the scale with the *dominant*, instead of the *sub-dominant;* and thus the progression from the *dominant* to the *sub-dominant* (which would have involved consecutive 5ths and 8ths) is avoided.

The following Example illustrates, in a *practical* form, and in a regular and uninterrupted progression, all that has been said on the subject of the *four inversions* of the chord of the minor 9th; to which are added such of the *dissonances* as are calculated to produce the best effect, interspersed with cadences; so that the whole receives thus a rhythmical form.

As the fundamental and inverted basses are all figured†, a minute and particular analysis of the Exercise is not requisite; but the few observations at the end may assist the pupil.

* To be explained hereafter.

† A separate staff has been added, to prevent the figured bass appearing crowded.

Ex 169.



* Produced by the suspension of the 5th by the 6th, prepared by the minor 9th. See fundamental bass, also Ex. 156.

EXERCISE ON MINOR NINTH.



SHORT ANALYSIS.

Bar 2. The 3rd of the chord, C sharp, is selected as the inverted bass, consequently first inversion of the chord of the 9th—diminished 7th. See Ex. 158, bar 4, and Ex. 159.

Bar 12. The 5th has been selected—second inversion, $\flat\frac{6}{5}$. See Ex. 158, bar 5, and Ex. 160.

Bar 7. The 7th ———————— third inversion, $\sharp\frac{4}{6}$. See Ex. 158, bar 6, and Ex. 161.

Bar 20. The 9th ———————— fourth inversion, $\natural 2$. See Ex. 158, bar 7, and Ex. 163, *d*.

This will suffice to show how the *inversions* of the fundamental 9th may be employed most effectively. We shall now point out a few of the *dissonances* which are introduced in the Example. See fundamental bass.

From bar 4 to 5 bass ascends a fourth, dissonance of 4th in soprano, prepared by 7th.

——— 5 to 6 ——————— second. ——————————————— ——————— 5th.

———10 to 11——————— fourth. ——————————4th in bass, ——————— 8th.

———11 to 12——————— fifth, ——————————4th in alto, ——————— 8th.

——— 7 ——————————— fourth, ——————————6th in alto, ——————— 9th

Bars 9, 14, 19, 23, various cadences.

* See note in the preceding page.

† In order to produce the proper effect, when playing this and the following exercise, it should be kept in mind, that they both form *one exercise*, and must be performed without interruption.

Ex. 170.


Allegro.
24.
25.
26.
27.
sf
sf
28.
29.
30.
31.
32.
33.
34.
35.
sf
sf
36.
37.
38.
39.
40.
41.
42.
43.
sf
sf
sf



The above Ex. may be viewed as a continuation of the preceding, written for the pianoforte; the subject in the bass at 24 and 25 is (with an occasional slight change) carried through the whole Exercise. From bar 32 to 35 the subject appears for the right hand. From bars 36 to 41 the subject is reversed in the bass.

As this interesting matter will be resumed hereafter, we shall for the present only impress upon the mind of the pupil the necessity of studying what has been already said with care and attention.

MODULATION IN MELODIES

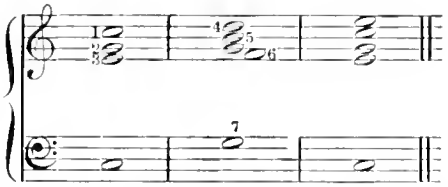
BY THE INTRODUCTION OF ACCIDENTALS*.

It will be observed that all the *melodies* hitherto *harmonized*, commenced, continued, and ended in the *same* key; and that all diversity of harmony (shown in so great a variety of examples) was produced through the instrumentality of the *three fundamental basses* (tonic, dominant, and subdominant); by the employment of the *four rules* of harmonizing; by inverted basses, &c., &c.

It shall now be shown how a melody, commencing in one key, may, through the means of an accidental, be made to modulate into another.

This is a subject of considerable importance, and calculated to open a very wide field for our future operations in Harmony. In order that the student may be enabled fully to enter into its nature and spirit, and to understand the principles on which it is established, he is strongly recommended carefully to *re-peruse* what has been stated respecting the *origin* of *Melody* and *Harmony*†, and scales of *three* sounds‡. From what has been there said, it is clear that a scale consists in reality of only *three* sounds, accompanied by *two* fundamental basses (tonic and dominant)§. The intervals of these two chords, including the fundamental seventh, will be found to comprise, in all, six sounds; thus:

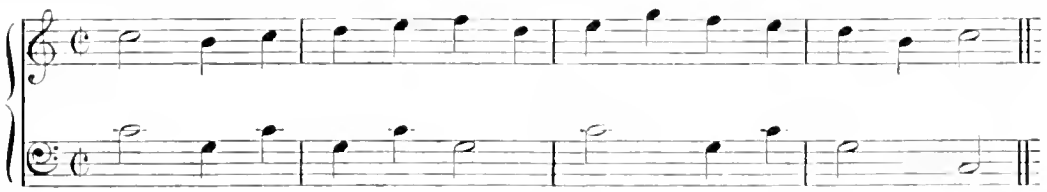
Ex. 171.



Now let it be carefully observed, that, whilst we employ *no other* intervals in constructing a melody but such *only* as are contained in the above example; and use *no other* fundamental basses but the *tonic* and *dominant*; then the melody and harmony will remain in the *same* key; nor can any departure out of that key take place.

The following Melody is constructed on this Principle, and continues therefore in the Original Key.

Ex. 172.



That no *accidental* can be introduced in the preceding melody without immediately *disturbing* the natural order of the progression, is self-evident; therefore, whenever we perceive a sharp or any other accidental placed before an interval in a melody, which does *not* belong to that melody or scale, we must conclude that a sound has been introduced which is foreign to the *original* key, and with which, consequently, the two fundamental basses of that key can have no connexion. Under these circumstances, it is clear that *another* bass must be found to accompany *that* foreign sound.

For example; let us suppose that we are required to harmonize the following melody, written in the key of C:—

Ex. 173.



* Sharps, flats, or naturals. † Page 49 to 55. ‡ Ex. 65, &c.

§ The subdominant can be considered at present in no other light than *as the tonic* of another scale of three sounds.

(See Ex. 67, &c., &c.)

We know that the key of C has neither sharp nor flat; but here we meet with an F♯!! Now, as this F♯ forms no part of the key of C, it cannot be accompanied by *either* of the fundamental basses belonging to the key of C; and the question is, how shall we find that *other* bass with which this F♯ may be accompanied? We reason thus: This F♯ belongs to the key of G (to the *octave* of which it *ascends* by a half-tone); we conclude, therefore, that a *modulation* to the key of G is contemplated*. Now, as no modulation can be effected but through the *instrumentality* of the *dominant* of the key to which we modulate†; and as D is the dominant to G; it follows, that D is the only proper bass which, on this occasion, can accompany the note F♯: and thus a modulation to the key of G is established.

N.B. The foreign interval, introduced thus, we shall call

"A *note* (*or* the *note*) *of modulation.*"

In illustration of the above, we give the following example:

Ex. 174



N.B. The notes placed under the fundamental basses point out the generators of the scales of three sounds, or key in which we are for the time being; and the dominant, marked thus ⊕, may be considered as the door which leads to the new key. See Modulation, Ex. 66 and 67.

The preceding melody continues in the original key of C until it arrives at F♯ (bar 3). Here a modulation takes place to the key of G, by "*the note of modulation*," F♯. This F♯ is accompanied by D. Why? Because it is the *dominant* to G.

N.B. After a *modulation* has been thus effected, every succeeding interval of the melody must be accompanied by the fundamental basses of the new key (thus—G is *now* the tonic, and D the dominant), until *another* "note of modulation" presents itself, by which we are directed to *another* key‡.

Q. In what key is the above melody written?—A. In the key of C.
Q. Does F♯ belong to that key?—A. It does not.
Q. How does F♯ proceed?—A. It ascends a half-tone to G.
Q. With what bass have you accompanied F♯?—A. With D; because D is dominant to G.
Q. As the note F♯ has *ascended* by a *half-tone* to G, you conclude that a modulation to G has been effected. Now suppose the key to be G, and you should meet with a C♯, to what key would you modulate?—A. To the key of D.
Q. With what bass would you accompany the note C♯?—A. With A; because A is dominant to D.
Q. But suppose G♯ had been the note of modulation?—A. Then I should modulate to A, by the dominant E.
Q. Why is the note A, bar 4, accompanied by the bass D?—A. Because A is the *second* of the scale of G, and requires to be accompanied by the dominant.
Q. Is F♯, bar 5, a note of modulation?—A. No; it is the 7th of the scale of G.

This will suffice to show the *nature* and *property* of a "*note of modulation*," and how it is to be treated when it *ascends* a *half-tone*§.

We shall now proceed to point out *another* "note of modulation," the progression of which is *diametrically* opposite to the former; for it *descends* a *half-tone*, and modulates to a key, to the tonic of which the note upon which it has thus descended will be a *major* 3*rd*.

By this *descending* "note of modulation" we are enabled to modulate back to the *original* key.

* The key of G is the first which presents itself in the circle of keys requiring a sharp. (See pages 5, 64.)
† See page 53, Part III, on Modulation, Ex. 70.
‡ See Part III.
§ Let it be kept in mind that the half-tones here spoken of (whether ascending or descending) are *major* half-tones.

The following Melody modulates out of the Original Key, and afterwards returns to it.

Ex. 175. 1. 2. 3. 4. 5. 6. 7. 8.



ANALYSIS.

The first 5 bars of the above example are the *same* as those in the preceding, except the last note, F♮; and, as *that* note does *not* belong to the key of G, it indicates a modulation *out* of it. *This* F♮ becomes now a "note of modulation:" it *descends* a *half-tone*, on the *major* 3rd of the following tonic, C, to the key of which it modulates. As we have now returned to the original key, it follows, as a matter of course, that the remainder of the melody must be harmonized according to that key,—C being now again the *tonic*, and G the *dominant*.

There are *three* things which the pupil ought well to keep in mind:—1. that there are *two* "notes of modulation;" one of which *ascends* a *half-tone*, and the other *descends* a *half-tone*:—2, that the former modulates to a key which lies a *half-tone immediately above it*; and that the latter modulates to a key to which, when it has thus *descended*, it will be a *major 3rd*:—3, that, in the *first* case, "the note of modulation" is a major third to the *dominant*; in the *second* case, "the note of modulation" is the *fundamental 7th* to the *dominant**.

Having fully explained, and illustrated by examples, how modulations in a melody may thus be effected by the introduction of *accidentals*, it shall now be shown how that object may be attained even without the aid of these accidentals. No doubt these agents are in most cases not only the plainest, but also the most certain indications of modulations in melodies; yet it is certain that *a simple melody contains within itself not only the* GERM *of many modulations*†, *but of melodies also.*

The *discovery* of those *intervals* in a melody by which we are thus enabled to modulate, and their practical application in harmony, form perhaps the most interesting subjects for intellectual pursuit that can well be imagined. The materials which it supplies for the purposes of harmony are so abundant, so rich, and so extensively applicable, that a melody, the most *uninteresting*, the most *monotonous* and *unmeaning*, may be made the means of producing almost endless variety; not only as it may affect the *harmony* as a *whole*, but also as it respects the *melodious* progression of the inner parts separately.

We shall now turn our attention to the *discovery* of modulating intervals not indicated by accidentals.

It has already been shown that a note which is raised by an *accidental* and *ascends* a *half-tone* modulates to a key which lies a *half-tone above it*; we may therefore conclude that *any* note which *proceeds thus*, whether indicated or *not* by an *accidental*, will modulate in the same manner. From this consideration arises

THE FIRST RULE

For discovering and employing, for the purpose of *modulation*, those intervals of a melody which have not accidentals.

* It may have been observed that, except at the close of an exercise where the cadence has been introduced, the subdominant has not been noticed. A careful perusal, however, of what has been said (page 52, and examples following) will suffice to show the reason why *that bass*, as *one* of the *three fundamentals*, must for the present be left out of view.

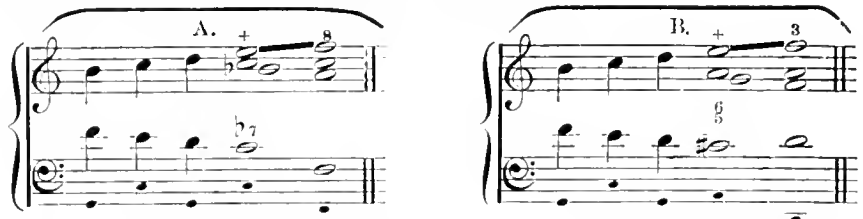
† See Part III, Modulation, from Ex. 71 to 80.

MODULATION BY INTERVALS OF A MELODY.

A.—"*The note which ascends a* HALF-TONE *modulates to a key, the octave of which lies* ***a half-tone*** *immediately above* that *note.*" A.

B.—"***Or,*** *it may modulate to the relative minor of that key.*" B.

Ex. 176.



Modulation to F Major. Modulation to D Minor.

In the *first* case, the "note of modulation" is a *major 3rd* to the dominant of the *new* key. A.

In the *second* case, the note of modulation is a 5th to the dominant of the new key. B.*

It will be observed that, although the "notes of modulation" in *both* cases *ascend* by *half-tones*, yet how very *different* are the results! In the former cases (A), we modulate to a *major* key; in the latter (B), we modulate to a minor key.

To show the variety which may be produced by the application of the *first* rule only, we here present the student with a melody which, for *monotony*, can scarcely be equalled; written thus *designedly*, to show the efficacy of the rule.

A Melody harmonized according to the first Rule of "Modulating by the Intervals of a Melody" which have not Accidentals.

Ex. 177.



ANALYSIS.

This exercise commences in the key of C, in which it continues until the 2nd bar, where the "note of modulation," E, (marked thus +) ascends a half-tone, and modulates to F *major*†.

Bar 3. E, the same "note of modulation," *ascends* a *half-tone*; but, instead of modulating to F *major*, it modulates to the ***relative minor***‡ of that key—D minor.

Bar 4. Same "note of modulation" modulates to F major†.

Bar 5. B♮——————————C major†.

Bar 8. Ditto——————————A minor§.

Bar 9. Ditto——————————C major†.

Q. At bar 2, you have modulated to the key of F; could you have modulated to any other?

A. I could have modulated to D *minor*.

Q. Suppose that you had modulated *so* in bar 3; how ought you to have treated the note of modulation in bar 4?

A. I would have modulated to F major, and then, in bar 5, to D minor.

Q. At bar 5, you have modulated to the key of C, by the note of modulation, B♮; could you have modulation to any other key?

A. Yes; to the *relative minor*.

Q. Suppose that you had modulated, at bar 6, to A *minor*, instead of C major; how would you have proceeded afterwards?

A. I would have continued in A *minor* until I had arrived at the note of modulation, B♮, in bar 7, and there I would have modulated to C major.

* As the rule naturally divides itself into two parts,—to prevent confusion in the practical application of it, we have distinguished the one from the other by the letters A and B. *Let this arrangement be kept in mind.*.

† First rule, A.

‡ See chord of the minor 9th, Ex. 158, on which this rule is founded. § First rule, B.

The following example exhibits the same melody *reharmonized*, showing how this rule may be *differently* employed. Let the student carefully *examine* and then *compare* the effects of both, *bar by bar;* not only as regards the *modulations*, but also as regards the *inverted* basses and inner parts; and let it be remembered, that as a change in the *inverted* bass necessarily brings about a correspondent change in the other parts likewise, so *new melodies* will naturally arise, which (as shall be explained hereafter) may be themselves converted into *principal melodies*, and harmonized as such.

The same Melody harmonized differently by the same Rule.*

Ex. 178.



Let it be borne in mind that the foundation upon which all this variety rests is *modulation as produced by the intervals of a melody.*

The student may put this rule into practice more extensively, if required: for example—let him select one of the *themes* given in the early part of this work†, and harmonize it simply according to the four rules of harmonizing‡, with inverted basses§. Then let him search out all those intervals which *ascend* by *half-tones:* these he *may employ* (if he chooses) as notes of modulation; but (let it be remembered) he is not *obliged* to do so; that is, he is *not obliged* to modulate. This must be left entirely to his *own* judgment and taste.

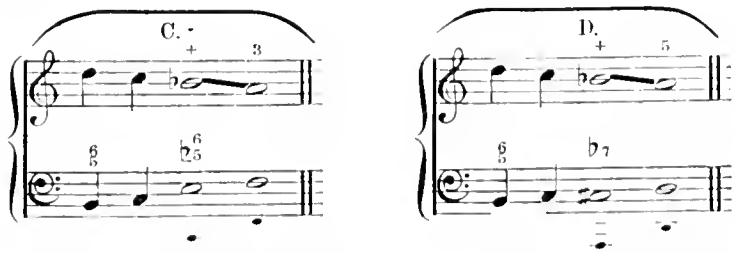
SECOND RULE

Of modulating by the intervals of a melody.

"*The note which* DESCENDS *a half-tone modulates to a key, to the tonic of which the note to which it descends is a major 3rd.*" C.

"*Or, to its relative minor.*" D.

Ex. 179.



Modulation to F major. Modulation to D minor.

In the *first* case, the "note of modulation" will be the fundamental 7th of the dominant of the *new* key. In the *latter* case, the note of modulation will be the minor 9th‖ of the dominant of the new key.

* Let the pupil carefully examine and compare the progression of the alto, tenor, and bass of the *present* example with the one immediately preceding, and mark *well* the difference.

† See pages 31 to 40. ‡ Themes, pages 31, 37, 40. § See inverted basses, Part IV.

‖ This rule is also founded upon the chord of the minor 9th. (See page 147.) See also the *fifth* rule of harmonizing by fundamental basses. page 153

A Melody harmonized according to the Second Rule of modulating by the Intervals of a Melody.

180.



ANALYSIS.

The key is C to bar 2, where the "note of modulation," C, *descends* a *half-tone* to B, and thus modulates to a key, to the tonic of which *that* B is a major 3rd.

Q. What key is that?

A. G major.

Bar 4. The "note of modulation," B♭, *descends* a *half-tone*, and modulates to the key of F major.†

Bar 5. Here the "note of modulation," B♭, occurs again, and *descends a half-tone:* but, instead of modulating to F *major*, we modulate to the *relative minor* (D minor).

Bar 5. The last note, C (note of modulation), *descends* a *half-tone*, and modulates to G major. Second rule.
Bar 6. Same note, C. —— E minor. Ditto.
Bar 6. Note F. —— C major. Ditto.
Bar 8. —— C♯, —— *ascends* —— D minor. First rule.
Bar 9. —— C♮, —— *descends* —— G major. Second rule.
Bar 10. —— D♯, —— *ascends* —— E minor. First rule.
Bar 11. —— D♮, —— *descends* —— A minor. Second rule.

After proceeding thus through several other modulations, this exercise concludes with a cadence in the original key.

The student, by way of exercise on this rule, may here again follow the directions given immediately after Ex. 178, page 149.

Q. Suppose that you were in the key of E♭, and that the note E♭ DESCENDED a *half-tone:* to what keys are you enabled to modulate?

A. To B♭ major, or its *relative minor*, G minor.

Q. By what rule?

A. By the *second* rule. (See page 149.)

Q. But suppose that the note D occurs, and ASCENDS a *half-tone:* to what keys can you modulate?

A. To E♭, or its *relative minor*, C.

Q. By what rule?

A. By the *first* rule. (See page 147.)

Q. Suppose you had met with B♮, and that it had *ascended* a *half-tone:* to where could you have modulated?

A. To C♯ *major*, or A♮ *minor*.

Q. By what rule?

A. By the *first* rule.

Q. Suppose that you modulate by the *second* rule; what interval will the "note of modulation" be to the dominant?

A. In the *first* case, it will be a fundamental 7th; in the *latter* case, it will be a *minor* 9th*.

Q. Suppose that you modulate by the *first* rule, what interval will the "note of modulation" be to the dominant?

A. In the *first* case, it will be a *major* 3rd; in the *latter*, a *fifth*†.

* Ex. 179. † Ex. 176.

Exercises such as the preceding (by question and answer), when pursued by the student to any extent, may be made the source of real *mental enjoyment*; they will be found exceedingly useful, indeed *especially so*, when they are written in notes and carried out into actual practice.

Heretofore our attention has been directed solely to those intervals which *proceeded by half-tones only* (*ascending* or *descending*); and upon *those* progressions were established our *first* and *second* rules. *Now*, however, the attention of the student shall be directed to those intervals which *descend* by WHOLE tones; this naturally leads us to the

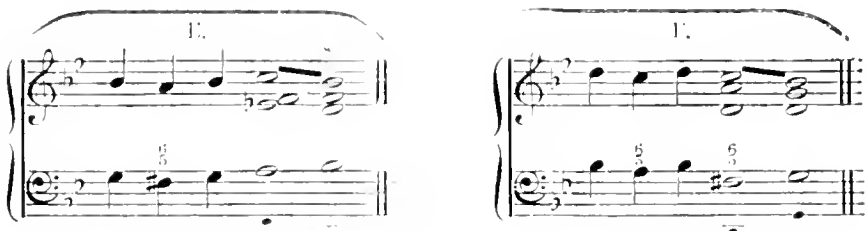
THIRD RULE

Of modulating by the intervals of a melody.

"*The 'note of modulation' which descends a* WHOLE TONE, *modulates to a key which lies a* WHOLE TONE *below the 'note of modulation.'*" E.

"*Or, to the* RELATIVE MINOR *of that key.*" F.

Ex. 181.



Modulation to B flat major. Modulation to G minor.

At E, the "note of modulation," C, *descends* a *whole tone*, and modulates from C *minor* to B♭ *major*.

At F, the *same* "note of modulation," C, *descends* also a *whole tone*, but modulates from B♭ major to G minor.

In the *first* case, the "note of modulation" is 5th to the dominant of the *new* key

In the *latter*, the "note of modulation" is a fundamental 7th to the dominant of the *new* key.

A Melody harmonized according to the Third Rule.

Ex. 182.



ANALYSIS.

The exercise in G minor continues in *that* key until the commencement of bar 3; here the "note of modulation," C, *descends* a *whole tone* to B♭, and modulates to that key.

The second part continues in the *same key* to the end of the 6th bar, where the "note of modulation" *again descends* a *whole tone*, and modulates to the original key, in which it concludes.

The following example exhibits a still *more* extended application of this rule. It will be observed that, in the *preceding* example, we modulated simply from a *minor* key to its *relative* major, and vice versa. *Here*, however, we have enlarged our operations, and, by the same rule, have modulated to others which are more distantly *related* to the original key.

* See inversion of dissonances, page 117. Ex. 140, 2.

A Melody harmonized by the same Rule.

Ex. 183



ANALYSIS.

Bar 2. The "note of modulation," D, *descends* a *whole tone,* and modulates to C minor† (relative minor to the sub-dominant of the original key).

Bar 3. The "note of modulation," A, *descends* a *whole tone,* and modulates back to the original key, G minor.

The second part, at bar 5, commences with the relative major *without modulation* (that is by progression‡); a modulation, however, to that key takes place on the second part of bar 5.

N.B. The consecutive 5ths between bars 4 and 5 are admissible, as a *new* strain commences at bar 5.

Bar 7. G, the "note of modulation," *descends* a *whole tone* to F, and modulates to D minor (relative minor to the *dominant* of the original key), to the *tonic* of which this F will be the *minor* 3rd§.

This may suffice to show, in a slight degree, what *may be* effected by the *third* rule. It is, however, only by practice, and a careful study of effects, that a thorough knowledge can be acquired of the variety which these rules afford in harmonizing.

FOURTH RULE

Of modulating by the intervals of a melody.

"*The 'note of modulation' which* ASCENDS a WHOLE TONE *modulates to a key, to the tonic of which the note, when it has thus ascended, will be a major 3rd.*"

Ex. 184.



At I, the key is G *major.* The "note of modulation," D, ascends a *whole tone* to E, and modulates to the key of C *major,* to the tonic of which E is 3rd‖.

At II, the "note of modulation," E, ascends a whole tone to F♯, and modulates to the key of D *major*¶.

At III, the key is G minor. The "note of modulation," C, ascends a *whole tone* to D, and modulates to B♭ **.

N.B. There are other keys to which this rule would *enable* us to modulate; but, as they are rather too far removed from the original†† key, they should be avoided.

The above *three* modulations, therefore, are not only the most effective in general practice, but contain sufficient *variety* for all our purposes.

N.B. The *fourth rule* admits of only *one* modulation, in which the note of modulation is 5th to the dominant.

* Let the student figure the inverted bass himself. † See page 148. ‡ See page 52.
§ See page 151, Ex. 181. ‖ This is a modulation to the subdominant of the original key.
¶ A modulation to the dominant of the original key. ** The relative major of *G minor.* †† Extraneous Keys.

A Melody harmonized according to the Fourth Rule of modulating by the Intervals of a Melody.

Ex. 185.



ANALYSIS.

Bar 2. The "note of modulation," D, *ascends* a *whole tone* to E, and modulates to the key of C major*.

Bar 3. The "note of modulation," F♯, *ascends* a *half-tone* to G, and modulates (by the *first* rule) to the *original* key.

Bar 6. The "note of modulation," E, *ascends* a *whole tone* to F♯, and modulates to the key of D *major*.

Bar 9. The "note of modulation," A, *ascends* a *whole tone* to B, and modulates to the *original* key.

Bar 13. The "note of modulation," D♯, *ascends* a *half-tone* to E, and modulates to E minor (by the first rule).

Bar 23. The "note of modulation," A, *ascends* a *whole tone*, and modulates to the *original* key†.

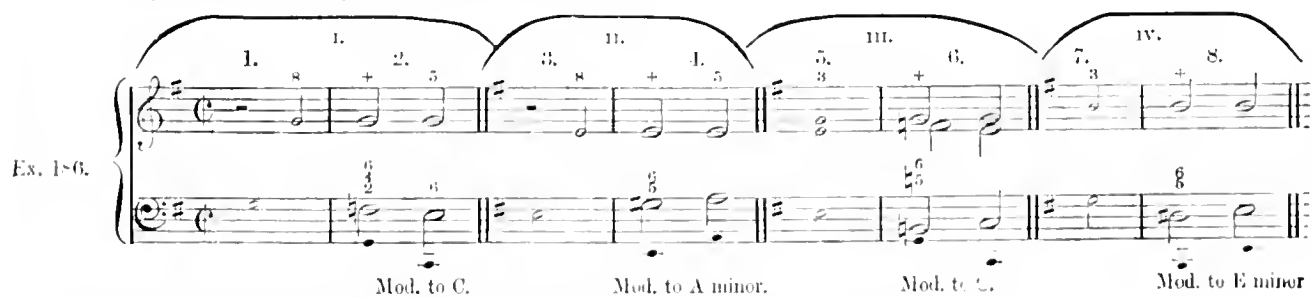
Having disposed of those notes of modulation which *ascend* and *descend* by *half* tones and *whole* tones, the student shall now be introduced to the

FIFTH RULE

Of harmonizing by the intervals of a melody.

"*When any interval is* REPEATED *in* IMMEDIATE SUCCESSION, *the interval thus* REPEATED *modulates to a key, to the tonic of which it will be a 5th.*‡"

Ex. 186.



* This is a modulation to the subdominant of the original key.

† When the fourth rule is employed, a licensed 7th becomes indispensable. (See licensed 7th, page 30.)

‡ Observe the analogy between this rule and the *third* rule of harmonizing by fundamental basses, Ex. 53.

At I, the example is in G *major*. At bar 2, the note G is *repeated*, and we modulate to C *major*, to which that G is a 5th. N.B Had the key been *minor* (for example, G minor), we should have modulated to a *minor* key (C minor).

At II, bar 4, the note E is repeated, and, as the key is *minor*, we modulate to *A minor*.

It is necessary to notice, that the above remarks refer only to such "notes of modulation" as are derived from, or *originate* in, the *octave* of the *preceding* chord.

At III, as the "note of modulation," G, bar 6, is *derived* from the *minor* 3rd of the preceding chord, we modulate to a *major* key*.

Here, however, at IV, bar 8, the "note of modulation," E, is derived from a *major* 3rd in the preceding chord; we therefore modulate to a *minor* key. Let this distinction be well kept in mind.

N.B. The "note of modulation" will be an *octave* to the *dominant* of the *new* key.

It may be observed, that the harmony, as we proceed with these rules, increases in richness, and becomes more and still more interesting. The fifth rule, especially when combined with some of the others, will be found a most powerful auxiliary in this respect.

A Melody harmonized according to the Fifth Rule of modulating by the Intervals of a Melody.



The same Melody as the preceding in Extended Harmony.



* See Ex. 72, page 57, *m*, *n*.

ANALYSIS.

Bar 1. The *last* note, B ("note of modulation"), is repeated. As this "note of modulation" is, *in the preceding* bar, *derived* from a *major 3rd*, we modulate to a *minor* key—E minor. See Ex. 186, IV.

Bar 2. B, the "note of modulation," *ascends* a *half-tone*, and modulates to C *major**.

Bar 3. C, the "note of modulation," *descends* a *half-tone*† to B, and modulates to G *major*.

Bar 4. A, the "note of modulation," *descends* a *whole tone*‡, and modulates to E minor.

Bar 5. G, the "note of modulation," *descends* a *half-tone*†, and modulates to D major.

Bar 6. F♯, the "note of modulation," *repeated*, derived from a *major 3rd*, modulates to B *minor*. See IV.

From bar 9 to 16 is in *extended harmony*, by means of which a new effect is produced, not only with reference to the harmony *collectively*, but also in the *melodious progression* of the alto and tenor, and, as these inner parts may hereafter be converted into *principal melodies* and then harmonized, it is a matter of some importance that the pupil pay particular attention to what has here been said upon this interesting subject, and reflect upon it.

Besides this, there will also be perceived a difference in the application of some of the rules: for instance—at bar 10, B, the "note of modulation," ascends a *half-tone*; but, instead of modulating to C major, as at bar 2, we have modulated to the relative minor (A minor); in which key the harmony remains until it arrives at the "note of modulation," A, bar 12. These alterations and changes in the modulation should be very carefully attended to; they *produce new melodies!*

Bar 17 commences in D *minor*.

Bar 18. D, the "note of modulation," *descends* a *whole tone*, and modulates to A minor‡.

Bar 19. The last note, A, is *repeated*, and modulates to D minor.

Bar 20. The last note, A♯, *ascends* a *half-tone*, and modulates to E minor.

Bar 21. B, the *last* note, is *repeated*, and modulates to E minor. See Ex. 186, II, and obs.

Bar 23. D, the *second* note, *ascends* a *whole tone*, and modulates to C major§.

The following example in E minor will be found a most interesting and useful study. Let it be observed, that, in harmonizing this melody, we have employed *principally* the *fifth* rule. For the *first* five bars, the melody is exceedingly monotonous (being designedly confined nearly within the compass of two intervals‖), and consequently affords a fair opportunity of *testing* the efficacy of that rule. By employing it on the present occasion, all the monotonous effect of the melody is not only removed, but such a *melodious* progression is imparted to the inner parts (especially to the *tenor*), that we have been enabled to convert that part into a *principal* melody, as exhibited in Ex. 188, II.

A Minor Melody harmonized according to the Fifth Rule.

Ex. 188.—I.



If the above and the *following* exercise be carefully examined, the difference between them will be found to be *very great indeed*; for the former is in a *minor*, from which the *present* one, which is in a *major* key, has been extracted or derived.

* First rule. † Second rule. ‡ Third rule. § Fourth rule.

‖ *Three* of these five bars contain, indeed, only one note.

The following Melody was the Tenor in the preceding Exercise.



Above all things, let it be *kept in mind* that the *above* melody *originated* in the *preceding* exercise, in which it was the *tenor; that* exercise was in the key of E *minor;* and that the *present* one is in the key of G *major*. Between them, there is little or no resemblance. The *rhythm* alone, being the same in *both*, may perhaps be said to produce *some resemblance;* but that is all!

The following example exhibits a portion of the foregoing melody, with the *rhythm* changed from common time to $\frac{3}{4}$. This rhythm also is an important study, which shall appear in a subsequent part of this work.

Part of the preceding Melody, the Rhythm being changed.



The following example, which is written for the *pianoforte*, exhibits the *fifth* rule in quite a *different character*. The effect produced by that rule in the *preceding* examples was *soft*, and, as it were, *conciliating*. Here, however, the effect is quite contrary.

Another Exercise on the same Rule†*, written for the Pianoforte.*



* See Rhythm, Periods, &c., page 259 to 274, old edit.

† The figures between parentheses show what rule has been employed.



After the minute analyses of preceding examples, it may suffice to say that the observations made already may be applied here with equal force.

SIXTH AND LAST RULE

Of modulating by the intervals of a melody.

"*When the 'note of modulation'* ASCENDS *a* PERFECT FOURTH, *or (which is the same thing)* DESCENDS *a* PERFECT FIFTH, *we may modulate to a key, to the tonic of which that note, when it has thus proceeded, will be an octave.*" G.

"*Or, to a key to which that note will be a 5th*.*" H.

Ex. 190.



At I, G, the "note of modulation," B, bar 2, *ascends a fourth*, and modulates to the key of E; to the tonic of which, *that* E is the octave. (See fundamental bass.)

The "note of modulation," A, bar 3, *ascends* a 4th to D, to the key of which it modulates†.

At II, H, the "note of modulation," B, bar 5, ascends a fourth to E, as at bar 2; but how VERY different is the modulation! For example:

At I, G, bar 2, we modulated to the key of E.

At II, H, bar 5, by the same "note of modulation" we modulate to the key of A.

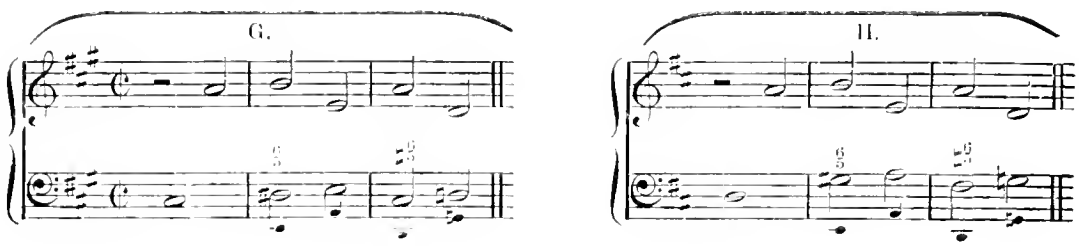
* These keys may be either major or minor.

† As this rule is also divided into two parts, we have, in order to distinguish them, employed the letters G and H for this purpose.

The great importance of this rule in harmonizing, and the vast influence which it exercises in modulation, will be better understood when practically illustrated.

N.B. When *this* rule is employed, it is good to let the inverted basses and melody proceed by contrary motion; as the "note of modulation," therefore, *ascends* in Example 190, G, we prefer the *third* inversion; and, for the same reason, when the "note of modulation" *descends*, we prefer the *first* inversion, as in the following example:—

Ex. 191.



The employment of the other inversion (the second) is not, however, to be rejected; nor should we confine ourselves to *contrary motion* only, as that would produce a monotonous effect, which should be carefully avoided.

As the *harmony* of the following melody will hereafter become the root or *parent* of many *other* melodies, the pupil is strongly recommended to examine it most carefully—*most minutely; especially* where the *difference* of effect, produced by the employment of the rule with reference to G or H, is introduced.

A Melody harmonized according to the Sixth Rule of modulating by the Intervals of a Melody.

Ex. 192.



+ Notes of modulation, according to G.

† Here, in order to obtain a flowing melody for the tenor, we have permitted the fundamental 7th to descend to the 5th, prior to its resolution.



ANALYSIS.

As the "note of modulation," B, bar 2, *ascends* a 4th, we *might* have modulated to the key of E; instead of which, we have continued in the *original key*. Why? It is not good to modulate so soon out of the original key. Compare *this* bar with bar 6, where we have modulated to the key of E.

Bar 3. The "note of modulation," A, *ascends* a 4th, and modulates to the key of D*, by the *first* part of that rule (G).

Bar 4. We have modulated back to the original key, by the *second* rule. (Page 149.)

Bar 5. Compare this bar with bars 2 and 6.

N.B. There, in order to procure a *flowing melody* in the bass, we have employed the *first* inversion, although it *does* produce *similar* motion.

Bar 6. We have, for the same reason, employed the second inversion.

This will suffice to show the most efficacious manner of *choosing inverted* basses on those occasions.

Bar 6. The "note of modulation," B, *ascends* a 4th, and modulates to the key of E, in which key the first part closes.

Bar 9. The "note of modulation," B, *ascends* a 4th to E, and modulates to the key of A (the *original* key)†. Here the *second part* of the sixth rule (II) is employed. (See Ex. 190, II.)

Bar 13. C♯, the "note of modulation," modulates to F♯ minor‡, by the fifth rule. (Page 153.)

Bar 17. F♯ descends a fifth to B, and modulates to B minor §.

Bar 18. Modulation to the key of A.

Bar 21. Modulation to E minor.

Bar 22. Modulation to D major.

Compare *these* two modulations with those at 17 and 18, and observe that, although the "notes of modulation" and the *progression* of them are the *same in both cases*, yet how very different is the result! *There*, we modulated to B *major* and then to A *major*. *Here*, we modulate to E major and then to D major. Observe also the difference of the *progression* of the *inner parts* with close attention, as well as *that* produced by the *same* "notes of modulation," bars 25, 26, 29, and 30.

N.B. From bar 25 to 32 the rule is exhibited in a minor key ||.

It is unnecessary to enter more fully into the analysis of the present Exercise, as the subject which we are now going to present to the intelligent pupil, will afford ample matter for this purpose—a subject one of the most interesting and *intellectual*, and at the same time, to the *practical* harmonist, one of the most important that can well be conceived; viz., *extracting* or *selecting* from a harmonized melody one or other of its *inner parts*, or *inverted basses*, converting it into a *principal melody*, and, having harmonized it, *extracting again* out of *that* harmony one of the inner

* Subdominant.—Let it be remembered that we are not *obliged* to modulate.
† The note D, in the inverted bass, is the dissonance of the 4th. (See dissonance, Ex. 140, bar 3.)
‡ Relative minor to the original key. § Relative minor to the subdominant of the original key.
|| Irrelative minor to the original key.

parts, and converting it also into a *principal melody**. During this process, we shall not always select the *entire* of an inner part, but *extract* such portions of each as shall, when formed into a principal melody, produce a pleasing and *melodious progression*. We have already exhibited a specimen of this sort† ; but we shall now enter more fully upon the subject.

Our first care should be to *examine the progression* of the *alto*, *tenor*, and *bass* of those examples out of which we intend to make our extracts.

The following exercise contains a melody which has been extracted from *different* parts of Example 192. To discover from which of the parts the present *new* melody has been constructed, let the student *compare bar with bar* as they are numbered ; for the numbers of both examples correspond.

A Melody extracted from the Harmony of Ex. 192, *and harmonized here in a variety of ways.*

Ex. 193.



* Hinted at in pages 147, 149. † Ex. 188, II.

‡ The notes of *embellishment* which appear in this example, called "*passing* notes," shall be explained in the next number. They do not form an essential part of the harmony.

§ The 3rd, in the alto, descends to make room for the dissonance of the 9th in the soprano. (See Ex. 120, page 105, and explanation.

‖ The 3rd of the dominant, in the *soprano*, afterwards in the alto, *descends* here by license ; the tenor, however, in the first instance where that 3rd is doubled, makes amends for this seeming impropriety by ascending.

Let the student attend to the following directions :—

1. To examine and compare the harmony of both examples, bar by bar; not *superficially*, but very *carefully*.

2. To note *particularly* the progression of each of the *three parts*, with a view to their being hereafter converted into *principal* melodies.

3. Occasionally to change *close* harmony into *extended*, and vice versa; because by this process a NEW *progression* of the inner parts will naturally follow. This is a matter of great consequence, the value of which may perhaps be properly estimated by and by.

4. To alter, sometimes, the *inverted* basses; for, by that means also, a new progression is introduced into the inner parts.

As the several parts of Ex. 192, from which the *new* melody of Ex. 193 has been extracted, are sufficiently marked, we shall only refer to such matters as may assist the student in his reflection, whilst engaged in this pursuit.

When we examine Ex. 193, the new melody, the first object that arrests our attention is the *new* combination of harmony and modulation which presents itself at every step; for instance: the note of modulation, D, in the soprano, bar 5 (original tenor), enables us to modulate to F♯ *minor*. Now, let it be observed that this is a modulation which the *original* harmony did *not* admit of. Thus not only is a new effect produced in the harmony *generally*, but also a new progression occurs in the *inner* parts, which, by a little management, may be turned to good account. In bar 6, by selecting the alto, we are enabled to introduce C♮, the minor ninth: thus producing the chord of the diminished 7th (a most effective chord), from which we were excluded in the original.

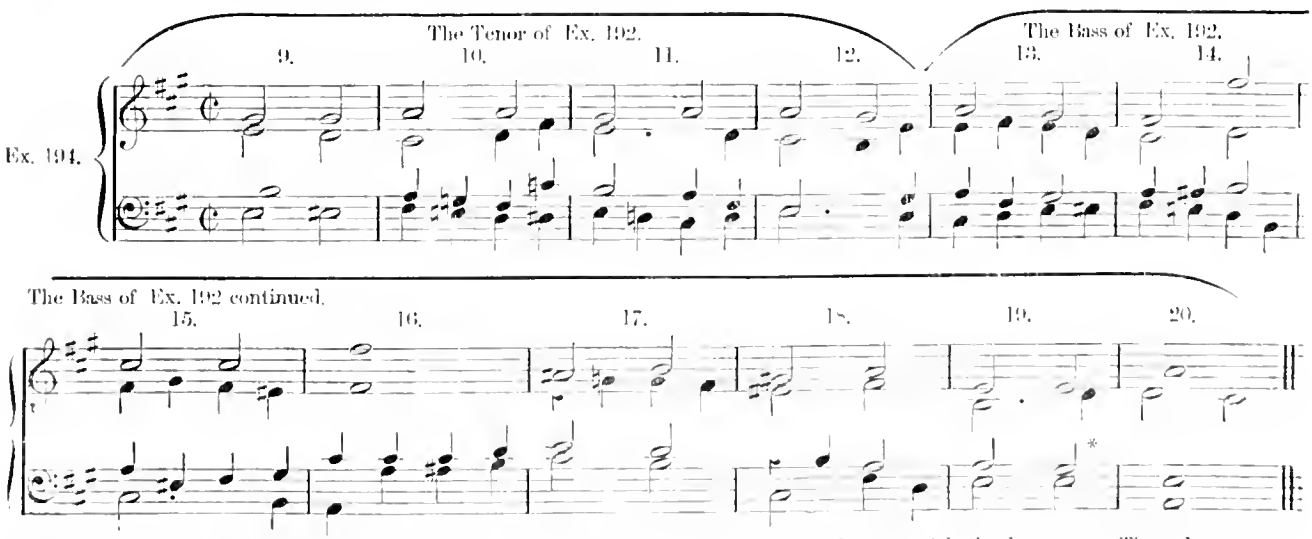
In bar 11, the note B, in the soprano (*bass* in the original), enables us to modulate to F♯ minor.

From bar 12 to 16, we have selected the *tenor*, and modulated to the key of A, bar 14; whilst, in the original, we modulate to F♯ minor.

To enter into a *particular* analysis of each bar of these two examples would be endless, and calculated rather to *retard* than *advance* the pupil in his studies. Examples are before him, the *corresponding* bars of which are all numbered, and to them a constant and careful reference is recommended. It will amply repay him!

The following is a melody extracted from the *tenor* and *bass* of Ex. 192, commencing at the 9th bar. Compare this harmony with the original.

Ex. 194.



* Here again the 3rd of the dominant chord descends on the 5th of the tonic, in order to enrich the harmony. These, however, are licenses, which must be used very sparingly.

The following melody is extracted from the alto of Ex. 192, commencing at bar **9**.

Ex. 195.



Compare the progression of the inner parts of the harmony from 13 to 16 with 17 to 20.

Heretofore we have selected our *new* melodies from Ex. 192. *That* example we will call "the *Original*," and Ex. 193 "the *Branch*." We shall now make our selections from "the Branch," and construct from it *new* melodies for harmonizing.

The following melody (ending in C♯ minor) exhibits the *tenor* of Ex. 193 (which ended in E major).

A few passing notes are introduced, to render the progression more smooth and melodious.

Ex. 196.



Here we have the bass and alto of "the Branch" as a new melody, from bar 1 to 8.

Ex. 197.



Although far from being exhausted, this portion of the subject must be concluded with the next Example. The pupil is advised to stamp these rules indelibly upon his memory by patient practice and careful study. The thinking faculties should be brought into active operation; the variety of effects should be heard, examined, and accurately compared: thus will the judgment become gradually matured, and produce the accomplished harmonist.

Be not too anxious to proceed; reperuse and reflect; follow the advice of the sage Lord Bacon: "Make haste slowly."

* The fundamental 7th in the tenor is omitted, in order to enrich the succeeding tonic chord with the 5th.

N.B. This present Part is eminently worthy of peculiar attention; it brings to light a vast mine of musical wealth, opening up inexhaustible stores of melody and harmony, otherwise perhaps for ever lost; and it may be pardoned were we to go so far as to say that it is sufficient of itself to furnish a fund of elegant ideas, even to the student who has none.

A part of Ex. 192, harmonized in the *relative minor*. (See page 158.)



N.B. The next Number will comprise the subject of *Passing* Notes, *Auxiliary* Notes, and *Secondary Harmony.*

NOTES OF EMBELLISHMENT,

PASSING AND AUXILIARY NOTES.

PREPARATORY to entering upon this important branch of harmony, it is necessary to explain what is understood by the

Three Motions in Harmony.

When *two* or *more* parts proceed together, *ascending* or *descending*, they are said to proceed by *similar* motion, as at *(a)* in the following example.

When *one* part *ascends* or *descends* whilst another remains in its place, an *oblique* motion is produced, as at *(b)*.

When *one* part ascends while another *descends*, they proceed by *contrary* motion, as at *(c)*.

Ex. 199.



These different motions or progressions may be more or less *combined*. *Two* parts may proceed by *similar* or *contrary* motion, and a *third* part remain in its place, as at *(d)*, producing *collectively* the *similar* and *oblique*; at *(e)*, *contrary* and *oblique*; at *(f)*, *similar* and *contrary*: at *(g)*, *similar*, *oblique*, and *contrary*: at *(h)*, all are combined in the resolution of the chord of the fundamental 7th.

N.B. *Similar* motion is permitted only when the parts proceed by *thirds* or *sixths*: with the latter, the *fourth* may be combined, as at *(a)*.

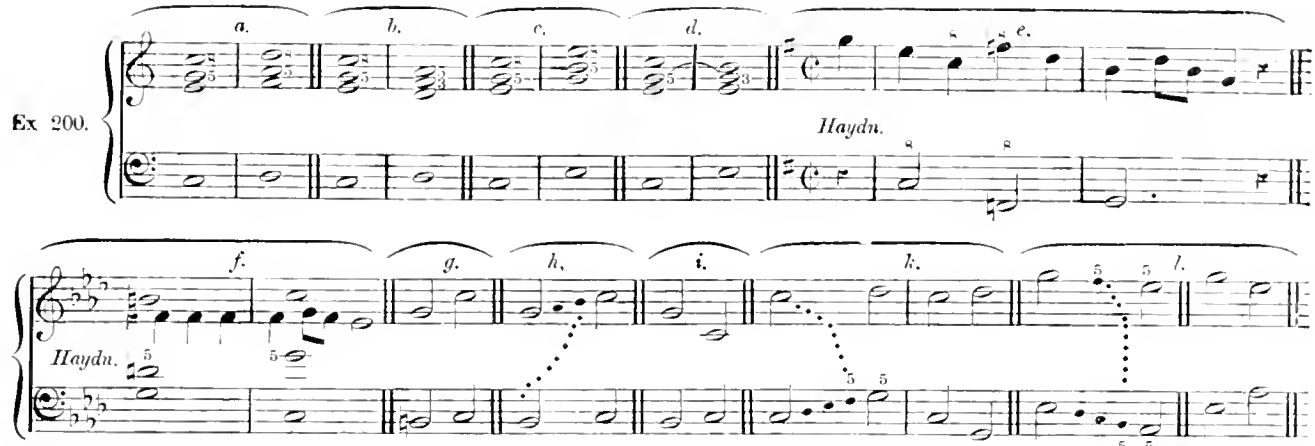
Consecutive Fifths and Eighths.

It has already been shown elsewhere* how these forbidden progressions may in some measure be avoided. Now, however, it becomes necessary to dilate somewhat more on this subject, as frequent references will be made to it hereafter.

One general rule will suffice to show how these disallowed progressions may be avoided; viz.: By the employment of *contrary* or *oblique* motion.

* See pages 20, 21; also page 28.

Ex 200.



At *(a)*, consecutive 5ths and 8ths: at *(b)*, *prevented* by *contrary* motion; at *(c)*, consecutive 5ths and 8ths; at *(d)*, the 8th prevented by *contrary*, and the 5th by *oblique* motion.

Consecutive 5ths and 8ths are permitted when the parts proceed by *contrary* motion.

At *(e)*, 8th between *treble* and *bass*. At *(f)*, 5th between *tenor* and *bass*. Extracted from Haydn's Quartets.

Hidden Fifths and Eighths.

Although these progressions are very little regarded by modern composers, yet it may be necessary to mention that when two parts proceed together by *similar* motion, and terminate their progression by 8ths, they are said to produce HIDDEN consecutive 8ths, as at *(g)*; for if the *space* between these two intervals were filled up, as at *(h)*, *consecutive* 8ths would be the consequence; but where these notes are *not* introduced, such consecutives are purely *imaginary*. However, they may be prevented by *contrary* motion, as at *(i)*. The same observations apply to hidden 5ths (see *k*, *l*). Hidden 5ths and 8ths are generally allowable; and it will be found that the works of the most *classical* authors abound with them.

Notes of Embellishment.*

It will be observed that the harmony which has hitherto engaged our attention consists solely of *concords*, *chords* of the *fundamental* 7th, *minor* 9th, and their different inversions†, founded on a progression of fundamental basses. To this *fact* we would now most *particularly* direct the attention of the pupil; because we are about to *introduce* notes or sounds into that harmony which DO NOT *form an essential part of it*. These *notes of embellishment* are employed for various purposes; one of which is, that we may obtain a more *flowing* and *melodious* progression than that which is produced by the more simple *intervals* of a melody or harmony, which we call *essential notes*, in contradistinction to those called notes of embellishment.

Ex. 201.



At I (*a*), the intervals of the melody (the *essential* notes) proceed by *thirds*. The *spaces* between these *thirds* we may fill up, as represented by dots (at *b*), and as they are usually written (at *c*). Similarly at II the spaces between the essential notes may be filled.

* These notes have been slightly noticed before. See p. 70. † Dissonances must for the present be kept out of view.

When notes are thus introduced between *essentials*, they are called

Simple Passing Notes;

because they pass *directly between* one *essential* note of the harmony and another*.

These passing notes may be written either *before* or *after* the *essential* notes.

When they are introduced *immediately* AFTER the *essential* notes (as at *c*), they are called "UNACCENTED."

When they are introduced BEFORE the *essential* notes, they are called "ACCENTED *passing notes.*"

In the preceding example, 201, II, *d*, all the passing notes (except the F) are *accented.*

The *accented* passing note occupies the *first* portion of the *time* belonging to the *essential* note.

The *unaccented* occupies the *second* portion (as marked + at *c*).

The following example exhibits a practical illustration of this subject :—

Ex. 202.



At I, is a *simple* melody, the intervals of which proceed chiefly by *thirds*†; at II, this melody is embellished with *unaccented* passing notes; and at III, they are introduced in the *bass;* by which a sort of *conversation* is carried on between the bass and soprano, called "*Imitation*‡." At IV, appears the simple bass (that is, without any embellishment). This bass is *figured,* showing that the essential notes *only* should be figured, and *no other*§.

It is evident that, through the agency of these *passing* notes, the melodious progression of the *soprano* and *bass* is much improved. Let us now try whether we cannot introduce them also into the *other* parts. We will take, for instance, the melody at I, in the preceding example, and harmonize it in four parts.

Ex. 203.



Here we find that the *peculiar* character of the passage‖ in the *soprano*, at bar 1, is imitated by the *alto* at bar 2, and by the *tenor* at bar 3, proceeding, in the latter case, by 3rds¶. (This is a progression of *compound passing notes* in *similar* motion**.) At bar 4, the bass commences a *new* passage, in conjunction with the *tenor,* ascending by 3rds in similar motion, which, at bar 5, is imitated by the *soprano,* in *contrary* motion††.

Supposing the *alto,* bar 4, to *originate* the passage of imitation,—in that case, the soprano imitates it at bar 5.

At bar 4, it will be observed that, while the *bass* and *tenor* ascend together by 3rds, in *similar* motion, the *soprano* and *alto descend* together by *sixths.* Thus we see that, whilst *two* of the four parts proceed together by *similar* motion, they *collectively* proceed by *contrary* motion‡‡. Compound progressions like this should be carefully noticed; they abound in the compositions of good masters§§.—N.B. Bars 3 and 4, consecutive 5ths between alto and bass, in contrary motion‖‖.

* These (and *none else*) are the *real,* the *legitimate* passing notes. The reason for this observation will be seen presently.
† A progression *peculiarly* suited to the introduction of simple passing notes. ‡ Of this, more hereafter.
§ Many errors are committed in figuring the inverted bass, by not attending carefully to this point.
‖ Sometimes called "*subject.*" ¶ They are *tenths;* but in simple counterpoint they are considered as 3rds only.
** See Ex. 199, *a.* †† See Ex. 199, *c.* ‡‡ See Ex. 199, *f.* §§ See note, page 168. ‖‖ See Ex. 200, *f.*

As passing notes DO NOT form any part of the *essential* harmony, they must be considered more or less as dissonances. *Unaccented* passing notes, being *less dissonant* than the *accented*, may be considered as nearer allied to *consonances;* whilst the *accented*, being struck with the chord, and consequently more discordant in their effect, may be considered as nearer allied to the *real* dissonances* ; as the following example will illustrate:—

Ex. 204.



At I, is a *simple* melody with its bass, both proceeding by thirds in contrary motion. At II, are exhibited *unaccented* passing notes. At III, *accented* passing notes. Here we perceive that the note D, being struck *with* the inverted bass, G, produces an effect similar to the dissonance of the 9th when it resolves into the 8th; and the note E, when struck with the inverted bass, F, produces that of the dissonance of the 6th resolving into the 5th†. They might, therefore, be easily mistaken for *un*prepared dissonances, unless the principle on which these passing notes are established be well understood.

When the *essential* notes of a melody proceed by *seconds*, and these seconds are *whole* tone then the *passing* note will be a *minor* semitone.

Ex. 205.



At I, the melody (a portion of the diatonic scale) proceeds by whole tones.

At II, C♯ and D♯ form the passing notes.

Passing notes of this description (which should be of short duration) may be very effectively employed as notes of modulation.

Passing Notes by Half-Tones converted into Notes of Modulation‡.

Ex. 206.



That *converting* passing notes thus into notes of *modulation* is a subject of great importance will be evident if we compare the harmony of the above example with the one immediately preceding. Let the pupil give this matter his serious consideration.

* See chord of the fundamental 7th compared with dissonances, page 106

† See dissonances, Ex. 113, II.

‡ See modulations by the intervals of a melody, page 148, Ex. 176.

The following example affords instances of the effective introduction of all these passing notes:



At I, is a simple melody.

At II, *un*accented passing notes.

At III, *accented* passing notes.

At IV, they are treated as *notes* of *modulation*.

We shall here give a specimen of a harmonized melody embellished with passing Notes; and let the pupil particularly notice the effect produced by the passing note, B♮, combined with the fundamental 7th, at bars 1 and 2, as also bars 5 and 6.



Bar 5. Observe the imitation between the *soprano* and *alto*, produced by passing notes of half a tone.

Bar 9. See also these *passing* notes converted into notes of *modulation*.

It is presumed that sufficient has been said to show the nature, character, and mode of treatment of simple passing notes. But should the pupil repeat the question, "*What are passing notes?*" They are notes *which pass immediately and directly between the intervals of a melody*. This must be kept

* This passing note will be more fully explained when we treat of *Ascending Dissonances*, Part IX.

in mind, at the *present* moment, most carefully; because we shall now introduce notes of embellishment which DO NOT *pass between the intervals of a melody*, and which, consequently, are NOT PASSING notes, though bearing a strong resemblance to them; they are employed as *substitutes*, when passing notes *cannot* be introduced. For this reason, we shall call them

Auxiliary Notes.

When these *auxiliary* notes are skilfully and judiciously interwoven with *passing* notes, they form the *groups* of notes usually called "*passages*" which, from their *peculiar form* and character, become so impressed upon the mind, that, when they reappear in some *other* parts of the harmony, they are immediately recognized. When a *passage*, thus remarkable, is heard in *one* part of the harmony, and *repeated* in *another*, it is called *Imitation**.

It will be observed, although *simple passing* notes thus give to the melody a more *graceful* and *flowing* progression, and a decided and marked character, that, nevertheless, without the aid of auxiliary notes, we should still fall very short of effecting our purpose: namely, of constructing the best passages for imitation. In order, therefore, that we may form a correct idea of the nature and usefulness of *these* notes of embellishment, let us suppose a note repeated, as at I in the following example:—

Ex. 209.



N.B. These notes are introduced in an exercise on modulation and progression, page 70.

In this repetition of the same sound there is nothing to excite attention or interest; all is monotony! but let them be written as at II, and immediately a degree of animation is imparted to them. A passage appears exceedingly simple, it is true: but as the *peculiar* form of it may easily be recognized, it is fit for *imitation*. This has been effected by the *auxiliary* note, F♯; and as this note is written BELOW the essential note, we shall call it an

Auxiliary Note from BELOW

When written *above* the *essential* note (as at 2), it will then be an

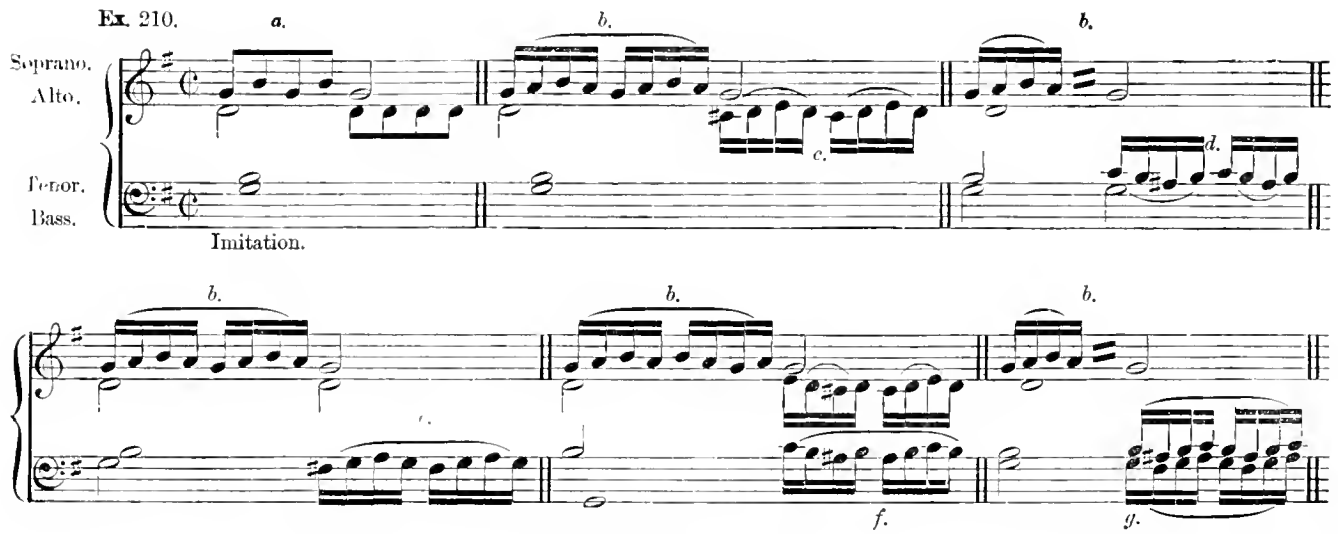
Auxiliary Note from ABOVE.

N.B. An auxiliary note from *below* ought to be written a half-tone below the essential note; when from *above*, it may be written a *whole* or *half* tone, just as the key in which it appears may require.

The following example of *imitation* is founded on a *single chord*. The *subject* (or passage for imitation) is formed out of *two* intervals of that chord; and as these proceed by 3rds, simple passing notes may be introduced: out of these two notes the *passage* at (*b*) is constructed. This passage we desire to imitate in the alto; but, as *that* part consists of ONE *note only*, how shall we effect our purpose? By having recourse to *auxiliary* notes. Thus, the passage at (*b*) is imitated by the alto at (*c*); by the tenor at (*d*); by the bass at (*e*); by the alto and tenor at (*f*); and by the tenor and bass at (*g*). At *d*, *f*, and *g*, the imitation is by *contrary* motion.

* Some of the greatest beauties and most thrilling effects in composition are produced by imitation. This is a branch of the art which young composers should endeavour to attain as soon as possible; it is particulary important to those who study fugues and canons.

† See Examples 202 to 208.



N.B. Let the pupil look well to the various examples here given. Precept may do much; but one *short example* will effect more than pages of verbal explanation.

The subject of the following example is the ascending diatonic scale in four parts. *One* interval only of the chord being selected to form the passage for imitation.

Passages constructed on Auxiliary Notes.



It will be observed that the embellishments in the above example proceed by 3rds; they may proceed by 6ths also, as here exhibited:—





At bar 1, between the soprano and alto.
2, 3, between the alto and tenor.
4, between the bass and soprano, &c.

All our notes of embellishment have heretofore progressed either by *diatonic* or chromatic intervals; they shall now be exhibited in another point of view. The following melody at I, bar 1, *ascends* a 5th. *Instead* of introducing between these intervals *simple passing* notes, we shall proceed from the *first* note, C, at once to **F**, as at II, bar 1. These notes, because they *pass* directly between the intervals C and G, are

Extended Passing Notes.

Ex. 212. Simple Melody.



All the notes marked (*a*) are extended PASSING notes.
(*d*) are simple passing notes.

In the above example, at bar 1, we see that, through the *extended* passing notes, a new *feature* or *character* is imparted to the simple melody; this character we desire to carry through the *whole exercise;* but, as the melody, at bar 2, *descends* from G to E, it is clear that no extended *passing* note can find a place *there;* an *auxiliary* note must therefore supply the deficiency: these we shall call

Extended AUXILIARY *Notes from* BELOW;

because they do not *pass* to, but *fall* a semitone below the essential note.

At II, D♯, in bar 1, and B♮, in bar 2, as well as all those marked *(b)*, are specimens of the same.

At III, are introduced extended auxiliary notes from *above;* because they ascend above the *essential* note, and then *descend* upon it *(c)*.

N.B. Carefully examine the notes of embellishment, at II, III, with the simple melody at I, and compare the *different* effects which they are calculated to produce; for let it be remembered, *that it is only by hearing and remarking the variety of effect of these, as well as of all the other notes of embellishment, that a just estimate can be formed of their importance.* These and the like observations cannot be too often impressed upon the pupil's mind.

The almost infinite variety of modes in which these notes of embellishment may be employed, renders it nearly impossible to establish *fixed* and *infallible* rules for their introduction in every case that may present itself.

The following example, founded on a simple subject, or melody, with its accompanying harmony, exhibits at one view how *all* the preceding notes of embellishment may be introduced effectively :—

Ex. 213.



Hitherto our notes of embellishment have appeared in the *soprano* and *inner parts* only; in the following example they are introduced into the *bass*.

Diatonic Scale descending.

Ex. 214.





The two basses, I, II, although founded upon the *same* fundamental harmony, yet differ widely with regard to their character, occasioned by the employment of different notes of embellishment. The effect produced at I, arises out of *simple passing* and *auxiliary* notes: at II, from *extended passing* and *extended auxiliary* notes. And here let it be carefully noticed that, in order to introduce our embellishments at II, we must suppose *that bass* to have been originally written as at III, where the *essential notes* of the chord, being introduced in succession, form not only a melody, *characteristic* of the *bass*, which (as the intervals proceed at great distances) is peculiarly fitted for the introduction of *extended notes* of embellishment.

When the intervals of a chord are introduced, as at III in the preceding example, a species of melody arises, the *intervals* of which may be considered as producing a *two-fold* effect; that is, as a secondary *melody*, and as a *secondary harmony*: by the employment of which, a harmony of *four parts* may be made to produce the effect of *five* or even *more* parts. This will be better understood by an example.

Ex. 215. I.



At (*a*), the harmony first appears as usual in *four* parts.

Bar 1. The *soprano* ascends to G, and doubles the alto in the octave: that is, the interval representing the part of the alto is made to appear twice in the same chord. This observation may apply to all the others.

Bar 2. The *soprano* ascends to F, and *doubles* the *inverted bass*: and thus the harmony in those two bars assumes the nature and character of *five* parts.

At bars 3, 4, *six parts.*

At 5 and 6 is exhibited the *real* harmony of that which has been *assumed*, the latter of which we shall call

Secondary Harmony;

and, although this "*secondary* harmony" is not *all* heard at *one* and the *same* time, as at 5, 6,—nevertheless, it will be found to produce *such* an impression upon the ear, as strongly to resemble it

Ex. 215. II.



At bars 7, 8, the *secondary* harmony appears in the *alto*: it is in 6 parts.
At —— 9, 10, —— in the *tenor*, ditto.
At —— 11, 12, —— in the *alto* and *bass*, in 7 parts.
At —— 13, 14, —— in the *soprano* and *bass*, ditto.

This will suffice to show the principle on which this *secondary harmony* is established.

It may be observed that this *secondary harmony*, arising from the peculiar progression of its intervals, is particularly suited for the employment of *extended* notes of embellishment. These we shall now introduce, and exhibit in a variety of forms.

Let us make one observation before we proceed. As *impurity* of harmony must at all times be carefully guarded against, and as the introduction of secondary harmony may easily lead into error in this respect, care must be taken that *the note which is employed as secondary harmony returns first to the original note of the chord* from which it started, *before it proceeds to a note of another chord.*

The subject which we have chosen for a practical illustration of "secondary harmony" and "extended notes of embellishment," is the ascending diatonic scale of C minor, written in the bass, and harmonized.

Ex. 216.



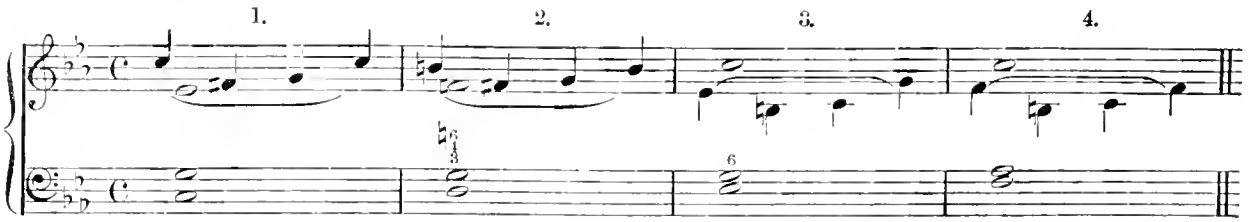
At bars 1, 2, the secondary harmony appears in the soprano.
At —— 3, 4, in the tenor, imitating the soprano by contrary motion.
At —— 5, 6, 7, in the alto, imitating the tenor, by similar motion.

Let not the pupil pass unnoticed these *imitations*, which have been effected through the instrumentality of *secondary harmony.*

N. B. The *first* portion of each bar contains the *real* harmony.

It will be perceived that the introduction of *secondary* harmony, in the preceding example, has paved the way for the employment of *extended auxiliary notes* from *below;* and thus a *new* and altogether different effect is produced, and passages formed for imitation.

Ex. 217.



If we minutely examine the above exercise, and compare it with the *preceding*, we shall find that it was through the *introduction of extended auxiliary notes from below* that the soprano received the still *more marked* and *distinct* character which is exhibited at bars 1, 2, and subsequently *imitated* at bars 3, 4, by the alto. It will be perceived that the secondary harmony, bar 1, *descends* from C to G, and our notes of embellishment are introduced accordingly; that is, extended *auxiliary* notes from below.

In the *following* example (observe) the notes of secondary harmony *ascend*, and thus we are enabled to employ *extended passing* notes; by which *again* a *new effect* is produced, and a passage formed in the soprano which is subsequently imitated by all the other parts.

Compare and examine very carefully the following example with the one above:—

Ex. 218.



* The inverted basses of the above examples are figured, to show that the essential notes only require to be thus treated.

In the following Example, "*secondary* harmony" is introduced into the *bass*, intermixed with various *extended passing* and *auxiliary* notes.

The pupil is here presented with two specimens of basses arising out of secondary harmony: let him examine both carefully.

Ex. 219.



The bass, at *(a)*, produced through *secondary harmony*, may be viewed as the outline or sketch of the following more *finished* example, in which it is again introduced, *embellished* with *simple* and *auxiliary* notes :—

Ex. 220.



Observe, the diatonic scale continues *in the bass* until the end of the third bar, when the alto takes up the subject, and continues it to the end with the same notes of embellishment as before.

Examples might be multiplied, and pages of explanation written to illustrate this interesting subject; what has been said, however, may suffice to show, in some measure, the importance of these notes of embellishment, —secondary harmony,— their practical use,— and the variety of effect which they are calculated to produce; reflection and study must complete the rest.

We shall now show how *dissonances* also may be mixed up and *amalgamated* with these matters, so as to produce new and still more striking effects.

We know that, according to the *principles* of "*secondary* harmony," we are permitted to write the tenor and soprano as at I, in the following example. *Therefore, on the* SAME *principle we may resolve* the *dissonances* of the 4th and 9th, as at II.

Ex. 221.



By keeping in view the above principle (upon which the two *following* examples are constructed), no difficulty can possibly arise in fully comprehending them.

First of all—let the pupil carefully examine the progression of the fundamental basses, which are added and *figured*; for upon this the whole superstructure rests.

Secondly—let him understand that when the *resolution* of a *dissonance* is *delayed*, it is occasioned either by a note of *secondary* harmony or by an *auxiliary* note; and that the *first* is an *essential* note, and the latter is *not*.

Ex. 222.



Let us first examine the progression of the fundamental basses.

The bass, from bar 1 to 6 inclusive, continually *ascends a fifth*; therefore, it admits the introduction of the dissonance of the 4th, prepared by the 8th.* The bass, from bar 6 to 10, ascends a 4th; therefore, it admits the dissonance of the 9th, prepared by the 5th, combined with the dissonance of the 4th, prepared by the fundamental 7th.†

Bar 1. The dissonance of the 4th is prepared in the alto by the 8th.

Bar 2. This dissonance, instead of *directly* resolving into a 3rd (as it ought), *first* ascends by a note of *secondary harmony* to D, and *resolves* as usual. This process produces a little *subject* or *passage*, which, at bar 3, is *imitated* by the *soprano*, and at bar 4 by the *tenor*.

Bar 5. *This* dissonance (the 4th) appears again in the *alto*: but, instead of pursuing the same process as at bar 2, an *auxiliary* note from *below* (F♯) is introduced, by which the *resolution* of the dissonance is *delayed* (similar to bar 2), and a *new* subject or passage formed, which, at bar 6, is *imitated* by the *soprano*.

Let it here be kept in mind, that all our *imitations*, up to the present, arose out of the dissonance of the 4th only; because the *progression* of the fundamental basses was by *ascending fifths*. Now, however, that progression is *changed*: the fundamental bass *ascends* by *fourths*, and the dissonance of the 9th is introduced.

* See Dissonances, page 102. Examples 116, 117, 118. † See Dissonances, page 104—107, Examples 119, 122, 123.

Bar 7. The 9th (F♯) is prepared, in the *preceding* bar, by the *soprano;* but, instead of resolving *direct* into the *octave*, E, it *first* descends to B (a note of secondary harmony), and *afterwards* resolves into the octave as usual.

Bar 8. The *same* dissonance is again introduced: but here it *ascends*, first to F, a note of *secondary* harmony, and then *resolves*.

Bars 10 and 12. The dissonance of the *fourth* (prepared by the fundamental 7th), before its resolution, descends first to an *auxiliary* note from *below*, and then resolves.

We give the following example (which is introduced precisely upon the same principle and upon the same *fundamental* harmonies as the preceding) as a further illustration of what may be effected by a "regular dissonance," "secondary harmony," and various notes of embellishment.

N. B. The present example commences and ends in a *major* key; the one *preceding* commences and ends in a *minor* key. Let the pupil practise well the difference of effect.

Ex. 223.



It may be noticed that, in the former example (222), from bar 1 to 6, the dissonance of the *fourth* only is introduced. Here, however, we have introduced the dissonance of the 6th in *conjunction* with the *fourth*.

Bar 2. The 6th appears in the tenor (prepared in the preceding bar by the 3rd).

Bar 3. This dissonance appears in the *alto*, combined with the *soprano;* bar 4, in the *soprano*, combined with the *tenor;* and bar 5, combined with the *alto* and *tenor*.

Bar 3. The *bass* proceeds by *auxiliary* notes, and *secondary harmony*, imitated by the soprano at bar 4.

Bar 5. The *bass* proceeds by *simple passing* notes, *accompanied by the alto*.

Bar 6. The *bass* is accompanied by the soprano.

To extend our analysis is needless. Let the pupil (if anxious to make himself acquainted with this interesting and important subject) examine and analyse for himself, *comparing example* with *example*—BAR by BAR. If he do so, he will be amply recompensed for his labour.

In order to render this subject still more interesting and practical, we will take a simple melody, harmonize it, and then arrange it for the pianoforte, introducing these notes of embellishment, with the usual marks of expression, to give it all the character of a finished composition.

It is necessary to observe that, when writing for the *pianoforte*, we are frequently obliged, in order to produce effects *peculiar* to that instrument, to *double* notes of the harmony; in which case, the rule respecting consecutive *octaves* is dispensed with; but they are not permitted to occur between the extreme parts; that is, between the *lowest* note of the bass and the highest note in the treble. The rule relating to consecutive 5ths remains in full force, and must be strictly observed.

Ex. 224.



Out of the harmony of the preceding example we give a specimen, in which the simple melody is *preserved*, and a variation extracted from the alto and tenor, with secondary harmony in the bass.

Ex. 225.



* Chord of the *eleventh*— to be explained hereafter.



The following specimen exhibits extended auxiliary notes chiefly in the bass :—

Ex. 226.





The variations shown in the above specimens are extracted from the bass and inner parts of the harmony ; and the *melody itself* is never absent, but, on the contrary, sustains a very prominent part.

Variations, however, are often composed on the harmony alone with which a melody is accompanied, the melody *itself* being *absent* (though still in existence). In this case, it is necessary that the *same harmony*, the *same modulation*, and even the *same inverted* basses, with which the melody was *originally* accompanied, should be retained ; no matter under what *form* the passages may appear.

These observations have reference only to variations constructed on a simple melody. In a word—a variation written according to this rule will always permit the original melody to be played with it, without either injury to the purity of the harmony, or interference with the passages of which the variation is composed.

The following variation, composed on this principle, needs no further comment :—

Ex. 227.





We shall conclude this interesting subject with the following example, which, in its concise and compressed form may be viewed as a *summary* or *recapitulation* of what has been stated in the preceding pages. This exercise is calculated to impress upon the mind of the pupil still more forcibly the vast *importance* of these notes of *embellishment*, as well as the extent to which, by judicious treatment, they may be introduced amongst the intervals of melodies, and the influence they exercise in a composition.

The melody at I, in the following example, consists of *three notes only*—E, C, B, accompanied by the harmony of the tonic and dominant and their inversions. At III is the cadence, which concludes the whole. It will be perceived, that as the four parts at II may, through the instrumentality of *extended harmony*, interchange places among themselves, a door is opened for the introduction of notes of embellishment, producing imitations in all these parts. It is needless to say more on this subject; *the example is before the pupil, let him study it with care and attention*—IT IS ONE OF IMPORTANCE.

We shall suppose the example to be written for the first and second violins, tenor, and bass.

Ex. 228




Cad.
2.
Cad.
3.
Cad.
4.
5.
Cad.
6.
Cad.
7.
Cad.
tr
8.
Cadence.
9.



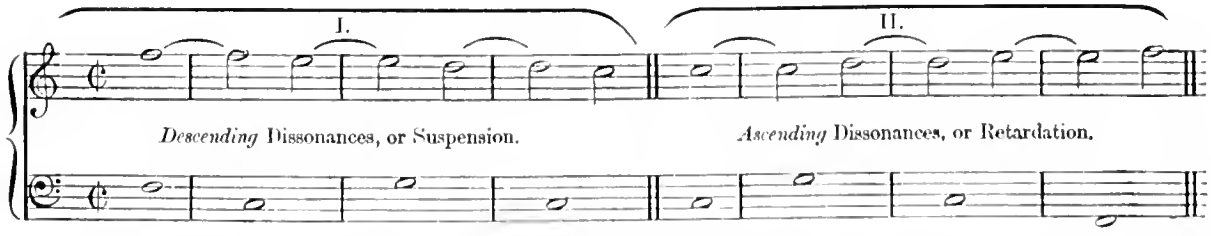
We shall only further remark, that if the pupil has carefully studied the present subject, he cannot help being struck with the *endless* variety which these notes of embellishment are calculated to produce. The best advice that can be given, is to examine the works of the most *classical composers*, and observe how they have treated the same subject on different occasions. In writing the *exercises*, let the harmony be written in four parts before a single note of embellishment is introduced, which will prevent many errors.

RETARDATION,

OR

ASCENDING DISSONANCES.

Ex. 229.



It has been shown*, that when an interval of a chord in a gradually *descending* melody is kept back in its progression, it produces a *Dissonance*, called a dissonance by *Suspension*.

However, a melody may ascend as well as descend; and when an interval of a chord in a *gradually ascending* melody is arrested in its course, it also produces a Dissonance; but this we call an ascending Dissonance, or RETARDATION.

* Example 112.

Here, then, we have two species of Dissonances : *Suspensions* and *Retardations*, widely differing from each other as regards their construction and effect.

I.	II.
In a *descending* melody the 4th *suspends* the 3rd.	In an *ascending* melody the 2nd *retards* the 3rd.
——— 6th ——— 5th.	——— 4th ——— 5th.
——— 9th ——— 8th.	——— 7th ——— 8th.

We know that when the *dominant* chord proceeds to the *tonic*, the 3rd ascends directly to the octave of that tonic ; as at I in the following Ex.* :—

Ex. 230.



But suppose B, the 3rd of the dominant chord, instead of proceeding direct to the octave (as at I), to be continued upon the following tonic (as at II) it becomes an *ascending* dissonance ; (the 7th), which must afterwards *ascend* or resolve into the octave of the tonic. At III, the remaining notes of the tonic chord are added, and thus form a chord (usually called the *chord* of the *sharp seventh*).

Ex. 230.



If, in this ascending progression, the 5th of the dominant (D), instead of ascending to the 3rd of the tonic (as at IV), be continued (as at V), it produces the *ascending* dissonance of the 2nd resolving into the 3rd. If this dissonance of the 2nd (at V) be combined with the 7th (as at VI), it produces the chord of the $\frac{7}{2}$.

It will be observed that the same note (D), which in an *ascending* melody (as at V) is a *retardation*, may in a descending melody (IX) become a dissonance by *suspension*. To ascertain to which species it belongs, it is only necessary to examine its *progression ;* if it ascends (as at V), it is a retardation (2nd into the 3rd) ; if it *descends* (as at IX), it is a suspension (9th into the 8th).

Having fully explained the nature of *suspension* and *retardation*, we proceed to the dissonance of the 4th into the 5th, which is not quite so satisfactory, in its effect, as the two preceding ones, occasioned by an ambiguity as to its final resolution : it is impossible to decide whether it is a dissonance by suspension or retardation until the resolution has taken place (as at X) ; the 4th appears in the soprano, which (as a suspension) we know cannot be admitted, because the 3rd of the chord is in the tenor ; and, as a *retardation*, the matter is exceedingly doubtful ; therefore, in

* The above may be considered as an epitome of all *Artificial Dissonances—artificial*, because they are *not* found in *nature*, as is the fundamental 7th. Re-peruse what has been said, page 106.

order to prevent this ambiguity in the resolution of the chord, the dissonance (the 4th) is frequently raised a minor half-tone, as at I in the following example :—

Ex. 231.



by which its *ascending* resolution is anticipated, and all doubts respecting its identity removed.

In like manner, the retardation of the 2nd may be raised a semitone, and thus a similar ambiguity as respects the nature of that dissonance is avoided; for when the 2nd is raised a half-tone (as at II), it is impossible to mistake it for a dissonance of the 9th.

A very important rule, with reference to the employment of dissonances and preservation of the purity of the harmony, should, on the present occasion, be recalled to mind; viz., "that a *dissonance* and the *note which that dissonance suspends, must* not be heard at *one* and the *same time*, a *dissonance* is the temporary *representation* of the consonance into which it subsequently resolves*.

Ex. 232.



In bar 2, the C sharp retards D, the 5th to the soprano: therefore the D in the tenor cannot be admitted. The same error occurs also in bar 3, where the D sharp (the 2nd) retards E (the 3rd) in the soprano.

Q. Can the 3rd E in the tenor be admitted?—Why?

Both these errors are avoided at bars 4 and 5.

The following example exhibits a practical illustration of *ascending* dissonances intermixed with *passing* and *auxiliary* notes†:—

233.



* See note, bottom of page 105.

† Re-peruse what has been said on passing notes by half-tones, Ex. 205.

The subject is the ascending Diatonic Scale, supposed to be written for two violins and a bass: it commences with the first violin, and is continued for three bars, when it is taken up by the second violin, imitating the first a fifth below. The bass in the meanwhile performs a melody of its *own.* It is unnecessary to enter into an analysis of the ascending dissonances; the example is purely practical, and speaks for itself.

We shall, in preference, give the same example in *four parts,* viz., for two violins, tenor, and bass. Here, more care is required to avoid ambiguities than was necessary in Ex. 233.

Ex. 234.



The student will examine carefully and perform the two examples, comparing one with the other, and particularly noticing the variety of the imitations.

In the latter example it will be perceived that the scale commences with the 1*st violin,* but is continued in that part for only *three bars;* after which it is taken up by the second violin for the following three bars, by which an imitation between these two parts is effected.

It has been fully shown that all dissonances, whether by *suspension* or *retardation,* have been produced by one simple circumstance, viz., by arresting the *natural* progress of the intervals of a melody whilst *ascending* or *descending.* These dissonances therefore are in fact *artificial;* they do not exist in nature; but why are they introduced? They are introduced to heighten the effect of the returning consonances, and thus produce in a greater or less degree that light and shade in a composition which is so striking in the works of great masters. A careful study of this branch of harmony is strongly recommended; indeed, the importance of it must, ere this, have been evident to every intellectual student.

When we treated on the chord of the minor 9th*, it became necessary to draw particular attention to two intervals of the chord of the fundamental 7th, viz., the 3rd and 7th; the former *ascending* a half-tone, the latter *descending* a half-tone †; by these two intervals ascending and descending by half-tones, the whole machinery of harmony is guided.

In order to impress this strongly on the mind, we shall repeat here a portion of Ex. 154, the whole of which, however, the pupil is strongly urged again to peruse.

Ex. 235.



* See preceding. † See Example 154.



a. Exhibits the essential notes of the chord of the fundamental 7th.
b. The ascending dissonance of the 7th. (Retardation.)
c. The descending dissonance of the 4th. (Suspension.)

Now observe. If these two opposite dissonances are united (as at *d*), they will produce a new chord, called

The Chord of the Eleventh.

Let it be well remarked, that it is through the *instrumentality* of these two *principal intervals* of the fundamental 7th that this chord is produced. We may introduce the dissonance of the 9th also (as at *e*)*; but the chord is not thereby changed, it still remains the same in *name* and *character*: or we may introduce a retardation, the 2nd ascending into the 3rd (as at *f*). Here the note which at (*e*) is a dissonance by suspension (the 9th into the 8th), is at (*f*) a retardation, the 2nd into the 3rd.

Again, we may have both the *suspension* and *retardation* at the same time (as at *g*), where the 2nd in the soprano *ascends* into the 3rd, and the 9th in the tenor descends into the 8th; and if we add the octave to the dominant, the chord of the 11th will appear (as at *h*). If the question be asked, what the chord of the 11th really is, the reply is simply, *The chord of the dominant or fundamental 7th placed over its tonic:* for instance, take the bass-note B♭ as a tonic, (the dominant of B♭ is F), write the chord of F, with its fundamental 7th, over the B♭, and the chord of the 11th is produced: its resolution follows as a matter of course.

Why is this called the chord of the 11th? The chord takes its name from the dissonance of the 4th, prepared by the 7th†, because this 4th is the 11*th* interval, counting upwards, from any given bass. In thus counting upwards, we must necessarily pass beyond the 7th and 9th, before we can arrive at the note which constitutes the 11th; so that, in this case, the interval in question is not a 4th, but really and truly an 11*th*.

Chord of the Eleventh, prepared.

Hitherto, the chord of the 11th has appeared on the *accented* part of the bar, having been prepared on the unaccented; but this is not necessarily the case; as it originates in the chord of the fundamental 7th, which requires no preparation, so the chord of the 11th is entitled to the same privilege: this is exhibited in the following example, where all the chords of the 11th are unprepared.

Chord of the Eleventh, unprepared.



In bars 1 and 2 the melody ascends; consequently, the retardation of the 2nd is introduced, figured with a (2 thus, $\frac{7}{2}$); but as, at bars 3 and 4, the melody *descends*, the suspension of the 9th is employed, and the figures required are $\frac{9}{7}\!>\!\frac{8}{3}$; the chord of the 11th may therefore be introduced, prepared, as in Ex. 235; or unprepared, as in Ex. 236.

* Example 230, IX. † See *i*, Ex. 235.

The following is a practical illustration of this chord with both these characteristics :—

The Chord of the Eleventh practically illustrated.



In the preceding Ex. all notes of embellishment have been carefully avoided, and other dissonances excluded, that this chord may appear in the simplest possible form*.

N. B. When the chord of the 11th is employed UNPREPARED, and the melody ascends, the note which represents the fundamental 7th may ascend.

At bar 5, the fundamental 7th *ascends* in the *alto*, and at bar 6 it ascends in the tenor.

The following Example is in substance the same as the preceding ; but here it is embellished with passing and auxiliary notes ; and the student will be amply repaid for the trouble of a careful comparison :—

The same Air as the preceding, embellished.



Take this as a general observation on the figuring of this chord of the 11th.

The 3rd and 7th of the dominant chord are its essential intervals. Now, in the chord of the 11th, *these* two intervals become the 4th and 7th, which must always, without exception, be figured; *they* must *never* be omitted.

The various modes of figuring, according to circumstances, will appear thus ; commencing with the chord of the sharp 7th, as that chord naturally leads to the chord of the 11th.

* In Examples 237 and 238, bars 2, 5, 6, 13, the chord of the 11th is unprepared.
Bars 8, 10, 12, 16 ———————— prepared.

Chord of the sharp 7th—figured	7,	and resolved into 8*
Same chord when the 2nd is added,	7 / 2	8† / 3
Chord of the 11th.....figured,	7 / 4	8 / 3‡
	8 / 9	8
Same chord with the 9th added.....	7	8§
	4	3
	7	8‖
Ditto when the 2nd is added	4 / 2	3
When the chord of the 11th appears with all its *suspensions* and *retardations*, it is figured.....	9 / 7 / 4 / 2	8 / 3¶ / 5

And whether we remove the 9th or the 2nd, or both figures, the chord still remains the chord of the 11th. This may suffice to show the nature and practical application of this important chord, and its derivation from the chord of the fundamental 7th, which is derived from nature**.

It will be perceived, that, when the chord of the 11th is introduced unprepared, as at *a*, in the following example, the original fundamental bass ascends a fifth ; and as *that* progression admits the introduction of the 4th into the 3rd, and 6th into the 5th††, it follows that either of these dissonances may very effectively be combined with the chord of the 11th.

Ex. 239.



Ex. 240.



In the preceding Ex. 240, at *b*, the dissonance of the 6th is combined with the chord of the 11th ; and at *c*, the dissonance of the 4th. The introduction of the dissonances thus gives rise to a very extraordinary anomaly, viz., dissonances becoming consonances and resolving into dissonances. For instance :

At *b*, in the above example, the 6th, united with the chord of the 11th, forms with the bass a *consonance*, and this resolves into a dissonance (the 9th).

At *c*, the dissonance of the 4th from the octave of the bass, resolves into a dissonance (the 7th).

The following is a melody harmonized in four parts, in which are introduced both the above-mentioned dissonances upon the chord of the 11th.

* Ex. 235, *b*. † Ex. 235, *f*. ‡ Ex. 235, *d*. § Ex. 235, *e*. ‖ Ex. 235, *f*. ¶ Ex. 235, *g*.
** Ex. 63, Harmonics.
†† Dissonances, page 109.

It is not necessary to expatiate upon this example. The student must hear it and particularly observe the difference of effect produced by the 6th and 4th combined with the 11th.

Ex. 241.



At *a*, dissonance of the 6th. At *b*, dissonance of the 4th. At *c*,

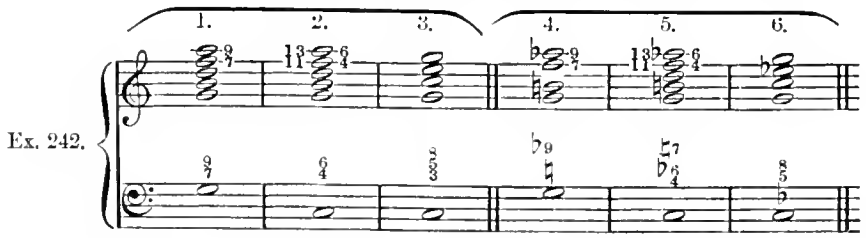
Chord of the Thirteenth.

The construction of the chord of the 13th is in every respect similar to that of the 11th.

By placing the chord of the 9th (whether major or minor) over its tonic bass, the chord of the 13th will be produced.

In the following example, bar 1, is exhibited the chord of the *major* 9th, and at bar 4 the chord of the *minor* 9th ; at bars 2 and 5, these chords are placed over their respective tonics, and thus produce the chord of the 13th ; as the figure 4 in the chord of the 11th expresses the original interval, which gives name to the chord (viz., the 11th), so the figure 6, as it expresses the original interval (the 13th), is indispensable when we desire to express by figures the chord of the 13th. Nor must the 4th be omitted, because that interval is the representative of the 11th, as the 6th is the representative of the 13th ; this will be seen in the following example :—

Ex. 242.



Indeed, if the chord of the 11th be well understood, no difficulty can possibly be experienced in comprehending that of the 13th. Examples illustrative of this subject, if carefully studied and examined by the student, must ever be the compass by which he will be guided unerringly through all the mazes of harmony : however, a treatise such as the present professes to be, can never be comparatively useful without abundant examples, one of which sometimes effects more to illustrate the subject than pages of words.

That the chords of the 11th and 13th arise out of a combination of dissonances by suspension and retardation, will be seen by the following :—

Ex. 243.



At 1, are two suspensions, $\frac{6}{4}$ (original 9), $\frac{4}{2}$ (original 7), and two retardations, 7 (original 3), 2 (original 5).

At 2, are three suspensions, $\frac{9}{6}$, $\frac{6}{4}$, and one retardation, the 7th.

At 3. are three suspensions, $\frac{9}{6}$, $\frac{6}{4}$, and two retardations, 7 (original 3), 2 (original 5).

N.B. When the chord of the 13th is immediately preceded by the chord of the fundamental 9th (as in the above Example), the chord is prepared. When it is *not* immediately preceded by the fundamental 9th (as in the *following* Example), then it is *unprepared*, and may be treated precisely as the chord of the 11th.

Ex. 244.



The preceding Ex. 244 is the Diatonic Minor Scale of C; but, in order to mark the interval of the chord of the 13th as much as possible, no signature is employed to denote the key; the accidentals are all expressed *where* required; the fundamental basses are also added, which may be found useful in more respects than one.

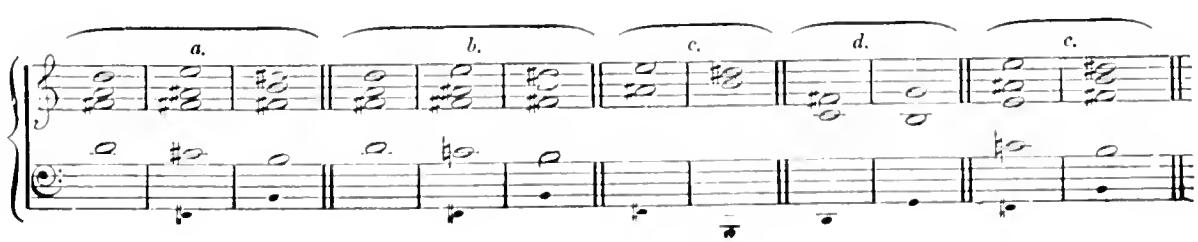
Before we proceed to give a lengthened example on the employment of this very important chord (the 13th), it will be necessary to make the student acquainted with the chords of *the sharp sixth* and *compound sharp sixth*.

Q. What is the chord of the *sharp sixth (♯6)*?

A. It is neither more nor less than the second inversion of a dominant chord, the inverted bass being *lowered* a minor semitone.

In the following Example (at *a*) is exhibited simply the 2nd inversion of the chord of the dominant :—

Ex. 245



Let us not forget that A♯ is the natural 6th to the inverted bass C♯*; but the instant we place a ♮ before the bass note C ♯, we lower that note a half-tone, and A♯ is now changed (as at *b*) into a sharp 6. F♯, the fundamental bass, remaining unchanged.

Having now fully explained the principle upon which this chord is founded, we will point out some peculiarities respecting it, which will be found interesting.

If we analyze this chord, we shall find that it contains within itself the *principal intervals* of two distinct fundamental 7ths† (see *c d*); the former would lead the ear to the key of B♮, and the latter to the key of G; but when heard both together, (as at *b*), the chord produces on the ear an effect not at all satisfactory. Every one may convince himself of this, by striking the chord first as at (*a*), and then as at (*b*). To avoid this *ambiguity*, one of the intervals must be removed—but, which of them? ‡

The note A♯ cannot be dispensed with, because it is the *principal* interval in the dominant chord, viz., the 3rd . E cannot be removed, because it is the fundamental 7th. The only interval, therefore, that can be dispensed with is the F♯, the octave to the fundamental bass. Let us take away this interval, and, in order to preserve the four parts complete, double the fundamental 7th (as at *e*), and all will be then correct.

We shall now give a few hints respecting the proper management of this chord (the sharp sixth) in its different aspects.

Ex. 246.



When the chord appears as at 1 in the following example, the 7th in the soprano *must* descend and the tenor ascend.

Should the 7th be doubled in the alto and tenor in unison, the alto must ascend and the tenor descend (as at 2).

Should the 7th be doubled in octaves (as at 3), then the alto must descend, and the tenor ascend.

This chord is frequently written as at 4 and 5, by the old church writers, and produces a very fine effect.

The most proper place for the introduction of the sharp 6 is when we are in a minor key, and desire to modulate to the *dominant* of that minor key; as in the following example:—

Ex. 247.



Here we are in the key of C minor—we desire to modulate to G (the dominant) by the 6. This we do in the usual simple way by the 2nd inversion; and, having lowered the inverted bass a half-tone, resolve the chord.

At 2, having modulated to G, from hence we proceed to F minor, and (by the ♯6) to C. This will suffice to show the origin and construction of this chord, and its principal use in modulation.

* The key of A requiring 3 sharps, F sharp is the natural 6th.
† Ex. 154. ‡ Ex. 245, *a*.
§ Sometimes called the Leading Note.

The contemplation of the chord of ♯6 naturally leads us to another of still greater importance; and if the former have been well understood, not the slightest difficulty will occur in fully comprehending this one also, because both are founded upon the same principle.

If to the chord of the *sharp sixth* we add the minor 9th, it will produce what we call

The Compound Sharp Sixth, figured, $\frac{\sharp 6}{\flat 5}$.

The following Example (at 1) exhibits the chord of the ♯6 as usual, with its resolution.

At 2, the minor 9th, E♭, is added.

Let the student carefully remark that *no radical change* has been made—the *intervals proceed* just as before—the fundamental bass is the same; in one word, the chord of the compound ♯6 is nothing more than the 2nd inversion of the chord of the minor 9th, with the inverted bass lowered a semitone.

Ex. 248.



It is necessary to observe that, as the bass in this chord (at 2) is obliged to descend a half-tone, and as the 9th (which here by inversion becomes the 5th) must also descend, consecutive 5ths would be the consequence; but these improper progressions must be avoided, which is very easily done, either by letting the 9th *descend* to the 7th in the same bar (see 3), or by suspending the following 5th by means of the 6th* (see 4).

This chord, one of the most useful, especially in modulating, has been treated in a variety of ways by different authors: which diversity of opinion need not in the least surprise us, as it arises from an ambiguity in the chord itself. It is not easy to convey exactly what we mean here by mere words; we shall be better understood by a practical example, thus: strike the chord at 1 (in the following Example 249), without being preceded or succeeded by any other chord; then the chord at 2. There is no *difference between* these two chords, as far as can be judged of by the ear; yet, grammatically, they differ as widely as the east and west.

How are we to distinguish the difference?

Answer.—By investigating the progression of the fundamental bass. It is only thus that we can discover the etymology of any chord, and its grammatical application.

Let us examine the two chords *just* heard, but not seen.

Ex. 249.



At 1, G♯ and D are the principal intervals of the fundamental 7th, indicating (as thus written) that it is derived from the chord of the minor 9th. E therefore is its proper fundamental bass, and thus the modulation proceeds to A. See 4, 248.

* Haydn has employed the latter mode. Cherubini, however, in one of his late Church compositions, has, without any scruple, permitted these consecutive 5ths (as at 2).

At 2, the A♭ and D, on the same principle, indicate that it is the chord of the fundamental 7th to B♭; the modulation therefore goes to E♭; which is a key diametrically opposite to the former. Very striking effects are produced by the employment of this chord, of which some specimens will be exhibited when we arrive at Equivocal Modulations.

We shall now give a short exercise on the preceding two chords, which, from what has been so fully stated respecting their nature and application, will require no further explanation, particularly as the fundamental basses are uniformly added.

Ex. 249½.



We shall only remark that at bar 2, E♮ (the 5th), instead of descending to the 5th in the third bar (which would have produced consecutive 5ths), is suspended at bar 3 by the 6th. The 6th, however, is here changed into the major, which produces a striking effect.

Bar 8, chord of the ♯6. Bar 4, compound sharp sixth $\frac{\sharp 6}{\flat 5}$.

Bar 9, compound ♯6, which resolves at bar 10 into a major chord (see bars 2, 3).

We shall now resume the subject of the chord of the 13th, which was interrupted after Ex. 244, for the purpose of introducing the pupil to the ♯6 and compound sharp 6th $\frac{\sharp 6}{5}$.

The following lengthened example contains the chords of the 11th and 13th—sharp 6th and compound sharp $\frac{\sharp 5}{3}$ in a variety of forms, incorporated with other harmonies, so as to constitute what may be called a finished composition. Before the student plays it (and it is expected that he will do so), he should study the subject well, by critically examining every bar. It is written for the pianoforte, with an additional staff for the figured and fundamental bass.

The subject is exceedingly prolific in matter, and abounds in practical illustration.

Ex. 250.





ANALYSIS

At *a*. Chord of the 13th unprepared.
b. Chord with the Dissonance of the 4th unprepared.
c. Chord of the 13th prepared.
d. Chord of the 13th compound sharp 6th $\frac{\sharp 6}{5}$.
e. Chord of the 13th prepared.
f. Commences on the relative major—chord of 11th.
g. Chord of 11th, Dissonances of 4th added.
h. Chord of 13th arising from major 9th.
i. Chord of 13th followed by minor 9th.
k. Compound sharp 6th $\frac{\sharp 6}{5}$.
m. Chord of the 13th, 6th added.

FINAL AND OTHER CADENCES.

It has already been stated that, in consequence of the frequent natural occurrence of the final cadence, composers have been induced not only to seek for variety, but have often endeavoured to avoid the final cadence altogether.

A cadence is sometimes made in some key *different* to that into which we had modulated; this we call

An Irregular Cadence.

Let us suppose the student sitting at the pianoforte, playing through a course of modulation, and introducing such cadences as he is already acquainted with; suppose him to have modulated to the key of D, as at (I) in the following example:

Ex. 251.



* Before the student proceeds, he is strongly recommended to peruse once again the commencement of the subject of cadences (page 115); of which the following may be considered a continuation.



In the preceding Ex. (251) the pupil commences in the key of D major at I. If, instead of closing in that key, he were to make a cadence in the key of its *dominant*, it would be an irregular cadence ;—irregular—because it does not close in the key to which modulation has been made.

At II, he modulates to F minor, and makes a cadence in the relative major.

At III, he modulates to A♭, and makes a cadence in the relative minor.

At IV, D minor is the key, and a cadence is made in A minor.

At V, a modulation to D minor—cadence in B♭.

N.B. Let it be observed that the *irregular cadence* must always bear some relation to the key to which we modulate.

It occurs frequently, that instead of proceeding direct from the tonic to the sub-dominant, a minor chord is first introduced, whose bass, when we are in a *major* key, is a minor 3rd below the tonic, as in the following Example (I). On the contrary, when we are in a *minor* key, this bass must be a *major* 3rd below the tonic (II).

Ex. 252.



When the cadence is made in a *minor* key, the added sixth may be written *minor* instead of *major*. See III, following

Ex. 253.



At IV, the added minor 6th is doubled and the 5th omitted.

N.B. This chord is eminently calculated to express a feeling of the most poignant grief and sorrow, and should be sparingly used.

Sometimes a cadence is written as at (V) in the following Ex. being the first inversion of the minor 9th (diminished 7th).

Or as at VI, 2nd inversion of the same chord.

Or as at VII, compound sharp $\frac{\sharp 6}{\flat 5}$.

Or as at VIII, $\sharp 6$.

Ex. 254.



In the following Modulations, the preceding cadences are introduced :—

Ex. 255.





Imperfect Cadence.

The final cadence, after frequent repetition, will necessarily lose much of its effect; because the ear, being accustomed to its regular indications, will contemplate its arrival, and a *certain degree* of indifference will arise. Instead, therefore, of allowing the chord of the $\frac{6}{4}$ to resolve upon the fundamental chord of the dominant, the 3rd inversion of that chord $\frac{6}{4}_{2}$ may be introduced, by which the ear will be disappointed in its expectation, and a higher degree of interest be excited.

Ex. 256.



False Cadence.

Another kind of deception is sometimes put in practice.

Instead of the resolution of the Chord of the fundamental 7th, another chord may be suddenly introduced.

Ex. 257.



At *a*, the dominant ascends a *whole* tone to A, which must be a minor chord: the *bass*, in a false cadence, ascending a *whole* tone, can only be employed in a *major key*.

We may also allow the bass of the dominant to ascend a *half* tone, as in the following Example (at *a*). In which case, *the concluding chord of the false cadence must be major.*

N.B.—"When we are in a major key, the false cadence may be produced by the bass ascending either a *half* or *whole* tone;" but,

"When we are in a *minor* key, the bass can ascend *only* a *half tone*" (*b*).

Ex. 258.



Or thus

Ex. 259.



In the following Example, the preceding cadences are introduced :—

Ex. 260.





Interrupted or Broken Cadence.

Instead of introducing a *final*, or *false cadence*, we may make a *sudden stop* after the dominant, placing a *rest* instead of the tonic, as in the following Example (*a*), after which we may proceed as pointed out at *b*, or as already recommended in Example 259 :—

Ex. 261.

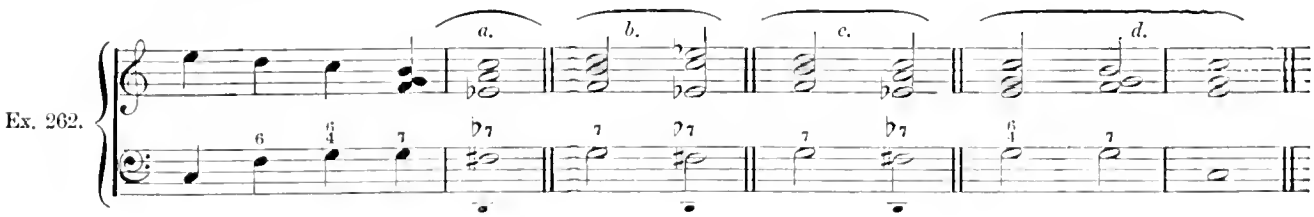


Irregular False Cadence.

In the preceding Examples of *false cadences*, the intervals of the dominant chord proceeded uniformly into *consonances;* a false cadence may, however, be constructed *so*, that these intervals *shall not* proceed into consonances.

In the former false cadences, the bass *ascended* a whole or half tone, *direct* to its fundamental bass. The bass in the following Example, on the contrary, does not *ascend*, but *descends* a *major semitone;* neither does it descend into a fundamental bass, but into the first inversion of the minor 9th; viz., diminished 7th.

Ex. 262.



At *a*, the 3rd ascends to the fundamental 7th, and the 7th descends to the minor 9th.

At *b*, the 5th ascends, by which the 9th is doubled.

At *c*, the 3rd is permitted to descend.

Suspended Cadence.

If, instead of proceeding with the dominant chord immediately to the tonic, we should first make a few protracted modulations and then close, the cadence will be suspended.

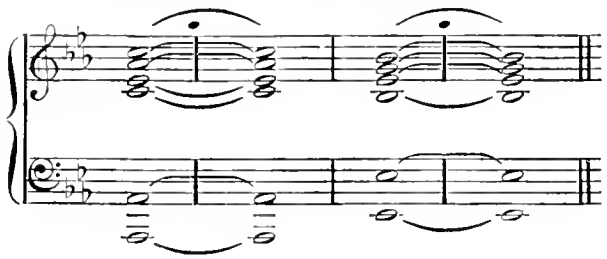
Ex. 263.



Great Cadence

In the *perfect final cadence*, the *tonic* is always preceded by the *dominant*. In the *great* cadence, on the contrary, the *tonic* is *preceded* by the *subdominant*.

Ex. 264.



This cadence is usually employed in sacred music, to the word *Amen!* It produces an effect calculated to create in the mind a feeling of reverence and awe.

Equivocal Modulation.

In order to form a clear and distinct idea of the principles on which these modulations are established, a few preliminary remarks will perhaps be necessary. It has frequently been observed that the two principal intervals of the dominant 7th, in their progression, insensibly lead the ear towards the chord of its tonic; the 7th having a tendency to *descend* and the third to *ascend*. This incessant inclination of these two intervals to proceed *thus* will be found on investigation to be occasioned principally (if not entirely) by the 3rd in the chord being major, for, were we to make the 3rd minor, this inclination would immediately cease, as will be evident on performing the following Example:—

Ex. 265.



The chords at I, II, III, having *minor* 3rds, no expectation is excited in the mind that these 3rds *ought to ascend*, although each chord contains a fundamental 7th; the ear (as it were) remains passive, and without the smallest reluctance permits *these* 3rds to be changed in the course of their progression into 7ths. At IV, however, the case is very different, for the 3rd (G) being *major*, the ear immediately expects this 3rd to ascend, and the chord of the tonic (A♭) to follow: thus the chord of the minor 9th at (V), having a *major* 3rd, must necessarily proceed to its tonic (A); at VI, to D minor; and at VII, to G minor. Now let us recollect, that this important interval forms a major 3rd with the fundamental bass *only*, and with no other interval. If, therefore, the fundamental bass be taken away, no major 3rd will be found in the chord to guide or direct our ear. See VIII, IX, X. We are left, as it were, in complete uncertainty as to where the chord will proceed; for the remaining intervals of the chord (after the fundamental bass has been removed) are *all minor* 3rds, no one of which possesses any peculiar power or quality to guide the ear. But, if we *lower* any one of these four intervals of the chords at VIII, IX, X, a half tone, it will produce a *major* 3rd, giving thereby a decided direction to the course of the modulation (which was before equivocal). Now as the interval *thus* lowered will be the dominant of the key to which we modulate, and as each of these four intervals may alternately be lowered a half tone, it follows that an equivocal chord may be converted into *four different* dominants, and may consequently modulate to four different keys. The three remaining intervals of the chord undergo no alteration, except what may be occasioned by an enharmonic change, which may perhaps be found necessary when once the dominant is established.

Ex. 266



At 1 : is the chord of the diminished 7th. It has no decided character but what it receives from the fundamental bass, which has been placed under it, by which the modulation goes to D minor.

The C♯, in the inverted bass at 2, is at 3 *lowered* a semitone to C♮, and thus E (which at 2 was a *minor* 3rd), is changed to a *major* 3rd ; and as the C♮ is the dominant to the key of F, we modulate to that key at 4.

N.B. All the rest of the intervals remain as before.

Here we see that by only *lowering one* interval of the chord of the diminished 7th, we are enabled to modulate to F instead of D minor.

At 5 : The chord appears again as originally written at 1, but at 6 the E is *lowered* a half tone to E♭ (forming thus a *major* 3rd with G), and as E♭ is the dominant to A♭, we modulate (at 7) to that key, instead of D *minor*.

N.B. All the intervals remain as before, except C♯, which must be changed enharmonically to D♭ ; because the fundamental 7th to E is D♭, and not C♯.

At 8 : The chord appears again written as at 1. The G is *lowered* at 9 a half tone to G♭ ; and as G♭ is dominant to C♭, we modulate (at 10) to *that* key instead of D *minor*.

N.B. Two intervals must here be changed enharmonically, *viz.*, E to F♭, and C♯ to D♭. The reason is obvious.

At 11 : *No* change of modulation has taken place, for, by lowering (at 12) the B♭ to A, we produce the *same* fundamental bass as at 1 : the only difference is, that, as the minor 9th is removed, we have modulated to a *major*, instead of a minor key.

N.B. Any inversion of the minor 9th may be thus employed, as well as the diminished 7th, instances of which are given in the following Example : –

Ex. 267.




ten.
5.
6.
7.
8.
9
ten.
ten.
ten.
10.
11.
12.
13.
rallentando.
14.
15.
16.
17.
18.
19.
20.
21.
cres.



In the preceding Example—

At 2 : A demonstration is made to modulate to D *minor*, by the *third inversion* of the minor 9th ; but by lowering G (the inverted bass) at 3, the half tone to F♯, a modulation is effected to *B♮ minor* (at 4).

At 5 : A demonstration is made to modulate to A *minor*, by the first inversion of the minor 9th ; but B ♮ being *lowered* (at 6) a half to B ♭, the modulation goes (at 7) to E♭.

At 8 : We make a demonstration to modulate to F *minor*, by the *second* inversion of the minor 9th ; but, the B ♭ (at 9) being lowered to A, the modulation proceeds (at 10) to *D minor*.

At 11 : The demonstration is made to C *minor;* but (at 12) B♮ is *lowered* to B♭, and we modulate (at 13) to E♭.

Although the ear cannot recognise any change having taken place between the chords at 14 and 15, when played on the pianoforte, yet, if we examine the fundamental basses of these two bars, it will be evident, that in order to modulate to G minor (at 16) this alteration of the chord became necessary ; for, as the dominant to G is D, and not F, we could not have modulated directly from the chord at 13 to G minor at 16 : it would have been ungrammatical, as modulating without a dominant.

At 20 : We make a demonstration to modulate to B♯; changing this determination, however, by lowering the A♯ to A ♮ (at 21), we make a demonstration to modulate to D ; here, however, the course is again changed, by resuming the dominant F♯ (at 20), and we seem to modulate once more to B♮; instead of which, however, we lower the C♯ (at 21) to C♮, and modulate (at 13) to F.

The preceding Exercise, which is written for the pianoforte, not only abounds in *secondary harmonies, extended, passing*, and *auxiliary* notes, but is likewise calculated to point out some of those contrivances in a composition, by which a series of modulations or progressions may be made pleasing and interesting ; for example : from the commencement to the end of bar 12, the right hand plays variations, founded on secondary harmony, interspersed with *extended, passing*, and *auxiliary* notes, whilst the left hand accompanies this variation by the simple chords. In order to

produce still more variety, the right hand, from bar 13 to 25, plays a simple melody, without the least embellishment, whilst the left plays a variation, founded on the intervals of the chord. At bar 26, the right hand again commences a variation, the left hand accompanying as before. The Example concludes with a cadence, commencing at bar 28, in which the *minor* 6th has been introduced.

Equivocal Modulation by the Compounded Sharp Sixth $\frac{\sharp 6}{5}$.

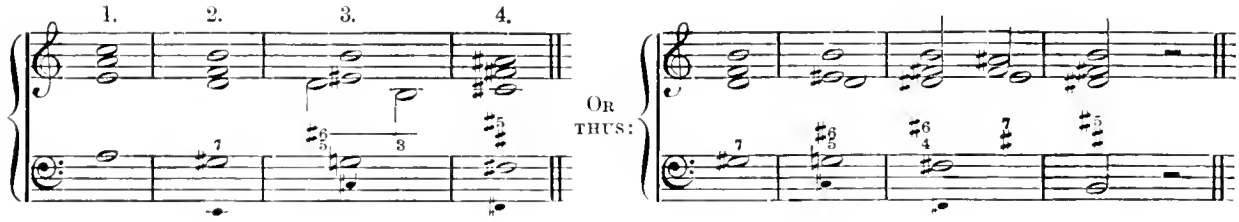
This chord is another powerful agent, which may be employed with great effect in producing an equivocal modulation.

If we lower the bass of any inversion of the chord of the minor 9th a *minor semitone*, the chord of the $\frac{\sharp 6}{\flat 5}$ will be produced, after which we can modulate as already explained in Examples 248 and 249.

N.B. We must be careful not to mistake *this* chord for one of those just described in Example 266; because the note which was there lowered became a *dominant*; whereas, in the present case, it becomes a false 5th, and (being the bass) is the second inversion of the dominant chord.

In the following Example (at bar 2), is the first inversion of the minor 9th. The bass being thus lowered (at 3) a semitone, the $\frac{\sharp 6}{\flat 5}$ is produced, and thus instead of modulating to *A minor*, we modulate (at 4) to *F♯ major*.

Ex. 268.



The following Example will show the application of this method of treating the chord, which will be found particularly effective when introduced immediately after the imperfect false cadence :—

Ex. 269.





At 2 : An irregular false cadence having taken place upon the first inversion of the minor 9th, this inverted bass F♯ is lowered a half tone in bar 3, to F♮, producing thus the $\frac{6}{5}$. Here we ought to modulate to E, instead of which, however, we make that E a dominant, apparently with the intention of proceeding to A (for at 4 a regular cadence commences in that key) ; but instead of proceeding to the tonic, the dominant chord at 5 falls again at 6 a major half tone, as it did at 2, and thus produces once more an *irregular false cadence* on the chord of the diminished 7th. The same process is observed through each succeeding four bars of the Example, untill we arrive again at the key from which we set out.

Deceptive Modulation—in which the *Fundamental Seventh* resolves into the *Octave*.

It cannot be too frequently impressed upon the mind of the learner, that the chord of the Fundamental 7th has a natural tendency to guide the ear to the *chord of its tonic only*. When, therefore, either of the principal intervals of the dominant chord (*viz.*, the fundamental 7th or 3rd), do not proceed thus, though they may resolve into consonances, a kind of deception is practised.

In the following Example, at 1, the 7th of (G) the fundamental bass descends as usual, but instead of proceeding to the third of its tonic (C), it falls, at 2, in the octave of the following dominant chord.

The 3rd, instead of *ascending* into the octave, *remains in its place*, and becomes a 5th.

The 5th likewise remains in its place and becomes the 7th ; and the bass, instead of proceeding to its tonic (C), ascends a minor semitone, and forms the major 3rd* : thus we modulate to *A minor* instead of *C*.

Ex. 270.



N.B. All the inversions of the fundamental 7th may be here employed ; the most effective, however, are the *first* and *third*.

The effect which these deceptive modulations produce will be better understood by the following short Example of Recitative :—

* This must, however, be understood as referring only to the *inverted* bass, because the fundamental bass falls on this occasion on a *minor* 3rd.

Ex. 271.



Deceptive Modulations—in which the *Fundamental Seventh* resolves into the *Fifth.*

In the following Example, the dominant (G), instead of proceeding to its tonic (C), ascends a whole tone, and becomes (as in the foregoing Examples) the dominant of another key, which latter we prefer to be minor, as being the relative minor to the subdominant of the expected key C.

Ex. 272.



In this deceptive modulation the 7th descends on the 5th of the *new dominant;* the 3rd ascends *into the 3rd* in the inverted bass, and the octave remaining in its place, prepares the 7th in the chord of the new dominant. The different inversions of the above chords are exhibited at *b* and *c*.

The following Example is an Exercise on the preceding :—

Ex. 273.





Observe, that the subject of the two first bars in the *tenor*, is imitated in bars 3 and 4 by the *bass*; in bars 5 and 6 by the *alto*; in bars 6 and 7 again by the *tenor*; and in bars 8 and 9 by the *soprano*.

Protracted Modulation.

If the 3rd of the dominant chord, instead of *ascending* to the 8th, continue to fall a minor half tone on the 7th of the following dominant, it will produce alternately the $\frac{6}{5}$ and $\frac{6}{5}$, and form thus a continued chain of *unresolved* dominant chords, by which the expected tonic is omitted, and the *final close* of the modulation deferred, or protracted, as in the following Example :—

Ex. 274.



At *b* : Dissonances are introduced, by which the imitation which naturally arises out of these modulations is more apparent.

The following is a protracted modulation with the addition of the chord of the minor 9th :—

Ex. 275





At *a*: A modulation, such as has been exhibited in Ex. 268 (*b*), is here introduced.

At *b*: Appears the *imperfect false cadence*, as shown in Example 269.

The following Example shows another kind of protracted modulation, by which the inverted bass is enabled to descend by semitones through the whole octave :—

Ex. 276.



At 3 : Is the first inversion of the minor 9th, changed at 4 to the chord of the compounded sharp sixth by the inverted bass being lowered a semitone*.

At 5 : The resolution of the chord of the $\frac{6}{4}$ has been omitted, but we proceed as if it had taken place, thus:



At 6 : The chord of the diminished 7th.

At 7 : The chord of the compounded sharp sixth.

At 8 : The resolution of the $\frac{6}{4}$ again omitted.

At 9 : The first inversion of the minor 9th.

At 10 : The 9th of the preceding chord changed to a 7th See Example 278.

* See Example 268.

In the following Example the fundamental 7th is changed to a minor 9th, by which the inverted bass continues to *ascend* by half tones :—



The above modulation bears a strong resemblance to Example 270. *Here*, however, the 7th is not resolved into the octave, but changed into a 9th, which occurs again at II, and III ; and in this manner we are enabled to modulate through the whole ascending chromatic scale.

In the preceding Example the fundamental 7th was changed into a minor 9th ; in the following Example, on the contrary, the 9th is changed into a 7th, by which the inverted basses continue to *descend* by half tones :—



The following Example will show how the several inversions of the minor 9th may be employed with effect :—





The first five bars contain only the chord of the minor 9th. The bass commences with the interval of the 9th, and passes from thence to the 7th, 5th, and 3rd successively, the rest of the parts interchange places; during which the *alto* proceeds from the 7th to the 9th; the *tenor* from the 5th to the 7th; and the *soprano* from the 3rd to the 5th. The same occurs frequently in the course of the Example. From the commencement to the end of the fifth bar we are led to expect the arrival of the key of C minor; however, the 3rd (B♮) in that bar having been lowered a half tone to B♭, in the sixth bar, we modulate in the seventh bar to E♭*. From thence to the twelfth bar is continued the chord of the minor 9th of F, and thus a demonstration is made to modulate to B♭ minor, but, by the introduction of the $\frac{6}{5}$ in the 13th bar†, we modulate to G, and from thence to C minor.

Modified, or Secondary Basses.

The only fundamental basses which have hitherto been employed in harmonizing melodies are the tonic, dominant, and subdominant. We have seen that from these *three* basses, with their harmonies, inversions, occasional introduction of modulation, dissonances, passing and auxiliary notes, we have been enabled to proceed thus far with sufficient variety. Let us now, however, make an attempt to discover other basses than these hitherto employed, and thus procure a still greater diversity of effect.

It has already been stated, that the natural scale consists of *three sounds only;* that our modern diatonic scale is compounded of two of these scales; that, were we to continue the succession of these scales of three sounds, we should continue to modulate *ad infinitum;* that, in order to avoid this, we are necessitated to break off at the sixth sound, and modulate back to the original key, by which consecutive fifths and octaves are produced.

Let us now, instead of *breaking off* at the *sixth* sound, continue the scale, without paying any regard whatever to the semitones which should occur between each of the subsequent scales of three sounds. If we continue to repeat the figures 8, 5, 3, in succession, over the intervals of this scale, and write the fundamental basses as indicated by these figures, we shall find that (after the first two scales) the intervals which follow, instead of being accompanied by the tonic, dominant, and subdominant, will be accompanied by other basses; the chords of which (except those arising from the three original) are either minor or imperfect‡.

* See Example 266. † See Example 268.

‡ An imperfect common chord has its 3rd and 5th minor, thus:
The imperfect common chord of B is B, D, F.
——————— D — D, F, A♭.

If we divide the above continued scale into scales of three sounds, and place under each its generator, or tonic, it will produce a progression of harmony, whose basses continually ascend by fourths, or descend by fifths.

Ex. 280.



In accompanying the scale as above, it is evident that we have deviated (commencing with the third bar) from the path pointed out by nature, and consequently the harmony produced is often obscure and crude. Yet this very obscurity we shall endeavour to turn to advantage, and by introducing it judiciously amongst the harmonies of the three original basses, produce still more light and shade than heretofore. Having premised thus much, let us enter into an examination of each interval of the diatonic scale, and see how the chords, as exhibited in the above Example, may be employed in our future Exercises.

The *first sound of the scale* we know may be accompanied by *two* basses, *viz.*, the *tonic*, which is an 8th below, and the *subdominant*, which is a 5th below*. Now, if we take the note which is a minor 3rd below (as at *a* in the following Example), we shall procure a new bass (which is neither one of the original three belonging to the scale, nor a dominant by which we can modulate), and which, for distinction, we shall call a modified or secondary bass.

Ex. 281.



In order to show the application of these basses, and enable the pupil to form a just idea of their effect, let him compare the accompaniments to the melody at *b*, *c*, *d*, in the Example with those at *e*, *f*, *g*.

At *b*: The *first of the scale* has been accompanied according to the third rule of employing fundamental basses†.

At *c*: According to the second rule of modulating in a melody‡.

* Third rule of accompanying the scale, page 38.
† See page 38. ‡ See page 141.

At *d:* Both are united.

At *e:* Modified bass, with third rule of accompanying the scale.

At *f:* „ with second rule of modulation in a melody.

At *g:* „ followed by the chord of the sharp 6th.

At *h:* When the key is minor, the modified bass to the first of the scale has a major chord.

The *second of the scale*, as we know, has only one original fundamental bass, which is a fifth below, and thus admits of two modified, *viz.*, one an *octave*, and the other a *third* below (see *a* in the following Example) :—

Ex. 282.



It is necessary to remark, that the modified bass, which is an octave below, produces a better effect than the other, and should therefore have the preference ; the reason is this,—the chord produced by the modified bass, a 3rd below, is an *imperfect common* chord having a minor 3rd and false 5th. The false 5th and octave of this chord, when heard together, produce the same effect upon the ear as the two principal intervals of the fundamental 7th (to the first inversion of which the imperfect common chord in its effect bears a strong resemblance). But as the false 5th in *ascending* (*d*), and the octave in *descending* (*e*), have the same effect as if the fundamental 7th had ascended and the 3rd had descended, the ear feels a certain degree of dissatisfaction, particularly when this chord is employed *fundamentally* (*c*) ; when inverted (*d*), the defect is not so very perceptible, owing to the octave not being doubled.

The *third of the scale*, having but one original fundamental bass, may be accompanied by two modified basses, *viz.*, a 5th and 8th below : the *first of these*, being the chord of the relative minor to the original key, *produces the best effect*, as in the following Example, at *a* :—

Ex. 283.



The *fourth of the scale* may have two modified basses, *viz.*, a 3rd and 5th below (*b*). The *former* is preferable, the latter being the imperfect common chord.

The *fifth of the scale* has but one modified bass, *viz.*, a 3rd below (*c*).

An application of the preceding modified basses will be found at *d*.

The *sixth of the scale* has two modified basses, *viz.*, a 5th and 8th below (as in the following Example at *a*), both of which are good :—

Ex. 284.



The *seventh of the scale* has two modified basses, *viz.*, a 5th and 8th below. The first is preferable, as the latter produces the imperfect common chord.

It is necessary to remark, that the introduction of modified basses demands great care and circumspection, as in employing them more mistakes are likely to occur than on any other occasion; these, however, will be prevented by a little attention to the following observations :—

1st : Employ the modified basses very sparingly ; for, as melody is derived from the harmony of the original fundamental basses, *they* should be more frequently employed than any other : they originate with nature, and, therefore, are the most satisfactory and pleasing. On the contrary, by introducing too many modified basses, the beauty of natural harmony accompanying a simple melody is frequently obscured, and crudities arise which we should endeavour to avoid.

2nd : *Very seldom employ* the imperfect common chord *fundamentally;* to the first inversion of that chord, however, no objections can be made.

3rd : Those modified basses which produce the relative minors of the *tonic* and *subdominant* should be employed in preference to any other, particularly when introduced as *fundamental basses;* they are on these occasions exceedingly effective.

4th : No modified basses should on any account be introduced until the melody has first been harmonized with the three original basses, employing the five rules, and rules of modulation, as occasion may require ; after having *done so,* we should carefully examine where the modified basses may, with most propriety, be introduced.

In order to show the application of these basses, and give some idea of their effect, the simple melody at I, in the following Example (written within the compass of a 6th) is variously harmonized.

Ex. 285.

I.



Harmonized with the *original* basses, interspersed with a few modulations.

II.



With *other* modulations.



Modified basses employed, interspersed with modulations.



Harmonized almost throughout with modified basses.



At (*a*) III. Is a deceptive modulation, the fundamental 7th resolving into the 8th.

At (*a*) V. The 3rd of the dominant chord is permitted to *descend :* this license is often indulged in by composers, to obtain a fuller harmony.

Sequences of Sevenths.

It must have been observed, that hitherto we have treated only of such 7ths as required no preparation, *viz.*, fundamental or dominant 7ths ; we shall now introduce 7ths which require to be prepared.

In referring to Example 280, we shall find that the generator or tonic, being placed under each scale of three sounds, produces a continued progression of basses, ascending 4ths (or descending 5ths); which uniformity of progression we shall call *a Sequence ;* and when such basses are accompanied by common chords (as in the above-mentioned Example) we shall denominate them—*Sequences of Common Chords.* Now, as the above progression of the bass ascending a 4th (or descending a 5th) is the same as from a dominant to its tonic, 7ths may be added ; and when they are added, we shall call the progression—*a Sequence of Sevenths**.

When these 7ths are added to *minor* or *imperfect* common chords, the effect produced will be extremely dissonant, unless the 7ths are prepared. In order that the pupil may clearly understand the nature of a sequence, let us write a progression of basses, descending a 5th, and ascending a 4th, or *vice versa*, as at *a*, and then add the simple melody as at *b* in the following Example :—

Ex 286.



If, instead of permitting the 3rds of the basses, in the preceding Example, at *a b*, to ascend, we let them remain in their places (as at *c*), they will produce a succession of 7ths prepared by the 3rds. At *c*, the 7th appears only alternately ; but if we add another part, as at *d*, we shall have an uninterrupted chain of 7ths, as at *e*, where it will be perceived that, in consequence of the uniform progression of the bass, we are enabled to treat the 3rds of the new part which was added at *d*, exactly in the same manner as those at *c*.

These sequences of 7ths seem to partake in a great measure of the character of *unresolved* retardations,—see *f*, where the retardation of the 7th has been regularly resolved upwards.

If we write the preceding Exercise in four parts, as in the following Example at *a*, each chord will be accompanied alternately by a 5th or 8th : that is,—the 8th remains in its place, and, by the progression of the bass, is changed into a 5th, similar to a progression of fundamental 7ths.

* In this progression of sequences a most admirable symmetry is observable. It was the great source from which the ancient composers drew their subjects for fugue, and the ground upon which they chiefly constructed their church compositions.

Ex. 287.



At *b*, this Exercise appears in five parts; and the interchange of the 5th and 8th takes place between the second soprano and tenor alternately.

Observe that the preparation of the 7th may be effected by any interval of the common chord. At (*c*) the 7th is prepared by the 3rd; at (*d*) by the 5th; and at (*e*) by the 8th.

Characteristic difference between the chord of the Fundamental 7th, and that of the 7th in Sequence.

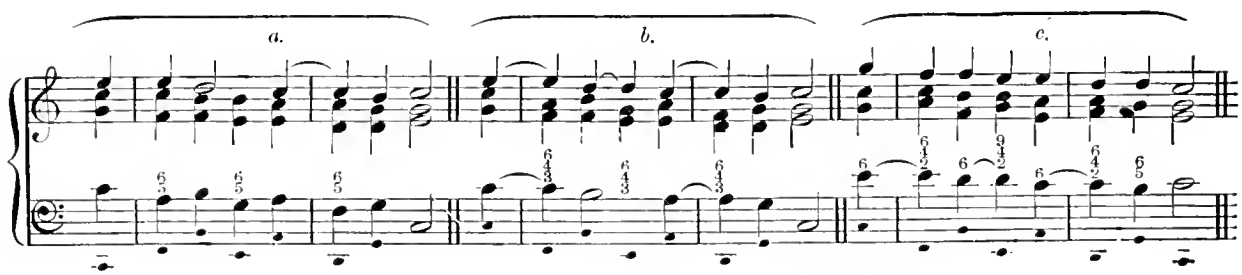
The chord of the fundamental 7th is produced by nature*.
It stands between *consonances* and *dissonances*, as it requires *no* preparation, but must be resolved.
By its means all modulations are effected.

The chord of the 7th in sequence is produced by art.
It is a dissonant chord, and must be prepared.
It prevents modulation.

In every other respect both chords are exactly alike.

The 7th by sequences has its inversions like the Fundamental 7th :—

Ex. 288.



At *a*: First inversions. At *b*: Second inversions. At *c*: Third inversions.

In the above Example, sequences of the 7ths and common chords succeed each other alternately, which produces a much better effect than an uninterrupted succession of 7ths.

Intermixture of the Fundamental 7ths with 7ths in Sequence.

When the 7th in sequence is a half tone higher than the fundamental 7th, the chord will be a major chord (*a*) :—

Ex. 289.



When the 7th in sequence is a whole tone below the octave (like the fundamental 7th), the chord will be either minor as at *b*, or imperfect as at *c*.

If, therefore, in the first case (at *a*) the 7th be lowered a half tone, as at *d*; or the chord changed from minor to major, as at *e*; or from imperfect to perfect, as at *f*; the chord of the fundamental 7th will be produced.

* See Example 63.

If, during the progression of sequences of 7ths, we change any one of the chords to a dominant chord, a modulation will immediately be effected to the *succeeding tonic*, upon which a close, though not a final one, may take place; or, if we choose, we may, upon this *last tonic*, commence a progression of sequences, and continue as before.

Observe that, in a progression of sequences, no sharp or flat can be introduced which does not belong to the key in which the progression takes place; for a modulation to another key would be the immediate consequence, as will be seen by the following Example :—

Ex. 290.



The sequences continue to the 3rd chord (inclusive); the fourth chord, having been made major, modulates to the key of A minor at the 5th chord, after which we close with a cadence.

These progressions of sequences may be intermixed effectively with a progression of dominants, thus :—

Ex. 291.

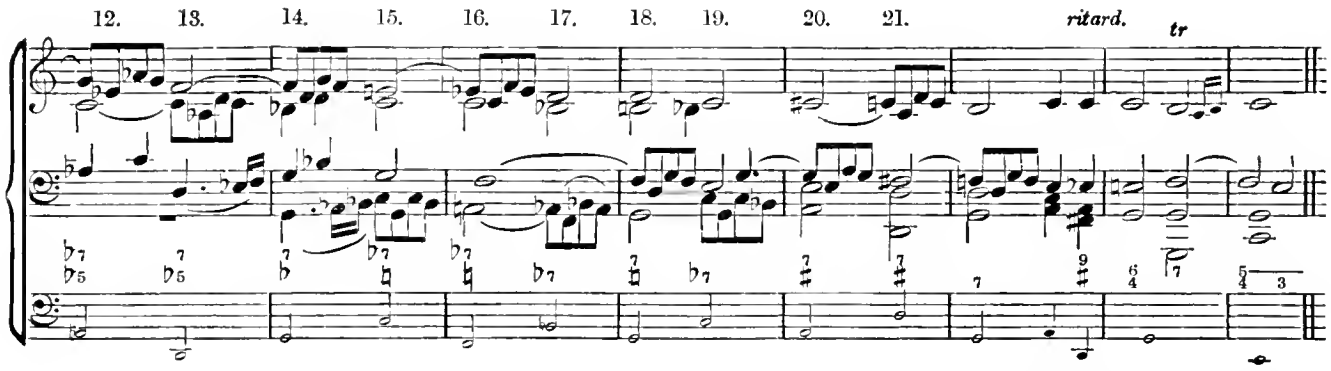


In the preceding Example, the same progression of the fundamental bass is continued throughout; but, after the first three, instead of *sequences*, we have employed *dominant chords*, by which a protracted modulation is effected at 4, 5, 6.

The following Example will show how admirably these sequences, when intermixed with dominant chords, are adapted for imitation and variety of effect :—

Ex. 292.





In the preceding Example, at 1, 2, the soprano commences a short subject, selected from the two first chords of these sequences ; and, in order to give this subject more character, two notes of secondary harmony have been introduced.

At 2, the alto commences the imitation, which is continued to 6 ; here the tenor takes up the subject, with a slight variation, and pursues it as far as 10, where it is resumed by the alto, and subsequently imitated by all the parts alternately.

The bass, at 1, 2, also commences a short subject, founded on the two first fundamental basses, with their first inversions. This subject is answered at 11 by the tenor, and at 14 again, slightly, by the bass ; which part, at 15, takes up and continues the subject of the soprano to 19.

The sequences continue as far as 7, consequently we remain in the *original* key.

At 8, commences a *protracted* modulation*, which ends in the key of E♭ ; for, at 11, the modulation is arrested in its progress by the introduction of sequences, which continue to 14.

From 15, a mixture of protracted and deceptive modulations† leads us back to the original key.

In order to ascertain whether a bass melody, about to be harmonized, will admit of sequences, it is only necessary to examine whether it contains any of the following progressions :—

Ex. 293.



At *a* : Is the progression of the fundamental bass itself.

At *b* : The progression of its 3rd.

At *c* : The progression of the 7th ; and as that interval must be always prepared, it is easily distinguished from any other, by *two notes* of the same denomination being tied together. The first of these notes is the preparation of the 7th, the second is the 7th itself, and the note which follows is its resolution.

Although the progression of the 5th is similar to that of the 7th (see *d*) ; yet the effect is not so good, and therefore it ought to be sparingly employed.

* See page 209. † See page 207

Let us suppose that we were required to harmonize the following bass melody :—

Ex. 294.



It is evident, from the progression of the intervals of the above theme, that the greater part of them may be considered in three points of view :—

First, They may be treated as a progression of sequences, as follows :—



Secondly, As a progression of dominant 7ths, and thus modulate :—



Thirdly, As partaking of both :—



In the following Example, at *a*, the bass melody of Example 294 will be found harmonized throughout with sequences, except where the progression of its intervals rendered it impracticable:—

Ex. 295.



The following is the same melody and harmony as the foregoing, with the addition of passing, and auxiliary notes and secondary harmonies, by which the imitation between the several parts naturally arising out of a progression of sequences, will be more clearly perceived :—



N.B. The 5ths, at *c*, between the soprano and tenor by contrary motion, are allowable*.

Those basses, which in the preceding Example were treated as *sequences*, are in the following Example treated sometimes as *dominants*: the rules of "modulation by the intervals of a melody†" have likewise been employed; and thus an effect is produced, so very different from that in the preceding Example, that one would scarcely imagine both to have emanated from the *same* bass melody.

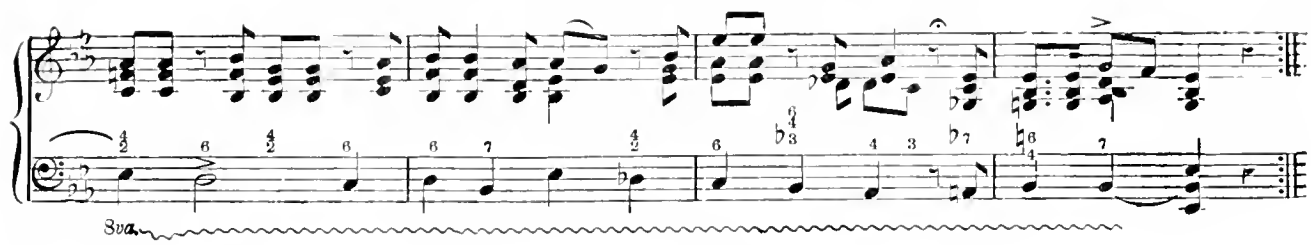
The Student will find much improvement in a careful examination and comparison of these two Examples.

Ex. 296.



* See Example 302 *(f)*.

† Page 138 to 150.



N.B. In the second bar a deceptive modulation takes place*.

Lastly, The melody, in Example 295, *which has been extracted* from the bass melody of Example 294, is, in the following Example, re-harmonized with *other basses,* according to the five rules of employing fundamental basses, and "modulation by the intervals of a melody."

Ex. 297.



By comparing the bass and harmonies in this Example with those of the two preceding, we shall perceive what a variety may thus be created; and those who are inclined to study composition, will, even in these few Examples, find ample matter. The preceding specimens will sufficiently show how 7ths in sequence may be employed with effect; their introduction not only prevents frequent modulation (thus impressing the present key more strongly on the mind), but also adds strength and vigour to the texture of the harmony. They contribute, moreover, materially to cement and interweave the several sections of which periods are constructed†, thus forming a still more connected chain throughout the whole composition.

* See Example 273.

(*a*) See Licensed Resolution of Dissonances, Ex. 357. (*b*) See Ex. 255. (*c*) See Ex. 223, *f*. (*d*) Ex. 268.

† See Periods, Example 320.

Sequences of 6ths, 6 5, and 7 6.

From the progression of fundamental sequences of common chords, at *a*, arise those at *b* and *c*,

Ex. 298.



In employing the progressions of the preceding Ex., it may perhaps be better to let the 6th appear on the accented part of the bar (as at *b*), because the 5th in that situation produces in some measure the effect of consecutive 5ths: this observation, however, has only reference to what is called the strict style of writing*.

By omitting the common chord in the progression at *c*, a sequence of the chord of the 6th will be produced (as at *d*), the effect of which, when judiciously employed, is very good.

From the descending progression of 6th at *e*, is derived that at *f*, which indeed is nothing else than the dissonance of the 9th resolving into the 8th; in this case, however, the interval of the 9th (which is the 7th to the present bass) must appear in the soprano: were we to give it to the alto, as at *g*, consecutive 5ths would be produced; for the intervening dissonance does not obviate the improper progression. This is shown at *gg*, where the dissonance is omitted; should we, however, consider the proper fundamental bass to this progression to be, as written at *h*, then the 7 6 arises from a sequence of 7ths, and these two intervals may appear in the alto.

It may be observed, that a sequence of 6ths is better calculated for a harmony of three parts than four; because, in avoiding the consecutive 5th at *l*, the tenor is obliged (as at *i*, *k*) to proceed by great intervals, which disturbs that smooth and graceful progression for which sequences of 6ths are distinguished.

How admirably Haydn has treated a progression of sequences of this description will be seen from the following specimen, extracted from one of his quartetts:—

Ex. 299.



* See Strict and Free Style.

The following Example, which is written for the pianoforte, exhibits all the preceding sequences in their various forms, ascending and descending. They are written chiefly in three parts; and still more clearly to show their effect when written thus, a contrast is produced by writing the harmony on every other occasion as full as possible.

Ex. 300.



* See Example 279.



Three Motions in Harmony.

When two or more parts proceed together in ascending or descending, they are said to proceed by similar motion (as at *a*) :—

Ex. 301.



When one part ascends or descends, whilst another remains in its place, an *oblique* motion will be produced (*b*). When one part ascends while another descends, they proceed by *contrary* motion (*c*). These different motions or progressions may be more or less combined ; for example : two parts may proceed by *similar* or *contrary* motion, and a third part remain in its place. At *d*, the soprano and alto proceed by similar motion, and by the bass remaining in its place, they produce collectively the *similar* and *oblique*. At *e*, the soprano and bass proceed by *contrary* motion ; but, the alto remaining in its place, they produce collectively the *contrary* and *oblique*. At *f*, the soprano and alto descend by *similar* motion, whilst in like manner the bass and tenor ascend, producing collectively the *similar* and *contrary ;* and at *g*, the *oblique* has been added. At *h*, all these various motions have been exemplified by the progression of the chord of the fundamental 7th to its tonic.

Consecutive 5ths and 8ths.

It has already been shown how these forbidden progressions in some measure may be avoided* ; we shall now dilate somewhat more on this subject, and introduce specimens from the works of the

* Page 22

most classical authors, to show how they have proceeded on these occasions. One *general* rule, however, by which these troublesome progressions may be got rid of, is, to employ contrary or oblique motion. In the following Example,

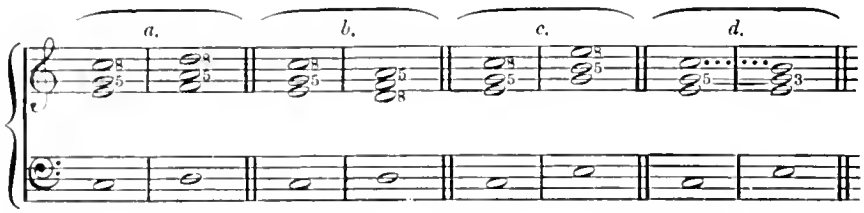
At *a*: Consecutive 5ths and 8ths.

At *b*: Prevented by contrary motion.

At *c*: Consecutive 5ths and 8ths.

At *d*: The 8ths are prevented by *contrary*, and the 5ths by *oblique* motion.

Ex. 302.



5ths and 8ths may follow each other in the *same* parts, provided they proceed by *contrary* motion.



At *e*: Are 8ths between the treble and bass.

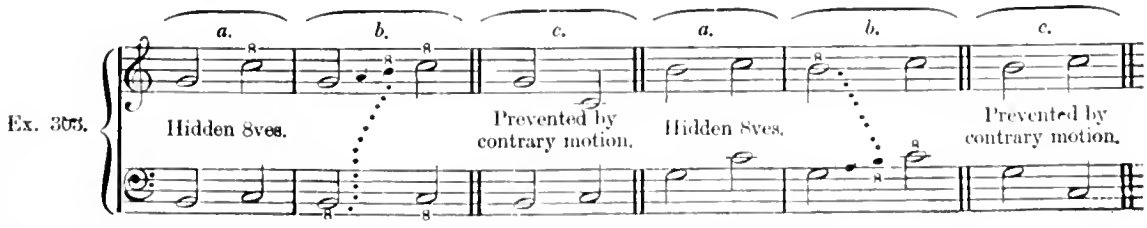
At *f*: 5ths between the tenor and bass.

At *g*: As here written, there appear consecutive 5ths between the tenor and bass, but the composer makes the second violin and tenor *cross* each other, and thus the 5ths are prevented .

Hidden Fifths and Eighths.

When two parts, proceeding together by similar motion, terminate their progression by 8ths, they are said to produce *hidden* consecutive 8ths (as at *a*); for if the space between these two intervals be filled up (at at *b*), consecutive 8ths will be evident; but, as these notes are not introduced, such consecutive 8ths are therefore purely *imaginary*: they may easily be prevented by contrary motion (as at *c*).

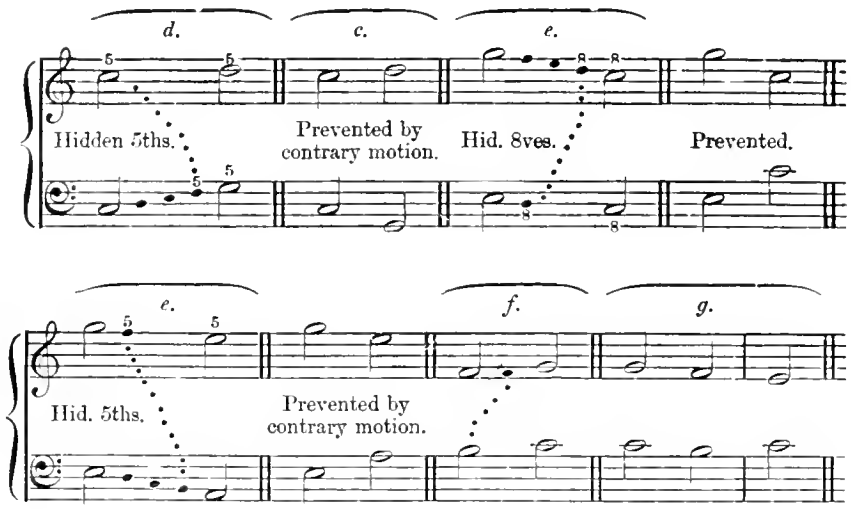
Ex. 303.



The same observation may be applied to hidden 5ths (*d*).

* Page 32.

Such hidden 5ths or 8ths as are produced by both parts proceeding by *skips* (as at *e*), are worse than the preceding, and should be cautiously avoided.



The *minor* or false 5th should (strictly speaking) not be allowed to *precede* the major 5th, because a hidden perfect 5th is found between them *(f)* *; but the *major* 5th *may precede* the minor 5th *(g)*. Hidden 5ths and 8ths are generally allowable, and it will be found that the works of the best and most classical authors abound in them; between the *extreme* parts, however, it is at all times advisable to avoid them. Yet, even *here*, we find Haydn and others have had no scruple in using them (see *a*):—

Ex. 304.



The consecutive 5ths which are produced by the progression of the chord of the $\sharp^{6}_{5}$ at *a*, are at *b* prevented by *suspensions*. Cherubini, however, in one of his late church compositions, has permitted those consecutive 5ths, as exhibited at (*c*), to appear more than once†.

Consecutive 5ths (when produced by passing notes) are permitted, because passing notes do not form an essential part of the harmony‡.

Ex. 304*a*.



* This rule is not so much attended to by modern composers. † See page 154.

‡ See Sulzer's *Allgemeine Theorie der Schönen Künste*, page 75.



Improper progressions cannot be prevented by diversifying, or (as it is usually called) breaking the chord ; for, whether the intervals of the chord are varied as at *(a)*, or struck together as at *(b)*, their effect, with reference to their improper progression, will remain the same.



Nor can consecutive 5ths or 8ths be prevented by the introduction of rests *(c)*.

As a progression of 3rds is allowed, why may not a progression of 5ths or 8ths be allowed also? NATURE HERSELF APPEARS TO REJECT THEM !

We find that the harmony arising from the vibration of a string produces consecutive 3rds, but neither consecutive 5ths or 8ths*. Nature has here been most decided : she points out to us an uniform uninterrupted chain of harmony, so closely interwoven that not the least break is discoverable. *Hidden*, or, in other words, *imaginary* 5ths and 8ths do present themselves, but no *real* consecutives. Neither shall we find that two intervals of the same name, except 3rds, follow each other directly ; and *even those* are of different species ; for, the first of them (which is produced on the second of the scale), is *major*.

The continual interchange of intervals which takes place in the harmony of the scale, arising from nature, points out to us the origin of that beautiful variety and regularity, so indispensable in a musical composition. In one word, it is the fountain from which flows the first stream of pure harmony, and the stream ought to be kept as pure in its course as the source from which it springs.

The necessity, therefore, for the rule, that "consecutive 5ths and 8ths are to be avoided," is self-evident, and we may rest assured that, when these improper progressions have been permitted to take place, it has been at the sacrifice of a better melody and harmony.

INTRODUCTION TO THE CONSTRUCTION OF MELODIES.

On the different measures of Time, Rhythm, &c., &c.

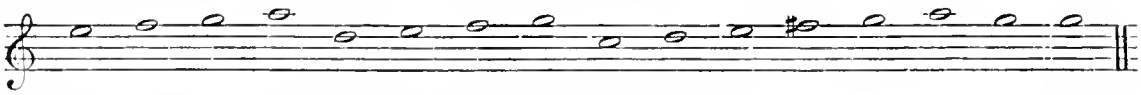
Hitherto the pupil has harmonized only such melodies as were written for him ; it shall now be shown how he himself may construct melodies.

The first step towards the accomplishment of this object will be to make him acquainted with the formation of a bar, and the various descriptions of time in which a composition may be written.

* See page 50.

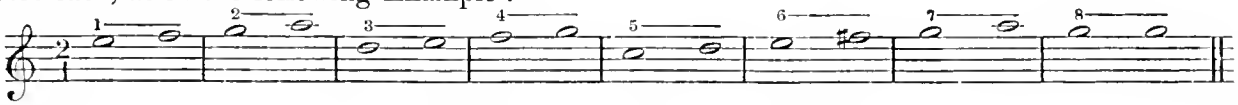
In order clearly to understand what is meant by different measures of time, let us suppose the notes in the following Example performed with an equal degree of strength throughout; in this case they will convey no particular meaning or expression, except what is produced by their rising and falling; they are (if we may be allowed to use a metaphor) *inanimate;* and though *harmony, modulations, dissonances,* &c., might contribute much towards calling them into life, yet one powerful ingredient would still be wanting, viz., *a proportion* or form.

Ex. 306.



In order to obtain this *rhythmical* form, let us divide the above series of notes into portions of two notes each, as in the following Example :—

Ex. 307.



These divisions we shall call bars, which are distinctly separated by lines drawn across the staff. This process gives us eight bars. Were we, during the performance, to count them—one, two, three, &c., to eight, we should unconsciously lay a stress upon the *first* note of each bar, but not on the second; this we shall call ACCENT; and it is the commencement of rhythm.

From the *first* division of two notes in each bar is deduced the rule that, "when a bar contains two portions of equal value (whether they be semibreves, minims, or crotchets), the *first* half is accented, and the *second* half *unaccented.*

This measure of time we shall, for the present, mark by the figure 2, at the beginning of the staff; thus: $^{2}/_{1}$ for two semibreves in a bar; $^{2}/_{2}$ for two minims; and $^{2}/_{4}$ for two crotchets*, and as each bar consists of *two* notes of equal value (or their equivalent) we shall call it *equal* or *common time*†.

Ex. 308.



Two bars of the above may be united to form *one* bar; which will produce a measure of time of four; thus: $^{4}/_{1}$, $^{4}/_{2}$, $^{4}/_{4}$, $^{4}/_{8}$.

Ex. 309.



* The upper figure expresses the number, and the lower figure the value (as to time) of each note in a bar.

† In modern compositions, this measure of time is generally marked thus, ¢: it would, however, be advisable to adopt the above simple mode, as it is better calculated to show the real difference between the $^{4}/_{4}$ here mentioned, and the $^{2}/_{4}$ hereafter shown.

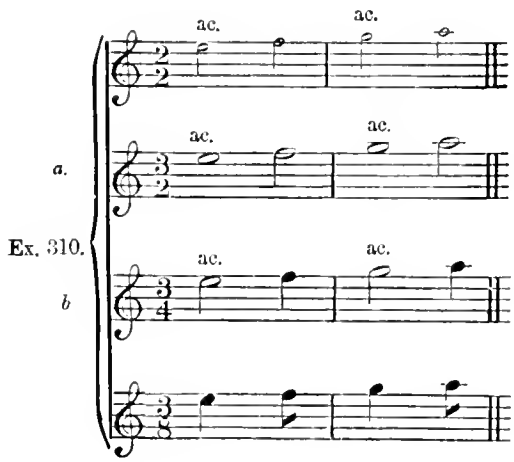
As each bar of the *latter* arises from an union of two of the *former*, it follows that each bar of the latter must necessarily have also *two accents*, viz., on the *first* and *third* portions; with this difference, however, that the *second* accent (marked here with a small *a*) is not so strongly accentuated as the *first*.

The time arising from four notes of equal value is called *long common time*.

N.B. Let this distinction between the measure of $^2/_2$ and $^4/_4$ be carefully kept in mind.

If that *equal* measure or division of time which was first described be destroyed by doubling the value of the *first* portion (as at *a* in the following Example), or by reducing that of the *second* portion to one half of the value (as at *b*), a new measure of time will arise, consisting of three notes of equal value (as to time) in each bar; this is called triple, or unequal time, and is marked thus: $^3/_2$ $^3/_4$ $^3/_8$.

Ex. 310.



As the above triple time arises out of the measure of $^2/_2$, as described at Ex. 308, it should consequently have but *one* accent, viz., on the first portion of each bar.

It is, however, necessary to observe that another kind of triple time is in use, arising out of an original grouping of *three notes* of equal value, between which notes the accent is sometimes equally divided.

Ex. 311.



The characteristic difference between these two species of triple time is sufficiently strong not to be easily mistaken; for instance, it will be clearly seen that the triple time at (*c*), in the following Example, is derived from the measure 2 at (*b*); whilst that at (*d*) is derived from an original grouping of three notes of equal value. The accent of the former measure of time admits of no doubt, whilst that of the latter is equivocal.

Ex. 312.



If in a bar of 2, one half its value be added after each note, a new measure of time will again be produced, called compound common time, marked thus : $^{6}/_{4}$, $^{6}/_{8}$.

Ex. 313.



As this division of time arises out of the measure of 2, it ought consequently to have but *one* accent, and we shall call it short compound common time.

When two bars of triple time, arising out of the measure of 2, are united, *long* compound common time will be produced.

Ex. 314.



As this time arises out of the measure of 4, each bar must of course have but *two* accentuations, as in Ex. 309. This *long* compound common time, arising out of 4, is sometimes mistaken for that arising from 2. The difference, however, will be immediately perceived on comparing the *short* compound common time at (*b*), with the long at (*c*)* in the following Example :—

Ex. 315.



By adding the bars of short $^{6}/_{4}$ together, we produce $^{12}/_{8}$; and as this measure of time arises from $^{4}/_{4}$, it follows that *two* accents must take place in each bar.

Ex. 316.



By adding one-half of its value to each note of 3 in a bar, compound triple time, $^{9}/_{8}$, is produced.

Ex. 317.



Whether the accent is to fall on the *first* part of the bar, or to be equally divided, will of course depend on the *original* measure of time from which this compound time is derived.

The following Example (318) will exhibit, in a still stronger point of view, the variety of effects which may be produced by merely altering the *rhythmical* form of a simple melody. In this it will be perceived that, without deviating from the *original* progression of the notes, all the subsequent variety of effects has been produced by either changing the measure of time; by shortening or lengthening the value of some of the notes; by employing dots, rests, &c., &c. As one example often tends more to elucidate a subject than pages of explanation, the following may serve as a slight specimen of the importance of rhythm; and to show how much it influences the effect of a musical composition, a description has been attempted of the various feelings and passions supposed to be portrayed by the different alterations of the rhythmical form of the melody. Rhythm, indeed, may be considered as the soul of music, and demands our utmost attention.

Ex. 318.





On the Construction of Periods, or Musical Phrases.

In the preceding Examples it has been shown that, by dividing a succession of notes into certain portions, bars are produced. Proceeding thus with a succession of bars, we shall produce *musical periods*, or *phrases*. An union of several of these periods forms a composition. As the most natural measure of time arises out of an even number of bars, viz., $^2/_2$, $^4/_4$*; those periods which consist of 2, 4, 8, 10, or any even number of bars, are the most natural and pleasing; we shall therefore call

* See Example 308.

them *regular periods*. The conclusion of a period, in music, is similar in effect to a full stop in language; every period should therefore end with a cadence.

The following Example is a period consisting of four bars, including the final cadence:—

Ex. 319.



As at the close of this period the ear is brought to a state of perfect rest by the final cadence, we shall call it a "*perfect period.*"

It is not absolutely necessary that all periods should end in the same key in which they commenced.

Ex. 320.



Here the period commences in the key B♭, and ends in its relative minor: it will however be understood, as a matter of course, that the melody cannot end *thus;* something must follow, in order to return to the original key.

After having commenced a period of eight bars, we perceive, on approaching the fourth bar, that we are imperceptibly attracted towards the harmony of the dominant, and a desire is experienced, at that point, to come to a certain degree of repose. If, therefore, in the fourth bar of a period of eight bars we come to the harmony of the dominant*, whether by *progression* or *modulation*, we shall call it a half period; to proceed by modulation, however, is preferable. The period in the following Example consists of eight bars, divided by the half period effected by modulation at *(a)*:—

Ex. 321.
Haydn.



Had the harmony of the third and fourth bars of the above Example been written as at *(b)*, the half period would have been formed by progression.

* Although the harmony of the dominant is here the most natural, yet, for the sake of variety, a modulation to the relative minor, or dominant, subdominant, &c, ought not to be objected to, as will be shown presently.

Where the melody is written in long common, or long compound time, the period will generally be found to consist of four bars only: in that case the half period will of course fall on the second bar.

Ex. 322.
HAYDN.

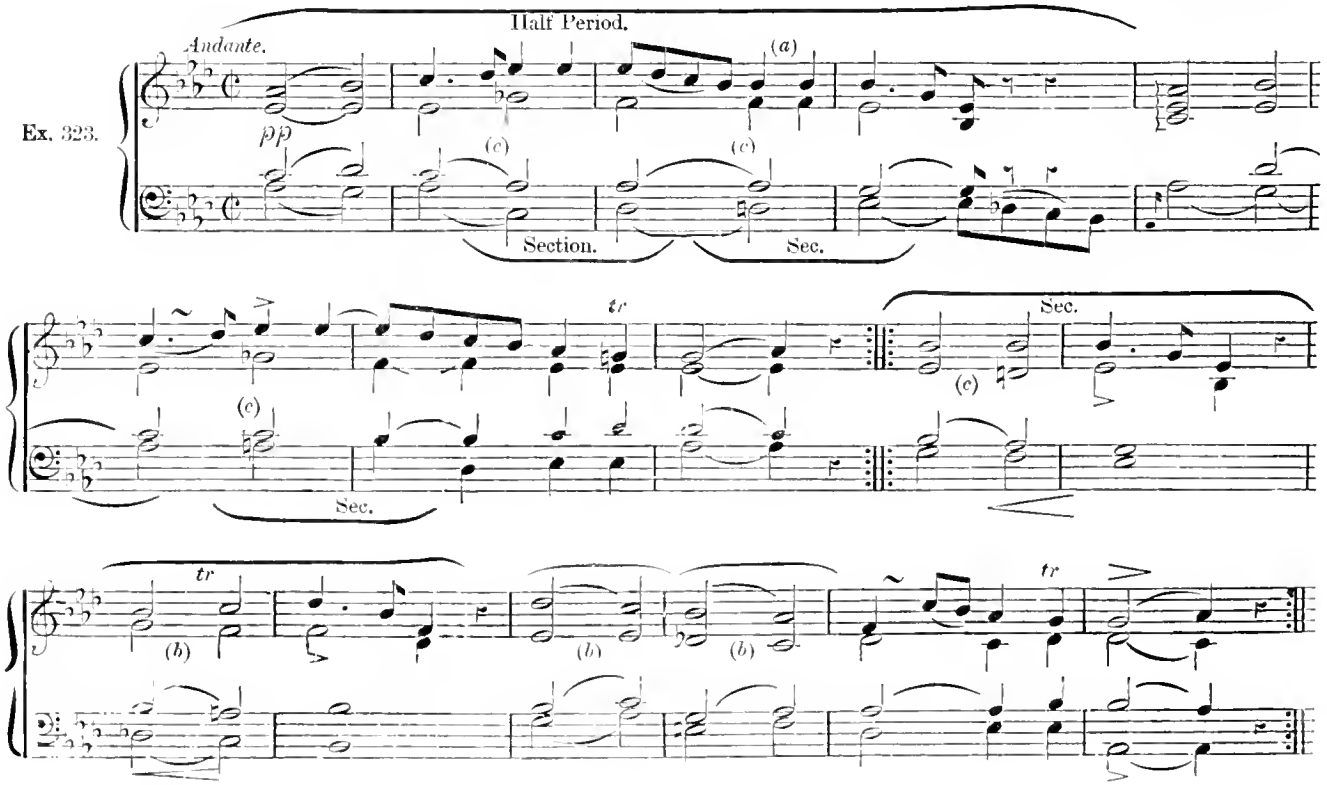


A period, or half period, may also be divided into smaller portions, called "*Sections*," which may either proceed by *progression* or *modulation*. When a section of modulation is introduced on the accented part of the bar, we shall call it an *accented section of modulation*; and when introduced upon an *unaccented* part of the bar, an *unaccented* section of *modulation*; the effect of the latter, when contrasted with that of the former, will be found much more soft and insinuating.

These matters will probably be more clearly comprehended by examining the following melody with attention.

First: It comprises sixteen bars, divided into two parts of eight bars each. Each of these parts consists of a whole period. The first is divided by a half period, effected at *(a)* by a modulation to the dominant. At *(b)* are *accented* sections of modulation, and at *(c)* they are *unaccented*.

Ex. 323.



Had the same melody been written and harmonized as in the following Example, the sections, together with the half period, would have been by *progression* instead of *modulation*:—

Ex. 324.



The notes constituting the final cadence may of themselves be treated as a period, as in the following Example; but, as the effect produced by such short periods (particularly when written in immediate succession, and without modulation) is exceedingly monotonous and puerile, they should be avoided.

Ex. 325.



By the introduction of modulation, however, even such short periods may be made pleasing and interesting.

Ex. 326.



By a careful examination of the above, we shall find, First: That the monotony produced by the second period in Ex. 325, is here avoided by a modulation to E minor. Secondly: That the last four bars which in Ex. 325 appear as *two periods*, are here united into *one*, by the introduction of the modulation to B minor in the sixth bar.

It will be perceived that the modulations by which an union is effected between the several periods in the preceding Example take place upon the unaccented parts of the bar; if, however, the rhythm of these bars be altered, a new and more striking effect will be given to the whole subject, thus:—

Ex. 327.



That the rhythm here is neither so natural nor so flowing as in Ex. 325, is evident; nevertheless, when introduced with judgment, it will produce an excellent effect.

N.B. It is not necessary that the cadence which closes a period should always be so complete as those in the preceding Examples; a mere *progression* of the chord of the fundamental 7th to its tonic will often be found quite sufficient to satisfy the ear, and conduct it to a certain degree of rest.

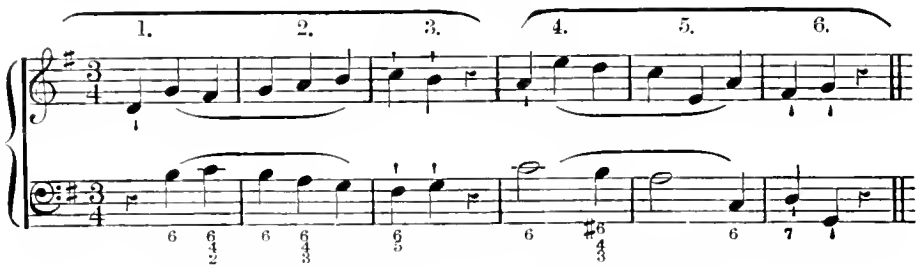
The national air of "God save the King" contains two periods; the first of which has six, and the last eight bars. They are divided into sections of two bars each.

Ex. 328.



The following Example contains a period of six bars, divided into sections of three bars each:—

Ex. 329.



It has been stated that those periods which consist of an *equal* number of bars are the most natural and pleasing; some authors, however, in order to produce peculiar effects, do not scruple to depart from this general principle.

The period in the following Example consists of nine bars; the first four bars of which form the half period, and the second portion contains five bars:—

Ex. 330.
Haydn.



This odd number of bars, when first heard, produces a very singular effect: the seventh bar in this period appearing to be uncalled for, and as if it were interpolated. It is, however, only necessary to play this charming melody a few times over, to convince us that the *added* bar is, in fact, a very great beauty.

The following Example shows how very effectively Mozart has introduced periods consisting of three and five bars:—

Ex. 331.



The first five bars constitute a half period. The period which follows contains *four* bars divided into sections, and the last period consists only of *three* bars. Had the preceding specimen been written as in the following Example, we should have had each portion equally divided, that is,—the first half period would have contained *four* bars instead of five, and the last period *four* bars instead of three; but then, that spirited and energetic effect which the unequal division of the bars at (*a* and *b*) is calculated to produce, would have been totally sacrificed. (See *c* and *d*.)

Ex. 332.



N.B. Those periods which consist of an *unequal* number of bars, we shall call "*irregular periods.*"

It is not necessary that a period should always commence with the accented part of the bar; on the contrary, it may commence with a *part*, or the whole, of the unaccented measure; in which case the value of the notes at the end of the period, when united with those at the beginning, must constitute a whole bar.

The periods in the following Example commence at *(a* and *b)* with the whole; at *(c)* with three-eighths; and at *(d)* with one-half of the unaccented part of the bar:—

Ex. 333.



We often find that two periods in immediate succession are constructed, so that the *last* bar of the one immediately preceding is also the *first* bar of the one succeeding.

Ex. 334.



Although the interweaving of periods in this manner is sometimes very effective, it can only be considered as a license, and ought not to be indulged in too frequently.

When the expected final close of a period is interrupted by either an imperfect, or any of the false cadences, we shall call it "*an irregular period.*"

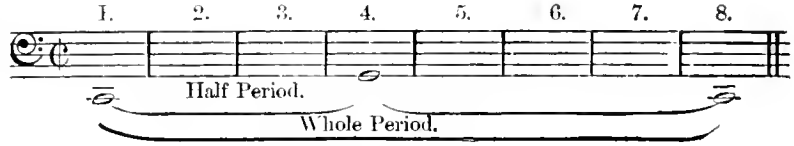
How to Construct Melodies.

The pupil may now construct melodies himself, by proceeding thus:—Having determined on the key and the time in which he intends to write (the former of which we shall suppose to be the key of C major, and the latter, short common time, $^2/_2$), let him divide the staff into eight bars; on

* Ending of the first period and commencement of the second.

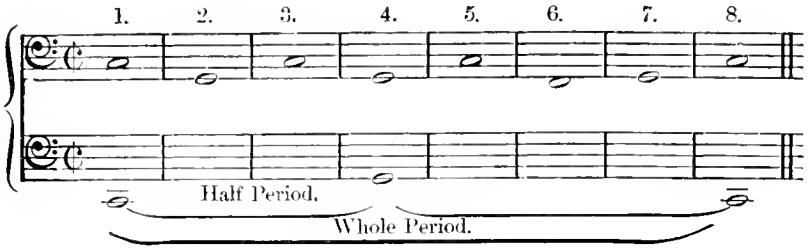
the *first* and *last* of which let him place the tonic, and on the *fourth* bar the dominant. This simple arrangement may be considered as the first sketch or outline of a whole period, divided in the middle by the half period.

Ex. 335.



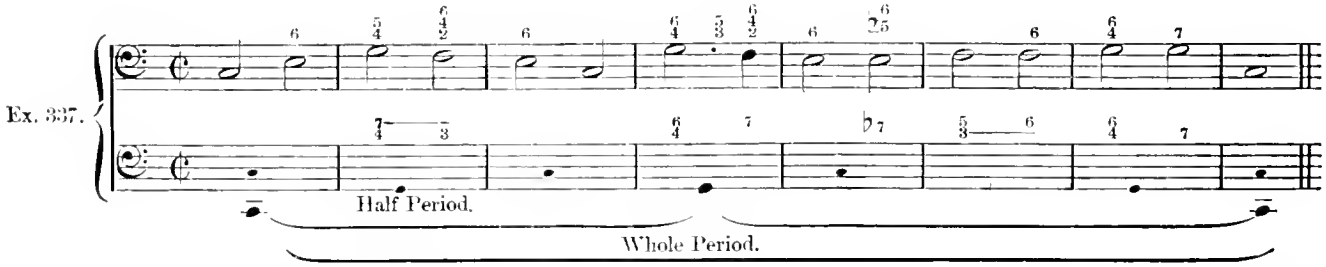
The unoccupied bars may now be filled up with different fundamental basses, as in the following Example :—

Ex. 336.



The pupil is here supposed to have chosen the dominant for the second bar, and the tonic for the third, thus arriving at the half period by *progression*; from hence he sets out again with the tonic, succeeded by the sub-dominant and dominant. Having now selected his fundamental basses, let him extract from these his inverted basses, which will produce a melody in the bass†.

Ex. 337.



From these inverted basses, or bass melody, must be extracted a counter-melody for the soprano, or treble‡.

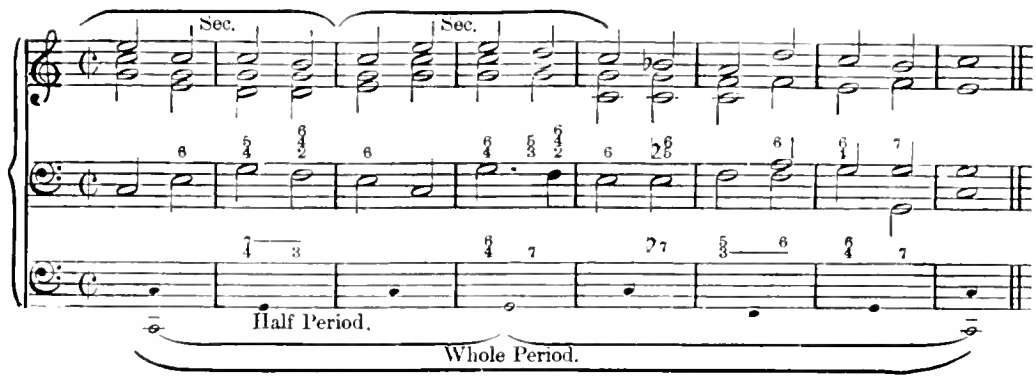
Ex. 338.



To which let him now write the alto and tenor, and he will have a simple melody harmonized in four parts, to which may be added, if necessary, dissonances and passing notes, according to the instructions already given from page 62 to 171.

† The pupil will be greatly assisted in selecting his inverted basses by again perusing what has been said upon that subject, commencing at page 99. ‡ See Ex. 219.

Ex. 339.



Although the above specimen is, for the sake of simplicity, constructed in common time, $^{2}/_{2}$, yet that it may be changed with very good effect into any other measure is evident, according to the principles laid down from Ex. 306 to 317.

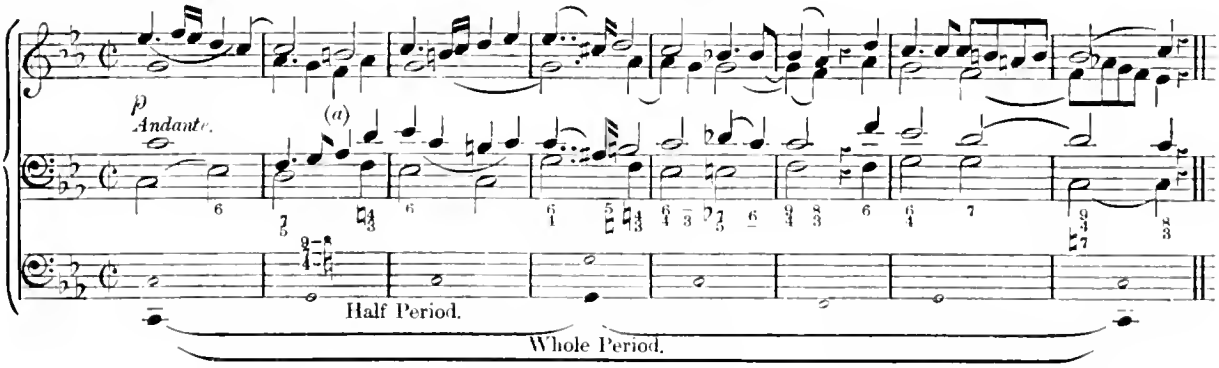
In the following Example, the same melody has been altered into short compound common time, $^{6}/_{4}$*. No change in the harmony has taken place (except that of its being extended), as will be seen by examining the fundamental and inverted basses.

Ex. 340.



In the following Example the *original* melody (at Ex. 339), is harmonized in the minor mode. Dissonances are added, with passing and auxiliary notes, and the harmony is extended. At (*a*) the second inversion has been chosen instead of the fundamental bass.

Ex. 341.



The same melody as in the preceding Example is written for the pianoforte, in the style of variations.

Ex. 342.

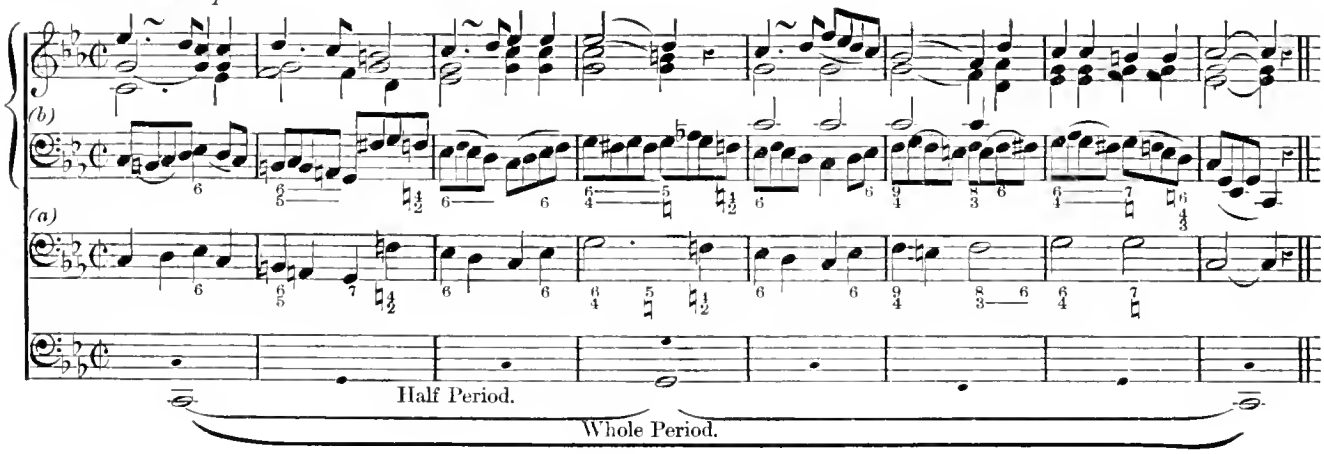


* See Ex. 313. † Accented passing note, see Ex. 238 (*c*).

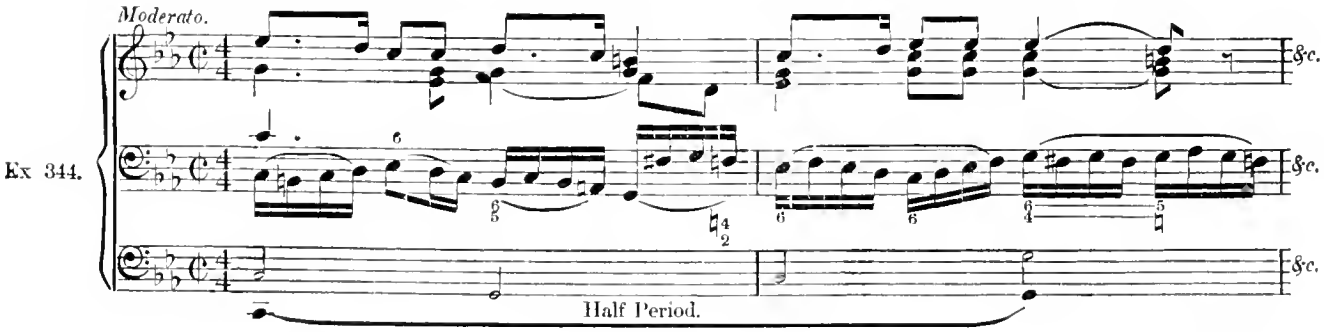


In the second bar of the following Example a slight alteration has been made in the *inverted bass*, by which the *soprano* is affected. The passing and auxiliary notes are here introduced chiefly in the bass. The pupil is recommended to compare the simple inverted bass at (*a*) with the florid one at (*b*), either of which may be used.

Ex. 343. *Andante esp.*



The following Example exhibits the former melody, written in *long* common time*:—



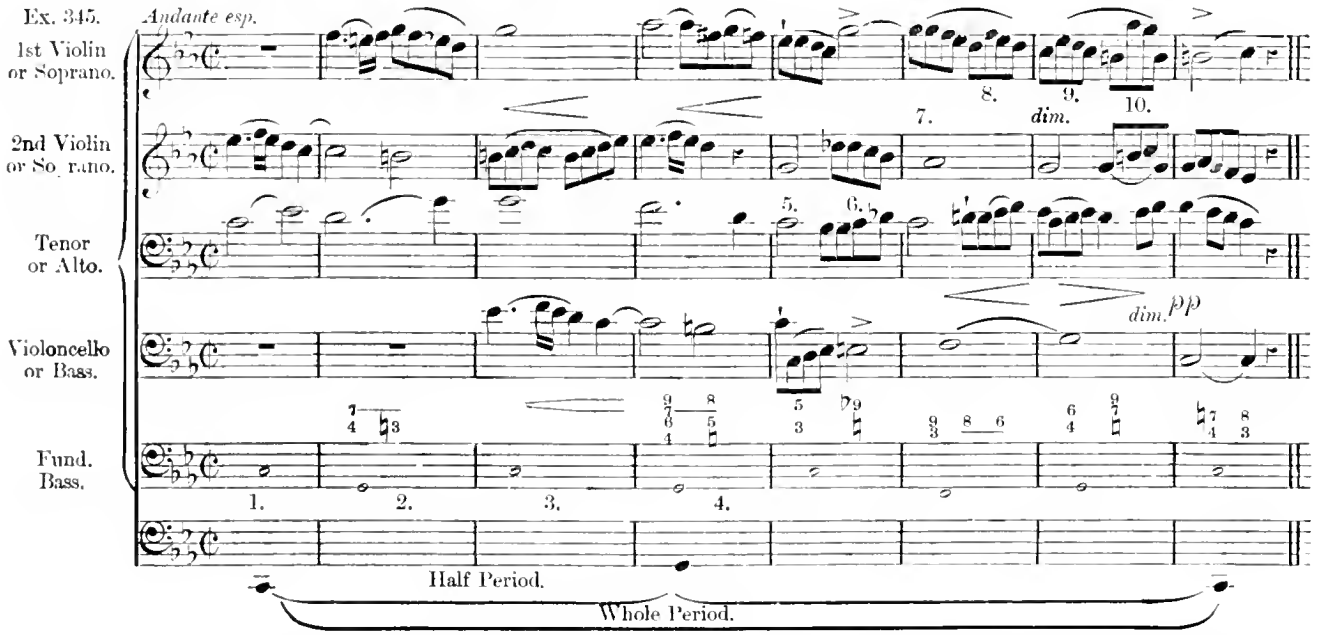
The melody of Example 341, is, in the following Example, divided and dispersed between all the parts, showing how imitation may thus be effected, without any alteration whatever in the original fundamental harmony.

From 1 to 4, the melody appears in the 2nd violin† ; at 5 and 6, in the tenor ; at 7, in the 2nd violin ; and at 8, 9, and 10, in the 1st violin. The two first bars of the melody (as they appear in the 2nd violin), are imitated by the bass in bars 3 and 4.

* See Ex. 309.

† The above Example, it will be perceived, is arranged for two violins, tenor, and violoncello ; the student will, however, observe that this arrangement does not in the least affect the harmony, which may be performed by two sopranos, tenor, and bass.

The student is requested to examine this specimen with care and attention, as he will find it not only *improving*, but very *interesting*.



It is presumed that the pupil, by this time, will have formed a tolerably just idea how a period may be constructed, and when once constructed, how variety may subsequently be produced, by either altering the inverted basses, employing different passing and auxiliary notes, dissonances, &c., and lastly, by changing the rhythm, or measure of time, in which the melody was originally written.

Let him recollect, *that all the different effects which have been produced during the last nine Examples, have arisen solely out of the sketch or outline in Ex.* 336, *and that no other fundamental basses, or inversions, have been employed during that time, but those found in Ex.* 338*; and when he also reflects that many *other* bass melodies may yet be extracted from the same fundamental basses, and that these melodies *again* will produce correspondent melodies in the soprano and inner parts,—he will easily perceive that, in the preceding Examples (however *simple* the original materials), the subject is very far from being exhausted, and that much, *much* more may yet be done with it! This fact ought to stimulate the pupil to exert his own ingenuity in discovering *other* bass melodies from the *same* fundamental basses; and should he in the beginning find some trifling difficulty in succeeding according to his wishes, a very little practice will convince him that this difficulty exists more in *imagination* than in *reality*.

If, then, so much variety can be produced from the simple materials exhibited in Ex. 336, *what may not be produced when the first outline (Ex.* 335*), is filled up with different progressions of fundamental basses.*

The following Example exhibits at one view a variety of specimens of filling up the original outline with different fundamental basses and inversions.

At II, we arrive at a half period of modulation, from which we proceed by a modulation to C, and from thence to D minor.

N.B. A and D, in bars 1 and 2, are modified basses.

At III, a half period by modulation; preceded in the second bar by a modulation to the relative minor.

At IV, a half period by modulation; preceded by a false cadence at bar 3.

* Except in one single instance, where the second inversion is chosen instead of the fundamental bass, and which is scarcely worth noticing.

At V, a half period by progression ; after which a modulation to the relative minor takes place.

At VI, a half period by modulation ; this modulation has previously been effected at bar 2.

VII, needs no explanation.

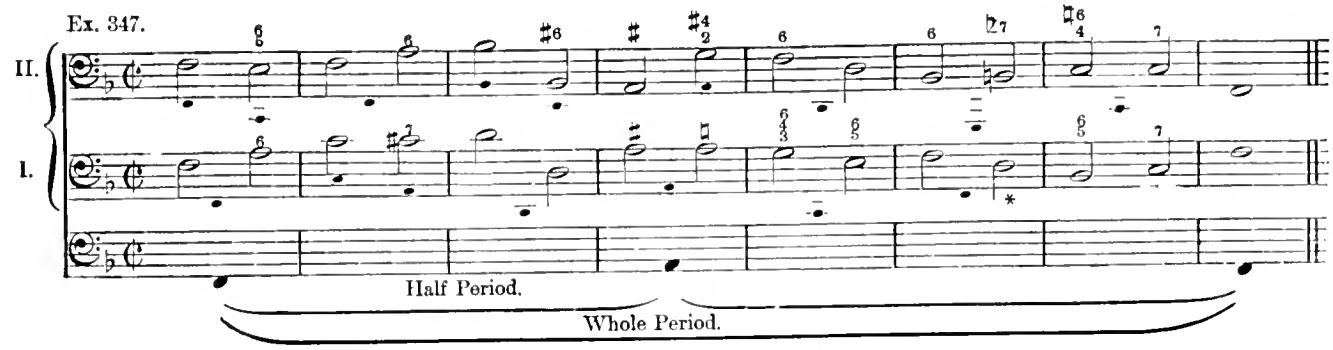
Ex. 346.



The pupil may take any of the above bass melodies, and proceed as already shown in the preceding Example.

In the following Example (347) the *dominant* of the relative minor has been selected to conclude the *half period*. At I, we arrive there by *progression* ; a modulation to the tonic of the relative minor having previously taken place in the second bar. At II, we arrive at the half period by modulation.

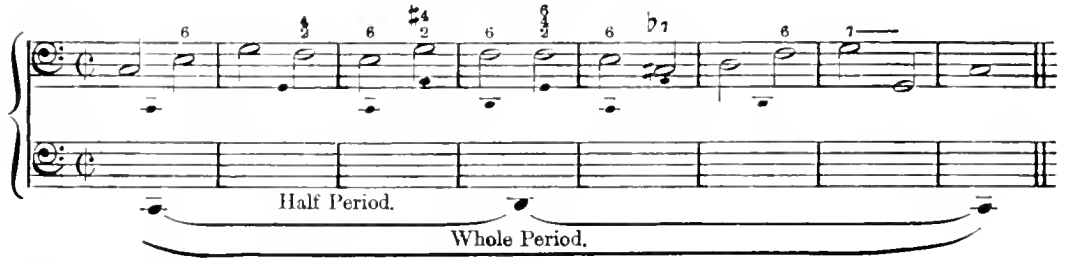
Ex. 347.



Here follows an example where the half period ends with the relative minor of the subdominant.

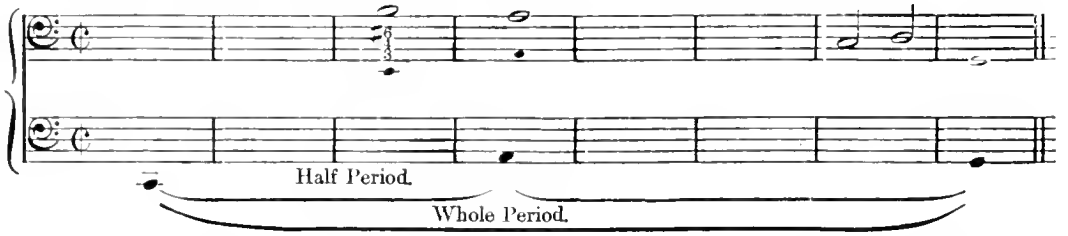
* See Ex. 278 (*a*).

Ex. 348.



In the following sketch the half period ends with the relative minor.

Ex. 348½.



Heretofore, our sketches have consisted of one period or part only; the following Example exhibits such as consist of two parts.

In sketching the outlines of the first period, it will be perceived that nothing decisive has been settled with respect to the key in which the half period is to end; that arrangement shall hereafter be left to the judgment and taste of the pupil himself; for the present, we shall only point out how he may proceed on such occasions.

Ex. 349.



* Ex. 277. † Deceptive Modulation, Ex. 272. ‡ Ex. 274. § Deceptive Modulation, Ex. 270.

At (*a*) we have modulated to the relative minor.

At (*b*) ———————— to the dominant of the relative minor.

At (*c*) ———————— to the dominant of the original key;

which latter will produce rather a monotonous effect, as the *same* modulation occurs again in the eighth bar.

In the *second part*, the half period is made to fall upon the *dominant* of the *original* key: this arrangement became absolutely necessary in consequence of the several modulations which were introduced after the first half period, and by which the ear was imperceptibly led away from the original key. The dominant, however, in the 12th bar, is calculated to recall to our recollection the original key; and thus our ear is gradually prepared for its re-introduction.

Hitherto our periods have consisted of eight bars only; but by the introduction of the false cadence at (*a*), and the irregular false cadence at (*b*), the final close on the eighth bar has been avoided, by which these periods are lengthened to ten bars.

Ex. 350.



The following questions very naturally present themselves at this time, viz.: *suppose I commence in a certain key, in what key shall I conclude my first period*, and *commence my second, &c.?*— In answer to these questions, we shall proceed to give the following suggestions as general rules. Let us suppose that the melody is to consist of sixteen bars, divided into two parts of eight bars each:

If the key is C major, we can end the *first part*—

First: In the tonic, C. Second: In the dominant, G. Third: In the relative minor, A. Fourth: In the dominant of the relative minor, E.

Should the *key be minor* (suppose C minor), we can end the first part—

First: In the tonic, C. Second: In the dominant, G. Third: In G minor (the 5th of the original key). Fourth: In the relative major of the original key E♭.

FIRST CASE.

Suppose the key is *major*, and the *first* part ends in the *tonic?*

Then the half period may end

1*st.* With the dominant by modulation, ... G.
2*nd.* sub-dominant by modulation, ... F.
3*rd.* relative minor of the sub-dominant, ... D.
4*th.* relative minor of the original key, ... A.

The *first* part having been thus disposed of, the *second* part may commence with

The *dominant*, G, at once, or with a modulation to it.

The *half period* may end

1*st.* With the relative, ... A.
2*nd.* Dominant of the relative minor, ... E major.
3*rd.* Dominant of the original key, ... G.

Again:

The *second part* may commence with the *dominant* of the relative minor (E major).

In that case the half period may end

1*st.* With the relative minor, ...A.
2*nd.* Dominant of the original key, G.

Again :

The *second part* may commence with the dominant of the relative minor of the *sub-dominant*, A major. } Here let the pupil choose the key of the half period himself

SECOND CASE.

When the first part ends in the dominant, G. } The half period may end
1*st*. In the dominant, proceeding there by progression.
2*nd*. In the relative minor.

The first part having been thus disposed of, the second may commence

1*st*. With the dominant, G.
2*nd*. With a modulation to the relative minor. } Here let the pupil again choose the key of the half period himself.

THIRD CASE.

When the first part ends with the relative minor. } The half period may end
1*st*. With the dominant, G ; proceeding there either by progression or modulation.
2*nd*. With the sub-dominant, F
3*rd*. With the dominant, G.

The second part may commence

1*st*. With the relative minor, A.
2*nd*. With a modulation to the sub-dominant.
3*rd*. With the dominant of the relative minor, E major.
4*th*. Modulation to the relative minor. } The *half period* may end as the judgment of the pupil directs.

A melody which originally consists of only eight bars may be extended to 10, 12, 16, or a greater number, by repeating some sections of 2, 4, 6, or any other even number of bars.

The following Example is a melody consisting of eight bars. At (*b*) it is extended to ten, by twice repeating the last crotchet of the fourth bar with the three crotchets immediately following. At (*c*), the same melody is extended to sixteen bars, by repeating the last six bars found at (*b*).

Ex. 351.



All these additional bars, however, are not intended to be introduced in the soprano only ; some of them are also to appear alternately in the *alto*, *tenor*, or *bass* ; and as these parts will, in consequence, be obliged to interchange places, a series of imitations will be produced.

In order to show the practical utility of this extension, and how these reiterated sections (which in the last Example occasioned rather a monotonous effect) are here employed to produce imitations, let us harmonize the preceding melody in four parts.

Ex. 352.



The letters *a*, *b*, *c*, have been added to the soprano, alto, and bass, in order that the interchanging of the parts in the above Example, by which the imitations are effected, may be more easily perceived.

At 5, the section for imitation (marked *a*) appears in the *soprano* as originally written. At 6, it is imitated by the *alto* an octave lower; and at 7, by the *bass*. Whilst the *alto* and *bass* thus successively imitate the *soprano*, the latter, at the same time, at 6, imitates the *bass* (*b*), and then the alto (*c*).

At 7, the tenor also partially imitates the *bass* (*b*). From 10 to 16, the parts continue to imitate each other with still more variety; for the sections in the *soprano* and *bass*, at 5, appear at 11 in the *tenor* and *bass*, and are imitated at 12 by the *soprano* and *alto*. And whilst at 13 the sections *a*, *b*, appear once more in the *bass* and *tenor* (but inverted)*, the *soprano* at the same time again imitates the *alto* (*c*) an octave higher. Observe also that the melody in the *tenor*, from 7 to 10 inclusive, has, at 13, been transferred to the *alto*.

It will be observed that hitherto the imitation has always commenced upon the *same* measure of the bar as the subject itself; in the following Example, however, the case is different; for, although the subjects for imitation (which here appear in the soprano and *alto*) do commence on the *second* crotchet of the unaccented part of the bar, as in the preceding Example, yet they are *not* answered by the *tenor* and *bass* on the *same* measure, as heretofore, but on the *second* crotchet of the *accented* part of the bar. Thus a mixed rhythm is introduced, by which a new and still more striking effect is produced.

* By which the two original parts in bar 5 proceed by what is called "double counterpoint" in the octave. See Ex. 150.



The parts which appear in the soprano and alto, at I, are here transferred to the tenor and bass, by which a mutual interchange of all the parts is effected.



The alto and tenor, at II, have here interchanged places; the former being written an octave *lower*, and the latter an octave *higher*. The soprano and bass remain unchanged.



There is not perhaps a more fertile subject, and one which might be more dilated upon than that upon which we have just been treating. If, however, the student possesses a little perseverance and industry, it will be found that enough has been said to enable him to pursue his object with pleasure and benefit.

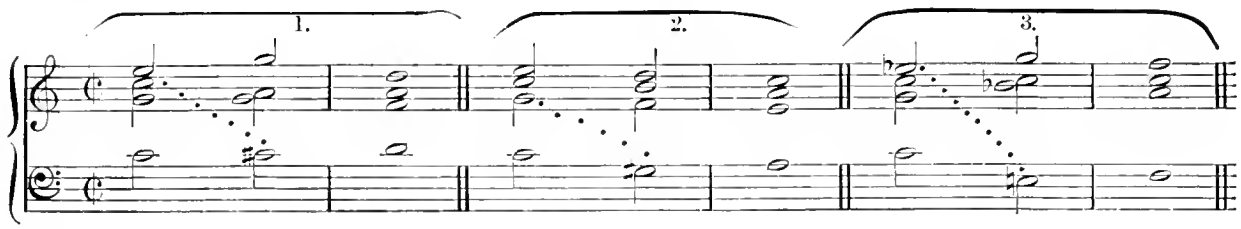
In the meantime he is requested to examine and compare the preceding specimens with care and attention (commencing from Ex. 351); and here he will see how few materials* are sometimes requisite to enable us, by a little ingenuity, to produce variety and pleasing effects. This truth will be still more illustrated and confirmed when we commence analyzing the compositions of some of our best and most classical authors, which we shall do presently; preparatory to this, it will be necessary to give a few hints with respect to what is called the strict and free styles of writing.

In the *truly* strict style, four sorts of notes only (that is, with respect to their duration) are allowed; for example: if the longest be a semibreve, then the shortest will be a quaver, the latter of which can be employed only as a passing note.

All dissonances, in which is included the fundamental 7th, require to be prepared upon the *unaccented*, and struck upon the *accented* part of the bar. No *octaves* or *fifths* on the *accented* part of a bar as exhibited in Ex. 298 *(k)*, are permitted, nor may they be thus prevented. The note of *preparation* must not be of less duration than the *dissonance;* and to add still more to the seriousness of the style, these dissonances must be *suspensions*†. Consecutive major thirds, whether proceeding diatonically, or by skips, as well as all extraneous modulations, or progressions‡, are prohibited.

In the following Example at (1) the note C in the alto is succeeded immediately by C♯ in the inverted bass; this is called "a false relation between two parts," and is forbidden. A false relation is exhibited at (2) between G in the tenor, and G♯ in the bass; and at (3) between the soprano and inverted bass.

Ex. 354.



These are a few of the leading features characterizing the truly *strict* style; which style of writing, however, is now generally considered as antiquated, and almost entirely laid aside.

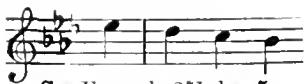
In the *free* style many licenses are permitted which would be quite inadmissible in the style just described. For instance: dissonances may be introduced upon the accented or unaccented part of the bar, prepared or unprepared.

These dissonances, when introduced thus, are sometimes written as at (*a*) but performed as at (*b*), and are called appoggiaturas.

Ex. 355.



* From these few notes are derived all the foregoing imitations and effects:



See Example 351, bar 5.

† Progressions of sequences are therefore particularly suited to the strict style. See Ex. 290 to 297

‡ See Examples 85, 86.



It has already been explained that dissonances should resolve upon the same fundamental bass on which they are heard*.

In the free style, however, dissonances, instead of resolving upon the *same* bass, may resolve upon another bass, provided that the intervals of the resolved discords form either the common chord, fundamental 7th, or 9th, with that bass; so that, in point of fact, the bass on which the dissonance *should* have resolved is altogether omitted, and another substituted. This will be better understood if we peruse the following Example, where, at I, the dissonances resolve as usual, and at II, they have been resolved upon a *new bass*. This may be called a *licensed resolution of dissonances*, and employed with great effect on various occasions.



ANALYZATION.

It is both instructive and amusing to trace the gradual and almost imperceptible change which has taken place in the compositions of eminent writers since the time of Corelli to the present; and how, with nearly the *same materials*, one author has constructed works so very different, with regard to their general style and effect, from that of others, that one would scarcely believe they had emanated from the same source. With the peculiarities and excellencies of the works of these great masters, then, the student should make himself acquainted; and as this can only be accomplished by analyzing them†, we shall detail the method to be pursued on this occasion; and in order that we may preserve regularity and method in this branch of the study, let us divide our materials into the following parts:

The Key, whether major or minor.
The Time.
Fundamental Basses.
Modulation and Fundamental 7ths.
Dissonances.
Passing Notes, Auxiliary Notes, and Secondary Harmony.
Periods.
Sections and Imitation.

Each of these several parts shall be explained as we proceed.

* Page 69.

† The pupil will be much assisted in this study by perusing the work called "Practical and Theoretical Studies," being a selection from the compositions of Corelli, Handel, Haydn, Mozart, Beethoven, Clementi, &c., arranged for the pianoforte, and analyzed by the author of this work.

The composition which has been selected for analyzation is the first concerto of Coreili, and commences in the key of D major.

Q. How do we know that it is that key ?

A. Because D major has two sharps.

Q. But as the relative minor B requires also two sharps, might it not be the latter ?

A. No ; because the first chord then should have been B minor, being the key chord* ; besides, between the 7th and 8th of the scale, a semitone must be found. Had the key been B minor, the note A♯ being the 7th of the scale of that key, could not have been admitted : it must have been A♮†. This not being the case, the key is decidedly D major.

The time is long common time‡.

Let us now proceed to find the fundamental basses, that the ground upon which the superstructure of the present work rests may be clearly established.



* See Ex. 173. † See Ex. 157. ‡ See Ex 309.


19. 20. 21. 22. 23. Allegro. 24. 25. 26.
Allegro.
27. 28. 29. 30. 31. 32. 33. 34.
Adagio.
35. 36. 37. 38. 39. 40. 41. Allegro. 42. 43. 44.



The composition commences with the common chord of D; D, therefore, is the fundamental bass, which we place under the chord.

N.B. The notes E and G in the first and second violins are accented passing notes*.

If we examine the notes of the four parts (2), we find that they collectively produce the chord of A: the note A, therefore, we place as fundamental bass under that chord.

C, in the bass, being the 3rd of the chord, consequently produces the first inversion; viz., the chord of the 6th.

N.B. The note B, in the first violin, is an accented passing note.

At (3) the chord B minor arises from a modified bass† on the first of the scale, which is here used fundamentally‡. The second chord at (3), we find to be the chord of the fundamental 7th, to E. The 7th is in the first violin; the 5th, in the second violin; the 8th in the tenor; and the 3rd, in the bass, producing the chord of the $\frac{6}{5}$; the note E, therefore, as fundamental bass, is likewise placed under the harmony, as exhibited in the Example.

N.B. The note A, in the bass, is an unaccented passing note. E, in the same part, as well as E and B in the first violin, are notes arising out of secondary harmony§.

* See Ex. 234. † See Ex. 281. ‡ See remarks on modified basses, "thirdly," page 215. § See Ex. 250.

Continuing thus to proceed upon the same principle, D will be the fundamental bass at (5), E the fundamental bass at (7), and F♯ at (9).

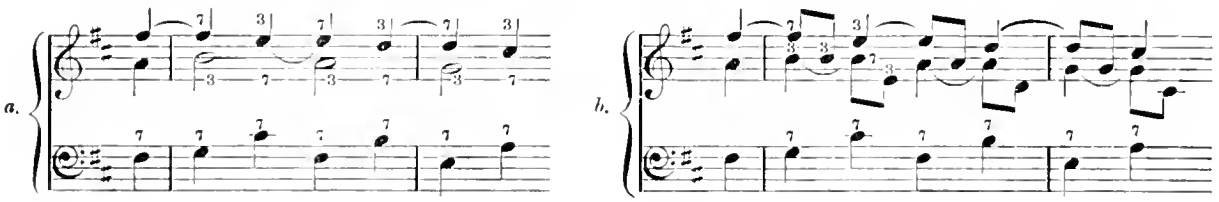
The inverted bass F, at (10), arises from a *modified* bass, and is an imperfect common chord*, from 29 to 35, the harmony arises out of a progression of sequences of 5 6†. That they are sequences may be inferred from the uninterrupted and regular ascending progression of the 1st and and 2nd violins by imitation.

N.B. The notes G and B in the bass (23), are unaccented auxiliary notes, and C, at (24), an accented auxiliary note.

The harmony from 49 to 52, arises from a progression of sequences of 7ths; this may be proved by the regular and uniform ascending 4ths, and descending 5ths of the fundamental bass, which progression, when divested of its *auxiliary* notes, will appear thus ‡:



Now, if we add the harmony which the *progression of these* fundamental basses will admit of (*a*), and then compare that harmony with the 1st and 2nd violins in the original, the similarity will immediately appear; for it is only necessary to suppose that the quaver rest in the first violin stands in place of the 7th, and that this 7th previous to its resolution (according to secondary harmonies), has proceeded to a part of its chord (*b*), and the legitimacy of the fundamental basses and sequences from 48 to 52 is established. See also Example 255.



The student may now continue to find the fundamental basses as already shown, and place them under the harmony, as exhibited in the Example.

Let us now proceed to examine the modulations which have been introduced.

The movement commences in the key of D, in which it continues until (3), when a modulation to the dominant takes place, indicated by G♯ in the inverted bass, which ascends half a tone to (*a*)§, E being a note of secondary harmony.

At 5, a modulation to D, which is indicated by G♯ in the inverted bass at 4. At 6, a modulation to G is indicated by C♯ in the first violin. At 8, a modulation to A, and at 10, to the relative minor, both of which are indicated by the inverted bass. From 12 to 17, various modulations have been introduced, which require no further explanation, as the student will easily discover them himself.

Dissonances¶.

As the fundamental bass from 3 to 4, 5 to 6, 7 to 8, &c., ascends by 4ths, or falls by 5ths, we are enabled to introduce the dissonances of the 9th or 4th.

Q. What dissonance has the composer employed? A. The 9th.

* See Ex. 282, also page 215 "secondly."
† See Ex. 298.
‡ See Ex. 286 (*e*).
§ See Ex. 180.
‖ See Ex. 181.
¶ See Ex. 95, 101.

Q. How, and where is it prepared? A. It is prepared at 3 by the 5th in the second violin, where it resolves into the octave.

A question naturally presents itself here: Why did not the composer introduce the 9th and 4th *alternately*, as the progression of the fundamental bass admitted of both these dissonances?—thus:



It would have obviated that monotony which must naturally arise by employing the *same* dissonance so frequently and consecutively.

Or, by employing both dissonances together, thus:



It would certainly have produced more variety and interest. In that case, however, the imitations which appear between the first and second violin, from 5 to 17, must necessarily have been omitted.

N.B. The process of examining the motion of the fundamental bass, as regards the introduction of dissonances, may thus be continued to the end of the composition.

That the composer should have figured the bass at 32 with the dissonance of the 9th, without subsequently introducing that dissonance, may seem strange. This seeming omission will be explained when we arrive at Imitation; at present, we must consider the *quaver rest* in the second violin to stand in the place of the *dissonance*, as pointed out by the small notes, and which has already been explained when treating on fundamental basses. The same occurrence takes place at 33, 49, 50, 51, &c. At 33, the 9th has been prepared by the 3rd; at 34, by the 5th, but resolved into the 3rd*. At 11, the fundamental bass having ascended a 5th†, the dissonances of the $\frac{6}{4}$ have been introduced.

Q. How and where have these dissonances been prepared?

A. The 4th has been prepared in the second violin by the 8th, and the 5th in the first violin by the 3rd.

Periods.

From 1 to 4 comprises a half period by modulation‡. From 5 to 6, 7 to 8, 9 to 10, are sections of modulations§. The period, consisting of six bars, concludes at 12 in the relative minor of the original key. From 13 to 20, are sections of modulation similar to the preceding; from 13 to 22 a half period by modulation. Here, in order to give more dignity and consequence to the half period, the author adds an odd bar, by which it is made to contain five bars.

From 23 to 37, is a *half period*, divided into *sections* by modulation and progression. From 24 to 25, 26 to 27, are sections of modulation. From 30 to 31, 32 to 33, &c., are short sections by progressions, ending at 37 with a half period by progression. From 39 to 42, a short period ending in F♯ minor. From 43 to 48, &c., sections of modulation; from thence to 53, sections by progression.

* See Ex. 182 (*b*). † See Ex. 101. ‡ See Ex. 321, 322. § See Ex. 322 (*c*).

*Imitation**.

The subject at 5 and 6, in the first violin, is repeated at 7, 8, 9, and 10, by the *same instrument* each time a whole tone higher†. Instead of which, had 7, 8, been written in the *second violin*, and 9, 10, in the tenor, it would have produced imitation, and been less monotonous.

At 23, the first violin commences a short subject on the *accented* part of the bar, which is imitated or answered by the second violin, on the *unaccented* part of the bar, in the unison. This *strict* imitation continues uninterruptedly until we arrive at 30, where the imitation, as far as rhythm is concerned, still continues; but the *intervals* are different in their progression from those of the first violin. Here, that the imitation might be pursued in rhythmical order, it became necessary to suppress the dissonances at 32 and 33, of which mention has already been made‡. The imitation from 42 to 48, is similar to that already described from 23 to 34.

It may seem strange that the 3rd of the dominant in the first violin (at 41), instead of proceeding to its 8th, should have ascended a 9th; but this was necessary, in order that that part (*viz.*, the 1st violin) might commence the subject of imitation. It will be perceived that the third of the tonic chord at 42 has been omitted; such omissions, however, are very frequently to be discovered in the works of ancient composers, particularly when closing in minor keys.

The parts cross each other sometimes very unwarrantably: at 1 and 39, the second violin and tenor, without any ostensible cause, appear above the first violin. Why has the author permitted the tenor to appear above the first violin at 59?—Had that part been written an octave lower, it would have been in its proper situation. To prevent the consecutive 5ths in the resolution of the chord of the diminished 7th, between the second violin and tenor at 56, and between the first violin and tenor at 58 (the 9th of the fundamental bass being in both cases above the 5th), the author has caused the tenor to fall to the 5th of the following bass, instead of the 8th. Had the dissonance of the 4th not been introduced, the 5th might have ascended to the 3rd§.

It will be perceived that the fundamental basses have, in the commencement, been figured with *all* the dissonances which their progressions would admit of. The pupil is advised to figure the rest himself, and he will then see how much more may be added to the harmony.

As music may be considered a language capable of portraying all the passions and feelings of which the human mind is susceptible, and as a composition which lays any claims to excellence ought to possess the power of awakening in us at least some of those feelings, we shall proceed to make a few general remarks upon the effect produced by the composition just analyzed, with reference to that object.

The introduction, in its effect, is noble and majestic. The first violin performs a melody portraying kindness and affability; the steady and measured pace of the bass proclaims dignity and self-possession.

The second violin and tenor play, of course, mere subordinate parts; for whilst the former appears humbly to echo the sentiments of his superior, the latter is making exertions to attract notice by his little sections of dissonances. Thus the introduction continues to proceed with a degree of seriousness verging on solemnity, until we arrive at 23; here, however, the scene changes; the allegro, which now commences, is gay and playful; the second violins appear to mock the first violin, whilst the bass, having as it were dismissed all state and formality, seems to make amends for the restraint imposed upon himself, and gives way to playfulness and good-humour. This, when contrasted with its former solemnity and sobriety of pace, appears truly comic.

The effect of the passage in the bass, as it continues to ascend, leads us to imagine that, during its progress, it increases in velocity. The tenor, who during four bars, had been a silent spectator, joins the party at 31, and thus they proceed together in a manner calculated to portray a high feeling of joy and extasy, until they arrive at the half period at 37. Here the parties appear to be

* See Ex. 245. † A similar progression of uences, ascending whole tones, will be found in Handel's Hallelujah Chorus, to the words "King of Kings." ‡ See pa 256. § See Ex. 159.

brought, for an instant, to a state of reflection; the adagio movement, preceded by the pause, certainly produces that effect upon the mind. This reflection, however, is not of long duration; the former scenes of merriment and joy are resumed at 42, and continue, without interruption, to 53.

We shall now take, for our subject of analyzation, an adagio, selected from one of Haydn's quartets.

It is an elegant and highly-finished composition; and, like all the productions of this great master, contains abundant matter for the contemplation of the student. Simplicity and variety are so happily blended, that we scarcely know which to admire most. In order that the student may be better enabled to understand the beauties and excellencies of this composition, we shall, preparatory to our entering upon the particulars of each portion, first explain the general plan and contrivance of the whole.





* See Example 173 : also 210, 211


37.
38.
39.
40.
41.
f
p
42.
43.
44.
45.
46.
47.
48.
49.
cres.
cres.
alto.
50.
51.
52.
53.
54.
55.



It will be found to comprise three subjects: the first, a graceful cantabile movement, contains a period of eight bars, divided by the half period at 4. This subject, with a little alteration, is repeated from 9, an octave higher, and ends with a cadence at 16. Upon this last bar commences a series of sections by modulation, on which is constructed, and afterwards continued, the second subject, commencing with the bass at 16. This subject contains two bars, and is divided into two portions; the second portion of which, 17, is given to the first violin. By this contrivance, a sort of conversation is maintained between these two parts as far as 20.

Here these parts interchange subjects, after which the conversation ceases at 22.

The first violin now proceeds alone, with passages which are constructed in such a manner that we are still enabled to recognize, though but faintly, the subject of the bass, as well as that of the first violin*.

At 25, the third subject commences, and after various modulations, closes with a cadence in the dominant of the original key at 33. Here the author, instead of reiterating the first subject, most judiciously introduces one which, though bearing (with respect to its rhythmical form) a strong resemblance to the first, is, in fact, only calculated to recall it to our recollection. By this admirable contrivance, all extraneous or new matter is excluded, and unity and variety are preserved; for, as a mere repetition of the original subject in the dominant would have produced monotony, so an entirely new subject would have had the effect of injuring the simplicity of the whole. This subject continues to 40, where it closes with a cadence.

Here the second subject is resumed by the bass and the first violin in the dominant of the original key, and ends at 44, where a series of imitations in all the parts commences, and is continued to 47. It will be observed that the passage here selected by the composer for imitation does not contain any *new* matter; it is, in fact, only the last half bar of the second subject at 43.

Thus the unity of the whole is preserved without any sacrifice of variety.

As the passages of the first and second violins, which follow the imitations from 47 to 48, are written upon the dominant harmony of the original key, an expectation of the approach of that key is excited preparatory to its re-introduction, which takes place at 49†; at the close of which the first portion of the second subject is again resumed between the first violin and the bass, with this difference, however, that the *first violin* commences that subject instead of the *bass*, which now replies to it in the dominant.

At 55, the third subject, which continues for eleven bars, is again introduced, with some alteration in its general construction; upon which follows once more, and for the last time, the first subject.

A series of imitations, founded on the passage of the first violin at 22, commences between the first violin, tenor, and bass, and thus continues until the whole is concluded. This may be considered as the *general plan* of the composition: let us now enter more minutely into the examination of its various parts. The key is C major. A false cadence occurs between 2 and 3, after which a modulation to D minor takes place, indicated by $C\sharp$ in the first violin‡. At 3, follow two sequences of 6ths, after which a modulation to the original key is effected. At 5, the first bar of the subject is repeated, but differently harmonized; for that which at 2 was only a progression to A minor, is here become a modulation‖.

At 7, a modulation to F has taken place, after which we proceed, by an irregular cadence¶, to the original key, and thus close a period of eight bars, the half period of which is by progression.

From 9 to 12, the first half period is repeated, with nearly the same harmony as the preceding. At 13, a modified bass on the fourth of the scale is employed fundamentally**. Here a demonstration is made to modulate to D minor, which modulation is, however, prevented by the false cadence at 14; a modulation to F is then introduced, succeeded by the chord of the compounded sharp sixth, $\frac{6}{5}$, the resolution of which is suspended,†† and a final cadence once more closes the former

* The legitimacy of the suspension of the 3rd at 17, 19, and 21, in the tenor, whilst the 3rd itself appears in the first violin, is questionable. This oversight (if we may be allowed to use that term when applied to the works of so great a composer) is corrected at 41 and 43

† See bars 1 to 8. ‡ See Ex. 180.

§ It may here appear that the fundamental 7th in the alto has ascended into the 5th, instead of resolving into the 3rd; the author, however, does not in the present instance consider this chord as that of the fundamental 7th, but the first inversion of the imperfect common chord, see Ex. 282 (*d*); the same occurrence will be found to take place frequently in the works of this author, and of others.

‖ See Ex. 185. ¶ See Ex. 277. ** See Ex. 283 (*b*). †† See Ex. 196 (*b*).

period. Upon the last bar (16) of this period the second subject commences with the bass, founded on the following simple melody :—



which is made characteristic and interesting by the introduction of extended auxiliary notes at 16, and by the simple passing and auxiliary notes at 17. From 16, a modulation takes place to G, and from thence to D minor ; here the author proceeds, for the sake of variety, to the dominant of the last key, by progression ; the same occurrence takes place from 20 to 21, where the first violin and bass interchange subjects.

At 24, a modulation is effected to the original key ; the note A, in the second half of that bar, is a modified bass on the first of the scale, and G♯ in the second violin, a passing note*.

At 25, the third subject commences upon the chord of the dominant 7th, whilst in the act of modulating to G. G♯ at (27), in the first violin, is an ascending dissonance, viz., a retardation of the 5th by the 4th†. At 28, a modulation to G minor takes place, and at 29, to E♭. In the same bar a modulation to G (the dominant of the original key), commences with the compounded sharp sixth, $\frac{6}{5}$, the resolution of which is suspended from 30 to 32‡, and closes at 33 with a final cadence. It may now be said that the composition is virtually finished ; for that which follows (if we except the first subject, altered as it appears from 33 to 40), is in substance a repetition, in various forms and imitations, of that which has already been noticed, and with which it is presumed the student is now sufficiently acquainted. We shall, therefore, proceed, in conclusion, to make a few general remarks on each of the three principal subjects, and endeavour to discover the feelings which they are calculated to excite.

The melody, harmony, and modulation of the first subject from 1 to 8 is soothing and placid ; it portrays the peaceful and happy state of a united family, gliding along the stream of life without care or anxiety. This kind and affectionate feeling is particularly observable in the first eight bars, when contrasted with the eight bars which immediately follow ; for the latter, being written an octave higher exhibit a slight degree of excitement, which is increased, from 13, by the rapid succession of modulations ending with the chord of the compounded sharp sixth, $\frac{6}{5}$. This excitement seems to increase as we proceed with the second subject from 16 to 24. Here it portrays a conversation between two persons at variance, whilst the accompaniments of the second violin and tenor express anxiety. From 22, the first violin seems triumphantly to proceed alone, having, as it were, subdued its antagonist, the bass, which now joins in the accompaniment of the second violin and tenor. Here (at 25) commences the third subject, which, even from its rhythmical form alone, is calculated to portray agitation, fear, distress, anguish, palpitation of the heart, and as it were a gasping for breath.

At 28, where the modulation to E♭ commences, the mind seems to be gradually wrought up to the extreme of agony bordering on despair ; at 30, it appears to be relieved from those dreadful feelings, and gradually to resume its original and peaceful state in the soothing and gentle strain of harmony which follows at 33.

The preceding specimens of analyzation will suffice to show how the student may proceed on similar occasions.

In conclusion, the author makes the few following observations, which he hopes will be useful to him in his future progress :—

It frequently happens that although the learner sets out with the most determined resolution to study a work of science with care and attention, yet that during his progress he unconsciously accelerates his pace, and overlooks many of those nice points of connection which are indispensable

* See Ex. 240. † See Ex. 263. ‡ See Ex 204.

to the proper understanding of the whole. This imprudent haste may often be traced to over-anxiety in the pursuit of knowledge; to too much confidence in the student in his own quickness of perception, or to natural impatience. But to whatever cause this error may be attributed, the pupil cannot be too cautious in avoiding it. If he has been really desirous of acquiring a perfect knowledge of the work before him, he has no doubt exercised upon the rules as they progressively presented themselves to him; and if he has done so, he must have observed,—

First: That from the commencement to the end they are so closely interwoven, and constitute collectively such a chain of causes and effects, that they could not be studied in a desultory or disjointed manner.

Secondly: He must have perceived, as he proceeded thus step by step, new and interesting matter continually presenting itself to his attention, expanding his views, and encouraging him to proceed.

Thirdly: That he himself has made discoveries, without even travelling out of his way in search of them.

Should the learner have thus proceeded in his studies, and "*made haste slowly*," he is advised by all means to make an attempt at composition. All knowledge is in progression, and it is only by degrees that excellence can be obtained. To acquire facility in composition much practice is absolutely necessary.

Should it be said that genius and talents are requisite to make a composer, we answer certainly: to make a *great* composer these gifts are indispensable; but they are equally so to make a great poet, painter, or architect, &c. But shall none compose, write poetry, paint, &c., but those who are thus gifted? No one will pretend to say that those numerous composers who have lived from the earliest time to the present day, have *all* been, or are, in possession of those peculiar gifts! Shall we not build houses because we have not the genius and means to construct palaces? Is it then absolutely necessary, in order to compose, that we possess the genius and imagination of a Gluck, a Handel, a Mozart, or a Beethoven? Shall none dare to write but those who can produce a grand sinfonia, serious opera, or oratorio? May not pleasure as well as profit be derived from the composition of songs, glees, sonatas, rondos, airs with variations, &c.? *Let us but make a beginning.* This, however, it must be confessed, has hitherto been the great stumbling-block. How shall I begin? How shall I set about it? These, it cannot be denied, are very natural and reasonable questions. If the pupil, however, has carefully studied the construction of periods and melodies, the necessity of asking such questions no longer exists; for what beginning can be more simple, or what path more secure than that which is pointed out to him from Ex. 335. For instance: he draws an outline of his intended composition, fills it up with fundamental basses, extracts inverted basses, and constructs a counter melody; to which he adds the rest of the parts, dissonances, passing and auxiliary notes, &c. All this is accomplished without difficulty, because the rules are all determined, and nothing is left to chance. During this process, no peculiar musical genius or feeling, no imagination or nicely-discriminating musical ear is required*; moderate talents, accompanied with a little patience and reflection, are sufficient to produce that which will lead and encourage him to higher exertions†.

The student will find, as he proceeds, new matter perpetually springing up, as it were, spontaneously under his hands; subjects, which at the commencement appear as mere trifles, may, subsequently, by a little contrivance (but still according to rule) be made most interesting.

By way of illustration of the above, and encouragement to the student to make the attempt at composition, we shall first trace the gradual progress and subsequent changes of a simple melody and harmony as it emanates from the outline, or sketch; and then show by what a simple and easy process the original materials are afterwards capable of being converted into new matter, almost endless in variety and effect.

* A German author says: "Eine Theorie der Kunst ist Schönheit ohne Gefühle und Phantasie." The theory of an art is beauty without feeling and imagination. *How true!*

† In proof of this, it is only necessary to examine the gradual progression of the outline of the melody from Ex. 335 to 345.

Let us suppose, for instance, that a melody has been constructed and harmonized according to the rules commencing from Ex. 335. The inner parts of the harmony may, perhaps, only with a slight alteration, furnish melodies which may be reharmonized in a variety of ways, by merely changing each time the original fundamental bass and inversions.

Secondly: By re-harmonizing the original melody and adding a few modified basses, the inner parts of which will again furnish new melodies.

Thirdly: By harmonizing the original melody according to the rules commencing from Ex. 180.

Fourthly: By adding modified basses to the air thus harmonized. Let it be recollected that at each change of harmony a corresponding change of dissonances and passing notes also takes place.

Hitherto we have only considered what may be effected by a mere change of *harmony;* but what shall we say when,

Fifthly: We likewise alter the *measure of time and rhythm* of the original subject, or any of those subjects which have arisen from it? Indeed, the change, on these occasions, is frequently so great, that the original source from which these harmonies have emanated is no longer to be recognized.

Sixthly: By letting the alto and tenor interchange places.

Seventhly and lastly: Extension of periods, and imitation between the parts.

Now that all these endless varieties of effects do arise from a simple outline, such as has just been described, cannot be denied. Then where is the difficulty which shall deter the student from making an attempt at composition? The process here pointed out is so simple and, it may be added, interesting, that it only requires in us the will, and the object is accomplished. The author repeats once more, that if the student but makes the attempt, and follows the rules contained in this work with patience and perseverance, he will not only have no cause to be dissatisfied with his progress, but will discover a source of amusement and improvement, of which he can form no adequate idea without the trial.

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