ŇŇŇŇ Ň	THE HARMONIA SACRA,
N N N N N N N N N N N N N N N N N N N	GENUINE CHURCH MUSIC.
<u>S</u> S S S S S S S S S S S S S S S S S S	Harmonized for Three and Four Voices:
ŴŴ.	THE PRINCIPLES OF VOCAL MUSIC.
N. N. N. N. N. N. N. N. N. N. N. N. N. N	IN A PLAIN AND COMPREHENSIVE MANNER.
	BY JOSEPH FUNK AND SONS.
	"And the ransomed of the Lord shall return and come to Zion with songs and everlasting joy upon their heads; they shall obtain joy and gladness, and sorrow and sighing shall flee away."—ISAIAH
	TWENTY-SIXTH EDITION
	2008
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THE HARMONIA SACRA

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PREFACE.

WHEREVER man inhabits the earth the power of music is felt and acknowledged. This influence of sweet sounds, like most other gifts of our bountiful Creator, may be so used as to be the instrument of much good, or perverted to the purposes of deep and extensive evil.*

As it would be a most pernicious error to imagine that the love of music is the same thing with Christian piety, so it would be a mistake of no trifling magnitude, to deny the utility of music in awakening and strengthening our devotional affections. That utility has been demonstrated in every age by the happy experience of those who have aspired to hold communion with the Father of mercies. And it is a fact as consolatory as it is remarkable, that while Christians are lamentably divided in many articles of their faith and practice, they all agree that God should be praised in musical strains; and that, when the heart goes with the voice, this is one of the most delightful and edifying parts of His worship. Hence, in addition to those divine songs with which it has pleased the Holy Spirit himself to fill many a page of the Inspired Volume, and in imitation of them, a great number of the servants of God have employed the talent He has given them, in furnishing materials for this branch of worship, adapted to the manifold situations and emotions of the pious mind. And similar exertions have been made to supply a large and variegated treasure of music, suited in union with those poetic materials, to express and to heighten our religious desires, hopes and enjoyments. By these COMBINED MEANS, we feel more intensely and more profitably, that in God we live, move, and have our being; that all our blessings are bestowed by his paternal kindness, and that our everlasting welfare results from his redeeming love towards us in Christ Jesus our Lord.

*"Music, though consecrated to the service of the sanctuary, and capable of good improvement in subserviency to devotion, has been, and is often, wretchedly abused to the vilest purposes. It should, therefore, be used in religious ordinances with jealousy and caution, lest it should produce a false fervor, and subserve the cause of vice, delusion, superstition, or enthusiasm"—DR. Scott.

PREFACE.

Since the first Edition of the "GENUINE CHURCH MUSIC" was brought before the public, some changes in music have taken place; among which, the practice of applying seven different syllables to the seven original sounds or notes of the scale has gained considerable ascendancy, and is worthy of notice. And as this mode of solmization has become so prevalent, we think it advisable to adopt it.

But as we are well aware that the patent note system is far preferable, and has many advantages over the round, we have had the three notes, to which the three syllables Do, RE, and SI, are applied, also characterized in a uniform style with the others, so that the singers are enabled to apply the syllables to them on sight, with the same ease as they do to the four characters. By this method the repetition OF FAW, SOL, and LAW, in the scale—which has been objectionable to some—is avoided, and may be deemed an improvement.

Moreover, as the principal motive and intention in bringing out this work is to promote the cause of religion and devotion, and a solemn, dignified, and expressive style of singing in the Church of God, we have, for the greater convenience of worshiping assemblies, divided it into two parts. The FIRST PART containing a variety of the most appropriate tunes and hymns of the various kinds of metres to be sung in the time of public worship. And these are arranged in metrical order, forming a series of metres from Long Metre, or Metre First, throughout all the different kinds of poetic measures up to Metre Eighty. This order and arrangement of the metres will be found very convenient for the chorister, in selecting suitable tunes for the psalms and hymns which are to be sung by the congregated worshipers.

The SECOND PART is composed mostly of longer tunes, set pieces, and anthems, whose rhythmical construction is somewhat more intricate and difficult to perform. These are more particularly adapted to be sung in Singing-schools and Societies, though they all abound with solemn and devotional matter, not unbecoming a worshiping assembly in the house of God.

But notwithstanding the different changes and the new arrangement of matter as now presented, the great mass of the musical and poetical compositions are identical with those in former Editions, to which a number of tunes and hymns of a later date have been added, which we trust will be found of equal merit with those dignified, solemn, and heart-affecting productions of musical genius which have stood the test of time, and survived the changes of fashion. Such music, with its sublime, flowing,

PREFACE.

melodious style and pathetic expression, will never become obsolete IN THE HOUSE OF GOD; it cannot even lose a particle of its interest, while human nature remains unaltered. No frequency of use can wear out these venerable airs with the Zion traveler; no fondness for novelty can make us insensible to their sterling merit. Other pieces which are added, will be found, we doubt not, to possess much attractive beauty, and have been selected with a view to the singing of "Psalms and hymns and spiritual songs," constructed in a vast variety of poetic measures.

The Rudiments and elucidations of the science of Vocal Music, which succeed this preface, have cost us much research and labor; and for the acquisition of which, many standard works on music, both german and English, have been consulted, together with our own knowledge and experience, gained from teaching for a long series of years. And no pains have been spared to lay before our readers, in a plain, familiar, and comprehensive style—illustrated by examples and tables—every thing that is necessary in acquiring a practical knowledge of the science of Vocal Music.*

In conclusion, that this work may be instrumental in promoting, in some degree, the praises of Him, the Triune God and everlasting Father, whom angels adore, and to whom all the redeemed incessantly sing high hallelujahs, is the fervent wish of The 19TH CENTURY COMPILERS.

*Although this work is principally intended for vocal performance, as the notes are formed in a different figurate manner, to facilitate the learner in applying the syllables to them; yet its elementary principles are equally applicable to instrumental performance, as they go hand in hand. The pitch of a note is the same whether it proceeds from the vocal organs, or from the pipe or string of an instrument or any other sounding body. The scales of vocal and instrumental music—their tones and semitones, with all their intervals, both major and minor, and the letters which represent them are the same; as also the common chord with its inversions, and the inversion of all the intervals of the diatonic scale.

TO TEACHERS.

The position of a teacher of sacred church music is an important and highly responsible one. He should be prepared and qualified to teach and instruct his class in the elements of music, with correctness and facility, both in theory and practice, and to do this he should make it his object to become as familiar as possible with the method of instruction, and of imparting knowledge in an easy and familiar manner. He should be deeply imbued with the desire of doing good, and of refining the taste and elevating the affections. Music should be with him not merely an entertainment, a pastime, or a *means of support;* but as a talent to be used for the service of Him to whom angels sing their high hallelujahs, and who gave it to man therewith to praise Him who is worthy of all honor and praise. Hence singing-schools of sacred Psalmody should be conducted in such a manner as to prepare its members to engage in praising God acceptably in song; and although it is not a direct place of worship, it certainly is a place where its members should be trained and prepared for service and participation of that holy place.

A school of sacred vocal music has so far a resemblance to the house of God, that it is a scene from which all levity should be banished far away. During a great part of the time spent in our employment, we are singing words of the most solemn and devotional import. And is such an avocation to be contemplated as a mere unmeaning form, or to be trifled with as a despicable jest! It is impossible, if the heart possess any reverence for God and religion. All decent people admit that a light carriage in the church deserves severe rebuke: and for our part we cannot see that much less

reprehension is due to the same carriage in a school of Psalmody. To have no ear, no relish for the beauties of harmony, is a defect which those who labor under it should certainly not be forward to betray. We can at best only think of it with compassion. But when a stupid contempt of music obtrudes itself into a school, with the additional deformity of injustice, bad breeding, and the scorn of sacred things, it deserves the utmost severity of censure. It is an obvious principle in every department of religious worship, that emotions should be unfeigned. They should not be suffered to rise merely through gratified taste, but be made to spring up in the mind while it is employed in the contemplation of holy things. This important distinction will not be preserved in the hours of devotion, where it has been neglected in the seasons of practice. It requires specific religious training in schools and family circles: and will not be maintained in any other way. Habit has its influence in devotion as in other things. The deportment of singers and teachers during the hours of practice, therefore, becomes a matter of great moment. To cultivate the praises of the highest God, is a solemn work, and should ever be so regarded. Volumes would fail to show the importance of this principle. How, then, can any teacher of devotional music dare to treat it with neglect! Yet this neglect seems to be almost universal. No wonder that the friends and cultivators of the art have so many difficulties to encounter. Let their efforts be fully Christianized, and the difficulties will be seen to vanish.

VOCAL MUSIC.

COME youth, and with profundity explore This sacred science; ponder and adore The beauties which in Harmony abound,

CHAPTER I.

OF MUSIC AND MUSICAL SOUNDS.

Section 1.—Music is composed of sounds produced by the human voice or by different kinds of musical instruments.

These sounds vary in pitch according to certain fixed and determinate degrees.

The pitch and gradation of these sounds from the lowest or most grave to the highest or most acute, form the whole scale of musical sounds.

A combination and succession of these sounds, sweetly tuned and performed in rhythmical order, have, by their rich, mellifluent, melodious, and harmonious progression—their sweetly moving accents and flowing numbers, a benign, winning, and powerful influence over the human mind.

Sec. 2.—The *Natural Scale* of musical sounds, though its extent is unlimited, consists of only *seven primary notes*. For it is found that after singing or playing these seven notes, if we continue the series, we repeat another scale similar to the first, and so on, as far as the extent of the voice or the instruments will go.

The voice in producing these sounds naturally passes from the first sound taken, a *step* to the second; from the second a *step* to the third; from the third a *half-step* to the fourth; from the fourth a *step* to the fifth; from the fifth a *step* to the sixth; from the sixth a *step* to the seventh; and from the seventh a *half-step* to the eighth, which completes the Octave, and is the first note of the succeeding scale.

And the exalted rapture of sweet sound: Direct your thoughts to those harmonic lays, And in poetic numbers your CREATOR praise.

NOTE.—The whole range of human hearing comprised between the lowest note of the organ, and the highest cry of known insects, seems to include about NINE OCTAVES, which will extend to sixty-four diatonic intervals.

Sec. 3.—There are three distinctions made in musical sounds; 1st, they may be *high or low;* 2nd, they may be *long or short;* 3rd, they may be *loud or soft.*

These three distinctions of sound embracePITCH, LENGTH, and POWER. Pitch regards a sound as *high or low;* Length, as *long or short;* and Power, as *loud or soft;* and these three distinctions form the essential property and peculiar qualification of good musical sounds.

On these three distinctions are founded three departments, namely, MELODY, RHYTHM, and DYNAMICS or Musical Elocution, which departments will be noticed and treated of in their proper places.

Sec. 4.—The doctrine of music may be arranged under six different heads: 1. Notation; 2. Rhythm; 3. Intonation; 4. Melody; 5. Harmony; and 6. Dynamics or Musical Elocution. But such is the nature of music, that the different heads or departments cannot be treated separately and apart; but by their close connection, they will be intermingled in theory and practice, though in the main they may be considered separately.

NOTE 1.—By NOTATION are given or represented all the marks and characters appropriate for the purpose of writing music, with their signification and use.

[Chap. 2, Sec. 5,6.

2. RHYTHM is the division of time into short portions, by a regular succession of motion, impulses and sounds, with regard to measure, accent, emphasis, and cadence; and flowing numbers, in the union of music and poetry.

3. INTONATION is practising the notes of the scale with the voice, or playing them on an instrument, according to fixed degrees of sound, and giving a correct sound to all the diatonic intervals, the triads and their inversions, and all the disjoint intervals in the whole scale.

4. MELODY is an agreeable succession of single sounds in a piece arranged according to the laws of Intonation and Rhythm, so as to be musical and pleasing to the ear. Melody and intonation are closely connected.

5. HARMONY is an agreeable succession of chords, or concordant notes, in two, three or four parts, moving together according to the rules of progression, which produce a diversity of flowing sounds highly pleasing, attractive, inviting and delightful.

6. DYNAMICS OF MUSICAL ELOCUTION consists in giving each tone or note that sound, stress, and modulation of voice which the subject of the poetry requires, in relation to loud or soft, strong or mild, and the swelling or diminishing of the sounds or notes.

QUESTIONS.

Of what is music composed?—How do these sounds vary?—What forms the whole scale of musical sounds?—Has the scale of musical sounds any limitation?—Of how many primary sounds does the scale consist?—If there are only seven primary sounds, how can the scale be unlimited?—What is the order in which the voice produces these sounds?—How many distinctions are made in musical sounds?—What is the first distinction?—The second?—The third?—What forms the essential property of good musical sounds?—What departments are founded on these three distinctions?—Under how many heads is the doctrine of music treated?—What are those six heads?

CHAPTER II. NOTATION.

OF THE STAFF, CLEFFS, LETTERS, &C.

Sec. 5.—The pitch of musical sounds or tones is represented by a character called a staff. The scale and music are written on the staff with notes.

The *position* which the notes occupy on the staff represents the *pitch*, and the notes, by their relative value, the *length* of the sounds.

The staff consists of five lines and four spaces. Each line and each space is called a degree of sound; thus there are nine degrees of sound on the staff. When more than nine degrees are wanted, the spaces below and above the staff are used; and if a still greater compass is wanted, additional lines are used, called leger or added lines.

THE STAFF WITH ADDED LINES.



Sec. 6.—Each part of music has a separate staff, and these differ in pitch. Hence to adjust their pitch, and to distinguish them, characters are used called Clefs. There are two clefs in common use, the F clef and the G clef.

The F clef represents F, the fourth line of the Base Staff, and the seventh sound of the General Scale of music.

The G clef represents G, the second line of the Tenor staff, and the eighth sound of the General Scale. It is also used on the second line of the Treble and alto staffs, representing G also, and the fifteenth sound of the General Scale when sung by female voices.





NOTE.—It is ascertained that the interval between the male voice and the female is exactly an octave, which is the most perfect chord in the scale of music. Hence, as the Treble is principally assigned to female voices, it is placed an octave higher in

Chap. 2, Sec. 7-10.]

OF VOCAL MUSIC

the General Scale than the Tenor. From this we learn that the ALL-WISE CREATOR has implanted between the sexes of the human race. [How happy would all those be who stand together in matrimonial relation, if they would observe, by a pious life, and a holy conversation, in Christian love, to fill up the interval of life with sweet harmonious chords, so that no dissonant or jarring string might vibrate between them!]

Sec. 7.—BRACE.—When music is written on these staffs, and performed simultaneously, they are united by a character called a *Brace*, and form a Score. The score may, however, consist of *two*, *three* or *four* parts. When two parts only are united, it is called a *Duet*; when three parts, a *Trio*; and when four parts, a *Quartet*.



Sec.8.—NUMERALS.—Numerals are used to point out the different degrees of sound in the scale of music. They will also be exclusively used in this work, in a fractional position, to indicate the different measures in the movements of Common, Triple, and Compound time.

Sec. 9.—LETTERS—To represent the seven original sounds of music, the first seven letters of the alphabet are used, namely, A, B, C, D, E, F, G. These letters are placed on the staffs in alphabetical order, counting upwards from the lowest. The natural diatonic scale of the minor key commencing with A, that of the major key commencing with C, in the following manner:

	А	В	С	D	Е	F	G	А	В		
	1	2	3	4	5	6	7	Num	erals of th	e Minor Scal	e.
Numerals of the M	Major S	cale.	1	2	3	4	5	6	7		

Sec. 10.—But as letters are not calculated to show forth and adjust the length of sounds, the proper length is indicated by the form of certain characters called Notes. And besides the rhythmical representation of these notes, they have also a distinct figurate form whereby the syllables *do, re, me, faw, sol, law,* and *si* are applied to them in solmization individually, on sight—their form indicating the syllable which is applied to them.

And as these syllables are always used in the scale in the same relation and invariable position to the key, they form a strong and inseparable association with the proper pitch of the intervals of the scale which they individually and invariably occupy. And as they have thus the proper pitch of the intervals of the scale associated with their names, it is of great service to the vocal performer, to have them communicated to the mind on sight, as thereby he will be enabled to strike the proper interval of the scale *on sight* of the note, and be relieved of the irksome task of finding the name by calculation, in every change of key. See those notes with their corresponding *Rests*, exemplified by the following Table. [See table next page.]

As these notes, by their names—as a whole note, a half note, &c., indicate to the *mind*, their proper relation of sound; and by their heads, stems, hooks or dashes, represent to the *eye*, the same relative length, it is almost superfluous to state, that *one* semibreve is equal in duration of time, to *two* minims, or *four* crotchets, or *eight* quavers, or *sixteen* semiquavers. For it is evident that as many parts as the whole note is divided into, so many of these parts it will take to amount to the whole note again. And if we allow four seconds of time to sound out the whole note, we must allow but two seconds for the half note, one for the quarter, half a second for the eighth note, and a quarter of a second for the sixteenth. This is the invariable

proportion and comparative relation in which these notes stand to each other; a strict observance of which is of the highest importance, both to the vocal and to the instrumental performer.



RESTS are marks of silence, and are named after the notes which they represent.

Note 1.—Other notes are sometimes used, as a thirty-second and sixty-fourth; these notes are, however, too quick and short for sacred music, and can easily be dispensed with.

A note called a BREVE, from which the semibreve derived its name—was also formerly used, but this note is too long and heavy a sound for any musical expression.

Note 2.—Nothing can be more certain than the fact that there is a true and inseparable union and association formed between these syllables which are applied to the notes and the proper pitch or sound of the intervals which they respectively and invariably occupy in the scale. For on this fact is founded the whole doctrine of transposition, and of transposing with the keys, the syllables with the notes, in their relative position to the keys. And it is evident that when the diatonic scale, which consists of tones and semitones, is sung to a series of notes and syllables always applied in the same order and relation to those tones and semitones, as they stand in their fixed position in the scale, that such an association will unavoidably be formed between them.

And hence arises the utility of having the notes characterized and formed in such a manner as to communicate by their different forms, the syllable which is applied to them, individually, so as to engage the singers to strike the proper pitch of the sound on sight of the note. And is it not strange that any should deny the usefulness of the character notes by which the syllables are known by the forms of the notes, when common sense and sound reason dictate that it opens and paves a highway for the student of vocal music to travel on, and to pursue his course with pleasure till he has acquired a complete knowledge of the science of music. And is this in any wise degrading to the science-diminishing its value-or robbing it of its intrinsic merit? By no means. It is adorning it with the vesture of simplicity, the richest dress in which it and its sister sciences can be arrayed. And in proof of this, let us cast our eyes to other arts and sciences, and see what has been done by the use of different characters, to pave the way for instruction, and to communicate to the mind correct ideas of what is to be inculcated and taught, and we will find an almost endless variety of characters, figures, cuts, drawings and delineations used to facilitate the learner in his progress in gaining scientific knowledge.

Do not the Lexicographers, WALKER and WEBSTER, in their famed Dictionaries—which are taken as standard works—use many different characters, to convey to the mind on sight a correct pronunciation of the words and the proper sound of the letters, —all of which might be acquired by a reference to grammar rules? And is there less propriety for the singer to have the correct sound of the notes conveyed to the mind on sight, by characters which might otherwise be acquired by having reference to the rules laid down in the science: which is, by making a calculation from the key?

Chap. 2, Sec. 11-13.]

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Note 3.—Rests are essential to music, in order to keep the accent in its proper place in the measure; and if sparingly used and skillfully observed, give variety, beauty, and expression both to music and poetry. When long intervals of silence occur in any part of the score, let those on the silent part, for their own improvement, notice the parts which others are singing, and mark the time with them till they arrive at the place where their own parts unite again. This is far preferable to poring over their own staff and measures of silence, by which is gained but little improvement.

Sec. 11.—Notes become subject to some variation by having additional characters annexed or added.

A dot (.) placed after any note, adds one-half to its original length. Thus a dotted whole note is equal in length to three half notes: a dotted half note to three quarters, and so on.

Four dots between the lines of the staff, mark the place from whence a strain or piece of music is repeated.



Sec. 12.—A Pause (n) placed over or under a note protracts or lengthens it out about one third longer than its original time: though this protraction may be longer or shorter according to the expression of the poetry, and the taste of the judicious performer.

A soft, graceful swell given to a paused note, followed by a momentary rest, is highly ornamental.

The pause is frequently used on the note of the last syllable in a line of poetry, and agrees with its final pause, which, in reading is marked with a suspension of the voice.

The pause is also used over *Rests* which need lengthening out; as also over *Bars*, where it is thought proper to have a momentary pause between two measures. Some of the most striking effects depend upon this character, and when well performed, it adds strength and beauty to music and poetry. EXAMPLES:



Sec. 13.—Notes are frequently tied together by a circular line called a Tie: or grouped together by hooks or dashes. All the notes thus tied or grouped, are sung or warbled to one syllable of verse.

If three notes are thus tied or grouped together, with the figure 3 above or below them, they are performed in the time of two notes of the same kind without the figure, and are called Triplets. Triplets, when smoothly and skillfully performed, are ornamental to music.



QUESTIONS

What character represents the pitch of musical sounds?—On what character is the scale and music written?—With what characters is music written on the staff?—What does the position of the notes represent?—How many degrees of sound can be written on the staff?—What is done when more than nine degrees of sound are wanted?—If a still greater compass is needed?—How many clefs are in common use?—Why are they called the F clef and the G clef?—How many sounds does the octave contain?—What is a score?—How many letters of the alphabet

[Chap. 3, Sec. 14, 15.

are used to represent musical sounds?—How many original sounds are there in music?—How many notes are in common use?—How are the notes named?—What is the form of the whole note?—Ans. An open note without a stem.—The half note? A. An open note with a stem.—The quarter note? A. A black note with a stem.—The eighth note? A. A black note with a stem and one hook.—The sixteenth note? A. A black note with a stem and two hooks.—What is the use of rests?—Has each note a corresponding rest?—How much does a dot add to a note?—What do dots indicate when placed on the staff?—What is the use of the pause?—On what note is the pause most frequently used?—What is a tie?—A group?—A Triplet?

CHAPTER III. NOTATION.

OF SHARPS, FLATS, NATURALS, &C.

Sec. 14.—The diatonic scale consists of five tones and two semitones. These are sometimes called *steps* and *half-steps*, because the voice steps along through the scale from one interval to the other; but the interval of a semitone is only half the distance of the interval of a tone. And to adjust the semitones and always keep them in their fixed position in the scale, throughout the course of transposition three characters are used— a *Sharp* (\ddagger), a *Flat* (\flat), and a *Natural* (\natural). A sharp *raises* a letter or note a semitone; a flat *depresses* a letter or note a semitone; and a natural *restores* a letter or note thus sharped or flatted, to its original sound. When these characters occur, in the course of a piece of music, they are called *Accidentals*, and operate only on the notes before which they are placed.

When sharps or flats are placed at the commencement of a tune, they operate on all the notes or the letters which are thus sharped or flatted, throughout the tune. Thus they prepare and adjust the tones and the semitones for the new key, and become the signature (or sign for the key note) to the tune. And when accidentals occur throughout the tune, on the letters thus sharped or flatted, they are raised or depressed, as the case may require, by a natural.



Sec. 15.—BARS.—When music is written on the staff, it is divided into measures by a character called a Bar.

There are three bars in use on the staff—the common bar, the broad bar, and the double bar. When a short bar is added to a broad bar, it forms a close.



The common bar is used to divide the staff into equal time measures according to the measure note or notes, of either Common, Triple or Compound measures.

The broad bar is used, by some authors, at the close of each line in poetry. But as that frequently falls in the middle of the regular measures of the staff, it is omitted by others. However, as the last syllable of each line of poetry is distinguished by the *final pause*, which marks the bounds of the metre by a suspension of the voice, there can be no impropriety in using it to point out that important syllable or word.

The double bar is used at the end of a strain which is to be repeated from

Chap. 3, Sec. 16.]

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measure from Common to Triple, or Compound time, or the reverse. Also at a change from major to minor, or the reverse. Likewise at the commencement of a chorus.

The close is used at the end of a tune or any piece of music.

Sec. 16.—Syncopated and Driving Notes.—A syncopated note is the blending of two notes in one,-an unaccented with an accented in the middle of a measure, with the previous accented note of the same measure tied with it. As this note is struck on the unaccented part, while the hand in marking the time, is at rest, and its sound continued over the accented part, while the hand is in motion, the regular movement in that measure is thereby thwarted, or broken in upon, which produces a fluttering effect on the note, or on the syllable or word applied.

When a longer note is wanted in a measure than the measure will contain, the long note is cut through, and one part is put in the next measure, and both parts tied together across the bar: these two notes compose the driving note. Thus two half notes sung across a bar produce the same sound with a whole note in a measure; a half and a fourth note across the bar, the same sound as a dotted minim in a measure. The same remarks apply to the fourth notes driven across a bar, and a half note in a measure.

The driving note is sometimes called a syncope-a synonymous term with syncopation—both signifying the division, or cutting through a voices.

from the mark of repetition. (Example Se. 11.) It is also at a change of 1 note by a bar, or accent expressed or understood. Hence the driving note may also be termed a syncope, as it is cut through by a bar, and commences on the unaccented part of the measure, and extends to the accented.

> APPOGIATURA.—The appogiatura is a note of embellishment. It is a diminutive note, prefixed to a principal note, and is always on the accented part of the measure. It borrows its time from the principal note that follows and to which it is tied. As this note produces a fluttering sound similar to that of the syncope, it may be brought in at this place, and classed with the syncopated notes.

> PASSING OR TRANSIENT NOTES.—These are also called ornamental and grace notes. They, too, are diminutive notes, and are used between the essential notes, where they become intermediate steps on the unaccented parts of the measure, in passing from one disjoint interval to another, and thus connect, embellish, and soften those intervals, diminish the roughness of the leap, and direct an easy and graceful movement.

> They borrow their time from the preceding note to which they are tied. CHOOSING NOTES .- Choosing notes are set perpendicularly one above the other, either of which may be sung: and as there is always a concordant interval between them, both may be sung at the same time by different



EXAMPLES:

ON [Chap. 4, Sec. 17, 18. CHAPTER IV.



Note.—Since the diminutive notes in the preceding section are merely ornamental, and not taken in the account in the harmony; and since other graces—*so called*—are frequently introduced, in many works, such as the Acciacatura, Cadenza, Grupetto, Mordento, Portomento di voce, Transient Shake, Continued Shake, Stracino, and the Turn; the only design of the most of which is, to display the dexterity and the skill of execution of the performer; and when skillfully performed, they *may* be tolerated; but they have no place in music designed to exhibit and call forth the emotions of the heart. They have no soul in them. And when they are reserved for the flight of some fanciful, injudicious performer, they too often prove the empty wanderings of ignorance and folly. And rather than simplicity should be so offended, it would be better to dispense with them altogether. They are rather ornamental than graceful, designed to give brilliancy, and not to excite emotions. The imagination may indeed be amused, but the heart remains uninterested. Such an attempt at display exhibits not only want of taste and judgment, but also want of science. The fact is, that music resembles every other art; the farther a person advances in the study of it, the more does he delight in the simplicity of manner, and the less is he attracted by superficial ornament.—*Porter's Mus. Cyc.*

QUESTIONS.

Of what does the diatonic scale consist?—What are the tones and semitones sometimes called?—How many tones and semitones are contained in the scale?—What characters are used to regulate these tones and semitones?—What effect has a sharp on a letter or note?—A flat?—A natural?—What effect have flats and sharps when placed at the beginning of a tune?—How is the staff divided?—By what character is the staff divided into measures?—What, then, is the use of the common bar?—The broad bar?—The double bar?—The close?—What is a syncopated note?—A Driving note?—Appogiatures?—Passing or grace notes?—Choosing notes?

NOTATION.

OF RYTHMICAL MEASURES IN COMMON, TRIPLE, AND COMPOUND TIME

Sec. 17.—Among the different writers on music, no less than twenty-six different measures of time have been brought out, all of which are marked or expressed by numerals placed in a fractional position. Those of Common or even time are expressed by the fractions ${}^{2}_{1}$, ${}^{2}_{2}$, ${}^{2}_{4}$, ${}^{4}_{8}$, ${}^{4}_{16}$. Those of triple or uneven time are expressed by the fractions ${}^{3}_{2}$, ${}^{2}_{3}$, ${}^{4}_{8}$, ${}^{8}_{16}$, ${}^{3}_{16}$, ${}^{9}_{16}$, ${}^{9}_{16}$. And those of compound time—which is also an even time, by the fractions, ${}^{6}_{2}$, ${}^{6}_{8}$, ${}^{6}_{8}$, ${}^{12}_{8}$, ${}^{12}_{16}$, ${}^{12}_{32}$, ${}^{12}_{6}$, ${}^{16}_{16}$, ${}^{12}_{32}$, ${}^{12}_{6}$, ${}^{16}_{16}$, ${}^{12}_{32}$, ${}^{12}_{6}$, ${}^{16}_{16}$, ${}^{12}_{32}$, ${}^{12}_{6}$, ${}^{16}_{16}$, ${}^{32}_{32}$. Many of the foregoing measures have, however, gone out of use; but some are still retained by some authors, which, when dispensed with, will simplify and improve the science. If we retain seven different measures of the twenty-six above-mentioned, it will be an ample supply for all the purposes of music, no matter how intricate the rhythmical construction may be.

Of the seven different measures which will be retained and used in this work, three will be in Common time, two in Triple, and two in Compound. The numerals used for all these different measures will be placed in a fractional position, to which fractions the whole note will be the integer. Thus the fractions will at once express the contents of the different measures to which they are invariably used.

Sec. 18.—COMMON OR EVEN TIME.—To Common or even time will be assigned three distinct measures; the first will be marked with the figures $\frac{2}{2}$; the second $\frac{4}{4}$; and the third $\frac{2}{4}$. Of these three measure, it will, however, be found that the first and second, by their connection and co-mingling, are

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Chap. 4, Sec. 18,19.]

identical, save that to the first may be assigned a slower movement, as it is mostly employed to the most solemn, devotional, and dignified music for the church of God. These measures are called *even*, because they naturally divided into even parts—two and four—and have feet of equal or even measured verse applied to them; and in their primitive state will admit of no other feet of poetry; though they may be so arranged and varied in their derivatives, that they will admit all the various metres that are contained in poetry, to be sung to them.

Measures are in their primitive state when they are filled with the notes which the fraction, by which they are marked, expresses. The upper figure, or numerator of the fraction, giving the number of notes which a primitive measure contains; and the lower figure, or denominator of the fraction, points out into how many parts the whole note is divided, and thus specifies whether they be half, fourth, or eighth notes.

Sec. 19.—The three foregoing measures will be illustrated in their primitive state, with a number of derivatives, by the following





[Chap. 4, Sec. 19-21.



Note.—In the foregoing examples of the three measures of Common or even time, their primitives and their derivatives, the learner will readily discover that these measures are alike in nature, and that the first and second are identical. For, in the third example of derivatives, the derivative of the first is the primitive of the second, and the derivative of the second is the primitive of the first; and in all the subsequent derivatives their measures are alike. They are also the same in their accents, for in many tunes they intermix, having, in some measures, two minims and one accent; and in others four crotchets, with two accents.

The third measure differs from the first and second only in that it has a minim for its measure

note, whereas the others have a semibreve; and consequently its rhythmical movement is faster.

Sec. 20.—TRIPLE OR UNEVEN TIME.—To triple or uneven time will be assigned two distinct measures. The first is marked by the fraction $\frac{3}{2}$; and the second by $\frac{3}{4}$. These two measures are identical in their rhythmical construction, and only differ in the length of their measure notes; the first containing three minims in its primitive measure, and the second three crotchets; in consequence of which, the second flows along more quickly in its rhythmical movement than the first.

These measures are all uneven, because they naturally divide into *three* equal parts; and thus having an uneven number of notes in their primitive measures, none other than uneven measured verse con readily be applied to them in their primitive state. But they may be so varied and arranged in their derivatives, that verse composed of all the various kinds of feet and metres may be applied to them.

As in Common or even time, so in Triple or uneven time, the fractions point out or mark the contents of the primitive measures. The improper fraction $\frac{3}{2}$ designates by its upper figure or numerator, 3, that three notes fill the measure; and the lower figure or denominator, 2, designates that the whole note is divided into two parts, and consequently, those three notes which fill the measure are half notes. In like manner the fraction $\frac{3}{4}$ designates that three fourth notes constitute its primitive measure.

Sec. 21.—These two measures of Triple time will be illustrated in their primitive form, and with a number of their derivatives, by the following







Note.—In the foregoing examples of the two measures of Triple time, it may readily be discovered, that in their primitives and in their derivatives their rhythmical construction is the same, save that the first measure is slower in its movement than the second—the first having three minims in its primitive measure, and the second three crotchets. These measures may be so constructed and varied, as to take one, two or three accents to the measure, according to the requisition of the poetry which is applied. This will be noticed and illustrated in its proper place.

Sec. 22.—Compound or Double Triple Measures.—The Compound

measure is an even measure; as two uneven numbers added together make an even.—Two distinct measures will be assigned to Compound time; the first of which will be designated by the fraction $\frac{6}{4}$, and the second by $\frac{6}{8}$. These two measures, like the former, are identical in their rhythmical construction, and only differ in the duration of their time; as the fourth notes are longer than the eighths.

These measures are even, because they naturally divide into two equal parts, and have two accents in each measure.

As in Common and Triple time, so in Compound, the fractions point out the contents of the primitive measure. The improper fraction $\frac{6}{4}$, designates that six fourth notes constitute the primitive measure; and the fraction $\frac{6}{8}$, that six eighth notes are contained in the primitive measure.

Sec. 23.—See the measures of Compound time—in their primitives, with many of their derivatives—illustrated by the following





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Note.—In the foregoing examples of the two measures of Compound time, it will readily be seen that they are the same in their primitive construction, and in their derivatives, save that the first contains two pointed minims in a measure, and the second two pointed crotchets, and, consequently, the second is performed faster than the first. These measures may be so constructed and varied as to take two feet of dactylic verse, or two feet of trochaic.

In all the foregoing examples of the primitive and derivative measures, in Common, Triple, and Compound time, it will be found, that by the various constructions and rhythmical arrangements of the different notes and ties, in the various measures, all the different feet of poetry may be applied to them, and agree with them in time, accent, emphasis and cadence.

QUESTIONS.

How many varieties of measure are used in this work?—What are the different kinds of time and movement of these seven measures? Ans. Common or even time; Triple, or uneven time; and Compound time.—How many varieties has Common time?—Triple?—Compound?—By what fraction is the first measure of Common time marked?—The second?—The third?—The first measure of Triple?—The second?—The first measure of Compound?—The second?—Is the Compound measure an even or an uneven measure?—Ans. It is an even measure, because two uneven numbers added together make an even.—Can these seven different measures be so arranged and constructed in their notes that all the different feet of poetic measures may be applied to, and agree with them, in all their rhythmical construction relative to time, accent, emphasis, and cadence?

CHAPTER V. RHYTHM.

OF TIME, ACCENT, EMPHASIS, AND CADENCE.

Sec. 24.—Nothing is more essential to the due performance of music than adjusting the *time* to the intention and meaning of the poetry.

Some of the most striking effects of music are produced by the change in time.

The *slow* naturally has a solemn, grave, and serious tendency, and the *lively* tends to joy and cheerfulness.

Destroy the time, or thwart the measure, and you rob the strain of its interest and charm.

The less we are sensible of anything mechanical in giving or keeping time, the more fully will the effect of the melody and harmony be allowed to operate, and the more deeply will the mind be penetrated with the feeling to be awakened.

But as notes are used in different rhythmical measures and movements, as also have different measures of poetry applied, they have not a positive length, but only a relative; yet it is proper that some definite time should be fixed for all the different measures, in the movements of Common, Triple, and Compound time, as a standard to guide the chorister to a consistent movement in all those measures; from which, however, it may be allowed to vary according to the requirement of the poetry.

Perhaps the most appropriate time which can be assigned to all the foregoing varieties of measure, is *three seconds* to the first and second measures of Common, and to the first of Triple and Compound time; and the third of Common, and second of Triple and Compound, about one-third faster.

Thus we have six measures—the first and second of Common time being blended into one—all of various rhythmical movements; this being an ample supply for all the poetic measures that can be written.

All the measures of Common time have *two* beats in the measure; a *down* beat on the first part of the measure, and an up beat on the second; and when two feet of trochaic verse are applied to them, they have two accents, but when only one foot of verse is applied, they have but one accent.

Note.—Some authors and teachers recommend four beats—down—left—right—up—to be given to the measures of 4.4 time; there may be some advantage in this arrangement, and the

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[Chap. 5, Sec. 24-25.

judicious teacher will decide for himself between two or four beats.

The measures of Triple time have *three* beats to each measure, two *down* and one *up*. In their primitive state they have but one accent, and one dactylic foot of verse applied to them; but each measure may be so varied as to make two, and even three accents to the measure, with two or three feet of trochaic verse.

The Compound measures have two accents in the measure, whether the verse be even or uneven—trochaic or dactylic, and *two* beats to each measure, a *down* beat on the first part, and an *up* beat on the fourth.

Each of the foregoing measures, in their different movements, may be so arranged, as to take as many accents as it has beats performed to it: but no accented syllable can properly be sung to a note on which the hand is not in motion, when marking the time. (See chap. 6.)

The first and second measures of Common time are identical in their rhythmical construction, as is evidently seen in the examples of the derivatives in chap. 4, sec. 19. But still it may be of some advantage to music to retain them both, and use the first to those pieces, the most of whose measures contain but one foot of verse and one accent; and the second to those pieces whose measures mostly contain two feet of verse, and two accents.

Note.—To measure musical time with accuracy and precision, a vibratory pendulum may be used, which may be regulated by the length of its cord, to swing or vibrate to any given time.

A pendulum is a heavy body, such as a piece of brass or lead, suspended by a wire or cord, so as to swing backward and forward. And when it swings, it is aid to vibrate; and that part of a circle through which it vibrates is called its arc. The vibrations are nearly equal whether it pass through a less or greater space of its arc; so that there will be no material difference in its vibrations or oscillations, whether it pass *six feet* through its arc, or only *six inches*. Hence,

A ball of some heavy metal of about one inch in diameter, suspended by a fine dense

cord of 39.2 inches in length from the centre of the ball to the centre of its motion, or the pin from which it is suspended, will vibrate once every second. the length of this pendulum will vibrate to the beats of the measures of the third movement of Common time, and to the first of Triple, and the second of Compound: each of these movements having one second allowed to each part of their measures, and consequently to each beat.

For the first and second movements of Common time, and the first of Compound, the cord of the pendulum must be 88.2 inches long; this makes one vibration in one and a half seconds, and vibrates in accordance with those measures which have two beats to the measure, and are performed in three seconds.

The second movement of Triple time has no equivalent in its measure, as it has three beats, performed in two seconds; whereas the third movement of Common time has but two in the same space of time; and, consequently, this requires a cord whose length is but 17 inches, to vibrate in accordance with the beating of its time.

There is now an instrument constructed called a Metronome, which by a short pendulum, with a sliding weight, and set in motion by clock-work, serves to measure time in music.

Sec. 25.—Accent and emphasis form the essence of versification and music. It is from this source that poetry and music derive their dignity, variety, expression, and significancy. Without these requisites music and poetry would be heavy and lifeless: they would be ambiguous and unintelligible. Consequently, as the accent of the music must exactly and invariably agree with the accent and emphasis of the poetry, when united, it makes it indispensably necessary for the learner to acquire some knowledge of the nature and propriety of accent and emphasis, and the rules for applying them, both to music and poetry.

Accent is the laying of a peculiar stress of the voice on a certain syllable in a word, or on a note in music, that they may be better heard than the rest, or distinguished from them. Every word of more than one syllable, has one or more syllables accented. For example: the words *music, musical* and *musically* have the first syllables accented; the words *become, becoming,* and

Chap. 5, Sec. 26.]

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becomingly have the second syllable accented; and the words *contravene*, *contravener*, and *contravention*, have the third syllable accented. Now, when monosyllables, which, properly speaking, have no accent, are combined with other syllables, and form a phrase, the stress which is laid on one syllable, in preference to another, is called emphasis: and thus emphasis, in monosyllables, supplies the place of accent, and is the same with in in disyllables and polysyllables.

Sec. 26.—Time in music and poetry is the quantity or length by which is assigned to every particular note and syllable its due measure, without making it either longer or shorter than it ought to be. There are two kinds of time in music, namely, *Common or equal time*, and, *Triple or unequal time*. These TIMES are regulated by the accent, which is laid on particular parts of the measure, the regulation of which must agree with the measures of poetry into feet, where the accent is laid on particular syllables, by means of which the voice steps along through the verse in a regularly measured pace, which is delightful, musical, and pleasing.

Poetry is measured by feet. All feet in poetry consist either of two or of three syllables. Feet of two syllables are equal, and feet of three syllables are unequal. Consequently, poetry may be divided into two parts, namely, *equal measured verse* and *unequal measured verse*. Verse of equal measure consists of feet of two syllables, and verse of unequal measure consists of feet of three syllables. Each of these measures may be subdivided into two parts; the first or equal measure into TROCHAIC and IAMBIC, and the second or unequal measure into DACTYLIC and ANAPESTIC measure.

Verses of Trochaic measure consist of feet of two syllables, having the first syllable of each foot accented, and the last unaccented.

Verses of Iambic measure consist also of feet of two syllables, having the first syllable of each foot unaccented, and the second accented.

Verses of Dactylic measure consist of feet of three syllables, having the first syllable of each foot accented, and the last two unaccented.

Verses of Anapestic measure consist also of feet of three syllables, having the first two syllables unaccented, and the last accented.



[Chap. 5, Sec. 26.

DACTYLIC FEET OF POETRY WITH MEASURES OF MUSIC



In the foregoing representations, where the poetic measures are divided into their respective feet of two and three syllables, the words used at the head of each of their divisions represent by their accent, the respective feet of poetry and measures of music to which they belong. Thus the Trochaic foor is represented by the disyllables, beauty, bounty, kindness, &c.; the Iambic by befriend, become, attend, compose, &c., the Dactylic by the trisyllables cherubim, paradise, meditate, gravitate, &c.; and the Anapestic by appertain, intervene, importune, averflow, &c.

In the example of trochaic feet, it will readily be seen, that the accent of the poetry, in each division, agrees with the accent of the music. But as the

first part of the musical measure is invariably accented, and the last part unaccented, it will be discovered that,

In the example of Iambic measure the feet must be divided by the common bar, and the first syllable of each foot put in the last part of the measure, and the last syllable in the first part, as may readily be seen in the example. And thus the accent of the poetic feet and of the musical measures will agree and be retained in their proper places.

In the example of the Dactylic feet, it will be seen that the poetic feet agree with the measures of music; they both having the accent on the first part; but,

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In the example of Anapestic feet it will be discovered that the foot of poetry must be divided by the bar, and the first two syllables of each foot put in the last part of one measure, and the accented syllable the accented part.

The preceding are the principal feet and measures, of which all species of English verse wholly or chiefly consist. These measures, however, are capable of many variations, by their intermixture with each other, and by the admission of secondary feet. From this intermixture it is, that we have such a variety of metres

NOTE.—The Secondary feet of poetry are—

1. A SPONDEE, having both the words or syllables accented, as in the words \overline{A} -men, pale moon.

2. A PYRRHIC, having both the words or syllables unaccented, as on the high rock.

3. AN AMPHIBRACH, having the first and last syllables unaccented, and the middle one accented, as in the words, *de-light-ful*, *a-mend-ment*.

4. A TRIBRACH, having all its syllables unaccented, as in the words, \overline{nu} - $\overset{\circ}{me}$ - $\overset{\circ}{ra}$ - $\overset{\circ}{ble}$, \overline{va} - $\overset{\circ}{ri}$ - $\overset{\circ}{a}$ - $\overset{\circ}{ble}$, \overline{con} - $\overset{\circ}{quer}$ - $\overset{\circ}{a}$ - $\overset{\circ}{ble}$.

The Spondee and Pyrrhic are both feet of two syllables, the one having both syllables accented, and the other both unaccented; and the Amphibrach and Tribrach are both feet of three syllables, the one having all its syllables unaccented, and the other the first and third unaccented, and the middle accented. Hence,

No piece of poetry can be formed by the secondary feet alone, which is evident from the fact that the Spondee has both its syllables accented; and the Pyrrhic and the Tribrach have all their syllables unaccented; consequently the Spondaic measure would form a line in succession of all *accented* syllables; and the measure of the Pyrrhic and Tribrach would each form a line in succession of *unaccented* syllables. The Amphibrach measure, as it has the first and third syllable unaccented, and the second accented, would, by a regular succession of its feet,

form a line of one accented syllable and two unaccented ones, and thus lose itself in the Dactylic or Anapestic measure. Hence, it is evident that there can be no poetry formed of the four secondary feet alone; but that they only tend to improve, enrich, beautify, and diversify the poetry of the four principal feet.

QUESTIONS.

Have notes a positive or only relative length?—May not some positive length of time be assigned to them and to the different measures?—What is the most appropriate length of the first two measures of Common time, and the first measure of Triple and Compound?—How much faster should the last measure of their movements be sung?—How many accents have the measures of Common time?—The measures of Triple?—Of Compound?—Have their measures more or less accents according to their rhythmical construction?—How many accents can each measure take? Ans. As many as it has beats.—How many beats are given to the measures of Common time?—To Compound?—What is accent?—What is time in music and poetry?—How is poetry measured?—How many different feet of poetry are there in music?

CHAPTER VI. RHYTHM.

ON MARKING OR BEATING TIME.

Sec. 27.—For the purpose of performing music in its proper time, as it steps forth with its flowing numbers through the various rhythmical movements, it is necessary to measure the time as it flows along. This measurement is performed by the singers with a motion of the hand down and up, in regular process of time, principally on the accented part or parts of the measure. For this marking of the time, the right hand should be used, and the motion of it should be so quick as to allow the rest to be equal with the motion. The first part of every measure, in all the various movements, has a down beat. In the measures of Common time which contain four fourth notes, there is a down beat on the first, a rest on the second, an up beat on

the third, and a rest on the fourth; and when these measures have but two accent to every beat, and the hand and the accent still move together. notes, the rest of the hand should likewise be equal to the motion.

In the measure of Triple time, where there are three beats in a measure, two down and one up, the rest of the hand should likewise be equal with its motion. And in the measures of Compound time, the rest of the hand should be double to that of its motion; for where there are six quarter notes in a measure, there is a down beat on the first, a rest on the second and third, an up beat on the fourth, and a rest on the fifth and sixth; and in all the various forms of the measure, the rest should be double to the motion. And as there is a down beat on the first part of every measure in all the movements of time; so all the measures in the various movements and rhythmical constructions, have the first part accented; and thus the hand and the accent of the voice move together.

When the measures of Common time contains but two parts, with one foot of Trochaic verse, they have but one accent, which is on the first part; but when they contain four parts, with two Trochaic feet of verse, they have two accents, which are on the first and third parts of the measure, being the same parts on which the hand is in motion. And thus the hand and the accent of the voice still move together.

The measures of triple time, when in their primitive state, have but one accent, which is on the first part; and in that state they take one foot of Dactylic verse. But they may be so constructed as to take two and three accents and two and three feet of Trochaic verse. For where the measure contains two crotchets and two minims, and has two feet of Trochaic verse applied, it has two accents, one on the first part, which falls on the first crotchet, and the other on the second part, which falls on the first minim; and when it has six crotchets, and three feet of Trochaic verse applied, it has three accents-one on each part of the measure, which is on the same part the beat is performed in marking the time. In marking this measure we have a down beat on the first crotchet and rest on the second-down on the third. and rest on the fourth,—up on the fifth, and rest on the sixth; thus it has an 1 it—also six syllables; but in their rhythmical movements there is a

The measures of Compound time have two accents and also two beats, which fall on the first and fourth parts. They contain either two feet of Dactylic verse, or two feet of Trochaic, according to their construction.

Sec. 28.—The Compound measure is an even measure; it can take two threes-or two feet of unequal measured verse; but cannot, like Triple measure, take three twos, or three feet of equal measured verse. And not withstanding the equal quantity of notes which fill their measures, they differ widely in their rhythmical movements,---the one taking two threes, with two accents and two beats; and the other three twos, with three accents and three beats, as in the following

EXAMPLE:



In the above example, the *first* Triple measure contains six quarter notes, and has three Trochees-six syllables-applied to it; and the first Compound measure has the same number of quarter notes and two Dactyls applied to

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wide difference in *this* and the following measures, as indicated by the abbreviatures.

Sec. 29.—Since a practical knowledge of time and accent, and of beating time with accuracy, according to the movements of the various measures, lies at the foundation of correct performance, and is the most important requirement we will illustrate it more clearly by the following examples.

In these examples will be used the following abbreviations, viz.: d will stand for *down beat*; u for *up beat*; and r for *rest*. The dash (—) marks the accented note, and the semi-circle (\Box) the unaccented. The numerals point out the parts of the measure according to their divisions. For the poetic feet written in each measure, and their respective accents, see sec. 26, with examples.

			Da	ctyl.	Troc	hee.	T	wo Tro	chees	.	D	actyl.		L	Dacty	1.	Τı	vo Tro	ochees		Troc	hee.	1	1	1	Mixe	d.	Tro	chee.	I.
			Hith - e	er, ye	faith	- ful,	hast	e with	songs	s of	tri-u	mph,	То	Beth	- le -	hem	go	your	Lord	of	life	to	me	et.	То	you	this	day	is	
			d	u r	d	u	d	r	u	r	d	u	r	d	u	r	d	r	u	r	d	u	d	u	d	u	r	d	u	
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t	orn	а	Prince	and	Sa	- V	ior, O	come	e and	let u	s wo	or-ship), O	com	ne an	d let	us	wor-	ship, (C	come	and le	t us	wor-s	hip		at h	is	feet.	
	d	r	u	r	d	r	u r	d	r	u ı	d	u	r	d	r	u	r	d	u	r	d	r u	r	d	u	r	d 1	a (d u	
	1	2	3	4	1	2	3 4	1	2	3 4	1 1	3	4	1	2	3	4	1	3 4	4	1	2 3	4	1	3	4	1 2	2	12	
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EXAMPLES OF COMMON OR EVEN TIME. (See Sec. 30)

Sec. 30.—In the foregoing example of common time, the movement is marked for two half notes to the primitive measure; and yet there are six measures with four quarter notes. Now the measures which contain two half notes have one accent, and one foot of trochaic verse; and those which contain four quarter notes have two accents, and two feet of trochaic verse, and yet they move smoothly and seetly together throughout the whole tune. Each of these measures have two beats—one *down* and one *up*. There is an accented down beat on the first part of every measure, in all the movements of time; and when the measure contains two half notes, there is an unac-

cented up beat, as in that state it has but one accent, and one foot of trochaic verse; but when it consists of four quarter notes, it has an accent on the up beat lso, and contains two feet of trochaic verse. All the measures can take as many accents as they have *regular* beats; and no measure should have more beats than it can take accents.

Throughout this example are found measures containing *one, two, three,* and *four* syllables of verse—all combined in one piece of music, moving in succession. Moreover, some of these measures have but one accent, and embrace one foot of trochaic verse, and others one foot of dactylic. Other

measures have two accents, and two feet of trochaic verse. hence we see they fall on such parts of the measure as cannot be accented. how various the measures, in the self-same tune may be formed, in their rhythmical construction, to answer the purposes of the various kinds of poetic numbers, and still retain a uniform movement and regular beat on all the accented parts of the measures. Hence also the propriety of giving only two beats to the measures of all the movements of Common time, which are nothing more than primitives and derivatives to each other, and should, in all cases, be treated as such. (See examples, Sec. 19)

NOTE.—It is proper here to observe, that when a measure in $\frac{2}{4}$ time has a pointed crotchet in the first part of the emasure, the point is swelled out, as it falls on the second part of the measure, which is frequently accented; but when in $\frac{4}{4}$ time there are pointed crotchets in the first or second part of the measure, they are not swelled, but smoothly lengthened out, because

In poetry and music the greatest attention is due to accent: for it is by a due observance of the accent that the poet is led and guided through the measures of his poetic numbers and sweetly flowing lays: and the musician, in the construction of his musical measures and rhythmical progression.

Sec. 31.—In the first example the movement is in Triple time, where the measure has one accent, and three beats, two down and one up. Some of the measures are primitive, and take one foot of dactylic verse; others have a slight variation of notes, but the same verse and rhythmical numbers; and others have one foot of trochaic verse, by uniting the two crotchets of the first and second parts of the measure into one minim.



EXAMPLES OF TRIPLE OR UNEVEN TIME. (See Sec. 30)

EXAMPLE FIRST.

EXAMPLE SECOND.



OF VOCAL MUSIC

EXAMPLE THIRD.



EXAMPLE FOURTH.

		Iam	ıbus.	Ian	nbus.	Iai	mbus.	Ia	mbus.	Iaml	bus.	Ian	nbus.	1	Ian	ıbus.	Ian	nbus.	Iam	bus.	Iam	bus. I	am	bus.	Ian	nbus.	Ian	nbus.	.	Iam	ibus.	
		The	Spir-	it	of	re -	deem	-ing	grace,	Give	us	in	faith	1	to	claim;	To	wres-	tle	till	we	seeth	y	face,	And	know	thy	hid	-	den	nam	ıe.
		u	d d	u	d d	u	d d	u	d d	u	d d	u	d	d	u	d d	u	d d	u	d d	u	dd i	i	d d	u	d d	l u	d	d	u	d d	1
		3	12	3	12	3	12	3	12	3	12	3	1	2	3	12	3	12	3	12	3	12 3	3	12	3	1 2	2 3	1	2	3	1 2	2
		c		0		S		S		S		0		с	c		0		S		S	— c	2		S	— c	, с		. U	S		
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In the *Second example* the movement is also in Triple time, where the measure has two accents, and two feet of trochaic verse applied to it. By the *abbreviatures* the pupil will see that one foot of verse is sung to two crotchets, and another to the two minims which are in a measure; and thus the first crotchet, which occupies the first part of the measure is accented, and the second unaccented; and the first minim, which occupies the second part of the measure is accented, and the second which occupies the third part is unaccented. In this measure there is a down beat on the first crotchet, and a rest on the second. When the hand beats a minim, its rest should be equal to its motion.

In the *Third example* we have the same movement as in the second save | various feet of poetic measures.

that the measures vary in their rhythmical construction; some of which have three accents and three feet of trochaic verse; and others one accent, and one foot of the same verse contained in them: all of which is clearly seen by the abbreviatures in the examples. Sec. 29.)

In the *fourth example*, we have the same Triple movement and measure as in the first, except that in these measures the first and second parts of the measure are united in one note and sung to one syllable; thus including one trochaic foot, whereas in the first example the measure is in its primitive state, and embraces one foot of dactylic verse. Both these measures are, however, subject to the same accentuation. Hence we see that the Triple measures are subject to three varieties of accent, to which may be applied various feet of poetic measures.

EXAMPLES OF COMPOUND OR DOUBLE-TRIPLE TIME. (See Sec. 32)

EXAMPLE FIRST.



EXAMPLE SECOND.

Two Trochees.	Mixed.	Two Trochees.	Mixed.	Two Trochees.	Mixed.	Two Trochees.	Mixed.
An - gels, roll the	rock a-way;	Death! yield up the	might - y Prey;	See! he ris-es	from the tomb,	Glow - ing with im -	mor - tal bloom.
drrurr	drru	dr r u r	drru	drur	drru	drrurr	drru
1 2 3 4 5 6	1 2 3 4-6	1 2 3 4-6	1 - 3 4 - 6	1 2 3 4-6	1 2 3 4-6	1 2 3 4 5 6	1 2 3 4-6
	— v v —	— ɔ ɔ — ɔ	$- \circ \circ -$	$- \circ - \circ$	— v v —	— ၁၁ — ၁ ၁	— v v —
• " 1 1	1				I	- 1 1	

Sec. 32.—In the *first example* is given the first movement of Compound time. This measure has two accents, and always two beats; a down beat on the first note of the primitive measure, and an up beat on the fourth, and in its primitive state, has two feet of dactylic verse applied to it, as in the examples. When this measure contains two pointed minims, and one foot of trochaic verse, it has *in that form*, but one accent, which is frequently the case at the close of one line of poetry, ad the commencement of another. The pupil will readily discover by the abbreviatures, (Sec. 29,) that the rest of the hand, in marking this measure, is double to that of its motion, which should be duly observed and practiced.

In the *second example*, the movement is also in compound time, with the measures varied and constructed with notes and ties, in such a manner as

to apply to two feet of trochaic verse to some, and one foot and a half to others. The motion of the hand, in beating time, should be as quick on a long note as it is on a short one, so that a regular and uniform motion and rest be sustained throughout all the measures of a whole piece of music.

Note.—From the foregoing examples and definitions, it is evident, that accent and emphasis adjust and regulate the time of the measures in music and of the feet in poetry, and also the motion of the hand in marking the time of the various measures, in all the different movements. And from this fact, as well as the fact that the two movements of Common time are identical, as shown in the examples, Sec. 19, we can find no use for four beats in any measure of Common time. And it is strange to us how the idea should ever have occurred, of introducing six beats to the measure of Compound time.

Chap. 7, Sec. 33-35.]

Sec. 33.—The motion of the hand, in beating time, should accompany the accent. And although the hand must in some measures, beat on an unaccented part, yet in other measures, in the same tune, that part may be accented: and thus the hand is always in motion on the accented part of the measure, and should be at rest on the unaccented. To have a continual motion of the hand, in marking the time, shackles the singers, and produces heavy and lifeless performance. The more natural and easy the singers can move along, in marking the time, the more charming and powerful will the effect of the melody and harmony prove, and operate on the minds of the performers and the audience.

Sec. 34.—Decency and order should characterize the marking of the time. The hand should be kept open, and move perpendicularly up and down, with a quick motion, but not too high. The rest of the hand should always be equal to its motion, and in slow movements about double. In triple time, the hand has two down beats and one up; in all the other movements the motion of the hand is simply up and down. All contortion, closing, twisting, or irregular motion of the hand should be carefully guarded against, and avoided, and an easy motion and rest sustained throughout.

Note.—Some authors arrange the measures of the different movements into four divisions, namely; Double, Triple, Quadruple, and Sextuple, and give two beats to the first, three to the second, four to the third and six to the fourth. This arrangement seems to have, at first sight, a good deal of consistency; since the first has two parts to the measure, the second three, the third four, and the fourth six, in their primitive form. But when we take into consideration the accentuation of the different measures of those movements (Sec. 26)—the commingling of the measures of the first and third, (Sec. 30)—the different rhythmical constructions and movements of the measures of the second and fourth, (Sec. 28)—and besides this, the four and six beats which those authors direct—the propriety of this arrangement vanishes away.

The mode of beating the triple measure with the second beat horizontally seems to have gained some practice: though we decidedly prefer two down beats and one up. This mode is

more uniform with all the other beats in the different movements, and less subject to lead singers to a disorderly habit in the motion of the hand.

QUESTIONS.

How many beats are in the measures of Common time?—How are they performed?—Which part of the measure has invariably a down beat?—What part of the measure is invariably accented?—Has the measure but one accent?—If the measure has four notes and two accents, on what parts of the measure do the accents fall?—Are the beats then performed on the accented parts of the measure?—How many beats has the measure of Triple time?—How are the beats performed?—How many accents are in it when in its primitive form?—Can it take more than one accent in its derivative measures?—How many beats has the measure do the accents fall?—Are the beats performed on the accented?—How many accents?—On what parts of the measure do the accents fall?—Are the beats performed on the accented parts of the measure?—How many accents for the measure?—How many beats has the measure of the measure of Compound time?—How many accents?—On what parts of the measure do the accents fall?—Are the beats performed on the accented parts of the measure?—Must the accents of the measures of music and the feet of poetry always agree?—If the measure of Triple time contains six quarter notes, and the measure of Compound time contains the same number, will they agree in their movement?—Why not?

CHAPTER VII. INTONATION.

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MELODY-MUSICAL INTERVALS, SCALES, &C.

Sec. 35.—As letters represent the seven original sounds on the staff of music, (Sec. 9,) it is of great importance that the student be well acquainted with their situation, and commit them to memory, as on the following, SCALES.

BASS STAFF.

OF VOCAL MUSIC



TENOR AND TREBLE STAFF.



[Chap. 7, Sec. 36,37.

Sec. 36.—As musical sounds may be high or low, (Sec. 3,) a scale is used to represent them in their different pitch.

In the following scales of the major and minor modes, is represented the gradual succession of the tones and the semitones, rising by steps and halfsteps, counting from the lowest upwards, and thus forming the diatonic scale in both keys.



Each of the above scales is made up of seven sounds, (Sec. 2) with the inversion of the first, which becomes an eighth, and thus completes the octave, and commences a second scale.

These scales consist of five tones and two semitones—or five steps and two half-steps—which are distinguished on this scale, by the lines and spaces, the spaces of the semitones being half as wide as those of the tones. By this the pupil will discover, that the semitones lie between B and C, and E and F; they also lie *invariabbly*, between the syllables Si and Do, and Mi and Faw. The letters and notes are placed on the lines, in the above scale, in the same order in which they are placed in their natural positions on the lines and in the spaces of the staff.

Sec. 37.—By comparing the sounds C, D, E, F, of the major scale above, with G, A, B, C, we find that the distance of each of these *fourths* consists

of three tones and a semitone; therefore any tune formed by one will be similar to that of the other.

These four sounds are termed a *Tetrachord;* they composed the ANCIENT GREEK SCALES, and the enumeration of all the sounds of their system; though it appears in GARDINER'S "MUSIC OF NATURE," that their music was all written in the minor scale. The two Tetrachords, taken in succession, form the diatonic scale; the chief sound or key of which is taken from C; *it* being the letter from which the natural major key proceeds.



In both these Tetrachords the semitones or half steps lie between the third and fourth intervals; and thus they are alike in their sounds, except that the first commences on C, and the second on G.



The Tetrachords of the minor scale are unlike in the location of the semitones, the first of which has the half step between the second and third; and the second has it between the first and second of the scale. They also differ with the tetrachord of the major, owing to the fact, that those of the major proceed from C and G, and the minor from A and E. Both the major and the minor, however, have the semitones between B and C, and E and F; as also between Si and Do, and Mi and Faw.

Chap. 7, Sec. 38,39.]

OF VOCAL MUSIC

Note.—In counting intervals *in this work*, both the extremes will be counted and taken into the number. Thus, C, D, E, F, form four intervals of the scale, reckoning from grave to acute; though there are only three *intervals*, or *spaces between* them. The term INTERVAL is applied both to the distance between the notes , and to the notes themselves. Thus E is not only said to be at a distance of a *fifth* above C, but is *itself* called the *third* above C; G is not only said to be at the distance of a *fifth* above C; but is itself called a fifth above C; in both which cases the extremes are taken into the number. So when the voice gradually ascending or descending by intervals, is compared to steps and half steps, the first sound will of course, be its first step, the second sound its second, the third, its third, &c.; and as the scale is unlimited, whatever sound or letter the voice or instrument may strike, there are still intervals below it or above, from which that step proceeds. In the scale of music, the half steps are taken into the number of intervals as well as those of the steps.

Sec. 38.—Two disjoint Tetrachords, one arranged above the other, form the diatonic scale. Those two Tetrachords, the first of which proceeds from C, and the second from G, form the major scale; and those two, the first of which proceeds from A, and the second from E, the minor scale.



EXERCISES IN RHYTHM





Note.—It is very desirable that the singer pronounce the syllables clearly and distinctly in solmization: it adds greatly to the beauty of music, and will lead to correct pronunciation of the poetry, when applied to music, which is of the greatest importance.

Sec. 39.—The following rhythmical exercises should be practiced in a school, with a full accent, and a regular marking of time, until the pupils have acquired a ready motion of the hand, and a command of voice, in striking the accented notes with strength and firmness, and with a clear voice; and the unaccented in a soft, smooth, and easy manner. In training a school, no pain should be spared in the intonation of the voice, and in a regular marking of the time, as thereon depends *wholly*, all future success in bringing out music in rhythmical order, and with taste and elegance.



[Chap. 7, Sec. 40.



Sec. 40.—The following exercises should be practiced till the pupils have acquired firmness in sounding, with precision, and with a smooth and clear voice, every interval in the diatonic scale, ascending and descending, both both keys.

EXERCISES IN MELODY



OF VOCAL MUSIC



Sec. 41.—As the Tonic or key note is the most important interval in the musical scale, and the chord based on it is the principal one in every piece of music, it will be proper, in this place, to give exercises on the intervals



Exercises on the Intervals of the Common Chord. INTERVALS PROCEEDING FROM THE MAJOR TONIC.



QUESTIONS.

How many letters of the alphabet are used to represent musical sounds?—How are these letters placed on the Bass staff?—How on the Tenor and Treble?—Are the Tenor and Treble alike in pitch?—How many tones are in the scale of music?—How many semitones?—Between which letters do the semitones lie?—Between which notes do the semitones lie?—How many modes are there in music? Ans. Two, the major and the minor.—Wherein do these modes differ? Ans. In the location of the semitones.—How many sounds form a Tetrachord?—How many Tetrachords compose the diatonic scale?—How many notes are applied to the diatonic scale?—What syllables are applied to these notes?—In how many different positions can the intervals of the common chord be sung?

CHAPTER VIII.

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MELODY.

OF INTERVALS, CHORDS, AND THEIR INVERSION.

Sec. 42.—The intervals of the scale are seven, (Sec. 2,) the first of which is called—

The *Tonic*, which is the key note or principal sound, and which governs all the rest.

The second is called the *Supertonic*, because it is next above the Tonic. (*Super*—above.)

The third is called the *Mediant*, as it is half way between the Tonic and Dominant. It varies with the mode, being the greater third in the major, and the lesser third in the minor.

The fourth is called the *Subdominant*, being next below the Dominant. But the term arises from its being a fifth below the Tonic, the same degree that the dominant is above. (*Sub*—under.—)

The fifth is called the *Dominant*, from its importance in the scale, and from its immediate connection with the Tonic; and as it is heard in the Bass immediately before the final perfect cadence, it is said to govern the Tonic in both the major and the minor scales.

The sixth is called the *Submediant*, from its being halfway between the Tonic and the Subdominant descending. Like the Mediant, it varies with the mode, being the greater sixth in the major mode, and the lesser sixth in the minor.

The seventh is called the *Leading note*, from its leading to the Tonic. It is also called the *Subsemitone*, from its being a semitone below the Tonic. Moreover it is called the *sharp seventh*, from its being of a sharp sound in

Chap. 8, Sec. 43.]

OF VOCAL MUSIC

the major scale, and is frequently sharped in the minor.

The eighth is the inversion of the Tonic and is the same note with it though it is an octave higher in the general Scale.

Sec. 43.—In the following scale is exhibited the connection of the three parts of music, Bass, Tenor, and Treble; with the degrees of sound of all the letters expressed by numerals, on the staffs, as they rise in acuteness, on the scale. The Treble staff is the same with the Tenor, except that it rises an octave higher in the scale; owing to the fact, that the female voice is more acute by one octave, than that of the male. Hence there are represented on the scale 22 musical sounds, from G, the first line of the bass staff, to G, the

space above the fifth line of the Trble staff; this being the ordinary compass of the human voice, including male and female: though the ordinary compass of either sex is only fifteen sounds. (See note on Sec. 6.)

The two natural keys, major and minor, with their intervals, as represented above, should be well understood. Of the seven intervals, of either key, five are steps or tones, and two are half-steps or semitones. In the major key the semitones always lie between the third and fourth and the seventh and eighth intervals of the scale; and in the minor key they lie between the second and third and fifth and sixth intervals. (See on this, Sec. 36, with scale.)



THE GENERAL SCALE OF MUSIC.

[Chap. 8, Sec. 43.

From the fact that there are but seven original sounds in the scale of music, and that it takes eight sounds to complete the scale, some difficulty seems to arise, in finding out the eighth sound. But when it is taken into consideration that the key note of either the major or the minor scale is always taken as *one*, and is the first interval in the diatonic scale; and that it occurs or comes round again every eighth interval, [like the Sabbath, which is the first day of the week, and comes round every eighth day; though there are but sevn days in the week,] it is easily perceived, that the eighth is nothing more than the inversion of the first; and with the same sound that commences a succeeding scale, the preceding is completed: thus the Tonic is the first sound in the scale, and is also the last.

By the three braces which include the octaves in the above scale, it will be seen that the first brace includes the first note and the eighth; the second brace includes the eighth and the fifteenth; and the third includes the fifteenth and the twenty-second. Thus it is manifest that the last note of a preceding octave, is the first note of a succeeding one. The same method is perceivable in the braces of the double octaves; the first of which includes the first and the fifteenth, for the compass of the male voice; and the second includes the eighth and the twenty-second, for the compass of the female voice; thus still including in the braces, the last note and the first of each octave.

Although the ordinary compass of the human voice is limited to three octaves, comprising twenty-two musical sounds; yet there are some voices which can surpass this limitation;—the instruments have yet a much wider range; and the musical scale knows no bounds. Hence we see in the scale, notes in double letters below, also notes in Alt above; these might form new octaves above and below; and be continued octave upon octave, without finding to them any limitation.

Note.—It is found by a mathematical calculation, based upon the number of vibrations to a second of time, that the five intervals of the diatonic scale termed *steps* are not exactly equal to each other, while the two *half-steps* are each of them a little more than half-steps, and the one between 7 and 8 is greater than the one between 3 and 4.

Dr. Calcott, in his musical Grammar, divides the scale into tones of 9 commas and tones of 8 commas; and the two diatonic or natural semitones into 5 commas, and the chromatic or artificial semitones into three or four, according to the magnitude of the tone.

Thus the scale is divided into major tones of 9 commas, and into minor tones of 8; and into natural or major semitones of 5 commas, and into artificial or minor semitones of 3 or 4 commas.

According to this theory, if we suppose a string on an instrument which sounds out one Do of the scale, to have 24 vibrations in a second of time, then one-half of its length, vibrating at the same tension, will sound eight of the scale, and will vibrate just twice as fast, or 48 times to the second. Preserving this ratio, the relative number of vibrations to every sound of the present scale will be as follows:

С	D	Е	F	G	А	В	С
1	2	3	4	5	6	7	8
24	27	30	32	36	40	45	48

Now, in order to give the length of a string which will make the proper number of vibrations to each of the intervals of the scale, we must take 24, the number of vibrations for the fundamental or 1, for a numerator, and the other numbers, which give the vibrations of the other intervals for denominators, and the fractions will stand thus:

1.	2.	3.	4.	5.	6.	7.	8.
24_1.	24_8.	24_4.	24_3.	24_2.	24_3.	24_{8} .	24_{1}
24^{-1}	27 ⁻ 9'	$30^{-}5'$	$32^{-}4'$	36 3'	$40^{-}5'$	45 15'	$48^{-}2^{-}$

These fractions express what part of the length of the whole or fundamental string is required to give the proper number of vibrations to each interval of the scale. And here we find that the Octave takes one-half of the string, the fifth two-thirds, the third four-fifths, &c. See the following

EXAMPLES OF VIBRATIONS

Unisons														. 1	
Fundamental .														. 1	
Octave														. 2	
Fundamental .														. 1	

OF VOCAL MUSIC

The foregoing examples of the unison, octave, fifth and third will suffice as specimens of all the rest of the intervals of the diatonic scale, which are the second, fourth, sixth and seventh, the length of whose strings are expressed above.

from the foregoing examples, we see that the proportion of the vibrations for each interval of the scale is fixed. And according to this theory, if we suppose the distance from 1 to 2 of the natural scale, or from C to D, to be 22, then the scale will stand as follows:

From	1 to 2,	2 to 3,	3 to 4,	4 to 5,	5 to 6,	6 to 7,	7 to 8,
	22;	20;	12;	22;	20;	<u> </u>	13.

Thus when we take 22, the distance from 1 to 2, as the standard of a step, then from 2 to 3 will be a step of 20, and so on, as in the above diagram.

Now if the intervalsof the scale could be performed according to this mathematical standard, which is based on the number of vibrations of a string to each interval as represented above, it would produce the most perfect harmony. But as the scale in this arrangement could not be transposed to other letters of the scale, it would in this fixed position, like the purest honey, soon cloy. Hence,

In order to adjust the scale to an even temperament, all the distances, as just given in the mathematical diagram, are added together, the aggregate of which is 131; this number divided by 12, the number of semitones in the scale, will produce 10_{12}^{11} as the distance of each half-step; and making each step twice as great, will give 21_{12}^{10} as the distance of a step. Thus all the tones of the scale are equalized, and so are the semi-tones also, and made just half the distance of a tone; and in this equal temperament it is transposed to all the letters of the scale, and to all the chromatic semi-tones.

Sec. 44.—The intervals of the scale are used both in a conjoint and in a disjoint manner. They are used conjointly, when they follow each other in the order of the scale; and disjointly when they are separated, and form longer intervals or skips, such as the third, fourth, fifth, sixth, seventh, and eighth. (See exercises, sec. 41.) These skips may also include their octaves, as the tenth, twelfth, fifteenth, &c.

Disjoint intervals are consonant or dissonant, according to the degrees of

sound they are distant from each other. The combination of sound produced by the *first, third, fifth* and *eighth* intervals of the scale, major or minor, called the Common Chord or harmonic triad, (exercises, sec. 41,) are consonant intervals, and when sounded together, form a delightful chord, producing the most sublime and pleasant harmony; but the second and seventh are discords, (See table, sec. 50.)

A Common Chord or harmonic triad, consists of a fundamental note, and its third and fifth, and usually its octave: and notwithstanding the chord which proceeds from the key note is the most perfect, yet every letter of the scale may be made the fundamental note of a common chord, major, minor, or imperfect.

Every consonant triad must have a perfect, or major fifth. A major triad has a major third from the *first* to the *third*, and a minor third from the *third* to the *fifth*; and a minor triad has a minor third from the *first* to the *third*, and a major third from the *third* to the *fifth*. (Examine the scale.)



In the foregoing scale are exhibited six consonant triads and one dissonant. Three of the consonant triads are major, and three are minor. In the dissonant triad, both the thirds are minor, and so is the fifth, in consequence of which, the chord is dissonant.

Sec. 45.—INVERSION OF INTERVALS.—When the lower note of any interval is placed an octave higher, or the higher note an octave lower, the change thereby produced is called *inversion*. Any interval and its inversion complete the octave. Thus let C and D form a major second, then invert C by placing it an octave higher, and it will produce, from D to C, a minor seventh, which, with the major second, completes the octave. Moreover, let B and C form a minor second, then invert B, by removing it an octave above, and it will broduce from C to B a major seventh, which, with the minor second, completes the octave.

INTERVALS AND THEIR INVERSION.















A Minor 6th becomes a Major 3rd;



A Minor 7th becomes a Major 2nd;





A Major 3rd becomes a Minor 6th;



A Major 4th becomes a Minor 5th;

A Major 5th becomes a Minor 4th;





A Major 7th becomes a Minor 2nd;







[Chap. 8, Sec. 45,46.

In the foregoing inversion of Major and Minor intervals, are exhibited fourteen, namely minor and major seconds, minor and major thirds, &c., with unison and octave. These will be farther noticed in treating on Harmony, Chap. 10.

QUESTIONS.

How many intervals are in the diatonic scale?—How are they called as they ascend?—How many sounds does the general scale contain?—How many octaves?—Is the musical scale limited to 22 sounds?—What is the difference between the pitch of the Tenor and the Treble staff?—Between the major and the minor keys?—Between which of the intervals are the semitones located in the major scale?—In the minor?—What different effects do the different locations of the semitones in those keys produce?—What is to be understood by conjoint intervals?—What by disjoint?—What is a common chord or Harmonic Triad?—What is a Major Triad?—A Minor?—A dissonant?—Are the major and the minor Triads both consonant?—Why are they consonant?—What is meant by inversion?—How many different intervals are produced by inversion?

CHAP<u>T</u>ER IX. MELODY.

TRANSPOSITION OF THE SCALE.

Sec. 46.—There are two modes of keys in music, the major and the minor, (Sec. 36 and 43.) In their natural state, the major has C for its fundamental note or key, and the minor has A. But were the keys confined to these two letters alone, their bounds would be too limited. Consequently, there is a much wider range provided for them by transposition. For this purpose flats and sharps are used as signs, to modulate the sounds, by means of which not only every musical letter, but every chromatic semitone may be made the tonic or key note both major and minor. Hence there are twenty-four keys in the scale of music, twelve of which are major and twelve are minor.

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In the scale of the major and minor modes, (Sec. 36,) the half-steps or semitones lie between B and C, and E and F; and in the major scale they lie between the third and fourth, and seventh and eighth intervals; and in the minor they lie between the second and third and fifth and sixth intervals; and in both scales they lie between the syllables MI and FAW, and SI and Do. Now in this, their natural position, the tones and semitones of the letters and the notes of the major and minor scales agree; but as the letters are immovably fixed in the scale—and the intervals of the scale, when transposed, also keep their fixed position in relation to the tonic or key note, there is a disunion produced by their removal, between the fixed scale of the letters, and the moving scale of the keys, which must be adjusted and modulated by the use of flats and sharps on the letters, so that they yield to the new key according to its requirement.

In order to make each one of the twelve semitones in the chromatic scale the key-note of a major scale, and also of a minor, it is requisite to use five sharps and six flats, or six sharps and five flats, as follows:

In the natural scale the major key is on C and the minor on A; but when the signature is-

F sharp,	the Majo	or key i	s G ti	he N	/lino	r E
F, Csharp,	"		D	"	"	В
F, C, G sharp,	"	"	A	"	"	F#
F, C, G, D sharp,	"	"	E	"	"	C#
F, C, G, D, A sharp,	"	"	B	"	"	G#
F, C, G, D, A, E sharp,	"	"	F#	"	"	D#
B flat,	"	"	F	"	"	D
B flat, B, E flat,		"	F Bb	" "	"	D G
B flat, B, E flat, B, E, A flat,		"	F Bb Eb	" "	" "	D G C
B flat, B, E flat, B, E, A flat, B, E, A, D flat,		""	F Вь Еь Аь	" " "	" " "	D G C F
B flat, B, E flat, B, E, A flat, B, E, A, D flat, B, E, A, D, G flat,		""	F Вь Еь Аь Dь	" " "	 	D G C F B⊧

In the scale of the major and minor modes, (Sec. 36,) the half-steps or emitones lie between B and C, and E and F; and in the major scale they lie etween the third and fourth, and seventh and eighth intervals; and in the ninor they lie between the second and third and fifth and sixth intervals; and in both scales they lie between the syllables MI and FAW, and SI and Do.

In the remove of the scale, there should never more than six sharps or six flats be used. For either six sharps or six flats will remove the key to the same interval, as in the above scale, six sharps remove the major key to F^{\ddagger} , and six flats to G_{\flat} : which is the intermediate semitone between F and G, and the self-same interval of the scale.

It is a very singular fact,—which evidently arises from the division of the scale into twelve semitones,—that if we take any number of sharps to transpose the key, the complement of twelve of flats will transpose it to the same interval. For instance, seven sharps bring the major key on C \ddagger , and five flats—the complement to twelve—bring it on Db, the same chromatic interval. Seven flats transpose the key on Cb; and five sharps—the complement to twelve—transpose it on B, which is the same chromatic interval of Cb. This will hold good with any number of sharps and the complement of flats to twelve; or of flats, and the complement of sharps to twelve. But in such cases double flats and double sharps would have to be used, which for the facility of execution, should be avoided in all cases.

The two keys stand in relation to each other. The relative minor is a third below or a sixth above the major, on the scale; and the relative major is a third above or sixth below the minor, on the scale. When the scale is changed, and the keys removed to other letters, higher or lower, they always stand in the same relation: and thus we have the fundamental notes of both keys, in every scale. (See Table, page 42, 43.)

Sec. 47.—Besides the diatonic scale, which is composed of tones and semitones, there is another called the *Chromatic Scale*, which is composed of semitones alone. The chromatic scale is, however, nothing more than a subdivision of the diatonic into semitones: which is effected by the use of

When the keys are transposed by sharps, they rise a fifth in the scale, and subdivision of the diatonic into semitones; which is effected by the use of

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flats and sharps. This scale ascends by sharps and descends by flats, as seen in the following scale:

CHROMATIC SCALE.



Note.—The doctrine which holds forth that the semitones are produced by a change in the vowel sounds of the syllables applied to the notes seems to be somewhat doubtful and uncertain; for if the slender sound of a vowel in the syllable applied to a note would raise a note a semitone; and if the broad sound would depress it, what would be the consequence where words or syllables of both broad and slender sounds are sung to the same letter and sound of the scale?—Which is evidently the case in many tunes, and for the proof of which it will only be necessary to refer to the following tunes, namely, Sterling, Miles' Lane, Martyn, Bozrah, Tavoy, &c. Now by giving proper attention to the above named tunes, it will be found when the poetry is applied to the notes, that in many measures there will be broad and slender vowel sounds applied to consecutive notes of the same sound—of the same letter; and yet no deviation from the self-same sound heard or discovered, by the application of the different vowel sounds. And even when vocal and instrumental music are performed together, there is no discordance of sound discoverable on these notes; but all the sounds, both from the vocal organs, and from the strings and pipes, mingle and flow together, in sweetest unison and harmony.

From the foregoing remarks, it is evident, that if the different sounds of the vowels by their broad and slender sounds, have the power to change the pitch of a note a semitone higher or lower, in one instance, they have the same power also in other instances; and if such be the

case, will it not be best to guard against their changing the sound of the notes in every case; and to get the proper pitch of the accidentals of the semitones by a change of sound, and not by a change of syllable? as by far the greater number of notes that would be affected by that change, would thereby become discordant and unharmonious.

A proper knowledge of the Chromatic scale will lead to a more full and extensive knowledge of the Diatonic, in its different positions when transposed. For by the flats and the sharps used in the Chromatic scale, the keys of the diatonic are modulated, and the tones and the semitones fixed in the proper intervals in the new keys, in every change of key, and it will be obvious to the student that the Chromatic scale is nothing more than a division of the diatonic into semitones; where the lower letter of a tone is sharped, or the upper flatted to produce the intermediate semitone, and thus form a scale of semitones alone.

Sec. 48.—It should be well understood that the letter of the key note or tonic is *always* taken as ONE, and that the tonic may assume *any letter or chromatic semitone* as the key note, either of the major or of the minor key, and that in the major scale the order of intervals must always be from 1 to 2 a tone; from 3 to 4 a semitone; from 4 to 5 a tone; from 5 to 6 a tone; from 6 to 7 a tone; from 7 to 8 a semitone. And in the minor scale, from 1 to 2 a tone; from 2 to 3 a semitone; from 3 to 4 a tone; from 4 to 5 a tone; from 4 to 5 a tone; from 1 to 2 a tone; from 2 to 3 a semitone; from 3 to 4 a tone; from 4 to 5 a tone; from 4 to 5 a tone; from 5 to 6 a semitone; from 6 to 7 a tone; and from 7 to 8 a tone. To this order, in the minor scale, there may be some exceptions: for wherever the seventh leads to the key, it is sharped, and thus produces a semitone between the seventh and eighth.

This is the order of the keys, in their intervals, *in every position*, which is manifested in the scales of Table of Transposition. In the first scales, major and minor, the intervals are natural, as the keys are in their natural position—the major key on C, and the minor key on A. But so soon as the scales are transposed to other letters, more or less flats or sharps must be used, to modulate the sounds in their new position. For instance—

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Let G, the dominant of the natural major scale be taken as the key-note or tonic of a new major scale, according to the scale of G, in the following Table: then G to A is a tone, from 1 to 2 a tone; from 2 to 3 a tone, from A to B a tone; from B to C a semitone, from 3 to 4 a semitone; from 4 to 5 a tone, from C to D a tone; from D to E a tone, from 5 to 6 a tone; from 6 to 7 a tone, from E to F naturally a semitone, which must here be a tone, and consequently F must be sharped; then F sharp to G a semitone, and from 7 to 8 a semitone. Thus we find that in the major key of G, F must be sharped.

In like manner as sharps raise the keys a fifth to the dominant, so flats lower them a fifth, (Sec. 46, to the subdominant. For by making F sharp, the major key will be transposed from C to G, the dominant, a fifth higher; and by making B flat, the major key will be transposed from C to F, the subdominant, a fifth lower.

Note.—By inversion the fifth above will become a fourth below; and the fifth below will become the fourth above.

As the major and the minor scales stand in relation together, and invariably keep their relative position, in every remove, the minor being a relative to the major, a third below or a sixth above; and the major being a relative to the minor, a third above or a sixth below; and as they are alike in the intervals of the dominant and subdominant, they are subject to the same order, when transposed, also in the inversion of the intervals.

Let D, the subdominant of the natural minor scale be taken as the key-note or tonic of a new minor scale, then from D to E is a tone, and from 1 to 2 is a tone; from 2 to 3 is a semitone, from E to F a semitone; from F to G a tone, from 3 to 4 a tone; from 4 to 5 a tone, and from G to A a tone; from A to B a tone, but from 5 to 6 only a semitone, therefore B must be made flat; then from Bb to C is a tone, and from 6 to 7 a tone; from 7 to 8 a tone, and from C to D a tone. Hence we see the necessity of making B flat, in the key of D minor or F major.

OF VOCAL MUSIC

NOTE.—In all the foregoing changes, of keys by flats and sharps, the vocal performer has no difficulty in making the flat and sharp sounds of the letters, seeing that the syllables of the scale have the proper sounds of the scale associated with their names; and the natural rise and fall of the voice is the same in every change of key; and thus the singer performs them without being aware of it, except when accidentals occur. But the case is different with the instrumental performer, where on keyed instruments, the keys of the chromatic semitones are short keys, constructed between the long keys of the natural scale; thus between the long keys of A and B, is a short key to strike the semitone A sharp or B flat; and as there is naturally but a semitone between B and C, also between E and F, there are no short keys between B and C, and E and F, because they are the natural semitones in the diatonic scale; but between C and D, D and E, F and G, G and A, there are also short keys to strike the semitones C sharp or D flat; D sharp or E flat; F sharp or G flat; and G sharp or A flat. Hence the player on an instrument must observe to strike the short keys on all the letters that are sharped or flatted in the signature, throughout the whole piece of music. From this fact it follows, that the less number of sharps and flats that can be used in the signature, the easier will be the execution to the instrumental performer.

The necessity and use of the Chromatic Scale, at the front of the following Table of Transposition, is because the *keys* are movable and changeable in their position, and the *letters* of the scale are permanent and fixed. Here the student will see at a glance, how the semitones run out from the chromatic scale, through all the movable scales—which are represented in this table in the form of a ladder—preparing and adjusting the intervals of the new scales for their assumed key, both major and minor. But,

For want of room on this table, we have given only two examples of the minor scale in connection with its relative major, which, if due attention be given to this, it will be amply sufficient to give the learner a due knowledge of the minor scale in connection with the major; as the relative minor is *always* a third below or a sixth above its relative major; and the relative major a third above or a sixth below its relative minor.

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The minor scale has of late been too much neglected and set aside, and I need now to express our sorrow, humility, and penitence by the minor key, we think every effort should be made to revive it again. We have as much as those in former ages. (see more on minor scale, page 43.)

Table of Transposition.

SCALES WITH SHARPS.

CHROMATIC SCALE	So	ales o	of C Maj. A	nd A I	Min.	S	cale o	fG.	SC	ale of	D.	Sca	ale of A	A.	So EO	cale of	E.	Sca	le of B		Sca	les of	F#.
			MATORA	L.				11(1 .		0 SIIAI	u 5.	- <u> </u>	L SIIA	xi 5.		OK SHA	IKI 5.		SHAR	5.	517	SHAR	5.
C natural																							
B natural																		B	-8-	Do			
A sharp or B flat																		A∓	-7-	S1			
A natural			A	. -8-	Law							A	-8-	Do				· · · .		.			
G sharp or A flat					a 1 ·							G#	-7-	S1				G#	-6-	Law.			
G natural			G	_7_	Sol	G	-8-	Do											_	a			
F sharp or G flat						F#	F - /	S1				F#	-0-	Law.				F#	-2-	Sol	F#	-8-	Do
F natural			F	-6-	Faw	· · · .						· · · · _	-	a				· · · -		.	E#	_7/_	S1
E natural			E	->-	- M1 .	E	-0-	Law				E	-2-	Sol	E	-8-	Do	E	-4-	Faw.		-	
D snarp or E flat			· · · · · · · · · · · · · · · · · · ·		. ·	· · · .		a 1 · · ·	· · ·	1		_P		L	D₽	- /	S1	D#	-3-	M1	D#	-6-	Law .
D natural			D	-4-	Re	D	-5-	Sol .	D		Do	. D	-4-	Faw	· · · #			 	2	 D.	· · · ·	~	
C sharp or D flat	·				D	a		. · ·	C	₽ - /	51	. C#	-3-	M11	C#	-0-	Law.	C#	-2-	ке	C#	-2-	501
C natural		-8-	Do C	-3-	Do	C	-4-	Faw.	· · ·			_D		 D.	_D	-	G . 1	n	1	D	· · · n	4	
B natural	В	-/-	S1 В	-2-	51	В	-3-	IVI1	B	-0-	Law.	В	-2-	Re	B	-3-	501	B	- 1	D0	B	-4-	Faw
A snarp or B flat		~		1	. ·				· · · .		G 1		1				.				A‡	-3-	IVI1
A natural	A	-0-	Law A	. - 1	Law	A	-2	ке	A	->	501 .	A	- 1	D0	A	-4-	Faw.					2	 D.
G sharp or A flat		~					1	D	··· .	4	.				G#	-3-	IVI1				G₽	-2	Re
G natural	G	-2-	501			G	-1	D0	G	u -4-	Faw.						n				· · · · · · · · · · · · · · · · · · ·	1	 D.
F sharp or G flat	Б	4							F :	₽ -3	IVI1				F ₽	-2	Re				F #	-1-	D0
F natural		-4-	Faw						···_		. · · ·				· · · -	1	D						
E natural	E	-3-	M1						E	-2-	Re				E	- 1	Do						
D snarp or E flat	D	2							· · · _P	1	L												
D natural		-2-	Re						D	- 1	Do												
C snarp or D flat		1																					
C natural		- 1	D0			1			1														

In these Tables, it will be observed, that we have ascended in each suc-1 required in each successive transposition; and in the descending scales by cessive scale a *fifth*, or descended a *fourth*—according to the order of inversion,—and that in ascending scales by sharps, one additional sharp was tion, both by sharps and flats.

flats, one additional flat was required. This is the regular order of transposi-

OF VOCAL MUSIC SCALES WITH FLATS.

CHROMATIC SCALE.		ales o	f C. Al.	Sca	ale of	F Maj. ONE FL	& D AT.	Min	•		ale of	B ♭. 	I TH	cale of IREE FL	Eb. ATS.	Scal	e of A r flat	кь. rs.	Sc FI	ale of VE FLA	D♭. TS.	Scal SIX	e of G	b•			
C natural B natural											 																
B flat or A sharp										B	-8-	Do															
A flat or G sharp		· · · · · · ·							· · · · · · ·	A	_/_	51				Ab	-8-	Do		 				· · · · · · ·			
G natural										G	-6-	Law				G	_7_	Si						De			
F natural				F	-8-	Do			 	F	_5_	Sol				F	_6_	Law				F	-8-	Si			
E natural E flat or D sharp				E	_7_	Si					4	Fow	E			_E ,	5	Sol				 E1	6	Low			
D natural		 		D	-6-	Law	D -	-8-	Law	D	$ _{-3}^{-4}$	Mi	D	b -7 -	- Si		-5-			 			-0-	Law .			
D flat or C sharp	 C	_8_	Do		-5-	Sol	C	7	Sol	_C	_2_	Re		_6	 Law	Db	-4-	- Faw Mi	DE	-8	Do	Db	-5-	Sol			
B natural	B	_7_	Si		-5-			-,							Law		-5-			_,_		С	_4_	Faw			
B flat or A sharp	Δ	6	Law	B _b	-4	Faw Mi	ВЬ -	-6	Faw Mi	B	-1	Do,	B	b -5 -	- Sol , ,	Bb	-2-	- Re	Bt	-6-	Law,	Bb	-3-	Mi			
A flat or G sharp		-0-	Luw					-5-					A	b -4 -	Faw		-1-	Do	A	_5_	Sol	Аь	-2-	Re			
G natural G flat or F sharp	G	-5-	Sol	G	-2-	Re	G -	-4—	Re				G	-3	- Mi				G	_4	Faw	Gb	_1_	 Do			
F natural	F	-4	Faw	F	-1-	Do	F -	-3—	Do				F	-2	Re			 	F	-3-	Mi		1-1-				
E natural E flat or D sharp	E	-3-	Mi				E -	-2—	Si					L _1 _	- Do				 EF	_2_	Re						
D natural	D	-2	Re				D -	-1	Law		•••••									1	Do						
C natural	C	-1-	Do			· · · · · · ·			 		 				 			 		- I 				 	· · · · · · · ·	· · · · · · ·	

MINOR SCALE.

"We hardly know why it is, but tunes written in the minor scale have been exceedingly rare in some of the singing-books that have been published for a few years past. Our fathers, we know, used this scale much more extensively than we have been accustomed to do. Have we become degenerate plants of a strange vine? Has the very decided prominence given to the major scale been owing to the fact that we have come to be a very joyful and happy people; and that we have no occasion for sorrow, humiliation, penitence, sadness and grief? Many of the psalms, if the sentiment contained in them,

and the feelings expressed therein, be a criterion for judgment, were sung in the minor strain. This is the natural expression of emotions of sadness, penitence and grief. And certainly our Creator has established the laws of the minor scale as really as he has the major scale. He has adapted that to our natures, and our natures to that as really as he has our natures and the major scale, the one to the other. And in a world like ours there is certainly a demand for tunes written in the minor scale. As long as we live in a world of sorrow—as long as we are sinful beings—have transgressions to confess, and mercies for which to supplicate, we shall have need to do it in strains, and in a manner corresponding to the feelings of the heart. But so little has this key been used

of late, that many choirs know not how to perform a minor tune creditably; and many singers are highly prejudiced against it. And the reason is not that their natures do not, at proper times, require it; but because they have been educated to execute major music solely, and have no taste for anything else; so that education and taste here do not answer at all to the demands of nature. Seldom do we hear a tune sung anywhere in that key, on the Sabbath at public worship, or in the social circle: and when such tunes have been selected, it has been a somewhat difficult thing to execute them, so

little has the voice been accustomed to sing in this scale."

The following exercises are designed to illustrate the subject of Transposition still farther. Each scale is here written out in full. The teacher should exercise his class in these scales, and instruct them in the same, until they become familiar with each key.







OF VOCAL MUSIC















QUESTIONS.

What do we understand by the word mode? Ans. A certain disposition of the tones and semitones of the scale, with respect to the tonic or key note.—How many modes are there in music?—What are these two modes called?—Wherein does the major mode differ from the minor?—What characters are used in transposing the keys?—What effect does a sharp, placed on a letter, produce?—A flat?—When we have one sharp as the signature, where is the tonic or key note?—When two sharps?—When three sharps?—When four sharps?—When one flat?—When two flats?—When three flats?—When four flats?—Of what does the Chromatic scale consist?—How many semitones does the Chromatic scale contain?—In what intervals do the major and minor scales differ?—What is the position of the relative minor key to any major?—The relative major to any minor?—Do the major and minor keys always stand in the same relative position?

CHAPTER X. — HARMONY. —

OF CHORDS, THEIR INVERSIONS, &C.

Sec. 49.—For the purpose of music sounds must be agreeable in themselves; they must have that clearness which distinguishes them from mere noise, and that sweetness which distinguishes them from harsh and disagreeable sounds. A succession of single musical sounds forms MELODY; and a

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OF VOCAL MUSIC

succession of combined melodical sounds forms HARMONY. In other words, melody consists in the agreeable succession of single sounds; and harmony consists in the succession of a combination and accordance of different sounds.

Not only may single intervals be inverted and changed, (Sec. 45,) but also the combined intervals of chords may be inverted. The common Chord or Harmonic Triad, which is based on each letter of the scale as its fundamental note, (see Scale, Sec. 44), may, by inversion, assume *three* different positions on each letter; the first being a *direct* chord, and the other two *inverted* chords.

These Triads or Common Chords, in the following scale, are close chords; as no chord can be formed closer together than a third. Every chord is known by its *fundamental sound;* thus the first chord presented in the following scale, is called a chord of C, because it has C for its fundamental sound. The chord of D has D for its fundamental sound: the Chord of E has E, &c.

The first position of each of the following chords has its *fundamental sound* the lowest, the *third* in the middle, and the *fifth* the highest.

The *second* position has the *third* the lowest, the *fifth* in the middle, and the *fundamental* the highest; because the fundamental is *inverted*.

The *third* position has the *fifth* the lowest, the *fundamental* in the middle, and the *third* the highest, because the third is *inverted*.

Thus every letter has a direct chord, and two inverted chords. The *fundamental note* of each letter is taken as *one*, from which the degrees of pitch of all the others are counted. Thus when the first or fundamental note is inverted, it becomes an eighth; and when the third is inverted, it of course becomes a tenth from the fundamental note; but as the fundamental note by inversion, becomes *one* of a *new octave*, so the tenth may in like manner, become a *third* in the new octave. (See keys on general Scale, Sec. 43.)

In the following scale, the triads which are based on C, F, and G—being the tonic, subdominant and dominant intervals of the scale—are major triads; and those which are based on D, E, and A—being the supertonic, mediant, and submediant intervals—are minor triads. The triad based on B, the sharp seventh, is a dissonant triad, and its inversions produce major fourths and minor thirds.



Chords of disjoint intervals may be dispersed into greater degrees or proceeding from one note of the chord to the other, as in the following leaps, and passing in different ways, over many intermediate intervals in examples of

[Chap. 10, Sec. 50.



Sec. 50.—As intervals or chords are *consonant* or *dissonant*, according to the degrees of sound of which they are composed; and as there are fourteen intervals in the diatonic scale, (Sec. 45,) it will be expedient to give a representation of them, and of the number of semitones of which each of them is composed, as manifested in the following.

TABLE OF CONCORDS AND DISCORDS.

No. of ntervals.	No. of Semitones.	Intervals.	Concords and Discords.
14	13	An octave	A perfect chord.
13	12	Maj. seventh	A discord.
12	11	Min. seventh	A discord.
11	10	Maj. sixth	An imperfect chord
10	9	Min. sixth.	An imperfect chord
9	8	Maj. fifth	A perfect chord.
8	7	Min. fifth	A discord.
7	7	Maj. fourth	A discord.
6	6	Min. fourth	A concinnous sound.
5	5	Maj. third.	An imperfect chord
4	4	Min, third	An imperfect chord
3	3	Maj. second	A discord.
2	2	Min. second	A discord.
1	1	A Unison	The most perfect chord.

The UNISON, or the same identical sound, although it cannot properly be reckoned an *interval*, is always considered as such when employed in harmony. And as the scale of music is unlimited, we cannot see that it could be otherwise; for there are always intervals or steps below and above, from

which every interval must proceed or step, no matter where it is found in the scale. (See note on Sec. 37.) And when the voices of the different parts of music, throughout a piece, sweetly harmonize, on the different chords, and close on a unison, must they not close on an interval of the scale?

The unison is an accordance or coincidence of sound proceeding from an equal number of vibrations of sounding bodies in a given time, and is the most perfect of all the musical sounds in the whole scale of music. (See note on vibrations, page 36.)

Next to the unison is the octave, which consists in a double number of vibrations in a given time, and is so sweet a chord with the unison, that they are scarcely distinguishable from being the self-same sound.

Next to the eighth is the perfect or major fifth, which in its vibrations is as three to two, and is a perfect chord of a sweet and charming sound; and next to the fifth in sweetness, is the major third, which in its vibrations is as five to four.

These four sounds, the unison, eighth, fifth and third, form the common chord, being the most essential sounds in every piece of music.

The minor third is also a consonant interval, and is the third of a minor triad in the minor scale; in its vibrations it is as six to five.

The minor fifth and the major fourth—each containing seven semitones are discords; and so are the major and minor seconds; and also the major and minor sevenths.

The minor fourth is termed a concinnous sound; it is not a very disagreeable discord; neither is it, by *itself*, a concord: one and four are rather dissonant, but when six is added they become consonant.—Also five and eight do not perfectly accord; but when three is introduced, they become concordant.

The major and minor sixths—the one containing ten semitones and the other nine, are both imperfect chords, though they are frequently used in harmony.

The foregoing order of consonant and dissonant intervals, in the diatonic scale, is applicable to all the octaves in the scale of music, no matter to

Chap. 10, Sec. 51.]

how many octaves the General scale may ascend or descend. For in like manner as 1, 3, 5, 8, in the first octave, harmonize, so will 8, 10, 12, 15, harmonize in the second; 15, 17, 19, 22, in the third, &c. All the octaves are the same, except as they differ in gravity and acuteness. If 1, 8, 15 and 22, the fundamental notes of four octaves rising in acuteness, were sounded together by musical voices, it would produce a volume of sound which could not easily be distinguished from being the self-same sound proceeding from one voice. The same effect will be produced by striking four keys of the same letter at once, on a well-tuned instrument.

Sec. 51.—The chief excellence of harmony, or music performed in different parts, consists in a proper succession of the fundamental chords of the scale; a due order of the different notes in their inversions; and the enchaining and binding together the chords in their harmonical progression.

The tonic or key note is the most important, and the chord based on it is the principal one in every piece of music, both in the major and minor keys. Regularly every tune both begins and ends with the tonic chord.

Next to the key note, the dominant or fifth of the scale takes rank. It occurs more frequently in a piece of music than any other note, as by far the greater number of chords in ordinary tunes contain it. For this reason, and because it is the base note which regularly leads to a final close, it is called the *dominant*. The chord based on this note is also called the dominant chord, which occurs more frequently than any other except the chord of the tonic. In modulation by sharps, the dominant is also the key note of the nearest relative key.

The subdominant is the next note of importance in the scale, because its chord has the *tonic* for its *fifth*. In modulation by flats, it is the key note of the second relative key, having the original key note for its dominant.

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NOTE.—As the dominant is a fifth above the tonic, and is the nearest relative key in the ascending scale, and to which the tonic is transposed by sharps; so the subdominant is a fifth below the tonic, and is the nearest relative key in the descending scale, and to which the key is transposed by flats. Hence the name *sub*-dominant.

The submediant is the third in relative importance, as its chord has two notes in common with the tonic chord, and must hence intimately blend, as also enchain with the other chords. This note is also the principal chord or tonic of the relative minor key. (See inversion of the Harmonic Triad, &c., Sec. 49.)

In the minor key, the third of the scale, or the tonic of the relative major key, frequently occurs. These chords have likewise two notes in common, which sweetly blend together in harmonical progression.

QUESTIONS.

What is the quality of good musical sounds?-In what does melody consist?-In what harmony?-How many positions can the common chord assume by inversion?-Can each letter of the scale be made the fundamental note of the common chord?---What is the first position of the chord of each letter called?-What are the inverted positions called?-What is the difference between the major and the minor triads?-What is a close chord?-A dispersed chord?-Is the unison an interval in the scale of music?-How can it be an interval when it is identical? Ans. Because wherever it is found in the scale there is an interval below or above from which it takes its step.-Which are the intervals of the scale that compose the common chord?-Are the minor fifth and major fourth concords or discords?—How many semitones does each of them contain?—How many intervals does the diatonic scale contain?-If there are but eight intervals in the octave, how can you get fourteen?-Are the major and the minor sixths consonant or dissonant intervals?--Will the consonant intervals in one octave be consonant throughout all the octaves in the General Scale?-What is the chief excellence of harmony?-Which is the most important chord?-The next of importance to the tonic?-The next of importance to the dominant?-The next to the subdominant?

[Chap. 11, Sec. 52.

CHAPTER XI. DYNAMICS.

MUSICAL ELOCUTION.

Sec. 52.—A good quality of tone is an essential property to dynamic expression; and that quality consists in *purity, fullness* and *firmness*.

A tone is PURE when it is clear and smooth, having no extraneous sounds mixed with it, such as hissing, screaming, or mumbling sounds. Impurity of sound is often produced by an improper position of the parts of the mouth.

A tone is FULL when it is delivered in a free and unconstrained use of the appropriate organs of sound, and with a good volume of voice. Faintness of sound is often produced by a careless or negligent use of the vocal organs.

A tone is FIRM which is correctly given, and held steadily, without change during the whole length of the note; being perfectly under the control of the performer.

Hence, striking below the proper sound and sliding up to it, as from *five* to *eight*, &c. A wavering or trembling of the voice, and a change just at the close of a tone, produced by a careless relaxation of the organs, which should always be held firm and immovable in their proper position until the sound ceases, should be carefully guarded against and avoided. Moreover, the voice may be rendered disagreeable by being too *nasal*, *labial*, *dental* or *guttural:* that is, it may be forced too much through the nose, the lips, the teeth, or be formed too deeply in the throat. All these disagreeable sounds should be carefully corrected.

The most effectual way to correct these errors in producing sounds, is to let the pupil sound on the syllable *awe*, frequently, by marking the position of the vocal organs while sounding, and then proceed sounding the syllables which are applied to the notes, keeping the vocal organs, as much as possible, in the same position while sounding them. By this process the voice will

acquire both strength and sweetness, and free itself from every disagreeable impediment. Care, however, should be taken that the voice be not made too guttural by this process.

A blending of the words when applied to music is an injury to good performance, and impairs and lessens the power of music. And, as many who read with a clear and distinct articulation, are apt to slide into this error when singing, it is deemed expedient to give a few examples, to show where the blending of words not only debases the sentence, but, in some instances, perverts the meaning of the phrase. For instance:

Example 1.	A storm that last still morning.
For	A storm that lasts till morning
Ex. 2.	He is content in neither place. }
For	He is content in either place.
Ex. 3.	Over waste sand deserts, }
For	Over wastes and deserts.
Ex. 4.	Who ever heard of such a notion,
For	Who ever heard of such an ocean.
Ex. 5.	Swee tis the da yof sacre drest,
For	Sweet is the day of sacred rest
Ex. 6.	O com man dlet tus worship,
For	O come and let us worship.
Ex. 7.	My hear tshall trium phin the Lord,
For	My heart shall triumph in the Lord.
Ex. 8. Call whil e may be t	foun doh see kim whil e's near, }
For Call while he may be	found, Oh seek him while he's near.
Ex. 9. Ser vim wi thall th	y art tan min Dan dworshi pim with fear, }
For Serve him with all the	y heart and mind, And worship him with fear.
Ex. 10. He by hi zown a	lmighty wor Dwill all your fear sremove,
For He by his own	almighty word Will all your fears remove.
-	

Besides this, we sometimes hear the words *when, where, while,* &c., pronounced in singing, as if they were written whe..en, whe..are, whe..ile, &c. All such incorrect and corrupt pronunciation and articulation have a tendency to obscure the expression and destroy the beauty of the sentence.

Chap. 11, Sec. 53,54.]

OF VOCAL MUSIC

Note.—Whenever the teacher discovers a fault, let him first point it out and imitate it himself, and afterwards give the true style of performance; then let him require the pupils to imitate both the correct and incorrect examples. It is not enough for the teacher to say that a fault exists; he must actually point it out, and exhibit it by his own performance, and this over and over again, until the pupils obtain a clear perception of it, and know both how to produce it, and how to correct and avoid it.

Sec. 53.—One of the greatest excellencies of sacred vocal music, is that strict union which should ever subsist between the words and the music. Hence the first object of the chorister is, to choose a tune to which the words are suited or ally themselves, both in sentiment and quality. Much of the beauty and strength of sacred music depends upon this. For psalms and hymns of prayer and supplication a minor key should generally be chosen, because it is of a plaintive, soft and melting quality; and for those of praise and thanksgiving, a major key, because it is of a cheerful, lively, and animating quality. This may be considered a general rule, yet there may be some exceptions, as some tunes of the major key partake, in some measure, of the soft, gentle, and subduing qualities of the minor, and some of the minor key, in some degree, partake of enlivening and cheering qualities of the major. Hence, as there are psalms and hymns which contain devotional matter, of both prayer and praise intermingled, so there are tunes suited for all those poetical productions which are adapted to the emotions of the pious mind. Now, when the poetry is truly expressive, and thus adapted to music, there is something grand and subduing in the harmonious progression of full chords, which brings a calm over the soul, rivets the attention, and enraptures the feelings in view of the sentiment, and thus produces a frame of mind, in the Zion traveler, which is highly devotional.

Sec. 54.—In the connection of words with musical sounds, good elocution is necessary, as well for the vocal musician as for the orator. Every word to which music is applied, should be pronounced distinctly and grammatically. The sound should be prolonged entirely on the vowel, and the mouth kept open in one fixed position from the beginning to the end of the sound, and

the consonants before and after the vowels forcibly and quickly, yet distinctly articulated. Without this, little expression can be given to vocal music; and for good and dignified performance it is indispensably necessary that it be strictly observed.

Every word and every sentence should be pronounced, in singing, with a clear voice, and with the same distinctness as when spoken or read; so that the sentiment of the poetry when united with the sound of music, be well understood. For to "sing with the Spirit and to sing with the understanding also," those heaven inspiring words in unison with the sweet strains of music, with their soft and soothing accents, is what has such a benign and powerful influence over the human mind. And when singers can realize the subject, and enter into the proper feeling and spirit of the poet, there is but little danger of not producing dynamic expression and musical elocution. And nothing can compensate for a want of feeling, and the realization of the expression of the poetry, because in the performance, the tone, the graces in the modulation of the voice, and sound, should all be suited to the subject which the poetry expresses, which is the *only true guide* to dynamical expression and musical elocution.

Note.—"Writers have attempted with great ingenuity, to lay down rules for the varieties of expression; but whoever undertakes to follow rules in giving expression, presents us with a mere skeleton, without life and animation. Every appearance of effort disgusts us... True expression clothes her song in characteristic display of grace, majesty and pathos; not a single note will be breathed in vain. She wisely considers that ornament should ever be subordinate to the sentiment, and that the grand end of the composition is to speak to the judgment as well as the hearing. The most common mistake with composers and church choirs is, in attempting to express words and not ideas.—Singing the word *small* with such softness as scarcely to be heard, or exerting all the powers of the lungs on the word *large*, is punning, not expressing; trifling with the words and neglecting the sentiment. Instead of considering how this or that word should be executed, the first object should be to study the true meaning and character of the subject, so that effect may not only be given to a word here and a word there, but the sense of the whole sentence expressed, so as to be understood and *felt*. It is true the expression of

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the whole is conveyed by appropriate emphasis on particular words, but it is not simply the words which demand emphasis, but their connection with the sentence. Religious feeling is full of dignified and placid joy, of which the gentle swelling of the emphatic words gives the most appropriate idea.

"Many terms are prefixed, by composers, to the several strains, as directions for the performer. These terms are usually Italian, such as *Andante, Affetuoso, &c.* In following such directions there is danger in attempting to express what the performer does not actually feel. In such a case the effect will often be ludicrous; and at best can but astonish us with the art and dexterity manifested. In true expression, the composer and performer are lost sight of; the attention is riveted, and the feelings enraptured in view of the sentiment.

[Porter's Musical Cyclopedia.

In all vocal performance of sacred music, singers should enter into those emotions which are expressed by the poetry. They should avoid a dull, heavy, unfeeling style of performance, and cultivate that which comes from the heart, which has some soul, some meaning, and which is appropriate to the words and music. There is something in the nature of musical tones, when combined with sacred poetry, which is heavenly and divine; and in the pious mind produces that lowly prostration of soul, and those pure affections with which we ought to approach the throne of the Deity.

ORIGIN AND UTILITY OF MUSIC

"The capacity of the human mind for poetry and music has been common to every age and nation; and though too generally perverted to evil and sinful purposes, it was doubtless originally implanted by the CREATOR, for wise and holy reasons, and should be consecrated to His service and glory. Accordingly hymns or songs or praise form a considerable portion of the Sacred Scriptures, some of which were composed on particular occasions, and sung as a part of solemn worship at the time or afterwards, in commemoration of the transactions celebrated in them."—Ex. 15; 1 Sam. 2; 2 Sam. 22.

But it was not with man that this heavenly science originated. It claims to have descended from the skies. For when the Lord "laid the foundations of the earth, \ldots the morning stars sang together, and all the sons of God shouted for joy." Job 38:4-7. And at the nativity of

CHRIST, there appeared to the shepherds a "multitude of the heavenly host praising God, and saying, Glory to God in the highest, and on earth peace, good will towards men." From this we may readily infer that these heavenly songsters were no strangers in Eden, in that day when the Creator himself walked and talked with his earth-born children in Paradise, and that the sound was prolonged by them in that blissful and happy place.

Hence sacred song is coeval with the creation; and the first music of the human voice must have been a holy exercise of a joyous ascription of praise to the bountiful Lord and Creator. And how consoling and heart-cheering has this heavenly science ever since proven to the people of God, both under the Old and the New Testament dispensation, in awakening and strengthening their devotional affections, when holding communion with the Father of Mercies!

What a high rank did music obtain under King David, that sweet singer of Israel, and his son Solomon, who not only cultivated it to a high extent, but by the inspiration of the Spirit of God, furnished material for the devotional exercises, which are highly valued by the people of God, and have been added to the inspired volume. How great must their influence have been, in promoting this heavenly science, when, at the dedication of the Temple, there were about four thousand singers and players on instruments, (according to 1 Chron. 23:5,) who performed together with so much accuracy, that their sound was as ONE SOUND to be heard in praising the Lord. And when they lifted up their voices, with the trumpets and cymbals, and instruments of music, and praised the Lord, the house was filled with a cloud, even the house of the Lord: so that the priests could not stand to minister by reason of the cloud: for the glory of the Lord had filled the house of the Lord. 2 Chron. 5:7-14.

"We can scarcely enlarge our thoughts to conceive the effects which these high praises of God, sung by so vast a multitude, with harmonious elevation of heart and voice, on these joyful occasions, must have produced. It naturally leads us to consider the songs of the redeemed of the Lord in glory: and perhaps we are not, in this world, capable of more just and spiritual ideas of them, than are suggested by these subjects, though we may be sure that they are unspeakably more sublime, enlarged and refined.

"Hear I, or dream I hear their distant strains,

Sweet to the soul, and tasting strong of heaven."

"How holy, how glorious is the God we worship! How wonderful are his perfections! 'It is good to sing praises unto his name,' from the affections of an overflowing heart. What can be more delightful than songs of joy issuing from lips that taste the love of God! Such were the Psalms of David, and such the songs of the primitive Christians, the martyrs, and the reformers. Such are the songs we should cultivate. They will prove a rich foretaste of joys unseen and eternal."