

A COURSE OF INSTRUCTION
IN
INSTRUMENTATION

BY

DR. S. JADASSOHN,
PROFESSOR AT THE ROYAL CONSERVATORY OF MUSIC, LEIPZIG.

TRANSLATED FROM THE GERMAN
(UNDER THE CAREFUL SUPERVISION OF THE AUTHOR)

BY

HARRY P. WILKINS
OF WASHINGTON, D. C. U. S. OF AMERICA.



BREITKOPF AND HÄRTEL
LEIPZIG, BRUSSELS, LONDON, NEW YORK.

1899.

MANUALS
OF
MUSICAL COMPOSITION
BY
S. JADASSOHN.

Part One.

The Theory of Pure Writing.

- Volume I. Manual of Harmony.
Volume II. Manual of Counterpoint.
Volume III. A Course of Instruction
in Canon and Fugue.

Part Two.

The Theory of Free Composition.

- Volume IV. Manual of Musical Form.
Volume V. A Course of Instruction
in Instrumentation.

VOLUME V.

A COURSE OF INSTRUCTION IN INSTRUMENTATION.



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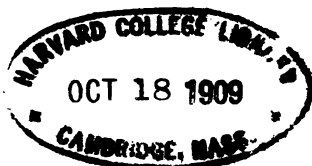
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Warren A. Locke,
Cambridge

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TRANSLATOR'S PREFACE.

While a pupil of the eminent Dr. Jadassohn, studying his excellent theoretical works, I had the honor of having the translation of this volume intrusted to me. Of course, being under the author's personal instruction in this subject, and knowing that I would work under his personal direction, I began my work. Throughout it has ever been a continual joy, and the labor bestowed has daily brought its own exceeding great reward. For step by step, page by page, and chapter by chapter the work continued, and each day as the end drew nearer, the book grew grander, and the great genius of my beloved teacher seemed more prodigious. Each word of kindness, seemed but a shadow of charity itself and came from a heart that made the true gentleman and good humane character. Each word of severity seemed to tighten the chords which began with respect and ended with love; while each suggestion illumined the superiority which nought but industry, frugality, perseverance and intelligence could build.

May this slight contribution lead at least a few others to love more warmly this foremost of musical theorists, whose excellence has only been attained by the labor of a lifetime, and to study more intelligently and conscientiously this greatest work of orchestral composition.

To all English speaking students, no matter of what branch of the art, whether instrumental or vocal, if you wish to be a good artist a knowledge of instrumentation is of the

greatest value. The study of the best orchestral scores should not be neglected. No matter what your instrument or your technical skill and refined artistic sensibility; you cannot possibly appreciate the genius, that breathes into his work, an unexpressed idea which speaks to our feelings even before it can be defined. For such is the genius that moulded the sublime creations of a MENDELSSOHN, HAYDN, SCHUBERT, MOZART, BEETHOVEN, CHERUBINI, MEYERBEER &c.

Even to non-musicians of philomusical tendencies, a theoretical knowledge of the instruments with which these master-works are given life, will certainly triple the intellectual stimulus and widen the emotional sensations of an actual performance.

It would be ungrateful were I not to acknowledge the kind assistance and many valuable suggestions received from the author.

I hope that no omissions or important inaccuracies will be found in this translation, for in a work of so many details slight errors are hardly unavoidable. Trusting to the forbearance of those for whose benefit it is intended, and to the candor of critics who may find it easy to detect faults, but who may at the same time duly appreciate difficulties, I heartily wish this work the renowned success of Dr. Jadasohn's previous manuals.

Leipzig, March, 1898.

Harry P. Wilkins.

AUTHOR'S PREFACE.

This book contains in a progressive manner, lessons in the instruction of the manifold means of expression in musical art, — of the voices as well as the instruments — and; at the same time an explanation of the different forms of composition, including both sacred (church) and secular; chamber and orchestral. On this account it was also necessary, to give an explanation of the formation of musical pieces which were fully explained in the "Manual of Musical Form" (Volume IV of the author's "Manuals of Musical Composition"); but to illustrate more fully special forms, in the further consideration of many classes of compositions.

The first three chapters treat of the composition for the voice, pianoforte and organ. To these are added a description of all the orchestral instruments occurring in Chamber-, Church-, Concert-, Opera-, and Military-Music; the treatment of which I have attempted to represent by the numerous examples contained in the text.

To represent to the pupil the sound of an instrument in reference to the tone effect of many employed simultaneously, I was compelled to refer to the passages of such works, as I presume are generally known. Therefore, I have preferably extracted the above-mentioned examples from the best well-known classics; but this means no reflection whatever on the esteemed works of the living masters. I, therefore, sincerely regret that many excellent contemporary works cannot be

discussed, for the reason that they are still not so universally circulated and known as they merit.

The musician who has no idea of making composition his vocation, will find in the previous books, much instruction which is necessary for every artist of academic education to know. The problems, for the student of composition, are given in the order of their chapters; however, in particular cases, according to the preparatory schooling and proficiency of the pupil, a departure from the graded order of arrangement in this book, is left entirely to the Judgment of the teacher. The "Conclusion" consists of *Method of Rehearsing the Choir; How to Lead the Orchestra, Chorus and Solo Voices in Rehearsal and Performance.*

May the experience which I have gathered through special study and by the instruction of my numerous pupils at the "Conservatory of Leipzig" during many years, be acceptable and advantageous to other teachers and scholars.

Leipzig, May, 1889.

Dr. S. Jadassohn.

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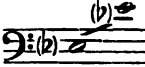
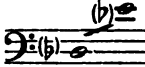
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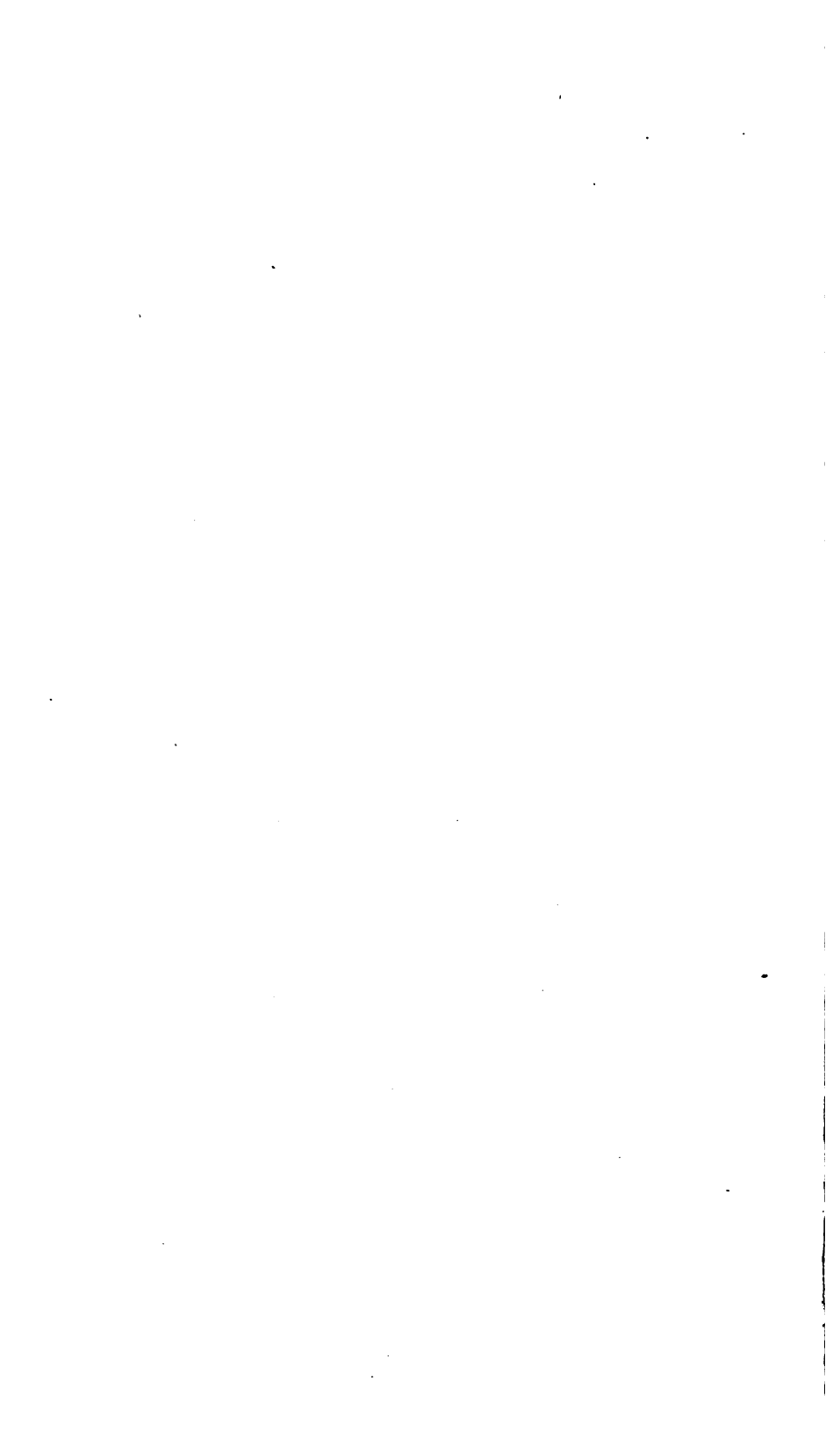
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§ 50. The choir practice. § 51. The orchestra rehearsal. § 52. Conducting (Beating of the time).

ERRATA.

Page 34, line 24 from top, reads: *B-flat major* instead of *B-major*.

- 35, - 6 - bottom, -  instead of 
- 43, - 4 - bottom, - itself, instead of itself.
- 52, - 6 - top, - *E-minor* No. 4, Op. 44. instead of *E-minor*, Op. 44.
- 55, - 9 - top, - *B-flat major* instead of *B-major*.
- 65, - 16 - bottom, - on *B-flat* instead of on *B*.
- 72, - 15 - top, - *B-flat major* instead of *B-major*.
- 81, - 6 - bottom, - organ-point on *B-flat* instead of organ-point.
- 82, - 8 & 10 - bottom, - *B-flat major* instead of *B-major*.
- 83, - 22 - bottom, - *B-flat major* - - *B-major*.
- 86, - 7 - bottom, - *B-flat major* - - *B-major*.
- 89, - 17 - top, - ORDER instead of ORER.
- 125, insert "§ 20" at the commencement of the paragraph.
- 164, lines 5 & 4 from bottom, reads: and the others are an octave higher or take an independent part.
- 178, - 6 - bottom, - duets instead of duet.
- 185, - 4 - top, - INSTRUMENTS instead of INSTRUMENTS.
- 198, - 3 - bottom, - extracts we presume are — instead of, extracts we presume is.
- 204, insert before fourth line of music: 2 Horns in *C*.
- 203, line 4 from bottom, reads: employs instead of employing.
- 207, - 3 - top, - Huguenots instead of Hugenotten.
- 216, - 2 - top, - three-lined $\overline{\overline{C}}$ instead of three-lined $\overline{\overline{D}}$.
- 230, insert after No. 253b: Mendelssohn, Overture to "Midsummer Night's Dream".
- 237, insert "§ 29" at the commencement of the paragraph.



CHAPTER I.

COMPOSITION FOR VOICES WITHOUT INSTRUMENTAL ACCOMPANIMENT.

The Compass of the Voice.

§ 4. Of all means employed in the performance of musical compositions, the human voice is the only one, bestowed entirely by nature. It is the most expressive as well as the most sympathetic. We say of an excellent instrumentalist that his tone is *singing*, to indicate thereby the highest grade of proficiency in his tone production. The voice is accordingly employed alone or in combination with one or more voices, or in still larger chorus masses, with or without instrumental accompaniment; it is also employed in many different classes of musical compositions, from the simplest song to the largest executed chorus movement in the Oratorium; when it is combined with instruments it invariably leads the melody, the accompaniment being subordinate thereto; it generally appears as a supreme sovereign to whom the accompanying instruments are more or less important subjects, helping to give it greater expression — and often forming a harmony which far exceeds the compass of the voice — thus, extending and perfecting it.

If we examine the compass of the tones, with which nature has endowed man, as a singing voice, we will find the following tonal range, scarcely exceeding three octaves.



This compass can occasionally be exceeded both in its depth and height one or more tones, by an exceptional voice. No one

voice, however, possesses the entire compass of the notes indicated in Ex. 1; on the contrary, there is a marked division at once, according to the sex, into male and female voices. The latter in music includes all children's voices, whether boys or girls. Again we find in both the above named principal divisions of voices a further sub-division into high and low, either male or female voices, which supplementing each other in the limit of their ranges, will give the entire compass, indicated in Ex. 4. We now illustrate the compass of the individual voices, of which the high female voice is called the soprano, and the lower, the alto; the high male voice the tenor, and the low male voice the bass. The following is the compass of the voices, which we may accept for the four-part (mixed) chorus.

(a)

2.

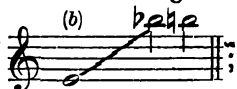
Soprano.

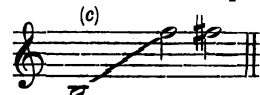
Alto.

Tenor.

Bass.

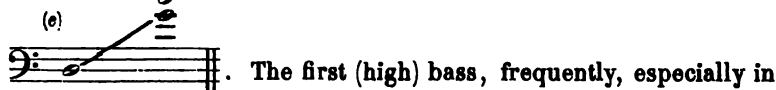
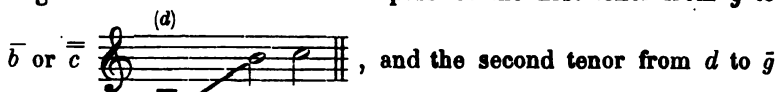
However, not every person endowed with voice, whether soprano, alto, tenor or bass, possesses the entire compass indicated in Ex. 2. According to the natural structure and cultivation, we find on the one hand, voices of greater or less tonal range, and on the other, such whose compass falls between the four principal divisions, indicated in Ex. 2. Among the female voices we make a further sub-division into first (high) soprano, whose tonal range we

generally accept for chorus as being from \bar{e} to \bar{b} ; exceptional solo voices can take a few chromatic tones higher. About a fourth below we find the tonal compass of the second or

mezzo-soprano extending  from b or $b\flat$ to \bar{f} $\bar{f}\sharp$ or even \bar{g} . Likewise, we sub-divide the alto voices into first (high) alto, having a range indicated for alto in general, as in Ex. 2^a,

and into second (low), usually called *contralto*, whose range extends usually two or three tones lower, while in height there are correspondingly fewer tones. Solo voices which possess greater compass such as Mme. ALBONI and Mme. TREBELLI are very rare exceptions.

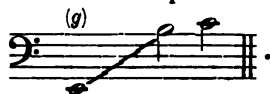
The male voices are also classified as first and second *tenors*, and first and second *basses*. On account of the very extraordinary development, and often very careful cultivation which the male chorus has received during the last half century, the high voices have been developed in height and the low voices in depth. We might therefore extend the compass of the first tenor from *g* to



solo voices, called *baritone*, will usually have a compass extending



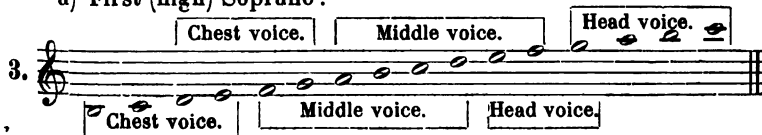
ranging one-fourth below has a compass from E to b or \bar{c}



The Registers of the Voices.

All the tones of the above mentioned various voices are, however, not equal in power and beauty of sound in their different registers, and highly cultivated vocal artists alone possess the ability to connect the different registers in such a manner, — thereby equalizing them — that the voice will retain the same character of pure and beautiful tone throughout its range. We recognize in the female voice three registers, in the tenor and baritone voices (as well as in high bass voices) two; whereas, the deep bass has but one register. In the female voice, we classify the three divisions as *chest, middle* and *head* voice, as illustrated for the soprano in the following example:

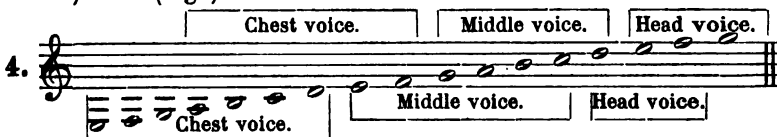
a) First (high) Soprano :



b) Second (Mezzo-) Soprano.

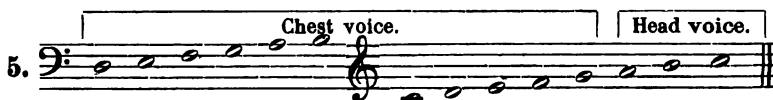
For the alto voice the different registers can be limited in the following manner:

a) First (high) Alto

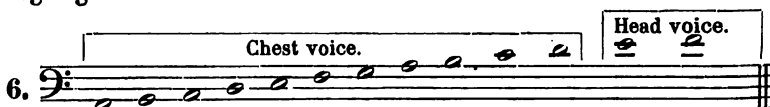


b) Second (low) Alto, usually called Contralto.

We illustrate the registers of the tenor voice in the following example:



The high basses and especially the real baritone voices (however, generally only such as have received cultivation) possess the following registers:



The compass of the voices and the limits of the different registers shown in Exs. 1, 3, 4, 5 and 6 are generally possessed only by solo voices.

In choruses for four voices consisting of male and female voices, the head tones of the individual voices will be but seldom and only exceptionally brought into use. In four-part male choruses, however, the first tenor will frequently be compelled to make use of the head voice; indeed a conscientious choir-master will do well to drill also the soprano voices in the use of the head voice, and in combining the middle and head tones.

COMPOSITION FOR FEMALE VOICES.

The Simple Song-Form.

§ 2. The simplest vocal compositions for two voices without instrumental accompaniment are the "Volkslieder" taught in the lower classes of the schools; both for the purpose of separating the

children's voices into high and low, and accustoming the latter to accompany the higher pitched melodic voice. We frequently find in collections of such school songs, admirably adapted for the cultivation of the taste in the little ones; two-part arrangements of songs by the best masters, written originally either for one voice with pianoforte accompaniment, or for chorus of four voices. These songs are usually of such a character that each stanza of the poem is sung to the same repeated melody. They are, therefore, called "Strophelieder" (Strophic Songs) and we find in them the shortest and simplest form of vocal composition. Naturally only such poems are adapted to this form, which retain throughout, the same sentiment; so that in all stanzas the music will be in accord with the words. Occasional minor rhythmical changes of the melody are permissible, when the natural declamation of the words renders them necessary in one or the other of the stanzas. These can be indicated in the notes and it is then unnecessary to re-write the stanzas in full; thus all the stanzas of the poem can be written under the same melody in the following manner:

7. 

V. 1.	beut	Na -	tur.
V. 2.	folgt	ih - rer	Spur.
V. 3.	Lust und Freude	nur.	

Unimportant changes of the second (accompanying), or of the first (melodic) voice, can also be indicated by means of small added notes, e. g., when such changes are required to form a more complete final cadence. We illustrate this in the following example:

8. 

1st Voice.	beut	Na -	tur.
2nd Voice.	Lust und Freu-de	nur.	

As two singing voices can indicate the harmony through but few interval combinations, variations for any length of time from the tonic key into distant keys are objectionable. The short form of the "Strophen-Lied" excludes any extended modulation. In the

following example consisting of only eight bars taken from the song book of the Leipzig Schools ("Leipziger Schulliederbuch"), we illustrate the briefest form of the "Strophen-Lied":



All-dort auf grü-ner Hei-de, da giebt's der Freuden viel, all-



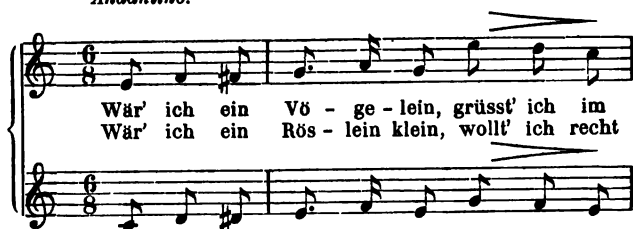
dort im grü-nen Schatten er-götzt man sich mit Spiel.

The rhythm of the verses and the greater or less length of the stanzas will always naturally determine the construction of the musical form of such a song. To exhibit this clearly we show in Ex. 10, as an extended "Strophen-Lied", a song taken from the author's collection of folk-songs (op. 72 Breitkopf and Härtel, Leipzig).

Andantino.

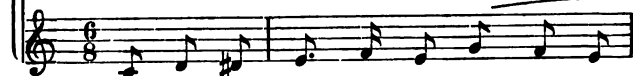
10.

1st Voice.



Wär' ich ein Vö - ge - lein, grüsst' ich im
Wär' ich ein Rös - lein klein, wollt' ich recht

2nd Voice.



Wär' ich ein Vö - ge - lein, grüsst' ich im
Wär' ich ein Rös - lein klein, wollt' ich recht



Mor - gen - schein, Lieb - chen, dich schon, grüsst' ich dich
dof - ten fein, ath - men um dich, ath - men um

Mor - gen - schein, Lieb - chen, dich schon, grüsst' ich dich
dof - ten fein, ath - men um dich, ath - men um

schon! Sit - zend auf dei - ner Hand, säng' ich zu
dich! Nim - mer mich weh - ren wollt', Dörn - chen nicht

schon! Sit - zend auf dei - ner Hand, säng' ich zu
dich! Nim - mer mich weh - ren wollt', Dörn - chen nicht

ritard. (♩) *ritard.*

dir ge - wandt lieb - li - chen Ton, lieb - li - chen Ton.
ste - chen sollt', pflücktest du mich, pflück - test du mich.

dir ge - wandt lieb - li - chen Ton, lieb - li - chen Ton.
ste - chen sollt', pflücktest du mich, pflück - test du mich.

In the third and fourth measures of the above example, we notice that the voices can occasionally cross each other in this style of song; in such a way that the lower will ascend above the upper, and *vice versa*: this leading of the voices being here the natural one. However, in such cases we must carefully avoid a too great separation of the voices; as otherwise they cannot sustain each other sufficiently; and also the higher tones of the second voice might sound forced and too strong and the low tones of the first voice too weak. In fact a great separation of the two singing voices is not advisable at any time for the above named reason, as it would impair the purity and precision of the intonation. That a crossing of the voices can occur ordinarily; but, very seldom and of a short duration is self-evident.

We exhibit a still more extended form of the "Strophen-Lied" taken from the collection of the folk-songs of FERDINAND HILLER (op. 39 Breitkopf and Härtel, Leipzig).

11. So hab' ich denn die gan - ze Wo - che mein

feines Liebchen nicht ge-sehn, ich sah es an einem Sonntag wohl
 vor der Thü-re stehn. Das tau-sendschö-ne Jungfräulein, das
 tau-sendschö-ne Her-ze-lein, wollte Gott, woll-te Gott,
 ich wä-re heu-te bei ihr, woll-te Gott,
 woll-te Gott, ich wä-re heu-te bei ihr.

In the two first measures of this little song is contained a motive: beginning with the third measure, this same motive is repeated for two or more measures, one tone higher; forming a "half-period" of *four measures*. The fifth measure commences again with the first motive and continuing for four measures forms the second "half-period": these two half-periods of four measures each, form a "whole-period" consisting of *eight measures*. On the words "das tausendschöne Jungfräulein etc.", recurring in each stanza of the text, a new motive is begun consisting of two measures, which is immediately repeated in the two following measures; forming another half-period of four measures with the semi-cadence on the dominant. Then follows a third motive of one measure on the words "wollte Gott"; the repetition of this one measure together with the two following measures forms another half-period of four measures; this same half-period is repeated with an alteration of the three last measures — this being necessary in order to form a more complete cadence. This alteration consists of a lengthening

of one whole measure; which is absolutely necessary for the following reason; namely, the first motive of the first period exhibits a rhythm of two measures which is retained throughout the entire song. Therefore, the lengthening of the last half period at the close was necessary so that the final measure might fall on the first half of the rhythm, as it should in every complete close.*)

As an illustration of the style and form for a three-part female chorus, we might mention MORITZ HAUPTMANN'S six sacred songs for two sopranos and alto, (op. 35 Peters Edition, Leipzig). Concerning four-part female choruses (*a capella*), we might name the Romances for two sopranos and two altos of ROBERT SCHUMANN (op. 69 N. Simrock, Berlin). The last of these is a euphonious double canon. Such songs for female or children's voices without accompaniment, we also frequently find as so-called "song-canons" in the brief form of the "Strophien-Lied". The canon is then invariably written in unison; the voices coming in one after the other at the proper entrances, and forming the simple harmony of the passage; although, always singing the same melody. Of course such little compositions are written only for voices which have the same character and compass. A number of repetitions of the canon to the same words of the text, is as necessary, as is the repetition of the same melody to other words, in the different stanzas of the simple, not thoroughly worked out song-form; because every musical composition, whether written in the simple or more extended form, must be of a certain length, and contain a repetition of the principal parts, if it would produce the desired impression and feeling. A passage of eight, twelve or sixteen measures without one or more repetitions cannot be effective. In every composition, each important idea must occur at least twice; for this reason the repetitions in the "Strophien-Lied" and in the above mentioned song-canon are exceedingly necessary. Only through a number of repetitions of the entire passage — which appears very small when considered by itself — does a musical composition result.

At the close of this section, we exhibit for the instruction of the pupil, a charming four-part canon of CHERUBINI. The melody of this canon is sixteen measures long. After every four measures, a new voice enters with the same melody, so that, beginning with the thirteenth measure, the canon forms a four-part passage of four measures, which is repeated in the last twelve measures; the relative positions of the voices being changed three times. The repeti-

*) A more extended explanation of the different song-forms will be found in the fourth volume of the author's treatises on composition (Manual of Musical Form, Chapters 2 and 5).

tions of the entire canon within the signs $\left[\begin{array}{c} \text{E} \\ \text{F} \end{array} \right] \left[\begin{array}{c} \text{G} \\ \text{A} \end{array} \right]$; contain therefore, in their entirety nothing else than the four closing measures of the canon, with alternately changed voices.

12.

Andante con moto.

1st Voice.

2nd Voice.

3rd Voice.

4th Voice.

A - pri - mi, a - pri - mi, a - pri - mi, oh

mia di - let - ta, la - scia - mi, la - scia - mi, la - scia - mi sa -

A - pri - mi, a - pri - mi, a - pri - mi, oh

lir di so - pra, spic - cia - ti, spic - cia - ti, spic - cia - ti ca -

mia di - let - ta, la - scia - mi, la - scia - mi, la - scia - mi sa -

A - pri - mi, a - pri - mi, a - pri - mi, oh

ra Li-set - ta, fam-me-lo, fam-me-lo, fam-me-lo que-
 lir di so - pra, spic-cia-ti, spic-cia-ti, spic-cia-ti ca-
 mia di-let - ta, la - scia-mi, la - scia-mi, la - sciammi sa-
 A - pri-mi, a - pri-mi, a - pri-mi, oh

sto pia-ce - re. A - pri-mi, a - pri-mi, a - pri-mi, oh
 ra Lis-set - ta, famme - lo, fam-me-lo, fam-me-lo que-
 lir di so - pra, spic-cia - ti, spic-cia - ti, spic-cia-ti ca-
 mia di - let - ta, la - scia-mi, la - scia-mi, la - scia-mi sa-

mia di - let - ta, la - scia-mi, la - scia-mi, la - scia-mi sa-
 sto pia-ce - re. A - pri-mi, a - pri-mi, a - pri-mi, oh
 ra Li - set - ta, fam-me-lo, fam-me-lo, fam-me-lo que-
 lir di so - pra, spic-cia - ti, spic-cia - ti, spic-cia-ti ca-

lir di so - pra, spic-cia - ti, spic - cia - ti,
mia di - let - ta, la - scia - mi, la - scia - mi,
sto pia - ce - re. A - pri - mi, a - pri - mi,
ra Li - set - ta, fam - me - lo, fam - me - lo,
spic-cia - ti ca - ra Li - set - ta,
la - scia - mi sa - lir di so - pra,
a - pri - mi, oh mia di - let - ta,
fam - me - lo que - sto pia - ce - re.

COMPOSITION FOR MIXED VOICES.

§ 3. The four-part mixed chorus is formed by the combination of the soprano, alto, tenor and bass voices. Ex. 2 illustrates the compass permissible for the individual voices; but the extreme limits should seldom be brought into use, and only for a distinct purpose. The choral effect will be best when the voices move in their natural range. In this position the high and low sopranos, the first and second altos, and the high and low tenors and basses, with their different qualities of tone, will meet and supplement each other. Furthermore, the middle range admits of every gradation of tone, from the faintest *pianissimo* to the most strongly marked *for-*

tissimo, without having the *pianissimo* seem weak or the *fortissimo* rough.

We must carefully avoid a too great distancing of the individual choral voices from each other; especially ought the middle voices not to be separated, for any length of time, more than an octave; and should the correct leading of the voices occasionally necessitate a greater distance, this ought to be diminished as soon as possible. When the middle voices move at a distance greater than an octave apart, for a considerable time, they cannot sustain each other sufficiently, and thereby the purity and certainty of the intonation is threatened, and even if such were not the case, the fullness and beauty of sound would be impaired. The following passage would not produce a good effect even if rendered by artistic singers with absolutely correct intonation.

Andante.

13.

Soprano.
Alto.
Tenor.
Bass.

If, however, we transpose the middle voices in the manner indicated in Ex. 14, the sound effect will be good.

Andante.

14.

Likewise, the soprano and alto voices must not transgress an octave for any length of time. Ex. 15 illustrates an awkward setting; while Ex. 16 gives the natural and correct harmony.

15. *Allegretto.*

Soprano.
Alto.
Tenor.
Bass.

16. *Allegretto.*

Soprano.
Alto.
Tenor.
Bass.

The bass will frequently move further than an octave from the tenor, and can do so without seriously effecting the harmony, provided the distance be not too great (extending to a twelfth or beyond), and be not too long continued. On these grounds Ex. 17 is open to criticism.

17. *Andante*

Soprano.
Alto.
Tenor.
Bass.

The faults of such a setting are very apparent. The upper three voices, will on account of their high position, sound forced. They cannot well sing a beautiful *piano*; while the bass which must determine the harmony of the passage, is incapable of giving a *forte*. In this deep position it would be faint, weak and soundless.

If Ex. 17 is to be rendered in strong *forte* or *fortissimo*, the bass must be taken an octave higher. To render the passage *piano* or *pianissimo*, it would have to be transposed into a more suitable key, as has been done in Ex. 18.

18.

Soprano.
Alto.

Tenor.
Bass.

From the above it will be needless to state that the distance between the upper two (female), and the lower two (male) voices should not exceed certain limits, as otherwise the phrase would sound empty.

19.

Soprano.
Alto.

Tenor.
Bass.

20.

Soprano.
Alto.

Tenor.
Bass.

For this reason the leading in Ex. 20 is better than in 19. Although, the melody and harmony are the same in both, and the outer voices (soprano and bass), are unaltered; yet the changed position of the intermediate voices will produce a considerably better sound effect.

GREATER SONG FORMS.

The Thoroughly Worked Out Song and the Motett.*)

§ 4. The more abundant means afforded us by the four-part mixed chorus enables us at once to form greater tone forms. In secular music, we find in addition to the "Strophen-Lied", also partially or completely worked out part-songs for the four-voiced mixed chorus. The latter class also includes the ballads. For church music the mixed chorus is especially adapted to the composition of sacred songs, motetts, anthems and hymns. These should, however, not exceed a certain time limit; because even if the intelligent composer, allows in the course of the composition, the necessary rests for the individual voices, such rests cannot in extended works be sufficiently long to avoid a tiring of the voices, which might seriously impair the correct intonation.

The words of the text which form the structural groundwork, will always determine the lengths of the different forms in the above mentioned compositions. If the hymn to be set to music contains in all stanzas, the same or a similar sentiment, the form of the "Strophen-Lied" will in most cases, be the natural and correct one to adopt, unless higher artistic considerations should render it preferable to clothe one of the intermediate stanzas, or else the final stanza in a different musical dress. That grand master-pieces can be composed even in the simple and short form of the "Strophen-Lied", is abundantly illustrated by the rich literature of four-part mixed choruses. At this point we need only refer to the following songs of FELIX MENDELSSOHN, which have become popular in the highest sense of the term: "Im Grünen" and "Abschied vom Wald" (op. 59, Nos. 4 and 3). The first song contains but fourteen measures, and the second but twenty-one measures, these however, through repetitions of the stanzas form compositions of forty-two and sixty-three measures respectively.

Should, however, a different sentiment be introduced in some verses of the poem, even if only in one or a few lines, this changed feeling must be expressed by a corresponding change in the music.

*) Das durchkomponirte Lied, so-called in German literally means a "through-composed song". For this German term there exists no equivalent theoretical term in the English language. The reason for this is probably because this form is so little used by English and American composers. However, we think that "Thoroughly Worked Out Song" fully expresses the German term. — The Translator.

Let us examine the "Herbstlied" (op. 48, No. 6) by MENDELSSOHN-BARTHOLDY. The first stanza of the song beginning in *E* minor, closes in the twelfth measure in *B* minor.

21. *Andante.*

Soprano.
Alto.

Tenor.
Bass.

Hol-der Lenz, du bist da - hin! nir-gends,

cresc.

nir - gends darfst du blei - ben! Wo ich sah dein froh - es

cresc.

cresc.

Blüh'n, braus't des Herb-stes ban-ges Trei-ben, braus't des

cresc.

braus't des Herb - stes ban - ges Trei-ben.

dim.

Herb - stes ban-ges Trei-ben.

dim.

Then, beginning in *B*-minor, the composition continues with the words of the second stanza of the poem. The swelling of the autumn wind is expressed by the modified rhythm, the successive entrances of the voices, and the gradual gradation from pianissimo to a marked forte; entering in the fifth measure on the chord of the diminished seventh.

Wie der Wind so trau-rig fuhr

22.
Soprano.
Alto.

Wie der Wind so trau-rig

Tenor.
Bass.

durch den Strauch als ob er wei - ne,
cresc.

fuhr durch den Strauch als ob er

Wie der Wind so trau-rig fuhr durch den

durch den Strauch als ob er wei-ne!

wei - - - ne!
wei - - - ne!

Strauch als ob er wei-ne!

Having come to the chord of the dominant seventh, at the end of these two verses, MENDELSSOHN continues in the principal key, *E* minor, and after eight measures brings the second stanza to a close.

23.

Ster - be - seuf-zer der Na - tur schau - ern

Soprano.

Alto.

Ster - be - seufzer der Na - tur schauern

Tenor.

Bass.

durch die wel - ken Hai - ne, durch die wel -

durch die wel - ken Hai - ne, durch die

- ken, durch die wel - ken Hai - - ne.

wel - ken Hai - ne.

The first four measures of the third stanza are the same as those of the first stanza, with the exception of a *ritard* in the middle of the third measure, and the pause on the eighth rest at the close of the fourth measure. Then the last two lines of the third stanza "fragend rauscht es durch den Wald" begin the same as the first two lines of the second stanza. To express musically the question, "hat dein Herz sein Glück gefunden?" (has thy heart found it's happiness?) MENDELSSOHN ends the stanza with a unison of the voices on the semi-cadence of the dominant of *E*-minor. After an additional pause, a new movement (*Allegro*, *E*-major, double time) begins in a happy hopeful spirit, entirely different from all the preceding. To introduce this the composer found it necessary to alter the words and thereby the sentiment of the last line. The stanza in question reads according to Lenau:

"Waldesrauschen! wunderbar
Hast du mir das Herz getroffen!
Treulich bringt ein jedes Jahr
Welkes Laub, wie welkes Hoffen."

"Wood-land murmur! so wondrous
Can it be, my heart you've conquered!
Truly brings each new born year
Leaves and hopes, alike quite withered."

This stanza expresses a sad, renounceful, grievously despairing sentiment. By changing the words "Welkes Laub, wie welkes Hoffen" into "Neues Laub, wie neues Hoffen", (new leaves, yes new hopes,) MENDELSSOHN entirely changes the sentiment, and dauntlessly proclaims the new spirit in the well-known final passage. The composition can, therefore, be divided into three parts, the first consisting of the two opening stanzas, contains twenty-six measures, the second part contains twelve measures, (lengthened one more by the pause) and takes the words of the third stanza. The fourth stanza is expanded to forty-six measures. Frequent repetition of the text is necessary for the musical expression of these forty-six measures. Such repetitions of a portion, or of the complete text, are almost always necessary in pure lyric song compositions. It will be well, however, in all cases to give at first the entire text, or at least enough of the text to convey a complete idea, before beginning with the repetition of the words. As a further illustration, we refer to the "One hundredth Psalm". It begins with the words: "Jauchzet dem Herrn alle Welt, dient dem Herrn mit Freuden; kommt vor sein Angesicht mit Frohlocken" (Shout unto the Lord all ye Lands &c.) Here it is preferable at once to give the words: "Jauchzet dem Herrn alle Welt". However, exceptionally, it would be possible in this case, to repeat at once, the first word; because, on the one hand, even by the one word, "Jauchzet" the sentiment of joy is expressed, and on the other hand, such repetitions of words are permissible in poetry for the sake of emphasis. But it would be decidedly better to give at once the words "Jauchzet dem Herrn alle Welt", the hearer then immediately recognizes to whom this hymn of praise is dedicated. Then the words "Jauchzet dem Herrn" or "Jauchzet" only, or "Jauchzet alle Welt" or "alle Welt" can be repeated. However, in all word repetitions, the composer must be careful to avoid any word combinations which do not express a clear, quickly recognized and easily understood idea. Also shorter portions of the text must not be repeated too often in succession. The effect would certainly be ridiculous if the singers were to repeat the words "alle Welt, alle Welt" (all ye lands, all ye lands) ten, twelve or more times in suc-

cession. Even though the text is but a support to the music, it cannot be separated in such a manner, that the word repetitions by themselves are incomprehensible and tiresome. This also is carefully considered by MENDELSSOHN. In the last part of the "Herbstlied", he gives at first the entire stanza, then he again gives the last two lines with the words "Neues Laub" and "Neues Hoffen" repeated twice. Then throughout to the close of the composition, the entire stanza again follows with various repetitions of the last line. That all voices do not sing the same words at the same time is evident from the leading of the voices. We must pay due regard, however, to the ending of all the voices with the same words, in the three following cases: namely, at the end of each musical section; each longer period; each principal division; and naturally at the final close of every composition.

We have already remarked, that even when the same sentiment is retained throughout the poem, the composer can, if he chooses, give one or the other of the stanzas, a different musical setting from that of the previous stanzas. This can be done in different ways according to the prominence desired. Thus in MENDELSSOHN's "Morgengebet" (op. 48, No. 5), the third stanza differs but little from the first two stanzas, and in a manner hardly perceptible to the hearer; the change being a different leading of the three lower voices, and a slight alteration of the melody in the seventh and eighth measures. Entirely different has the same composer written his "Jagdlied" (op. 59, No. 6). The last four lines of the poem do not differ in sentiment from the rest. The first two stanzas, consisting of eight lines each, are sung alike (similar to Ex. 7), with the exception of a few unimportant rhythmical changes, occasioned by the declamation. Also the third (final) stanza continues in the first four lines the same as the previous stanzas. Now, however, to the words "Erquickliche Frische, süßschaurige Lust! Hoch flattern die Büsche, frei schlägt die Brust" a new closing movement of the song is begun, which forms a striking and most effective contrast to the other parts. A strong passage in *B* major brings the composition which has hitherto been in minor, to a close. Surely, the words "Erquickliche Frische" were not the cause which induced the master to introduce an entirely different musical sentiment. It is more reasonable to suppose that MENDELSSOHN felt it necessary for artistic purposes to forsake the minor key, which had thus far been the ruling spirit of the piece; and to bring the composition to a glorious, happy, strong and satisfactory ending by the change of key into major. How successfully the master has accomplished this purpose, every one endowed with the right spirit, will most willingly acknowledge.

THE COMPOUND, TWO PART SONG-FORM.

§ 5. If we examine the church music, written for four-part chorus, we will find the simplest form to be the anthem. However, but seldom are all the stanzas treated in exactly the same manner. Generally the closing stanza contains an alteration such as we have already observed in the "Morgengebet" by MENDELSSOHN (p. 48, No. 5). This is still more striking in the same composer's "Neujahrslied" (op. 88, No. 1). The first three stanzas of the hymn are sung to the same melody and harmony, the fourth (final) stanza contains in the first nine measures new musical material, but the following five closing measures are the same as the previous stanzas.

ERNST FRIEDERICH RICHTER, in his composition "Gott ist mein Licht" (op. 44, No. 1), changes the ending of the first stanza

24.

Soprano.
Alto.Tenor.
Bass.

Gott ist mein Licht, Gott ist mein

Licht, Gott ist mein Licht!

in the second stanza as follows:

25.

Soprano.
Alto.Tenor.
Bass.

Gott ist mein Heil, Gott ist mein

Heil, Gott ist mein Heil!

After this unimportant alteration of the ending, the third (final) stanza begins with an entirely new melody and harmony, and, although the sentiment is similar, it repeats nothing of the contents of the previous stanzas. The rhythm of the last line alone reminds us of the first two stanzas.

26.

Soprano.
Alto.
Tenor.
Bass.

Gott, Gott ist mein Preis, Gott ist mein

Preis,
Gott ist mein Preis, Gott ist mein Preis!

Still more varied, broad and extended, are the forms of the motett. In MOZART's "Ave Verum Corpus", we find a short but well worked out motett. This, although it has an accompaniment for string quartet and organ, is frequently rendered *a capella*, by omitting the two measures of prelude and three measures each of interlude and postlude, which belong entirely to the accompaniment. Thus curtailed, it consists of only thirty-seven measures. This exquisite, religious hymn begins in *D*-major, and after eight measures, is brought to a semi-cadence on the dominant.

27.

Adagio.

Soprano.
Alto.

A - ve, a - ve ve - rum cor - pus

Tenor.
Bass.

na - tum de Ma - ri - a vir - gi - ne

Then follows eight measures entirely in the key of the dominant, which lead in the eighth measure to a complete cadence in this key.

28.

in

Soprano.
Alto.

ve - re pas - sum im - mo - la - tum

Tenor.
Bass.

cru - - - ce im - mo - la - tum

in cru - ce pro ho - mi - ne

Now follows a middle passage, which, through a most impressive modulation to *F*-major, and leading from that to *D*-minor, closes after eight measures with a semi-cadence on the dominant of the latter key. The deep and painful feeling of grief which is expressed in the words "cujus latus perforatum unda fluxit et sanguine", is most expressively reproduced in these few measures. By means of the deceptive resolutions, of the chord of the seventh, from the

fifth to the sixth, and from the sixth to the seventh measures, the feeling of sorrow is very effectively expressed.

29.

Soprano.
Alto.

cu-jus la - tus per - fo - ra - tum

Tenor.
Bass.

un-da flu - xit et san - gui - ne.

The ending following these measures, begins with a charming imitation. The soprano and alto intone the "esto nobis"; after one measure, the tenor and bass enter in double canon of the fourth, which is continued for four measures. Through a deceptive cadence in the eighth measure of Ex. 30 on the chord of the sixth of the sub-dominant, the close is postponed; in the following final six measures, the entire composition is brought to a satisfactory close after this gradual and effective working up.

30.

Soprano.
Alto.

e - sto no - bis prae - gu - sta - tum in

Tenor.
Bass.


e - sto no - bis prae - gu - in mor -

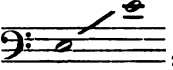
mor - - - tis ex - a - mi - ne, in

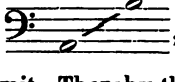
sta - tum in mor - tis ex - a - mi - ne,



The faithful, pious, sincere sentiment of this choral setting is, even without regard to its religious contents and the noble and pure style in which the latter is expressed, very materially aided by the extraordinarily soft and beautiful tone of the passage. All the voices move only in the euphonious middle register and have, therefore, a comparatively small compass. Thus the soprano has only a range of a ninth, from the deepest tone \bar{d} to \bar{e}

The alto  takes only a minor seventh, from b to \bar{a} .

The tenor has a compass of one octave , from e to \bar{e} .

The bass , has the note A as its lowest and b as its highest limit. Thereby the voices are able to continue the subdued tone coloring throughout the entire composition, indicated by "sotto voce" at the commencement.

In MORITZ HAUPTMANN'S "Salve Regina", (op. 43) we find in the form of the motett, a composition the relative parts of which are more extended and larger; here also an accompaniment for organ or pianoforte "ad libitum" is added to the score of the singing voices. However, we have always heard this beautiful choral work sung *a capella* and believe that such an accompaniment, which continually gives the same notes as the voices, will unnecessarily double the latter, and will be injurious to the tone effect, inasmuch as it detracts from the more delicate, beautiful, sincere and heartfelt rendition on the part of the chorus. In some cases, even in practising the voices, the pianoforte is more a hinderance than useful, because it cannot give the altered and leading tones, with that degree of decision, which we can always expect in the pure and precise intonation of the chorus.

In HAUPTMANN'S "Salve Regina" we notice at first a principal phrase of twenty measures, beginning and ending in *E*-major; then follows an intermediate section, which during its sixteen measures is principally in the parallel minor key, *C*♯-minor. Then follows nineteen measures of modulating changes, coming to a semi-cadence with the chord of *B*-major, the dominant of *E*-major. Then the first sixteen measures of the principal section are repeated, but to different words; the sixteenth measure, however, leads to a deceptive cadence, from which an extended codal passage, consisting of twenty-nine measures, brings the composition to a close.

In this motett we can distinguish the following parts: first part of twenty measures; development of thirty-five measures; curtailed repetition of the first part, after the development containing sixteen measures; and extended closing part of thirty-nine measures. This form we call the extended, compound song-form, and very many motetts are written in this form.

MENDELSSOHN, in his motett (op. 69, No. 2), has set the one hundredth Psalm to music. In this we can recognize, according to the poetic contents of the Psalm, three distinct musical movements, differing in tempo and key. The words "Jauchzet dem Herrn alle Welt! Dient dem Herrn mit Freuden und kommet vor sein Angesicht mit Frohlocken" forms the first part of the opening movement, beginning in *A*-major (*Allegro moderato*), and closing in the same key on the pause in the thirtieth measure. The music expresses a happy, pious sentiment. With the entrance of the second part of the first movement, the sentiment is changed on the words, "Er ist Gott, unser Herr; er hat uns gemacht, und nicht wir selbst, zu seinem Volke und zu Schafen seiner Weide", the music begins in a more serious strain, which is at once introduced, and well contrasted from the preceding by the entrance of the *D*-major chord in the thirty-first measure. The second part of the first movement, moves principally in *G*-major and ends with the pause of the twentieth measure on the *E*-major chord. The pious strain "O geht zu seinen Thoren ein mit Danken, zu seinen Vorhöfen mit Lobsingen", is repeated many times in imitations of the first motive,



in an intermediate passage, taken in *moderato* time in *A*-minor. The movement is brought to a complete close in the thirty-first measure. The final chord is given with tonic and fifth only, and without the third which decides the mode. Then the third movement, *Andante*

con moto, begins in *A*-major; this contains a peculiar charm on account of the simultaneous leading of two different musical ideas, of which the first is introduced in the three lower voices in the opening sixteen measures. In the sixteenth measure the soprano enters with the second subject, likewise in *A*-major, while the alto, tenor and bass for sixteen measures repeat as an accompaniment, the subject introduced at the opening. With the thirty-second measure the bass takes up the second subject, for eight measures, while the soprano leads off (thirty-third measure) with the first subject; then after the eighth measure while the soprano continues its subject, the bass becomes free like the alto and tenor. A short coda, developed from the opening motive of the first subject, after nine measures, brings the composition of the three movements of this Psalm to a close.

It may be casually observed, that we notice from the above described composition, that the composer may alter individual words to suit the musical declamation, and occasionally, may even insert a word or two, if he deems it advisable or necessary. Thus MENDELSSOHN, begins the first two measures of the "One hundredth Psalm" with the words, "Jauchzet, Jauchzt", in which the "e" of the final syllable is eliminated in the second measure. In the same manner it would be correct to alternate or use either of the following: "Dient dem Herrn" and "Dient dem Herren", "Singet" and "Singt", "Lobet" and "Lobt"; also nouns can be curtailed by means of the apostrophe (as syncope, aphaeresis &c.) e. g., "Gnad" can be substituted for "Gnade". Adverbs, like "ewiglich" can be changed to "adjectives, like "ewig"; interjections, such as "O" and "Ah" can be inserted to increase the number of syllables. Repetitions of separate words, and even shorter phrases can be omitted and pronouns substituted. Thus MENDELSSOHN, towards the end of the Psalm, gives the following: "Denn der Herr ist freundlich, und seine Gnad' und Wahrheit, seine Gnad' und Wahrheit waltet ewig, sie waltet ewig" (for the Lord is good, His mercy and truth, His mercy and truth, they last forever).

It will be unnecessary to devote more space to the declamation of the text words. Every one familiar with the language, will not have the slightest difficulty in selecting a suitable arrangement of the words to serve as an intelligent supporting text to the composition.

COMPOSITION FOR FIVE OR MORE VOICES.

§ 6. Sometimes the mixed chorus consists of five, six, seven, or even eight voice parts. The tone effect of such choruses, consisting of more than four voices, will be fuller, richer and more powerful, according as there are more voices employed in the rendition of the composition, particularly as each individual voice can move in the range most favorable and convenient to it. For five-part composition it is advisable to divide one of the outer voices, soprano or bass, as experience shows that these voices are most numerous in most choral societies; again the first soprano can have more freedom of movement in height, and the second bass in depth, than the middle voices, the latter being hemmed in by the outer voices. To divide the middle voices, alto or tenor, into first and second parts is not practicable, because they are generally in the minority in comparison with the sopranos and basses, and as above stated, because they have less room for free movement. The following Ex. 32, illustrates how much fuller in sound the four-part chorus is, with even one added voice.

32.

Soprano I.
Sopranoll.
Alto.

er las-se

Tenor.
Bass.

Gott sei uns gnä-dig und seg-ne uns,

er las-se uns sein Antlitz leuch-ten, Gott seg-ne
sein Ant-litz leuch-ten, Gott seg-ne

seg - ne uns, sei uns gnä - dig und seg - ne, und
 uns, Gott sei uns gnä - dig und seg -
 und sei uns gnä - dig und seg - -

seg - ne uns, *sotto voce*
 - ne uns, sei gnä - dig, Gott sei uns gnä - dig und
 - - ne

sei gnä - dig, Gott, und
 seg - ne uns, sei gnädig, Gott, sei gnä - dig, Gott, und
 und seg -
 und

seg - ne uns.
 seg - ne uns, Gott seg - ne uns, dass wir auf
 ne uns, dass
 seg - ne uns, Gott seg - ne uns, dass wir auf

cresc. - - molto *ff*

Er - den er - ken - nen sei - nen Weg, sein Heil un - ter

cresc. - - molto *ff*

p

al - len Hei - den, sein Heil, dass wir er -

p

cresc. *s*

ken - nen auf Er - den sei - nen Weg, sein Heil un - ter

cresc.

dass wir er -

al - len Hei - den, sein Heil, sei - nen

dass wir er - ken - nen, er -

dass wir er - ken - -

ken - nen sei - nen Weg, — sein Heil, sein
cresc. *ff*
 Weg, dass wir er - ken - nen sein Heil, sein
 ken - nen *cresc.*
 nen sei - nen Weg, *ff* sein Heil, sein

Heil. ——— Gott,
dim. *assai* *dolce*
 Heil. ——— Gott sei uns gnä - dig und
dim. *assai* *dolce*
 Heil. ——— *dolce*

espress.
 seg - ne uns, ——— er las - se uns sein Ant - litz
 er las - se uns sein
espress.

und seg - - ne uns, ——— *fp*
 leuch - ten und seg - ne uns, seg - ne
 und seg - ne, seg - ne
fp
 und seg - ne

uns, Gott seg - ne uns, sei gnädig, Gott, seg - ne uns,

uns, sei gnädig,

Gott seg - ne uns, Gott sei uns gnä - dig und seg - ne

Gott. o Gott,

A - - men,

cresc. A - - men, A - - men, A - men.

uns. A - - men, A - - men, A - men.

A cresc. - men, A - - men,

The above example, a motett by the Author, (op. 44, C. F. W. SIEGEL, Leipzig) exhibits all the advantages which the composer possesses in making use of five voices. Occasionally the basses are doubled, and sometimes even trebled, as in the closing chords, which is done on account of the larger number of singers of this voice usually present in the chorus. This motett also serves as an example of that form which we have fully explained in referring to HAUPTMANN'S "Salve Regina".

For the style of composition with six, seven or eight real voices, *i. e.*, independent and correct, according to the rules for strict writing, we refer to the Author's work on counterpoint, Volume II, pages 402 to 447 inclusive. However, we especially recommend a thorough study of the six celebrated motetts of JOHN SEBASTIAN BACH.

of which the first four, "Singet dem Herrn ein neues Lied" "Fürchte dich nicht, ich bin bei dir", "Ich lasse dich nicht, du segnest mich denn", "Komm, Jesu, komm", are written for eight voices, as a double chorus; the fifth, "Jesu meine Freude", although containing three and four-part passages, is written principally for five voices (two sopranos, alto, tenor and bass); and the last, "Der Geist hilft unsrer Schwachheit auf", is again set for eight voices.


In these grand examples of church music for voices without accompaniment, the art student will find many differently constructed forms as must naturally be the case from the contents of the text. Thus in the first motett, there is a first movement brought to a complete close, (*Allegro moderato*, $\frac{3}{4}$ time) on the words "Singet dem Herrn ein neues Lied, die Gemeinde der Heiligen sollen ihn loben. Israel freue sich dess', der ihn gemacht hat. Die Kinder Zions sei'n Fröhlich über ihrem Könige, sie sollen loben seinen Namen im Reigen, mit Pauken und mit Harfen sollen sie ihm spielen." After this joyful hymn follows a second movement (*Andante sostenuto*, $\frac{4}{4}$ time), in which on the words "Wie Väter mit Erbarmen auf ihre schwachen Kinder schaun etc.", the sentiment of the sincerely pious petition is predominant. The second movement closes in the same key as the first, *B*-major. Then the third movement on the words, "Lobet den Herrn in seinen Thaten, lobet ihn in seiner grossen Herrlichkeit", (*Poco Allegro*, *E* \flat -major $\frac{4}{4}$ time) begins in the same character as the first. However, it is not brought to a close; the four-part fugue (*Allegro vivace*, *B* \flat -major, $\frac{3}{8}$ time) on the words, "Alles was Odem hat, lobe den Herrn, Alleluja", immediately follows and ends this grand masterpiece.

The extent of this book will not permit us to analyze in detail the minor differences in the formation of the above named motetts. We must leave this to the private study of the pupil. For a knowledge of the style of compositions of eight independent voices, not arranged for double chorus, we would recommend particularly the exceedingly effective Psalms of FELIX MENDELSSOHN, (op. 78, Breitkopf and Härtel) as also the motett by the same master, (op. 23, No. 3 SIMROCK, Berlin) "Mitten im Leben sind wir mit dem Tod umfassen".

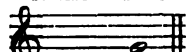
COMPOSITION FOR MALE VOICES ONLY.

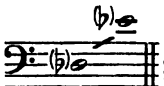
§ 7. In recent times, male chorus music has received special attention and cultivation. Before the beginning of the nineteenth century, there were but very few such compositions written, with the exception of an occasional one which was necessary in the opera;

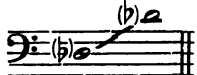
however, during the last seventy years there has sprung into existence, a rich literature of independent compositions of this character, of more or less extended description, both with and without instrumental accompaniment. We will consider primarily compositions for male voices which are written a capella, or which have an instrumental accompaniment with the designation "*ad libitum*". Thus MENDELSSOHN in his songs for male chorus (op. 50, F. KISTNER, Leipzig, states in reference to the second song, "Der Jäger Abschied": "this song can be sung with an accompaniment of four horns and a trombone". Similarly to the title of the motett, "Ehre sei Gott in der Höhe" by MORITZ HAUPTMANN, there is added "for male voices with accompaniment, *ad libitum*, of two horns and three trombones". Only once have we heard the latter composition with the above mentioned accompaniment; MENDELSSOHN's song which has become popular in the highest sense of the term, we have never heard with the accompaniment, nor have we missed the latter.

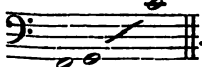
The tonal range within which we can write for a four-voiced male chorus, consists of about two octaves and a third, and extends from large *F* to one-lined *a* . However, not even in

this limited compass can we expect all sound gradations from the voices. Only occasionally can a strong powerful fortissimo be given by one or the other deep bass voices, and due regard must also be paid, to giving the singer such a number of previous rests, as allow him sufficient time to take breath: a soft pianissimo is almost impossible with chest tones even for artistically cultivated, high tenor voices; and can only be given by means of a skillful use of the head voice.

We will therefore do well to permit the first tenor to sing principally within the octave from *g* to *g* , and possibly

a tone higher; for the second tenor the range *e* to *e* ;

for the first bass *d* to *d* ; and for the second bass

G to *c* .

For the upper three voices the close position is most suitable, in fact the sound effect of the entire chorus will most generally be best, when all the voices are within the range of a twelfth or a thirteenth. The limit of the extreme

distance of the second bass from the first tenor, should not exceed two octaves in four-part male chorus work, and this limit should only be reached in passing, as illustrated in Ex. 33.

33. *Andante. p espressivo*

Tenor I.
Tenor II.

Herr Gott, Dich prei-sen wir, Dich prei - sen

p espressivo

Bass I.
Bass II.

Herr Gott, Dich prei - sen wir, Dich, Herr

wir, Herr Gott, Dir dan - ken wir, dan - ken Dir,

Gott, preisen wir, Gott, Dir dan - ken wir, dan - ken Dir,

Herr, un - ser Gott. &c.

Herr, un - ser Gott.

The correct leading will occasionally necessitate a crossing of the voices, (especially of the middle voices), but this also must occur only in passing, and naturally the crossing parts must not transgress their respective tonal ranges, and must not move in the outer limits This is illustrated in Ex. 34 taken from the above mentioned song of MENDELSSOHN.

34.

Tenor I.
Tenor II.

le-be wohl, le-be wohl, le-be wohl, le-be

pp

Bass I.
Bass II.

wohl, le-be wohl, le-be wohl, du schö-ner Wald!

cresc.

p

cresc.

p

We have given the ranges and positions of the voices as they generally occur; however, the student must not forget that in a chorus consisting of a number of bass and tenor voices, the lowest or highest tone cannot be bounded as precisely as in an instrument. There are deep basses, who possess well-sounding tones, down to *D* and even to *C*, and we can therefore, occasionally sub-divide the second bass parts, as we have already observed in four-part mixed chorus. Thus HAUPTMANN, in his motett, (op. 36, No. 3) writes as follows: —

35.

Tenor I.
Tenor II.

mf o Herr, Herr — und Gott!

dim.

Bass I.
Bass II.

o Herr und Gott!

Again it is permissible to overstep the ranges of the second bass as to the height, and of the first tenor as to depth, when all the voices are led in unison. In such cases the sound will not be injured, but rather be made more effective. The *forte* of such a unison passage will sound more marked and powerful, on account of the high tones of the basses; and the *piano* more mellow and pleasant, on account

of the deep tones. For this reason, MENDELSSOHN, in his song "Abschiedstafel" (op. 75, No. 4) begins as follows: —

36. *Assai maestoso.*

Tenor.

Bass.

So rückt denn in die Runde! es

schleicht die Zeit im Dunkel.

When writing for male chorus of five voices, it is most advisable to divide the parts into two tenors, one baritone and two basses. In this manner, ROBERT SCHUMANN has written the first canon, "Die Rose m Thau", in the Ritornelle (op. 65, No. 4 Breitkopf and Härtel, Leipzig). An eight-part setting for male voices, can be properly written only in such a manner that we have two four-part choruses, which we permit to sing at times alternately or together. This is illustrated in the following example taken from the motett of the Author, (op. 38, C. F. W. SIEGEL, R. LINNEMANN), the beginning of which (chorus I) has already been illustrated in Ex. 33.

Solo voices or little Chorus.

37.

Tenor I.

Tenor II.

Chorus I.

Bass I.

Bass II.

Dir dan-ken, Dir danken wir. Dir nur al-lein sei die

Dir, Dir o Herr, Dir nur al-lein sei die

o Herr, wir danken, sei

Dir dan-ken wir.

Eh - re, Dir, Herr, al - lein.

Chorus I.

Eh - re, al - lein.

Eh - re, Dir al - lein.

Eh - re, Dir al - lein.

Dir nur al - lein sei die

Chorus II.

Dir al - lein sei die Eh - re, Dir,

Dir al - lein sei die Eh - re, Dir,

Eh - re sei Dir, Herr und

Du hast uns Gu - tes ge - than,
espress.

espress.

mf Du hast uns

Eh - re, Dir, Herr, al - lein!

Gott Herr, al - lein! Herr und

Gott und Herr, al - lein! Herr und

Gott, Dir al - lein! Herr und

Gu - tes ge - than, Du hast uns

Gu - tes ge - than, Du hast Gu - tes ge - than,

Du hast uns Gu - tes ge - than, *espress.*

Gott, Du hast Gu - - tes ge-
Gott, Du hast Gu - tes, Du hast uns

Gott, Du hast uns Gu - - -

Gu - tes ge - than, Herr, Du mäch - ti - ger
an uns, Du

Du, o Herr, Du mäch - ti - ger
Du, o Herr, Gott,

than an uns, Du, o Gott, Du
Gu - tes ge - than, Du, o Herr und Gott,

tes ge - than, Du, o Herr und Gott, Du

Gott, Du mäch-ti - ger Gott, Du mäch-ti - ger

Gott, Du

mäch-ti - ger Gott, Du mäch-ti - ger Gott, Du hast

mäch - ti - ger

Du hast uns geschirmt,

Gott, Du hast uns,

Du hast uns, Du hast uns,

uns, Du hast uns ge-schirmt, Du hast uns ge-

uns ja ge - schirmt, Du hast uns ge-

Du hast uns ge-

Du hast uns ge - schirmt!

uns ge - schirmt! &c.

schirmt,

schirmt, Dir nur &c.

schirmt, Dir nur

From the above example the pupil will observe that the first chorus, consisting of a small number of particularly high or solo voices, is generally set higher than the second chorus. The tenor of the first chorus extends to *ab*, the bass of the second chorus down to E. Occasionally this range can even be used for four-part male chorus, as the high tenors, from the constant use of the high tones, gradually develop their voices in height, and learn to skilfully unite the chest and head voices; while the second basses, from the continued use of the low tones, will gradually lose the upper tones, while in depth, they will gain in the quality of the tone, and in some cases even in the compass. However, generally more good, deep, well sounding bass voices will be found in male choral societies, than high tenors; and it is, therefore, advisable to avoid having the first tenors sing frequently in the high range. This voice, with the exception of a few especially gifted, so-called hero tenor voices, easily loses the character of a genuine male voice; and assumes an unnatural character, if the head tones are too frequently employed. The entire chorus loses thereby, in *forte* passages, the effectiveness, strength and power of sound; and in *piano* passages in dignity, nobility and mellowness, which gives to the male chorus its peculiar charm and real individuality.

CHAPTER II.


COMPOSITION FOR KEYED INSTRUMENTS.

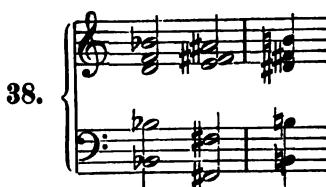
Composition for the Pianoforte as a Solo Instrument.

§ 8. It is almost unnecessary to give a description of the pianoforte as an instrument; a familiarity with it and its uses, can justly be presupposed by every composer. Every person knows that there are square, upright and grand, large and small pianofortes; that the metal strings of all these instruments are brought into vibration, through the striking of small hammers, and that these hammers are set in motion by pressing down the keys. The right pedal is employed to continue the sound of the instrument, as it raises the damper and thus renders possible the sounding together of tones distant from each other in chord passages. The left pedal, also called the soft pedal, weakens each single tone, inasmuch as, when it is brought into use, the hammers can touch but two of the three strings. The pedals can be used either separately or together. The pianoforte is frequently called simply piano. There is no other instrument, so general in all countries, in which the musical art is cultivated, as the pianoforte. This extensive use is due principally to the fact that a composition can be completely reproduced, both as to melody and harmony, on this instrument; while at the same time, the performer possesses the power of effectively expressing his own feelings, through modulations of the touch, such as the gradual transition from one sound gradation to another, from the most delicate *pianissimo* to the most powerful *fortissimo*.

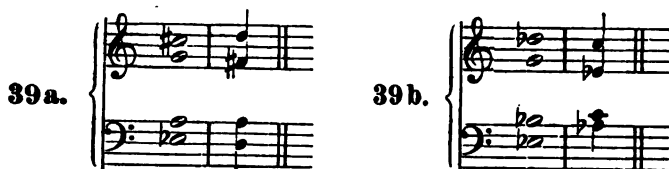
For this reason we can consider the pianoforte the most independent of all musical instruments. In like manner as the organ, it has the advantage of an exceedingly extended tonal range. It exceeds all other instruments in this respect, and permits, in a much greater degree than the orchestral string instruments, such as the harp, the violin and others; the possibility of giving in addition to the melody, the harmonic accompaniment. Even though it is impossible to reproduce on the pianoforte the different characters of tone of the orchestral instruments, however, when used as a solo instrument, we can in a certain sense say it is an orchestra in itself, controlled by a single performer. In depth, its tonal range exceeds even the deepest of orchestral instruments, such as the contrabass, the trombone and the tuba. In fact the pianoforte has the advantage of power over the deep tones of the contrabass, though not

over the deep brass instruments. Recently pianofortes have been

constructed which can give the five-line , and it therefore, exceeds in height the violin; as the flageolet tones of the latter instrument cannot be brought into use in the orchestra. It has the further advantage of being easily managed. In many respects, a special or more general musical cultivation, or a particular talent for his instrument, is not required of the pianoforte player. While the singer, and the performer of wind and stringed instruments, must first mentally conceive each tone to be reproduced, and must therefore, possess an accurate musical ear; the pianoforte player on the other hand, has the tone given to him, ready and firm, and only needs to press down the key to bring out the tone, pure and accurate in intonation when of course a well tuned instrument is placed at his command. The disadvantage that the pianoforte has but one and the same pitch and key for the enharmonic tones $c\sharp$ with 273,0375 vibrations in a second, and $d\flat$ with 268,04 vibrations, (which also is the case with all enharmonic tones) will make no material difference in a solo performance on this instrument; because, on account of the complete harmony given by the pianoforte, we will feel the $c\sharp$ higher than the $d\flat$ and seem to hear a higher tone, when the former is necessary on account of the other tones of the chord. Every musically cultivated person will seem to hear the altered and leading tones in the chord sharper, and will feel them higher, than when they occasionally occur in enharmonic changes as sevenths or less perceptive intervals of other chords. How entirely different we feel the tones $b\flat$ and $a\sharp$ in the following chords: —

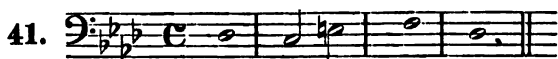


The $a\sharp$, written lower in our system of notation, will seem to our ears to be the higher tone, because it is the leading tone. Still more perceptible is this in the altered tones which we might designate as the sharpest leading tones. Examine the harmonic combinations in Exs. 39a and 39b, in which we have $c\sharp$ as an altered tone, while $d\flat$ is a seventh.



The $c\sharp$ of the altered chord in No. 39a leading to d will seem higher to us than the seventh $d\flat$ in No. 39b leading to c .

However, even when the harmonic foundation is not given, we can determine at once from the position of the single tone, and its interval relation to the preceding and following tones, which of the two enharmonic tones is intended. For example, play on a well tuned pianoforte, the following passages; the first of which is the $C\sharp$ minor fugue from the "Wohltemperirte Clavier" of BACH (Book 1 No. 4), and the other, a sequence taken from the F -minor scale, *e. g.* —



In Ex. 40 we will observe that the $B\sharp$ is different, *i. e.*, higher than the tone C of Ex. 41. $B\sharp$ coming between $C\sharp$ and E , will be a leading tone, and the interval from $B\sharp$ to E will be felt as a diminished fourth. On the other hand, we will feel the tones C and E between the $D\flat$ and F , in Ex. 41, as an augmented third. The C seems lower to us than the $B\sharp$, because we feel the major third C to E as a major interval, and the diminished fourth $B\sharp$ to E as a minor interval.

In this manner our musical intuition will at all times rectify the tuning of the pianoforte when this instrument is used alone. The tempered tuning of the pianoforte will only then be perceptible to the more delicate ear; especially, when as in the following example taken from BEETHOVEN's sonata, (C -minor, op. 111), two voices move at the outer limits of the instrument, without harmonic tones in between to give fullness to the passage.

42.

cresc. sf p cresc. dimin.

However, but seldom will the tempered tuning make a serious difference in a passage extending over the entire key board. The small degree that the four-lined $e\flat$ is lower than the contra $E\flat$ according to perfectly correct tuning, will hardly be perceptible to the human ear in Ex. 43; even when we continue the sound of the $E\flat$ major chord — as exhibited in the following — by means of the loud pedal, to permit a longer examination of the purity of the tone: —

43.

Ped.

8

The most serious disadvantage of the pianoforte in comparison with other instruments, excepting the harp, kettle-drum, drum, and triangle, consists in the fact that the individual tone once given, cannot increase in power or continue of the same strength; even with the raised damper it soon dies away, so that the a , if struck

forte on a large concert grand, is not audible after twenty seconds. The diminuendo — by this term we designate the dying away of the pianoforte tone — of the contra *A*, will last about forty seconds, and *vice versa*, the length of sound of the tones produced on the shorter strings will be less, correspondingly as the tones are higher. It is, therefore, not possible to reproduce as effectively and expressively on the pianoforte, a melody formed of long continued tones, as can be done with the voice or with stringed or wind instruments. The performer on the pianoforte must despair of means of a crescendo, diminuendo or the vibrato (trill) of the single tone. By the deepest inner feeling or the highest degree of giving, expression, composers for this instrument have always felt this lack, and have, therefore, invented a special pianoforte literature, which excludes long continued tones. The themes of the slow movements of pianoforte compositions consist mainly of short notes; longer notes are avoided by a repetition of the same tones, as illustrated in the following example: —

Beethoven, op. 26.

Marca funebre sulla morte d'un Eroe.

Maestoso andante.

44.

The musical score is for a piano piece by Beethoven, Op. 26, 'Marcia funebre sulla morte d'un Eroe'. It is in F major (two flats) and 2/4 time. The tempo is 'Maestoso andante'. The score is divided into three systems. The first system begins with a piano (p) dynamic. The right hand plays a series of chords, while the left hand plays a single note. The second system features a crescendo (cresc.) in the right hand. The third system returns to a piano (p) dynamic. The score is numbered 44.

The musical score consists of four systems, each with a piano (P) and bass (B) staff. The key signature is B-flat major (two flats). The first system includes the marking *cresc.* and *sf*. The second system is marked *sf*. The third system includes the marking *NB.* and features a natural dying out of the chord (diminuendo) indicated by a wedge. The fourth system includes the marking *cresc.* and *p*, and ends with the marking *&c.*

In this funeral march, BEETHOVEN was compelled to continually repeat the upper note carrying the melody, because otherwise it would have been smothered by the harmony and the rhythm. In the fourteenth measure of the march, designated by N. B., BEETHOVEN makes use of the natural dying out of the chord as a diminuendo — ; and *vice versa*, in the fifth and ninth measures, a crescendo is produced by the repetition of the same chord and melody tone.

BEETHOVEN follows the same plan in the theme of the variations, in the second movement of the sonata op. 57. The following theme also shows a similar construction: —

BEETHOVEN, op. 2, No. 2.

*Largo appassionato.**tenuto sempre*

45.

The musical score for measures 45 and 46 of Beethoven's op. 2, No. 2. Measure 45 begins with a piano (p) dynamic. The right hand plays a series of chords, while the left hand plays a steady eighth-note accompaniment. Measure 46 features a trill on the right hand and a fermata on the left hand, with the instruction 'tenuto sempre' above the staff.

CHOPIN also makes use of this device in his First Nocturne, op. 9. The tone repetition in the first measure is necessary for the crescendo of the melody note *F*; while a diminuendo is indicated on the *D*-flat of the second measure. This idea is repeated many times in the course of the composition.

46.

Larghetto. ♩ = 116.

The musical score for measures 46 and 47 of Chopin's First Nocturne. Measure 46 shows a trill on the right hand. Measure 47 includes a trill on the right hand and a fermata on the left hand, with the instruction 'Larghetto' and '♩ = 116' above the staff. The score is marked with 'Ped.' and '*' symbols.

In former times the trill (also the mordent, double mordent, double beat and many other embellishments), became frequently employed in order to avoid the disadvantage of the early dying out of the tone. Thus BACH adds a trill to the last note of the theme of the *B*-minor fugue (Wohltemperirte Clavier, Book 1, No. 24).

47. *Largo.*

47. *Largo.* *p* *tr*

&c.

BEETHOVEN begins the Adagio of his sonata, G-Major, op. 34, No. 4, with a trill on the longer notes of the first and third measures to insure the sound duration, and he repeats this for the same reason with each repetition of the theme.

48. *Adagio grazioso.*

48. *Adagio grazioso.* *p* *tr*

The trill can be used, however, not only to increase the duration of the melody tone on the pianoforte, but also to produce a crescendo or diminuendo of the melody note thus embellished. This expedient is, however, but seldom and exceptionally made use of, because as the melody of the singing voice differs from the melody leading of the violin, violoncello, clarinet and other instruments, even by its smaller compass, so the pianoforte has its own peculiar pianoforte melody; if we can be permitted to thus designate the special character of the "cantilena" suitable for this instrument. The difficulty of "singing on the pianoforte", i. e., playing a melody beautiful and with proper expression, is lessened in two ways. The first and most common method is the intelligent use of the right pedal, which raises the damper and thereby helps to tie the melody notes. The second consists in adding octaves to the melody, provided the latter does not contain many short notes and the tempo is not too fast; this will give the melody a richer, more effective, beautiful and powerful character. Even in quick tempo it is not difficult to play the melody in octaves. We give the following passages of the fourth movement of BEETHOVEN'S sonata, op. 2, No. 4, the tempo being indicated "prestissimo": —

49.  &c.

50.  &c.

In BEETHOVEN'S sonata in F-minor, (op. 57), the second subject of the first movement is most effectively introduced as follows: —

51.

As a final illustration of a model pianoforte melody, par excellence, we give the well worked out Cantilena from CHOPIN's Concerto, (*E*-minor, op. 11), and we recommend to the pupil, in addition to the compositions of BEETHOVEN, MOZART and the Songs without Words of MENDELSSOHN, especially the works of CHOPIN, RUBINSTEIN, REINECKE, SAINT SAËNS and other younger composers who have shown a special preference for this instrument.

Allegro maestoso. ♩ = 126.
 52.

The musical score is written on seven staves in G major (one sharp). The notation includes various musical symbols such as notes, rests, slurs, and dynamic markings. The performance instructions are as follows:

- Staff 1: *con anima*, *cresc.*
- Staff 2: *con forza stretto*, *sf*
- Staff 3: *appassionato*, *fz*, *p*, *fz*, *p*
- Staff 4: *fz*, *legatiss.*, *stretto*, *fz*
- Staff 5: *f agitato*
- Staff 6: *cresc.*
- Staff 7: *stretto*, *riten.*, *&c.*

A melody such as illustrated in Ex. 52, must be played with due regard to the use of the right pedal, otherwise there will be a considerable loss in effectiveness. The indications for the use and discontinuance of the pedal are the signs "ped" and *. These indications are, however, frequently superficial and in many ways uncertain; many composers are satisfied with general remarks such as "con pedale", or "sempre pedale" or leave the use of the pedal

entirely to the "taste of the player". Sometimes every reference is omitted, although the employment of the pedal is absolutely necessary in most pianoforte compositions, thereby frequently occasioning a most dreadful misuse of the pedal, not only by amateurs who do not possess a knowledge of harmony, but even by so-called musicians who do not always keep in mind, the utmost clearness of rendition in the performance. The misuse of the right pedal occasions an indistinctness of the melody and confusion of the harmony. This evil could easily be remedied, if instead of the signs "ped." for the raising and * for the lowering of the damper, which are frequently not designated sufficiently often, the use of the pedal rhythmically determined, be indicated on a special line placed below the staff in each instance. Hereby the lack of knowledge on the part of the performer would be remedied and all arbitrariness effectually avoided. We will illustrate such a pedal indication in the following example: —

53a.

The musical score is for a piano piece, labeled 53a. It is written in 3/4 time with a key signature of three sharps (F#, C#, G#). The score consists of three systems. Each system features a grand staff (treble and bass clef) and a separate line below for pedal indications. The first system begins with a piano (p) dynamic. The second system continues the piece. The third system ends with '&c.' indicating the piece continues. The pedal line shows rhythmic patterns of vertical strokes and horizontal lines, indicating when to raise and lower the damper.

Until about the year 1840, the pianoforte had more than two, usually three pedals. In addition to the so-called loud pedal which raises the damper, the other two, placed at the left, were employed to thus displace the damper, that the hammers should strike but one or two of the strings respectively. Thereby the instrument became correspondingly softer and more delicate, and assumes even a somewhat mysterious character when but one string is employed in the production of each tone. BEETHOVEN, in the Adagio of his celebrated sonata for the Hammerclavier, *B*-major, op. 106, indicates the use of the three pedals by means of the terms "*una corda*", "*tutte le corde*", "*una corda, poco a poco due ed allora tutte le corde*".

Nowadays the pianoforte has usually but one pedal for weakening the sound, termed the "soft pedal" and its use is indicated by the terms "*una Corda*", "*mit Verschiebung*" or "*con sordino*", or when the use of both pedals is desired, by the term "*due pedale*". When the soft pedal is employed, although two of the three strings still sound for each note, beginning with the great octave; yet this suffices for the most delicate sound gradations as the player has it in his power to produce, even through the touch alone, a very soft pianissimo; and furthermore for the tones of the contra octave, there are but two (spun) strings of which only one can sound when the soft pedal is employed.

The use of the soft pedal should be most carefully indicated by the composer, especially should he indicate when and where the player should discontinue its use. Here also we frequently meet with the evil that the player unnecessarily makes use of the soft pedal in order to render a piano or pianissimo passage in a very delicate manner. The character of the sound of the pianoforte is altered too much by the use of the pedal to allow of its extensive use, and furthermore it is apt to render the instrument out of tune.

A good player will be able to produce, in a properly instrumented composition, all shades of tone, from the most delicate pianissimo to the most powerfully marked fortissimo, by means of the touch alone, and without the use of the pedal.

We will not omit, at this point, to call attention to the fact that the great manifestations of power on the pianoforte are produced not only by full chords, but through the doubling of staccato octaves with both hands.

Runs, such as the one indicated in Ex. 53^b possess on the pianoforte, an especially peculiar and very energetic sound effect:—

Henselt, Concerto, op. 46. Movement 1.

Allegro patetico.

VARIOUS FORMS OF MUSICAL COMPOSITION.

§ 9. The remarkable progress made during the past two centuries in the art of pianoforte making, has been accompanied by a corresponding development of artistic performance on this instrument. Nowadays we can justly expect from every good pianoforte player, that he be familiar with the classical literature for this instrument from BACH and HANDEL to the composers of our own time; and that he be able to perform in a smooth and correct manner all such compositions which do not require exceptional technical Virtuosity. One who is not a pianoforte player, can readily acquire a knowledge of such compositions as are capable of being rendered on this instrument; by a study of the works of the masters. There is ample opportunity to hear such works frequently, and well performed.

The pianoforte has the special advantage that it admits of a performance by two players at the same time, in compositions for four hands which renders possible a still greater fulness of sound and power. This is a considerable and very important advantage not only for original compositions, but also for arrangements of orchestral works for the piano. Such arrangements are frequently written for two pianofortes either for two players, four-handed or for four players eight-handed. However, there are also original compositions written for two pianofortes, four- and eight-handed; and even for three pianofortes and three performers, either with or without accompaniment.

In the pianoforte literature we will find almost all great composers represented with beautiful, valuable master-works from the little prelude to the great symphonically constructed sonata. The forms of these works remain the same in style of composition, whether for one or more instruments, for home, chamber, church, concert,

or opera music. It will, therefore, be advisable to consider them all together, explaining and analyzing each.

We have already spoken of the simple and extended song-forms in § 4 and § 5. We find the same again in the preludes of the "Wohltemperirte Clavier" of BACH, in the "Songs without Words" of MENDELSSOHN, in the "Nocturnes" of CHOPIN, in the many slow movements (Adagios and Andantes) of the pianoforte sonatas of CLEMENTI, HAYDN, MOZART and BEETHOVEN; as well as in the many smaller pianoforte compositions of recent times, which possess such titles as "Character-pieces, Fantasia, Romances, Impromptus, Melodies, Cavatinas, Bagatelles, Arabesques, Aquarelles etc." As the performance on the pianoforte is considerably less tiring than the rendering of a lengthy movement for voices without accompaniment, we will generally find the simple as well as the extended song-form, worked out more fully and carried to a greater length, in instrumental compositions than is the case in works for the voice, a capella. However, the form is essentially the same, whether the relations of the movements be greater or less.

In general we must guard against forming a too literal conception of the term "*form*". Definite and fitting accounts pertaining to "*Form*" cannot be given. What we understand in music under the technical term "*Form*", might be better expressed as the organic creation, the natural structure, or the development of a composition. This development however, we must not consider as logically necessary. As Nature creates according to the same principle, organisms of like species with many differences of detail; so the creative fancy of the composer, constructs compositions of the same form-kind with great variety in the musical details.

In addition to the above mentioned and explained simple and extended song-form, we might mention as the principal kinds of instrumental forms: the variation-form, the dance-form, the rondo-form, and the sonata-form.

An examination of the variation-form discloses two kinds. First, those variations which repeat the theme in the different parts, with only a different rhythm and changed movement, and with the same, or but slightly altered harmonic foundations, so that it is easily recognized through all the variations; secondly, those in which from the theme or a part of it, or even a single motive of the same, new pictures are constructed, differing considerably in melody, harmony and rhythm. We might designate this second kind as "symphonic variations".

Many kinds of etudes and preludes might in a certain sense, be termed variations on one and at times even on two different

motives. But we cannot consider such smaller compositions as denoting independent variation-forms.

After this brief allusion, we refer to the Author's "Treatise on Form" (Chapters 3, 4 and 6), for a further discussion of the variation-form, the dance-form and the rondo-form.

THE SONATA.

The Introduction to the Sonata.

§ 40. The form of the sonata has already been explained in the "Treatise on Form" in chaps. 7, 8, 9, 10, 11 and 12. The Author, however, considered it advisable to add the following to what was then said.

The greatest compositions, both as to intellectual tenor and extension, are written in the form of a sonata.

The sonata contains two, three or four movements of different character united in one whole composition. The first, and usually also the last movements, are similarly constructed in the form which is distinctively known as the sonata-form; we repeatedly find this form in compositions for chamber music and in the works for orchestra, *i. e.*, in the symphony and in the overture, extended more or less according to the means for rendering. At times, the movements both opening and closing, have a quiet, slow introduction, which serves as a sort of prelude. These introductions are closely related in construction, and serve to lead to the real principal movement, which is taken up in a lively tempo. In the sonatas of BEETHOVEN we find but three introductions of such character and form, *viz*; in the *eighth*, the *twenty-sixth*, and *thirty-second* sonatas.

The chord of the sixth beginning the sonata (op. 34, No. 2) and extending through two measures, and the Adagio cantabile of the sonata (*F#*-major, op. 78) extending through three and a half measures, cannot be regarded as introductory movements. In general, extended introductions are suitable only for movements of considerable range; and we therefore find them less frequently in sonatas for the pianoforte, than in chamber music, the orchestral symphony and particularly in the overture. One or the other motive of the principal movement can then appear in the introduction, and in a certain sense indicate the intellectual tenor of the movements which directly follow.

The First Division of the Movement.

The first movement of a sonata consists of three principal parts, to which is frequently added a lengthy extended coda. The first part of the movement contains the principal ideas and in such a manner that if the movement is written in a major key, the first subject which in every key will always appear in the tonic key and the second usually in the key of the dominant. If the movement is in a minor key the second subject will usually be written in the parallel major key. There are, however, numerous exceptions; thus, **BEETHOVEN** frequently has the second subject of a major movement take the major key a third higher than the first subject; as may be seen in the first movements of his sonatas (*G*-major, op. 34, No. 4 and *C*-major, op. 53), in the great overture to *Leonora* (No. 3.) and elsewhere. In the sonata for the "Hammerklavier" (*B* \flat -major, op. 106), as also in the trio for pianoforte, violin, violoncello (*B* \flat -major, op. 97) by **BEETHOVEN**, the second principal subject is written in the key of the minor third below; these are, however, exceptional cases. When the key of the first movement is minor, the second subject occasionally, also appears in the major key a major third below; less frequently in the minor key of the dominant, and only in exceptional cases in the major key of the dominant. At times we also find the second subject in the minor key, a minor third above (compare the first movement of the *Sonata Pathétique*).

The Transition to the Second Subject.

After the first idea has been completely expressed, a suitable transition leads us to the second subject. The manner in which the transition is accomplished can be varied. Usually a motive of the first subject is utilized as a continuation, though at times a new idea is made use of to form this intervening passage. In the latter case we might then consider the movements as consisting of three subjects, of which, however, this secondary theme interpolated between the first and second principal ideas, acts as a connecting link. **BEETHOVEN**, the greatest master, who has given us in the form of the sonata, the grandest art-works, and has never been excelled, either before or after his time, delights in constructing these connecting transition sentences in such a manner that they end with an organ-point on the dominant of the key in which the second subject is to enter. As proofs, we give the following passages from sonata movements by **BEETHOVEN**: —

Sonata, op. 2, No. 4, Movement I.

Allegro.

54.

Sonata, op. 2, No. 4, Movement IV.

Prestissimo.

55.

Sonata, op. 2, No. 2, Movement I.

Allegro vivace.

56.

p &c.

Sonata, op. 3, No. 2.

Allegro con brio.

57.

f *sf* &c.

Sonata, op. 7.

Allegro molto e con brio.

58.

&c.

Sonata, op. 40, No. 1.

59.

&c.

Sonata, op. 40, No. 2.

60.

Allegro.

sf

sf

sf

&c.

In a similar manner we find such organ-points on the dominant chord before the entrance of the second subject in the first move-

ments of BRETHOVEN's sonatas op. 13, op. 14 (No. 4 and 2), op. 22, op. 53, op. 57, op. 106; and in many other compositions of the same master, constructed in the first sonata-form. In such cases where BRETHOVEN does not precede the second subject with a greater or less organ-point on the dominant chord of the key, in which the second subject enters, he usually employs the above mentioned chord in a striking manner, so that we are led through the dominant chord into the key of the second subject, as is plainly seen in the following Exs. 61, 62, 63 and many others: —

Sonata, op. 10, No. 3, Movement I.

Presto

61.

ff

E: V₇ A: V₇

cresc.

I IV

3

&c.

I V I

Sonata, op. 28, Movement I.

Allegro.

62.

5

5

ff

E: V₇ A: V₇



Sonata, op. 34, No. 4.

Allegro vivace.

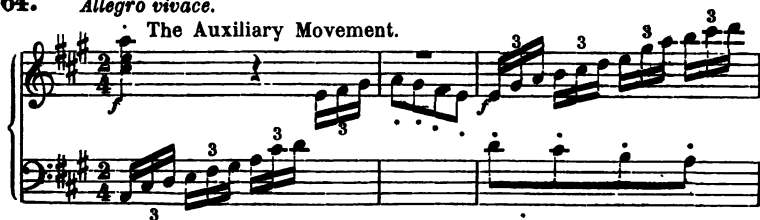


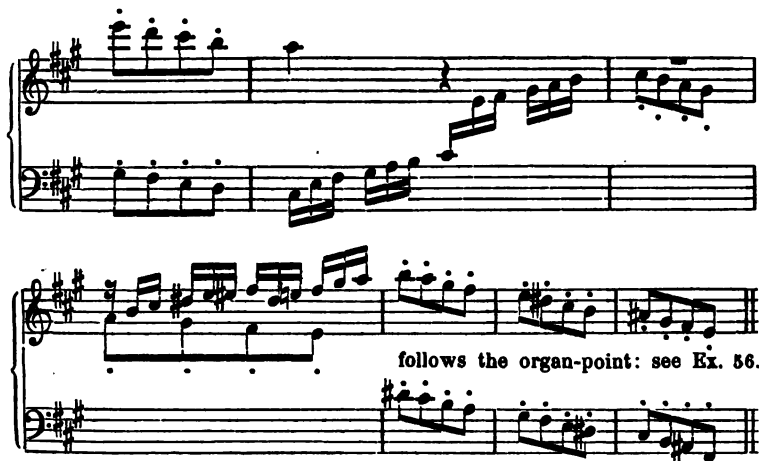
The Auxiliary Movement (The Episode).

§ 44. We have already referred above to the fact that the connecting link between the first subject and the second principal idea, can be an auxiliary sentence with an independent theme or a new motive. Such an Episode constructed from a motive foreign to the first subject and beginning in the key of the first theme, will be seen in the first movement of the sonata. (A-major, op. 2, No. 2). We illustrate its beginning in the following, Ex. 64. After six measures a transition occurs on the dominant chord of E major, and leads in the eleventh measure to the organ-point illustrated in Ex. 56, e. g: —

64. *Allegro vivace.*

The Auxiliary Movement.





In the sonata (*C*-minor, op. 40, No. 4), after a complete close of the first theme the auxiliary movement begins in the major key of a major third lower, and leads after a continuation of the following motive —



to the pedal-note on *B*, illustrated in Ex. 59.

In the *C*-major sonata (op. 2, No. 3) an episode with independent theme in *G*-minor enters in the twenty-seventh measure, and leads after sixteen bars to the pedal-note on *D* illustrated in Ex. 57. Then the second principal theme enters in *G*-major. In the *D*-major sonata (op. 40, No. 3) **BEETHOVEN** develops the first theme in twenty-two measures. After the pause in that measure, an episode with independent theme begins in the parallel minor key, of *B*-minor; which closing in *A*-major after thirty-one bars, leads to the second principal subject. The first movement of the *B*♭-major sonata (op. 22) illustrates after a long pedal-note on "*c*" beginning with the sixteenth measure; an episode from the twenty-second to the thirtieth measures in the key of the dominant. Thereafter, the same key is first taken by the second principal theme. In the *D*-major sonata (op. 28) we find the first subject developed in 39 measures; then in the fortieth measure, beginning with the motive illustrated in Ex. 66 —



an episode is introduced, which is extensively developed and later leads back to *A*-major (the dominant key) and introduces the second principal subject in this key. From the above mentioned examples the pupil will see that the episode, following the first subject and leading to the second principal idea can be constructed on a new motive, or contain a new theme, that it is short in length and usually in the key of the first or the second theme, or in a key closely related to one or the other.

The Second Subject.

The second subject is distinguished not only on account of the change of key and rhythm, but also on its character, even when it is constructed from a motive of the first subject, or retains such a motive either in the melody or in the accompaniment. On account of the intellectual relationship between these two subjects, a marked contrast must be avoided. In part, the homogeneousness of the two ideas will be necessitated by the same tempo. We must refer the pupil to the works of the classical masters where he will easily find the necessary instruction.

The Second Auxiliary Movement and the Coda.

After the second subject a second episode frequently follows, which, however, in its contents borders on some motive of the first subject or of the first episode. We compare here the introductory motive of the first movement of the *A*-major Sonata (op. 2, No. 2) with the motive of the second episode after the second subject: —

Motive of the first subject.



Motive of the second episode.



In the continuation this second episode is modelled after the first. At times the second Episode assumes even the character of the coda, as is the case in the first movement of the Sonatas (op. 53 and op. 57), by BEETHOVEN, *e. g.* —

Sonata, op. 53, Movement I, Episode.

Allegro con brio.

8va

decresc. cresc.

This system shows the first two measures of a musical piece. The treble clef staff is marked '8va' and contains a melodic line with a 'decresc.' (decrescendo) marking. The bass clef staff contains a supporting harmonic line. The key signature has two sharps (F# and C#).


This system contains measures 3 and 4. The treble clef staff continues the melodic line, and the bass clef staff continues the harmonic support. A 's' (sforzando) marking appears in the bass clef staff at the beginning of measure 4.

This system contains measures 5 and 6. The treble clef staff continues the melodic line, and the bass clef staff continues the harmonic support. A 'sf' (sforzando) marking appears in the bass clef staff at the beginning of measure 6.

8

This system contains measures 7 and 8. The treble clef staff continues the melodic line, and the bass clef staff continues the harmonic support. A measure rest is present in the bass clef staff at the beginning of measure 8.

This system contains measures 9 and 10. The treble clef staff continues the melodic line, and the bass clef staff continues the harmonic support. A 's' (sforzando) marking appears in the bass clef staff at the beginning of measure 10.

In the auxiliary movement (Ex. 68) we find only the chords of the complete principal cadence, the tonic, the sub-dominant, the chord of the fifth and sixth, the chord of the seventh of the second degree with altered third , and the dominant chord of *E*-major brought into use. This succession of chords gives the episode in question, the character of a first lengthy coda, to which a second shorter coda is added. This is also the case in the episode after the second subject in the first movement of BEETHOVEN'S Sonata op. 57: The latter of which begins in *A*-flat minor, *e. g.* —

69.

and leads after ten measures to the little four-measured coda, after which a partial close follows in the fifth measure. In this part of the sonata appears but one episode (as has already been stated above) after the second subject. Shorter sonata movements do not contain any episodes, *e. g.*, the first part of the sonata in *F*-minor, op. 2, No. 4, first movement; and likewise op. 79, first movement. The coda, however, which brings the part to a close, is indispensable. This always has the chord of the final cadence as a basis and repeats it. We refer here to all the final measures of the first parts of **BEETHOVEN's** Sonata movements. All contain repetitions of a motive, usually taken from a previous motive and its harmonies, and even the shortest sonatina movement cannot dispense with bringing the part to a close with a coda. Compare the final measures of the first part of the smaller sonatas of **BEETHOVEN** op. 2, No. 4; op. 49, Nos. 4 and 2; op. 78; op. 79; and op. 90. All these codas are substantially nothing more than variations of the principal final cadence.

By a careful examination of the first parts of **BEETHOVEN's** sonata movements, we will see that the master usually gives the first Theme very short and terse, and soon reaches the dominant chord of the key in which the second subject is to be written. Thereby, the first subdivision up to the second theme, that is, up to the entrance of said dominant chord, will always be shorter than the further continuation of the part to the close. In all cases, in the first part the material consisting only of themes and motives out of which the entire movement is to be constructed, is given with the utmost conciseness and brevity. Hereby, a lengthy departure from the principal keys of the two themes is impossible, and the modulation circle of the first part — with the exception of separate shorter deviations — is a very limited one. Any actual thematic work, *i. e.*, constructing new harmonic and melodic pictures from a theme or motive, is avoided and only occasionally in a restricted measure employed for the purpose of transition; contrapuntal developments of a motive are almost entirely lacking. The repetition of the entire first part is required in most cases; this is for the purpose of better impressing the thematic material of the movement on the hearer, than could be done with a single hearing.

The Second Part of the First Movement.

THE DEVELOPMENT.

§ 12. At the commencement of the second part or immediately thereafter, the key in which the first part has been brought to a close is abandoned; usually one of the principal themes or possibly

only one of its motives enters in a different key. Frequently, also the motive of the last coda is used as a connecting link. However, no matter from which portion of the first part the material for the development is taken, its purpose always is to form new figures out of the existing material. Therefore, in the development, it is by no means necessary to make use of all of the themes and motives contained in the first part. The actual thematic work can really be better expressed by a single characteristic motive, than through the employment of several themes and motives. It is, however, hardly possible to establish definite rules and laws; it must be left to the imagination of the composer to determine in each case how and wherewith he will construct the development, and what chain of modulations shall be formed from the themes, in order to connect later the repetition of the first part in the principal key.

The art-student well grounded in counterpoint and fugue knows that a large number of different formations can be constructed from a theme and one or two uniform constantly recurring counterpoints, according as one or the other voice carries the theme or the counterpoint and according as the key is changed from major to minor and *vice versa*, accordingly the change of keys of the same kind in contrapuntal phrases capable of being reversed three or four times, will give new combinations of the same material by exchange of the different voices. The confined limits which must be regarded in the strict style of the fugue must, however, not apply to the thematic construction of the *development*. Here the imagination of the creative mind has wider and freer play, and especially in compositions for the pianoforte we frequently find development movements in which contrapuntal combinations either do not occur at all, or only in a very limited degree. We may, therefore, accept a kind of thematic construction without contrapuntal combinations for the style of the free composition, and the pianoforte development especially necessitates limitations which do not occur in the combination of several or many instruments in chamber or orchestral music. Even though the technique of pianoforte playing has in recent times been highly cultivated and notwithstanding the high degree of finish and certainty of our artists and amateurs, it is not possible to overstep the limits set for this instrument. It is impossible to play on the pianoforte more than two independent voices with each hand; due regard must be paid that these two voices do not separate more than the distance of an octave, and even when this requirement is complied with, the performance of a strict four-part contrapuntal movement is a very difficult task. Although in the fugues of the "Wohltemperirte Clavier", by no means are all

the parts always employed, and BACH at all times pays the greatest regard to the practicability of performing; yet there are some exceptionally difficult pieces in this book. We might mention the three-part, C \sharp -minor Fugue (No. 4, Bk. 2), the four-part fugues in A-minor and B-minor (Nos. 20 and 24, Bk. 4) and other Fugues of like difficulty. In the two five-part fugues of the "Wohltemperirte Clavier", all the five parts move together in but few measures.

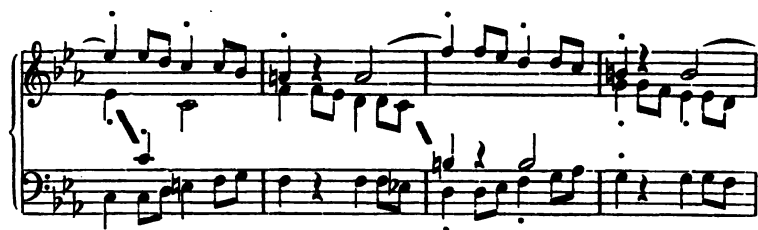
For the above mentioned reasons it can be easily explained that BEETHOVEN in his pianoforte sonatas employs contrapuntal combinations in the development-parts comparatively less than in other works where he had more suitable material. However, in almost all development-parts of the sonatas we find at least a few or several contrapuntal passages, and we illustrate but one of them in the following example, from the sonata for the Hammerklavier (B-major op. 106): —

Allegro.

70. *p* *sempre p*

cresc.

più cresc.



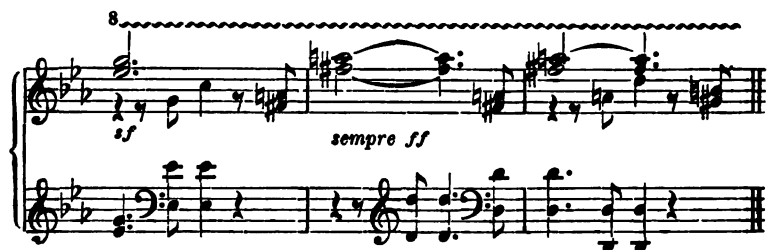




First system of musical notation. Treble and bass staves. Treble staff has a wavy line above it labeled "8va". Dynamics: *sf*, *sf*, *p*.



Second system of musical notation. Treble and bass staves. Treble staff has a wavy line above it labeled "8". Dynamics: *cresc.*, *sf*.



Third system of musical notation. Treble and bass staves. Treble staff has a wavy line above it labeled "8". Dynamics: *sf*, *sempre sf*.



Fourth system of musical notation. Treble and bass staves. Treble staff has a wavy line above it labeled "8".



Fifth system of musical notation. Treble and bass staves. Treble staff has a wavy line above it labeled "8". Dynamics: *dimin.*



First system of musical notation. The upper staff is in treble clef with a key signature of two sharps (F# and C#). It begins with a series of eighth notes, followed by a half note, and then a whole note. The lower staff is in bass clef and begins with a series of eighth notes, followed by a half note, and then a whole note. The tempo marking *a tempo* is placed above the upper staff. The dynamic marking *poco ritard.* is placed below the upper staff, and *p cantab.* is placed below the lower staff.



Second system of musical notation. The upper staff is in treble clef with a key signature of two sharps (F# and C#). It begins with a series of eighth notes, followed by a half note, and then a whole note. The lower staff is in bass clef and begins with a series of eighth notes, followed by a half note, and then a whole note. The tempo marking *a tempo* is placed above the upper staff. The dynamic marking *poco ritard.* is placed below the upper staff, and *p cantab.* is placed below the lower staff. The marking *espress.* is placed below the lower staff.



Third system of musical notation. The upper staff is in treble clef with a key signature of two sharps (F# and C#). It begins with a series of eighth notes, followed by a half note, and then a whole note. The lower staff is in bass clef and begins with a series of eighth notes, followed by a half note, and then a whole note. The tempo marking *a tempo* is placed above the upper staff. The dynamic marking *poco ritard.* is placed below the upper staff, and *p cantab.* is placed below the lower staff. The marking *espress.* is placed below the lower staff.



Fourth system of musical notation. The upper staff is in treble clef with a key signature of two sharps (F# and C#). It begins with a series of eighth notes, followed by a half note, and then a whole note. The lower staff is in bass clef and begins with a series of eighth notes, followed by a half note, and then a whole note. The tempo marking *a tempo* is placed above the upper staff. The dynamic marking *poco ritard.* is placed below the upper staff, and *p cantab.* is placed below the lower staff. The marking *espress.* is placed below the lower staff.



Fifth system of musical notation. The upper staff is in treble clef with a key signature of two sharps (F# and C#). It begins with a series of eighth notes, followed by a half note, and then a whole note. The lower staff is in bass clef and begins with a series of eighth notes, followed by a half note, and then a whole note. The tempo marking *a tempo* is placed above the upper staff. The dynamic marking *poco ritard.* is placed below the upper staff, and *p cantab.* is placed below the lower staff. The marking *espress.* is placed below the lower staff.



Repetition of the first part.



BEETHOVEN closes the first part, in the same key in which he has written the second theme, viz., in G-major. This is a principle which is carried out in most cases, however, in case the second theme is in a minor key the corresponding major key of the same note can be used for the coda and the close of the part, as is the case in the first part of the first movement of the "Sonata Pathétique". The reverse is seen in the close of the first part of the "Sonata Appassionata" (op. 57), in which the second theme in A♭-major is followed by the coda in A♭-minor and the part is brought to a close in this key.

In the sonata for the Hammerklavier illustrated above, after the close of the first part BEETHOVEN immediately changes the key and uses the first motive of two measures of the last coda of the first part, as an introduction to the actual development which we exhibit in Ex. 75. The latter consists principally of the thematic working out of the first motive of the first theme: —



After a powerful crescendo which attains its climax in measures 56, 57, 58, 59 and 60 BEETHOVEN introduces the second last codal-phrase of the first part with variations. Then (in measure 73 of Ex. 75) the first motive again appears and is employed during four measures in imitations. In the last ten measures only the rhythm of the beginning of the motive ♩ | ♩. is again employed with crescendo, as an introduction to the repetition of the first part.

From this the pupil will see that almost the entire development of this sonata movement is founded on the use of one motive. The characteristicness of a motive mostly consists more in its rhythmic than in its melodic construction. There are development parts in which the rhythm of a motive is employed almost exclusively, in order to construct new and different figures on the easily recognized rhythmic part of a theme as a foundation. A frequent change of the key is of great assistance; a continued remaining in the same key is not appropriate to the character of the development. The modulation through different keys should be accompanied by a gradual mounting toward a climax. Attention must further be paid to the tonic

key of the movement not being employed for any length of time in the development; it is more advisable not to introduce the tonic until the repetition of the first part. Many development parts end with a pedal-note on the dominant of the principal key before the re-entrance of the first theme in the repetition of the first part; such a pedal-note in which at first the entire motive and in the last four measures only a rhythmic part of the measures of the first theme is employed, is illustrated in the following examples. These are taken from BEETHOVEN's Sonata in C-major (op. 2, No. 3): —

Motive of the first theme.
Rhythmical part of same.

72.

Example 72 shows a piano (p) pedal point on the dominant (F) in the left hand. The right hand plays the first theme motive, which is a sequence of eighth notes: F4, G4, A4, B4, C5, B4, A4, G4, F4. The piece is in C major, 2/4 time.

73.

Example 73 shows a piano (p) pedal point on the dominant (F) in the left hand. The right hand plays the first theme motive, which is a sequence of eighth notes: F4, G4, A4, B4, C5, B4, A4, G4, F4. The piece is in C major, 2/4 time.

Example 74 shows a piano (p) pedal point on the dominant (F) in the left hand. The right hand plays the first theme motive, which is a sequence of eighth notes: F4, G4, A4, B4, C5, B4, A4, G4, F4. The piece is in C major, 2/4 time.

Example 75 shows a piano (p) pedal point on the dominant (F) in the left hand. The right hand plays the first theme motive, which is a sequence of eighth notes: F4, G4, A4, B4, C5, B4, A4, G4, F4. The piece is in C major, 2/4 time.



Whereas, according to the existing examples of the classical masters we can indicate for the first part a definite and almost exact series of modulations subject to but few and rare exceptions in the development part; this is only possible in so far, that at the end of the development a preparation for the return into the principal tonic key of the movement is necessary. The modulation circle of the development parts in BEETHOVEN's sonatas is considerably varied; the fantasy of the master was here given full sway. But one more point can be definitely stated, viz., that the development part always abounding in modulations, usually only begins in a different key or very soon moves into a different key, from the close of the first part and finally leads back to the tonic key of the entire movement.

Older masters were satisfied with development parts which were usually much shorter than the first part of the respective movements. BEETHOVEN to whom we are indebted for the complete structure of the symphonic forms, gives us in all of his works broader and better worked out development parts than are found in many works of his predecessors HAYDN, MOZART and others. However, nowhere in BEETHOVEN's works, notwithstanding the usually very short first parts, are the development parts extended in length beyond the preceding first part.

For the beginner, the development of the sonata movement contains greater difficulties than the analysis of the first part. We can here only recommend the conscientious study of the works of great masters; the more the pupil studies these works which we must consider as the revelations of the innermost being of music, the more will he little by little gradually become proficient to originate in the spirit of the masters, and according to his individual talent, to follow in the construction of similar movements. This by no means is intended to mean an anxious servile copying of the modulations of the relative lengths of the one or other development of one or more sonata movements.

Similarly as the first part must be organically constructed, so the development which is a continuation of the first part, must natur-

ally follow the latter, be constructed out of it and form the chain leading to the repetition of the first part. Therefore, under certain circumstances, proportionately longer developments can also follow a short first part and shorter developments follow a more extended beginning. At all times, however, even when it is held very short the first part will be broader than the development.

The Third Part of The Movement.

§ 43. Immediately following the development, in most cases the first theme in the tonic key is added; there are, however, cases in which the second subject is introduced at first immediately after the development in the tonic key, while the first subject appears later in the same key frequently curtailed, and occasionally it is entirely lacking. The latter, however, can then only occur when the first subject has been repeatedly brought into play in the development even though it be with alterations so that a further repetition in the tonic key would be unnecessary and tiresome.

Occasionally a curtailed repetition of the first subject after the development is sufficient. Also the transition to the second subject will frequently be given in briefer form than was the case in the first part. Thus, BEETHOVEN in his sonata (*E-flat major*, op. 7) has thirty-four measures in the first part before he reaches the organ-point exhibited in Ex. 58. In the repetition after the development he found only twenty-six measures necessary to reach the corresponding organ-point. The curtailing consists in the omission of the small episode illustrated in the following example.

74.



Then follows the second subject with fifty-one measures in its repetition after the development, instead of fifty-nine measures in the first part. From this the pupil will observe that less important episodes of the first part can be entirely omitted in the third part.

More marked is the curtailing in the first movement of the sonata (*G*-major, op. 34, No. 1), in which there are in the second part but twenty-four measures corresponding to sixty-five of the first part (from the beginning to the second theme). A similar relationship will be found in the first movement of the sonata in *D*-minor (op. 34, No. 2). More rarely are these parts lengthened; we might refer here to the sonata (*C*-major, op. 53) in which in the first movement the second subject is introduced in the first part after thirty-four measures, while in the third part it is only introduced after forty measures.

The repetition of the first episode before the second theme is given in different ways. In the major movements of the sonatas (op. 2, No. 3 and op. 22), the episodes which are given in the first parts in the key of the dominant, are repeated in the third in the key of the tonic. The first episode of the *C*-major sonata (op. 2) is changed from *G*-minor to *C*-minor. In the first part of the *B*-major sonata the first episode is in *F*-major and is repeated in the third part in *B*-major. Quite different is the *D*-major sonata (op. 40, No. 2); the first episode beginning in the parallel minor key (*B*-minor), is taken up in the third part in *E*-minor. The episode beginning in the major key a third below the tonic, as illustrated in Ex. 65, commences a tone lower in its repetition. In the sonata (op. 28) we have an episode beginning as follows: —



third below, when in the first part it was introduced in the parallel major key of the minor third above. If the second subject of a minor movement appears in the first part in the minor key of the dominant, it will invariably be repeated in the third part in the minor key of the tonic. Thus, compare the first movements of the sonatas (*D*-minor, op. 34, No. 2 and *E*-minor, op. 90) of BEETHOVEN.

The Auxiliary Episode, The Small Coda of the Part and the Well Worked Out Great Coda of the Movement.

§ 44. In shorter sonata or sonatina movements there is frequently no episode after the second subject; the coda of the part follows close upon the end of the subject. We have already mentioned above (page 69) that the little coda really contains nothing more than two or more repetitions of the closing cadence constructed more or less completely either only with the dominant and tonic chords or with the chords of the second (or fourth), fifth and first degrees, to whose support occasionally other chords are added which, however, always return to altered variations of the chord of the second degree. (See Treatise on Harmony Chaps. 22 § 68 Ex. 378.) To present this more clearly we exhibit second part-codas from BEETHOVEN's sonatas.

Sonata, op. 49, No. 1.

Andante.

77.

Bb: I V₇ I V₇ V₇ I

Sonata, op. 49, No. 2.

Allegro, ma non troppo.

78.

D: I V₇ I V₇

I V₇ I V₇ I

Sonata, op. 34, No. 4.

Allegro vivace.

79.

b: I V₇ I V₇ I

cresc. p

V₇ I V₇ I V₇ I V₇ I

The above three examples exhibit the harmonies of the dominant and the tonic. In Ex. 79 we notice a peculiar characteristic of BERTHOVEN in the quick change from minor, major and minor of the same pitch. In Ex. 80 we find a part-coda constructed on the chords of the first, fourth, first and fifth degrees.

Sonata, op. 57.

Allegro assai.

80.

ab: I IV I sfp V₇

Three systems of musical notation for a piano piece. Each system consists of a treble and bass staff. The first two systems have a wavy line above the treble staff with the number '8'. The first system has a *sf p* dynamic marking in the bass staff. The second system has an *sf p* dynamic marking in the bass staff. The third system has a *p* dynamic marking in the bass staff. Chord symbols I, IV, I, and V₇ are written below the bass staff in the first two systems.

The first movement of the *B*-major sonata exhibits a part-coda formed by adding other chords to complete the principal cadence; but here also in the last five measures the change of dominant and tonic chords is employed to strengthen as much as possible, the close of the part.

Sonata, op. 406.

Allegro.

Musical notation for a piano piece, starting at measure 81. It shows a treble and bass staff. The treble staff has a wavy line above it with the number '81'. The bass staff has a *p* dynamic marking. Chord symbols C: V₇, a: V₇, I, V₇, and I are written below the bass staff.

80. *cresc.* *f* *sf*

D: V₇ G: V₇ I V₇ I V₇ I V

I I

We particularly call your attention here to the fact that the little coda of the first part must invariably be transposed in the third part to the corresponding key; this also occurs when a lengthening of the close is added, either through some additional measures or by means of a well worked out coda.

In many cases the episode following the second subject and preceding the small coda will bear a codal character. For this purpose we illustrate the beginnings of several such episodes which the pupil can more thoroughly examine in the sonatas of BEETHOVEN. These episodes usually move on the chords of a well worked out principal cadence.

Sonata, op. 7, Movement I.

Allegro molto e con brio.

82. *sf* *sf* &c.

Sonata, op. 12, Movement I.

Allegro molto e con brio.

83. *p* *p* &c.

Sonata, op. 57, Movement I.

Allegro assai.

84.

&c.

Should still a third smaller episode follow the second, as is the case in the sonatas op. 7 and op. 13, this latter will also bear and usually still more mark the character of a coda. All such episodes of the first part are repeated with corresponding transposition in the third part. When there are two episodes, their repetition and the *small coda*, will be sufficient for the complete close of the movement, as we find numerous examples of the same in the shorter sonata movements of the older masters (and even in BEETHOVEN, sonata, op. 22, *first movement*). In most cases, the *small coda* is given a slightly lengthened close in the third part, even if only by a few additional measures, as we can see in BEETHOVEN's sonatas op. 49 Nos. 1 and 2, op. 78 and op. 90.

The older masters frequently indicate a repetition of the parts before the development. BEETHOVEN also does this in the first movement of the sonata, op. 78. This repetition was probably advisable for the shorter forms of former times. However, since the acquisition of the extended well worked out final coda of the movement by BEETHOVEN, such a repetition has become unnecessary.

The final coda can be of three kinds, namely: first, — as a motive of the movement once more introduced in brief form and quicker tempo (*stretto*), with a further small coda added, as is the case in BEETHOVEN's sonata (op. 57); second, — as a new independent idea, as in the final movement of the above mentioned sonata; and third, — it can be in the nature of a second, small development added to the third part, as we see in the first movement of the sonata op. 53. Such well extended codas, provided with a second smaller development, make a repetition of the second and third parts unneces-

sary, in fact they form a fourth part and thus complete the close of the first, or more especially of the last movement of a more extended composition; and moreover, we find them not only in Finales, which have the form of a sonata movement, but also in Rondos and in greater *variation movements*, as well as in other broadly carried out slow movements, whether written in extended "song-form", in "sonata-form", or with alternative middle movement. Even smaller Dance-Forms, such as 'Minuets', 'Scherzos' and 'Marches' frequently contain according to their proportions, a smaller or greater coda-part, as has already been remarked above. We might mention here the small coda-parts of the minuets in BEETHOVEN's sonatas (op. 44, No. 4 and op. 34, No. 3); also the codal passages added in the fifth variation of the sonata (op. 26), the 'Funeral March' and final movement of the same sonata, also the coda of the march in the music of the "Midsummer Night's Dream" by MENDELSSOHN, and the magnificent coda of the Funeral March in BEETHOVEN's "Heroic Symphony".

THE NUMBER AND ORDER OF THE MOVEMENTS IN THE SONATA.

§ 45. In general we understand by the term 'sonata' to be a musical composition, written in three or four movements, of which at least one, usually the first, is carried out in the above explained Sonata-Form. Usually this is followed by an Adagio or Andante movement in extended song-form, or in the form of variations. When the sonata contains but three movements, the closing movement follows in a lively tempo such as *allegretto* or *allegro*, in the form of an extended Rondo, or the form of the first movement. In sonatas of four movements, a Minuet or Scherzo in quick time is added, either before or after the slow movement. We notice, however, a great difference both as to the number and order of the movements in the sonatas of BEETHOVEN and other masters. BEETHOVEN has sonatas in but two movements, op. 49, Nos. 1 and 2; op. 54, 78, 90 and op. 441. Most of his sonatas contain three movements, of which, however, the *Adagio molto* in the C-major sonata (op. 53) appears as a well carried out introduction to the following Rondo, which is closely joined to it and is taken up at once, after the *Adagio molto*, without bringing the latter to a close, as is indicated by the direction "*Attaca subito il Rondo*" at the end of the introduction. Thus, this sonata can also be classed among those of two movements.

The first movement must not always be written in the sonata-form. BEETHOVEN's C#-minor sonata (op. 27, No. 2) with the special

prefix "*Sonata quasi una Fantasia*", begins with *adagio sostenuto* in song-form. The A \flat -major sonata (op. 26) begins with the "*Andante con Variazioni*" and appears thereafter neither in the first nor in the following three movements in the real form of a *sonata movement*. Also in the final movements, BEETHOVEN exhibits a variety of forms. Rondos, movements in sonata-form, extended great variation movements (see op. 409 and 444), and fugue movements (op. 404, 406 and 440) form the final movements of different sonatas. MOSCHELES even gives a single sonata movement the title "*Sonate mélancolique*". Also in *chamber music* and *symphonic orchestral compositions*, written usually in four and sometimes in three movements, we find dissimilarity. Regarding the Variation-Form, we only call attention here to the final movement of BEETHOVEN's 'Heroic Symphony'. In general the sonata for the pianoforte alone, or for piano and violin or violoncello, we accept as consisting of three movements. Also trios for piano, violin and violoncello contain frequently but three movements; whereas, string quartets, quintets and other *chamber compositions*, as well as symphonies are usually written in four movements, and the Finale almost invariably appears in the great form of the first sonata movement. The Concert Overture usually contains — after an extended introduction — a well worked out first sonata movement, with an extended coda. The Opera Overtures are also partly written in this form, frequently they merely consist of a Potpourri, composed of the melodies occurring in the opera occasionally they are in the form of a "Phantasia", in which movements consisting of themes from the opera and free movements are alternately introduced. Many operas, particularly the later ones, have no overture, but give instead a shorter Prelude in the form of Entre-Acte music. RICHARD WAGNER gives to his later operas, well worked out extended Preludes ("Vorspiele") in song-form, of which we might mention as among the most beautiful and tuneful, the Prelude to "Lohengrin" and also the one to "Tristan and Isolde".

The Concertos for pianoforte, violin, violoncello, or for other instruments, mostly contain, the same as the sonata, three greater movements, of which the slow middle movement, usually the shorter, is frequently written in close connection with the Finale. The first movement usually begins with a part for the orchestra alone; in such case it contains the essential material of the first movement, *i. e.*, the principal themes in brief form. Frequently both themes are in the key of the tonic; then, with the entrance of the solo instrument, a movement is begun in the usual form of the sonata movement, in which, however, the repetition of the first part must be omitted, inasmuch as the first "Solo" is an extended and varied

repetition of the first "Tutti". Later concertos frequently give the first movement, without the preceding extended "Tutti", and with a short prelude, as MENDELSSOHN'S "pianoforte concerto", or without any prelude as the "Violin Concerto" of the same master. Other concertos exhibit the form of a "Fantasia", as the "Concertstück" of WEBER.

The compositions known under the title "Suite" consist of a succession of movements in different forms, such as the prelude and fugue, the aria in song-form, earlier and later dances, as *e. g.*, sara-bande, gavotte, minuet, scherzo, and gigue; and sometimes even variation movements are contained therein.

The "Serenade" contains principally symphonic movements and differs little from the symphony. As the latter can be considered as an extended sonata of four movements for orchestra, so the serenade in the same form can be considered chamber music for more instruments or as a concert-piece for orchestra. The pupil will find more ample explanations concerning the foundation and structure of musical compositions in the Author's text-book, "The Form in Musical Composition". Here, however, as in all other discipline pertaining to the technic of musical composition, the careful and thorough study of the works of classical masters will give the best instruction.

THE PIANOFORTE AS AN ACCOMPANYING INSTRUMENT TO THE VOICE.

§ 46. The pianoforte is adapted more than any other instrument to the accompaniment of one or more voices, not only inasmuch as it can always give the single voice the full harmony as a foundation, but also because it can add character description by means of various figured tone-pictures, and thus greatly aid in the tone effect and expression of the composition. The rush of the water, the whistling of the wind, the roar of the storm, the stir of the spinning wheel, the clatter of the mill, the soft murmur of the waves, the rock of the cradle, the trot of the horse and many other sounds can be called to mind by the accompaniment of the pianoforte. We need here only refer to the accompaniment of the "Erlking" by SCHUBERT, the "Songs of the Mill", the "Winter's Journey", the "Swan Song" and many other songs and melodies of the same master, such as "Gretchen at the Spinning Wheel" and others. We cannot pass on, however, without exhibiting in the following examples a number of song passages with particularly characteristic accompaniment:

Suleika.

85.

Rather lively.

Franz Schubert, Op. 44.

Voice.

-Pianoforte.

The musical score is written for voice and piano. The key signature has one sharp (F#), and the time signature is 3/4. The tempo is marked 'Rather lively.' The piece is by Franz Schubert, Op. 44, No. 85.

The score consists of three systems. The first system shows the beginning of the piano accompaniment in the bass clef, marked *pp* (pianissimo). The voice part is shown in the treble clef with a whole rest.

The second system continues the piano accompaniment, which is marked *pp* and *sempre legato*. The voice part enters with the first line of the lyrics: 'Was be - deu - tet die Be - we - gung?'.

The third system continues the piano accompaniment and the voice part. The lyrics continue: 'bringt der Ost mir fro - he Kun - de? &c.' The piano accompaniment features a steady eighth-note pattern in the right hand and a more complex bass line.

The Trout. (Die Forelle.)

86.

Rather lively.

Fr. Schubert.

Voice.



In ei - nem Bächlein hel - le, da

Pianoforte.



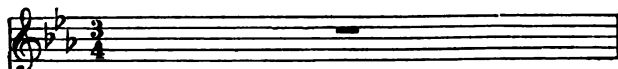
schoss in fro - her Eil' die lau - ni - sche Fo -

rel - le vor - ü - ber wie ein Pfeil. &c.

From the song "The City" (Die Stadt) No. 44 of the "Swan Song" of SCHUBERT.

87.

Voice.



Pianoforte.



Ein feuchter Windzug kräuselt die grau-e Wasser-bahn &c.

"Love's Message" (Liebesbotschaft) from the "Swan Song" of SCHUBERT.

88. Andante.

Voice.

Rauschendes Bächlein, so sil - bern und hell;

Pianoforte.

pp &c.

"Departure" (Abschied) from the "Swan Song" of SCHUBERT.

89. Allegro moderato.

Voice.

Pianoforte.

A - de! du

mun-te-re fröh-li-che Stadt! &c.

"Wandering" (Das Wandern) from "The Beautiful Miller's Wife" (Die schöne Müllerin) of SCHUBERT.

Allegro moderato.

90.

Voice.

Das

mf

Pianoforte.

Wandern ist des Müllers Lust, das Wan - dern,

p *mf* &c.

The musical score is for a piano accompaniment of a song. It features three staves. The top staff is a single melodic line in treble clef. The middle and bottom staves are grouped together by a brace on the left, indicating a piano accompaniment. The middle staff is in bass clef and contains a continuous eighth-note pattern. The bottom staff is also in bass clef and contains a simpler eighth-note pattern. Dynamics markings include *p* (piano) and *mf* (mezzo-forte). The notation includes various musical symbols such as notes, rests, and bar lines.

How aptly is the question of Suleika, the arrow swift rush of the moody trout, the moist draught of air, the murmuring ripples of the silvery clear, rushing brook, the gay trot of the lusty pony, and the light tread of the wandering miller, illustrated. How many different descriptive accompaniments, we find in the songs of SCHUBERT, WEBER, MOZART, BEETHOVEN, MENDELSSOHN, SCHUMANN, BRAHMS, FRANZ, REINECKE, in the Ballads of LOEWE and in many well known songs of BRUCH, RUBINSTEIN and other later masters! All this is only made possible by the enormous wealth of figures and passages, which can easily be rendered on the pianoforte.

To all these advantages which the pianoforte possesses, as an accompanying instrument, to a greater degree than other instruments, it has the further advantage of being able to give better than the organ, all sound gradations, especially the transitions from pianissimo, crescendo, forte, fortissimo and diminuendo, in accompanying duets, trios, quartets and choruses, at the same time with the voices and thus sustain their intonation. In later times we find even pianoforte accompaniments for four hands; also obligato instruments such as the violin, violoncello, clarinet and others can be added to the pianoforte accompaniment. Thus in many cases the pianoforte proves itself to be the most complete and useful instrument.

CHAPTER III.

COMPOSITION FOR THE ORGAN (Ital. Organo).

Description of the Instrument.

§ 17. The organ is an instrument composed of a great number of metal and wooden pipes; a number of which are exterior and are visible to the eye, while the majority are contained within, and are invisible. The material of the outer pipes is English tin; their tasteful and symmetrical arrangement is an ornament to the organ. Some, and occasionally many of these pipes serve only as an ornament to the front side — “the prospect” — of the organ; all visible (exterior) pipes are therefore, called “prospect-pipes”. Through the vibration of the air in the pipe, the tone is produced. The air passes from the wind-chest into the pipes; by means of stops, called “registers”, the flow of air into the rows of pipes is opened and shut off. The depth, and height of the tone is respectively dependent upon the length and shortness of the pipe. The separate rows of pipes, differing according to their pitch and tone-color are called “voices”.

The compass of the organ differs according to the number of pipes; larger organs exhibit a compass of more than eight octaves. The highest, however, as well as the lowest tones, can never be used alone, but only in combination with other octave tones not situated at the outer limits of the instrument.

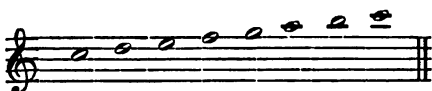
The player places the entire complicated mechanism of this gigantic instrument into motion by merely pressing down the keys. These keys are arranged chromatically on the key-board; the organ, however, possesses several key-boards; the two or three of which (also known as “manuals”) — in the case of very large organs also four — are situated one above the other and are played with the hands. At the feet of the performer is another key-board consisting of broad wooden keys, which are played with the feet and are commonly known as “the pedal”. Each manual exhibits a row of keys almost four and a half octaves in extent, from great octave *C* to three-lined $\overset{=}{f}$ or $\overset{=}{g}$, with all the intermediate chromatic intervals. The manuals of the older organs, extended only to three-lined $\overset{=}{d}$, or perhaps only to three-lined $\overset{=}{c}$. The pedal-keys extend from great octave *C* to one-lined \bar{c} or \bar{d} , and in the latest organs advantageously to one or two notes higher till “*f*”. By means of these key-boards,

all tones of the organ, the high as well as the low, can be employed to produce the many different qualities of tone of the various stops ("registers"). The stops (voices) are distributed among the different manuals; the first manual called the "principle manual" (*i. e.*, great organ) always possesses the largest number.

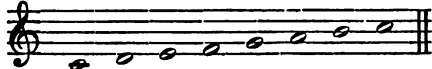
The pitch of every organ is that of an 8-foot instrument, in which all tones are of their natural pitch, *i. e.*, they sound as written. The term 8-foot tone is derived from the fact that a pipe which gives the great octave *C* is an open pipe 8 feet long. There are, however, in the organ also *sixteen feet* stops (stops in this case is used for pipe, as each stop connects one and the same pipe to every key of the manual), the tones of which sound an octave lower than written; the *four feet* stops, which sound notes an octave higher than those of *eight feet*; *two feet* and *one foot* stops which sound notes respectively two and three octaves higher than written. The *thirty-two feet* stops of larger organs produce tones two octaves below the eight feet *foundation stops* (*i. e.*, these stops which are only used with the "pedal keys", — which originally sound an octave lower than standing or as 16-foot tones — render them one octave lower, or as 32-foot tones). We illustrate this with the following (Ex. 91) scale: —

91.

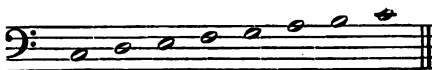
4-foot tone:



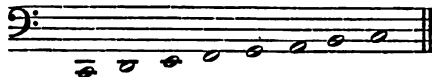
2-foot tone:



4-feet tone:



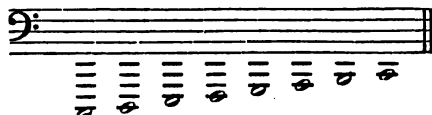
8-foot tone:



16-foot tone:



32-feet tone:

8^{va} bassa - - - - -

The thirty-two feet stops do not occur in the manuals; the pedal-board whose natural pitch is that of the 16-feet tone, possesses also the 8- and 4-feet stops. From this, the extraordinary wealth of tone and compass of the organ is easily accounted for. The more of the high and low registers that are drawn, all the more sounds the tones of the different octaves simultaneously. By the expression "full organ", we cause all the octaves of the instrument to sound at the same time. The manuals can be connected by means of "couplers", which cause all the ranks of the organ to sound simultaneously. The touch, which in most organs (especially in older instruments) is considerably heavier than on the piano-forte, is rendered still more heavy in accordance with the number of manuals coupled.

The pipes of the organ are divided into two principal classes, namely; *flue-pipes* and *reed-pipes*. The sound of the two different pipes is entirely different. That of the former is open and clear; that of the latter, sharper and a trifle rattling in tone. The flue-stops have also pipes which are closed at the top; thereby forcing the current of air back from the top, and naturally, by transversing the pipe twice, produces a tone one octave lower than the tone produced by an open pipe of the same length. Such pipes closed at the top are called "stopped pipes". The stopper is a well fitting leather-lined cover. By lowering the stopper the pipe can be tuned higher, and inversely by raising the same, it can be purely tuned lower. The stopped pipes produce a softer, more mellow, and in the lower octaves, a duller tone than that of the open pipe. We have stopped pipes of both wood and metal.

There are also half-closed pipes, in whose stopper a small pipe is placed; thereby allowing a part of the air column to escape at the top, and at the same time forcing back the greater part. The various different tone-colors of the stops arise from the different kinds of material, as well as from the different shapes and sizes of the pipes. These imitate more or less perfectly the sound of ancient and modern instruments (least of all the horn); there are also stops termed "*vox humana*" and "*vox angelica*". We will venture no opinion, however, as to the degree in which they answer their purpose or approach, even approximately a beautiful human singing voice.

Just as the number of stops differ according to the size of the instrument we also find that in different countries the stops have entirely different names, and frequently when possessing the same name, their character of tone is entirely different; therefore, we will omit the names of the possible stops of which there are sometimes

in the large organ, one hundred or more. The most important stops are the "principals"; that of the first (great-) manual has a strong open tone; that of the second weaker, and of the third manual more mellow.

There are principals of sixteen-, eight-, four- and even two-feet; in the pedal we also find a sixteen-, and occasionally a thirty-two feet principal.

The principals such as "flute", "Rohrflöte" and "bourdon", belong to the flute stops; some of which are open, some (as the "Rohrflöte") half-stopped, and some (as the "double-flute") full-stopped. Of the "stopped" we name the "bourdon", which almost always stands as a 16-foot tone the same as the "sub-bass" and the quint, the last named of which (Quintatön in German), on account of its peculiarity, can only be employed in combination with many other foundation stops, in such a way, that the perfect fifth is covered. This stop gives (sounding faintly) the twelfth, and belongs to the so-called "mutation stops": the "mixtures" (compound stops) are those stops which simultaneously give one or more tones, as the octave, or fifth, or the full major triad with perfect fifth and major third, as *e. g.*, the "Cornet" and other stops. All these intermediate tones are not actually audible, and the above mentioned stops which contain these tones can only be employed in combination with a sufficient number of covered foundation stops. As the intelligent employment of the pedals on the pianoforte does not injure the purity of the harmony, but gives to the instrument a stronger, fuller and more brilliant tone; so the "mixtures" serve for strengthening and ennobling the tone of the organ.

Of special characteristic mild tone, are those stops which we find in most organ works, even in the smaller, known as "Salicet" or "Salcional", "Viol da Gamba", "Gemshorn" and "Viola"; the last named of which is but seldom present. Each of these stops exist in different sizes, such as 8-foot and 4-foot, "Salicet" in the pedal exists also as a 16-foot stop. All the above mentioned stops are flue-stops.

Of the reed-stops we name as the most important, those of 8-foot, as the "Trumpet", the "Hautboy" and the "Clarinet" (the last occasionally also as a 4-foot tone) in the manual; and the "Fagotto", „Posaune" and "Trumpet" of the pedal.

A small organ which is provided with two manuals and a pedal, possesses generally the following ten stops: in the first manual ("Great Organ") a principal (8-foot), octave (4-foot), quint (2-foot 8 inches), gedackt (8-foot), octave (2-foot); in the second manual ("Swell Organ"), flute (8-foot), salicet or viola di gamba (8-foot), and Spitzflöte (4-foot).

To these are also the pedal sub-bass (16-feet) and octave bass (8-feet), with pedal and manual coupler.

The largest organs have from 35, 45, 48, 55, 60, 74, 84, 85, 95, and in some of the very largest organs still more different stops; among these we find several characteristic stops, *e. g.*, the *echo stops*, the pipes of which are enclosed in a box in the interior of the organ, producing a tone which sounds as though it comes from a great distance. The more different stops which are simultaneously combined with one another, produce all the more of a mixture and blend together in the general solemn and rich characteristic organ-tone, in such a manner, that the separate stops lose their special tone-color.

Formerly, the organ was mostly only to be found in the church, and only occasionally in exceptional cases, smaller organs were found in the house; but to-day we possess many large concert-hall organs which are used as well for the accompaniment of religious choruses, as for solo purposes. Leipzig has three concert-halls provided with beautiful and likewise excellent organs; on these organs we can admire a number of ingenious inventions. To enter into details regarding this here, would lead us too far, and moreover, exceed the limits of a text-book; we can only present to the art-student, in concise form, such a knowledge of the organ as is absolutely necessary.

Instructions regarding the construction and mechanism of the organ, we find in many excellent books, such as: WILHELM SCHNEIDER's "The Organ stops, their origin &c.", BECKER's "Advice for Organists", SEIDEL's "The Organ and its Construction", DIEMLING, "Description of the Construction of the Organ", FISCHER, "Care of the Organ", KÜTZING, "A Practical and Theoretical Manual of the Architecture of the Organ", WILKE, "Materials for the History of Modern Organ Architecture", TÖFFER, "The Organ &c.", and the excellent Catechisms of the Organ by E. F. RICHTER and Dr. HUGO RIEMANN. By all means we will always do best when we allow an organist to explain to us who is fully familiar with the construction of the organ and all its contrivances. We will then by the proper observation, obtain in a shorter time, a more accurate knowledge of the instrument, in a clearer, better, and surer manner, than is possible in any other way.

THE TECHNIQUE OF ORGAN-PLAYING.

§ 18. The practising of the organ requires genuine musical talent, a copious knowledge, and a fundamental preparatory schooling of an extraordinary high degree. A good organist must be

thoroughly familiar with the technique of pianoforte-playing and must possess a complete knowledge of the pure writing in all contrapuntal art-forms and compositions. He must have such accurate knowledge of his instrument, the number and quality of the stops, as will give him the ability to employ ("registration") the same, as every composition demands. By the expression "registration" we understand to be the grouping of stops of different timbres and tone-power, and this method of instrumentation on the organ, requires in no limited degree, delicacy of feeling and good taste, as well as a correct understanding of the execution of musical compositions. As the compositions for the organ only occasionally and older classical pieces hardly ever contain accurate instructions regarding the registration, which could only be indicated in general, owing to the heterogeneousness of the construction; the organists fell into the habit of changing the stops during the movement of a composition. Not seldom must the organist avail himself of an experienced assistant, who receives sufficient instructions from him before the performance, to close and open the different registers (stops) at the proper time.

As the keys of the manual (especially by old organs) must be pressed lower than those of the pianoforte key-board, and moreover as it is more difficult to play when several manuals are connected with one another by coupling; therefore, it is necessary that the organist should have great finger strength, *i. e.*, an exact development of each single finger is necessary; moreover, he must always endeavor to play with the greatest possible neatness, for the tone of the organ remains equal in strength as long as the keys are pressed down, so the least uncertainty in playing easily disturbs the purity of the leading of the voices, injures the harmony and under certain circumstances produce intolerable dissonances. He must, therefore, even in the strictest *legatissimo*, permit a most accurate withdrawal of the finger. Rapid passages, trills and other embellishments require much more skill on the organ than on the pianoforte. In addition to this the performer is not only occupied with his hands on the manual, but especially with his feet simultaneously on the pedal key-board. Moreover, in the organ trio, he has each hand on a separate key-board (manual) performing a special part; the player is then employing three different key-boards, two manuals and the pedal.

The management of the pedal requires moreover, the movement of the upper part of the body, when the feet are employed at the outer extremities of the pedal. But all this should not injure the tranquillity and certainty of the performance.

The fingering of the organ is the same as on the pianoforte; with the pedal we employ the toe and heel of the foot. Both feet must (sometimes even with rapid passages and sudden skips) participate in the performance in such a manner, that the player can move the feet continually, without looking to find the pedals. The easiest exercise for the pedal is the sustained tone of a long organ-point; a trifle more difficult is the leading of the bass in compositions of moderate time. Figures in which a foot retains one and the same tone, are much easier to execute than those in which the feet must advance.

In very difficult figures of rapid time, we will always do best when we allow the manuals to pause. The pedal of course is always only one voice, and contains the bass; this can, however, occasionally also be led by both feet in octaves; and now and then, for a short time, two different parts can be given by the pedal, as is illustrated in the end of the following prelude to BACH's fugue in *D*-major: —

92. *Adagio.*

Manuals.

Pedal.

The image displays three systems of musical notation, likely for an organ. Each system consists of three staves: a top treble staff, a middle bass staff, and a bottom bass staff. The key signature is one sharp (F#), and the time signature is 4/4. The first system shows a melodic line in the top staff with a slur over the first two measures, and a more active bass line in the bottom staff. The second system features a more complex melodic line in the top staff with many beamed sixteenth notes, while the middle and bottom staves have simpler accompaniment. The third system continues the melodic development in the top staff, with the bottom staff showing a final melodic phrase. Dynamic markings include a 'p' (piano) in the bottom staff of the third system.

For the instruction of the pupil we now give a passage from BACH's composition for the organ, which is partly easy and partly difficult:

93.
Cembalo
ossia Organo.

Pedal.

The above beginning of the Passacaglia repeats the basso ostinato (*i. e.*, any set phrase adhered to in the bass part) to the upper voices, five times in the pedal. Then it appears with the following rhythmical alterations, which are not difficult to execute.

94.



Thereafter, the pedal repeats the bass three times in the first manner, to the different variations in the upper voices. Likewise, the rhythmical variations which directly follow, offer no special difficulties: —



Pedal.



Incomparably more difficult is the pedal part, which to the *cantus firmus* led by the soprano, gives in the course of the movement, a bass on the pedal, of the following figures, which are repeated in the upper voices.



Pedal.



Of course, the composer must always have a certain consideration for the practicability of the figures which he gives to the pedal; while in very difficult passages of the bass, it is best that the upper parts have either sustained notes or pauses. We take the following extract from the prelude of BACH's *A-minor* fugue: —

97.

Manuals.

Pedal.





In the following quotations we still give some passages from the works of BACH, wherewith the scholar may become a little familiar with the technique of organ-playing and see what kind of pedal passages and figures we can require of the performer. The following (Ex. 98) is from the beginning of the prelude to fugue No. 17, C-major: —

98.

Manuals.

Pedal.

A musical score for the song 'The Rose Tree'. It consists of three staves. The top two staves are for the vocal melody, with the first staff in treble clef and the second in bass clef. The bottom staff is for the piano accompaniment, in bass clef. The melody is a simple, folk-like tune. The piano part features a rhythmic pattern of eighth notes and sixteenth notes, with a prominent bass line. The score is written in a simple, clear style, suitable for a children's songbook.

[illegible]

A musical score for three voices: Soprano, Alto, and Bass. The music is written on three staves. The Soprano staff has a treble clef and a key signature of one sharp (F#). The Alto and Bass staves have bass clefs and the same key signature. The melody is simple and folk-like, consisting of eighth and quarter notes. The lyrics are printed below each staff, aligned with the corresponding notes. The piece ends with a double bar line and repeat dots.

A musical score for the song 'The Rose Tree'. It consists of three staves. The top staff is a treble clef with a key signature of one sharp (F#) and a 2/4 time signature. The melody is written in eighth and sixteenth notes. The middle staff is a treble clef with a key signature of one sharp (F#) and a 2/4 time signature. The accompaniment is written in eighth and sixteenth notes. The bottom staff is a bass clef with a key signature of one sharp (F#) and a 2/4 time signature. The accompaniment is written in eighth and sixteenth notes. The score is divided into two measures by a vertical line.



The prelude to the second fugue begins with the following scale on the pedal-board: —



The end of the prelude to the third fugue shows us a pedal skip in which the feet of the player are separated from one another, a distance of a tenth: —

100.

Manuals. .

Pedal. .

A musical score for a pedal skip exercise. It is divided into two parts: 'Manuals' and 'Pedal'. The 'Manuals' part consists of two staves (treble and bass) with a treble clef and a key signature of one sharp (F#). The 'Pedal' part consists of a single staff with a bass clef and a key signature of one sharp (F#). The exercise is marked with a repeat sign at the beginning and ends with a double bar line.





From the great *F*-major toccata, we give the following solo passage for the pedal: —



&c.

Still more expanded is the second solo passage for the pedal, which at the time of BACH could not possibly be performed as

written. We can scarcely take for granted that the organ pedals of those times extended to one-lined \bar{f} . The respective measures probably were suitably altered, so that the three first notes of both measures marked NB. were played an octave lower: —

102. 

NB.

NB.

&c.

The more the hands are employed in leading the upper voices on the manuals, all the more difficult is it to execute a prominent part on the pedal-board with certainty; this is particularly the case, when the pedal takes a long fugue theme to the contrapuntal movement of the other voices, as we see in the following (Exs. 403 and 404). The above mentioned passages are taken from the fugues in *a*-minor and *g*-minor: —

103 a.

Manuals.

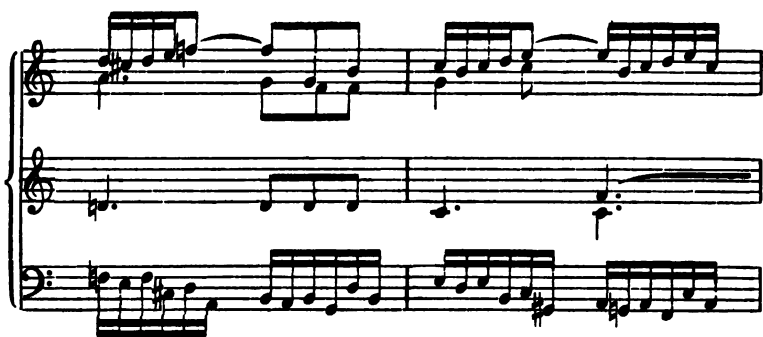
Pedal.

NB.

Theme of the Fugue.

The first system of the musical score consists of three staves. The top staff is a treble clef with a key signature of one sharp (F#) and a common time signature (C). It contains a melodic line with eighth and sixteenth notes, some beamed together, and a final half note. The middle staff is a treble clef with a key signature of one sharp (F#) and a common time signature (C). It contains a melodic line with eighth and sixteenth notes, some beamed together, and a final half note. The bottom staff is a bass clef with a key signature of one sharp (F#) and a common time signature (C). It contains a bass line with eighth and sixteenth notes, some beamed together, and a final half note. The system is enclosed in a large bracket on the left side.

The second system of the musical score consists of three staves. The top staff is a treble clef with a key signature of one sharp (F#) and a common time signature (C). It contains a melodic line with eighth and sixteenth notes, some beamed together, and a final half note. The middle staff is a treble clef with a key signature of one sharp (F#) and a common time signature (C). It contains a melodic line with eighth and sixteenth notes, some beamed together, and a final half note. The bottom staff is a bass clef with a key signature of one sharp (F#) and a common time signature (C). It contains a bass line with eighth and sixteenth notes, some beamed together, and a final half note. The system is enclosed in a large bracket on the left side.



Although the themes of these fugues were evidently invented in consideration of the pedal employment, so has BACH notwithstanding, found it good to alter the omission of the sixteenth note (the easy and more practical half) at the beginning of the theme marked NB.

The precise answer to the *a*-minor fugue beginning with a theme in the dominant key of *e*-minor, must be in the following manner:



104.

Manuals.

Pedal.

The first system of the musical score for exercise 104. It consists of three staves: a treble staff for the right manual, a bass staff for the left manual, and a separate bass staff for the pedal. The key signature is one flat (B-flat), and the time signature is common time (C). The treble staff begins with a quarter rest followed by a series of eighth and sixteenth notes. The left manual staff features a continuous sixteenth-note pattern. The pedal staff has a few scattered notes, including a half note and some eighth notes.

Theme of the Fugue.

The second system of the musical score. The treble staff continues with a melodic line of eighth and sixteenth notes. The left manual staff has a series of eighth notes followed by a half note and a quarter note. The pedal staff continues with a steady eighth-note pattern.

The third system of the musical score. The treble staff features a melodic line with some ties. The left manual staff has a continuous sixteenth-note pattern. The pedal staff continues with a steady eighth-note pattern.

This musical score consists of two systems of three staves each. The top staff is in treble clef, the middle in bass clef, and the bottom in bass clef. The key signature is one flat (B minor). The first system shows a complex texture with rapid sixteenth-note passages in the upper parts and a more active bass line. The second system concludes with a double bar line. Above the final measure of the middle staff is the notation "&c.", indicating a continuation of the pattern.

We find occasionally even the "Pralltriller", trill and trill passages written for the pedal-board; as in the *e*-minor fugue the pedal takes a characteristic "Pralltriller" in its theme twice: —

105.

Manuals.

Theme of the Fugue.

Pedal.

This example, numbered 105, illustrates the "Pralltriller" in a fugue. It is divided into two parts: "Manuals" and "Pedal". The "Manuals" section shows a two-staff setting in E major (one sharp) with a common time signature. The top staff contains a complex melodic line with many trills and grace notes, while the bottom staff provides a harmonic accompaniment. The "Pedal" section shows a single staff in the same key and time, featuring a rhythmic pattern of eighth and sixteenth notes, with trills marked above several notes. The text "Theme of the Fugue." is placed between the two sections.

&c.

and moreover at the end of the fugue: —

106.

Manuals.

Pedal.

Theme of the Fugue.

In the C-major toccata we find the following passage for pedal alone: —

107.



But we do not believe, that the exceptional difficulties which appear in the quoted examples (from 400 to 407), can be overcome by every good organist, with facility. When also very rapid tempos appear, which are not in suiting with the large and earnest character of the organ; the same are not permitted to be played in an awkward, drawling tempo. What several prominent virtuosi, such as TÖPFER, ADOLF HESSE and other masters of organ-playing have accomplished in former years, is certainly performed in the present day by youths and far surpassed; therefore the composer may in general, place all the greater demands on the pedal dexterity. The extraordinary effect which is produced by difficult pedal passages, is only good when they can be given with perfect certainty. The author has often had the pleasure of hearing the most difficult organ composi-

tions performed (both old and new) by his friend, the highly celebrated and distinguished living organ virtuoso, PAUL HOMER (Organist of the Gewandhaus and Instructor of the Königl. Konservatorium in Leipzig). The management and execution of the organ by this master who is still young, surpasses all that the author has ever heard earlier.

HOMER's manual and pedal dexterity has perhaps, previously never been attained; his certainty of execution even in the most difficult passages appears infallible. His execution throughout is always clear and artistic; the method in which he employs the stops always shows that he is an expressive, genuine artist.

THE STYLE AND FORM OF ORGAN COMPOSITION.

The Praeludium and the Fugue.

§ 49. In accordance with the character of the organ, only compositions of a serious tenor can be employed on it; the style of which are mostly polyphonic. We can produce much better on the organ than on the piano, four, five and even six independent parts which can be distinctly heard; as the organ tone when sustained, continues to sound uniformly and; on the contrary, the piano tone when sustained for a long time gradually vanishes and moreover is covered by the other voices.

The organ moreover has the advantage of an agreeable stop, *e. g.*, by the performance of the cantus firmus on another manual, with the suitable stops, it can be brought forth exceptionally prominent.

Of all the many-voiced compositions, that of the fugue is first in importance; therefore, we find it preceded by a prelude (prelude), frequently as an independent composition and also in combination with other movements of organ composition. Also, the preludes, whether under the name of "praeludium" "fantasia" or "toccata", are always written in the same strict style by BACH; the fugues are four-or five-voiced. Of great effect is the performance of the theme of the fugue, at first on the pedal and afterwards in the upper voices. The richness of the deep pedal tones renders the sound of the theme of the fugue, in an augmented (*per augmentationem*) state, extremely solemn and estimable. So JOH. SEB. BACH allows the following theme



to be performed for forty-eight measures in the four upper voices and afterwards in measures 49, 50, 54 and 52 twice in succession, in the following augmented manner, as a fifth voice on the pedal:

109.  Theme. Answer. &c.

Detailed description: This musical example is in the bass clef with a key signature of one sharp (F#). It consists of two measures. The first measure, labeled 'Theme.', contains a half note G2, a quarter note A2, a quarter note B2, and a half note C3. The second measure, labeled 'Answer.', contains a half note D3, a quarter note E3, a quarter note F#3, and a half note G3. The notation continues with a repeat sign and the abbreviation '&c.'.

In the fifty-eighth measure the theme appears in the pedal (in the enlarged inversion) in a like manner, twice in succession:

110.  &c.

Detailed description: This musical example is in the bass clef with a key signature of one sharp (F#). It consists of two measures. The first measure contains a half note G2, a quarter note A2, a quarter note B2, and a half note C3. The second measure contains a half note D3, a quarter note E3, a quarter note F#3, and a half note G3. The notation continues with a repeat sign and the abbreviation '&c.'.

That the themes of BACH's organ fugues were invented with regard to the pedal execution is quite evident. They differ from those of the same master's fugues for pianoforte; as the following theme in its extension for seven measures illustrates —

111. 

Detailed description: This musical example is in the treble clef with a key signature of one sharp (F#). It consists of two measures. The first measure contains a half note G4, a quarter note A4, a quarter note B4, and a half note C5. The second measure contains a half note D5, a quarter note E5, a quarter note F#5, and a half note G5. The notation continues with a repeat sign and the abbreviation '&c.'.

as well through their great copiousness, as also (see the themes of examples 403 and 404) in the contents of their subscribed figures, as is evident in their pedal manipulation. A theme such as that of the *a*-minor fugue (see Ex. 403) is utterly impossible as a singing chorus-composition; the theme is given on the pedal in the form of a sequence, —

112. 

Detailed description: This musical example is in the bass clef with a key signature of one sharp (F#). It consists of two measures. The first measure contains a half note G2, a quarter note A2, a quarter note B2, and a half note C3. The second measure contains a half note D3, a quarter note E3, a quarter note F#3, and a half note G3. The notation continues with a repeat sign and the abbreviation '&c.'.

the execution of which is not so difficult, as the right foot of the performer always remains on the same pedal key during a measure. Also the themes of the toccatas in *d*-minor and *F*-major and many other organ compositions of BACH show that they are well adapted to the pedal. The young composer will do well to consider these suggestions.

The Figured Chorale.

What great knowledge of the contrapuntal forms the organist must possess, will be seen from JOH. SEB. BACH's book entitled "Orgel-Büchlein" (literally "Organ Booklet"); according to this title:

"Organ Booklet,"

"Whereby, a student who is just beginning the study of the organ, is given a method of instruction, in the execution of all kinds of chorales, together with the acquirement of such pedal studies as are found as obligatos to chorales.

The "Organ Booklet" was written in the years 1717—1723, and shows us besides, a number of imitations artistically embellished, consisting of three-and four-voiced chorale works, in which the chorale sometimes appears in a middle voice (*Christum wir sollen loben*, Chorale in Alto); also many strict canons accompanied by two and also three free voices.

On a later work consisting of 24 chorales (see 25th annual publication entitled BACH Publication, by Breitkopf and Härtel) we likewise find exceedingly imitative movements, in which the cantus firmus lies in a middle voice or in the pedal, moreover, also fugue pieces in which the chorale moves as Ripien-Voice (*i. e.*, a voice used only for the purpose of filling up) as *e. g.*, in the later treatment of the chorale "Come Holy Ghost" ("Komm, heiliger Geist") and "Nun komm' der Heiden Heiland".

We required of the organists of earlier times, such contrapuntal art-exercises to be played without preparation, as the improvised prelude, also the interludes of the separate chorale verses, always in pure and strict style; then they could also freely improvise with each given theme, and even a fugue if they wished. The organ virtuoso must therefore also be a composer for the organ. Of the present day, we name as the most modern composer of organ composition, the prominent JOSEF RHEINBERGER, who has a great right to be highly celebrated; and the previously mentioned PAUL HOMER of the living (the first through his precious compositions, the second through his free improvising) artists known to us, who also has a skilled command of the intellectual part of the technique of the organ.

The Organ Sonata.

The sonata is another art-form which besides BACH, such composers as MENDELSSOHN-BARTHOLDY, RHEINBERGER, GUSTAV MERKEL and other younger masters have supplied many precious compositions. However, such pieces of music for the organ must be separated in

still shorter movements, than the sonatas for pianoforte or for pianoforte and violin or violoncello. We cannot refrain from remarking here, that longer organ compositions, which in time exceed twelve to fifteen, or at the most eighteen to twenty minutes, partly through their polyphonic style, but more through the peculiar tone of the organ wearies the hearer. We also find that the character of this noble instrument is not adapted to those compositions, the contents of which are of modern sentimental or bright secular character. Moreover, the expression of ardour and joy must always remain more earnest and solemn in organ compositions; the tempo of music-pieces for the organ can never be so rapid as the time of concert movements for other instruments. We must still consider that the organist in his special perception of the performance of a composition must always give it with less expression, and that all the delicate colouring of execution which is in the power of artists on other instruments, is always impossible with the organ.

The Organ Concerto with Accompaniment.

GEORG FRIEDRICH HÄNDEL'S organ concerto as also those of many other masters has an accompaniment of a stringed orchestra and some wind instruments, as two oboes and also two flutes; RHEINBERGER in his magnificent concerto for organ (op. 437, pub. by FR. KISTNER) has an accompaniment of three horns and stringed orchestra. We can consider the organ as an orchestra consisting of a large work (mechanism) with many stops.

The alternate employment of these two orchestras (organ and accompaniment) offers much charm, but less so when the two work together, for then, even a very grand and majestic employment of the orchestra appears very feeble in contrast to the organ. In spite of the alternation in tone of the orchestra tutti, we cannot commend the above principles in case of long movements. In general we will make no mention of the brilliant form; in regard to the organ we will quote the appropriate words of Tell: "The strongest is most powerful when alone."

The Passacaglia.

A particular form of organ composition is known under the name of Passacaglia (fr. Passecaille). It mostly consists of a cantus firmus always appearing in the form of "basso ostinato", which sometimes is repeated later in a rhythmically altered form. At every alteration of this bass, the figures in the upper voices are changed. We can on this account term a passacaglia as a form consisting of

connected variations or a fantasia formed over the cantus firmus. In this we occasionally find the cantus firmus in an upper voice; for this purpose we must see the Passacaglia (c-minor) by BACH, in which the soprano takes the cantus firmus (measure 88). Later the cantus firmus appears as a "fugue theme" (with altered ending) in the other voices.

The Organ Variations.

This form which mostly consists of a number of consecutive themes, in strict contrapuntal manner, is seldom employed in modern times.

The Organ Suite

can also only consist of a number of serious movements. The most important composition of this class, composed in modern times, is the organ suite, op. 149, of REINBERGER's for organ, violin and violoncello. This composition in the second number, contains a movement consisting of a "theme with seven variations (or alterations)"; some of which are very interesting. This superior composition, but a trifle long — of thirty-five minutes performance — becomes of most worth when it is performed by a large number of stringed instruments.

The Organ as Accompanying Instrument in the Church and Concert Saloon.

The most important work of the organ in the church is the accompanying and holding together of the voices.

The simpler the accompaniment is, all the more valuable and effective it becomes. Regarding the formation of the interludes of the different verses of the chorale, there is much dispute. We will not allude to the different opinions under the head of divine service, especially as the kinds of interludes always depend on the organist. An artist of delicate feeling will consider the interlude as an important mediation, while another will allow it to appear as an unnecessary adjunct.

In the performance of oratorios, masses, passion-music and psalms, in the church as well as the concert-saloon, the orchestra is frequently employed as an accompaniment to the organ. This was in earlier times absolutely necessary, as the orchestra was insufficiently combined and of scanty employment. The voices (parts) must always be carefully worked out by the organist, as they mostly only have a harmony consisting of a figured bass. In the case of arias, duets, and other solo numbers, the organist must give partic-

ular attention to the registration; he must consider the difference in strength of the single voices. As the gradations in expression of the solo voices in piano, crescendo and diminuendo can by no means, be followed by the organ so rapidly as is possible in the accompaniment of the orchestra and pianoforte; the organ tone in a large room always spreads and continues very strong, therefore, the organist is always recommended to accompany the soloists or weak choruses with a light accompaniment rather than a strong accompaniment.

We also find many masses and motetts for chorus and solo voices written only for organ accompaniment; with the motetts we also find the organ accompaniment written *ad libitum*, in which case the organ accompaniment can be dispensed with, especially for the benefit of the composition, when the chorus is manifold and well employed; as the organ can easily cover the voices, render the text indistinct and injure the expression of the execution.

The Registration.

As we have already remarked, that the registration demands of the organist, besides, a full knowledge of the work and a delicate execution of the same. Unfortunately in modern times this is greatly abused. The great mechanism with all its many different stops is opposed to the employment of the crescendo and diminuendo stops, as it is in direct opposition to the character of the registration of the organ. The sudden harsh transition from a roaring, overpowering *forte* of the full mechanism, to a distant *pianissimo* of the echo stop, and back again to the fortissimo with full work after the *pianissimo*, appears with this powerful instrument, as unnatural or straining after effect. Also, the too frequent changing of the stops, as is possible by the aid of a companion and also the intelligent arrangement of the new works, is not suitable to the character of the organ. It is much the best when we remain in a certain registration as is the case with the older classical works; for the exaggerated registration of many organists, who in paltry consideration of an outward effect, allows a full management of the executed compositions to be performed without the necessary attention.

CHAPTER IV.

COMPOSITION FOR STRINGED INSTRUMENTS.

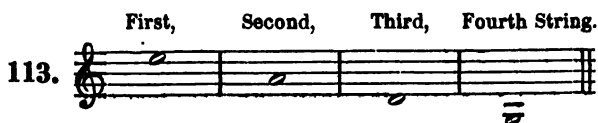
A General Description of the Stringed Instruments.

The stringed instruments of the orchestra, such as violin, viola, violoncello and double-bass are all of similar construction, differing however only in size. They have a resonance-box the sound holes of which are in the form of two F's (2S) placed opposite one another; on this account they are generally called the F holes. The head of the instrument contains the pegs by which we tune the strings. The finger-board extends from the nut or "small-bridge" (Sattel) at the head of the instrument, over the entire neck and part of the resonance-box. The commonly called bridge, over which the strings are stretched, is in the proximity of, and midway between the two sound holes. The strings are held by a tail-piece which is fastened to the lower end of the instrument by a button. Every stringed-instrument (*i. e.*, those four instruments which form the nucleus of the orchestra) has four strings; older double-basses in England and France had only three strings, and quite frequently we have attempted to add to the four stringed bass, a fifth lower string.

The strings of these instruments are played by a bow strung with horse hair. The parts of the bow are: the stick, frog, screw and the hair; by means of the screw the hair can be stretched tighter. The bow is held by the right hand at the frog.

The Violin (Ital. Violino; Ger. Die Violine).

The strings of the violin are tuned in pure fifths in the following manner: —



The first or *E*-string is also commonly called the "fifth"; the fourth is always wrapped with silver wire. By means of these strings we can have the following scale with all the intermediate chromatic tones:

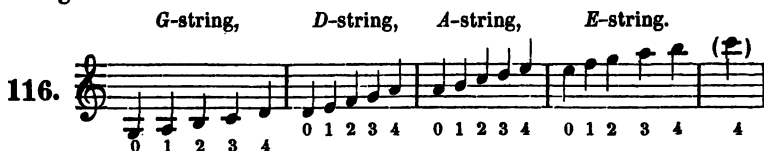
114. 

The violins of the orchestra are divided into first's and second's; consequently the highest tones are only given to the first violins. But regarding this employment we are to use much discretion, as we cannot agreeably skip from the lowest to the highest tones. Passages like the following —

115. 

should not be required in a moderate time, although the technique of the members of our orchestra of the present day, is such, that we generally find a virtuoso among the first violin players.

Tones can be produced by the open string or by the placing of the finger on the string (known as stopping); in the latter manner the more the string is shortened, the higher becomes the tone. When the left hand of the performer stands in such a position that he takes with the first finger on the *G*-string, the *a* or *a*-flat; on the *D*-string, the *e* or *e*-flat; on the *A*-string, the *b* or *b*-flat; and on the *E*-string, the *f* or *f*-sharp — such fingering is given the name of the *first position*. In this position we obtain the following scale, with the appropriate fingering. The cipher always signifies an open string: —

116. 

The student sees from the above (Ex. 116) that the tones of the open strings *D*, *A* and *E* may also be obtained by "stopping" the *G*-, *D*-and *A*-strings with the fourth finger; but the tones of the open strings are brighter and more open than those of the shorter strings, which necessarily become the case when stopped. The last tone of the example under consideration (116), the three-lined *c*

which appears in parenthesis, can be taken in the first position by extending the fourth finger but very little. We call this a "stretched" tone (technically known as an "extension").

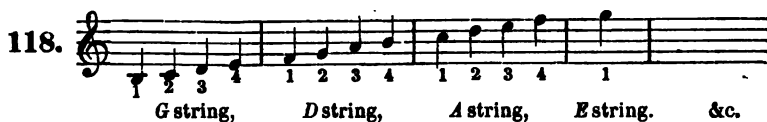
By the same process we can obtain the next highest note of each high position, by the "extension". The above diatonic scale can be played in rapid time without much difficulty. The chromatic succession of tones is more difficult, as the same finger must be moved from one half tone to the next, and still touch the string with the necessary firmness.

Figures such as the following —

117. 

The first staff shows a sequence of notes with fingerings: 0, #1, 1, #2, 2, 3, 4, 0, #1, 1, 2, 2, 3, 4, 0, 1. The second staff shows a sequence of notes with fingerings: 2, 1, 0, 4, 3, 2, 1, 1, 0, 4, 3, 2, 2, 1, 1.

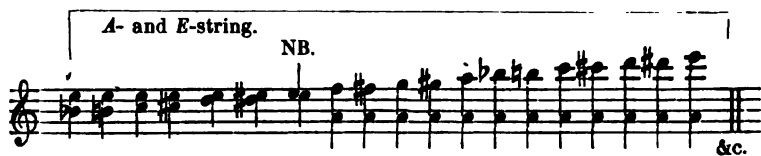
are with the help of the open strings in a rapid tempo, much more difficult and moreover, are not of such good effect. When we place the first finger on the following tones of the four strings, then we are said to be playing in the *second position*: —

118. 

The staff shows a sequence of notes with fingerings: 1, 2, 3, 4, 1, 2, 3, 4, 1, 2, 3, 4, 1. Below the staff, the strings are labeled: G string, D string, A string, E string, &c.

By the *third position* the first finger is placed on one-lined \bar{c} of the *G*-string; one-lined \bar{g} of the *D*-string; two-lined \bar{a} of the *A*-string; and two-lined \bar{a} of the *E*-string. As we place the first finger on each string consecutively a tone higher, we obtain the fourth, fifth, sixth positions &c. We may continue in this manner to the eighth position; however the performers preferably employ — in case higher notes are not required — the third and fifth positions. It is also better to avoid the frequent changing of positions, when such is not absolutely necessary, and play as long as is practicable in one position. Then the higher tones are to be played in a higher position on a lower string as the above mentioned tones cannot be taken in the first or perhaps in lower positions.

The following movement in the third position is played most conveniently — without the employment of the open strings — when the accompanying fingering is employed:



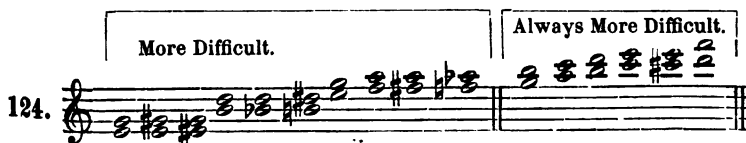
The scholar will see that the notes marked NB. in the above (Ex. 121) are *unisono* and are played as double notes. When we wish to make a definite part of the measure prominent, by a special rhythmical accent, or to bestow a rhythm with special strength of tone it can be accomplished in the following manner:



Thirds are — in case we do not go too high — only to be given by both first and second violins in a moderate tempo. We give in the following illustration, a table of such thirds:



These thirds are all possible in the *first position*; of course those thirds which can only be taken in the higher positions are more difficult to grasp and the higher we ascend the more difficult they become:



Rapid runs of thirds should never be required of the orchestral violins; but can easily be taken by the simultaneous employment of both first and second violins, in such a manner that we give the upper voice to the firsts and the lower voice to the seconds.

If the seconds are otherwise employed, we should then distribute these two parts among the firsts, and designate the same by the word "divisi"; or this may also be represented by the following manner of writing:

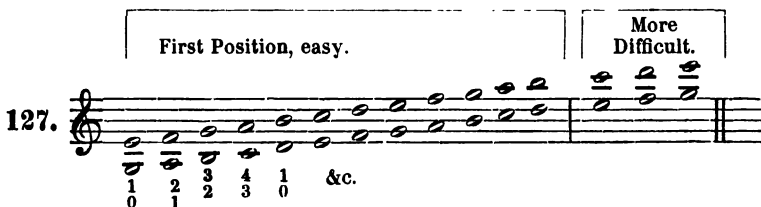


When part of the performers take the upper voice and another part the lower voice; such a succession of thirds as appears in the above (Ex. 125) is possible in every degree of velocity.

Intervals of a fourth are easily taken when within the first position; the following double notes, therefore, present no difficulty:




Likewise are sixths of the first position, without special difficulty:



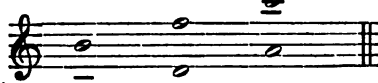
Single double-stops in octaves can well be demanded of the orchestra; but never runs, figures or full embellishments. But such an employment is entirely unnecessary, for we can separate the first violins in the same manner as for the rapid runs of thirds. The easiest octave double notes are those by which we can employ an open note.

Very easy.	Easy.	More difficult the higher we go.
---------------	-------	----------------------------------

128. 

Double notes in tenths should only be employed when an open string can be employed for the lower voice; but nevertheless, such tenths are impossible in the first position. The following tenths are easily taken:

D-string, A-string, E-string.


129. 

G-string, D-string, A-string.

Chords of Three Notes.

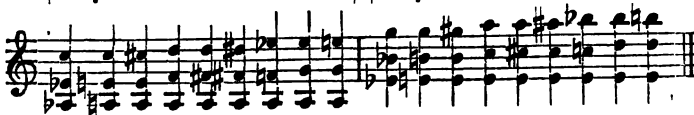
Three- and four-voiced chords only make a good effect in *forte* or *fortissimo*; the bow must be drawn over the three strings so rapidly, that the tones of the chord resound almost simultaneously. The lowest tone of course, can never be held; in case that a tone must be sustained, it is always best to confine this to the highest tone and write the chord as is shown in the following (Ex. 130). Such chords are most effective, which employ at least one or two open strings and naturally are easier to execute than those which require three fingers to be placed on the strings.

Two Open Strings Very Easy.	One Open String, Easy.
--------------------------------	------------------------

130. 

In those three-voiced chords by which no open strings can be employed without special difficulty, the student should give the proper application of fingering for the same, *e. g.*:

G-, D- and A-string, easy.	D-, A- and E-string, easy.
-------------------------------	-------------------------------

131. 

When we employ higher fundamental tones than those shown in the above (Ex. 131), we must necessarily take a higher position, if we wish to obtain the corresponding chords. In such positions the difficulty is all the more increased and the sound all the more decreased as we shorten the strings; also, when these chords are to follow one another rapidly, the sound effect is of little artistic value. However, the single three-voiced chords when employed in forte or fortissimo, are of specially good effect when they employ one or two open strings (see Ex. 130).

Chords of Four Notes.

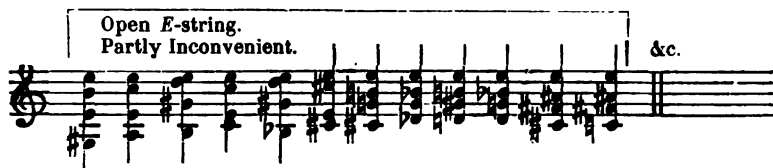
Likewise, under the four-voiced chords, we find that those with which we can employ one or two more open strings, are the easiest to execute and produce the best sound effect; as can be seen from the following illustration:

132.

Open G- and E-strings.		Open G- and D-strings.	
Easy.	Easy.	More Difficult.	

Open D- and A-strings.		Open A- and E-strings.	Open G-string.
More Diffic.	Easier.	Easy.	

Open D-string.	Open A-string.
Easy.	Not Difficult.



Also can many chords of four notes which contain no open strings be taken without difficulty and can be employed in the orchestra, *e. g.*:




All three- and four-voiced chords are best taken with a downward stroke. We could give here many more such chords — the above examples do not claim to be complete — but the scholar can find the same in violin compositions, and he may, if he desires, ascertain the correct fingering of chords of two notes or more and mark the chords accordingly; and he must always keep in mind that as easy as it is to touch with the same finger a pure fifth on two neighbouring strings, it is equally as difficult or often impossible to employ simultaneously the same finger on strings which are separated from one another. The following chords are very difficult and can only be taken with uncommon fingering:



for in the first two chords we see that we cannot place the first finger simultaneously on the G- and E-strings; and likewise the second finger with the third chord and the third finger with the fourth chord. Moreover, we must not think that the four-voiced chords produce an essentially stronger effect than the chords of three notes; perhaps there is an exception to this when two open strings are employed. We must also not forget that the independent leading of two voices, exists only in a limited number of chords of two notes and is only possible in short passages; for they most invariably present uncommon difficulties and hardly ever are employed in the orchestra. We give in the following (Ex. 435) a passage from the sonata for violin by JOH. SEB. BACH, from which the

scholar will see how to lead a two- or three-voiced movement, and in which manner BACH leads the harmony with the melody by single three- and four-voiced chords. Concerning a real three- or four-voiced movement we cannot discuss. We must also call the student's attention to the above mentioned sonata of BACH's, which offers extraordinary difficulty and can only be produced with certainty and pure intonation by the best violin artists; and, moreover, that the auditor must not forget that the production of harmonic and melodic notes conjointly, is not to be expected of this instrument as it is not the natural method of employment. Also we cannot — with all reverence to BACH — suppress the remark that in such a violin solo as the second part of the magnificent Chaconne, the long deep tones of a steady and slow moving accompanying bass is wanting. Such

a movement which must have the small octave *g*  for its

lowest tone, seems only to float in the air as it were, and by its limited deep tones and the uniform tone colour of the instrument, it gradually becomes wearisome. This is supplied — speaking candidly — by the well-adapted piano accompaniment to the Chaconne, arranged by FFLIX MENDELSSOHN-BARTHOLDY.

Short pieces containing an excess of melody, which is contained in the independent leading of two or three voices, demand no exaltation whatever; also, where the harmony is indicated here and there through the three- and four-voiced chords, the deficiency of an appropriate bass and a well executed harmonic accompaniment is not so perceptible.

From the Second Sonata for violin alone, by J. S. BACH.

Two-voiced free canonical worked movement from the fugue.

135. 

Theme of the fugue
in the inversion.

This musical score consists of three staves of music. The first two staves are in treble clef and contain a complex, fast-moving melodic line with many accidentals. The third staff is also in treble clef and ends with a double bar line and the instruction '&c.'.

A movement from the Chaconne (Part II) for several voices.

136.

This musical score consists of four staves of music. The first two staves are in treble clef and contain a complex, fast-moving melodic line with many accidentals. The third and fourth staves are also in treble clef and end with a double bar line and the instruction '&c.'.

Gavotte en Rondeau from Part III.

Short melodious movement with indicated harmony.

137.

This musical score consists of a single staff of music in treble clef. It contains a short, melodious movement with a few accidentals and a double bar line at the end.



Harmonics (Germ. Flageolett-Töne).

Besides those tones which are produced by the firm placing of the finger on the string, we can also have others by merely touching the string. Such tones have a characteristic flutey sound, and are called "harmonics". These are of two kinds; *natural* and *artificial*. The *artificial* harmonics are not employed in the orchestra and the *natural* are used but seldom. A perfect and pure tuning of the strings is the first and essential requisite for the production of pure natural harmonics; for with these the performer cannot help the intonation, in case the strings are tuned a trifle too low or too high. When harmonics are to be given by different violins simultaneously, the effect produced is only good when the tuning of the instruments and the intonation of the performer is perfectly pure. A well known and successful employment of chords composed of harmonics, is presented in the beginning of the finale of the prelude to "Lohengrin", by RICH. WAGNER.

The natural harmonics are obtained in the following manner: by gently touching with the finger the octave of a string, we obtain the unison of the octave of this string; by gently touching the fifth of an open string, we obtain the higher octave of this tone; by gently touching the fourth, we obtain the double octave of the open string. We illustrate this by the following example:

Height of the natural harmonics.



The scale of the violin which we find in the previous example (114), may be extended to the four-lined c. The artificial harmonics are produced from double notes in the following manner: the first

finger is firmly placed on the string, while the third or fourth touches the string gently at a distance of a pure fourth or fifth respectively. We obtain then the double octave, relatively the twelfth of the tone which is "stopped", as will be seen from the following:

Artificial Harmonics.

139.

Gently Touched Tone. 3 3 3 &c. 4 4 4 4 &c.

Stopped Tone. 1 1 1 1 1

We can, therefore, by the *natural* and *artificial* harmonics, obtain a complete scale to the five-lined octave, with all the intermediate chromatic tones. As we only seldom meet with the natural harmonics in orchestral and chamber music forms, we must then warn the student all the more against the use of the artificial harmonics, which should only be employed in brilliant concert-pieces for the violin.

The Different Kinds of Bowing.

The technique of the violin has for a long time so developed, that we can execute all kinds of scales, trills and broken chords with facility. But of course we must always take into consideration the nature and compass of the instrument. A reasonable amount of judgement must always be used, and *fanfares* which are only suitable for the trumpet should never be given to the violin. We must always consider that the higher we ascend in position, the more limited becomes the space where the finger is to be placed.

Therefore, half tone trills in the highest positions are much more difficult to execute than in the middle and lower positions.

It is quite evident that the trills *g-a* and *g-a flat*



cannot have an after-stroke (grace-note). But the cantilena and particularly all kinds of runs can be presented on the violin in many different ways and by different kinds of bowing. The bow can be drawn as well from frog to point, as from point to frog. The first we call the down-bow and indicate it by the sign \square ; the second

the up-bow, and designate it in the following manner V. The bow can moreover be employed in the following manner: in the first third or by the frog; in the second third or in the middle; in the third third or with the point. When these three different methods of bowing are employed with one and the same passage, the tone effect of each is different. Also can many down- and up-bowings follow one another. With the cantilena it is not indifferent how many or how few bowings are employed with the single note. The more different kinds of bowing we employ with one or more slurred notes, the greater will be the tone extracted. The following passage illustrates how the tone is effected by the employment of different bowings with the same passage


Sostenuto, molto espressivo.
sul G

140. 

or: sul G



or: sul G



or still other ways this same passage may be bound. As bound notes can be executed by bowings of greater or smaller lengths, so can detached notes be given with many different kinds of bowings.

The many different kinds of bowings are designated by the following terms; *detached*, *spiccato* (i. e., quick successive touches of the string, while the bow keeps the same direction), *martellato* (i. e., a quickly interrupted short stroke), *saltato* (i. e., a springing movement of the bow). By the expression *staccato*, we understand to be those notes which are produced by short strokes during the single down- or up-bow; and are designated in the following manner:

141. 



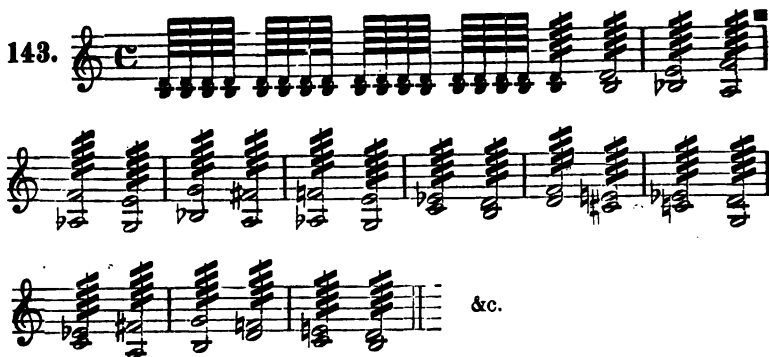
Many different kinds of bowing are derived from the intermingling of slurred and detached notes; as is illustrated by the following (Ex. 142)



and also various other different kinds of bowing.

The various bowings alter the character of a run, therefore the composer will do well when he designates by the appropriate expression, whether he wishes one or another of the different bowings for a definite effect. Many bowings fatigue the right arm of the player when continued for a long time, *e. g.*, a long continued

spiccato, and still more the *tremolando* which is produced by very rapid successions of down- and up-bowings. Passages such as the following (Ex. 143), should not be permitted to continue too long:



The Legato or Slurred Tremolo



can be agreeably prolonged; on one and the same string this is very easy, but on the other hand when the performer passes continually from one string to another in a forced and unnatural manner it becomes much more difficult. The effect produced by the two different kinds of tremolo is quite different; the *legato tremolo* can never be given so forcible and wavering as the *detached tremolo*. On the other hand for an undulatory movement, the *legato tremolo piano* is most suitable. Both tremolos are possible in the lower positions in all degrees of sound; when we ascend to very high tones, the *piano* and *pianissimo* produces a better effect than the *forte* or *fortissimo* of the strong shortened strings. At this place we must mention the *broken chords* (*arpeggio*); although they are seldom employed in the orchestra. But in solo compositions for violin, we find these much more frequently employed with many different bowings. Such arpeggios can be led as four voices over four strings, or as three voices over three strings, e. g.:





The first bowing at (a) gives more tone than the second at (b), which can only be produced by a skipping movement of the bow. Other bowings as, *e. g.*:





are but rarely employed and are of less good effect. A special effect is produced when we employ the bow close to the bridge. Such an employment is designated by the words *sul ponticello*. By the numerous employment of the violins (and other stringed instruments) in the orchestra *sul ponticello*, we obtain a brilliant effect. Sometimes we also find the expression *col legno*, which means strike the violin strings with the wooden part or wrong side of the bow (see CHOPIN's E-minor Concerto, op. 44, pub. by Fr. Kistner, Leipzig). The bow must not touch the strings from the hair side, but with the wooden part as mentioned above; such detached notes give only a dull crackling sound. This employment of the bow is not to be recommended as the effect is not very fine.

The Pizzicato.

Although the violin is preferably known as a melodic instrument, and scarcely another instrument can give the cantilena in the high soprano position with such beauty of tone and fervour as the violin (especially when the first and second violin in orchestra lead the melody in unison), yet, when this instrument is not manipulated with the bow, the character of the instrument is greatly changed. The strings are then plucked with the first and second fingers of the right hand and give a weaker, duller and slightly colder sound. This manner of playing we call the *pizzicato*. The "pizzicato" can neither give so rapid a succession of tones as is possible with the bow, nor can we employ it for so long a time; also, the plucked tones in the higher positions, become all the more diminished in sound as the string is shortened. The motion for few notes cannot be more rapid than perhaps the *sixteenth* in "allegro moderato", *e. g.*:



The pizzicato is designated (as can be seen from Ex. 147) by the abbreviation of the word; when the employment of the bow is to be resumed, we designate this by the expression, *col arco* (with the bow) or simply by the word *arco*. Notes of longer duration ( or ) are only effective when many instruments are employed, as the tone of the short violin strings does not vibrate very long; the open tones are best adapted to this manner of playing. Of course a genuine *forte* cannot be produced by pizzicato notes; however, by the manifold employment of the stringed quartet, single chords can be produced tolerably strong in a pizzicato movement. As we can draw the finger rapidly over two, three and also four strings, we can likewise give double notes, three-voiced and also suitable four-voiced chords reasonably well pizzicato, *e. g.*:



The partial employment of the bow, together with the plucked pizzicato of the fingers of the left hand (by DE BÉRIOT); as appears occasionally under the name "Pizzi-Arco", we cannot take into account here.

The Mute (Sordino).

The mute is a little instrument resembling a comb in appearance, and is about the size of the bridge upon which it is placed. The tone of the violin is not only thereby essentially weakened, but also becomes muffled and mysterious; the low tones are given a trifle gloomy character. As a matter of course, the mute does not permit a genuine full *forte*. In solo playing it is little used, likewise in chamber music; in the orchestra, on the contrary, we can produce very characteristic effects when the violin, viola and violoncello play with the mute. When we wish the mute to be employed in a passage we must designate it by the words *con sordino*; when the same is to be removed, we then write *senza sordino* (without mute). The mute should always be on the desks of the violin

players and should be arranged and removed as noiselessly as possible. The arranging of the mute requires almost a minute of time and the removal of the same less. The composer must always consider the time of a movement in which the mute is to be used and allow the necessary several or more bars' rest for the same. In order not to weaken the special effect of the veiled tone, we must never employ the mute for long movements. We know that in giving our opinion as such, we make a gross heretical error, as the whole of the adagio of the marvelous *g*-minor string quintet of MOZART is positively prescribed by the master that all the instruments (two violins, two violas and violoncello) are to be muted. However, we may affirm that the superb movement can only profit when all the instruments do not play *con sordini* throughout the whole movement continually. Also in E. F. RICHTER's Sonata for Piano and Violin (op. 26, *a*-minor, publ. by Breitkopf and Härtel, Leipzig) the slow movement is to be played with mute; but here likewise, we cannot approve of the instruction of the composer. The long continuous employment of the mute produces all the more monotonous tone colour, as the performer can only execute soft and delicate gradations. An energetic, impassioned *forte* remains always excluded, as the performer cannot employ the same method of drawing a tone in the cantilena as he can without the mute; rapid runs cannot be executed so clear, and always contain more or less, a slight obscure wavering. Therefore, we must never permit ourselves to employ the mute too extravagantly.

The Means of Execution of the Violin.

No instrument possesses in so rich a degree, the means of such an overflowing, soul-like style of delivery as the violin — as we will at the same time remark — the violoncello. All that we will say in the following pages, on this subject, bears equally the same relation to both instruments. Above all, the violin (as well as all stringed instruments) has the advantage over the voice and wind instruments in its not being dependent upon the breath; it can sustain a tone as long as the bow reaches. With the numerous employment of the violins, no interruption will be heard, when the changing of the bow is not brought about simultaneously; moreover, the change of the bow does not need a pause, as is the case with the breathing of the singers and players of wind instruments. The tone can be increased and decreased to the liking of the player. The vibration (*vibrato*) which occurs occasionally in singing, from bad habit or defect of the singer, often endangers the purity of in-

tonation, is annoying, and is detrimental to the execution; on the other hand when employed on the violin, by a light wavering movement of the firmly placed finger, it imparts to the single sustained tone a greater warmth and more cordial nature.

Although the violin never possesses the power of tone which we find in the beautiful strong human voice or the wind instrument, it has at its disposal all gradations of tone from the most delicate *pianissimo* (also without mute) to the most violent *fortissimo*; moreover, it can (when employed manifold in the orchestra) give a very heavy stroke (*le coup d'archet*) by means of a three- or four-voiced chord and in general has the advantage of double notes which the voice and wind instrument does not possess.

Also the tone-colour of the melody can be greatly varied, according to the string it is executed upon. A melody when played on the *G*-string, makes quite another impression than when the same is played two octaves higher on the *E*-string; certainly it is not merely the raising of the melody two octaves that produces this impression, but the difference in character of tone of the two strings. Of course we are not able to describe the tone of an instrument or its string accurately, and can only intimate that the difference in strength of the spun *G*-string, and the "fifth" (*E*-string), is, that the first is melodious, full and — when we are allowed to use the expression — velvet-like; and the second, on the contrary, a bright, sharp and more penetrating tone; therefore you will see that when one and the same melody is played on these two strings, the impression produced is entirely different. On this account it is most requisite that the composer designate whether he will have a melody played on a definite string; he must mention this in such a manner as we have done in the previous example (140), *i. e.*, for the *G*-string by *sul G*, and correspondingly for the *D*-string by *sul D*; moreover this must continue by means of a dotted line to the point where such execution on said string is no longer required. A greater advantage of the leading of the melody on the violin is contained in the occasional employment of a single harmonic tone, which of course must be designated by a cipher (0) over the respective note, when we wish the harmonic to be firmly touched. The following passage is to be played on the *G*-string alone, and will from one violin or from all in the orchestra, certainly produce a more beautiful effect, than when executed on the *G*- and *D*-string without employing the designated harmonic:

Adagio.
sul G- - - - -

149a. 

149b. 

In concert-pieces for the violin, composers designate similar passages precisely in the same manner; we give in the following (Ex. 150) such a movement from the concerto of the highly celebrated violinist, JOSEPH JOACHIM (in Hungarian manner; op. 44, publ. by Breitkopf and Härtel, Leipzig); which illustrates chiefly, a long executed cantilena on the G-string alone:

Jos. JOACHIM, op. 44, First Movement.

Allegro un poco maestoso.

150. 





We have already mentioned the advantage of the double notes on the violin; but especially are they well employed for the leading of the melody in solo compositions. In such employment the second voice is generally very simple, but nevertheless, it imparts a special charm when only occasionally it moves with the melody in a natural and simple manner, and consists merely of appropriate harmonic notes of an accompanying voice. As an illustration of this we quote the following passage (Ex. 152), which is a continuation of the movement in the above (Ex. 151):

152. 

dolce ossai.

&c.

Accompaniment phrases can be executed simultaneously with the melody; we quote the following passage from the concerto of JOACHIM'S:

Jos. JOACHIM, Op. 44, First movement.

153. 

dim.

poco ritard.

dim.

pp

cresc.

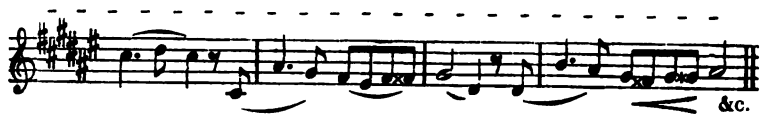
c.

A very effective impression is produced when the melody is executed in octaves, but especially so when it is first given on the G-string in the simple alto position, and then directly after, is heard in octaves, in a higher position. We quote a corresponding example from the concerto (*F-sharp minor*, op. 23) of H. W. ERNST:

Allegro moderato.

4^a Corda

154.



Directly afterwards (at letter L in the score), the same melody is given again in the following manner:



In the above given suggestions regarding the many different kinds of execution and representation of the melody, we wish to give the student the necessary hints and finger-marks. The student will receive instruction concerning this, by reading attentively the above named concerto. We also recommend for this purpose the familiar works of MOZART, VIOTTI, RODE, BEETHOVEN, SPOHR and MENDELSSOHN-BARTHOLDY; also the admirable concerto of MOLIQUE in *A*-major and *a*-minor; the concerto in *d*-minor of FERDINAND DAVID; the concerto in *g*-minor of MAX BRUCH (a genuine classical work); the concertos and concert-pieces of REINECKE, BRAHMS, RAFF (Fairy Love), SAINT-SAËNS, Introduction et Rondo capriccioso; and the concertos of HANS SITT which are of much intrinsic value and are distinguished as excellent solo works. However, not only for the manifold means of delivery is the violin adapted, but also for portraying such expressions as dignified love, grace, capriciousness and numerous other emotions. In the following (Ex. 156) we quote the third movement of the *E*-major concerto of Vieuxtemps, which combines grace, energetic strength and teasing gracefulness:

Allegretto.

156. 
f dimin. ritard. p




grazioso


pp




f


ss


dim. poco ritard. a tempo mf

8va

8

8

p

ff

p ritard.

pp

&c.

By all means we are not permitted to write such passages as the above for orchestra, not only that the same contains unusual difficulties, but especially when it is played simultaneously by several or many violins — in case such is possible — the intended effect cannot be brought about. To the extent that the violin can be employed in the orchestra for the expressing of the emotions, can be seen from the works of the masters. From the deepest earnestness to the frolicsome whim and bacchanalian feast, through the whole gamut of human emotions and passions, the violin of the orchestra is capable of expressing. We will only mention here the characteristic violin passages contained in the Death March of the "Heroic Symphony" of BEETHOVEN and the "seventh" and "eighth" symphonies by the same master; an unlimited number of such effects can be found in the orchestral works of other masters.

In the first position, in which this instrument moreover sounds the best, rapid scales and chord figures (legato as well as staccato) are very successful. However, the viola possesses more fullness of tone in its deeper notes, and is therefore best adapted to the carrying of the middle voices in the orchestra. The high tones of the *A*-string have a thin and slightly nasal sound and are always, when obtained from the violin, brighter, sharper and more beautiful. We employ the viola frequently for strengthening the violin; in unison when the latter plays in a low position, and in octaves when in a high position. Likewise, we often allow the viola to strengthen the bass; partly in unison and partly in the higher octave as shown in the following:

BEETHOVEN, Symphony No. 3, Finale.

Presto.

161.

1st
Violins.

2nd
Violins.

Violas.

BEETHOVEN, Second Symphony, First Movement.

Allegro con brio.

162.

Violas.

Violoncello
and
Double Bass.

By a weak employment of the upper voices in the orchestra,
the viola can lead the bass alone.

FELIX MENDELSSOHN-BARTHOLDY, Overture to "Midsummer Night's
Dream".

Allegro di molto.

163a.

1st Violins. *Divisi pp stacc.*

2nd Violins. *Divisi pp*

Violas. *pp pizz.*
pizz.

The first system of musical notation consists of five staves. The top four staves are grouped by a brace on the left and are in treble clef with a key signature of three sharps (F#, C#, G#). They contain continuous sixteenth-note passages. The bottom staff is in bass clef with a key signature of three sharps and contains a more sparse melody with some rests.

The second system of musical notation also consists of five staves. The top four staves are in treble clef with a key signature of three sharps and feature sixteenth-note passages, some with slurs. The bottom staff is in bass clef with a key signature of three sharps and contains a sparse melody. The word *arco.* is written above the bottom staff, indicating that the instrument should be played with the bow.

&c.

KARL MARIA VON WEBER, "Der Freischütz".

163 b.

Adagio.

Soprano.

Lei - se, lei - se from - me Wei - se,

4th Violins.*Divisi con sordini.*2nd Violins.

Viola.

pp

schwing' dich auf zum Sternen - krei - se

&c.

This musical score features four staves. The top staff is a vocal line in treble clef with a key signature of two sharps (F# and C#) and a 2/4 time signature. It contains the lyrics "schwing' dich auf zum Sternen - krei - se". The bottom three staves are for stringed instruments, also in treble clef with the same key signature and time signature. They contain melodic lines with various ornaments and trills. A bracket on the left groups the bottom three staves together. The notation includes many slurs, ties, and dynamic markings.

In the stringed quartet we quite frequently find that the viola takes the bass, but only occasionally when the violoncello leads the melody at a distance from the bass.

The low tones of the C-string of the viola exhibit suitability for the leading of the bass.

BEETHOVEN, Quartet (F-major, op. 59, No. 4).

Adagio molto e mesto.

164.

1st Violin.

2nd Violin.

Viola.

Violoncello.

This musical score shows the first four staves of a quartet: 1st Violin, 2nd Violin, Viola, and Violoncello. The key signature is three flats (Bb, Eb, Ab) and the time signature is 2/4. The tempo/mood is "Adagio molto e mesto". The notation includes various musical symbols such as slurs, ties, and dynamic markings like "p" (piano). The 1st Violin part starts with a trill. The staves are grouped by a large bracket on the left.

The musical score consists of two systems, each with four staves. The first system begins with a *cresc. p* marking on the first and second staves, and a *cresc. p* marking on the third staff. The fourth staff features a trill (*tr*) on a note. The second system begins with a *cresc.* marking on the first staff, followed by a *morendo.* marking on the second staff. The third staff has a *cresc.* marking, followed by a *morendo. &c.* marking. The fourth staff has a *cresc.* marking, followed by a *morendo.* marking. The score is written in 3/4 time and B-flat major.

As a solo instrument, the viola is only seldom considered in concert compositions. Yet it is occasionally used in the orchestra as an obligato instrument in a very characteristic manner. We will only call attention to the "viola obligato" of the "Romance and Aria" ("Once, when, my poor aunt was dreaming") from WEBER's "Frei-schütz". The introduction of the solo viola gives in a comic, parody-like manner the expressions of fright and horror; in the recitative following the "romanza", it expresses cordial entreaty, and in the *allegro* of the "aria" it exhibits courteous and charming nimbleness.

In ROB. SCHUMANN's "Paradise and Peri", the semiquaver (♪) movement of the song of the Peri is given by the viola (No. 4, $\frac{6}{4}$ Time) — "I know that the urns are filled with valuables" — and produces an effect of peculiar fictitious character. In the second theme of the *B* flat major symphony (op. 38, publ. by Breitkopf and Härtel) by ROB. SCHUMANN; the accompanying figures of the viola, produce a mysterious, whispering effect:

ROB. SCHUMANN, op. 38.

Allegro molto vivace.

165.

Clarinet.

Bassoons.

Violas.

The musical score for measures 165-167 shows three staves. The top staff is for Clarinet, the middle for Bassoons, and the bottom for Violas. The Clarinet and Bassoon parts are in 2/4 time, while the Viola part is in 6/4 time. The Clarinet and Bassoon parts are marked 'p dol.' and the Viola part is marked 'p'.

The musical score for measures 168-170 shows three staves. The top staff is for Clarinet, the middle for Bassoons, and the bottom for Violas. The Clarinet and Bassoon parts are in 2/4 time, while the Viola part is in 6/4 time. The Clarinet and Bassoon parts are marked '&c.' and the Viola part is marked 'p'.

The tremolo on the low tones of the viola characterize the gloomy moods. So RICH. WAGNER allows the melancholy melody of the violoncello, which expresses the desperation of Telramund, to be specially accompanied only by the viola. The chords of the horns and bassoons complete the gloomy and evil impression:

RICH. WAGNER, "Lohengrin", Second Act, 1st Scene.

166.

Andante.

Horns.

divisi.

Violas.

pp

pp

pp

Violoncello.

Bassoons.

p

&c.

When we combine the viola with the violoncello in the tenor or baritone position, we can produce an exceedingly charming, sweet sounding melody. We will consider the following passage from the second movement of the fifth symphony of BEETHOVEN:

167.

Andante con moto.

1st Clarinet Solo.

4th and 2nd Violins.

Violas
and Violoncellos
in Unison.

Double Basses.

f

p

pizz.

p dolce

pizz.

Oboes
and 2d Clar. *f* *p*

&c.

Bassoons

C-B.

This musical score consists of four staves. The top staff is for Oboes and 2nd Clarinet, starting with a forte (*f*) dynamic and ending with a piano (*p*) dynamic. The second staff is for Bassoons. The third staff is for C-B. The fourth staff is for C-B. The music is in 3/4 time and features a variety of rhythmic patterns and dynamics.

In chamber music style the characteristicness of the viola is much more frequently brought forth than in orchestral movements. ROB. SCHUMANN employs very successfully in his quartet (*E-flat major*, op. 47, Pub. by Breitkopf and Härtel, Leipzig), the pure, modest and sincere tones of the instrument, for the leading of the melody:

Andante cantabile.

168. *mf*

&c.

This musical score consists of three staves. The first staff is for Viola, starting with a mezzo-forte (*mf*) dynamic. The second and third staves are for other instruments. The music is in 3/4 time and features a variety of rhythmic patterns and dynamics.

Of compositions in which the viola as solo instrument has quite a prominent share; we give here the "Concerted Symphony" for violin and viola; with the accompaniment of two violins, viola, bass, two oboes and two horns (No. 16, 136 of Breitkopf and Härtel's

171.  is designated as the $\frac{1}{2}$ Position.

 , , , , 1st ,


 , , , , $1\frac{1}{2}$,

 , , , , 2nd ,

 , , , , 3rd ,

 , , , , $3\frac{1}{2}$,

 , , , , 4th ,

Higher upwards we can employ the thumb which then gives us the five fingers of the left hand at our disposal on the finger-board. The sign for the employment of the thumb is indicated thus .

Although in orchestral movements the violoncello mostly has the leading of the bass in combination with the double-basses, it also is well adapted, in delicate movements (which frequently occur) to the leading of the melody in the tenor position; — as is evident from Ex. 167 — above which we should rarely exceed, in orchestral movements.

The sound of the instrument is always of a masculine nature; the lowest strings are of powerful strength and the higher tones especially of the A-string are fervent and penetrating. Therefore the violoncello of the concert and opera orchestra is more employed for expressive solo-passages than other instruments. As a familiar example we give in the following quotation, the introduction of the Cavatina of Agatha:

KARL MARIA VON WEBER, "Der Freischütz", Act II, Second Scene.

172. *Adagio.* 

The technique of the violoncello, is to-day developed to such great extent, that our younger virtuosi can execute with perfect facility and certainty (in a corresponding manner) all that is practicable on the violin. All kinds of double notes, trills, runs and arpeggios succeed as well on one instrument as the other. Regarding the double notes we perceive, that, whilst the same become more difficult in the high positions of the violin; on the contrary, they are very much easier on the violoncello, as the large stretches which are necessary with the low notes, become much smaller when high positions are employed. The most frequently employed double notes are sixths; those of thirds and octaves are more difficult. In orchestral passages we renounce all double notes with the exception of those chords which are given with the down-bow.

On the other hand, those chords are easy which contain a pure fifth or those by which we can use the open strings, *e. g.*:



The different kinds of bowing are the same as for the violin, and an extensive movement in light staccato is more successful on the violoncello (although the bow is heavier) than on the violin.



The harmonics on this instrument sound well; are very extensively employed in solo-compositions; and are easy, in consequence of the great length of its strings. We can scarcely recall a single modern violoncello solo of moderate time, that does not end with a high and long sustained harmonic note. The effect is occasionally admirable, especially when the respective string is tuned purely. The artificial harmonic we obtain in the same manner. The violoncellos are also frequently divided in orchestral movements; they can be separated in many ways. The simplest method is when some violoncellos are led in unison with the double-basses and others in the higher octave, or take an independent voice.

Sometimes we do not allow them to carry the bass, but give them two or three independent voices. The tone effect of several violoncellos, specially in a moderate movement is occasionally very

excellent. The first example we give illustrating this, is from the beautiful opening of the overture to "William Tell" by Rossini. Here we find five different violoncello parts. When several violoncello parts are combined with several viola voices, in a moderate movement, we bring about a serious solemn and consecrated expression.

The great length of the strings, gives the pizzicato of the violoncello in the lower tones and especially with the open strings, much more sound than is the case with violin and viola. The broken chords *piano* are especially delicate and harp-like in sound:



A very good effect is obtained by the pizzicato of the violoncello, when leading the bass and accompanied by the soft upper voices; but particularly (as in Ex. 477) when it has a figured bass. Of course the motion must only be moderately fast. The slightly echoing sound of the long strings render the pizzicato of the violoncello less dull and acute than those of the viola and violin. By the manifold employment of the violoncellos and double-basses *pizzicato* in the orchestra, much sound is produced; but the motion must be correspondingly slow:

176. BEETHOVEN, Quintet, Op. 29.

Adagio molto espressivo.

1st Violin.  Musical notation for 1st Violin part of Example 176. The notation is on a five-line staff with a treble clef, showing a series of notes and rests. The instruction *p mezza voce* is written below the staff.

2nd Violin.  Musical notation for 2nd Violin part of Example 176. The notation is on a five-line staff with a treble clef, showing a series of notes and rests. The instruction *p* is written below the staff.

1st Viola.  Musical notation for 1st Viola part of Example 176. The notation is on a five-line staff with a treble clef, showing a series of notes and rests. The instruction *p* is written below the staff.

2nd Viola.  Musical notation for 2nd Viola part of Example 176. The notation is on a five-line staff with a treble clef, showing a series of notes and rests. The instruction *p* is written below the staff.

Violoncello.  Musical notation for Violoncello part of Example 176. The notation is on a five-line staff with a bass clef, showing a series of notes and rests. The instruction *p pizz.* is written below the staff.

First system of musical notation, measures 1-4. The score consists of five staves. The top staff is in treble clef with a key signature of one flat (B-flat). It contains a melodic line with eighth and sixteenth notes, ending with a trill (tr) on the fourth measure. The second staff is also in treble clef with a key signature of one flat, containing a similar melodic line. The third and fourth staves are in alto clef with a key signature of two flats (B-flat and E-flat), containing a lower melodic line. The fifth staff is in bass clef with a key signature of two flats, containing a bass line. Dynamic markings include accents (>) and slurs over the notes in measures 2, 3, and 4.

Second system of musical notation, measures 5-8. The score consists of five staves. The top staff is in treble clef with a key signature of one flat, starting with a *cresc.* marking and ending with a *sf* (sforzando) marking. The second staff is in treble clef with a key signature of one flat, starting with a *cresc.* marking and ending with a *sf* marking followed by a *p* (piano) marking. The third staff is in alto clef with a key signature of two flats, starting with a *cresc.* marking and ending with a *sf* marking followed by a *p* marking and the text "&c.". The fourth staff is in alto clef with a key signature of two flats, starting with a *cresc.* marking and ending with a *sf* marking followed by a *p* marking. The fifth staff is in bass clef with a key signature of two flats, starting with a *cresc.* marking and ending with a *sf* marking followed by a *p* marking. Dynamic markings include *cresc.*, *sf*, and *p*.

177. BEETHOVEN, Quartet, Op. 59, No. 3.
Andante con moto quasi Allegretto.

1st Violin.

2nd Violin.

Viola.

Violoncello.

sp *dim.*

sp *dim.*

sp *dim.*

sp pizz. *dim.*

sempre dim. *pp*

sempre dim. *pp*

sempre dim. *pp*

sempre dim. *pp*

sempre dim. *pp*

sp

p

sp

Detailed description: This is a musical score for a string quartet, specifically measures 177 through 184 of Beethoven's Quartet, Op. 59, No. 3. The score is arranged in four systems, each containing staves for the 1st Violin, 2nd Violin, Viola, and Violoncello. The key signature is one flat (B-flat major or D minor), and the time signature is 3/8. The first system (measures 177-180) shows the beginning of a phrase with dynamics *sp* (sforzando) and *dim.* (diminuendo). The second system (measures 181-184) continues the phrase, with the Violoncello part marked *sp pizz.* (sforzando pizzicato). The third system (measures 185-188) features a *sempre dim.* (sempre diminuendo) instruction across all parts, leading to a *pp* (pianissimo) dynamic. The fourth system (measures 189-192) shows a change in texture with some parts resting and others playing, marked with *sp* and *p* dynamics.

The following (Ex. 478) shows the different fullness of sound, of the different instruments *pizzicato*, and the possible degree of rapidity of motion:

BEETHOVEN, Quartet, Op. 74, 4th Movement.

178.

Allegretto.

arco.

The following (Ex. 179) illustrates the *pizzicato* of the violoncello in combination with the double-basses (which sound an octave lower than written), and the *pizzicato* of the violas which are situated an octave higher in such a manner that they strengthen the bass:

179.

BEETHOVEN, Second Symphony, Finale.

Allegro molto.

1st Violins.

2nd Violins.

Violas.

Violoncellos
and Double-
basses.

The literature of solo-compositions for the viola is as scarce as the same are plentiful for the violoncello. We possess a great number of concertos for violoncello by HAYDN, ROMBERG, MOLIQUE, ROB. SCHUMANN, ROB. VOLKMANN, CARL REINECKE, GOLTERMANN, SAINT-SAËNS, CHARLES DAVIDOFF and JULIUS KLENGEL. The last named, who as a virtuoso, surpasses such great artists as DAVIDOFF and PIATTI; possesses at the same time, a very distinguished talent for composition — and he is still in his youngest years — not only for concertos of his own instrument, but particularly also in earnest chamber music, namely, a Suite for violoncello and pianoforte (op. 4), Quartet for stringed instruments (op. 22), Sonata for pianoforte and violoncello (op. 23), Serenade for stringed orchestra (op. 26) and many other brilliantly worked compositions. All the works of JULIUS KLENGEL appeared previous to this as publications of Breitkopf and Härtel. In chamber music the violoncello can unfold all its excellence and superiority of tone. We find in the classics as in the modern literature, a vast number of sonatas for pianoforte and violoncellò. The tender, warm and hearty tone of the violoncello is made prominent by the brilliant tone of the pianoforte. In this combination it is but seldom employed for strengthening or leading the bass, for it steps forth independent of its partner and exhibits its superiority as a melodic instrument. Both instruments combine in such a manner as to strengthen and render the tone effect complete. This is likewise the case in the trio for pianoforte, violin and violoncello, where both stringed instruments move opposite to the pianoforte and all combine to render a complete whole. In stringed trio for violin, viola and violoncello (now more extended as a musical form than were the same class of works by MOZART and BEETHOVEN), as is the case in the stringed quartet; the violoncello gives a sonorous bass to the weaker instruments and is also quite frequently — as example 164 illustrates — employed for leading the melody. However, we must not exceed the real tenor position. In Ex. 164, the G-clef for the violoncello is employed in the old manner, *i. e.*, the notes are to be played an octave lower than written. When we write higher in the cantilena and go into the real soprano position; then the violoncello loses part of its masculine tone and becomes slightly nasal in the highest position, sharp and penetrating, in case these notes are not executed by a good player and on an excellent instrument. In some cases the fourth string *C* can be tuned to the *B-flat* directly below. ROB. SCHUMANN, demands this in his quartet (op. 47, Third movement), and allows for this tuning *fifteen* measures rest, *andante cantabile* ($\text{♩} = 84$).

In conclusion we give here several movements from modern

concert compositions, by which the scholar will see intuitively to what high degree the *technique* of the violoncello of the present day has developed. The following passage (Ex. 480) written in the G-clef, is given in its natural pitch, i. e., as an 8-foot tone:

CHARLES DAVIDOFF, Concerto, Op. 44, First Movement.

Allegro.

180.

From the same movement:

181.

Trills and complex fingerings are indicated throughout the first three staves. The fourth staff is marked *ff* *riten.* and concludes with *&c.*

In a different way is the following passage still more difficult (Ex. 182, from the first movement of the second concerto of JULIUS KLENGEL, op. 20):

Allegro non troppo.

182.

The score for Example 182 consists of four staves. The first three staves are in treble and bass clefs, showing complex fingerings and trills. The fourth staff is a single treble clef line with a *mf* dynamic and *riten.* marking, ending with *&c.*

Measures 181-185 of a musical score for stringed instruments. The score is written in bass and treble clefs. Measures 181-184 feature complex, rapid sixteenth-note passages with various accidentals (sharps, flats, naturals). Measure 185 shows a grand staff with a piano (pp) dynamic, featuring a series of ascending and descending sixteenth-note runs, with fingerings 2, 3, 2, 3 indicated above the notes. The piece concludes with a double bar line and the text "&c."

The beginning of the scherzo from the same concerto, of JULIUS KLENGEL's, offers the greatest difficulty:

Allegro molto vivace.

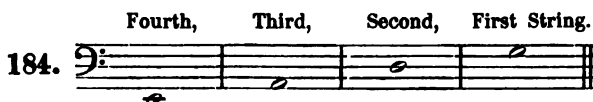
183.

Measures 183-185 of a musical score for stringed instruments. Measure 183 is in 6/8 time, marked *pp* (pianissimo), and features a series of sixteenth-note runs with fingerings 1, 2, 3, 4 indicated above the notes. Measure 184 continues the sixteenth-note runs. Measure 185 features a series of sixteenth-note runs with fingerings 2, 3, 2, 3 indicated above the notes. The piece concludes with a double bar line.

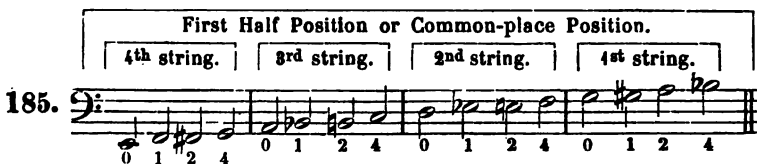


The Double-Bass (Ital. Contrabasso; Ger. Kontrabass).

§ 23. The largest of the stringed instruments is the double-bass; it has four strings, the lowest of which (fourth) is always spun with wire. With regard to economy (*i. e.*, as a wire spun string lasts longer) we also find the third string occasionally spun. The tuning is in pure fourths as follows:



Occasionally the fourth string is tuned to the *D* below. The instrument stands naturally in 16-feet tones, and sounds an octave lower than written. We take seven positions and the intermediate positions on the double-bass, and obtain then, a scale from great octave *E* to one-lined *a* of the scale, which sounds (one octave lower) from contra *E* to small octave *a*. The fingering is arranged thereto in the following manner:



This position is called the "first half" position or the ordinary position. The fingering of the same is arranged in the following manner:




The following passage from the scherzo of the Cmajor symphony of FRANZ SCHUBERT, is more difficult:

Allegro vivace.

190.  *cresc.* *ff* &c.

Moreover are skips — in case the movement is not too rapid — practicable on the double-bass. BEETHOVEN writes in the first movement of the Heroic symphony the following skips for the double-bass:

Allegro con brio.

191.  *p* *sfr* &c. *sfp*

The tone of this instrument is not so strong, therefore, in orchestral movements, we mostly lead the double-basses with the violoncellos; the former strengthening the latter an octave lower. We never employ the mute for the double-bass, and never give it double-stops.

Such treatment of the double-bass in the orchestra, whereby it leads the bass alone, is never good.

We only advise this to be employed in sustained passages *piano*. A division of the double-basses is not always employed.

The pizzicato of the low tones, in consequence of their length, sound well on the double-bass; but specially so are the open strings of good effect. The sound of the double-basses when employed

manifold in this manner, resemble a weak tympani blow as we supply here. WEBER does the same in the introduction to the overture of "Der Freischütz". The double-bass in the first place strengthens the same and then supplies the blow of the tympani.

192.

Adagio.
Solo.

Tympani. *pp*

Double-Bass without Violoncello. *pizz. pp mf*

Rapid, detached (staccato) passages yield no good effect when they lie deep, as the tones do not sound so easy. The following from the finale of the Fourth Symphony (*d*-minor, op. 420) of ROS. SCHUMANN is in the beginning not always clear, though the violoncellos and the bassoons double the double-basses in the higher octave. We think that the accompaniment of the horns, trumpets and tympani render the clearness of the passage indistinct.

193.

Presto. a 2

Bassoon. *sempre f*

Violoncello and Double-Bass.

4 Horns. *p cresc.* &c

2 Trumpets. *p cresc.*

Tympani.

The following (Ex. 194) with no instrumental accompaniment, begins in a high position *forte*; in a passage of essentially less

lively time, such as this scherzo movement of the Fifth Symphony of **BEETHOVEN**, the basses and violoncellos always sound clear and distinct and receive their full value.



In the quartet, quintet, sextet and octet for stringed instruments, the double-bass only exceptionally takes part therewith. We will call attention to only one quintet for two violins, viola, violoncello and double-bass, by **GEORGE ONSLOW** (*g*-minor, op. 47). In other chamber music pieces, we find the double-bass occasionally employed and in such cases can lead the bass alone. But separate solos the bass will not lead, as in general this instrument is not adapted to such execution. The classical literature exhibits no concert pieces or concertos for double-bass. Of chamber music with double-bass, we mention here the septet for violin, viola, violoncello, double-bass, bassoon and horn by **BEETHOVEN** (*E*-flat major, op. 20); the octet for two violins, viola, violoncello, double-bass, clarinet, bassoon and horn of **FRANZ SCHUBERT** (*F*-major, op. 466); the septet for pianoforte, flute, oboe, horn, viola, violoncello and double-bass of **HUMMEL** (*d*-minor, op. 74); the septet for pianoforte, violin, viola, violoncello, double-bass, clarinet and horn by **IGN. MOSCHELES** (*D*-major, op. 88); and the Author's serenade for flute, two violins, viola, violoncello and double-bass (*D*-major, op. 80).

CHAPTER V.

CHAMBER MUSIC FOR STRINGED INSTRUMENTS.

Compositions for violin solo, duet for two violins, for violin and viola, the stringed trio.

§ 24. We have previously mentioned the compositions for violin alone by **JOH. SEB. BACH**; besides etudes (real practice pieces) we know of no other compositions for violin alone. Also are duets for stringed instruments (with the exception of those specially for

instruction) not composed by the modern composers. Of the earlier composers we mention here the duet for two violins by MOZART; moreover, MORITZ HAUPTMANN's Duos (op. 2, op. 46 and op. 47); and those of LOUIS SPOHR (op. 3, op. 9, op. 39 and op. 67). MOZART has also written two duets for violin and viola (No. 4, *G*-major, No. 2, *B*-flat major, Series XV of the Breitkopf and Härtel, Mozart Publications).

The taste for composing stringed trios (violin, viola and violoncello) does not appear to exist in our day. MOZART has written a *Divertimento* (*E*-flat major) for these three instruments; of BEETHOVEN's we possess besides the three trios (op. 9, No. 4, *G*-major; No. 2, *D*-major; and No. 3, *c*-minor — the last of which is a highly important work), the exceedingly charming and attractive *Serenade* (*D*-major, op. 8), a favorite piece of all chamber music associations.

The Stringed Quartet.

The most important form of chamber music is the stringed quartet; in this class of music the composer cannot give the splendid and magnificent colouring effects as is possible in orchestral movements, but only in such a manner (speaking comparatively) as pencil marks are to colours. In the stringed quartet, the composer only knows of the four-voiced movement; the mighty effect of the polyphonous movement remains excluded. When the single chords can be strengthened by the double notes of the four instruments, the tone effect is never so powerful and full as the same are in orchestral movements by the manifold employment of the same instruments. A movement, lead in more than four voices, is contrary to the character and nature of the stringed quartet. We perceive therefrom that the performance of a long and fully continued movement of more than four voices and of considerable difficulty, sounds always thick and overburdened; the clearness of the movement is injured and the effect is by no means the same as when the same movement is performed by more than four instruments. We much oftener find in the stringed quartet only two or three voices employed, and this is all the more natural, as with this class of musical compositions, each instrument must move with a certain independence. But this is by no means to be understood that each instrument must move in a full independent melody; as is the case with the strict style of fugue. Naturally the first violin always preserves a certain sovereignty; the violoncello the leading of the bass; the second violin and viola the leading of the middle voices.

The single instruments can also conveniently change their character (rôle); the first violin can undertake the accompaniment or remain silent; each of the other instruments can step from their subordinate positions and take the leading of the melody or characteristic motives, and especially introduce the principal theme, in such a way that it receives its full value as a movement. So BEETHOVEN in his quartet (op. 59, No. 4) gives the violoncello the principal theme accompanied by the second violin and viola in the first eight measures, then for the first time the first violin takes the theme and continues it, while the violoncello steps as a bass to the accompaniment.

BEETHOVEN, Quartet, op. 59, No. 4.

Allegro.

195.

1st Violin.

2nd Violin.

Viola.

Violoncello.

Violin I: *p*

Violin II: *p*

Viola: *p*

Violoncello: *p*

&c.

In the finale of the same quartet the violoncello first carries the principal theme, only being accompanied by the trills of the first violin. After the first eight measures the above mentioned instruments change their rôles, and the second violin and viola give the filling harmony.

196.

Thème russe.

Allegro.

1st Violin.

2nd Violin.

Viola.

Violoncello.

1st Violin: *tr* *tr tr*

2nd Violin: *sempre p*

Viola: *sempre p*

Violoncello: *sempre p*

tr tr tr tr

p

p

tr

sempre p

&c.

tr tr tr tr tr tr

That also two instruments can lead independent melodies at the same time, can be seen from example 164. In this example the first violin and the violoncello are the privileged instruments; but we also find occasionally numerous other examples where the second violin or viola takes the important part. Sometimes (but rarely) it may possibly occur, that the first violin may take the bass to the second violin, in a two-voiced phrase for a short while. The form of most stringed quartets is that of the large sonata in four parts. Only **BEETHOVEN** departs from this in his last quartet. The development part of the largest movement, can in the thematically worked composition, be in figures of more extended contrapuntal formation; as is possible with the sonata for pianoforte, while the independent leading of the voices is more distinct and can be more readily perceived. When the respective instruments also belong to one and the same family, so is the difference in tone of the same, still sufficiently marked and the leading of the single voices are sharply and definitely distinguished from one another. But herein lies the charm, namely, that a limited sustained instrumentation is

never so rich in colour as the orchestral; but nevertheless a great quantity of fine gradation of colouring is possible. As we have already remarked (see Exs. 154 and 155) regarding the difference in tone of a melody, according to whether it is played on the G- or the E-string; how much more is this the case with the different stringed instruments which collectively, command a compass of over five octaves, and their character of tone being all different. In the following (Ex. 197) we find an alteration in the time; therefore we see that one and the same theme can appear in an entirely different light. So BEETHOVEN in the finale of the F-major quartet (op. 59, No. 4), gives the same Russian theme as shown above (Ex. 196), with the following instruments, towards the end of the movement in passing slow time:

197.

Adagio ma non troppo.

1st Violin.

2nd Violin.

Viola.

Violoncello.

sempre perdendosi ppp

sempre perdendosi ppp &c.

sempre perdendosi ppp

The slightly intoxicated, humorous, frolicsome character, which the Russian melody (Ex. 496) exhibits in its first performance; softens into the incomparable beautiful sound effect (Ex. 497) of a sacred, sincere and pleasing parting mood.

Nearly all the great masters such as HAYDN, MOZART, BEETHOVEN, SCHUBERT, CHERUBINI, MENDELSSOHN and SCHUMANN have enriched the literature of the stringed quartet with the most excellent works and in this class of compositions have written preferably. It is unnecessary for the author to call the attention of the scholar to this rich and precious treasure; he also most urgently recommends the study of the classical quartet literature. Also have modern composers, such as RUBINSTEIN, RAFF, BRAHMS, VOLKMANN, BRUCH, REINECKE &c. produced admirable works of this class of compositions.

The Stringed Quintet, the Sextet, the Octet and the Stringed Orchestra.

The orchestration of the stringed quintet is nearly always the same, it consists of two violins, two violas, and violoncello. For this grouping of the instruments MOZART has written his celebrated quintets in *g*-minor, *D*-major, *E*-flat major, *C*-major; likewise have the quintets by BEETHOVEN (*C*-major, op. 29), by FELIX MENDELSSOHN-BARTHOLDY (*B*-major, op. 87) and many by ONSLOW been written. As an exception (containing a part for double-bass) we name the above mentioned quintet of ONSLOW (op. 47) which contains a very difficult part for double-bass, besides two violins, viola and violoncello; and the charming quintet (*C*-major, op. 463) by FRANZ SCHUBERT, for two violins, viola and two violoncellos. As the last we name an excellent quintet by F. OTTO DESOFF (in *G*-major, op. 40) published by Fr. Kistner, Leipzig.

Sextets for two violins, two violas and two violoncellos have in modern times been written by BRAHMS, RUBINSTEIN and DAVIDOFF.

Under the eight-voiced works for stringed instruments we find two different classes; they are the "double quartet" and the "octet". The instrumentation is, in both kinds the same, and consists of four violins, two violas and two violoncellos. The double quartet contains two independent stringed quartets, which move partly together and partly intermingled with one another. LOUIS SPOHR is to our knowledge the first and only great master who has written the most works in this class of compositions (*d*-minor, op. 65; *E*-flat major, op. 77; *e*-minor, op. 87; and *g*-minor, op. 436).

In the octet the above named instruments are placed collectively in a small orchestra. The most prominent work of this class

is MENDELSSOHN's octet (*E-flat major*, op. 20), which likewise, is distinguished by its nobleness of intellectual contents, and also by its well sounding and charming instrumentation. Also JOHANN SVENDSEN's Octet (op. 4), and the Octet by NIELS W. GADE; the both of which are very distinguished. In the stringed orchestra the double-bass moves in manifold employment to the numerous employment of the remaining stringed instruments. Of this class we name as the most important modern works, the "Suite" in canonical form of OTTO GRIMM and ROB. VOLKMANN's "Serenade". Small pieces have lately appeared, such as; "Suite" (from Holberg's Time) by EDWARD GRIEG and "Twelve Tone Pictures" for stringed orchestra by CARL REINECKE (op. 46, 47, 63, 75, 154, 173, 177 and 194); and the same master's generally known introduction to the fifth act of the opera "Manfred", in which the whole stringed orchestra plays muted from the thirteenth measure, thereby producing an extraordinary sound effect.

CHAMBER MUSIC FOR STRINGED INSTRUMENTS AND PIANOFORTE.

The Sonata for Pianoforte and Violin.

§ 25. Although the violin is better adapted to leading the melody, and the pianoforte more for the harmonic accompaniment; in the sonata for pianoforte and violin both instruments are allowed the same privileges. Neither one nor the other executed part is permitted to lead the melody alone, or is it entrusted with the accompaniment in the same manner. Therefore, must not only the theme, but also the accompanying figures, be found to change accordingly from one instrument to the other, or be performed by both conjointly. In case that occasionally one of the two instruments must maintain a subordinate passage, it should never be permitted for too long a time.

Examples illustrating this are here unnecessary; each of the classical masters have composed sonatas for the above mentioned instruments which show us the simultaneous and mutual employment of both instruments.

The Sonata for Pianoforte and Violoncello.

We see in the sonata for pianoforte and violoncello exactly the same fundamental principles observed which we have learned in the sonata for violin and pianoforte, and we recommend the works

of BEETHOVEN and MENDELSSOHN as the classical models of this style. Of the sonatas for pianoforte and viola, we can at this instant, only recall to our mind the previously mentioned work of ANTON RUBINSTEIN.

The Trio for Pianoforte, Violin and Violoncello.

One of the most attractive classes of chamber music is the trio for pianoforte, violin and violoncello. Here we combine three instruments, whose character of sound is different. Each instrument is in its independent characteristicness very efficacious; we can, besides, have the two stringed instruments of the same family move opposite to the pianoforte, soon alternate, and then combine with these to move together in mutual efficacy. We now consider the most beautiful and magnificent trio (*B-flat major*, op. 97) that we possess of BEETHOVEN, in which we chiefly see how the exalted master allowed the three instruments to move in a characteristic manner. In the first seven measures the pianoforte alone carries the principal theme.

At the half-close in eight measures, the violoncello begins; and at the tenth measure the violin joins it. Both instruments return then to the principal mode. The violin takes the first theme (measure 14) and is accompanied by the violoncello in an independent manner, while the pianoforte gives the harmony thereto in eighth notes. With the delayed cadence (measure 24) a new motive begins, the violin makes a skip downwards of a sixth, and in the twenty-second measure the pianoforte makes another motive prominent by embellishing it with trills, while in a more extended progress of the movement, in the developing portion, the above named instruments return to the original motive in a conspicuous manner. This motive is taken from the seventh measure of the theme.

The second principal theme (compare § 44) appears in the mode of a minor third lower, namely, *G-major*, and is given first by the pianoforte alone, but is soon taken up by the other instruments, as in general all the essential constituent parts of the movement are distributed among one or the other, or by two and also three instruments are manipulated at the same time.

In the second movement of the scherzo the violoncello begins; the first sixteen measures are occupied by a dialogue between the two stringed instruments and directly following, the pianoforte first begins.

In the *andante cantabile* of the third movement we find a theme which is first carried by the pianoforte and afterwards is

repeated by three instruments conjointly. In the variations directly following, first one instrument and then the other is significantly brought forth; but they mostly work together.

The analysis of other examples will lead us entirely too far, as the suggestions given here are quite sufficient.

For the study of this class of compositions we recommend especially the trios of **BEETHOVEN**; in these older compositions we find the violoncello frequently (to use the expression, "stiefmütterlich" — as a step-mother) entrusted with only a supporting bass or a supporting accompanying part and appearing but seldom in an independent manner. From **BEETHOVEN** we find that all the composers following, such as **MENDELSSOHN**, **SCHUMANN**, **RUBINSTEIN**, **VOLKMANN**, **REINECKE**, **BRAHMS**, **GERNSHEIM** &c. have in their trios always treated the violoncello as an instrument of the same importance as its partners.

The Quartet and Quintet for Pianoforte and Stringed Instruments.

The arrangement of the stringed instruments in the quartet, has in all the works known to us, consisted of a violin, viola, violoncello and piano; in the quintet, of two violins, viola and violoncello. In both classes of compositions the stringed instruments move partly single, but mostly with the pianoforte, either opposite to, or together in joint execution; whereby the one or the other soon takes the accompanying part, or a single instrument is specially privileged and allowed to step forth alone. The best known classical model of this kind of chamber music is **MOZART**'s quartet in *g*-minor. Less commonly known is the same masters second quartet in *E*-flat major. **BEETHOVEN** has written three such quartets (in *E*-flat, *D*- and *C*-major); the works in circulation of the more modern writers are **MENDELSSOHN**'s quartet (*B*-minor, op. 3) and that of **SCHUMANN**'s (*E*-flat major, op. 47). Also, still later composers as **BRAHMS**, **GERNSHEIM**, **RHEINBERGER** &c. have written many such excellent chamber pieces. If you will permit, at this place, we will also mention the Author's quartet (*c*-minor, op. 77, pub. by Fr. Kistner, Leipzig).

In modern times and also at the present day, we find that the quintet is much more frequently and partially performed than the quartet. We name first in order, the celebrated quintet of **ROS. SCHUMANN** (*E*-flat major, op. 44, pub. by Breitkopf and Härtel, Leipzig). Also the quintets of **BRAHMS**, **RUBINSTEIN**, **REINECKE**, and that of the Author's (op. 70 and op. 76) &c., which have all found a wide circulation.

CHAPTER VI.

THE WOOD-WIND INSTRUMENTS.

§ 26. The tone-color of the different instruments under this classification differs considerably; for we have the flute without a *reed*, the clarinet with a *single reed*, the oboe and bassoon with a *double reed*. In the tone of the flute and clarinet we find a certain harmonious affinity which differs greatly from the character of the tone of the oboe and bassoon. In giving a description — as far as it is possible by words — of the character of tone, in the different registers of this instrument; it is sufficient for the present, to say that the instruments without and with a reed (single) give an open, free tone, and those with double reed give an oppressed, sharp and piercing tone.

The Flute (Ital. Flauto traverso; Germ. Die grosse Flöte).

This instrument has a compass from one-lined \bar{c} to four-lined \equiv c , with all the intermediate chromatic intervals. Recently flutes have been manufactured which possess the small octave b ; however, we cannot count upon this tone for it is not possessed by the flutes constructed on the BOEHM method, which we find employed in Belgium, France, England and America. Within this extended gamut we reckon four distinct registers. The lowest register includes the complete octave of one-lined notes, which in sound are rather hollow and feeble. WEBER and WAGNER employed this lower register, for the portrayal of mystery, anxiety and gloom.

In the following (Ex. 198) appears the thirds taken by two flutes while Caspar mixes the ingredients for the magic bullets, in the Wolf's Glen scene ("Freischütz", Act II).



In the next quotation we present the passage from RICH. WAGNER's Lohengrin (Act II), where Elsa asks "Wo calls" &c. which is likewise accompanied by two flutes.

199.

2 Flutes.

Solo.

pp

Elsa.

Wer ruft? Wie schauerlich und klagend er-

tönt mein Na-me durch die Luft.

The notes of the two-lined octave of the flute, from \bar{E} -flat or \bar{E} -natural, possess a mild, delightful and bright tone. In the following (Ex. 200), we call your attention to the first measure of the Overture to "Midsummer Night's Dream". The student who at any time has heard the two flutes of (Exs. 198 and 199) will immediately be able to estimate the distinction between the two registers, when he recalls them to his mind.

200.

First Register.

Second Register.

Weber.

Wagner.

Mendelssohn.

As the third register we may designate the octave from

. This register is best suited for the leading of the melody in an orchestral movement; besides, the high three-lined \bar{B} -flat is easily uttered in *piano*. The three-lined \bar{B} is a vigorous, bright and very beautiful tone; while on the contrary, the four-lined

\equiv
C sounds harsh and is not to be employed in *piano*, but in *forte* sounds a little shrill.

The two last mentioned tones are best suited to the actual *forte*. The leading of the melody, which we see in the following (Exs. 201 and 202) from Lohengrin, is especially adapted to the flute.

201.

Slow and solemn.

Flute.

p

p

cresc. - - - -

poco f *dim.* *p* *più p* &c.

202.

Slow.

Flute.

Clarinet.
 Oboe.
 Engl. Horn.

p

p dol.



In the orchestra we have two flutes; a first and a second. When the violin is moving between the one-and two-lined octave, in the *tutti* orchestra *forte*, we generally strengthen it by doubling it one octave higher with the first flute. But, when the violin is already in the higher position, we allow both flutes to sound in unison with the violin.

A very fine effect is produced when we double the violins by the flutes, in their low register (unisono), in a *piano* passage. The flute then softens the tone of the violin, thereby causing it to sound faint and gloomy. Which we illustrate by an extract from WEBER'S "Freischütz" (Act II) "Wolf's Glen Scene".

203.

Andante.

2 Flutes.

Bassoon.

1st Violin.

2nd Violin.

Viola.

Max.

Cello.

p

pp

pp

pp

pp

ge - spenst' - - ge Ne - bel-bil - der

pp

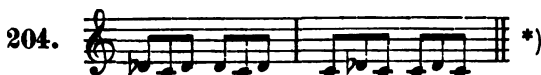
First system of a musical score, measures 1-4. The score is in 3/4 time and B-flat major. It features a piano (p) dynamic. The vocal line (soprano) has lyrics: "wal - len, be - lebt ist das Ge -". The piano accompaniment includes a treble and bass staff with various chords and melodic lines.

wal - len, be - lebt ist das Ge -

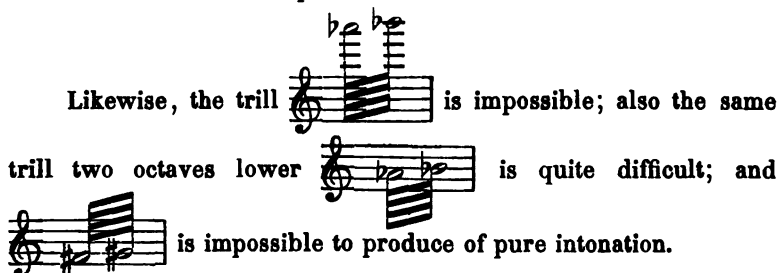
Second system of a musical score, measures 5-8. The score continues in 3/4 time and B-flat major. The vocal line (soprano) has lyrics: "stein, und hier". The piano accompaniment includes a treble and bass staff with various chords and melodic lines.

stein, und hier

Although we can easily produce upon the flute (in all keys), diatonic and chord-figures, trills, leaps of great extent, and the rapid repetition of the same note (by double tonguing) with facility; we caution you against the use of the following trills and figures.



This figure in a rapid movement is very difficult and the trill on the tones $\bar{c}-\bar{D}^b$ is impossible.



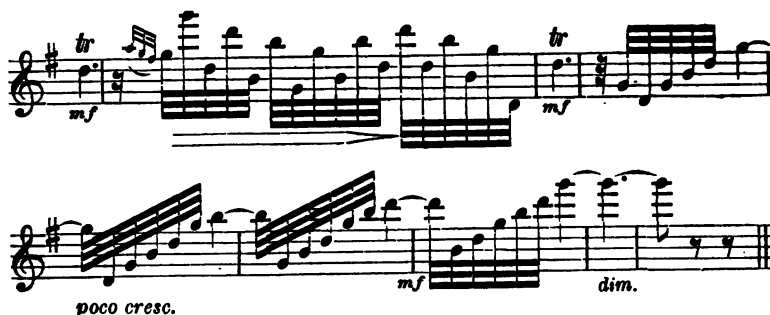
The flute is frequently employed in the orchestra as a solo instrument. In the following extract, we give one of the most charming solos for flute, from the Overture to "William Tell" by Rossini; from which the student will see what extraordinary agility and nimbleness the flute possesses for executing figures, variations and skips of great extent.

205. *Andante* ♩ = 76.

Flute. 

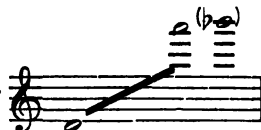



This page contains eight staves of musical notation. The music is written in treble clef with a key signature of one sharp (F#). The notation includes various musical symbols such as notes, rests, and dynamic markings like 'p' and 'mf'. There are also some unusual symbols, possibly indicating fingerings or ornaments, above many of the notes. The first staff begins with a treble clef and a key signature of one sharp. The second staff has a dynamic marking of 'mf' and a long horizontal line with a left-pointing arrow below it. The third staff has a dynamic marking of 'p'. The fourth staff has a dynamic marking of 'p'. The fifth staff has a dynamic marking of 'p'. The sixth staff has a dynamic marking of 'p'. The seventh staff has a dynamic marking of 'p'. The eighth staff has a dynamic marking of 'p'. The notation is complex, with many notes and rests, and some unusual symbols above the notes.




We observe from the foregoing quotation, that roulades of lengthy extent, both legato and staccato, must be interspersed with occasional short rests, during which the performer can take a fresh breath.

The Piccolo or Octave Flute (Ger. Die kleine Flöte)

possesses the compass of  with all the intermediate chromatic intervals; and sounds an octave higher than written. The lowest tones are not employed in the orchestra, for they cannot be heard in the *tutti* orchestra.

The higher tones of its compass, from  sound very acute, shrill and penetrating in a *forte* passage; and in a *piano* or *pianissimo* passage are mostly employed to portray gloomy situations.

In such a manner ROB. SCHUMANN uses the highest tones

 *pianissimo* for the appearance of the four old women (Scene from Goethe's "Faust", Part. II, No. 5).

In *forte* and *fortissimo*, the higher tones of the piccolo express wild joy.

206.

Piccolo.



The foregoing passage which we take from Caspar's song (WEBER's "Freischütz", Act I, No. 4), we presume is generally known. With this same motive WEBER portrays a "fiendish laugh of scorn" in the Aria of Caspar's (which directly follows song No. 4, Act I, spoken of above) where it is played by the piccolo, to the words "Revenge thy Triumph is nigh!"

The piccolo doubles the first violin (Aria of Caspar's) an octave higher. Of no less characteristic sound is the piccolo (*pianissimo*) where it doubles the first violin an octave higher with the words "umgibt ihn, ihr Geister mit Dunkel beschwingt" and produces a colouring of horrible gloom in this passage.



The piercing, wild shriek of the chorus of "Invisible Spirits" (as notated in Ex. 207) from WEBER's "Freischütz", Act II, No. 40 is mostly expressed by the two piccolos. The piccolo never fails to admirably represent the sublime effects of a furious tempest; which can be seen from the Entr'acte (Introduction to the third act) of "Medea", by CHERUBINI; "Pastoral Symphony" of BEETHOVEN &c. Passages of various kinds are used on the piccolo for giving almost natural colourings and conveying a clear idea of the howling wind and the torrents of rain in a musical composition.

MENDELSSOHN employs the piccolo very seldom indeed; however, when he wishes it for a characteristic effect, we find it occasionally employed, e. g: —

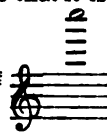
Overture, "Calm Sea and Pleasant Voyage".

Piccolo.

208. 

In the "Walpurgis Night", MENDELSSOHN employs the piccolo in a remarkable manner, with the words, "Kauz und Eule heul' in unser Rundgeheule".

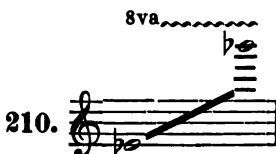
In conclusion we observe that it is the most practical to employ

the flute only to four-lined $\overset{=}{c}$  in a *forte* or *fortissimo* of the orchestra *tutti*; and for the notes which extend beyond this compass, it is best that we employ the piccolo.

In military music we employ two higher piccolos; such as, the "minor ninth piccolo" in *D-flat*; the tones of which sound a minor ninth higher than those of the flute; the "tenth piccolo" (which only seldom appears) in *E-flat*; the tones of which sound a tenth higher than on the flute. Both are transposing instruments. The tones



which are written for the "minor ninth piccolo" (one-lined \bar{d} to three-lined \bar{a} , in Ex. 209) actually sound as given in the following:




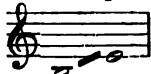
For the "tenth piccolo" in *E-flat*, the tones of (Ex. 209) would sound a tenth higher, as can be seen from the following:



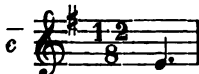
The Oboe (Ital. Oboe; Ger. Die Hoboe).

§ 27. Although the above possesses the smallest compass of all the wood-wind instruments, it is from the peculiarity of its tone, the most frequently employed instrument in the orchestra. Its tone is the most penetrating of the family of wood-wind instruments.

Its compass extends from  with all intermediate chromatic intervals; and perhaps in cases of necessity we may use the *F*, one tone higher. The few tones of the three-lined octave above $\bar{\bar{C}}$ - and $\bar{\bar{D}}$ -flat, are so piquant and sharp that it is best not to employ them in the Cantilena and most sparingly in a *forte* tutti.

The lower tones are of great strength, but not very agreeable in tone; and at all times sound prominently forth in a well filled orchestra. To express by words the quality of these tones is impossible, and those tones from  would be very difficult to describe, beyond saying that they are very cutting and sharp.

In the first measure of the "Freischütz" Overture, the sustained and swelling one-lined \bar{c}  and likewise the one-lined

\bar{c}  in the first measure of the Matthäus-Passion by BACH, are of very characteristic tone-color.

The most charming register of the oboe, is a little more than an octave in extent; reaching from one-lined \bar{g} to two-lined \bar{a} , and perhaps to $\bar{\bar{B}}$ -flat and *B*-natural, but at all events, ending with three-lined $\bar{\bar{C}}$.

The tone of this register is of a most characteristic, melodious nature; and its notes are especially delicate and likewise charming in tone.

The following extract we presume is generally known: —

212. BEETHOVEN, Symphony No. 3.
Marcia funebre.
Adagio assai. ♩ = 80.

Oboe. 

213. FR. SCHUBERT, Symphony in C-major.
Andante con moto.

Oboe. *Ima*

decresc.

214. ROB. SCHUMANN, Symphony Op. 64, C-major.
Adagio espressivo. ♩ = 76.

Oboe. *Solo.*

p cantabile *fp* *cresc.* &c.

But it is not the oboe of this tuning which we find employed singly in the three foregoing examples; we find it also employed in many different ways. In the prelude to the Ariette ("Freischütz", No. 7), WEBER employs the oboe in a delicate manner, to characterize the youthful cheerfulness and bright simplicity of the amiable Ännchen.

215. *Allegretto.*

Oboe.

In the above (Ex. 245) the oboe is used in a pleasing manner to express the playful roguishness of the innocent coquette, Ännchen. In older music especially French opera, the oboe is used to portray rustic and pastoral effects, and sometimes a herdsman's shawm (wooden trumpet). In a similar manner WEBER employs it in the waltz ("Freischütz", No. 3).

216.



Beethoven also employs this instrument as a rural one, in the scherzo of his Pastoral Symphony.

217.

Allegro $\text{♩} = 108.$

In a like manner ROSSINI employs the oboe as a herdsman's shawm in the following movement of his opera "William Tell", Act I:

218.

2 Oboes.

Allegro.

d 2.

2 Clar's in C.

2 Bassoons.

2

Triangle.

Cello.

Bass.

This block contains the musical notation for measures 218 through 222. The score is arranged in two systems. The first system includes staves for 2 Oboes, 2 Clarinets in C, 2 Bassoons, 2 Treble Clef parts (likely Flutes), Triangle, Cello, and Bass. The second system continues the notation for the 2 Treble Clef parts, Cello, and Bass. The tempo is marked *Allegro.* and the key signature has one flat (B-flat). The time signature is 2/4. The notation includes various musical symbols such as notes, rests, beams, slurs, and dynamic markings like *pizz.* (pizzicato) and *&c.* (crescendo).

Like all the other instruments of the wood-wind family the oboes are generally employed doubled in the concert and opera orchestra. We naturally give the first oboe the highest part (voice), and frequently entrust it with prominent solos. The second oboe takes the second part, in a suitable manner, except when the first oboe goes very high, then it is best that it doubles the first oboe one octave lower or takes a suitable lower interval, *e. g.* —

WEBER, Overture "Der Freischütz".

219. &c.

Oboe.

In the above (Ex. 219), the oboes in consequence of their characteristic sharpness of tone, stand out very prominently in the orchestra tutti (*forte*). Therefore, we would only advise the student to lead the oboes in unison, when he wishes a part specially prominent, *e. g.* —

WEBER, Overture to "Freischütz".

220.

Flutes.

Oboes and Clarinets.

1st and 2nd Violins.

Viola.

&c.

The harmony is greatly increased in strength by the sustained notes of the upper register of the oboe, *e. g.* —

WEBER, Overture to "Freischütz".

221.

Flutes and Violins.

Oboes.



Rapid slurred passages which are of good effect on the clarinet and flute, are very ineffective on the oboe, for they are entirely unsuited to it.

Variations of many forms are difficult on the oboe and we must not employ this instrument continuously, for it is absolutely necessary that the player have frequent rests for breathing. But movements such as the following are without difficulties: —

WEBER, "Freischütz", No. 7.

Allegretto.

Solo.

222.

Oboe.



On the contrary, we find the following extract from the finale of ROB. SCHUMANN's "Piano Concerto", difficult to perform: —

Allegro vivace $\text{♩} = 72$.

223a.

Oboe.



Still more difficult is the same movement which directly follows it, in which each note, sounds one tone higher —

223b.

Oboe.



and consequently employing the extreme notes of the oboe's register Slurred runs are in general, much more difficult to perform on the oboe than staccato. Some trills are difficult, others impossible; the last named we give in the following: —



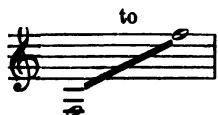
From the three-lined *C*-sharp upwards, every trill is impossible. Moreover the trills and trill movements in the following (Ex. 225) are difficult to produce: —



The English Horn (Ital. Corno Inglese; Ger. Das Englische Horn).

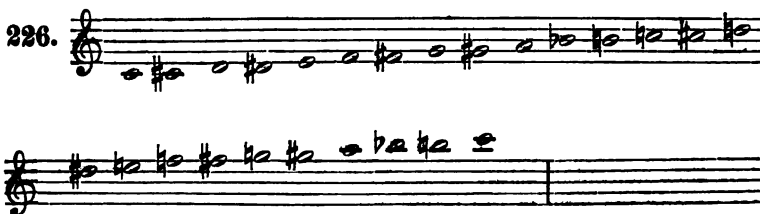
This instrument bears the same relation to the oboe, as the viola to the violin. The compass of this instrument extends from small octave *F* to two-lined \bar{C} ; yet the highest tones are seldom employed, for they are produced much easier and are of more pleasant sound on the oboe.

It is best that we restrict its compass to two octaves, from

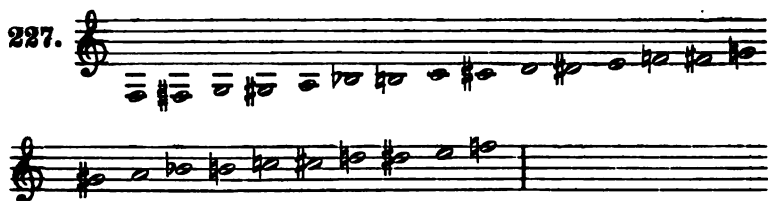


. All the intermediate chromatic tones within

this compass are practical. We write for this instrument a fifth higher than we wish it to sound: the author knows of only one exception to this notation (ROSSINI's, Overture to "William Tell"). Its scale as written in (Ex. 226) —



actually sounds as follows: —



The tone of this instrument is more energetic than that of the oboe; and its tone represents to a greater degree, expressions of heavy affliction, melancholy and grief.

The first quotation (Ex. 228) illustrates the manner in which MEYERBEER employed this instrument in "Robert The Devil": —

MEYERBEER, "Robert The Devil", Act IV, Cavatina.

Poco Andantino.

Solo.

228.

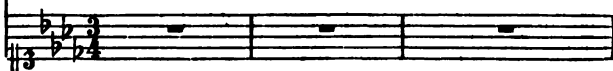
4 English
Horn.



Harp.



Isabella.



Ro-bert, Ro-bert, mein Ge-

lieb - - ter, mein Herz lebt nur, lebt al-
 lein durch dich, du

The English horn is occasionally employed as a rural instrument; such as the shawm or alpine horn (ROSSINI's, Overture to "William Tell"; ROB. SCHUMANN's, "Manfred" &c.).

In the above quoted cases, the English horn appears as an obligato (solo) instrument, in such a manner that its tone is only occasionally allowed to be heard, as it stands out so important.

MEYERBEER was the first one to use the English horn in this manner ("Robert"); it has also been employed more recently in the orchestra, but in a less remarkable manner. Through RICH. WAGNER this beautiful instrument has maintained a very prominent place in the orchestra. When used in combination with other instruments, its characteristic tone is less perceptible, notwithstanding its extraordinary power.

The following (Ex. 229) is adequate to make this clear to the pupil:—

229. MEYERBEER, "Hugenotten" Act 4, Cavatina.

Andante amoroso.

1st Violin. *ppp*

2nd Violin. *ppp*

Viola. *ppp*

English Horn. *p*

4th Clar. in B \flat .

2nd Clar. in A. *pp*

Bassoon. *pp*

II. Horn.

2 Horns in B. *pp*

Raoul. *dolce* tu l'as

Cello.

Bass. *pp*

p

pp

1st Horn.

p

dit, que tu m'ai - mes;

dol.

sfz

A musical score for woodwind instruments, featuring ten staves. The first three staves contain dense, rapid passages of music, likely for flutes or piccolos. The fourth staff has a more melodic line. The fifth and sixth staves show a mix of melodic and harmonic parts. The seventh and eighth staves are primarily harmonic, with some melodic fragments. The ninth staff contains the lyrics 'dans ma nuit' and 'quelle étoile a bril-'. The tenth staff is a bass line, likely for a bassoon or double bass.

dans ma nuit quelle étoile a bril-

16!

Je re-nais, c'est l'air pur des cieux

Imo.

&c.

p.

p.

In the preceding (Ex. 229), the English horn in combination with the low tones of the clarinet, the bassoon, and the horns; supports the tremolo of the stringed instruments. A glowing tone color is spread over the whole passage; the effect is essentially strengthened by the mingling of the English horn with the intervals of the violins. Still more effective is this instrument where it repeats the first movement and moves with the soprano voice one octave lower; and shortly afterwards where it enters in combination with the tenor (page 752 of the score).

In RICH. WAGNER'S "Lohengrin", we find the English horn frequently employed as a third oboe in the orchestra tutti; but it also steps quite frequently from this subordinate position to a more important one, *e. g.*, the first measure of the second scene of Act I; in the course of the first scene of Act II —



and also in the second scene, where Elsa recalls to her memory the grave warning of LOHENGRIN'S: —



The English horn which was quite unknown at the beginning of the second half of this century, is, at the present day, of estimable worth in all such bodies.

In Russian military music it is always employed, but in Germany and Austria never.

The Clarinet (Ital. Clarinetto; Ger. Die Klarinette).

§ 28. The clarinet first came into common use in the last quarter of the previous century and derived its name from the Italian word „clarino” (trumpet): clarinetto (small trumpet) being the diminutive of clarino. Whether the first of these instruments possessed a tone

similar to that of the trumpet, we are uncertain of the fact. The *B*-flat and *A*-natural clarinets which are employed in our concert and opera orchestras of the present day, have nothing resembling the tone of a trumpet. The *C* clarinet which we find especially employed in the earlier French opera, was of a sharper and keener tone than the two lower clarinets, already mentioned. WEBER employs the *C* clarinet in the "Peasant's March" of "Der Freischütz"; Act I, No. 4. Most performers of the present day prefer to use the *B*-flat clarinet; employing the *A* clarinet only when the *B*-flat is inadequate for the lower notes, or when certain figures are more easily executed upon the *A* instrument. The great ability which the players possess in transposing, qualifies them to use the *B*-flat instrument, although the composer may designate the *A* clarinet in the course of a movement. This proceeding — although by one's own authority — is not always to be censured; for, the difference in quality of tone, and the variance in key, by half a tone — extraordinary cases excepted — of these two instruments, is not so marked as to be hardly perceptible, when employed in the orchestra in combination with other instruments. Often we find that the composer designates the *A* clarinet, merely for a more convenient mode of notation (*i. e.*, a key requiring few sharps or flats); utterly disregarding the slightly gloomy nature of its tone, which may be entirely inconsistent with the nature of the composition. Take as an illustration a phrase which begins in *E*-flat major, and which remains in the same mode or a closely related one for any length of time: we must designate the *B*-flat clarinet as the most suitable to be employed. Supposing that in the midst of this movement we find a modulation to the *E*-major mode, and wish to employ the *A* instrument for the clarinet solo, the player must bear in mind that the unemployed *cold* (*A* clarinet) instrument, will not accord instantaneously in so perfect tune, with the rest of the orchestra, as the previously long employed *warm* (*B*-flat clarinet) instrument.

Provided the performer is able to fulfil certain requirements it will not be necessary for him to change instruments.

They are these: He must be able to play the above mentioned movement equally as well on the *B*-flat clarinet as on the *A*; overcoming the greatest difficulties; playing as effectively on the transposing instrument, as on the original one. The connoisseur will recommend that we retain the same instrument when there is not sufficient cause existing to compel us to change. The compass of the clarinet extends from small octave *E*, to three-lined $\overline{\overline{G}}$, with all the intermediate chromatic intervals: —



It is possible to extend this compass several chromatic tones (from three-lined \bar{G} , to four-lined \bar{c}); but these notes are very difficult and not possible to every player; moreover, very keen and harsh in tone. We leave the employment of these notes entirely to your discretion. The scale of the clarinet which appears in the above Ex. 232), sounds a whole tone lower on the *B*-flat clarinet, and a minor third lower on the *A* clarinet. The actual compass of both clarinets, is as follows:

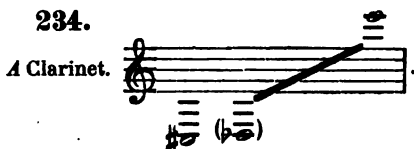
For the *B*-flat clarinet from small octave *D*, to three-lined \bar{F}

233.



A Clarinet, from small octave *C*-sharp, to three-lined \bar{E}

234.



Music for the clarinet is always written in the *G* clef. We employ the *B*-flat clarinet mostly for the flat keys, and the *A* clarinet for the sharp keys.

For a composition in *E*-flat major, or *A*-flat major, we use the *B*-flat clarinet and write for it in the key of *F*- and *B*- flat major, respectively: for *B*-flat major we use the *B*-flat clarinet and write for it in the key of *C* major.

BEETHOVEN'S Symphony No. 8, 1st Movement.

235a.



235b.



BEETHOVEN'S Symphony No. 5, 2nd Movement.

236.

Andante con moto.

B♭ clarinet.

dol.

Bassoons.

The actual sound of both clarinets in the above (Ex. 236), is quite evident from the underlying bassoons. Likewise we find that the bassoons in the following example, imitates the notes of the clarinet one octave lower.

237.

BEETHOVEN'S Symphony No. 4, 1st Movement

B♭ clarinet.

I mo

p dolce

Bassoon.

I mo

p dol.

&c.

When employing the *A* clarinet for a composition in *A*-major, we must write in the *C*-major mode; in *G*-major for the *E*-major mode &c.

238.

WEBER, "Freischütz", No. 8.

Actual Sound.

Andante.

A clarinet.

dol.

Bassoons.

The fingering and likewise the notation is the same for both clarinets; only the same tones becoming higher or lower when played on the different clarinets.

All movements of many sharps or flats are very difficult to perform, while on the other hand, movements of a more simple mode are easily executed. Therefore, we recommend the employment of the clarinets, as shown in the following table, as the most convenient.

We use the *A* clarinet:

for the <i>D</i> -major	mode, and write its part in <i>F</i> -major,
" " <i>B</i> -minor	" " " " " " <i>D</i> -minor,
" " <i>A</i> -major	" " " " " " <i>C</i> -major,
" " <i>F</i> -sharp minor	" " " " " " <i>A</i> -minor,
" " <i>E</i> -major	" " " " " " <i>G</i> -major,
" " <i>C</i> -sharp minor	" " " " " " <i>E</i> -minor,
" " <i>B</i> -major	" " " " " " <i>D</i> -major,
" " <i>G</i> -sharp minor	" " " " " " <i>B</i> -minor,
" " <i>F</i> -sharp major	" " " " " " <i>A</i> -major,
" " <i>D</i> -sharp minor	" " " " " " <i>F</i> -sharp minor,
" " <i>G</i> -major	" " " " " " <i>B</i> _♭ -major,
" " <i>E</i> -minor	" " " " " " <i>G</i> -minor.

We use the *B*-flat-clarinet:

for the <i>B</i> -flat major	mode, and write its part in <i>C</i> -major,
" " <i>G</i> -minor	" " " " " " <i>A</i> -minor,
" " <i>E</i> -flat major	" " " " " " <i>F</i> -major,
" " <i>C</i> -minor	" " " " " " <i>D</i> -minor,
" " <i>A</i> -flat major	" " " " " " <i>B</i> -flat major,
" " <i>F</i> -minor	" " " " " " <i>G</i> -minor,
" " <i>D</i> -flat major	" " " " " " <i>E</i> -flat major,
" " <i>B</i> -flat minor	" " " " " " <i>C</i> -minor,
" " <i>C</i> -major	" " " " " " <i>D</i> -major,
" " <i>A</i> -minor	" " " " " " <i>B</i> -minor.

These two clarinets are distinguished in tone by the higher *B*-flat instrument possessing a brighter, more pleasing tone, and the lower *A* instrument, — a more delicate and fuller tone. Within the very extensive compass of both these instruments, we distinguish four registers. The lowest (*first register*) of which possesses a characteristic serious quality of tone, and extends from small octave *E*, to one-lined \bar{E} . The tones of the one-lined octave, which comprise the *second register* are somewhat weaker, and do not possess the full, soft and charming tone of the specially melodious *third register*, which extends from two-lined $\bar{\bar{C}}$, to three-lined $\bar{\bar{\bar{C}}}$. The tones of

the *fourth register* are very harsh, shrill, penetrating and acute, and comprise all the tones above and including three-lined \bar{D} : it is our opinion that these tones should only be employed in a *tutti orchestra, forte*.

By the following quotations the student will more accurately distinguish the four compasses. The notes of the lowest compass are best adapted to sustained tones; for their tone in the beginning is a trifle "wavering" before it becomes fixed. WEBER employs these tones at the beginning of the finale of the second act of "Frei-schütz" (No. 10, "The Wolf's Glen Scene"). Beginning with the tremolo of the stringed instruments and the mournful tone of the near lying trombones; like the low tones of the bassoons, they spread over the above passage a tone of a horrible gloomy character.

239.

Sostenuto.

Clarinets in A.

Bassoons.

Trombones.

1st Violin.

2nd Violin.

Viola.

Violoncello
and Bass.

The musical score for measures 239-240 of "Frei-schütz" is presented for a full orchestra. The tempo is marked *Sostenuto*. The key signature is one sharp (F#), and the time signature is common time (C). The score is arranged in seven staves, each with its instrument name to the left. The Clarinets in A and Bassoons play sustained notes with a *pp* dynamic. The Trombones play a sustained note with a *pp* dynamic. The Violins, Viola, and Violoncello/Bass play a tremolo pattern with a *pp* dynamic. The music is written in a single system with a brace on the left side of the staves.

The musical score consists of seven staves. The first staff is a treble clef with a key signature of one sharp (F#) and a 3/4 time signature. It contains a series of notes, including a half note, a quarter note, and a half note, with a fermata over the last half note. The second staff is a bass clef with a key signature of one sharp (F#) and a 3/4 time signature. It contains a series of notes, including a half note, a quarter note, and a half note, with a fermata over the last half note. The third staff is a bass clef with a key signature of one sharp (F#) and a 3/4 time signature. It contains a series of notes, including a half note, a quarter note, and a half note, with a fermata over the last half note. The fourth staff is a treble clef with a key signature of one sharp (F#) and a 3/4 time signature. It contains a series of notes, including a half note, a quarter note, and a half note, with a fermata over the last half note. The fifth staff is a treble clef with a key signature of one sharp (F#) and a 3/4 time signature. It contains a series of notes, including a half note, a quarter note, and a half note, with a fermata over the last half note. The sixth staff is a treble clef with a key signature of one sharp (F#) and a 3/4 time signature. It contains a series of notes, including a half note, a quarter note, and a half note, with a fermata over the last half note. The seventh staff is a bass clef with a key signature of one sharp (F#) and a 3/4 time signature. It contains a series of notes, including a half note, a quarter note, and a half note, with a fermata over the last half note. The score includes dynamic markings such as *p*, *f*, and *pp*, and a crescendo hairpin.

In a similar manner WEBER employs the lower tones of the clarinet upon the first appearance of Samuel ("Freischütz, Act I, No. 3, Aria of Max).

240.

Moderato.

Recit.

B \flat Clarinet.

Bassoons.

Tympani.

1st and 2nd
Violins.

Viola.

Max.

Violoncello
and Bass.

pp

pp

Hat denn der Him-mel mich ver-

Tempo.

Recit.

Tempo.

pp

pizz.

las-sen? Die Vorsicht ganz ihr Haupt gewandt?

The mellow and slightly rumbling tones of the second register of the clarinet, are of particular charm. We quote in the following (Ex. 241) the well known extract from the introduction of the second theme, in the overture to "Oberon", by WEBER.

241. Solo.

A Clarinet.

2nd Violin.

Viola.

Violoncello.

HALÉVY employs the single sustained tones of the clarinet in an extremely characteristic manner, where he expresses the deep grief of Recha, in his opera "The Jew".

242.

HALÉVY, "The Jew", Act II, No. 40.

Allegro molto.

Solo.

C Clarinet. *pp*

1st and 2nd Violins. *pizz.*

V o a. *pizz.*

Violoncello and Bass. *pizz.*

smorz.

The third register displays both delicacy and great strength of tone in an equal manner. We present the following quotation from "Der Freischütz", as an illustration: —

243.

WEBER, Overture to "Der Freischütz".

Solo.

Imo

B \flat Clarinet.*ff con molta passione.*

1st Violin.

*mf**p*

2nd Violin.

*mf**p*

Viola.

*mf**p*Violoncello
and Bass.*tenuto.*

The musical score is presented in two systems. The first system includes staves for the B \flat Clarinet, 1st Violin, 2nd Violin, Viola, and Violoncello and Bass. The B \flat Clarinet part is marked 'Solo.' and 'Imo' with a long melodic line. The string parts (Violins, Viola, and Cello/Bass) are marked with 'mf' and 'p' dynamics and play a rhythmic pattern of eighth notes. The second system continues the string parts, showing the dense texture of the ensemble.

pp

pp

pp

Violoncellos.

pp

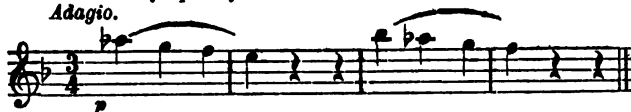
Basses.

No other instrument is capable of uttering such a cry of despair to the words, "Despair hath spread her snare before me", in the solo of Max (Act I, No. 3, "Der Freischütz"), with such power and expressiveness as the clarinet. Within the two-lined octave, every

tone is adapted to practical use; also, the most delicate and softest *piano* is at its command.

244.

BEETHOVEN: Symphony No. 4.

*Adagio.*B \flat Clarinet.

245.

FELIX MENDELSSOHN BARTOLDY: Overture to "The Hebrides".

Imo solo.

A Clarinet.

The simple consonant intervals for two clarinets, in the above example, are especially charming. The tones comprising the fourth register are — as previously remarked — brilliant, but harsh and shrill. These tones are best employed in the *forte* passages of the orchestra and occasionally in the brilliant running passages of a concert composition which is to be played *forte*. We also advise the student not to write above the three-lined \bar{F} . Although the clarinet may not possess the extraordinary nimbleness of the flute, we can execute upon it a great number of diatonic and chromatic runs, as well as passages in broken chords and various embellishments, with ease and certainty.

Certain chord-figures are specially graceful, *e. g.* —

MEDELSSOHN: Overture to "The Legend of the Beautiful Melusina".

Allegro con moto.

246.

1st B \flat
Clarinet.

2nd B \flat
Clarinet.

pp *pp*

&c.

MEDELSSOHN: Symphony, No. 3, Op. 56.

Vivace non troppo. ♩ = 126.

247.

B \flat Clarinet.

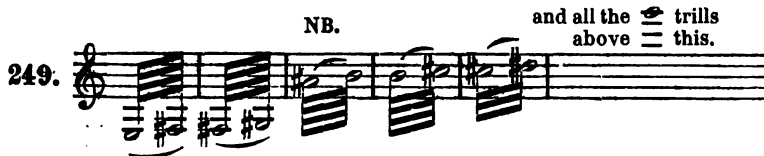
p

BEETHOVEN, Symphony, No. 3 Finale.
Poco Andante.
 Imo

248.

B \flat Clarinet.

We must caution you against the use of certain trills and trill figures, for on the clarinet some are impossible and others are very difficult and cannot be produced of pure intonation. In France as in Germany there has been many attempts made to improve this imperfection; nevertheless we must designate the following trills as impossible on the German instruments: —



The trill marked NB. is impracticable on the French instrument. Moreover, the following trills are difficult to produce:





That the character of the tone of this instrument, is unfavorably modified in proportion to the increased employment of flaps (keys) and holes along the tube of the instrument, is not to be relied upon as a fact.

Also, we find that the four registers are of a more homogeneous nature on the new French instruments; the notes of the three-lined octave are easier; special difficulties are greatly facilitated; — yet the tone of this instrument is not quite so free, open and noble as the previously employed clarinets.

Whether the benefit derived from this new improvement, counter-balances the loss of melodic and characteristic tone, we are undecided. We always employ two clarinets in the orchestra: a first, and a second. The tone of this instrument mixes admirably with that of the horns, flutes and bassoons; moreover, when combined with one or two oboes, their delicate and melodious tone is greatly strengthened by the peculiar sharpness of the oboe. In the *tutti* orchestra forte, the clarinets are well employed with the oboes, by leading the *first* clarinet and oboe together, and the *second* clarinet and oboe likewise.

Although the tones of these two instruments are entirely unlike; they sound well together, but do not mix homogeneously. By the employment of these instruments alternately, they produce a charming effect through the different character of their tone, as will be seen from the following: —

FR. SCHUBERT, Symphony, C-major, 2nd movement.

Andante con moto.

251.

1st Flute.

1st Oboe.

1st Clarinet
in A.

A musical score for three instruments: 1st Flute, 1st Oboe, and 1st Clarinet in A. The music is in 2/4 time and C major. The 1st Flute part is mostly rests. The 1st Oboe and 1st Clarinet in A parts play a melodic line starting on a half note G4, followed by a series of eighth notes: A4, B4, C5, B4, A4, G4, F#4, E4, D4. The Oboe part is marked with a piano (p) dynamic. The Clarinet part is also marked with a piano (p) dynamic and includes a breath mark (z) under the first eighth note of the eighth-note run.

The first system of music consists of three staves. The top staff is in treble clef and contains a series of eighth notes, some beamed together, with a dynamic marking 'p' (piano). The middle staff is also in treble clef and contains similar eighth notes. The bottom staff is in bass clef and contains a series of eighth notes, some beamed together. The second system consists of three staves. The top staff is in treble clef and contains a series of eighth notes, some beamed together. The middle staff is also in treble clef and contains similar eighth notes. The bottom staff is in bass clef and contains a series of eighth notes, some beamed together.

. The tone of the horns mixes well with the middle notes of the clarinet's compass, as shown in the following: —

252.

WEBER, Concert Piece, Op. 79.
Tempo di marcia.

B♭ Clarinet.

Horns in C.

The musical score for Weber's Concert Piece, Op. 79, Tempo di marcia, shows two staves. The top staff is for the B♭ Clarinet and the bottom staff is for the Horns in C. Both staves are in treble clef and contain a series of eighth notes, some beamed together. The key signature is one sharp (F#) and the time signature is common time (C). The bottom staff has a '15*' marking at the end.



The delicate and melodious tone, which is produced by the combination of flutes, clarinets and bassoons, we illustrate by the following (Ex. 253a): —

"WEBER, Euryanthe", Act II, No. 12.

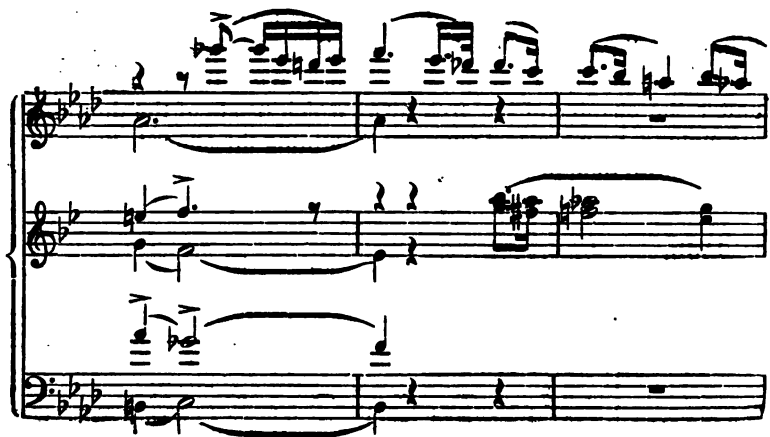
253a.

*Larghetto non
lento.*

2 Flutes.

2 Clarinets
in B \flat .

2 Bassoons.



The tone of the clarinet also mixes well with the stringed instruments (Violin and Viola); in the cantilena especially, they greatly strengthen and give to it a fuller tone. We will discuss this later under the chapter of the orchestra, which treats of the doubling of the melody, by many instruments. By adding the oboes to the mellow and delicate tone of the wood-wind instruments and the horns, their tone is greatly strengthened, *e. g.* —

253b.

2 Flutes.

2 Oboes.

2 Clarinets
in A.

2 Bassoons.

2 Horns in E.

In the military band we employ besides the *B*-flat and *A* clarinets of the opera and concert orchestra, many others in different keys. They are:

The C Clarinet.

Music for this instrument sounds as written.

The E-flat Clarinet (High),

sounds a minor third higher than written, *e. g.* —

254 a. Notated.

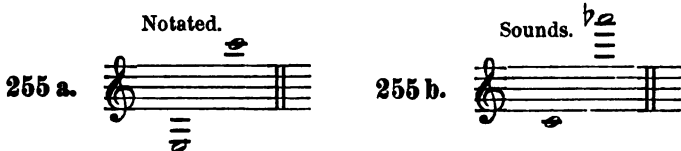
254 b. Sounds.

The F Clarinet (High),

sounds a perfect fourth higher than written. This clarinet has a sharper and keener sound than the *C* and *E-flat* clarinets.

The A-flat Clarinet (High),

is the smallest of all clarinets and sounds a minor sixth higher than written. Its compass extends from small octave *E* to three-lined $\bar{\bar{C}}$.

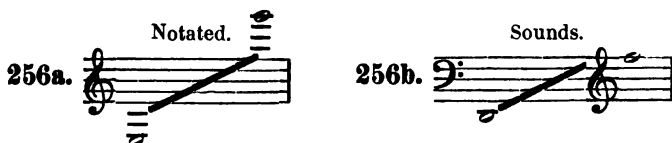


Of rarer use are the clarinets in *D* and *G*, as are also the low alto clarinets in *F* and *E-flat*. These many different kinds of clarinets are used only in military band music. But of ordinary use we find the *B-flat* and *E-flat* mostly employed.

The Bass Clarinet.

This instrument is an octave lower than the *B-flat* clarinet and bears the same relation to it as the violoncello to the viola. Although the compass of the bass clarinet (one octave lower) corresponds with that of the ordinary *B-flat* clarinet; it is best to employ the highest tones unfrequently. On the contrary its lowest notes are of excellent quality and exceedingly sonorous.

Music for this instrument is mostly written in the *G* clef and its complete compass exceeds three octaves, extending from small octave *E* to three lined $\bar{\bar{G}}$.



Within this compass the instrument possesses all the intermediate chromatic intervals. The tone of the bass clarinet is of a sacerdotal and impressive character: the lowest tones sound full and solemn, the highest a trifle obscure. MEYERBEER introduced this noble instrument in the orchestra. The student will obtain a good conception of the compass and character of the tone of this instrument, when he recalls to his memory, the following passage from "The Huguenots" (Act V).

257. MEYERBEER, *The Huguenots*, Act 5, Trio.*Molto maestoso.*Bass Clar.
in B \flat .

RICH. WAGNER in his opera "*Lohengrin*", employs besides the B-flat bass clarinet, an instrument in A, for which he writes in the violin clef, a minor tenth higher than he wishes it to sound. But frequently we find that he uses the F and G clefs alternately, using the F clef for the low notes and the G clef for the high. We write for the B-flat bass clarinet, in the F clef, one tone higher than we wish it to sound, and for the A instrument, a minor third higher than we wish it to sound.

In the *tutti* orchestra WAGNER leads the bass clarinet partly with the bassoon (which represents a bass voice), and partly with a deep middle voice. In a characteristic manner he (Ex. 258) employs the bass clarinet, by doubling it with the English horn one octave higher, *e. g.* —

258.

*"Lohengrin", Act II, No. I.**Moderately slow.*

English Horn.

Bass Clar. in
A.

In the above quotation the impressive tone of the English horn is strengthened by the solemn, serious tone of the bass clarinet.

Of a more sublime effect is the following solo for bass clarinet from the first act of "*Lohengrin*".

259.

Bass Clarinet in *B♭*

The serious character of the bass clarinet is not well adapted to rapid passages and shakes; but, as a melodical instrument, it can be most effectively employed. In a *tutti* orchestra this instrument when used with the middle tones of the bassoon, — which sound a trifle dull — greatly enhance their fulness and stability and produce a nobler effect of tone. At the present time we find the bass clarinet in all large orchestras; the *B*-flat instrument being most commonly employed. In military band music, the bass clarinet is universally employed.

The Basset Horn (Ital. *Corno di bassetto*; Ger. *Das Bassetthorn*).

This instrument has a compass from small octave *C* to three-lined $\bar{\bar{C}}$, and is not to be found in our modern scores. MOZART employs two basset horns in his "Requiem"; also in his "Serenade" for wind instruments (2 oboes, 2 clarinets, 2 basset horns, 2 bassoons, 2 horns and double bassoon). Of the more recent composers, HALÉVY in his opera "The Jew" is the only one who has written for this instrument. But the author has never heard this passage (Ex. 260) from "The Jew", performed as it is written. In Leipzig, formerly, the basset horns were replaced by two oboes, recently, by two English horns. Music for the basset horn is written a fifth higher than we wish it to sound.

260.

HALÉVY, "The Jew", Act IV, No. 49.

Clarinet in *B♭*.

Basset Horn.

Bassoon.



2 Basset Horns.
Moderato.
espress.

1st and 2nd Violin and Viola.
pizz.
Violoncello and Bass.
pizz.

This system contains the first three measures of the piece. The key signature has two flats (B-flat and E-flat). The first staff is for 2 Basset Horns, with notes in measures 1 and 2, and a rest in measure 3. The second staff is for 2 Basset Horns, with a melodic line in measure 1, a rest in measure 2, and a melodic line in measure 3. The third staff is for 1st and 2nd Violin and Viola, with notes in measures 1 and 2, and a rest in measure 3. The fourth staff is for Violoncello and Bass, with notes in measures 1 and 2, and a rest in measure 3. The fifth staff is for Violoncello and Bass, with notes in measures 1 and 2, and a rest in measure 3.

2 Basset Horns.

2 Horns in F.
pp

1st Bassoon.
pp

This system contains measures 4, 5, and 6. The key signature has two flats (B-flat and E-flat). The first staff is for 2 Basset Horns, with a melodic line in measure 4, a rest in measure 5, and a melodic line in measure 6. The second staff is for 2 Horns in F, with notes in measures 4, 5, and 6. The third staff is for 1st Bassoon, with notes in measures 4, 5, and 6. The fourth staff is for Violoncello and Bass, with notes in measures 4, 5, and 6. The fifth staff is for Violoncello and Bass, with notes in measures 4, 5, and 6.



First system of musical notation. It consists of five staves. The top staff is in treble clef with a key signature of three flats (B-flat, E-flat, A-flat) and contains a melodic line with eighth and sixteenth notes, some beamed together, and a triplet of eighth notes. The second staff is in treble clef and contains whole rests. The third staff is in alto clef with a key signature of three flats and contains whole rests. The fourth staff is in treble clef with a key signature of three flats and contains a series of chords, mostly triads, with some eighth notes. The fifth staff is in bass clef with a key signature of three flats and contains a series of chords, mostly triads, with some eighth notes.



Second system of musical notation. It consists of five staves. The top staff is in treble clef with a key signature of three flats and contains a melodic line with eighth and sixteenth notes, some beamed together, and a triplet of eighth notes. The second staff is in treble clef and contains whole rests. The third staff is in alto clef with a key signature of three flats and contains whole rests. The fourth staff is in treble clef with a key signature of three flats and contains a series of chords, mostly triads, with some eighth notes. The fifth staff is in bass clef with a key signature of three flats and contains a series of chords, mostly triads, with some eighth notes.



First system of musical notation. It consists of five staves. The top staff is in treble clef with a key signature of three flats (B-flat, E-flat, A-flat) and a common time signature. It contains a melodic line with various notes and rests. The second staff is in treble clef with the same key signature and time signature, starting with a fermata and the marking "Imo. pp". The third staff is in treble clef with a key signature of three flats and a common time signature, starting with a fermata and the marking "pp". The fourth staff is in treble clef with a key signature of three flats and a common time signature, containing a series of chords. The fifth staff is in bass clef with a key signature of three flats and a common time signature, containing a series of chords.



Second system of musical notation. It consists of five staves. The top staff is in treble clef with a key signature of three flats (B-flat, E-flat, A-flat) and a common time signature, containing a melodic line with various notes and rests. The second staff is in treble clef with the same key signature and time signature, containing a series of chords. The third staff is in treble clef with a key signature of three flats and a common time signature, containing a series of chords. The fourth staff is in treble clef with a key signature of three flats and a common time signature, containing a series of chords. The fifth staff is in bass clef with a key signature of three flats and a common time signature, containing a series of chords.

A musical score for woodwind instruments and timpani. The score consists of six staves. The first five staves are for woodwind instruments (flute, oboe, clarinet, bassoon, and contrabassoon) and the sixth staff is for the timpani. The key signature is three flats (B-flat, E-flat, A-flat) and the time signature is 3/4. The woodwind parts feature various melodic lines and chords, while the timpani part has a few chords marked *ppp*.

The Bassoon (Ital. Fagotto; Ger. Das Fagott).

The bassoon possesses a compass of three octaves; extending from contra octave *B*-flat to one-lined *B*-flat, with all the intermediate chromatic intervals. Within this compass we must distinguish three different registers.

The extremely low tones

261.
 Musical notation showing the extremely low tones of the bassoon. It consists of a single staff with a bass clef and a key signature of three flats. The notes are: B-flat, A-flat, G-flat, F, E-flat, D-flat, C, and B-flat. The notes are written in a stylized, somewhat abbreviated manner.

(and perhaps still another tone higher), are very strong, full, powerful and magnificent in sound.

In our orchestras of the present day, where we do not find the real bass trombone, the lower tones of the bassoon can well be utilized as the bass of the ~~wood~~-wind instruments, in case we do not wish to associate the trombone with the tuba as the lowest voice. The second register extends from great octave *F* to one-lined *C*; these tones are feeble, dull and obscured. In a very characteristic manner, this register is employed by MEYERBEER, in the 3rd Act of "Robert The Devil". The gloomy procession of the resurrected nuns is accompanied in the following manner by two bassoons: —

brasa

MEYERBEER, "Robert The Devil", Act III.
Andante sostenuto.

262. *poco f* 3 3

Bassoons.

The highest tones of the bassoon, extending from small octave *B* to one-lined *B*-flat, have a thin, strained and anxious quality of tone. WEBER employs this register in many characteristic solo passages, *e. g.* —

WEBER, Concert Piece, Op. 79.

263. *Adagio.*
Solo.

Bassoon.

The recitative of Euryanthe, where she appears alone in the solitary forest, begins with the following solo for bassoon:

WEBER, "Euryanthe", Act III, No. 17.

264. *Largo.*
Imo.

Bassoon.

In the above solo, we designate the high one-lined *B*-flat as the extreme limit of this instrument's compass, and we caution the student not to enter upon this tone freely. The bassoon is very little suited for rapid passages; only in a *tutti* orchestra when it is suitably doubled, can we arrange it as in the following (Ex. 265): —

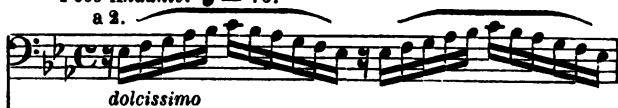
265.

MEYERBEER, "The Huguenots", Act II, No. 8.

Poco Andante. ♩ = 76.

a 2.

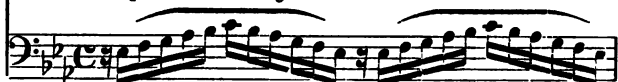
Bassoon.

*dolcissimo*

Harp.

*sempre dolciss. e legato*

Violoncello.



Clar.

a 2.




Clar.

&c.



In the lowest as well as in the highest tones of the bassoon, all such slurred passages as we find in (Ex. 265) are impossible: Likewise the following trills are impossible:



On the older instruments, the trill of small octave *F*-sharp and *G*-sharp  was impossible.

By the addition of a new key or flap, Almenraeder of Wiesbaden has greatly facilitated the execution of such movements. On bassoons of the Almenraeder model, many trills which were hitherto partly impracticable and difficult; and, likewise slurred passages in rapid motion, are practicable and easily executed.

Unfortunately the above named instrument is not in use.

The following trills are very difficult —



and also all trills on the highest tones.

In the orchestra we generally have two bassoons, a first and a second. The highest tones of this instrument are generally written in the tenor clef. In consequence of the large compass of this instrument, we can employ it equally as well, as a tenor or bass instrument.

As previously remarked, the tone of the bassoon mingles well with that of the trombone, clarinet, and especially the horns, *e.g.*—

268a.

FRANZ SCHUBERT, Symphony, *B*-minor, 4th movement.
Allegro moderato.

2 Bassoons. 

2 Horns in *D*. 

268 b.

2 Bassoons.

2 Horns in D.

2 Bassoons. *sp*

2 Horns in D. *pp*

By employing the bassoon in unison with the violas and violoncellos, the tone of the stringed instruments is greatly augmented in fullness and roundness.

This method of employing the bassoons is especially to be recommended with the cantatas.

From the following extract which we present from Mendelssohn's Overture "The Fingel's Gate", without the accompaniment of the stringed instruments and harmonic filling notes of the flute, we will see that Mendelssohn combined the bassoons with the violoncello:

Allegro moderato.
a 2 cantabile

269.

2 Bassoons.

Violoncello.

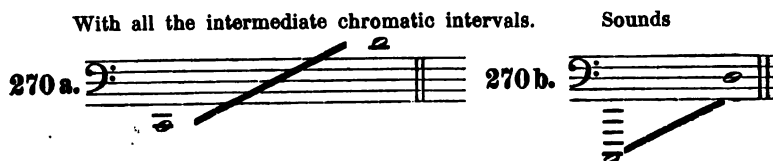
Bass.

2 Bassoons. *cantabile*

Violoncello. *cresc.*

Bass. *cresc.*

The Double-Bassoon (Ital. *Contrafagotte*; Germ. *Das Kontrafagott*). has a compass from great octave *C* to one-lined \bar{D} ; which really sounds an octave lower than written.



The double-bassoon bears the same relation to the bassoon as the double-bass to the Violoncello. **BEETHOVEN** in the finale of his 5th Symphony, reinforces the double-bass with the double-bassoon, in the tutti orchestra *forte*.

This is also the case in the finale of his 9th Symphony: only in the *Allegro assai vivace* ($\text{♩} = 84$, *alla marcia*) we find that the double-bassoon begins with the second bassoon all unisono; but later in the *pianissimo* passage, it accompanies it in the lower octave. It is re-introduced with full force *fortissimo*, with the words "Freudig wie ein Held zum Siegen". In military bands this instrument is generally introduced and is used for strengthening the basses.

We must carefully avoid using this instrument in rapid passages.

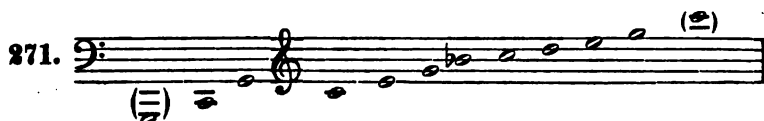
CHAPTER VII.



THE BRASS INSTRUMENTS.

The Horn (Ital. *Corno*; Germ. *Das Waldhorn*).

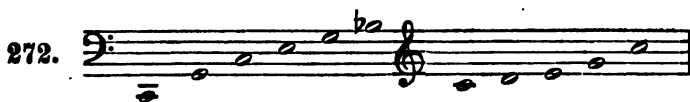
§ 30. Up to the middle of the present century, only the "hand-horn" (Ger: "Das Waldhorn") or *natural* horn was known in Germany. **BEETHOVEN**, **SCHUBERT**, **WEBER** and **MENDELSSOHN**, the four greatest masters in the art of writing for the orchestra, have with this simple instrument, singly or in combination with one or more horns, produced the grandest effects, notwithstanding its limited compass. We have a complete family of horns in all keys, from *B-flat* (low) to *B-flat* (high), and by employing several horns simultaneously in different keys, we obtain a complete chromatic scale. Horns are of different sizes; so, consequently the power of tone from the one, is greater than from the other; also, the resonance varies accordingly. The

original horns in *B-flat* (low), *C*, *D*, *E-flat*, *E*, *F*, *G*, *A* (high) and *B-flat* (high), can, by means of a "crook", (*i. e.* a small piece of tubing which lengthens the tube of the instrument) be lowered a semitone. By this process we obtain the horn in *B* (low or high) from the *C* horn (low or high); and by the same means the horn in *D* is transformed into *D-flat* &c. We must distinguish in general, between the two different tones of the horn, namely: the open or *natural* tone, and the closed or *stopped* tone. On the other hand, we must also make distinction between the half- and the full-stopped tone. In the following quotation we will consider the natural tones of the horn:



We observe from the above, that the first tone, the lowest *G*  is only possible on horns whose keys are high; on the contrary, the highest *c*,  can only be given by horns in the low keys. All horns are transposing instruments. In the foregoing quotation of the natural harmonic scale of the *C* horn, only the two lowest notes, sound as actually written, the others sound an octave lower than notated.

Actual sound of the *C* horn: —



As two horns are the least we write for upon one staff, we, therefore, in writing the lowest tones of Ex. 272, always notate them in the bass clef — when the second horn is given the lowest, great octave *c* — in the following manner: —



These notes sound as written; all others are written in the *G*-clef and sound an octave lower than notated.

In the following table we present the natural (open) tones of the horn in every key:

Notation.

274.

Actual Sound.

In low B \flat

In C

In B

In D \flat

In D

In E \flat

In E

In F

In G \flat

In G

In A \flat

In A

In high B \flat

The image displays a series of musical staves for the number 274. Each staff is divided into two parts: 'Notation' on the left and 'Actual Sound' on the right. The 'Notation' part shows the number 274 written on a staff with a treble clef. The 'Actual Sound' part shows the corresponding musical notes on a staff with a treble clef. The staves are labeled with keys: In low B \flat , In C, In B, In D \flat , In D, In E \flat , In E, In F, In G \flat , In G, In A \flat , In A, and In high B \flat . The notes are written in a way that shows the relationship between the number and the sound in each key.

From the above table (274) we see that the great octave *B-flat* is the lowest tone of the horn, and the two-lined \bar{f} , the highest. Thus, in the following we observe:

1. It is always easier to produce high sounds than low sounds, on horns in the low keys of *D*, *E-flat*, *E* and *F*; and, on the contrary, it is impossible to produce high tones on the horns above *F* (as can be seen from table 274)

2. The highest tones must only be given to the first horn; and the lowest to the second. Horn players sometimes use different mouthpieces: *e. g.*, the first horn players use a mouthpiece which is slightly narrower than that of the second, and can only produce the higher tones; while on the other hand, the mouthpiece of the second horn is a little larger and the low tones can be produced easier than the high. Only in a solo for the horn we find an exception to this rule, *e. g.*, the horn solo in the prelude to the cavatina of GEORGE BROWN, (BOIELDIEU, "Weisse Dame" No. 44).

In the Adagio of BEETHOVEN's 9th Symphony, the following solo for the second horn in *E-flat*, is very difficult to execute:

275. Solo. Adagio.

Horn in *E^b*.

dolce

3. That, in a chord progression, the highest \bar{e} and \bar{f} can only be taken from a lower natural tone; but never, from a distant tone by a skip, or in other words, be introduced in a free manner, *e. g.* —

Beethoven's 2nd symphony, Larghetto.

276.

Horns in *E*.

The foregoing passage in example 276, is by no means easy to execute, as it must be played piano.

277. Weber, "Der Freischütz", Act I, No. 2.
Moderato.

I and II Horn. *in F.*

III and IV Horn.

The above quotation for horns from "Der Freischütz", appears with chorus and full orchestra *fortissimo*.

In the following passage from the Scherzo of the 3rd BEETHOVEN Symphony, we find the E-flat for the first horn taken in diatonic order.

This quotation is to be considered as a solo passage for the horns:

278. *Allegro vivace.*

I and II Horn. *in E♭.*

III Horn.



The scholar will see from the above illustration (Ex. 278), that the part for the third horn is higher than that of the second. We therefore, make the following statement. In case we have to employ more than two horns in the orchestra, the third must be considered as a first horn, and the fourth as a second. Therefore, we generally find the third horn written higher than the second.

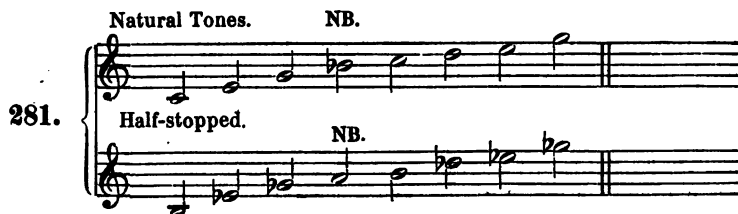
The following chord for four voices —



must be written for four horns, in the following manner:



By considering example 275, we find tones which can only be produced on the horn by the artificial means, known as "stopping" — *i. e.*, produced by closing the hand, so that the thumb rests against the forefinger; and in this manner, inserting it in the bell of the instrument. In the following table, the notes in the lower clef, which are all a semitone lower than the "natural" tones in the upper clef, are easily produced by half stopping: —



In the above table (Ex. 284), at NB., the natural harmonic *B*-flat is a trifle too low for *B*-flat; so, consequently the underlying *A*, resembles very closely a "natural tone" in sound. We see from the first few bars of SCHUMANN'S Symphony in *C*-major —

282. *Andante.* NB.

2 Horns in *C*.

that the note *F*, marked NB., is also easily produced by "stopping", and differs but very little in sound, from an open tone. On the contrary the following open tones when "half stopped", produces muffled and dull. From

the low *F*-sharp or *G*-flat can be produced by merely relaxing the pressure of the lips upon the mouthpiece. Therefore, the following illustration from the Scherzo of the 7th BEETHOVEN Symphony, is easy to produce and very pure in tone: —

283. *det.* *criss.* &c.

II Horn in *D*.

Also can the semitones above *G* (as *A*-flat or *G*-sharp), be produced by forcing the tone, i. e., in plain language — a slightly firmer pressure of the lips against the mouthpiece. Consequently the *B*-flat marked NB. (Ex. 284), which naturally sounds a trifle lower, can be produced purely by a slight overblowing or forcing. The more the bell of the instrument is closed by stopping, the tone produced, will naturally sound all the more muffled and flattened, and consequently will be dull and have very little brilliancy.

Such tones are very effective and of great aesthetic value, when employed to produce characteristic effects, such as pensive melancholy, grief, pity and distress. See the following illustration from RICH. WAGNER'S "Lehengrin" Act II: —

284.

2 Flutes.

2 Oboes.

4 Horn in E \flat .

4 Horn in C.

Ortyrd.

pp

sfpp

stopped *sfpp*

stopped *sfpp*

loud, in a mournful manner. **Eisa.**

El - sa! Wer

ruft? Wie schau-er-lich und kla-gend er

sf pp

sf pp

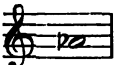
sf > pp acc.


sf > pp

Ortrud.

tönt mein Na-me durch die Nacht! El - sa!


Such "whole-stopped" tones, which are formed by almost entirely closing the bell of the instrument, can only be produced from the higher natural tones. The lowest available or practical

"whole-stopped" tone is . As the B-flat, one tone above (as we have already frequently remarked) is a trifle too low, the production of this A-flat will be comparatively easy and of pure intonation, nevertheless it will sound muffled. The lower natural tones when "whole-stopped", give forth faint sounds of very little resonance and are difficult to form. All stopped tones are more easily taken in a descending progression than in an ascending. There-

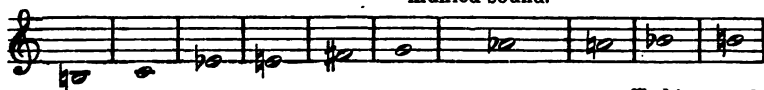
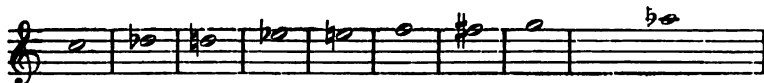
fore, the following passage from (Ex. 275) 

is exceptionally difficult to perform. And also the very best of horn players, will not be able to render the different open, half- and whole-stopped tones in a uniform and artistic manner. In the following, we present the complete scale of the horn: —

Only possible in keys of E^b , and above. Produced by relaxing pressure of lips.

285. 

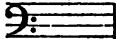
muffled sound.

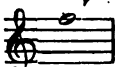
very muffled in sound,
see Ex. 284.

see example 278.



only possible on horns in the low keys.

Consequently the great octave *B*-flat  as the lowest;

and two-lined *E*-flat, *E* and possibly *F*  as the highest (in a corresponding key), are the most feasible on the horn. In the cantilena (melody) we cannot exceed two-lined *C* or *D*-flat; it is also hazardous to exceed two-lined *C*-sharp (or *D*-flat) on a horn in a high key ("piano"), when the above mentioned two-lined \bar{c} is an open tone. Therefore, the following entrance of the horn in the coda of the first movement of *BEETHOVEN's* 7th Symphony, is by no means easy to produce in a delicate *pianissimo*:

286.

2 Oboes and
2 Clarinets.2 Horns in *A*.

Violins.

'Cello and
Bass.

On the contrary, in the following solo (Ex. 287a.), the last note — two-lined *D*-flat — is easily produced from the preceding slurred natural tone, by overblowing: —

287 a.

BEETHOVEN, *Sinfonia Eroica*, Movement 4.

Solo.

4 Horn in F.

dolce

cresc. *p*

The character of the tone of the horn is not always melodious and smooth in the high keys.

The keys of *E-flat*, *E* and *F* are the most favourable for the horn and should be employed as much as possible. The last named instrument, horn in *F*, is far superior to all others for solo composition. The sound of the horn mingles most admirably with that of the reed family (Clar. and Bassoon), as will be seen from the following: —

287 b.

ROSSINI, "*Wilhelm Tell*", Act I, No. 2.*Allegro, sotto voce*2 Clarinets in B \flat .

2 Bassoons.

2 Horns in E \flat .

1st Violins,

2nd Violins.

Violas.

Arnold.

'Cellos.

Basses.

sotto voce

sotto voce

sotto voce

pizz.

pizz.

pizz.

pizz.

O ciel, tu

A musical score for brass instruments and voice. The score consists of nine staves. The first four staves are for brass instruments (likely cornets, euphoniums, and tubas), and the fifth staff is for the voice. The sixth staff is for a string section (likely violins and violas), and the seventh staff is for a string section (likely cellos and double basses). The eighth staff is for a string section (likely violins and violas), and the ninth staff is for a string section (likely cellos and double basses). The music is in 3/4 time and features a key signature of one flat (B-flat major or D minor). The lyrics are in French and are written below the voice staff.

sais, si Ma - thil - - - de m'est chère, ô

dolce

arco

ciel, tu sais, si Ma - thil-de m'est chère. &c.

Formerly, we found only two horns in the orchestra, and the old masters such as HAYDN, MOZART &c. were perfectly contented with that number. When two horns are employed they are generally of the same key, but, as an exception, we call your attention to the first movement of MOZART's *G-minor* Symphony. We find there, the first horn in high *B-flat* and the second in *G*. The natural tones of the horn are used chiefly to fill up the harmony and a few of the half-stopped tones can be used for the same purpose. In BRETHOVEN's 9th Symphony we will find that he only made use of two horns.

But at the present day we find most invariably, four horns in

every concert and opera orchestra. The following is a very simple movement for four horns, from the first Act of Rossini's "WILHELM TELL": —

287 c.

Allegro ♩ = 112.

1st Horn
in E^b.

2nd Horn
in E^b.

3rd Horn
in E^b.

4th Horn
in E^b.

The musical score is for four horns in E-flat, measures 287-300. The tempo is marked *Allegro* with a quarter note equal to 112 beats. The key signature has one flat (B-flat), and the time signature is 6/8. The score is written for four staves, each with a treble clef. The first staff is labeled '1st Horn in E^b.', the second '2nd Horn in E^b.', the third '3rd Horn in E^b.', and the fourth '4th Horn in E^b.'. The music begins with a forte (*sf*) dynamic and a crescendo hairpin. The melody is a simple, rhythmic line consisting of eighth and quarter notes. In measure 295, there is a trill in the second staff, indicated by a wavy line and the letter 'tr'. The score ends with a final cadence in measure 300.

The musical score is presented in three systems, each containing four staves. The notation includes various musical symbols such as clefs, key signatures, time signatures, and dynamic markings. The first system begins with a piano (*p*) marking and includes a sforzando (*sf*) marking. The second system features a piano (*p*) and a forte (*f*) marking. The third system includes a piano (*p*) and a sforzando (*sf*) marking. The score concludes with the abbreviation "etc." on the third staff of the final system.

WHERE by all means understood how to produce the best effects with the horn. We call your attention to the following, as being most excellent for study, Horn solo in the beginning of the "Oberon"

Overture; near the beginning of the "Freischütz" Overture; the Hunter's Chorus (No. 15), from the same opera; Hunter's Chorus (No. 18) in the third Act of "Euryanthe"; the horn obligato to the MEERMAIDS' Song (No. 15) in Oberon; and the following quotation from the "Wolf's Glen Scene" ("Freischütz", Finale of the second Act) which accompanies the misty stag that is pursued by the huntsmen and skeleton dogs, and is of a discordant nature.

288a.

2 Bassoons.

4 Horn in high B \flat .

4 Horn in F.

2 Horns in E.

Trombones.

sempre tutto fortissimo possibile

sempre tutto fortissimo possibile

sempre tutto fortissimo possibile

sempre tutto fortissimo possibile



In a *tutti fortissimo*, the horns are admirably employed to strengthen the harmony in the middle register, and occasionally the fourth horn can be given the bass. But at one time it is impossible, and at another very effective for the fourth horn (relative third) to continually double the bass, as the second bassoon. The first horn can occasionally be employed to double the melody.

We call your attention once more to WEBER's Overture "Der Freischütz", Euryanthe &c. The scholar will learn from these, the best manner of employing four horns in the whole orchestra (*Tutti*). Although the *forte* or *fortissimo* of a single horn, is never the same energetic tone as that of the trumpet, or of the powerful fullness of the trombone, it will on the contrary, when combined with three other horns, give forth a most majestic — when suitably arranged — and harmonious *forte*. Four horns when played in unison in a *fortissimo* passage, are of extraordinary power, and are to be heard in the largest orchestra.

MENDELSSOHN was the first to employ four horns *unisono*, and therewith, we discovered a new and particular effect of this instrument. See MENDELSSOHN's 3rd Symphony, Op. 56, Finale, *Allegro maestoso assai*. The melodious and rich sounds of the horn become rough and shrill when the player changes the bell above. This is expressed by all composers in the following manner, "Bell high". As can be seen in the third part of JOACHIM RAFF's "Forest Symphony" (Op. 453).

The Ventil- or Valve-Horn.

§ 34. We have previously observed, that for certain keys, crooks were adjusted to the horn, and these, together with various others, often smaller coiled tubes, render the production of the natural tones all the more difficult. These imperfections, such as the uncertainty of the stopped tones, were greatly relieved and improved by the invention of HENRY STÖLZEL (in the year 1844).

The above named master first made a horn with cylindrical ventils (or valves), by which we could change an *F* horn readily to a horn of a lower key. In the present day we employ almost exclusively horns with three ventils and, as to the kind of ventil, namely: box-ventil, tube-ventil or cylinder-ventil, it is quite indifferent, for the sound produced and the management is quite the same*).

The specially favored keys for the ventil-horn, are those of *F*, *E* and *E-flat* (see ROB. SCHUMANN'S, "Manfred" Overture). It is quite indifferent as to which key the composer designates, as the fundamental principle remains the same; for the players will most invariably use their *F* horn and transform it into the one named. By the great dexterity and unerring certainty in transposition, which all horn players more or less possess, it leaves the composer to write as he finds it most convenient. For he can always be sure of a correct performance, even when the player does not strictly observe the designated key. But in another instance, when we wish to produce particular effects by means of the half- and whole-stopped tones, the performer *must* observe strictly, the prescribed key of the composition. This of course must be precisely expressed by the composer (see Ex. 284). The construction of the ventil-horn is equally as simple as it is ingenious. In the principal coil of the tube of the horn are found other pieces of tubing which are opened by the valves. As long as the valves are not employed by the performer, the principal tube only is open, and the instrument can be used in the same manner as the "natural horn" (Waldhorn). When we press down the so-called second valve, it lengthens the principal tube to such an extent that the tone produced sounds a semitone lower than the original tone (as on the "natural horn" without the use of valves). The first valve lowers the original note a whole tone; these two valves ($1 + 2$), when employed simultaneously lower the original tone a minor third (3 semitones). By pressing the third valve alone, we can produce the same effect (*i. e.*

*) The above-named ventils which are merely literally translated, are commonly known as valves, pistons and cylinders. — Translator.

lowering a note 3 semitones). By employing these valves in various combinations: the *F* horn can readily be changed into an *E*, *E-flat*, *D*, *D-flat*, *C* and *B* horn. Beside the use of the *E* and *E-flat* crooks for certain keys, it is better that we employ the *G* and *A* crooks for high keys, for they greatly facilitate the production of the higher tones. So will the following very difficult passage of the Mass by BACH in *B-minor*, for the "Corno da caccia" (hunting-horn), be much more easily produced, if the *G* crook is employed in place of the *D* crook. Therefore, the "Aria, Quoniam to solus sanctus" in *D-major*, is written for the horn in *D*.

288 b. *Aria.*

Corno da caccia.

Bassoon I.

Bassoon II.

Continuo.

But unfortunately the resonance and sweetness of the tone of the horn is lessened in accordance with the number of valves simultaneously employed. A horn solo which in the course of a musical composition appears in two different keys, and is performed by one and the same horn in both these keys, is without exception, never so beautiful in effect, as when it is performed by another horn in the appropriate key. As will readily be understood from the following melody: —

289.

Solo.

Horn in G.

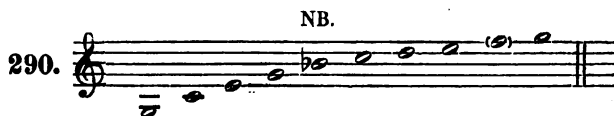


We think that when the first part of this movement in *G*-major, is played by a 4th natural horn in *G*, and the second part, by a 3rd in *C*; we think that the quality of tone produced will be much more beautiful, than when the same passage in both keys is executed upon one and the same horn. Apart from this that the beauty of the tone is lessened in accordance with the number of valves employed; it is also true that the purity of intonation is greatly debased. A skillful performer will certainly know how to improve this condition in the production of pure tones, but he cannot prevent the rough and less noble tones of the horn, which result in accordance with the employment of ventils, to lower the original key of the instrument. This actual disadvantage offers to the ventril horn the benefit of a complete scale with all intermediate chromatic tones, from great octave *B*-flat to two-lined *E*-flat. We must therefore use the low tones very cautiously, when they are not open tones, and they must only be employed in the full (*Tutti*) orchestra, in a *forte* passage. The scholar must always consider, that a valve-horn does not differ from a natural horn, which can without detriment, produce from its original key six other keys.

Rapid diatonic or chromatic progressions never produce a good effect, although when executed by the ventril-horn, for they are not adapted to the nature of the instrument. The composer of our time must candidly renounce the natural horn, as the ventril-horn is everywhere in general employment.

The Trumpet. (Ital. Clarino or Tromba; Germ. Die Trompete).

§ 32. The trumpet, likewise, is only employed as a valve instrument. The open tones of the trumpet are the same, as those of the horn, with the exception of the small octave *c*.



The one-lined *B-flat* marked N.B. is a little too low for *B-flat*, and the two-lined *F* in parenthesis, can be treated as an open tone for it is easily produced, but is a trifle too high. The performer knows how to improve the intonation in both deficiencies. We may, however, observe that it is very difficult to obtain a pure one-lined *B-flat*, in a *piano* or *pianissimo* passage. In tone, the valve trumpet is precisely the same as the natural trumpet. We give only the scale, which is at the disposal of the valve trumpet. The practical compass of the valve trumpet, extends from small octave *F* to two-lined *A*, and, in cases of absolute necessity perhaps two-lined *B-flat* and *B-natural*. The tones above two-lined *C* can no longer be employed in a *piano* passage; likewise with the tones above two-lined *G* which are no longer employed in a *fortissimo* movement. When the old masters such as BACH and HÄNDEL wrote for the trumpet above two-lined *G*, in chord-formations (figures), as well as in diatonic passages and in many instances as high as three-lined *D*, it was at that time fully practical, for the trumpet then used was of an entirely different form to the one of the present day. The best key for the valve trumpet is that of *E-flat*, for which we write a minor third lower than we wish it to sound. But trumpets in other keys are also used, besides that of *E-flat*, the trumpet in *F* is frequently employed. With the *F* trumpet all notes sound a perfect fourth higher than written (notated). Music for the trumpet is always written in the *G* clef.

Compass of the Valve-Trumpet.

Rough, not noble. Not especially beautiful in *piano*.

291.

Actual Sound.

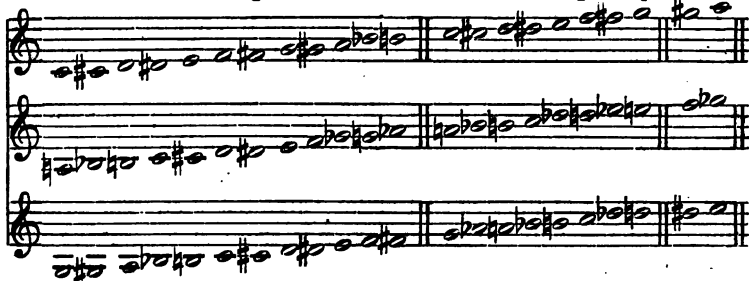
Notation:

Trumpet in E-flat.

Notation:

Trumpet in *F*.

In all keys excellent.

Only good in *forte*.Very
violent.

We usually find two trumpets in the orchestra, a first and a second, and occasionally three. The tone of the instrument is noble and strong, particularly in the middle register. Not only may the tones of this register be used for harmony passages, but also for strengthening the force of the rhythm in the *tutti* orchestra. The true *piano* is little adapted to its nature, but on the contrary, when certain characteristic effects are desired, they can be produced by the trumpet in *piano*.

292.

ROB. SCHUMANN, Overture "Manfred" op. 115.

Affettuoso (Leidenschaftlich).

Soli.

2 Flutes.

2 Oboes.

2 Clars. in
B-flat.

2 Bassoons.

1 Horn in
E-flat.3 Valve Trum-
pets in F.

3 Trombones.

'Cellos.

The image shows a musical score for brass instruments, specifically focusing on the Trumpet, Horn, Trombone, and Double Bass parts. The score is written on eight staves. The first four staves are for the Trumpet, Horn, Trombone, and Double Bass respectively. The notation includes various musical symbols such as notes, rests, and dynamic markings. The dynamic markings include *pp* (pianissimo) and *pizz.* (pizzicato). The Double Bass part is labeled "D.-B." at the bottom. The score is in a key signature of two flats (B-flat and E-flat) and a time signature of 4/4. The music is a piano passage, with sustained whole tones of the harmony.

The most beautiful effects of the trumpet, are those of the sustained whole tones of the harmony in a *piano* passage, with *tutti* orchestra, as we generally see employed in combination with the horns, for filling up the harmony. For strengthening the melody, the trumpet is best used in a slow, sustained Cantilena. As a matter of course, only the middle register is best adapted to such a purpose, with two-lined *E* as the limit.

The extraordinary power of the higher tones of the trumpet can easily be imagined by the pupil, when he recalls to his memory the Coda of the Finale of BEETHOVEN'S 7th Symphony (*A*-major). In the *fortissimo* passage for two trumpets in *D*, the two-lined *F* (the tone after two-lined *G*) in the 39th measure preceding the end of

the "Festival March of the Bacchantes", is sounded by the two trumpets with the greatest power. The strength of the trumpet's tone gives the rhythm the greatest possible precision, from which comes the facility of producing certain repetitions of the same note, *e. g.*:



Such rhythmical movements are distinctly characteristic to the trumpet, and can be produced clearer and more precise by it (especially in piano), than by the horn.

This can be easily seen from the following example, which we presume is familiar to you.

294. **FRANZ SCHUBERT, Symphony C-major.**
Andante con moto.



2 Oboes. *p*

2 Clarinets in A. *p*

2 Bassoons. *p*

2 Horns in C. *p*

1 Trumpet in A. *p*

4th and 2nd Violins and Violas. *p*

'Cellos and Basses. *p*

When we combine the oboe with other reed instruments, the characteristic power of its tone always retains a certain individuality; and likewise with the trumpet, for when it is combined with other brass instruments, its tone is always a little more prominent than the rest and it never mingles so perfectly as is the case with the horns and trombones. Combine the trumpets with the last named instrument (trombone) in such a manner that the first trumpet will have the leading of the melody.

MEYERBEER, "Robert the Devil", Procession of the Nuns.

Andante sostenuto.

Solo.

295.

4 Horn in
E-flat.

2 Horns in C.

3 Trumpets
in B-flat.

I. solo.

Trombones
and Ophi-
cleide.Tympani in
C and G and
Tamtam.Cellos and
'Basses.

ppp *poco cresc.* *ppp*

ppp

poco cresc. *ppp*

poco cresc. *poco cresc.* *ppp*

ppp *ppp*

poco cresc. *poco cresc.*

poco cresc. ppp *poco cresc.* *poco cresc.*

poco cresc. ppp *poco cresc.* *ppp*

ppp *poco cresc. ppp* *Ophy.* *poco cresc.*

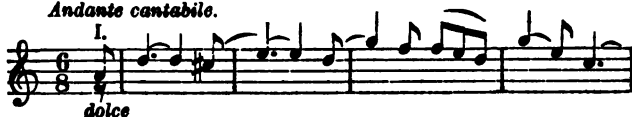
ppp

Another example in which the trumpet has the leading of the melody, we quote in the following, from the same opera "Robert the Devil". The accompaniment of which is also by 4 horns, 3 trombones, ophicleide, tympani, 'cellos and basses. From the above Exs. 295 and 296, the scholar will see that MEYERBEER employs the ventral-trumpet as a melodic instrument and writes for it in the same manner (with the exception of a few notes) as for the natural trumpet; also, that the melody does not exceed two-lined \bar{e} and is of a serious lyric nature.

296.

MEYERBEER, "Robert the Devil", Act V.
Andante cantabile.

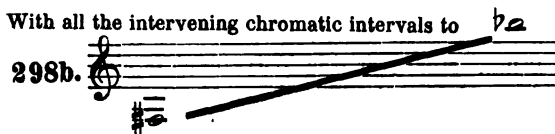
2 Trumpets
in A.



The many different chord-figures (Fanfares) which are easily produced on this instrument are especially adapted to it and is its chief characteristic.

Such passages will be heard in serious concert music as well as in the opera, *e. g.*, BEETHOVEN's Overture to "Leonore", RICHARD WAGNER's "Tannhäuser March", MENDELSSOHN's "Wedding March"

The compass of the cornet, for which we can safely write in all its keys, extends from small octave *F*-sharp (perhaps also *F* or *E* lower) to two-lined *B*-flat.



Music for the cornet is always written in the *G*-clef. We generally have cornets in *C*- and *E*-flat, the last named of which is most preferably employed.

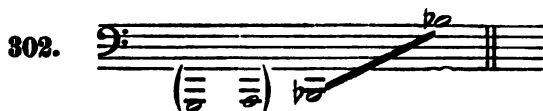
From these are formed the cornets in *B*-flat and *A*, which are also known as “Flügelhorns” and are generally used for leading the melody. The cornet in *A* is formed from the *B*-flat cornet by means of a crook, and is therefore no special instrument. We also use the alto cornet (or Alto Flügelhorn) in the keys of *F*- and *E*-flat and obtain the cornet in *D* from the last named instrument by means of the crook. The natural tones of these instruments sound as we illustrate in the following (Ex. 299).

But we must expressly remark that the tones of the middle register (*i. e.*, the notes from small octave *B*-flat to two-lined *E*-flat) are always the best and of the purest intonation.

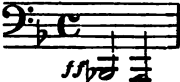
299.

Cornet in <i>C</i> .	A musical staff in G-clef showing the notes C4 (first line), C5 (first space), D5 (second line), E5 (second space), F5 (third line), G5 (third space), A5 (fourth line), B5 (fourth space), C6 (fifth line).
Cornet in <i>E</i> -flat.	A musical staff in G-clef showing the notes Eb4 (first line), Eb5 (first space), F5 (second line), G5 (second space), Ab5 (third line), Bb5 (third space), C6 (fourth line), D6 (fourth space), Eb6 (fifth line).
Cornet in <i>B</i> -flat.	A musical staff in G-clef showing the notes Bb4 (first line), Bb5 (first space), C6 (second line), D6 (second space), Eb6 (third line), F6 (third space), G6 (fourth line), Ab6 (fourth space), Bb6 (fifth line).
Cornet in <i>A</i> .	A musical staff in G-clef showing the notes A4 (first line), A5 (first space), B5 (second line), C6 (second space), D6 (third line), E6 (third space), F#6 (fourth line), G#6 (fourth space), A6 (fifth line).
Alto cornet in <i>F</i> . (Flügelhorn.)	A musical staff in G-clef showing the notes F4 (first line), F5 (first space), G5 (second line), A5 (second space), B5 (third line), C6 (third space), D6 (fourth line), E6 (fourth space), F6 (fifth line).
Alto cornet in <i>E</i> -flat.	A musical staff in G-clef showing the notes Eb4 (first line), Eb5 (first space), F5 (second line), G5 (second space), Ab5 (third line), Bb5 (third space), C6 (fourth line), D6 (fourth space), Eb6 (fifth line).
Alto cornet in <i>D</i> .	A musical staff in G-clef showing the notes D4 (first line), D5 (first space), E5 (second line), F5 (second space), G5 (third line), A5 (third space), B5 (fourth line), C6 (fourth space), D6 (fifth line).

The best compass of this deepest of all brass instruments, is from contra *B*-flat (in case of necessity also *A* and *G*) to small octave *B*-flat —



with all the intermediate chromatic intervals.

As the higher tones can be given better by the trombone, it is best not to exceed small octave *E* in compass. The tuba is well adapted to the orchestra and especially so when it takes the fourth part (bass) to three trombones, but occasionally we find it doubling the third trombone. Of special characteristic effect is the entrance of the tuba (with trombones)  in the "Hymn of the

Spirit of Ariman's (No. 7 in ROB. SCHUMANN's "Manfred"), with the words "Plague is thy spirit" (Pest ist sein Schatten).

The genuine bass trombone is not to be found in the orchestra of the present day; therefore, the tuba whose compass is several notes lower in the deep register, and of richer tone, becomes indispensable to the full orchestra.

There are other obsolete instruments such as the ophicleide, bombardon and serpent, which far surpass the tuba in resonance and beauty of tone.

The Trombone. (Ital. Trombone; Ger. Die Posaune).

§ 33. Formerly we always had three trombones in the orchestra, namely: alto, tenor and bass trombone.

The last named instrument which is no more in use — as previously remarked above — is admirably replaced by the tuba. The alto trombone is of less frequent use, for its higher notes, such as one-lined *B*-flat, *B* and two-lined *C* can be taken much better by the valve-trumpet.

Therefore, it is most advisable to write for three tenor trombones, giving to the first the highest part, the second the middle part, and the third the lowest. By this treatment we gain excellent results, as these instruments have the same sound, strength and pitch, and are manipulated in the same manner. In the following quotation we will see that ROSSINI, in his Overture to "William Tell" wrote for three trombones unisono.

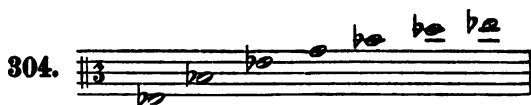
Allegro $\text{♩} = 108.$

303.

The foregoing example is easier and less fatiguing for the alto trombone than for the larger tenor and bass trombone. The student may represent the three different trombones as three larger trumpets, whose tube consists of two sliding pieces inserted in one another, which may be lengthened by pulling out the sliding elbow-joint.

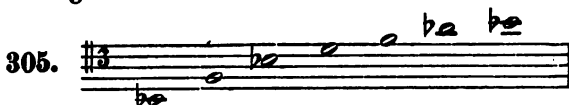
Such a process gives it six different positions, each of which successively lowers the instrument a half tone.

The natural tones (*i. e.* those tones which are produced when the slide is completely closed) of the alto trombone are —

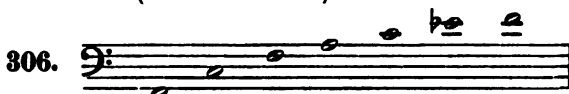


so, from the small octave *B*-flat, by means of the first position of the slide, we have *A*-natural one semitone lower, second position *A*-flat, third position *G*-natural, fourth position *F*-sharp, fifth position *F*-natural and the sixth *E*-natural.

The tenor trombone is in *B*-flat and produces with closed slide, the following harmonic series.


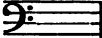


The bass trombone is in the key of *F* and possesses the following natural tones (harmonic series): —



So, by means of the sixth position of the slide, we produce from great octave *F*, the contra *B*-natural.

But it is not advisable to employ the sixth position with the tenor and bass trombones, for the tube is drawn out so far that the player cannot produce the lowest tones so pure and true as with the other positions.

We also observe that the old masters have not written for the bass trombone lower than the great octave *C* , but we can do so if we do not wish to use the tuba. We can occasionally write the great octave *E*  for the tenor trombone.

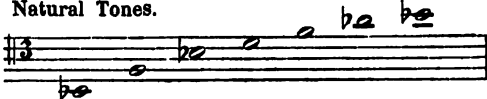
As was previously remarked, the high tones of the trombone are better taken on the valve trumpet and the low tones by the tuba; therefore, it is best when writing for the trombones to limit its compass from great octave *G* (perhaps *F*) in the low, to one-lined *A* in the high.

Within this compass we can rely upon every intermediate chromatic tone with certainty. The utmost degree of velocity which we should require from the trombone, can be seen from Ex. 303; the quaver notes (eighth) of which, in the Allegro movement are equal to $(\frac{1}{8}) = 408$. But the student must consider that this quotation, although of such a preponderous nature, is easier to execute

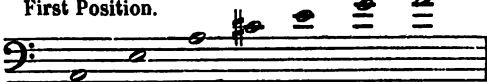
than a diatonic progression or one that does not lie in the harmonic series of open tones and requires a constant shifting of the slide to produce them. The following (Ex. 307), gives first the natural harmonic series of the tenor trombone and then the same notes as they are affected by the six different positions: —

307.


Natural Tones.



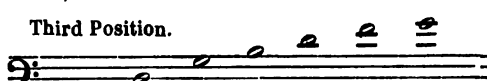
First Position.



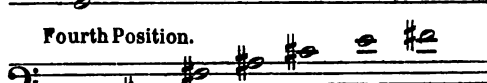
Second Position.



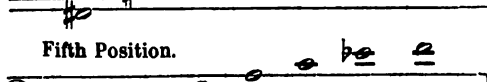
Third Position.



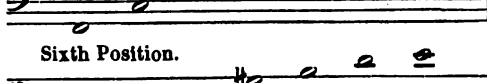
Fourth Position.




Fifth Position.



Sixth Position.



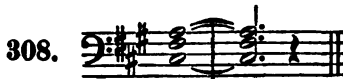
Also, by skipping about a great deal within this scale of notes we must not exceed the velocity of quaver notes in Allegro. Likewise, we must not employ the trombone continually as it requires a great deal of breath to play it. The player requires time to regain wind, as a long passage is a great tax on the lungs, and the saliva which accumulates in the tube must frequently be allowed to flow therefrom. We must also provide for the exceedingly long sustained notes which are given to the trombones.

The technique of the instrument is so developed that trills in the higher register are practical, and the repetition of a note, such as  is always certain and not so shrill as from the

trumpet. The three trombones can be employed in many different ways in the orchestra. Most frequently we compose for them as three voices, but the effect of close position *piano* is of an entirely different nature to that of open position *forte*.

The introduction of the trombone *pp*, in No. 40 (Finale, Wolf's Den) of "Freischütz" produces a most sinister effect (or as we say, a feeling akin to terror creeps over us).

Sostenuto.



The effect of the trombones in the following quotation from the Overture to "Euryanthe" is magnificent and brilliant.

309.

Allegro marcato, con molto fuoco. ♩ = 92.

Alto Trombone.

Tenor Trombone.

Bass Trombone.



In religious music the effect produced by a movement for three trombones, is grave and solemn, and when the three mighty instruments are employed *unisono* they are of most vehement power (see Ex. 303). SCHUBERT produces a grand effect in the introductory andante of his C-major Symphony by his three trombones moving at an octave apart.

310a.Alto and Tenor
Trombone.

Bass Trombone.



But it is much too distant leading, when we employ only a small number of such extraordinary effects, as the great masters have used in trombone movements. We refer the student to the scores of MOZART, GLUCK and BEETHOVEN. From these he will see how these instruments are employed, and how efficacious their tone is in the portrayal of solemnity, seriousness, pathetic grandeur, frightful horror (harrowing the soul), courageous combat and lamentable gloom.

The Saxophone.

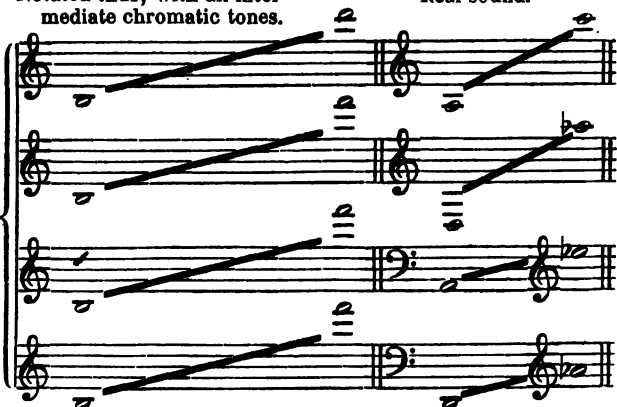
This instrument is at the present time, little known in Germany: the pleasantness of its tone and its comparatively speaking, easy management, has caused it to be universally employed in military bands. The band of the 407th Regiment in Leipzig, has one tenor saxophone.

The saxophones are four in number, — the soprano, the alto, the tenor and the baritone saxophone. The compass of each is given in the following: —

310b.

Notated thus; with all intermediate chromatic tones.

Real sound.

Soprano Saxa-
phone in B^b.Alto Saxa-
phone in E^b.Tenor Saxa-
phone in B^b.Baritone Saxa-
phone in E^b.

Some German cavalry regimental bands possess a double quartet of such saxaphones. We must present the saxaphone as an instrument of the clarinet order, the body of which is of brass with a mouthpiece similar to that of the clarinet, and a reed and keys such as we find on the wood-wind instruments; its bell, however, is turned over.

Chamber and Concert Music for Wind Instruments.

§ 34. Chamber music for the wind instruments is not very plentiful. Under this heading we give a list of the most prominent works of the classical masters. The pupil can from these select those compositions which best answer his purpose.

We will name first the previously mentioned "Serenade" of MOZART's, for 2 oboes, 2 clarinets, 2 basset-horns, 4 horns (natural) and 2 bassoons; another "Serenade" by the same composer, in *E-flat* major and *C-minor* for 2 oboes, 2 clarinets, 2 horns and 2 bassoons; and lastly his "Divertissement" in *E-flat* and *B-flat* for 2 oboes, 2 clarinets, 2 English horns, 2 horns and 2 bassoons. From BEETHOVEN we possess an "Octet" for 2 oboes, 2 clarinets, 2 horns and 2 bassoons (op. 103, *E♭*-major), a "Sextet" for 2 clarinets, 2 horns and 2 bassoons (op. 71, *E♭*-major), and a "Trio" for 2 oboes and English horn (op. 87, *C*-major). In modern times this class of music has been greatly enriched by the following most excellent work, namely, an "Octet" for flute, oboe, 2 clarinets, 2 horns and 2 bassoons, by THEODORE GOUVY, op. 71 (Leipzig, pub. by F. KISTNER). Still better is the chamber music of the old masters which employed both wind and stringed instruments simultaneously. Of this class we name first: BEETHOVEN's well-known "Septet" (op. 20 in *E♭*) for violin, viola, horn, clarinet, bassoon, 'cello and double-bass; also BEETHOVEN's little used "Sextet" (op. 84b in *E♭*) for 2 violins, viola, 'cello and two obligato horns. From the great number of compositions by MOZART for stringed and wind instruments employed simultaneously, the most prominent is the "Quintet" in *A*-major for clarinet and string quartet. For incomparable richness in florid melody and magnificent instrumental coloring, we call your attention to FRANZ SCHUBERT's celebrated "Octet" (op. 166, *F*-major) for clarinet, horn, bassoon, 2 violins, viola, 'cello and double-bass.

Chamber Music for Pianoforte and Wind Instruments.

For pianoforte and wind instruments, we call your attention to the two "Quintets" of MOZART's, namely, *E-flat major* and *C-minor*, the "Quintet" of BEETHOVEN's (op. 16, *E^b-major*), also the same master's well known sonata for pianoforte and horn (op. 17, *F-major*), and the Trio for pianoforte, clarinet and 'cello (op. 44, *B^b-major*).

Of the more recent works for pianoforte and wind instruments, we mention the interesting "Septet" for pianoforte, 2 violins, viola, 'cello, double-bass and trumpet, by SAINT SAËNS (op. 65), the beautiful sonata "Undine" for pianoforte and flute (op. 167) by CARL REINECKE, and the author's "Concert Piece" for flute and pianoforte, op. 97 (Pub. by ROBERT FORBERG, Leipzig). MOZART has written concertos for the flute, the flute and harp, the clarinet, the bassoon, and three concertos for the horn. From WEBER we have three concertos for clarinet (op. 26, op. 73 and op. 74), a concerto for bassoon (op. 75), and a concerto for horn (op. 45). JULIUS RIETZ has composed a valuable concert-piece for oboe (op. 33); FERDINAND DAVID a concertino for bass-trombone (op. 4). To the student of musical art who is interested in this branch of musical literature, will find that we have mentioned above, many excellent works, suitable for study.

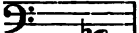
CHAPTER VIII.

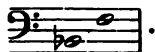
PERCUSSION INSTRUMENTS.

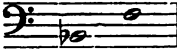
The Kettle Drums. (Ital. Timpani; Ger. Die Pauken.)

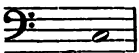
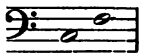
§ 35. Of the percussion instruments, it is true that only the kettle drums demand our interest in a high degree, for in the orchestra they are indispensable. We always employ two: the larger is tuned so as to produce any of the following tones — great octave *F*, *F-sharp*, *G*, *A-flat*, *A*, *B-flat*, *B-natural* and small octave *C*. The smaller drum is tuned so as to produce great octave *B-flat*, *B-natural*, small octave *C*, *D-flat*, *D*, *E* and *F*. With the mechanical kettle drum, which is in general use at the present time, the changing of one drum or of both, can be accomplished in a very short time. But, when such a change is desired in the course of a movement, we must always allow an adequate number of bars' rest, preceding the change, so as to allow the performer ample time to alter the tone and test its exactness.

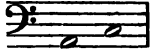
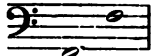
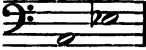
The kettle drummer uses many different kinds of drum sticks, which produce either a hard, soft or dull tone. It is not necessary that the composer prescribe whether the drum stick is to be of leather, rubber, felt covered or of sponge, for the players ordinarily use a species of stick, which they handle with such aptitude, that they can produce with one and the same stick, all possible degrees of force, from the softest *pp* to the most powerful *ff*.

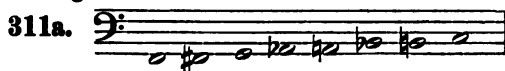
In most cases the kettle drums are tuned in the tonic and dominant. It remains then for the composer to select one, of two possible tunings for a composition in *B-flat*. Thus  or



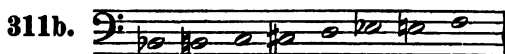
In the first case the tension of the parchment is greatly diminished, and consequently it gives forth a dull tone which is only suitable for grave and serious movements. But in the second tuning  the tension of the parchment is augmented and the same tones are essentially brighter and clearer.

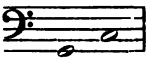
Likewise, for compositions in the key of *F*, the composer has the choice of employing  or .

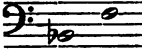
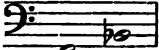
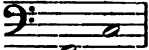
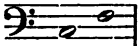
We can also tune the kettle drums agreeably in other intervals, as will be seen from the following, *e. g.*, in  (minor third) in the Adagio of the "Freischütz" Overture; in  (perfect octave) BEETHOVEN'S (9th Symphony); in  (diminished fifth) "Fidelio" and also in all the remaining tones, that the notes of the large kettle drum



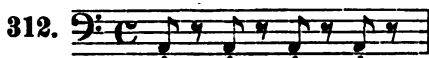
and the small drum



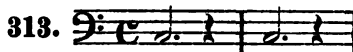
can give; therefore, it is much better for the composer to give the actual notes for the tuning of the drums at the beginning of a movement, than to signify by written characters, as was the custom formerly. Previously the kettle drums were considered as transposing instruments, and the notes  were invariably written, no matter what the key of the movement may have been.

This allowed the performer, for the key of *B-flat*, the free choice of  or ; and in *F-major*  or .

But there is all the less obvious reason existing for writing the notes for the drums in such a manner, for they are not transposing instruments in general, as their notes sound in the same octave as they are written. As the tone of the kettle drum reverberates when not muffled, it becomes absolutely necessary to write in the following manner, if we wish a short abrupt blow —



or a long reverberating sound:



The kettle drum is essentially a rhythmical instrument: occasionally the bass can be reinforced or strengthened by this instrument:

BEETHOVEN'S, Symphony No. 5. 1st Movement.

Allegro con brio. $\text{♩} = 108.$

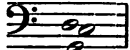
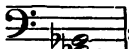

314. Solo. 

Flute.

Oboe.

Bassoons.

Timpani.

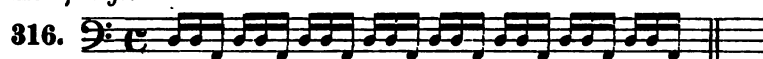
Sometimes three drums are written for, *e.g.*, MEYERBEER, "Robert The Devil" (No. 17), ; ROB. SCHUMANN'S Symphony in *B-flat* major, op. 38 1st Movement , and in the 3rd Movement ; 4th Movement same as in 1st Movement.

MOSCHELES also wrote for three kettle drums in his "Second Piano Concerto" (*E-flat* major).

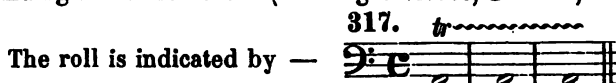
Various rhythmical figures can be executed upon the kettle drum with facility —



and on the other hand, there are many such figures which are very difficult and require great skill on the part of the player to perform them, *e. g.* : —



The roll is practicable on all the notes of the drum, from the most delicate *ppp* to the most deafening *fff*, and can be continued for a long time without fatiguing the performer. We refer here to the well known “first movement” at the close of the developing part of BEETHOVEN’S 4th Symphony. From the most delicate “*pp*”, gradually swelling to “*ff*” the kettle drum has a roll to perform continuing for 25 measures (in Allegro vivace, $\text{♩} = 80$).



The tuning of the kettle drum requires the most careful attention and its correctness depends greatly upon a cultivated ear, the least deviation from purity of tone will bring forth the most disagreeable effect. The 5th Scene of the Opera “Euryanthe” begins in the following manner:

319. *Vivace.* $\text{♩} = 438$.

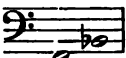
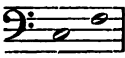
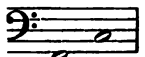
4 Trumpets in D.

Timpani in

Solo.

mf

&c.

The pompous, festive tone at the beginning of the finale becomes really sad and gloomy when one or the other kettle drum, or perhaps both drums are not perfectly tuned. We must always consider the re-tuning of one or both tympanies during the course of a movement, while the orchestra and chorus are in distant keys, and not depreciate its difficulty under such circumstances. The novice in the art of instrumentation will therefore consider that when we desire a re-tuning of the drums in the course of a movement, from  to two such notes as ; the change will be greatly facilitated by changing only the B-flat of the large drum, upwards to the C one tone above, e. g., .

The effect produced by a muffled kettle drum ("timpani coperto") has never been heard by the author; therefore, he cannot judge what the alteration of sound under such conditions would be.

The Bass-Drum. (Ital. Gran Tamburo; Ger. Die grosse Trommel.)

The pitch of this drum is dubious, therefore, we can only indicate the rhythm with it, or strengthen a *fortissimo* of the orchestra: under certain conditions in a *piano* passage, a definite effect can be produced by the "after vibration" of the parchment (skin) in long sustained notes.

In concert music the bass-drum is seldom used, and when employed it is most frequently used in combination with other instruments of indefinite pitch, such as the cymbals, triangle, or with cymbals alone: both instruments being written on one staff. Then the composer must always signify whether the bass-drum is to be used singly; likewise the cymbals, or if both are to be employed conjointly. BEETHOVEN writes for the bass-drum, cymbals and triangle on three different clefs, in the finale of his 9th Symphony (Allegro assai vivace, alla marcia). In the first twelve measures he uses only the bass-drum, introducing the cymbals and triangle on the thirteenth measure. MENDELSSOHN uses the bass-drum in "Walpurgis Night" (No. 5), ROB. SCHUMANN in the music to "Manfred" (No. 7). In opera music we find the bass-drum only occasionally employed, e. g., Overture to "William Tell" by ROSSINI. The bass-drum is indispensable to the Military Band, for the kettle drum is lacking, and the rhythm must be given by the bass-drum. In such music it is mostly limited to single strokes.

The Side-Drum or Military Drum. (Ital. Tamburo; Ger. Die kleine Trommel),

is likewise mostly found in military band music, and is used for giving signals and marking the rhythm in march music. Besides the many different figures (rhythmical) we can also produce long and short rolls.

Occasionally this drum appears in opera music, *e. g.*, **BEETHOVEN'S** music to "Egmont"; **WEBER'S**, Overture to "Preciosa".

Cymbals, (Ital. Piatti; Ger. Die Becken),

are mostly employed for confirming the rhythm and strengthening the *fortissimo*. **RICH. WAGNER** employs them in an original way towards the close of the first prelude to "Lohengrin", with some *pp* strokes which produce among the other instruments of this passage, a bewitching, fabulous coruscation.

The Triangle. (Ital. Triangolo; Ger. Der Triangel),

we find also in concert music as well as in opera, very frequently employed. It is used very effectively in single strokes, and also in *piano*, *pianissimo* and *forte* trills. (See **BEETHOVEN'S** 9th Symphony, **ROB. SCHUMANN'S** Symphony No. 4, **WEBER'S** "Zigeuner March").

The Gong or Tamtam,

is a Chinese cymbal of metal, which possesses a horribly exciting tone. It is utilized occasionally for gloomy effects. (See Ex. 295 **MEYERBEER'S**, „Robert The Devil”; **CHERUBINI'S** "Requiem").

The Carillon or Chime of Bells. (Ger. Das Glockenspiel),

is only used in military band music. This instrument consists of steel bars, which extend in compass from two-lined \bar{c} to four-lined \bar{c} : it is generally played with a brass hammer. While the bars are long resounding, it is advisable to use only chord-figures. The notes are written an octave lower than they sound.

The Tambourine

is without definite pitch, and resembles a half drum in shape. It is used mostly in military band music, however, we find it in **WEBER'S**, „Zigeuner March” from *Preciosa*.

The Bells and the Castagnettes,

are also without definite pitch, and likewise are mostly employed in military music. The bells are also to be found in the "Zigeuner March" by WEBER.

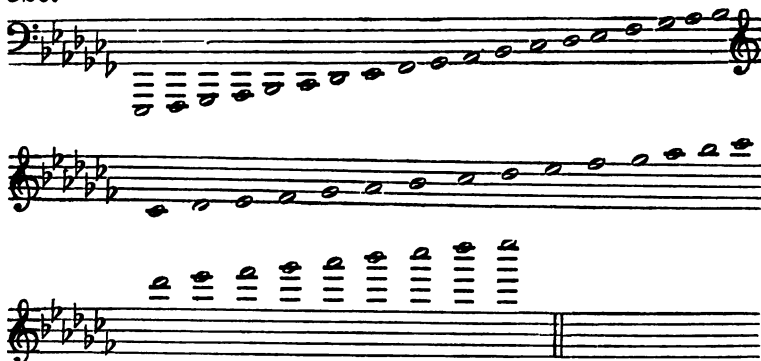
CHAPTER IX.

THE LESS FREQUENTLY USED STRINGED INSTRUMENTS.

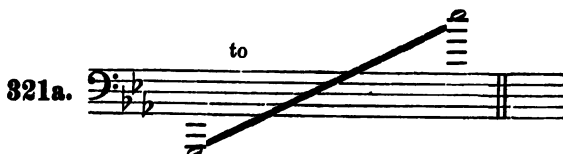
The Harp. (Ital. Arpa; Ger. Die Harfe.)

§ 36. The harp has been extensively improved during the present century, principally through the pedals. The solo instrument used formerly in the orchestra, was the "Haken Harp". The actual compass of the double-actioned harp, will be seen from (Ex. 320), as follows: —

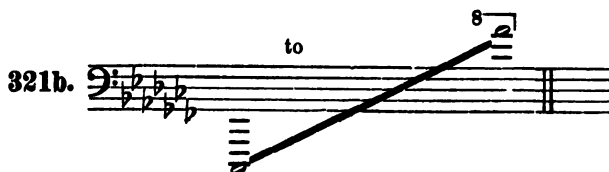
320.



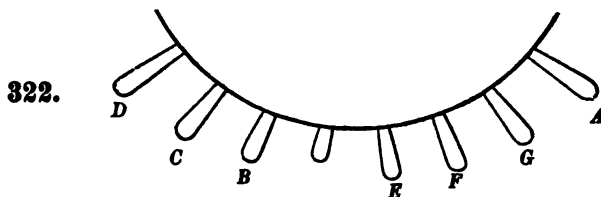
From the above example, we will see that the natural key of the double-actioned harp, is that of C-flat major. The pedal harp formerly used was of very simple mechanism, and its natural key was that of E-flat major, with a compass from great octave *G* to four-lined *c*.



The Gothic harp, invented and manufactured by Pierre Erard, has a compass of six octaves and a half, from —



On this harp we will find that all the C-flat strings are colored red and the F-flat blue. Music for the harp is written upon two clefs, as in the piano. The lower being generally the F-clef, and the upper the G-clef. Each note of the scale has its pedal: on the left side we find the three pedals for D, C and B, on the right side the four for E, F, G and A. The following illustrates their order: —

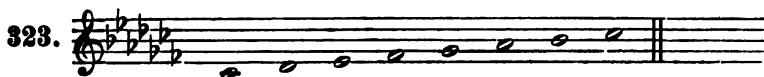


The eighth pedal which we find situated about the middle of the pedestal, is used merely for strengthening the tone (swell pedal). Each of the seven pedals when lowered one notch, raise each string with which they are connected (through all six and a half octave) one semitone. Thus, it will plainly be seen, that when we lower the D-pedal in such a manner, all D-flat strings become D-natural strings; likewise, C-flat strings become C and so on with the remaining five pedals, when lowered one notch, they bring about the same change. With the harp of the simple mechanism, each pedal could only be lowered one notch, thereby, raising the strings only one semitone; but with the double-acted harp, each pedal can be lowered two notches, by which means each string can be raised a whole tone. Upon this principle the double-acted harp, stands naturally in that key which has seven flats for its signature, namely, C-flat major.

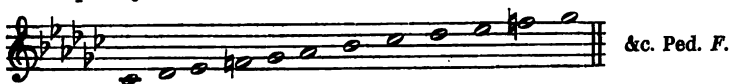
By lowering all the pedals one notch, we transform the key of C-flat or B-major, to the key of C-major; but when the pedals are completely lowered (two notches), then the key of C-flat, becomes C-sharp or D-flat major. By this process we can form all the twelve keys with facility, as is shown in example 323.

- Without lowering the pedals, the harp stands in its natural key, that of *C-flat major*: —

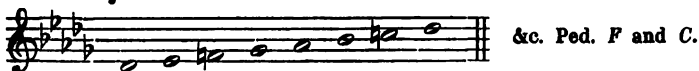
cb, ab, eb, fb, gb, ab, bb, cb



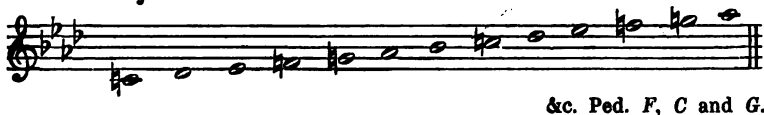
By lowering the *F*-flat pedal one notch (thereby raising all *F*-flat strings a semitone to *F*-natural), we have a harp in *G-flat* or *F-sharp* major: —



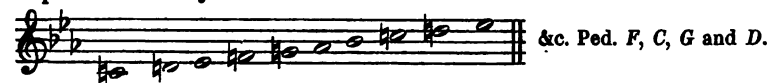
By lowering the *F* and *C* pedals one notch, we have a harp in *D-flat* major: —



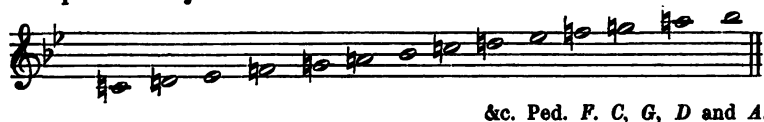
By lowering the *F*, *C* and *G* pedals one notch, we have a harp in *A-flat* major: —



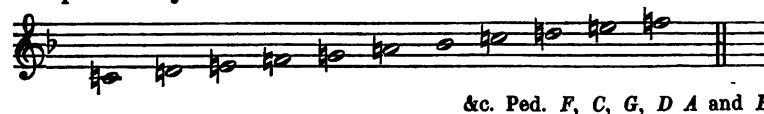
By lowering the *F*, *C*, *G* and *D* pedals one notch, we have a harp in *E-flat* major: —



By lowering the *F*, *C*, *G*, *D* and *A* pedals one notch, we have a harp in *B-flat*-major: —



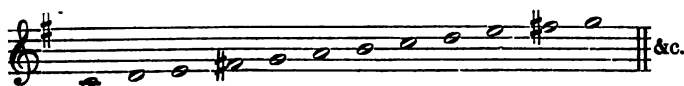
By lowering the *F*, *C*, *G*, *D*, *A* and *E* pedals one notch, we have a harp in *F*-major: —



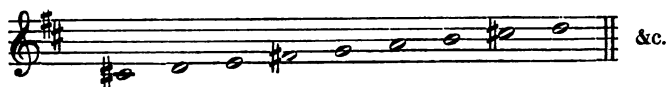
By lowering all seven pedals one notch, we have a harp in *C*-major: —



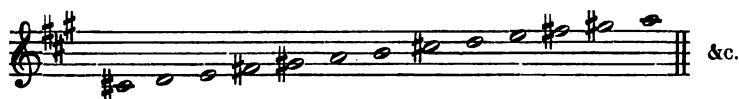
By lowering the *F* pedal two notches (*F^b* strings become *F[#]*) and the other six one notch; we have a harp in *G*-major: —



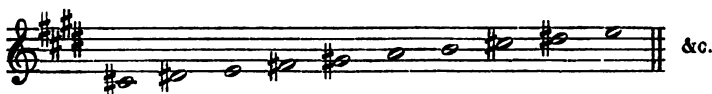
By lowering the *F* and *C* pedals two notches and the other five one notch; we have a harp in *D*-major: —



By lowering the *F*, *C* and *G* pedals two notches and the other four one notch; we have a harp in *A*-major: —



By lowering the *F*, *C*, *G* and *D* pedals two notches and the other three one notch; we have a harp in *E*-major: —



We can have a harp in the following keys, in two distinct ways, namely: the keys of *B*-major, *F*-sharp major, and *C*-sharp major *e. g.*, a harp in *B*-major, can be formed either by lowering the *F*, *C*, *G*, *D* and *A* pedals two notches, and the *E* and *B* pedals only one notch; or by using the harp enharmonically in its original key of *C*-flat major, which requires no change in pedals. In the same manner we can have a harp in *F*-sharp major by lowering the *F*, *C*, *D*, *G* and *E* pedals two notches and the *B*-flat pedal only one notch (the *G*-flat pedal remaining, and being employed enharmonically as *F*-sharp); or by using *G*-flat major (six pedals stationary) enharmonically and lowering the *F* pedal (1st pedal) one notch (compare Ex. 323). In conclusion we can have a harp in *C*-sharp major; by lowering all pedals two notches or simpler from *D*-flat major, by lowering the *F* and *C* pedals one notch. With the old harp of simpler mechanism, we could only lower the pedals one notch; so consequently the following scales were wanting; *C*-flat major (or *B*-major), *G*-flat major (or *F*-sharp major), *D*-flat major (or *C*-sharp major) and *A*-flat major. When in the course of a composition we are to retain the same key for any length of time; then, it is better that we adjust the pedals to their definite notches (first

or second) in the pedestal of the harp (lower part of the resonance chamber), to remain until a change as required.

From Ex. 323 we observe the following: —

1. That the flat keys are much more readily formed on the harp, than those of sharps; with one exception, that of *B*-major (enharmonic change of *C*-flat major).

2. That we can write easier for major keys than for minor.

3. That the harp is essentially a diatonic instrument, and therefore chromatic scales or figures are not suited to it.

4. That we can with the double actioned harp, have the same tone from two different strings at the same time, by lowering the pedal of the underlying neighboring string, thereby raising it one or two semitones, *e. g.*: —



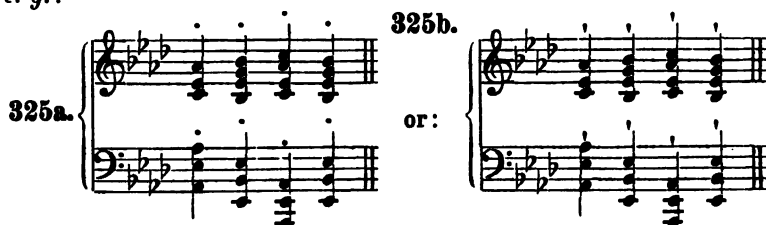
Such double tones are known as "Synonymous" (*gleichlautende* tones. But the three tones *D*, *G* and *A*, we cannot have from two strings as the strings *C*-flat, *F*-flat and *G*-flat when raised a whole tone (*i. e.* by lowering their pedals two notches) only produce *D*-flat, *G*-flat and *A*-flat.

5. That we must avoid sudden and remote changes of key, as the lowering (*i. e.* notching of the pedals) of the pedals cannot be accomplished rapidly.

The harp is played with both hands, and the thumb and three following fingers thereof are used, but not the little finger. Therefore, chords which exceed an octave in compass are much more difficult than those which keep within the octave.

Such chords as exceed an octave in compass are best played as broken chords (*arpeggiatura*).

When chords are not to be played broken, they are designated by a particular sign, such as the dot or staccato hook (or apostrophe), *e. g.*: —



When such chords are to be played as broken chords, we place before them the same sign (·) as we find in piano music (compare Ex. 228).

The descending broken progressions are the most beautiful in effect, *e. g.*: —

Parish Alvars, op. 58.
Moderato maestoso.

326.

Arpeggio figures which pass through several octaves, are executed by the two hands employed alternately: —

327.

When we wish arpeggio figures to be executed by the two hands simultaneously, we must write them at the distance of an octave or a tenth apart, *e. g.*: —



We must guard against placing the hands in too close proximity, therefore, arpeggio at the distance of a third must be avoided. When the hands are brought in such close proximity in piano music, the execution is greatly hindered and likewise with the harp, for when the same string is plucked in such rapid succession it has no time to vibrate.

The highest (shortest) string, which sounds delicate and soft in *p* and *pp*, will in *f* or *ff* sound very cold.

The lowest tones are employed mostly for sustained bass notes, *e. g.* : —

329.

The tremolo is practicable on the harp, in the following manner: —

330 a. Written:

Executed:

Exercise 330a consists of two systems of musical notation. Each system has a 'Written' part and an 'Executed' part. The 'Written' part shows a treble and bass staff with a series of notes, each marked with a '3' above it, indicating a triplet. The 'Executed' part shows the same notes, but with a tremolo effect indicated by a series of slanted lines above the notes, suggesting a rapid vibration or tremolo effect. The notation is in C major, 4/4 time, and the key signature has one sharp (F#).

330 b. Written:

Executed:

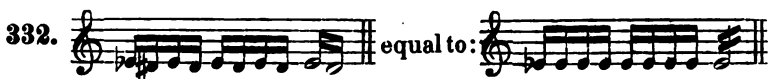
Exercise 330b consists of two systems of musical notation. Each system has a 'Written' part and an 'Executed' part. The 'Written' part shows a treble and bass staff with a series of notes, each marked with a '3' above it, indicating a triplet. The 'Executed' part shows the same notes, but with a tremolo effect indicated by a series of slanted lines above the notes, suggesting a rapid vibration or tremolo effect. The notation is in C major, 4/4 time, and the key signature has one sharp (F#).

Of charming effect are the “flute-like”- (flageolet-) or “harmonic” tones (sons harmoniques) of the middle and above portion of the strings. Flageolet-tones are designated by a small cipher above the notes. Such designated notes give a tone one octave higher than written. Of course flageolet-tones should not be written in too rapid succession: double-flageolet-tones for both the right and left hand are well adapted to the instrument.

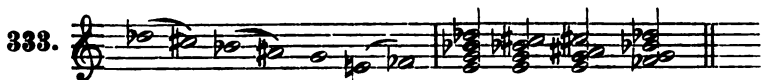
The trill is possible by the alternate employment of both hands: —



Reiterated notes are possible by adjusting the pedals so as to give the same tone from two neighboring strings: —



By the simultaneous employment of more pedals the harp can give forth several tones, each of which is sounded by two different strings. In this manner the harp can be tuned to a definite chord, e. g., the following tuning of the diminished seventh, e. g. *b*-flat and *d*-flat can be given: —



In this tuning each note of the notated chord is taken by two neighboring strings, with the exception of the *G*, which can only be had from one string.

By this means, runs — which is illustrated by the following (Ex. 334), — are practicable in all degrees of pitch, *ff* as well as *pp*, and can be played with great rapidity by merely gliding the fingers over the strings. Such passages are designated by the words “*glissando*” or “*sdruciolando*” (glide) or “*glissez*”: —

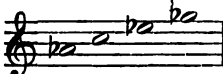
KARL REINECKE, Concerto for Harp with Orchestral Accompaniment.
op. 482.

Allegro moderato.





Such runs are also practicable with both hands in octaves.

When we use the notes  we can execute the run of example 335, by merely employing the thumbs of both hands in descending, and the index fingers for ascending; and in both cases by merely sliding the fingers over the strings.



It is also evident, that we can form runs in other chords by the proper employment of the appropriate pedals. As will be seen from the following:



Musical score for a piano piece, measures 8-11. The key signature is three flats (B-flat, E-flat, A-flat). The melody in the right hand features a series of eighth notes and a final eighth-note triplet. The left hand provides a rhythmic accompaniment with eighth notes and a descending line.

Parish Alvars, la danse des fées.

337.

Musical score for "Parish Alvars, la danse des fées", measures 1-4. The key signature is three flats. The right hand plays a melody of eighth notes, marked *ff* *sdruciolando*. The left hand plays a bass line of eighth notes.

Musical score for "Parish Alvars, la danse des fées", measures 5-8. The right hand continues the melody of eighth notes. The left hand plays a bass line of eighth notes, with a final measure showing a double bar line and a repeat sign.

Musical score for "Parish Alvars, la danse des fées", measures 9-12. The right hand continues the melody of eighth notes, marked with a fermata. The left hand plays a bass line of eighth notes.

Musical score for "Parish Alvars, la danse des fées", measures 13-16. The right hand continues the melody of eighth notes, marked with a fermata. The left hand plays a bass line of eighth notes.

First system of musical notation. The treble staff contains a melodic line starting with a piano (*p*) dynamic marking. The bass staff contains a bass line. A crescendo hairpin is positioned below the treble staff.

Second system of musical notation. The treble staff contains a melodic line. The bass staff contains a bass line. A crescendo hairpin is positioned below the treble staff.

Third system of musical notation. The treble staff contains a melodic line. The bass staff contains a bass line. A piano (*p*) dynamic marking is present. A crescendo hairpin is positioned below the treble staff.

Fourth system of musical notation. The treble staff contains a melodic line. The bass staff contains a bass line. A piano (*p*) dynamic marking is present. A crescendo hairpin is positioned below the treble staff. The text "*ff or pp and crescendo*" is written below the bass staff.

338.

Such glissando movements are possible for three voices with three fingers, but only ascending, *e. g.* :

339.

It is quite evident that we can play scales both ascending and descending, as easy as we can the double-stopped glissandos, *e.g.*—

340. Right Hand.

glissando

Left hand. glissando.

KARL REINECKE, op. 182.

341.

sdruciolando

23

17

Veiled or Muffled Tones (*sons étouffés*) are written mostly for the left hand. They are produced by muffling the vibrating string and thereby hindering a longer sounding of the string. This is designated by the sign \oplus ---- *, or we merely write, "*sons étouffés*".

Guitar-Tones and **Zither-Tones** are played with the nail, at the tip of the finger and as near the resonance chamber (*i. e.* low down on the strings, near the sounding board, "*près de la table*") as possible. Both class of tones are seldom employed. The guitar tones are designated by "*sons d'ongles*"; but as soon as the notes are to be played in the natural way, we must write, "*s. n.*" (*sons*

naturels). For the zither-tone we have no particular sign; the composer must, however, make a suitable remark therewith. Formerly the harp was of seldom employment in the orchestra; and then, only in exceptional cases. At present we find a harp in every large (full) orchestra; MEYERBEER, MENDELSSOHN, BERLIOZ, GOUNOD, NIELS GADE, SAINT SAËNS and others have occasionally employed in their compositions, one or two harps.

Through RICH. WAGNER this instrument has maintained its full rights in the orchestra. The harp is particularly adapted for accompanying a solo voice; but its sound blends most admirably with that of the horns and wood-wind instruments, as already appears in (Ex. 228, Harp and English horn).

Arpeggiare chords (*i. e.*, the notes of which are played one after the other) are well employed in combination with the pizzicato of the string quartet as a support, but we must guard against the single notes which are to be played pizzicato by the strings, for they are not strengthened by the harp when they are to be given in rapid succession, for the longer strings of the harp resound for quite a long time when they cannot be muffled. Such a quotation as the following —

342.
1st and 2nd
Violins.

pizzicato

loses its clearness and distinctness through the accompanying of the harp. Chromatic scales must be entirely avoided on the harp; as even in slow time, they are difficult, as it is necessary to change the pedal constantly, and the effect is very poor. We know of very few classical compositions for the harp, that are of much importance. In the catalogue of MOZART's compositions, is named a Concerto for flute and harp, which unfortunately is unknown to us. Besides the highly esteemed and moreover very difficult Saloon-Composition for harp by OBERTHÜR, such virtuosi as PARISH ALVARS possess a more modern composition and a very beautiful and effective one, namely, a Concerto for harp with orchestral accompaniment by KARL REINECKE (op. 182), in which we take a special interest and for the scholars instruction we present an extract, therefrom: —

KARL REINECKE, Concerto for Harp with Orchestral accompaniment,
op. 182 (1st Movement).

343.

Allegro moderato.

Flutes.

Oboe.

Harp.

1st and 2nd Violins.

Violas and 'Cellos.



From this exercise it is evident that we can employ both hands alternately for "flageolet-tones" (1st Measure). At NB., only the highest note of the chord is to be a "flageolet-tone", the underlying tones are to be merely natural tones.

KARL REINECKE, op. 182 (2nd Movement).

345. *Adagio* (♩ = 92.)

Horn in F.

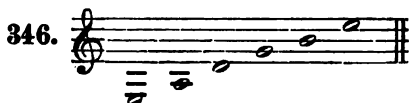
Harp.

The strengthening of the melody by the horn, is of most excellent and beautiful effect.


The Guitar.

§ 37. This instrument has six strings and was formerly, frequently employed for accompanying the voice; but generally in union with other instruments, such as violin, flute, viola, 'cello, in duets, trios, quartets &c., but singly for the execution of small dance compositions. The resonance chamber of the guitar is flat on both sides and its size is a happy medium between a viola and a (very small) 'cello. The three lowest strings (*e*, *a* and *d*) are of silk, wound with silver wire and the three highest (*g*, *b* and *e*) are of catgut. The *E*, *A* and *D*-strings are played with the thumb, the *G* (fourth) with the index finger, the *B* (fifth) with the third finger, the *E* (sixth) with the fourth finger.

The guitar is tuned as follows: —



The notes sound an octave lower than written and music for it is always written in the violin clef. In case we have a chord of more than four voices, the thumb must then glide over the strings. We must avoid such chords as require their two lowest notes to be played upon the first and third strings by the thumb, leaving the intermediate string (2nd or A-string) unemployed. Four-, five- and six-voiced chords sound particularly well, when one or two of

their notes can be played on open strings, *e. g.*: —  347.

In the above chord, four of the six notes can be played on open strings, namely; *e*, *g*, *b* and *e*. From the tuning of the guitar it is evident that the sharp keys are better adapted to the instrument than those of two or more flats; for with the later, the open strings cannot be employed.

In the orchestra, the guitar is not used: the author knows of only one exceptional case and that is the "Vision Song" (No. 3) in the first Act of "Oberon", by WEBER, which we quote in the following: —

348.

Andantino.

2 Clars. in A:

2 Bassoons.

Horn in E:

Rezia.

Wa - rum musst du schla-fen, o Held voll

Guitar:

Muth? Ein Mädchen sitzt wei-nend an Ba-by-lon's Fluth! Auf,

ret-te sie dir, eh' als O-fer sie sinkt. Guy-

en - ne zu Hül - fe! die Schön - heit dir winkt!

Bassoon.

Horn.

From the foregoing example the student will see the clever employment of the open strings in the different chords. For those that wish a more precise and complete knowledge of the guitar we recommend the guitar instructors of **GUILIANI, SAMANS, CARULLI, WOHLFART, HARDER, GALLY &c.**

The Mandolin.

The author is not familiar with this instrument, which is only employed in the southern European countries. **MOZART** wrote the accompaniment to the Canzonetta "Deh vieni alla finestra" (Act 2, No. 3), for mandolin and string quartet (pizzicato).

This instrument has four strings and is tuned the same as the violin.

The Zither

which twenty years ago was only used in Switzerland, is to-day to be found in most all European countries.

It appears in two principal forms, namely, as an instrument played with a bow or plucked by the fingers, and of these two kinds there are many varieties.

The number of its strings vary from twenty to thirty in number. **Leipzig** possesses a zither club in which is introduced many kinds of zithers.

This instrument has never received attention from the composer, and is never found in the orchestra or employed in combination with other musical instruments.

For those who wish a thorough knowledge of this instrument, we recommend the study of W. MORALT'S "Zither Instructor".

CHAPTER X.

THE ORCHESTRA.

The Grouping of the Orchestra.

§ 38. In general we understand the term "Orchestra" to be the combination of the stringed instruments (in multiplicity) with the wind (wood and brass) and percussion instruments. The multitudinous employment of the stringed instruments is absolutely necessary, for the great number of other instruments employed and the excessive power of tone of each, would completely obliterate the tone effect of the stringed instruments when only employed as a quartet. The group of stringed instruments always forms the main part of the orchestra: this group can only be placed opposite the power of the wind instruments, when employed in adequate mass. All of the most distinguished artists who have employed these superior instruments as a single or double quartet (more proper *stringed quintet*, as the violins are always employed as a first and second), have found the wind instruments, to prove more than efficient. The employment of the stringed instruments can only be estimated or regulated by the number and nature of the instruments used in combination therewith.

When we apply this to accompaniments, where only a few wind instruments are requisite, only a limited number of stringed instruments would suffice; otherwise they must be increased. So we find that the following instruments which BEETHOVEN employs in his G-major Pianoforte Concerto (op. 58), namely, six first violins, six second violins, four violas, four violoncellos and two double-basses are sufficient, as the other instruments employed are only one flute, two oboes, two clarinets, two bassoons and two horns. The orchestral accompaniment to the Pianoforte Concerto in E-flat major (op. 73) of BEETHOVEN'S, consists of two flutes, two oboes, two clarinets, two bassoons, two horns, two trumpets and two tympanis in combination with the stringed instruments. This orchestra is adequate to the character of the work; and the multifold employment of stringed instruments employed, is absolutely necessary.

In symphonies, the orchestra is employed independently, and the stringed quartet must be employed in such numbers as suits the number and nature of wind instruments used, and must participate in such a manner as the execution of the work requires. But in each case the stringed instruments should be numerously employed, for this is necessary to orchestral accompaniments of concertos, arias, duets &c. And in such works, the stringed quartet can be strengthened in many different ways.

Thus we find in the score of MOZART'S G-minor Symphony — consisting of one flute, two oboes, two bassoons, and two horns, and the mass of stringed instruments — that a less numerous employment of this quartet is necessary, than in the case of the C-major Symphony, by the same master, where he employs in the closing fugue, the same instruments as in the G-minor, with the addition of two trumpets and two timpanis. MOZART employs a brilliant instrumentation to suit the festive nature of his C-major Symphony. For the proper execution of the symphonies of HAYDN and MOZART, we generally employ a stringed quartet, consisting of ten or twelve first violins, eight or ten second violins, six violas, five or six violoncellos, and three or four double-basses. Of more certainty is the tone effect, when these instruments are employed in the mass; but of the greatest importance is the consideration of the size of the room in which they are to be used, and employing them in proportion therewith. Moreover, the arrangement of the orchestra is to be considered. The number of instruments of the stringed family employed for the concerts in the "Old Gewandhaus", remained always the same for all orchestral works; namely, *fifteen* to *sixteen* first violins, *fourteen* second violins, *nine* violas, *nine* violoncellos and *six* double-basses. The orchestra was arranged on a semi-circular platform, in the form of steps — the entire mass of violins being on the first or lowest step; the violas, violoncelles and double basses, on the second next highest step; on the next the wood wind instruments; above these the brass, and on the next highest and last the trumpets, trombones and tympanis were situated. On account of the great difference between the saloon of the "New Gewandhaus" and that of the "Old Gewandhaus" especially in height and area, a reinforcement of the stringed instruments was absolutely necessary. At the present time they approximately consist of *twenty-three* first violins, *twenty* second violins, *twelve* violas, *ten* violoncellos, and *eight* (sometimes also *nine* or *ten*) double-basses. In this large and very high room, the great mass of stringed instruments is not yet sufficient, also, the tone effect is greatly inferior to that produced by the lesser number in the smaller saloon. The exuberant fullness which was so much ad-

mired in the "Old Gewandhaus", exists no more in the same pleasant degree. Notwithstanding the fault of the great height of the saloon, the arrangement of the orchestra is not so effective as in the Old Gewandhaus.

The horns are not always sufficiently effective in an orchestra *tutti*. We are therefore compelled to employ four horns for the *forte* and *fortissimo* passages of those compositions which are orchestrated for two horns; for, the original two horns of the score, are never sufficiently effective against the multiplicity of strings. We see from this that a numerous employment of stringed instruments may possess great power and at the same time be very defective in beauty of tone; — that the augmented employment of stringed instruments has a certain limit, which we cannot exceed without proportionally decreasing the effectiveness of the co-operating instruments. But, on the other hand, when besides the wood-wind instruments, the horns, trumpets, tympani, trombones, tuba or double-bassoons, bass-drum, cymbals and triangle are employed, we are compelled by necessity to greatly increase the stringed quartet. However, as previously mentioned, the last named instruments (percussion) are much less frequently employed in the concert orchestra, than in the opera. These two orchestras differ in two ways; namely — in manner of arrangement, as the theatre orchestra is always found in a lower position (*i. e.* of less inclined plane, or less elevated platform), and a more limited employment of the stringed quartet in the opera orchestra. These two orchestras, however, are employed for entirely different purposes. The concert orchestra is most invariably employed for the execution of purely instrumental music, while the opera orchestra prevails as an accompanying body to solos and choruses. The concert orchestra is distinguished from the ordinary large orchestra, in the following — in addition to the stringed quartet, flutes, oboes, clarinets, bassoons, two or four horns, trumpets and tympani, it generally employs a piccolo, English horn, bass clarinet, a third bassoon or contra bassoon, a third trumpet, three trombones, tuba, harp and besides the tympani, several other of the percussion instruments. However, it is not necessary that all the above-named instruments should actually exist in the large orchestra. The composer, however, must more or less employ all these instruments in order to represent the general tenor of his work in an intellectual manner. The following will give you a clear idea of the most usual method of arranging the instruments in score :

Piccolo.	2 Clarinets.	1 st and 2 nd Horn.
2 Flutes.	1 Bass Clarinet.	3 rd and 4 th Horn.
2 Oboes.	2 Bassoons.	2 Trumpets.
1 English Horn.	1 Double-Bassoon.	1 Alto and 1 Tenor

Trombone (or two	2 Tympanis.	Violas.
Tenor Trombones)	4 Harp.	Violoncellos.
4 Tenor Trombone.	4 th Violins.	Double-Basses.
4 Tuba.	2 nd Violins.	

The most practical manner of arranging the score, is to write the flutes, oboes, clarinets, bassoons, first and second, third and fourth horns, the two trumpets, the first and second trombones, the third trombone and tuba, each on one system and all other instruments on different systems, *e. g.*, the harp on two systems. Respecting the combination of the horns — in case they represent different parts — the higher should be written above the lower. In case we have to write for other percussion instruments beside the timpani, they should be written on one system directly under this instrument. In such compositions that include chorus and solo parts; as the cantata, sacred and secular oratorio and other works of this order, we generally arrange the score in such a manner that the chorus bass is placed above the violoncello and double-bass system and the higher voices arranged in the order of their pitch, directly under the viola. Thereby giving the following arrangement of the different groups of participating instruments in the complete score: — above, we find the group of wood-wind instruments; directly under and in the middle of the score we find the groups of brass and percussion instruments; next in order, the group of stringed instruments and voices, and lastly the bass instruments (stringed).

§ 39. The simultaneous employment of all the instruments, we call an

Orchestra Tutti.

In such an employment of the orchestra, the following general valid principles are of special importance:

1. Melody, harmony and rhythmical accompanying movements, should be completely contained in the stringed quartet.

2. Each group, as far as it is possible, should contain the melody and harmony.

The most natural employment is that the highest pitched instruments of each group be given the melody; the next in pitch the middle parts; and the lowest the bass.

Occasionally, we may employ many instruments for doubling a certain voice, either by the instruments of one special group or of several groups; this method of employment adds to the effectiveness of tone effect. By considering the following movement — the introduction to the finale of BEETHOVEN's fifth Symphony — we will find the above principles varified: —

349.

Allegro. $\text{♩} = 84.$

Piccolo.
 2 Flutes.
 2 Oboes.
 2 Clarinets in C.
 2 Bassoons.
 Double Bassoon.
 2 Horns in C.
 2 Trumpets in C.
 Alto and Tenor Trombone.
 Bass-Trombone.
 Tympani in
 1st Violins.
 2nd Violins.
 Violas.
 'Cellos and Double-Basses.

Musical score for orchestra, page 311, number 349. The score is for "Allegro" with a tempo of 84 beats per minute. It features a full orchestra including Piccolo, 2 Flutes, 2 Oboes, 2 Clarinets in C, 2 Bassoons, Double Bassoon, 2 Horns in C, 2 Trumpets in C, Alto and Tenor Trombone, Bass-Trombone, Tympani, 1st Violins, 2nd Violins, Violas, and 'Cellos and Double-Basses. The music is written in 2/4 time and includes various dynamics such as *ff* (fortissimo) and *NB* (nota bene).

814

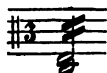
NB.

This page of musical notation, titled "THE ORCHESTRA." and numbered 318, contains three systems of staves. Each system consists of five staves. The notation is written in a single system of staves, with various musical symbols including notes, rests, and bar lines. The first system of staves (top) features a complex melodic line in the upper staves, while the lower staves provide harmonic support. The second system of staves (middle) continues the melodic and harmonic development. The third system of staves (bottom) concludes the page with a final melodic phrase and harmonic accompaniment. The notation is clear and legible, with a focus on the orchestral arrangement.

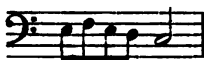
This musical score is organized into three systems, each containing four staves. The first system (top) features a grand staff (treble and bass clefs) with a melody in the treble and a bass line in the bass. The second system (middle) consists of two grand staves, each with a treble and bass clef, showing a more complex texture with multiple voices. The third system (bottom) also features a grand staff with a melody in the treble and a bass line in the bass. The notation includes various musical symbols such as notes, rests, and bar lines, indicating a piece of music with a specific tempo and key signature. A small 'a 2.' marking is visible in the first system, indicating a second ending or a specific measure.

This page of musical notation, titled "THE ORCHESTRA." and numbered "315", presents a complex orchestral score. It is organized into three distinct systems of staves. The first system consists of five staves, featuring a variety of rhythmic patterns and melodic lines. The second system also contains five staves, with some staves showing sustained chords and others featuring more active rhythmic figures. The third system is composed of four staves, continuing the intricate musical texture. The notation includes numerous notes, rests, and beams, suggesting a fast and detailed performance. The overall layout is clean and professional, typical of a printed musical score.

The above (Ex. 349) requires no further explanation; however, for the benefit of the pupil we will mention the following: In the third measure marked N. B.



we find that the notes *C* and *E* cannot be played simultaneously on the *C*-string, for the *C* is the lowest possible note which can be played on the viola and must be taken on the *C*-string and the *E* must be stopped and taken also on the *C*-string — this is impossible. Furthermore, in measures 8, 40 and 42, the following figure for the double-bass



must be played as written here, for the lowest note on the double-bass is the great octave *E*



In the following (Ex. 350) for *tutti* orchestra, we observe that the sustained harmony of the wind-instruments, for several measures, produces a powerful tone effect; also, that the moving figures executed by the stringed instruments — especially the quaver notes of the second violins — more equally balance the excessive power of the wind instruments, than could suitable sustained notes: —

350.

BEETHOVEN, Symphony No. 4, 1st Movement.

1 Flute.

2 Oboes.

2 B \flat Clarinets.

2 Bassoons.

2 B \flat Horns.

2 B \flat Trumpets.

Timpani in

1st Violins.

2nd Violins.

Violas.

Violoncellos.

Double-Basses.

The musical score is written for a full orchestra. The woodwind section (Flute, Oboes, Clarinets, Bassoons, Horns, Trumpets) and the string section (Violins, Violas, Violoncellos, Double-Basses) are shown. The brass section (Horns, Trumpets, Timpani) is also present. The score is in 3/4 time and features a key signature of one flat (B \flat). The woodwinds and strings play sustained notes, while the brass instruments play moving passages. The score is marked with 'ff' (fortissimo) and 'p' (piano) dynamics.

In the following (Ex. 354) we have two different motives, — the sustained notes of the wood-wind instruments and the first violins, and the moving passages of the strings.

The horns strengthen and replenish the sustained harmony of the stringed instruments, while the trumpets and timpani render

the rhythmical accent more acute. In the very rapid tempo, **BEETHOVEN** prefers to lead the violoncellos and double-basses in quarter notes, while the violas and second violins move in eighth notes.

The passage is thereby given more vigour and stability, than if the violoncellos were lead with the more rapidly moving violas and second violins. In a slower tempo the violoncellos may move with the violas and second violins, but the double-bass is invariably given a slower *motive*: —

BEETHOVEN, Symphony No. 4, 4th Movement.

351.

Allegro vivace $\text{♩} = 80.$

1 Flute.

2 Oboes.

2 B^b Clarinets.

2 Bassoons.

2 B^b Horns.

2 B^b Trumpets.

Timpani in

1st Violins.

2nd Violins.

Violas.

Violoncellos.

Double-Basses.

The image displays a page of a musical score, likely for a full orchestra. The score is written on multiple staves, each with a key signature of one flat (B-flat) and a time signature of 3/4. The notation includes various musical symbols such as notes, rests, and dynamic markings like *sf* (sforzando). The score is organized into systems, with each system containing several staves. The music appears to be a symphonic or orchestral piece, possibly a ballet score, given the complexity and variety of the instrumentation and notation.

Rapid tremolo chord movements of the violins and violas are most efficiently strengthened by the violoncellos and double-basses, when given notes of longer duration; as shown by the following extract: —

BEETHOVEN'S, 2nd Symphony, 1st Movement.

Allegro vivace ♩ = 100.

354.

1st Violins.

2nd Violins.

Violas.

Violoncellos and Double-Basses.



The Various Arrangements of the Instruments in the Tutti Orchestra.

§ 40. As was previously remarked, the doubling of the several voices, through many different instruments, is very advantageous for the total tone effect. We must pay attention to the proper distribution of the instruments for melody, middle harmonic (filling) voices, and bass, so that they are properly balanced, receive their full value, and are employed to the best advantage. We must also consider if two or four horns are to be at our disposal, and if the trombones are to be added to these instruments, for the orchestra *tutti*.

In a rapid moving melody of *allegro tempo*, the powerful toned brass instruments including the trumpets, should only be employed for strengthening the melody and rhythm; the third (Bass) trombone for strengthening the bass, — providing it is not of too rapid tempo — and when the brass is employed in this manner (for harmony), particular attention must be given to the combined employment of the violins, flutes, first oboe and clarinet, for strengthening the melody; and the bassoon (and sometimes the viola) for strengthening the bass. In such an arrangement the voices are doubled through two, three and in some cases more octaves.

In the following (Ex. 355 a), we quote a *tutti* passage from BEETHOVEN'S Overture No. 3, to "Leonore", in which all instruments with the exception of trombones, trumpets and horns, double the melody through four octaves: the tympani reënforce the bass: —

355a.

2 Flutes.

2 Oboes.

2 C Clarinets.

2 Bassoons

1st and 2nd
Horns in C.3rd and 4th
Horns in E.2 Trumpets
in C.3 Trom-
bones.

Tympani in

1st Violins.

2nd Violins.

Violas.

Violoncellos.

Double-
Basses.*Allegro.*

a 2.

*ff sempre**ff sempre**ff sempre**ff sempre**ff sempre**ff sempre**ff sempre**ff sempre**ff sempre**ff sempre**ff sempre**ff sempre**ff sempre**ff sempre*

&c.

In the above example we see that the harmony of the principle movement, is only shared by one group (the brass instruments). All the other participating instruments — with the exception of the horns in *C*, which take the melody only in the first measure — take the melody. Beginning with the second measure we find that the brass instruments take only the harmony and strengthen the rhythmical accent: the bass is strengthened by the tympani. In this exceptional case **BEETHOVEN** requires all the other instruments for melody, in order to counterbalance in proper proportion, the harmony of the powerful group of brass instruments. All the melodic instruments are placed as high as possible; the second violins move in unison with the first, as high as three-lined \bar{a} ; the violas to two-lined \bar{a} ; and the flutes, oboes, first clarinet and first bassoon are employed in their highest registers. Also, the accompanying harmony of the brass instruments is placed as high as possible: —



All is calculated to give a powerful, triumphant *fortissimo*. The melody is written for the stringed instruments as double bowed eighth notes, by which employment is developed the greatest possible power and fullness of tone*). By the repetition of this same movement, directly following this first performance, the instrumentation is slightly altered. We find the harmony in the stringed quartet given by the second violins; and in order to balance this, the melody of the first measure is given by four horns and two trumpets.

The double-bowed eighth notes of the second violins, together with the double notes of the harmony, are of great value, as the tympani do not take the eighth notes (of Ex. 355a), but, single short strokes for marking a more acute rhythm. The violas are greatly strengthened by the clarinets moving in unison: —

*) We must consider that in this case, the harmony is indicated by the notes of the melody.

356.

2 Flutes.

2 Oboes

2 Clarinets
in C.

2 Bassoons.

1st and 2nd
Horns in C.3rd and 4th
Horns in C.2 Trumpets
in C.3 Trom-
bones.

Tympani in

1st Violins.

2nd Violins.

Violas.

Violoncellos.

Double-
Basses.

musical score for orchestra, rehearsal mark 356. The score is written for 2 Flutes, 2 Oboes, 2 Clarinets in C, 2 Bassoons, 1st and 2nd Horns in C, 3rd and 4th Horns in C, 2 Trumpets in C, 3 Trombones, Tympani in, 1st Violins, 2nd Violins, Violas, Violoncellos, and Double-Basses. The music is in 2/4 time and features a variety of rhythmic patterns, including eighth and sixteenth notes, and rests. The dynamic marking *sempre ff* (sempre fortissimo) is indicated throughout the score. The score is divided into measures by vertical bar lines. The first measure of the Flute part is marked with a rehearsal symbol (a double bar line with a dot) and the number 356. The score concludes with a double bar line and the marking *&c.*

The Separation of the Different Groups of Instruments in the Orchestra Tutti.

§ 41. Many different groups of instruments can be rhythmically distinguished from one another in the orchestra tutti; also, in various ways they can be employed simultaneously, as will be seen from the following extract of BEETHOVEN'S Fifth Symphony (1st Movement). In spite of the combined tone of the wind and stringed instruments, the continual changing of the same motive, can readily be distinguished in both groups: —

Allegro con brio. d = 108.

357.

2 Flutes.

2 Oboes.

2 Clarinets
in B \flat .

2 Bassoons.

2 Horns
in E \flat .

2 Trumpets
in C.

Tympani in
C.

1st Violins.

2nd Violins.

Violas.

Violoncellos.

Double-
Basses.

This musical score is a page from a book, showing a section of the first movement of Beethoven's Fifth Symphony. It consists of ten staves of music, arranged in two systems of five staves each. The notation is in G major (one sharp) and 4/4 time. The first system includes staves for the first violin, second violin, viola, first bassoon, and first trumpet. The second system includes staves for the second bassoon, second trumpet, third trumpet, first horn, and first trombone. The music features a prominent crescendo, indicated by the word 'cresc.' written below the staves at various points. The section concludes with a fortissimo (f) dynamic marking. The notation includes various musical symbols such as notes, rests, beams, and slurs, as well as dynamic markings like 'cresc.' and 'f'.

A very interesting and varied employment of the wind and stringed instruments, is likewise found in the first movement of **BEETHOVEN'S** Fifth Symphony, as shown in the following: —

358.

Allegro con brio. d = 108.

2 Flutes.

2 Oboes.

2 Clarinets
in B \flat .

2 Bassoons.

2 Horns
in E \flat .

2 Trumpets
in C.

Tympani in

1st Violins.

2nd Violins.

Violas.

Violoncellos.

Double-
Basses.

Musical score for "L'Alceste" by Christoph Willibald Gluck. The score is in G major and 3/4 time. It features vocal staves for the main characters and a full orchestral accompaniment. The dynamics range from *dim.* (diminuendo) to *pp* (pianissimo), with the instruction *sempre più p* (becoming increasingly softer) appearing frequently. The score is presented in a single system with multiple staves.

This page contains ten staves of musical notation, arranged in two systems of five staves each. The notation is complex, featuring many beamed notes, slurs, and dynamic markings such as 'ff' (fortissimo). The music appears to be for a large ensemble or orchestra, with various instruments represented by different staves. The notation is in a historical style, possibly 19th-century, with some unusual note heads and stems. The page is numbered 332 in the top left corner and 'CHAPTER X.' in the top center.

We will not omit calling your attention to the high *pianissimo* tones of the bassoon in the above (Ex. 358); as they give to this passage a characteristic tone-color.

Tone-Color and Movement of the Tutti Orchestra.

§ 42. It is quite evident that definite applicable rules for the instrumentation of a tutti orchestra cannot be formulated. For in writing for a small or large orchestra, each instrument can be employed in many different ways. We can employ the bassoon, viola and sometimes also the violoncello, both for representing a tenor voice and strengthening the bass.

When the tone-color of a *tutti* (minor mode) in unison is to be very gloomy, it is necessary to place the voices low; on the other hand, when the *tutti* is to be bright and brilliant, we must treat it in another manner.

The student may compare for this purpose, the allegro movement in the overture to "Der Freischütz" and "Euryanthe". We should always pay particular attention to the mode (key) we employ for the instrumentation of our composition, as each is of different character and not equally applicable to the same composition. In *C*-major, *G*-major, *D*-major, *A*-major and *E*-major, the stringed instruments, which form the most puissant part of every orchestra, have more open strings at their disposal. The employment of these modes give especially to the chord movements of the stringed quartet, a more vigorous and brilliant tone-color, than the flat modes in which less and frequently not even a single string can be employed open. This is illustrated by the opening chords of BEETHOVEN'S Overtures op. 445 and 424; CHERUBINI'S "Anacreon" Overture; and many others of the master works.

Another very important consideration is the selection and position of the instruments of a movement.

The vigorous, strong, bright, cheerful and joyous opening of the first movement of the fourth symphony of MENDELSSOHN (op. 90), is depicted by the tremolo movement of eighth notes for the woodwind instruments and horns: —

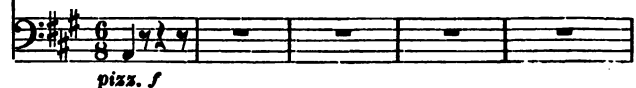
Allegro vivace.

359 a.

2 Flutes.

2 Clarinets
in A.2 Bas-
soons.2 Horns
in A.1st Vio-
lins.2nd Vio-
lins.

Violas.

Violoncel-
los and
Double-
Basses.

The musical score is written for an orchestra. It consists of eight staves. The first four staves are for woodwinds (flute, oboe, bassoon, and clarinet) and the next four are for strings (violin I, violin II, viola, and cello). The key signature is D major (two sharps). The first four staves contain block chords. The fifth and sixth staves contain melodic lines with slurs and accents. The seventh and eighth staves are empty.

&c.

In a like manner, the triplet movement in the introduction to the third act of "Lohengrin" is employed to portray solemn triumph:—

From the introduction to 3rd Act of the Opera "Lohengrin", by
RICH. WAGNER.

Schr lebhaft. (Very lively.)

359b.

1st and 2nd

Flutes.

3rd.

1st

Oboes.

2nd and 3rd.

1st

Clarinets in A.

2nd and 3rd.

3 Bassoons.

4 Horns in D.

1st and 2nd

Trumpets in D.

3rd.

3 Trombones.

Bass Tuba.

1st Violins.

2nd Violins.

Violas.

Violoncellos.

The musical score is a full orchestral arrangement for measures 359b. It is written for a large orchestra, including Flutes, Oboes, Clarinets in A, Bassoons, Horns in D, Trumpets in D, Trombones, Bass Tuba, Violins, Violas, and Violoncellos. The tempo is marked 'Schr lebhaft' (Very lively). The score is in 3/4 time and features a key signature of one sharp (F#). The music is characterized by a driving, rhythmic pattern in the woodwinds and strings, with a prominent melody in the horns and bass tuba. The score is marked with 'immer ff' (always fortissimo) and includes dynamic markings like 'a 2', 'a 3', and 'a 8'.

This page of musical notation, numbered 337, is titled "THE ORCHESTRA." It contains a complex arrangement of staves for various instruments. The notation includes a variety of rhythmic patterns, such as sixteenth and thirty-second notes, and rests. Dynamic markings like *ff* (fortissimo) are present throughout the score. The layout is typical of a full orchestral score, with multiple systems of staves grouped together. The notation is written in a standard musical notation style, with clefs, key signatures, and time signatures visible at the beginning of the staves.

The musical score is arranged in three systems, each containing six staves. The notation is complex, featuring many beamed notes and rests. In the second system, the third staff from the top has the marking "2. u. s." above it. In the third system, the fifth staff from the top has the marking "ff" above it. The page concludes with the text "&c." at the bottom right.

We see an entirely different movement in the first great *tutti* of BEETHOVEN's "Egmont" Overture, in which he places the violas, violoncellos and tympani very low, for the purpose of imparting a gloomy, passionate and stormy character to the movement. The violoncellos cannot strengthen the bass in this case, therefore, the double-bass is strengthened by the two bassoons and tympani:—

360a.

Allegro.

2 Flutes.

2 Oboes.

2 Clarinets in $B\flat$.

2 Bassoons.

2 Horns in F .

2 Horns in $E\flat$.

2 Trumpets in F .

Tympani in

4th Violins.

2nd Violins.

Violas.

Violoncellos.

Double-Basses.

This page contains a single system of musical notation, consisting of 14 staves. The notation is arranged in two groups of seven staves each, separated by a brace on the left. The top group of seven staves appears to be for a vocal or instrumental ensemble, with various note values, rests, and dynamic markings. The bottom group of seven staves appears to be for a piano accompaniment, with a grand staff (treble and bass clef) and various note values, rests, and dynamic markings. The notation is in a historical style, with many notes beamed together and various ornaments or decorations. The page is numbered 340 in the top left corner and has the chapter title 'CHAPTER X.' in the top center.

From the foregoing (Ex. 360a), the student will see to what degree a strong employment of the stringed instruments is necessary. The melodic movement of the violins in the first eight measures of this example would be completely obliterated by the powerful mass of other instruments (although no trombones take part), if the stringed instruments were not greatly augmented. It is impossible in the limited space allotted to an instruction book, to discuss the different effects produced by the various ways of instrumentating an orchestra *tutti*. We must refer the student to the works of the masters for this knowledge. By the proper effort on the part of the pupil, both in the study of these scores and reflection thereon, he will conclude that the nature of every composition is as a four-voiced one, and that such a treatment thereof, is the most natural and simple. In the stringed orchestra give the first violins the first part; the second violins the second. The violas should be employed for representing the tenor part in a suitable manner; the violoncellos and double-basses for giving the bass.

It is never advisable to leave the representing of the bass-part entirely to the double-basses, for even when these instruments are employed in great number they are always weak.

If, as in the above (Ex. 360a) we do not wish to strengthen the bass by the violoncellos, then we should always sufficiently reinforce this part through the other bass instruments. In the chorus of the wood-wind instruments, we find that these instruments are employed in the same natural manner: certain instruments being employed to represent the melody; certain instruments for the middle voices; and certain instruments for the bass voice. The wood-wind instruments are always employed in the score, in their proper order of pitch (*i. e.* high above, low below). Of course it is hardly necessary to remark that the flute should represent the first part, the oboe the second, the clarinet the third, and the bassoon the bass.

The last-named instrument is quite frequently employed for representing the tenor or middle voice, especially so, when the trombone and tuba are employed as bass instruments. The second flute, second oboe and second clarinet are frequently employed as a middle voice; the flute doubling these two last-named instruments, in the higher octave. With the brass instruments we prefer to write the three trombones as three voices; the horns (most frequently employed as four) as four voices; and the first trumpet and first horn as melodical instruments. But of course it is self-evident that these instruments should not be required to execute

such passages as are played with facility, by the more nimble instruments, such as violin, flute &c.

The doubling of a single part is therefore absolutely necessary, in order to prevent the gaps which would occur by a too distant placing of the voices. By the proper consideration of classical models and experience by the proper kind of work, the student will find to be the best method of acquiring a knowledge, which can never be expressed by words and the general demonstration as we find in text-books. The beginner must keep experimenting; first gain experience by imitating others, before he ventures to treat his own independent ideas.

The teacher often hears the expression — "I have written this purposely so for the orchestra" — but this is absurd, for the pupil can never make apology for ignorance and lack of ability. We will also advise the student not to employ all the instruments, in his early practice; but to learn first to write for a well sounding *tutti*, without trombones, tuba, harp &c.: including only the stringed instruments, wood-wind, two horns, trumpets and tympani — as we find employed in the symphonies of the greatest classical masters — which is much better for the pupil, than employing all the instruments, at his disposal in the present day. But without exception we find the orchestration of the *tutti* orchestra, the first, most necessary and most important exercise in the art of instrumentation. Regarding the greatest orchestral forms such as the "overture" and "symphony", we cannot give others here, than can be found in §§ 40, 41, 42, 43 and 44, under the explanation of the sonata form. The more ability is required in the representation of a musical work of art, as a single movement can be represented in so many different ways. The overture and symphony is no more than a sonata form in greater extension. Naturally such a work displays more of an intellectual tenor and can be expressed in so many more various ways, as the works of the great masters illustrate. In a lengthy movement for orchestra, we should by no means in the *tutti* orchestra employ each instrument always in the same manner. By the gradual changing of single groups of instruments; the mixing of the different tones of the same; the many different tone-colorings of a single passage; the representation of a theme through many different instruments; and the possible gradations of tone, from *pp* to *ff*, either by one, some or of all instruments in a *tutti* orchestra, — cause the rendering of a composition, to be of more charming color, than when the same is rendered by a one or several instruments of a home circle or chamber orchestra.

The Double and Unisono Leading of the Melody.

§ 43. We will not fail to treat of the possible effects produced, by doubling the melody through two or more instruments. In the following we distinguish between:

1. Doubling of the Melody in Unison.
2. Doubling of the Melody through Two or Three Octaves.

Only those instruments whose tones blend well, should be doubled in the unison. Such instruments as those that differ greatly in character and strength of tone, should only be employed occasionally for doubling the melody in unison. The flute and oboe; flute and clarinet; violin and trumpet; violoncello and trumpet; are from the very first principles of instrumentation, ill adapted to doubling in unison. The instruments of the stringed quartet, all blend well in unison; likewise the wood-wind instruments with the horn. We must also consider the harmonious blending of the wood-wind and the stringed instruments when doubled in the unison.

The violin mixes well with the clarinet and oboe. The tone of the oboe adds to the tone of the violin, more precision, sharpness and force of character; on the other hand, that of the clarinet, gives a fuller, rounder and richer tone to the violin.

This is the same in the case of the flute, when the violins are employed, either single or double, in unison with the flute. The flutes when employed in their low register, (*pp*) in unison with the violins, seem to greatly veil the bright tone of the strings; as was already said in connection with example 203.

The viola is best doubled in unison with such instruments as the clarinet, bassoon and the horn; the violoncello with such instruments as the bassoon, horn or with both of these wind instruments. The bass instruments are little adapted to doubling the melody in unison. When the flute and clarinet are doubled in the same octave — although the character of tone of the two are not wholly different — the far superior strength of tone of the clarinet, covers that of the flute. This instrument only appears as a shadow, alongside the powerful tone of the clarinet and when so combined, the clarinet never strengthens the tone of the flute, but moreover, is more injurious than beneficial in effect. The oboe on account of its characteristic tone, should only be employed occasionally, for doubling in unison, the melody of the other wood-wind instruments. The following instruments do not mix well (in unison) with the oboe: oboe and flute; oboe and clarinet; and oboe and horn. The

ombination of horn and bassoon in unison is much better, especially when the violoncello, or viola is combined with the bassoon.

We quote first, a movement in unison for violins, violas and violoncellos, from the first movement of Louis Spohr's Symphony, in C minor (Op. 78): —

SPOHR'S Symphony, Op. 78.
Larghetto. ♩ = 50.

360b.

2 Flutes. *Imo.* *p* *cresc.*

2 Oboes. *Imo.* *p* *cresc.*

2 B^b Clarinets. *p* *cresc.*

2 Bassoons. *p* *p* *cresc.*

2 Horns in C. *p* *cresc.*

Tympani in

1st and 2nd Violins, Violas and Violoncellos. *tutti all' unisono, sopra una corda.* *p* *cresc.*

Double-Basses. *p* *cresc.*

This musical score page, numbered 345, is titled "THE ORCHESTRA." and contains seven staves of music. The notation is in G major (one sharp) and 4/4 time. The first six staves are grouped by a brace on the left. The first staff begins with a forte (*f*) dynamic, followed by a decrescendo (*dim.*) and ending at a pianissimo (*pp*) level. The second staff starts with a forte (*f*) dynamic, followed by a decrescendo (*dim.*) and ending at a pianissimo (*pp*) level. The third staff begins with a forte (*f*) dynamic, followed by a decrescendo (*dim.*) and ending at a pianissimo (*pp*) level. The fourth staff starts with a forte (*f*) dynamic, followed by a decrescendo (*dim.*) and ending at a pianissimo (*pp*) level. The fifth staff begins with a forte (*f*) dynamic, followed by a decrescendo (*dim.*) and ending at a pianissimo (*pp*) level. The sixth staff starts with a forte (*f*) dynamic, followed by a decrescendo (*dim.*) and ending at a pianissimo (*pp*) level. The seventh staff begins with a forte (*f*) dynamic, followed by a decrescendo (*dim.*) and ending at a pianissimo (*pp*) level. The eighth staff is a single staff of music, starting with a forte (*f*) dynamic, followed by a decrescendo (*dim.*) and ending at a pianissimo (*pp*) level. The score includes various musical notations such as notes, rests, and dynamic markings.

The musical score consists of eight staves. The first four staves are grouped together with a brace on the left. The first staff is in treble clef, the second in treble clef, the third in treble clef with a key signature change to one sharp (F#), and the fourth in bass clef. The fifth staff is in treble clef, the sixth in bass clef, the seventh is a grand staff (treble and bass clefs), and the eighth is in bass clef. Dynamics include *cresc.*, *f*, *dim.*, *p*, and *&c.*. There is also a marking *a 2* above the fifth staff.

This extraordinary charming, rich fullness of tone effect, produced by the stringed instruments in the above (Ex. 360b), has been previously little used. But in most every orchestra, we find employed besides the double-bass and bassoon, such instruments as the third trombone and tuba as bass instruments.

In the following (Ex. 360c) we quote a passage of most beautiful tone effect, produced by the combination of the body of violins "con sordini" with one horn; the violas and bassoons joining in the seventh and eighth measures, on the words:

"Night oh how calm; the moon is spreading
her light o'er the lonely hedge."

These instruments being most admirably adapted to the accompaniment of such an exclamation: —

GADE, "Erlking's Daughter", Op. 30, from No. 4.

360 c.

Andante con moto.

360 c. *Andante con moto.*

3 Flutes.

3 Clarinets in *B♭*.

2 Bassoons.

2 Horns in *C*.

1st and 2nd Violins.

Violoncellos and Double-Basses.

The musical score is written for a string quartet. It consists of four staves. The first two staves are for Violins I and Violins II, both in treble clef. The third staff is for the Viola, in treble clef. The fourth staff is for the Cello and Double Bass, in bass clef. The music is in 3/4 time and D major. The first two staves play a complex, rhythmic pattern of eighth and sixteenth notes. The third staff plays a melodic line with slurs and ties. The fourth staff plays a simple, rhythmic pattern of eighth notes. The word "Violas." is written above the third staff. The word "pp" (pianissimo) is written below the first measure of the fourth staff.

We illustrate in the following example, the doubling of the melody in unison, by the first violin and clarinet: —

360 d.

From the Overture "Der Freischütz".

*Molto vivace.*1st Clarinet
in B \flat .

1st Violins.

2nd Violins.

Violas.

Violoncellos
and Double-
Basses.

The first system of the musical score features five staves. The 1st Clarinet in B \flat and 1st Violins play a melodic line marked *dolce* and *arco*. The 2nd Violins play a rhythmic accompaniment marked *arco*. The Violas and Violoncellos/Double-Basses play a bass line marked *p* and *arco*. The key signature is one flat (B \flat), and the time signature is common time (C).

The second system continues the musical score with five staves. The 1st Clarinet and 1st Violins play a melodic line. The 2nd Violins play a rhythmic accompaniment. The Violas and Violoncellos/Double-Basses play a bass line. The key signature is one flat (B \flat), and the time signature is common time (C).

The third system continues the musical score with five staves. The 1st Clarinet and 1st Violins play a melodic line. The 2nd Violins play a rhythmic accompaniment. The Violas and Violoncellos/Double-Basses play a bass line. The key signature is one flat (B \flat), and the time signature is common time (C). The system ends with a double bar line and the text "&c."

We find that the melody can be doubled in the octave, by the following instruments: flute and oboe; flute and clarinet; oboe and bassoon; clarinet and bassoon; flute and violin &c — a doubling in the octave of the English horn and bass clarinet, has already been illustrated in example 258.

This doubled employment of instruments is of so common use, that we deem it unnecessary to deal with more examples. Doubling the melody through three octaves is equally very frequently used. The most appropriate illustration of this, we find in the doubling of the flute, clarinet and bassoon throughout three octaves; as the following (Ex. 360c) illustrates: —

From the second movement of BEETHOVEN'S, C-minor Symphony (Op. 67).

Andante con moto. ♩ = 92.
Solo.

360c.

1st Flute.

1st Oboe.

1st Clarinet
in B \flat .

1st Bassoon.

1st Violins.

2nd Violins.

Violas.

Violoncellos
and Double-
Basses.

The musical score for Example 360c consists of eight staves. The first four staves are for woodwinds: 1st Flute, 1st Oboe, 1st Clarinet in B \flat , and 1st Bassoon. They all play a melodic line marked 'Solo.' and 'p' (piano). The last four staves are for strings: 1st Violins, 2nd Violins, Violas, and Violoncellos and Double-Basses. They all play a rhythmic accompaniment marked 'pizz.' (pizzicato) and 'pp' (pianissimo). The key signature is C minor (three flats) and the time signature is 3/8. The tempo is Andante con moto, with a quarter note equal to 92 beats per minute.

The first system of musical notation consists of eight staves. The first four staves are grouped by a brace on the left and represent the woodwinds: Flute (treble clef), Oboe (treble clef), Clarinet (treble clef), and Bassoon (bass clef). The next two staves represent the strings: Violins (treble clef) and Violas (bass clef). The final two staves represent the lower strings: Cellos (bass clef) and Double Basses (bass clef). The key signature is three flats (B-flat, E-flat, A-flat), and the time signature is 3/4. The music features a variety of rhythmic patterns, including eighth and sixteenth notes, and rests.

The second system of musical notation continues the orchestral piece with eight staves, maintaining the same instrumentation as the first system. The woodwinds (Flute, Oboe, Clarinet, Bassoon) and strings (Violins, Violas, Cellos, Double Basses) are all present. The key signature remains three flats, and the time signature is 3/4. The musical notation includes various note values, rests, and dynamic markings, such as 'f' (forte) and 'b' (piano).

8c.

CHAPTER XI.

THE ACCOMPANYING ORCHESTRA.

The Orchestral Accompaniment of Church Music.

§ 44. Under the title "Church-or Religious-Music" we do not only include all such compositions as are used in the divine service of different creeds, as the hymn, mass, lamentation &c. but also such works as are of religious purport, which do not form a necessary part of the divine service, and are permitted to be performed in the church, such as hymns, cantatas, psalms, oratorios, passion-music &c. Such compositions are also performed in theatres and concert halls. In all such works, the centre of gravity lies in the voices, particularly in the chorus.

The orchestra is mostly employed only for the accompanying of the chorus, arias, duets &c; it seldom moves independently. In the older religious compositions of BACH's, HÄNDEL's &c; we find that the organ is included in the instrumental accompaniment. This was necessary, as the orchestras of those times, consisted of — besides the strings — only a few wood-wind instruments. The string quartet was also but sparingly employed; when this is actually the case, the various voices of the organ complete the wood-wind instruments; and its complete mechanism is sometimes (especially in England) employed for strengthening the mass of chorus. But in those works there exists no actual organ part. Whether BACH and HÄNDEL executed an organ part in the performance of their works; whether, those that came after them, verbally intimated that such was the case; whether a carefully worked out organ part was written thereto; or whether the organists of those days executed a difficult improvised part for organ: we must leave undecided. At all events the organ accompaniment must contain more than the mere figures which stand above the notes and indicate the harmony. We cannot think that the tenor aria "Patience", in the second part of the Matthias Passion, is only accompanied by the chords and bass of the organ. Just so little in the aria, "I will watch o'er my Saviour", accompanied without a technically correct middle part. Therefore, the organ must take an essential part of the work, as it is absolutely indispensable. The few orchestral

instruments as flute, oboe and string quartet (in the *Matthias Passion*) are led mostly with the voices of the chorus.

The orchestra gives the prelude, interlude and postlude to the several music-pieces and only occasionally executes an accompaniment or perhaps the chorus figures of the final chorus of the first part ("Oh, bewailing man, thy great sins") or by the arias. As an exception, we find that the recitative of Jesus, is accompanied by the string quartet. The violins and violas are always placed high (in this work), and their tone encircles the voices, as the luminous circle does the head of Christ. The rich movements of the orchestral accompaniments in the *Matthias Passion*, become frequently covered by the motion contained in the voices and organ.

This is especially the case, when the organ, to the passage — "Open thy fiery abyss, O Hell", — moves with full accompaniment. It becomes more and more the case in the present day, as the orchestral accompaniment is used merely for the purpose of tone colouring. We find this to be the case in *MOZART's*, *Requiem*; *CHERUBINI's*, *Requiem*; and the great *Mass (G minor)* of *MORITZ HAUPTMANN*; in the *Psalms and Oratorios* of *MENDELSSOHN*; in the "*Missa solemnis*" of *BEETHOVEN*; in the *Requiem* of *BERLIOZ*; and also the case with the compositions of the later masters. We advise the beginner in his first attempts in orchestral accompaniments of sacred music, to work as simple as possible. As far as possible, we should always treat the accompaniments of sacred works, as of secondary importance. In the choruses of the fugue style, the stringed instruments are led but seldom with the voices. However, this does not prevent the execution of a movement in the stringed quartet; the wind instruments can partly go with the voices and partly strengthen the harmony, as the following (Ex. 364) illustrates: —

CHERUBINI, Requiem, Fugue.
Poco Allegro. ♩ = 120.

361.

2 Oboes.

2 C Clarinets.

2 Bassoons.

2 Horns in E \flat .2 Trumpets
in B \flat .

3 Trombones.

1st Violins.

2nd Violins.

Violas.

Soprano.

Alto.

Tenor.

Bass.

Cellos and
Double-
Basses.

CHORUS.

et se - mini

et se - mini e - jus,

quam olim A - brahae pro - mi - si - sti

quam olim A-brahæ pro - mi - si - sti et se -
 e - jus, quam olim A-brahæ
 et se - mini e - jus,
 et se - mini e - jus,

The musical score is arranged in two systems. The first system consists of ten staves: five for the orchestra (flute, oboe, clarinet, violin, and viola) and five for vocal soloists (soprano, alto, tenor, and two basses). The second system continues the vocal parts with lyrics. The key signature has two flats (B-flat and E-flat), and the time signature is common time (C). The vocal parts enter with the lyrics: "mini e - - jus, et pro - mi - si - sti et se - - mini e - - quam olim A. brahae pro - mi - si - et se - mini e - jus." The orchestra provides accompaniment throughout.

mini e - - jus, et

pro - mi - si - sti et se - - mini e - -

quam olim A. brahae pro - mi - si -

et se - mini e - jus.

se - mini e - jus, et se - mini e - jus,

jus, et se - mini, se - mini e - - -

sti et se - mi - ni, et se - mini

et se - mini, se - mi - ni e - - - jus,

unis.

The musical score is divided into two main sections. The first section consists of ten staves, each with a treble or bass clef and a key signature of one flat (B-flat). The first six staves are empty, indicating rests for the orchestra. The seventh staff is a grand staff (treble and bass clef) with musical notation. The eighth staff is a single bass staff with musical notation. The second section consists of five staves, each with a bass clef and a key signature of one flat. The first staff of this section has the lyrics "quam olim, quam olim A - bra-hae, quam o - lim," written below it. The second staff has the lyrics "jus, quam olim," written below it. The third staff has the lyrics "ejus, quam o - lim, o - lim A - bra-hae, quam o - lim," written below it. The fourth staff has the lyrics "quam o - lim, o - lim A - bra - hae," written below it. The fifth staff is empty, indicating a rest for the vocal soloist.

quam olim, quam olim A - bra-hae, quam o - lim,
jus, quam olim,
ejus, quam o - lim, o - lim A - bra-hae, quam o - lim,
quam o - lim, o - lim A - bra - hae,

o - lim A - bra - hae pro - mi - si - sti,

quam olim A - bra - hae promi - si - sti

o - lim A - bra - hae et se - - mi - ni

quam olim A - bra - hae pro - mi -

Musical score for the accompanying orchestra and vocal soloists. The score is in B-flat major (two flats) and 4/4 time. It features a piano introduction with chords in the upper strings and a rhythmic pattern in the lower strings. The vocal soloists enter with the lyrics:

quam olim Abrahamae pro mi si -
 et se - mini e - jus,
 e - jus, et
 si - et se - mini e - jus, et

sti et. se - mini e - jus,

quam olim A - brahae pro - mi - ei - sti et.

se - mini e - jus, quam olim

se - mini e - jus, et se - mini e -

et se - mi - ni, et — se - mini e - - jus,

— se - mini e - - jus. et -

A - bra - hae pro - mi - si, sti et se - mini e, jus,

jus, quam olim A - bra - hae pro - mi - si. sti

unis.

et se - mini e - -

se - mini e - - jus, et se - mini e -

et se - mini e - - jus, et se - mini e -

et se - mini e - - jus,

a 2.
ff
 a 2.
ff
 III.
ff
 jus,
 jus, et se - mi - ni, et se - mi - ni
 jus, et se - mi - ni
 quam o - lim A - bra - hae pro -

quam o . lim A . . bra - hae

e . . - jus, quam o . lim

e . . - jus, quam o . lim A . bra hae

mi . . si . . - sti, quam o . lim A . bra hae

Note: Particulars regarding the vocal fugue with orchestral accompaniment; the independent figured orchestral accompaniment to the vocal fugue; the double-fugue for chorus and orchestra; the eight voiced (double choir) lugue &c. we find in the Author's "A Course of Instruction in Canon and Fugue", Chapters XIV, XV and XVI.

In the sustained movement of the four pure harmonic voices, the orchestral accompaniment must have a movement of directly opposite nature which is best given by the stringed quartet. In the following (Exs. 362a and 362b.) we see that frequently, merely simple chord figures suffice: —

CHERUBINI, Requiem.

Largo ♩ = 54.**362a.**

2 Oboes.

2 C Clarinets.

2 Bassoons.

2 Horns in F.

2 Trumpets
in C.1st and 2nd
Trombones.

3rd Trombone.

1st and 2nd
Violins.

1st Violas.

2nd Violas.

Soprano.

Alto.

Tenor.

Bass.

'Cellos and
Double-Basses.

The musical score for Ex. 362a is for Cherubini's Requiem, marked *Largo* (♩ = 54). It features a full orchestra and a chorus. The woodwinds (2 Oboes, 2 C Clarinets, 2 Bassoons) and strings (2 Horns in F, 2 Trumpets in C, 1st and 2nd Trombones, 3rd Trombone, 1st and 2nd Violins, 1st and 2nd Violas, 'Cellos and Double-Basses) play sustained chords. The strings have a rhythmic pattern of eighth notes. The chorus enters in the second measure with the vocal line "La - - - cry -".

il - - - la qua re - - -

MENDELSSOHN, "Paulus", Chorus (No. 3).

Allegro maestoso ($\text{♩} = 120$).

362 b.

2 Flutes.

2 Oboes.

2 A Clarinets.

2 Bassoons.

2 E \flat Horns.

2 Trumpets in D.

Tympani in

1st Violins.

2nd Violins.

Violas.

Soprano and Alto.

Tenor and Bass.

Violoncellos and Double-Basses.

CHORUS

Herr! _____ Herr, _____ Herr. _____

Lord! _____ Lord! _____ Lord! _____

der du bist der Gott, der du bist der Gott, der Himmel und

— Thou alone art God, — Thou alone art God, and Thine are the

&c.

The musical score consists of five staves. The first two staves are for Violins I and II. The third staff is for Violas. The fourth staff is for Cellos and Double Basses. The fifth staff is for the Piano, with the marking 'pi' and 'c' indicating piano and forte dynamics respectively. The score is in 3/4 time, key of B-flat major, and features various musical notations including notes, rests, and dynamic markings like 'pi' and 'c'.

The orchestral accompaniment in CHERUBINI'S Requiem contains no organ part, and also in most of the late compositions of religious character we find this also to be the case. The rich ability of the modern orchestra renders the organ unnecessary for completeness. BEETHOVEN writes in the "Missa solemnis" (op. 123), an organ part, which he only allows to be introduced in the *tutti* orchestra, for the purpose of strengthening the *forte* and *fortissimo* passages of the chorus and orchestra; but, in the solos it remains silent. The organ is employed in this mass wholly as a secondary instrument and becomes efficacious only when employed in the mass of instruments and voices.

In the Old Gewandhaus, FELIX MENDELSSOHN performed a single movement of the "Missa solemnis" without employing the organ. We can see from this how little such a great master, deemed the employment of the organ necessary.

Regarding the combination of orchestra and organ for accompaniments, we will make a suitable objection. Besides from regarding that comparatively few of the new concert-halls possess an organ, and that compositions which are necessarily to be accompanied by both orchestra and organ, can mostly only be performed in the church, must be consequently considered. The mechanism of the organ is variously different in magnitude, extent of registers,

tone-color and richness of tone. The large organ completely drowns the combined effect produced by both orchestra and chorus. Its powerful mass of tone, stifles the other participating instruments, for it is practically a large instrument in itself. The composer cannot accurately estimate the registers, as they differ considerably in the various kinds of organs. In case, — as in the old compositions of church music — the organ part is not worked out by the composer, and is left to another to conceive, he must be qualified more or less to meet this requirement.

The Accompaniment of the Solo in Sacred Music (Church Music).

§ 45. The organ is not suited to the solo, for it cannot instantaneously follow the gradations of the accompaniment of the solo, with the equal agility and nimbleness as can the other instruments of the orchestra. It is self-evident that the orchestral accompaniment of arias, duets and ensemble movements must be weaker than for chorus and moreover they take a greatly different place in the theatre than in the church and concert-hall. But there is no reason existing for excluding this most powerful instrument, provided it can be employed in a suitable manner and in a suitable movement, as shown in the following: —

MENDELSSOHN'S, "Paulus", Aria (No. 47) with obligato for oboe and bassoon.

Allegro maestoso (♩ = 100).

364.

1st and 2nd Violins.

Violas.

Bass Solo.

Violoncellos and Double-Basses.

Herr thu - e mei - ne Lip - pen auf, dass mein
Then open Thou my lips, o Lord! and my

2 Trumpets in D.

3 Trombones.

p

Mund dei-nen Ruhm ver - kün - di - ge, dass mein
mouth shall show forth Thy glo - rious praise and my

p

ritard.

ritard.

ritard.

Mund dei-nen Ruhm ver - kün - di - ge.
mouth shall show forth Thy glo - rious praise.

ritard.

The accompaniment can more or less, be arranged in many different ways; but no rules can be formulated which are applicable thereto. However we will recommend to the beginner, that in striving to make the accompaniment characteristic, he should not go too far. The soul of every musical composition is found in the melody, and this belongs to the voice. The accompaniment is to be secondary, for strengthening and for improving. But when the

composer misplaces the center of gravity of the accompaniment, it is not so interesting and becomes a great blunder.

Every genuine art-work is not merely for the artist and connoisseur, but also for every one who has the proper perception and feeling of such a work; but even when we are not qualified to understand a delicate execution of the whole work, we must feel and be affected by it. So we find that many of the arias and songs of the great masters are firmly set in the hearts of the people, and that they always possess the best meaning of the words of the "Volkslied" (*i. e.* a well-known song or people's song). A special kind of accompaniment remains yet to be mentioned, it is the orchestral accompaniment with obligato instrument. This instrument then steps from the more ordinary employment of the other instruments and appears as a distinct solo voice to the other voices which it partly accompanies and partly varies with. The obligato instrument moreover, gives exactness to the voice and is of prominent characteristic value to the accompaniment. We find that the classical masters frequently employed the violin as obligato instrument, but principally with arias, of which we name "Pity thee, my Lord" from the second part of the "Matthias Passion" by SEB. BACH. BEETHOVEN has also arranged a violin obligato to the ensemble movement of chorus and solo voices of the "Benedictus" in his "Missa solemnis". We also observe that the accompaniments of arias in secular music, especially opera, frequently contain an obligato instrument which give a special coloring to the voice.

In the above extract (Ex. 364) from "Paulus", we find that in the first part are employed two obligato instruments, which are indicated in the heading. This exceptional case explains the close relationship of the two instruments (oboe and bassoon). Two like instruments are often employed simultaneously as obligato instruments; *e. g.*, two basset horns in the aria of Eleazar, in the fourth act of the "Jew", by HALÉVY, and the two horns in the aria of Alice, in the first act of "Robert The Devil" &c. In the religious oratorium the orchestra only moves independently, in the instrumental introduction. In this work we find the large symphony movement for the orchestra alone; frequently it begins with an overture in fugue form. MOZART has also selected this form for the overture to his opera "The Magic Flute".

The Accompanying Orchestra in Concert and Opera Music.

§ 46. The accompaniments performed by the concert orchestra, we find to be of two different themes: namely, the accompaniment

of the secular oratorio and cantata; the accompaniment of the concerto and concert pieces, for one or more instruments. Also—as with the church music—we find that the religious contents of the secular oratorio, is chiefly expressed by the voices of the chorus and solo, thereby, opening a larger field for the many different expressions which may be produced by various tunings of the accompanying orchestra, than is possible in the case of sacred music. In the latter class prevail three pre-dominant moods, that of penance, entreaty, and grateful prayer. Only occasionally perhaps, may the oratorio possess another mood. The secular oratorio can on the contrary convey to us many pictures of the emotions of the soul, which cannot be presented by religious music. When we compare the two celebrated oratorios of HAYDN's, "The Creation" and "The Seasons", we find that in the last named work is contained many details of tone coloring in the instrumental accompaniment of the death scenes of the supporting text. The orchestral accompaniment is of a more prominent character than that of the "Creation".

Likewise, we find that the modern composers provide for a richer orchestral part, when writing these works for concert performance, than is necessary for compositions of a religious character. This is verified in the following works: ROB. SCHUMANN's, "Paradise and Peri", "The Rose Pilgrimage"; GADE's "Erlking's Daughter"; RUBINSTEIN's, "Paradise Lost"; MAX BRUCH's, "Odysseus", "The Bell", "Achilles" and many others. We find this likewise to be the case in the male chorus with orchestral accompaniment of MAX BRUCH's excellent work, "Scenes from the Frithjof-Sage" which marks the creation of a new class of compositions.

The orchestral accompaniment of the concerto and concert-pieces up to the time of BEETHOVEN, were of very simple character.

The orchestra usually gave an introduction in which the essential substance (*i. e.*, the principal theme of the first movement) was contained. Immediately following was the "first solo" to which was connected a second full "Tutti": in the second and third movement of a concerto the "full orchestra tutti" does not appear. The accompaniment of the "solo" was very simple; they arranged the concert instrument entirely below. BEETHOVEN was the first to arrange the accompaniment of his concertos in a more symphonic manner; after him followed MENDELSSOHN, ROB. SCHUMANN, RUBINSTEIN, REINECKE, SAINT-SAËNS, MAX BRUCH, BRAHMS &c. In the works of these masters the orchestra is not so empty in the secondary accompanying: it takes a more important place and a greater share of the work in the performance. In the French and German opera, always from the earliest times we find the accompaniment to

be of a more prominent character than the mere secondary and empty one. Such a work is generally introduced by a large symphony-movement known as an "overture", and before single acts we find a long instrumental prelude known as "entr'acte". In the midst of an act is executed "ballet music", which is characterized by nobility of invention and refinement of instrumentation. The endeavor to produce characteristic effects by the instrumental accompaniment of the opera has been brought about by the introduction of many of the concert orchestra instruments, which were hitherto foreign to the opera orchestra.

The English horn, bass-clarinet, tuba and harp are at present of permanent employment in the opera orchestra.

RICH. WAGNER has otherwise enlarged the opera orchestra through the triple employment of the wood-wind instruments and the trumpets. Examples of the instrumentation of orchestral accompaniments of the opera, besides those which have appeared in the previous chapters of this book, could not be given as they would carry us entirely too far. This is also unnecessary, for the scholar has besides the opportunity of hearing in all places the operas of the classical masters, such as MOZART, GLUCK, BEETHOVEN, CHERUBINI, WEBER, SPOHR and the works of MÉHUL, AUBER, BOIELDIEU, NICOLAI, MARSCHEMER, LORTZING, ROSSINI ("Tell" and "Barber"), HALÉVY, GOUNOD, BIZET &c. RICH. WAGNER's operas have triumphantly captivated the stages of all civilized lands.

The scores of most of these works exist in inexpensive editions and are accessible to the earnest endeavoring art student.

The Forms of the Music Pieces of the Oratorio and Opera; the Music of Dramas and Tragedies.

§ 47. The forms in the oratorio and opera are by no means as broad as those of the symphony or sonata of the home-circle, chamber and concert orchestra. The simple and compound arrangements of the song-form prevails. Accordingly as the supporting text permits, we find in many arias also the small rondo-form, in ensemble pieces, sometimes we find a short form of the sonata-movement. In the oratorios the composer cannot strictly follow the forms of pure instrumental music, as the text often offers sufficient cause for deviating therefrom. This is more often the case with opera music.

Also when the song form of the arietta, ariosa, ballad, cavatina, retains its form, we must then in the ensemble movements and finales through the progress of the performance arrange these forms to conform to the supporting text. By the combined effect of

the two arts, poetry and music, as is the case in opera, the perfect and natural governing of the art becomes limited.

By way of exception the music should be subordinate to the poetry, in the case of the recitative and melodrama; nevertheless in lyrical and dramatic motives, we must regard the combined effects of the sister arts.

Therefore, we see in the largest operatic ensemble movements mostly, only small musical forms placed next to one another.

These are obliged to be interrupted often by long or short recitatives. Not always is the unity of the tonality prohibited; one of the most beautiful movements in "Der Freischütz", the trio with chorus in the first act (No. 2) begins in *A*-minor and ends in *F*-major. But in spite of this we see that the classical masters and also the modern writers, strive to retain the close of the single instrumental forms, as far as the text allows.

Then, where the poet in drama or in tragedy wishes music, it is mostly in the form of the overture, entr'acte, songs, marches, dances, and occasionally only an accompaniment to spoken words (in melodrama).

We refer you to the excellent music of BEETHOVEN's "Egmont", "Ruins of Athens", overture to "Coriolanus", to MENDELSSOHN's music to "A Midsummer Night's Dream", "Athalia"; and ROB. SCHUMANN's music to "Manfred". The most beautiful of all theatre-music is written in the form of concert music and is much oftener performed in the concert saloon than in the theatre.

CHAPTER XII.

THE MILITARY MUSICAL CORPS.

The Military Band Music (Infantry Music).

§ 48. As well as in different countries, also in the different branches of every army, the military bands differ.

The infantry music is however of the fullest arrangement; the employment of the instruments of military bands in Austria and Germany, are pretty much the same in regard to number, kind and nature. The following instruments, which compose the bands of infantry regiments, have been described in chapters VI, VII and VIII.

Piccolo in <i>C</i> or <i>D-flat</i> ,	2 Bass Trombones,
2 Flutes in <i>C</i> ,	2 nd and 3 rd Clarinets in <i>B-flat</i> ,
2 Oboes,	Alto Clarinet,
1 Small Clarinet in <i>A-flat</i> or <i>G</i> ,	2 Bassoons,
2 Clarinets in <i>E-flat</i> ,	Double-Bassoon,
1 Clarinet in <i>B-flat</i> ,	2 Soprano Cornets,
2 Tenorhorns,	2 Tubas (Helicon),
Baritone,	Military Drum,
4 Horns,	Bass-Drum and Cymbals,
4 Trumpets,	Triangle,
2 Tenor Trombones,	Carillon.

In addition to these, we find that in several cases the following instruments are also employed:

Piccolo Cornet,	Alto Clarinet and
English Horn,	Bass Clarinet.

The arrangement of the score can be made in many ways; in the following (Ex. 365) we give a fully employed score, suitable for the purpose in view. —

365.

Alla marcìa.

Piccolo.
 Flute.
 Oboes.
 Clarinets in *E♭*.
 1st Clarinet in *B♭*.
 2nd Clarinet in *B♭*.
 3rd Clarinet in *B♭*.
 Bassoon.
 Double-Bassoon.
 Soprano-Cornet in *B♭*.
 Alto-Cornet in *E♭*.
 Tenorhorn in *B♭*.
 Baritone.
 1st and 2nd
 Horns in *E♭*.
 3rd and 4th
 1st and 2nd
 Trumpets in *E♭*.
 3rd and 4th
 Military Drum.
 Bass-Drum and
 Cymbals.
 2 Tenor-Trombones.
 2 Bass-Trombones.
 Tubas.

In the above score (Ex. 365) of MENDELSSOHN'S March, the student will see how the military band instruments — which he studied in the previous chapters — may be practically employed as soprano, alto, tenor and bass voices. Special delicate fine effects of orchestration cannot be brought about in this definite class of music. "In this matter there is no artistic struggle, for they only proceed in suitable masses." This leaves it to the student to reflect upon the instrumentation of military music; it permits the given means to be employed in an intelligent and suitable manner, aiming to instrumentate as full and well sounding as possible. The military band leaders bring forward such musical compositions, as were originally arranged and composed for piano or orchestra, *e. g.*, as selections from the operas.

Brass Band Music (Horn Music).

§ 49. This generally derives its name from a special troop; it is of much weaker instrumentation than the "infantry music", and without exception consists of the following brass instruments:

Piccolo Cornet in E^b ,

1st and 2nd Soprano Cornet in B^b (mostly employed double),

Alto Cornet in E^b ,

1st and 2nd Tenorhorn in B^b ,

Baritone,

1st and 2nd Trumpets in F or E^b ,

2 Tenor Trombones,

Bass Trombone,

1st Horn in B^b (High),

2nd

1st " " " " F or E^b ,

2nd

3rd

4th

1st Tuba,

2nd

" "

} These five horns are most invariably employed double; likewise the second tuba.

Cavalry Band Music (Trumpet Music)

consists of the following named instruments:

1 Piccolo Cornet in E^b ,

1st and 2nd Soprano Cornets in B^b ,

Alto Cornet in E^b ,

1st and 2nd Tenorhorn in B^b ,

Baritone,

1st, 2nd, 3rd and 4th Trumpets in E^b ,

1st and 2nd Tuba,

Tympani.

The students who wish to enter into the instruction of the military music, will do better when they frequently visit the exercises and rehearsals of the different "military bands". There they

will best learn the forms, power of tone, and the employment of the respective instruments, than in any other way.

Of the chief compositions, we recommend **FELIX MENDELSSOHN'S** Overture for Brass Band (Op. 24), to be studied.

This little known work is instrumentated for piccolo, flute, two clarinets in *F*, two Clarinets in *C*, two oboes, basset horn, two bassoons, double-bassoon, bass-horn, two horns in *F*, two in *C*, two trumpets in *C*, three trombones, military drum, triangle, bass-drum and cymbals.

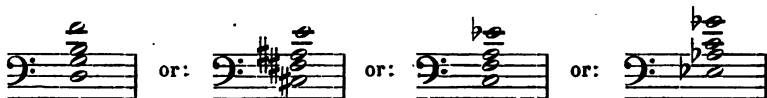
As this work was written in 1826, it is quite evident it was written for natural instruments; we feel authorized to take for granted that the Prussian Infantry, in the music of those times employed such instruments.

CONCLUSION.

METHOD OF REHEARSING THE CHOIR, HOW TO LEAD THE ORCHESTRA, CHORUS AND SOLO VOICES IN REHEARSALS AND PERFORMANCES.

The Choir Practice.

§ 50. The first and most essential requirement of a musical director or conductor of orchestra, is a good musical ear. Not every one, when in other respects properly qualified, has been bestowed by nature and from youth with so fine an ear that they are able to recognize each separate tone, or each agreeable group of tones, of either consonant or dissonant chords, and in their correct pitch, so that they can place each tone in its proper position and give the prevailing tuning, also actual sound. The author knows very talented musicians, who of course know instantaneously each harmony, whether given from the piano, or from voices, or from horns, and know the correct situation, but still cannot say whether the above mentioned chord be



Still less is he prepared to give such a chord or another to your liking, or even a single tone, in its actual pitch, accurately and immediately from the head.

This knowledge of the absolute pitch, is perhaps not always positively possible, particularly as the tuning in different countries

is not always the same, although they vary but little; however, this talent of every highly musically cultured person is only gradually acquired by attentive listening.

As an auxiliary means thereto, we recommend thorough vocal studies; also the study of a stringed instrument or wind instrument.

Moreover, we require, that the musician who will rehearse a musical composition, must previously learn it thoroughly, have a perfect knowledge of all its particulars, and also an actual mastery of its theme, before he can instruct and impart it to others. The genuine artistic conscientiousness, allows no one, — no matter how skilled in confidence of his self-possession, in his quick survey, in his excellent reading and playing at sight when at rehearsal — to conduct an art-work, without a previous preparatory rehearsal. Although, this can well be permitted in the practice of an approved and fully qualified director, for it is of absolute necessity; but the beginner must not draw the conclusion from this exceptional case, that a scrupulous preceding information of the rehearsal work in all its details is not always of absolute necessity.

The quickest, surest and best method of studying a chorus, when it is only a polyphonic composition of slight difficulty, is to rehearse each part separately at first. We find in each division of the chorus, frequently both male and female singers who are provided with excellent voice material, but cannot sing true at sight even though they stand next to trained and musically talented pupils. When such members of a chorus are obliged to learn their parts rapidly and thoroughly, the single practice of the voice parts, spoken of above becomes most essential.

We recommend the single part practice as being most profitable for certainty of entrance, correct and distinct pronunciation of the text, purity of intonation, breathing and elegance of execution, — all of which are requisite for solidity and strength. But it is not necessary to employ so much prudence in practice and that the chorus be of such remarkable strength, in the simpler, child-like movements of this art. The chorus conductor must know precisely his strength, so when he becomes aware of what is to be required of him, there will not be that unnecessary loss of time.

When beginning immediately from the first with the study of the separate voice parts, all delicacy and elegance of execution should be left until the very last. Before having the whole chorus sing together, we must take care that all the intervals are purely intonated; that all entrances of soprano, alto, tenor or bass, are given — by all the voices comprising that part — simultaneously, firmly and positively; that all passages, the progression of the intervals of

which are of difficult intonation, should be studied singly and practiced carefully. The purity and acuteness of intonation of the leading tones and altered tones deserve to be all the more considered, for they can never be given by the pianoforte, as a good chorus can give them.

When the chorus movement has a written pianoforte or orchestral accompaniment, it is best only to employ this when the chorus has mastered its exercise completely and can sing it with certainty.

With the separate practice of special voices, it is best to play as an accompaniment thereto, only the fundamental harmony; but with the first ensemble singing of the chorus, we may in case of necessity employ the pianoforte for calling special attention to the difficult entrances.

It is very foolish to combine the chorus with the orchestra, before it has completely studied its part and can render it with certainty, for most frequently the accompaniment contains difficult figures which more often hinder than strengthen the chorus. In works which contain a double chorus such as BACH's motet in the "Matthias Passion" and HÄNDEL's "Israel in Egypt", we should study at first each chorus separately. For when the two choruses are combined with the orchestra, in rehearsal and performance, they are generally separated.

In the Leipzig "Gewandhaus" we find that the first chorus is placed to the left of the conductor (*i. e.*, with the first violins), and the second chorus to the right.

The Orchestra Rehearsal.

§ 54. Here must the conductor manifest the greatest possible repose and prudence, for he must accustom himself to hear all things in the orchestra. It is not unusually the case that superior musicians and composers when seated at a distance from the orchestra, both in rehearsal and performance, can hear and follow with excellent exactness; but on the other hand when called to the directors stand, they will at first, — as not being accustomed to stand so near the orchestra — find much difficulty in hearing as well and will be little able to superintend the execution. Also in regard to the pitch, they must first learn to find the right degree.

Moreover, here lies the difficulty, that the sound of the orchestra in rehearsal, which generally takes place in an empty saloon, is greatly different than in the principal rehearsal (*i. e.*, the one previous to performance) or performance, which takes place in a well filled saloon.

All these difficulties, however, are overcome in a very short time by the true and qualified musician. If he was previously a member of the orchestra and he only at times co-operated therewith, then the previously mentioned difficulties are absolutely nothing to him or only exist in a slight degree. If he has had the advantage to play under the direction of a very excellent, orchestral conductor, he will then have observed how the orchestra should be conducted. He will also know what the orchestra requires, to overcome rapidly the difficulties of his exercises and in what manner the time must be given, so as to enable the body to follow with certainty his leading.

Whether the stringed quartet or the wind instruments should be rehearsed separately before brought together for the full rehearsal, depends partly on the nature (make-up) of the orchestra, and on the other hand, whether great or small difficulties be contained in the work or not. The superior private royal bands of Germany and also their excellent orchestras, in the most difficult of exercises, scarcely ever find it necessary to have separate rehearsals of the above-named instruments. In the student or amateur orchestra, such rehearsals are found to be of much benefit.

It is quite different when in a great work for chorus, solo voices and orchestra, a single rehearsal for the orchestra precedes the complete rehearsal. Such a proceeding is indispensable, when a new and very difficult work is to be performed for the first time. When the respective work is not printed, and the single parts are in manuscript, then such a previous rehearsal is to be all the more recommended, as the parts may contain mistakes due to rapid writing.

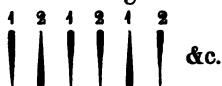
Conducting (Beating of the Time).

§ 52. The exalted conductor in giving all the necessary signs and signals to the orchestra, should always have courteous consideration for the audience, but should never allow this to cause him to take a position by which his back will be continually turned towards the orchestra. The signs given for two beats in a bar are very simple.

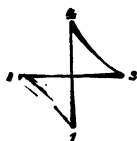
The conductor must give the down-beat of the *first* measure of every piece, in such a manner, that a short and quick upward motion is allowed to precede the down-beat, to which it must be bound in the manner as shown in the following (Fig. a): —

The first (a) or down-beat, $a \overset{1}{\mid} \overset{2}{\mid} b$ and the second or up-beat

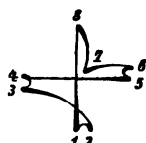
(b). The following measures are illustrated in the following simple manner, consisting of the following short *down* and *up* movements:



The four-part measure is illustrated as the following shows:



In a very slow *tempo*, the eighth notes of a measure must be given in the following manner:



The three-part measure is designated by three beats, in such a manner that the second beat is given to the left:



In a slow *tempo* the six-eight measure is designated by six beats, in the following manner:



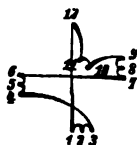
In a rapid *tempo* it is given as a two-part measure, by a *down*- and *up*-beat.

The nine-eight measure is designated by nine beats in the following manner:



In a rapid *tempo* this is given by three beats, as in three-four time.

The twelve-eight measure is given in the slow *tempo*, in the following manner:



In rapid *tempo* it is given as the $\frac{4}{4}$ time.

The conductor must always give the beginning of each movement with certainty and vigour and likewise the change of a tempo within a movement. If a movement in a rapid tempo begins with an up-beat, then it is not sufficient to designate the beginning, by the value of a short up-beat, for in $\frac{3}{4}$ time the whole measure should be signified by three beats, with the orchestra beginning without further notice, on the third quarter beat. In the following time we designate all the measures by down-beats. Therefore, we must begin the Symphony of ROB. SCHUMANN'S, in the following manner: —



In the two- and four-part measure we give the up-beat in a similar way. In the "Quasi Presto" of the above scherzo, ROB. SCHUMANN makes the following remark: "To facilitate the simultaneous beginning of the instruments in this movement, the conductor may before beginning the "Quasi Presto", give two beats.

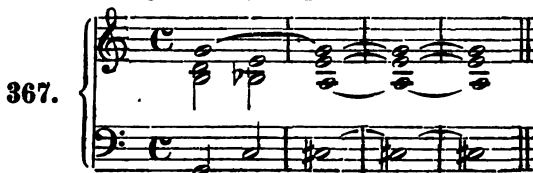
By this method ROB. SCHUMANN knew with what certainty the simultaneous entrance of the instruments on the up-beat would be.

It is frequently necessary, in a very slow tempo, to give the small parts of the measure also. Therefore, every intelligent conductor will give at least six beats in the first measures of a Largo movement of $\frac{3}{8}$ time. Also the *ritardando* and *ritenuto* movements are much facilitated when the value of the smaller parts are represented by augmented beats. At the end of a pause (τ) the conductor must give a short, quick side-movement with the baton, whereby all engaged in the execution of the pause, may sustain and end simultaneously.

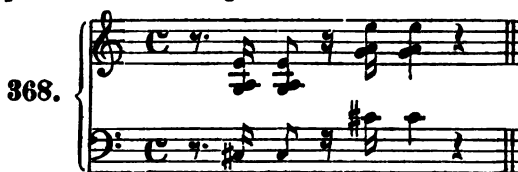
In this case as well as in all other similar cases, the conductor must accustom the singers as well as the performers to look at him.

It is no difficult task to give the tempo of a movement, when it continues for a long time without cessation, as in the symphony, overture and musical compositions of other forms.

It is however, very difficult where we find in the opera short movements of different tempos, such as arioso-recitatives, when at the same time, the measures of the recitative retain the same time-signature. When the last is only accompanied by sustained or tremolo harmony through many measures, the conductor only designates the beginning of each bar by a down-beat. When the harmony changes in the middle of a movement, then must the parts of the movement be designated by frequent accurate beats, *e. g.*: —



In the above the conductor must give each quarter of the measure a definite beat; in the second, third and fourth measures only a down-beat should be given. In the following (Ex. 368) the first three quarters should be given definite beats.



In the following example, the first four quaters of the first measure must be given on account of the movement of the viola; and in the second measure, the first three beats precisely: —

369.

4th Violins.

2nd Violins.

Violas.

Violoncellos.

In the recitative, the conductor must always attentively follow the voice, for this by no means always strictly follows the time. Also he must continually and strictly follow the concerto or concert piece of a professional artist, and comply with his fine execution always in such a manner that his accompaniment is secondary. In this case the conductor is not the leader of the work, but only the mediator between the executing virtuoso and the accompanying orchestra. The student who has had no opportunity of assisting in the orchestra, will do well to observe the movements and signs of an excellent conductor. Although by a first class orchestra, the sign for the introduction of a single voice, after many bars of rest is unnecessary, and the conductor most invariably leaves it to the intelligence of the performers, who hardly ever fail at the correct time, but of course in some cases this sign of introduction is to be recommended. This is of especial value in the case of the entrance of the trombones and tubas. With these instruments it is necessary to take a great deal of breath, and when the breath is not taken at the right time, these instruments always enter a little late. It is sufficient then when the conductor, shortly before these instruments are to enter, merely looks in the direction where they are arranged and designates their entrance by a strong and wider given down- (or up-beat). All the signs should be given at the performance, in such a manner that they are not disagreeable to the audience and do not divert their attention. The conductor who in the previous rehearsals has filled and performed his duties in a professional and intellectual manner, will at the performance not make more remarks, than the least possible which are absolutely necessary for success. When failures and omissions occur, which in rehearsal he has repeatedly corrected, he should allow these to quietly pass by, and not disturb the impression of the whole. During the rehearsal he should not tolerate interruptions which are caused by each small omission, but should, with over-scrupulous severity see that each single movement is repeated many times (when it is in any way possible). And moreover, the conductor should in the performance, give the time with the greatest possible quietness and self-possession, which is all the more advantageous for the success of the work.

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