EDITION SCHMIDT.

No. 3.

HEAD AND HANDS

Fundamental Technique

FOR THE

PIANOFORTE

BY

STEPHEN A. EMERY.

Op. 37.

INTRODUCTION TO

TAUSIG'S DAILY STUDIES.

EDITION SCHMIDT.

Introduction to
Tausig's Daily Studies.

HEAD AND HANDS.

FUNDAMENTAL TECHNIQUE

FOR THE

PIANOFORTE

BY

Stephen A. Emery.

Op. 37.

BOSTON:
ARTHUR P. SCHMIDT & CO.

INTRODUCTION.

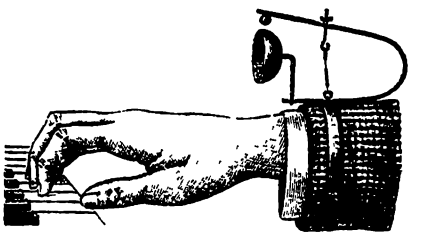
The following exercises may be profitably studied in either of two ways: First, following literally the directions laid down in the book, working out everything both theoretically and practically. Second, omitting the theoretical part and only practising the numbered exercises in strict accordance either with the rules here given or with others which possibly some teachers may prefer to substitute in their place. Occasionally, even the order of succession may be changed to meet the requirements of exceptional pupils, though the author's experience has induced him to present the present arrangement as being the best in general application.

The title, **Head and Hands,** suggests that the prime object of these exercises is to promote **intelligent** study, in technique as well as in all to which it leads, rather than the merely mechanical work which, because it is such, so rarely produces results at all commensurate with the time and labor bestowed. The former at once invests preliminary work, which is too often regarded as irksome, with a degree of interest quite surprising to those who first try it, and develops executive skill far beyond any attainable by unintelligent practice. **Part One** contains only what is indispensable to the merest amateur, while **Part Two** leads on to more difficult execution.

The exercises themselves will be found to include much that is already common property among teachers, together with some new points and suggestions intended to increase the value and results of practice. For more advanced technical work the student is referred to the justly celebrated exercises of Carl Tausig, Theo. Kullak, Adolph Kullak. Schmitt, Hummel, Knorr and others.

PART ONE.

Before beginning these exercises, the student must be shown the proper position of the fingers, hand, wrist and arm, together with pure finger-movement; and these must be rigidly insisted on in strictly **legato** passages. In all these, the teacher will of course adopt his own theories. Plates and rules illustrating the author's views may be found in his **Foundation Studies in Pianoforte Playing,** Op. 35. The cut below gives a position at once favorable to **flexibility, agility** and **strength,** the three indispensables to all pianoforte execution.



Emery's Legato Monitor.
Patented Feb. 21, 1882.

The simple device here shown, the **Legato Monitor,** will be found a valuable aid in overcoming that nearly universal fault, a jarring wrist, which destroys all semblance of **legato** effects. In the succeeding exercises, the wrist must be kept flexible, though quiet; never stiff and rigid, as this inevitably produces a hard, unmusical touch.

The printed directions as to force and rapidity must be strictly followed. The metronome signs are to be interpreted thus: — M. M. stand for Maelzel's Metronome, an invention for measuring (or indicating) the rapidity of the performance. The signs ♩ = 112 mean that, in the music following them, one hundred and twelve quarter notes, or their equivalents in other notes (as fifty-six half notes, or two hundred and twenty-four eighth notes, etc.) are to be performed in one minute. 𝅗𝅥 = 72 show that seventy-two half notes, or their equivalents, occur in one minute. In technical exercises the metronome may be used in either of two ways: — letting it beat a few measures, enough to fix the movement firmly in the student's mind, and then stopping it before beginning to play (as is its proper use in musical compositions), or allowing it to beat steadily while one practises. In the latter case one should also play part of the time without the metronome, as constant reliance upon any mechanical aid is to be avoided.

If the student has no metronome, let the general directions, »Slowly«, »Somewhat quickly«, »Very fast«, »As fast as possible«, etc., be carefully observed. In every case, the proper **tempo** will be secured by occupying exactly one minute in going over the amount of music occupied by the given number of the specified notes, or their equivalents. When the metronome is used, the bell must always ring on the first count of each measure.

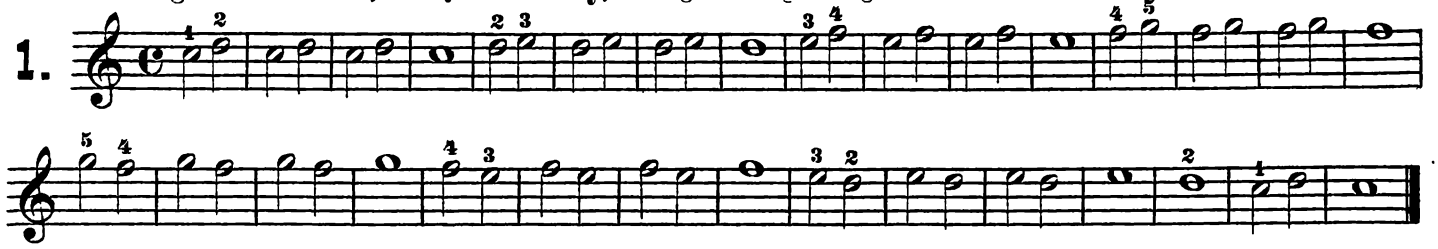
FOR FLEXIBILITY.

Count, either aloud or mentally, to insure slow, steady playing at first. When any finger is to play, it must rise when the note before its own is played, **not waiting to rise after the previous finger falls.** Do not hold two keys down at once.

Keep the wrist flexible but quiet — never rigid.

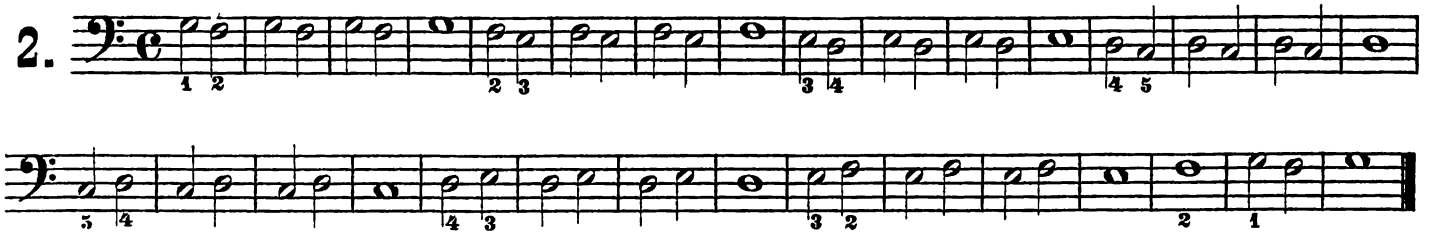
Right hand alone, slowly and **softly,** lifting the fingers high. M.M. ♩= 60.

1.



Left hand alone, slowly and **softly,** lifting the fingers high. M.M. ♩= 60.

2.

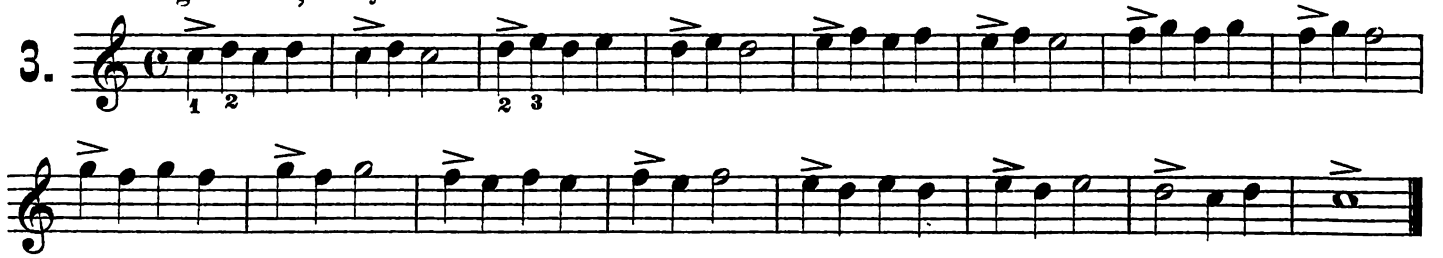


FOR STRENGTH.

Nos. 3 and 4 must not be played faster than the **tempo** here given. The accented notes must be noticeably loud and all the others very **soft.** Play with the fingers only, not with the hand and arm. Lift the fingers very high but never in a wrong position.

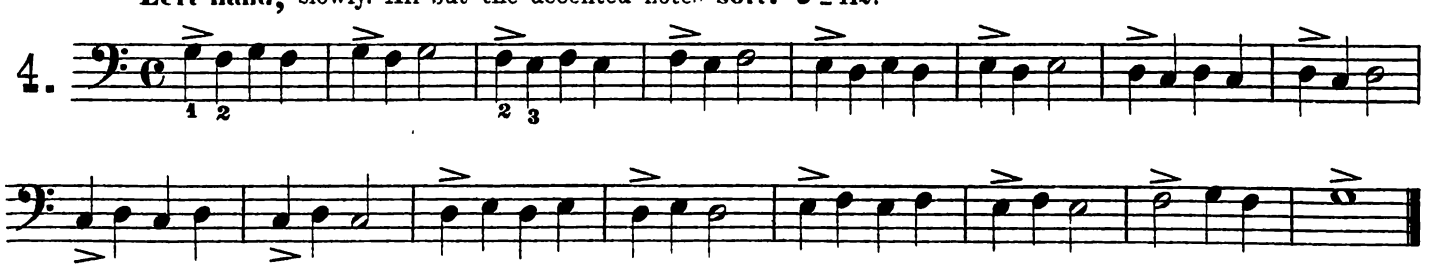
Right hand, slowly. All but the accented notes **soft.** ♩= 112.

3.



Left hand, slowly. All but the accented notes **soft.** ♩= 112.

4.



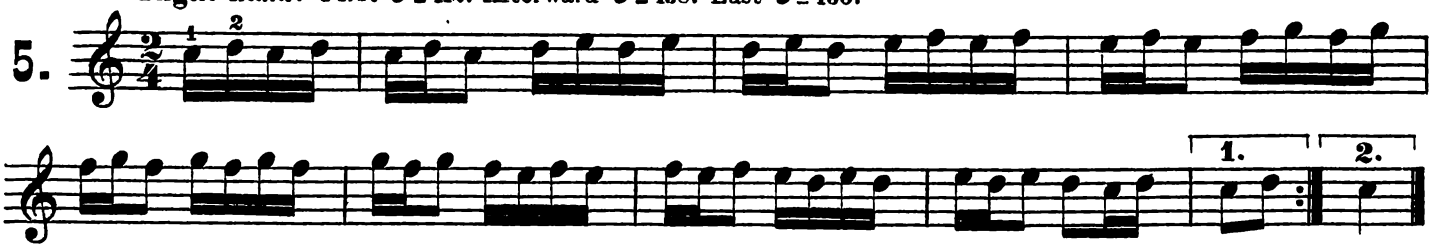
FOR AGILITY.

If one practises without a metronome, in all these exercises for agility the first **tempo** may be regarded as meaning **Somewhat quickly**; the second, **Quickly**; and the third, **Very quickly.** Each **tempo** must be perfectly mastered before the next is attempted: the fastest may need to be delayed until **Part One** has been learned in the slower **tempi.**

Nos. 5 and 6 clearly but softly, no accent being allowed.

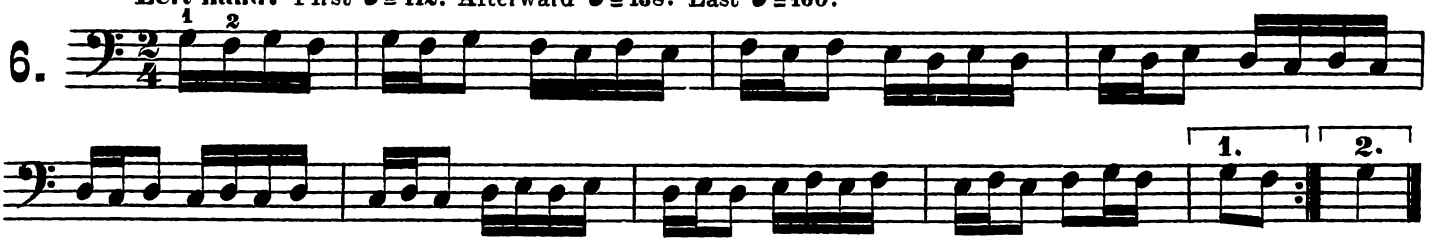
Right hand. First ♩ = 112. Afterward ♩ = 138. Last ♩ = 160.

5.



Left hand. First ♩ = 112. Afterward ♩ = 138. Last ♩ = 160.

6.

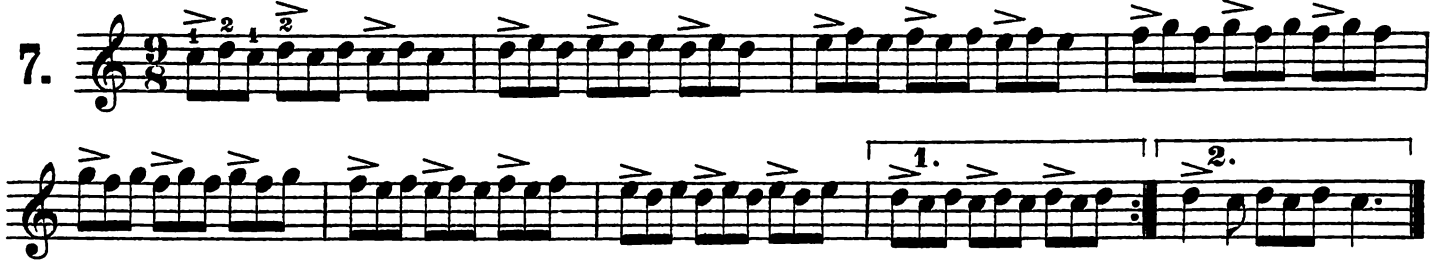


FOR STRENGTH AND FLEXIBILITY.

Nos. 7 and 8 strongly accented on the first of each group, with the finger, only. Observe that the dotted quarter in the metronome mark equals one group.

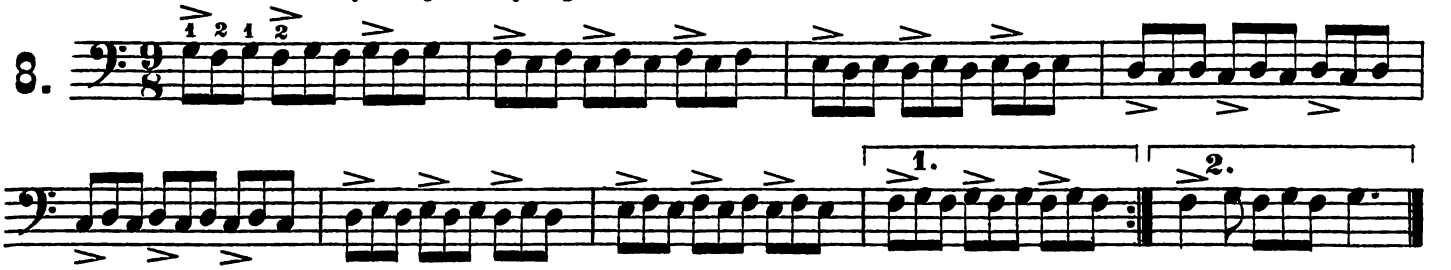
Right hand. Slowly. Fingers very high. ♩. = 60.

7.



Left hand. Slowly. Fingers very high. ♩. = 60.

8.

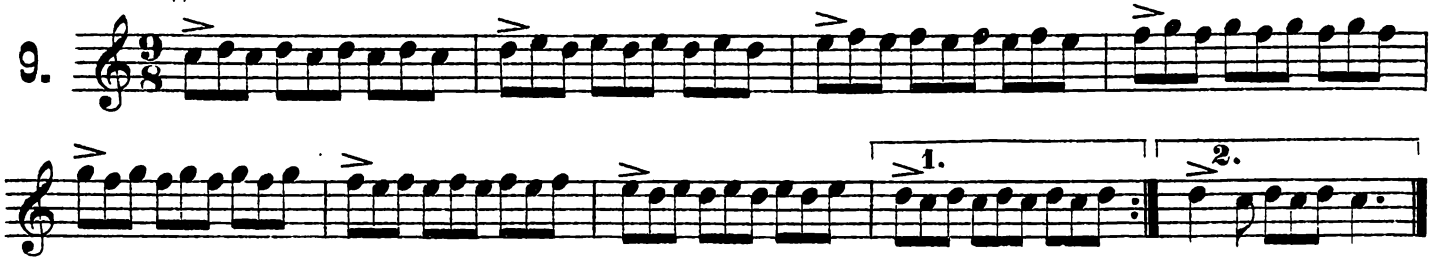


FOR STRENGTH AND AGILITY.

All soft except where accents are marked.

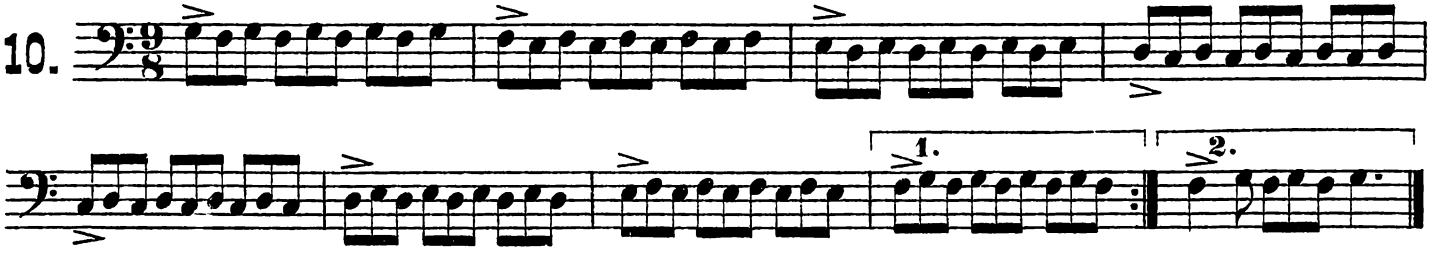
Right hand. ♩.=120. ♩.=144. ♩.=176.

9.



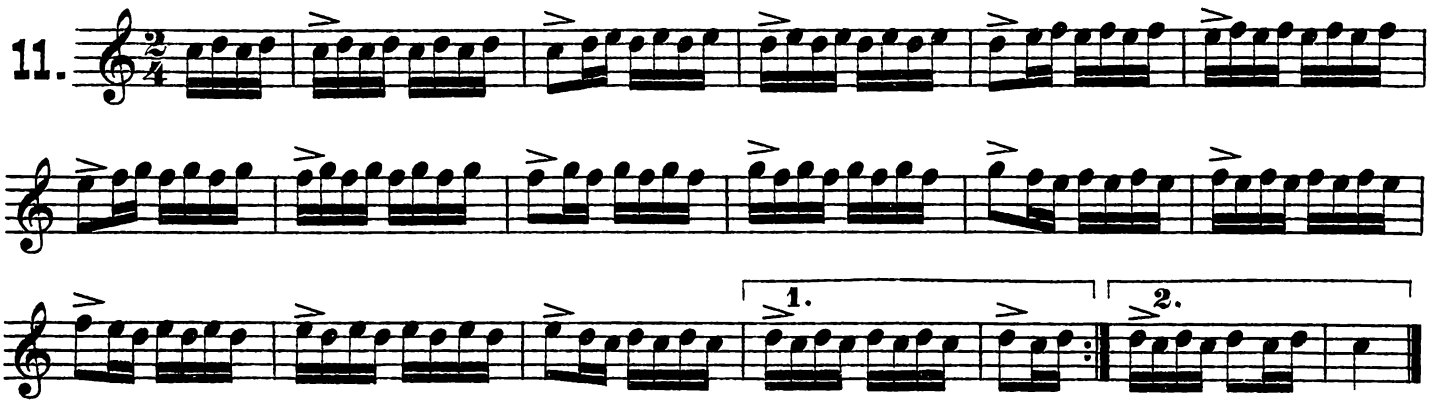
Left hand. ♩.=120. ♩.=144. ♩.=176.

10.



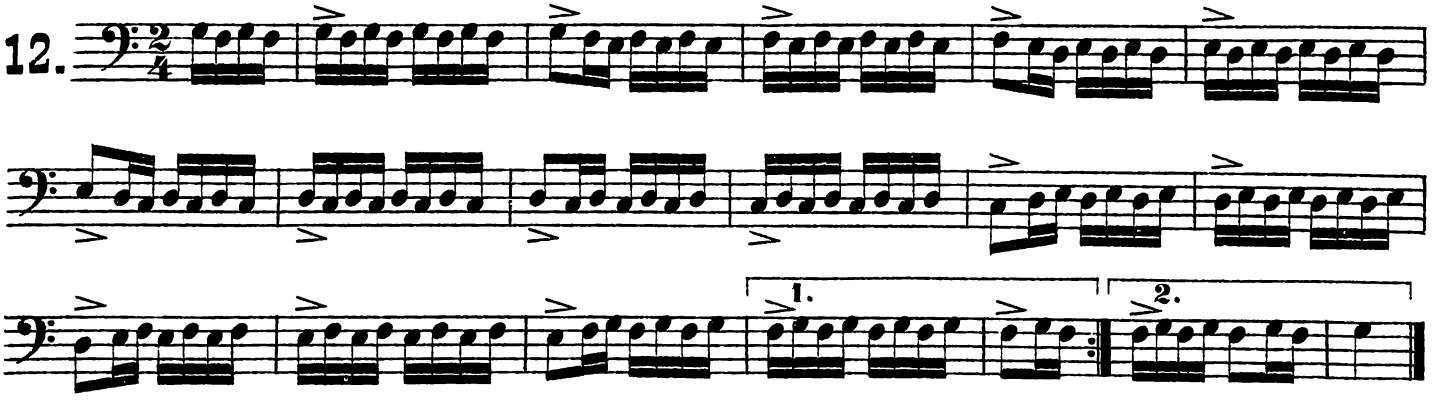
Right hand. ♩=112. ♩=138. ♩=160.

11.



Left hand. ♩=112. ♩=138. ♩=160.

12.

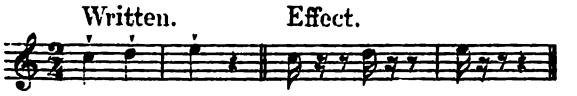


For finger exercises with a moving hand see Part Two, No. 152.

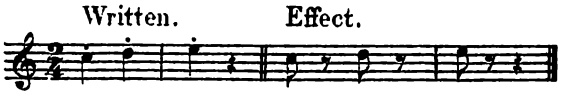
STACCATO.

The general, technical definition of **staccato** is **detached,** in contradistinction to **legato**, which means **smoothly connected. Staccato** is of three kinds: — **staccato, demi-staccato** and **slurred staccato,** the last, when found in pianoforte music, being called **portamento.** The effect desired is sometimes denoted by the printed word **staccato,** but oftener by points or dots immediately over or under the notes.

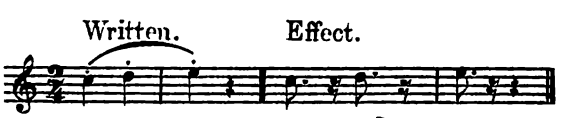
Staccato is marked by sharp points, and notes so written should be held only **one fourth** of their usual length.



Demi-staccato is marked by small dots, and the notes are then held only **one half** of their usual length.



Slurred staccato or **portamento** is marked by dots (rarely by points) and a curved mark called a slur; in which case the notes should be held **three fourths** of their usual length.



Here the notes are neither really short nor connected.

The **demi-staccato** mark is used more than the full **staccato;** but as in rapid passages its effect is unavoidably the same, it is not improper in such cases to call it **staccato** and to play it so.

As the only result of either form is to shorten the notes, no effect of force is thereby intended: therefore one should never play a note more loudly simply because it is **staccato** than if it were **legato.** The too general practice of tapping **staccato** notes is incorrect, except where several follow in rapid succession. Preparatory exercises now follow, showing a general subdivision into **slow staccato** and **rapid staccato.**

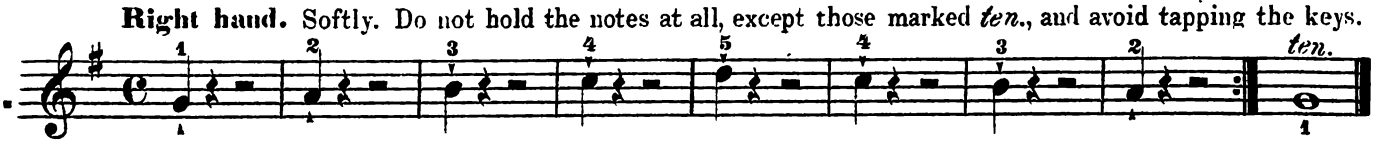
Slow Staccato.

By **slow staccato** is meant very short, detached notes that do not come in rapid succession: this applies also to single **staccato** notes, or chords.

Place the hand in the same position as for **legato** playing, close over the keys — not held high above them. The finger that is to play first should **rest lightly on the key,** at the beginning of the passage, give a sharp, sudden pressure, and the whole hand should then spring elastically upward as though trying to toss something backward. The wrist must be very flexible and may rise slightly with the hand, in order to avoid a stiff motion and a hard touch. **Do not tap the keys.** The hand must **rise quickly** and **fall slowly.** A note marked to be held (**ten.**) is not necessarily loud.

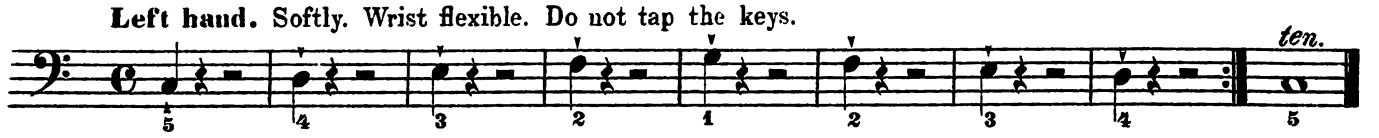
Right hand. Softly. Do not hold the notes at all, except those marked *ten.*, and avoid tapping the keys.

13.



Left hand. Softly. Wrist flexible. Do not tap the keys.

14.



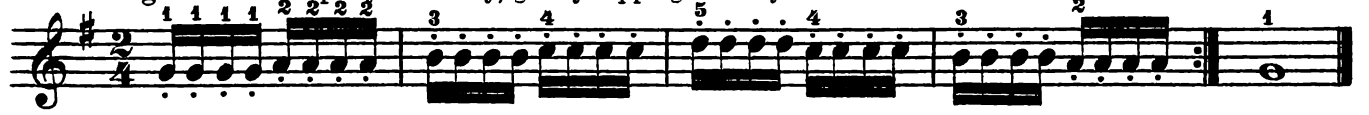
Staccato thirds, sixths, octaves and chords are played in substantially the same way as the foregoing. See Nos. 105, 106 and 107.

Rapid Staccato.

By **rapid staccato** is meant detached notes coming in rapid succession. Such notes are usually marked **demi-staccato** though intended to be played as if marked **staccato.** The motion necessary to play these passages is readily acquired by moving the whole hand with a flexible, hinge-like wrist, as though one were fanning the keyboard with the hand, care being taken to keep the fingers bent as in **legato** playing. Here a gentle tapping of the keys is unavoidable; but the rapid succession of notes prevents the hand from rising very high and thus generally renders the contact of the fingers with the ivory inaudible.

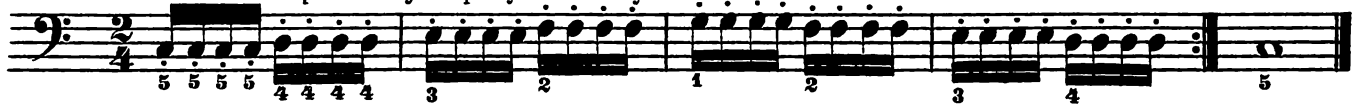
Right hand. Rapidly but softly, gently tapping the keys.

15.



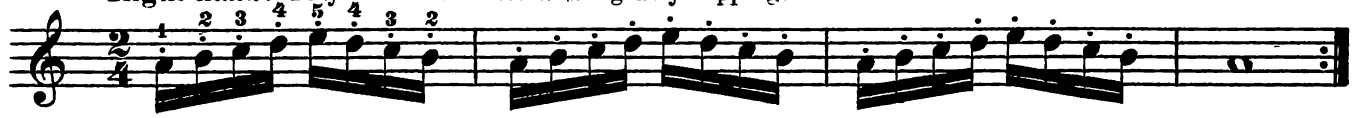
Left hand. Tap the keys rapidly but softly.

16.



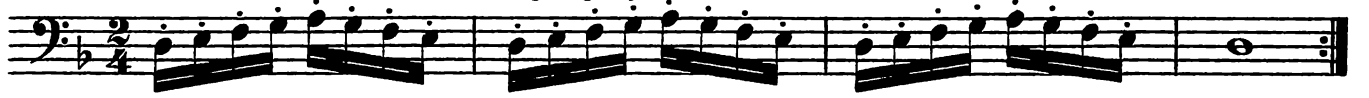
Right hand. Play with the whole hand gently tapping.

17.



Left hand. Let the whole hand tap rapidly.

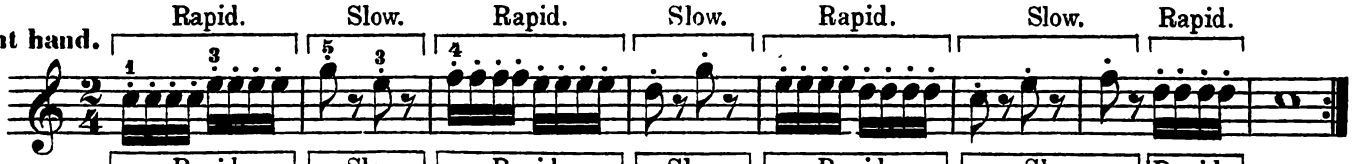
18.



When rapid and slow **staccato** are intermingled, as in Nos. 19 and 20, play each in strict accordance with the foregoing directions. **Preserve regular counting** from beginning to end. The words **Rapid** and **Slow** refer to the two kinds of **staccato** and not to the counting.

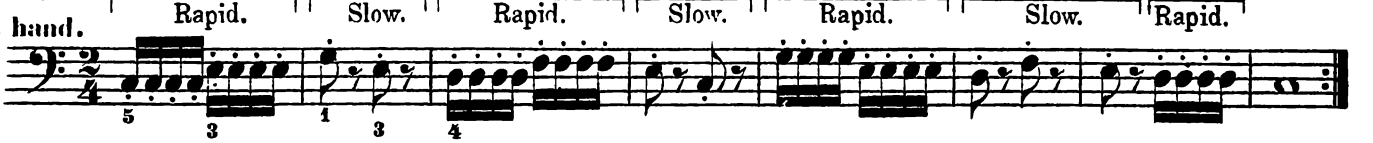
Right hand.

19.



Left hand.

20.

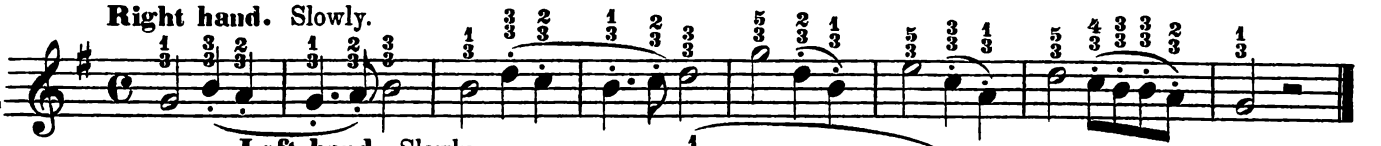


Slurred Staccato, or Portamento.

This rarely occurs except in rather deliberate, singing passages. In the following, play the exercise first as smoothly as possible with one finger; then produce a similar audible effect with the upper fingering. The notes must be neither connected nor **staccato.**

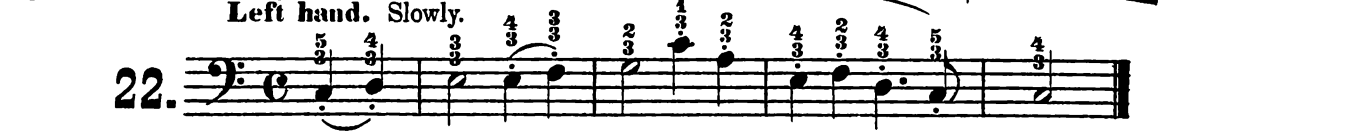
Right hand. Slowly.

21.



Left hand. Slowly.

22.



SLURS.

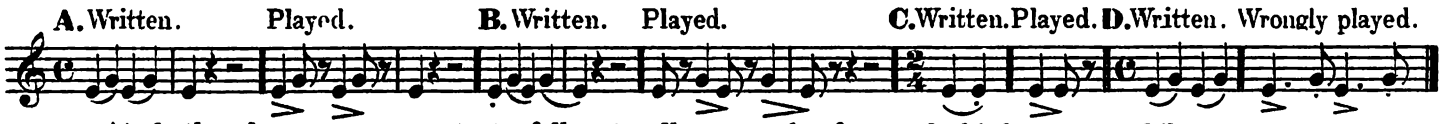
The following rules for slurs are for pianoforte music exclusively, as they would often be unreasonable or impossible if applied in music for other instruments or for voices.

A **long slur** extends over any number of notes or chords more than two and is also called a **legato mark.**

A **short slur** embraces only two consecutive notes or chords. These may be on different degrees of the staff, or they may stand on the same degree, the second note being marked **demi-staccato** to show that it is not tied. A short slur produces four effects: — 1st, it causes some accent on the first note (with exceptions); 2nd, it connects the first note smoothly with the second; 3rd, it makes the second note soft; and 4th, it reduces the length of the second note one half, quite the same as though it were marked **demi-staccato.** In the study of miscellaneous compositions for the Pianoforte, the student needs many additional rules for both long and short slurs, only a few of which here follow as being indispensable to early study.

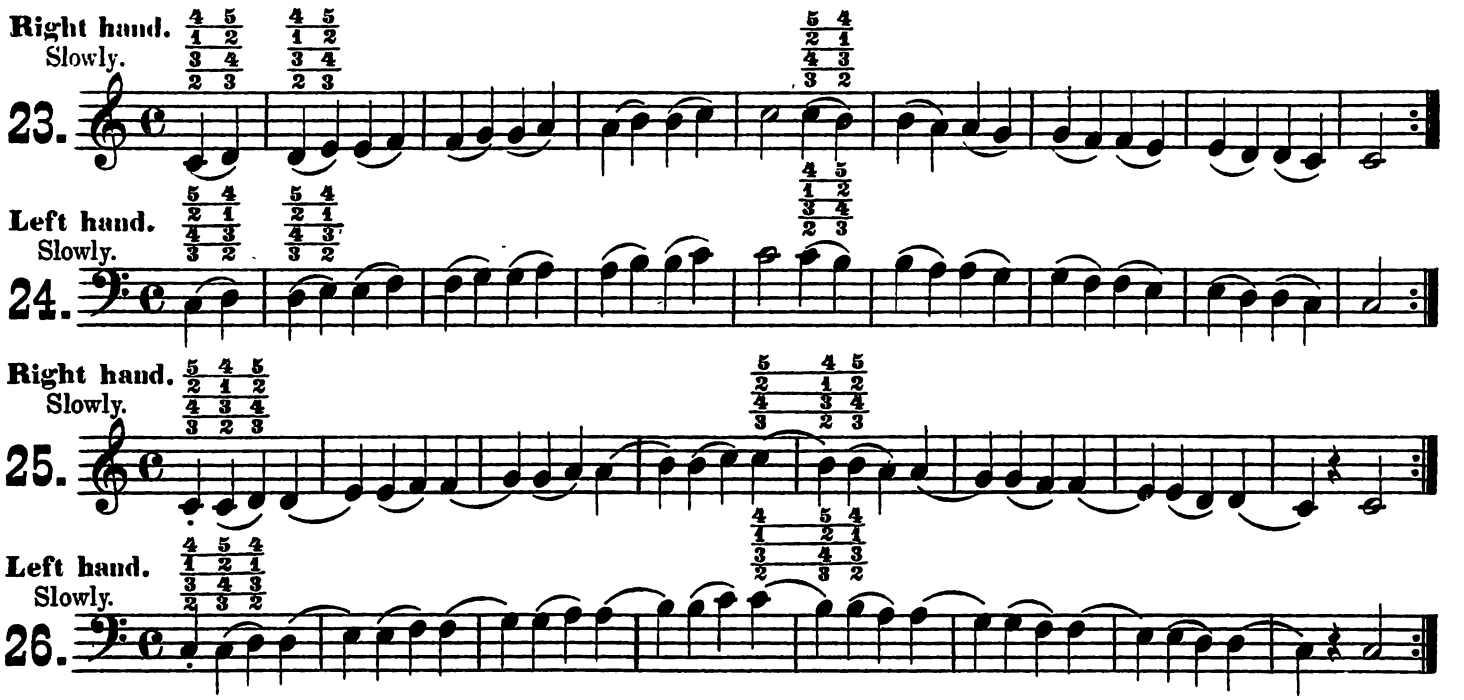
Rules for Short Slurs in Pianoforte Music.

Rule 1. When a slur connects but two notes or chords of equal rhythmic value — two quarters, two eighths, two sixteenths, etc., — the first is accented more or less, according to the force of the passage in which it stands, and the second is soft and but one half its usual length (except when as long as a half note or when tied to a following note). In slow, or **cantabile,** movements the second note must not be made too short.

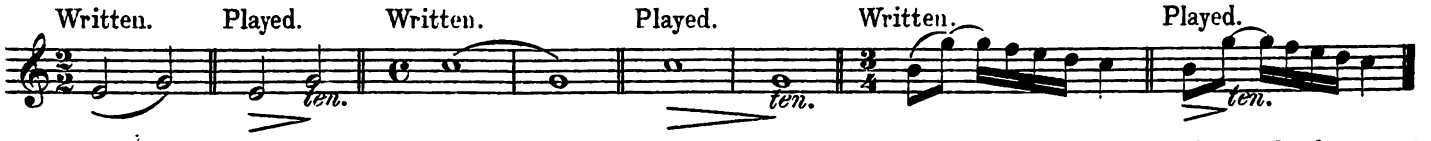


At **A** the slurs cause accents to fall naturally upon the first and third counts, while at **B** they transfer the accents to the second and fourth counts, thereby producing a syncopated effect. Some writers regard the slur at **C** as a tie: but a careful study of its use in standard compositions fully sustains the view that both notes should be played precisely like the example at **A,** or any other two slurred notes. The first slurred note must not be played longer than its printed value, as shown at **D,** above.

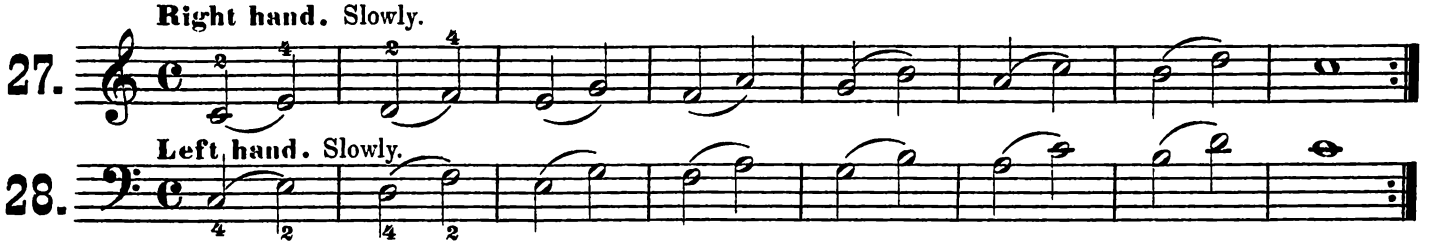
Of the following fingerings, use the lowest first, playing the whole exercise before taking the upper. Accent the first note under each slur and play the second softly and as short as though marked **demi-staccato.**



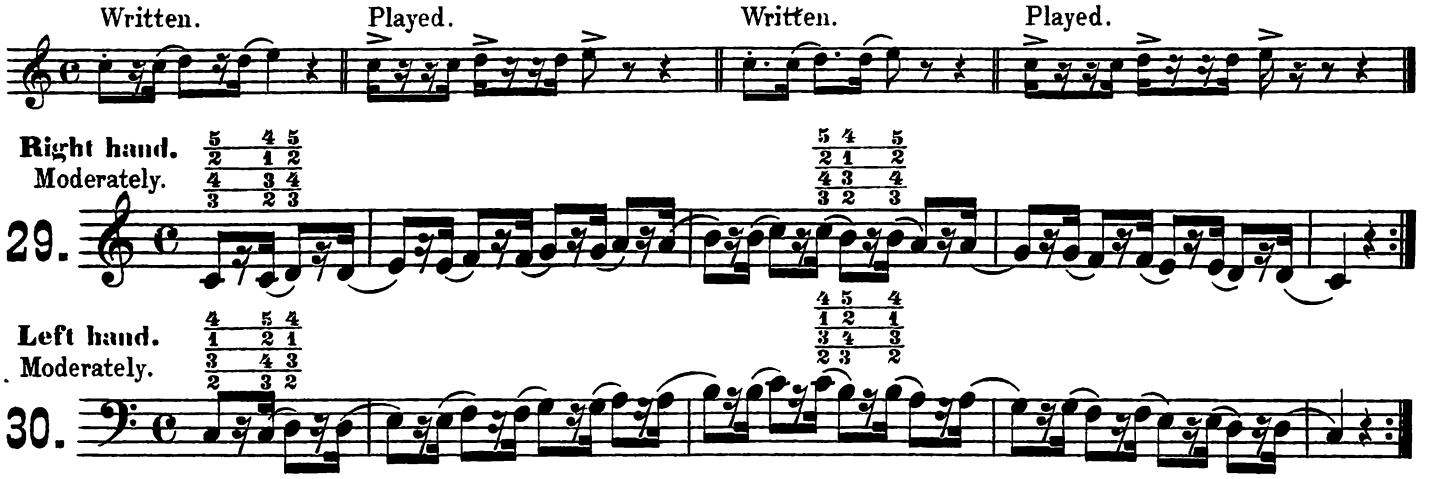
Rule 2. When the second of two slurred notes of equal length is as long as a half note, or longer, it is usually played more softly than the first, but held its full value: likewise when it is tied to a following note.

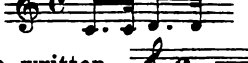
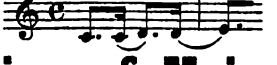


The slurred notes in Nos. 27 and 28 are alternately loud and soft; but the second under each slur must not be shortened. Play slowly.



Rule 3. When two slurred notes are of unequal length, the longer is usually (though not always) the louder, unless the contrary is plainly marked; but the second is generally shortened.



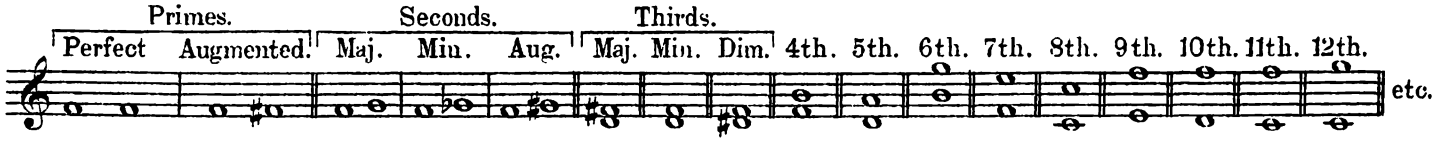
This last application of slurred effects gives great delicacy and sprightliness which would be impossible were the notes written  etc.; but substantially the same effect as in Nos. 29 and 30 would follow, were the passage written  etc.

Explanation of Major and Minor Seconds.

The lines and spaces of the staff are called **degrees**: hence, the staff consists of nine degrees, five lines and four spaces. When two notes stand on the same degree, whether sounding alike or not, they represent what is called a **prime**, as shown in the table below. When standing on contiguous degrees they form **seconds**. When occupying three degrees, from lowest to highest inclusive, they form **thirds**; and so on. The difference in pitch between two notes is called an **interval**; and intervals as large as ninths, with all smaller ones, are used in **Harmony**, as more particularly described in the author's **Elements of Harmony**, pp. 5 and 6. Still larger intervals are recognized in pianoforte exercises for expanding the hand or acquiring skill in playing skips.

The differences in pitch which are often called **tones** and **semitones** are also called respectively **steps** and **half steps**. In ascertaining the name of any interval, counting the **degrees** tells us its general name and counting the **steps** gives its particular name. For example: — as F and G (see table of seconds, below) occupy but two degrees, they are called **seconds**. The same is true of F and G♭, also of F and G♯. Further, as from F to G

is one step, the interval is a **major** second; F to G♭, a half step, forms a **minor** second; and F to G♯, a step and a half, forms an **augmented** second. F to F♯, although as truly but a half step as F to G♭, does not occupy two degrees and is therefore not a minor second (a diatonic semitone) but an augmented prime (a chromatic semitone). From this it is plain that both a certain number of degrees and a proper number of steps are necessary to the correct formation of each interval.



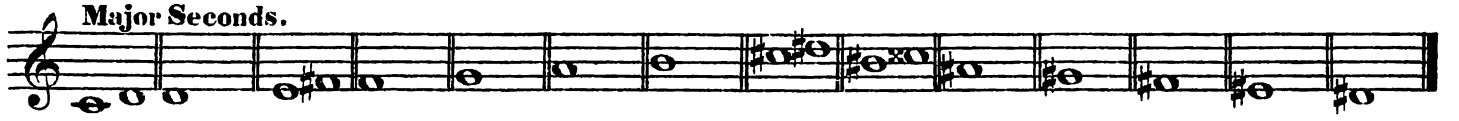
Various sub-divisions of other intervals will be explained in the proper place.

In order clearly to understand the formation of scales, the student should now fill out with a lead-pencil the following forms.

A major second occupies two degrees and contains one step.

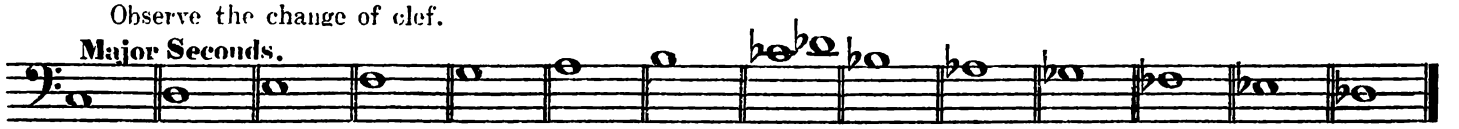
Write a major second above each of the following notes by writing on the next higher degree and inserting an accidental before the upper note wherever one may be needed in order to separate the two notes the proper number of steps. It is but a half step from B to C; also from E to F.

Major Seconds.



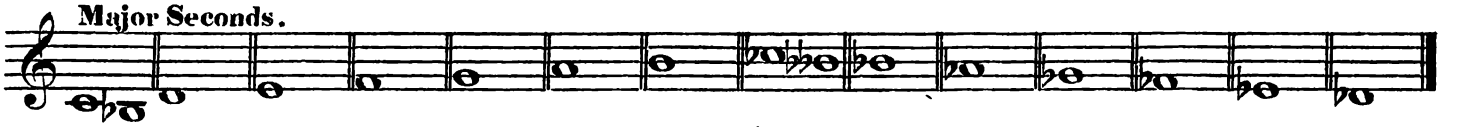
Observe the change of clef.

Major Seconds.

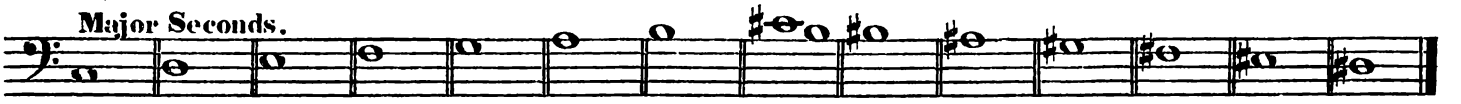


Write major seconds **below** the following notes.

Major Seconds.



Major Seconds.

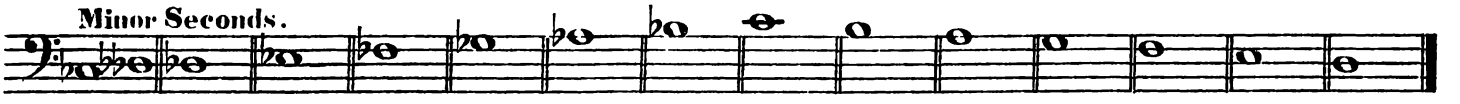


A minor second occupies two degrees and contains one half step.

Write a minor second above each of the following notes.

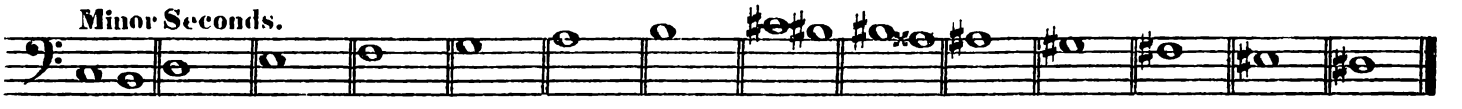
Minor Seconds.

Minor Seconds.



Write minor seconds **below** the following notes.

Minor Seconds.



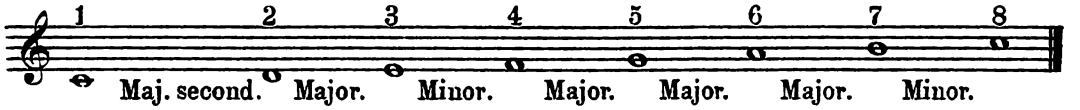
Minor Seconds.

SCALES.

Pure scale passages are such as progress diatonically; that is, with neither skips nor repeating notes. An entire scale is usually understood to extend at least one octave above or below the starting-point. Although a scale-passage may properly begin on any note belonging to that scale, only one tone, or some octave of that tone, will sound like the natural end or close of the whole. This closing note is called the **Keynote**, and the scale is said to be in the key of that note. For example: — when there are no sharps or flats, the scale will naturally end on C and is then said to be in the key of C. If one sharp, F♯, be used, the scale of G will be produced; if one flat, B♭, be written, the result will be the scale of F. The keynote is also called the **Tonic.**

Scales appear in three general divisions: — **major**, **minor** and **chromatic**; but keys are only major or minor, the most recognizable difference being that the major is more cheerful than the minor, if other things are the same. But one piece played brilliantly in a minor key may be more cheerful than another performed more tenderly in a major key. The same piece played or sung in the same style in major and minor would show the plaintive effect of the minor. Major and minor scales, also, present this contrast, owing to a difference in their formation.

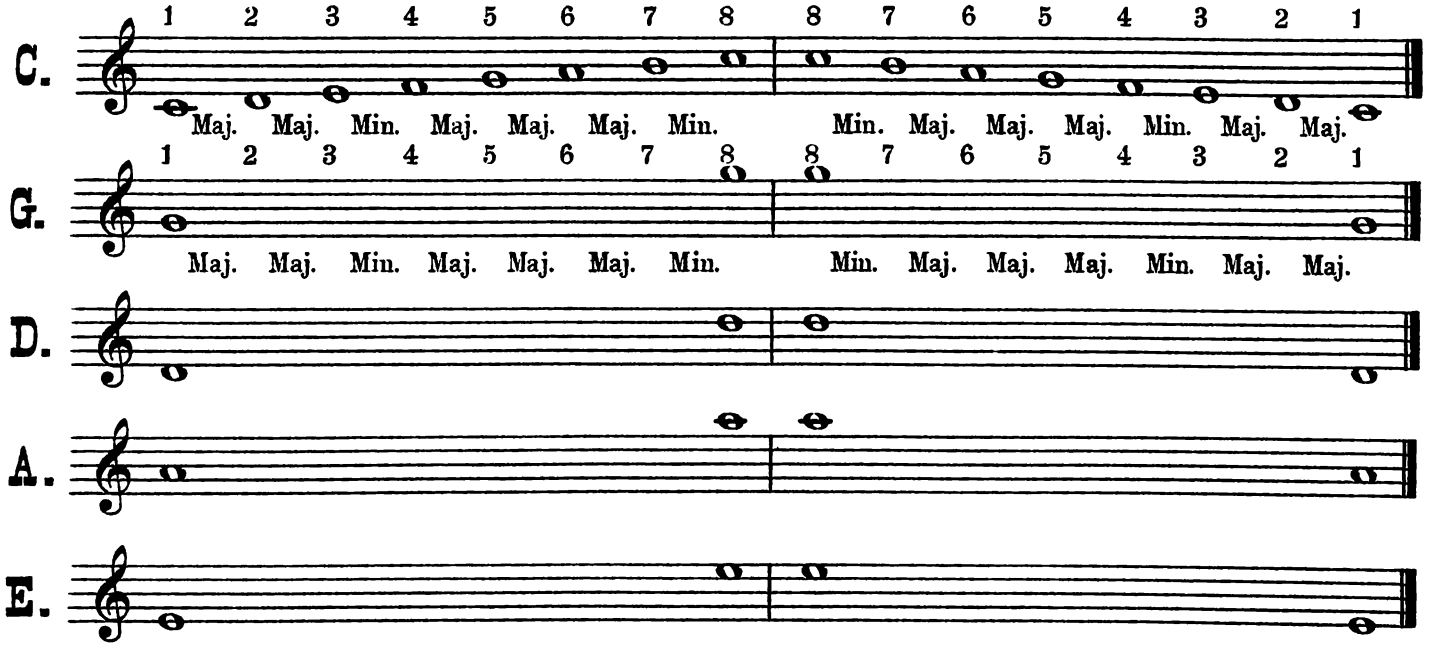
The major scale consists of a series of notes progressing diatonically at intervals of major and minor seconds; the latter coming only from the third to the fourth degrees and from the seventh to the eighth, counting from the keynote upward, as shown by the following major scale of C — usually called the scale of C major: —

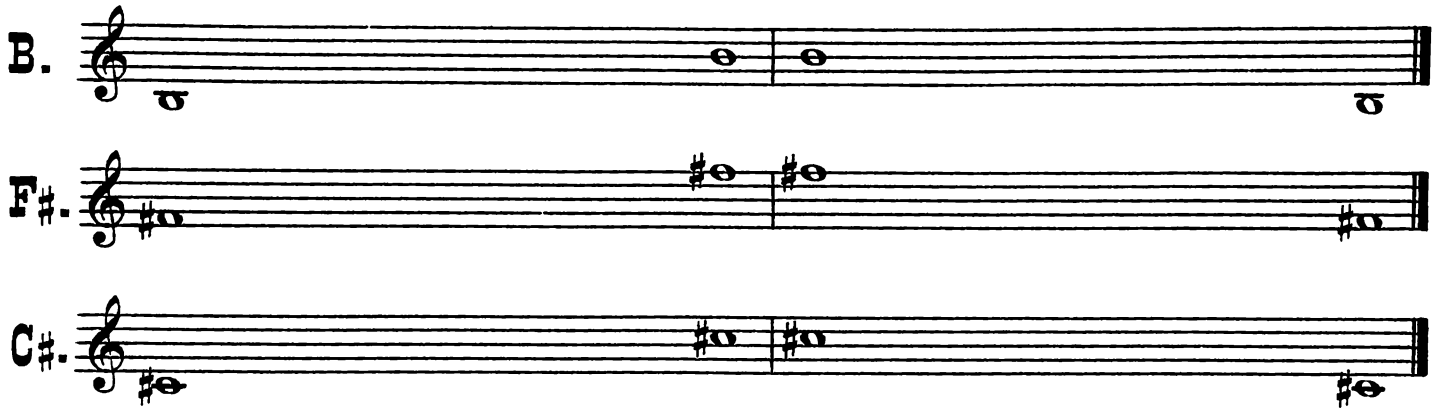


The above notes in a reversed order give the descending scale of C major.

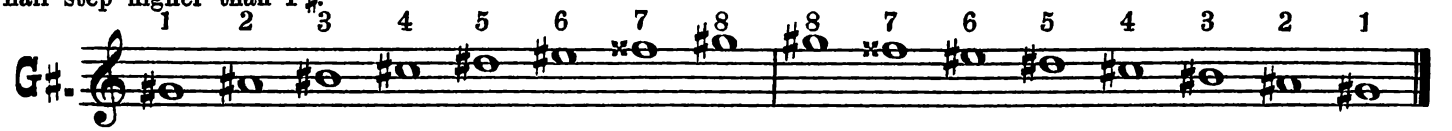
If any other note than C be taken as the first of a scale, some of the notes must be affected by sharps or flats in order to preserve the above succession of intervals. Keys having many notes alike are said to be mutually **related**; those having but one or two notes in common are said to be mutually **remote.** In writing new scales we take either the fifth or the fourth of each for the first of the next, as this requires but one note to be changed for each new scale, thus producing a succession of closely related scales.

The student should now write a major scale, ascending and descending, from each of the following notes, using accidental sharps or flats wherever they may be needed to preserve the same order of intervals as found in the scale of C major. Each scale is a fifth above (or a fourth below) the one before it.

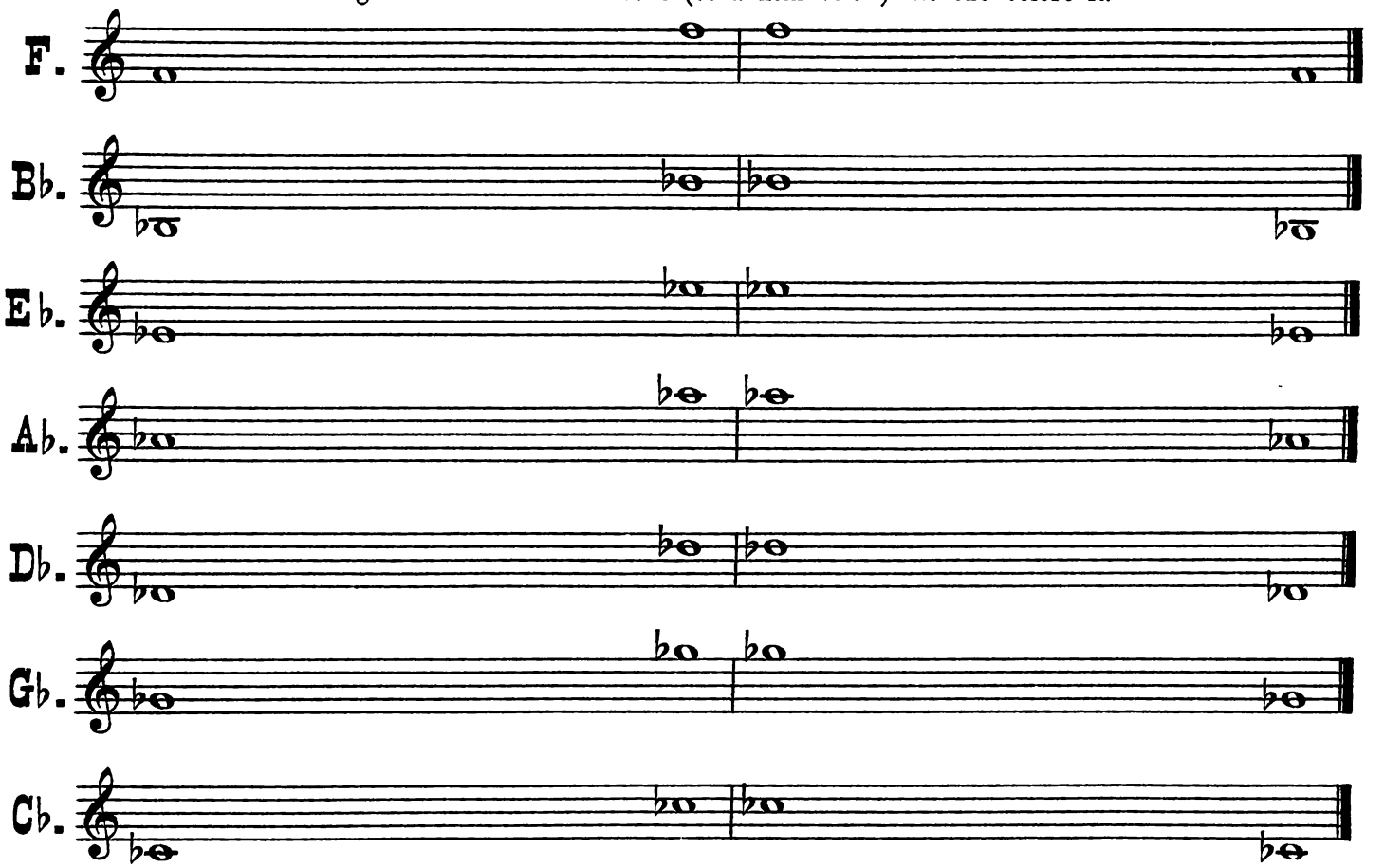




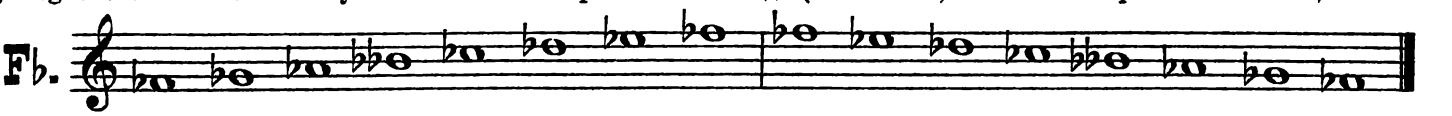
The following scale of G♯ major is rarely seen, the same audible effect being produced by a simpler notation, giving the scale of A♭ major. Compare the two scales when they are played. F𝄪 (double sharp) is a half step higher than F♯.



Each of the following scales is a fourth above (or a fifth below) the one before it.



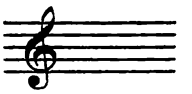
The following scale of F♭ major, which would come next, is seldom written, the simpler scale of E major giving the same effect. Play the two and compare them. B𝄫 (double flat) is a half step lower than B♭.

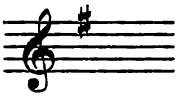


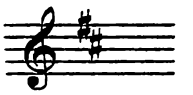
See the author's **Elements of Harmony**, pages 8—11.

Signatures of Major Keys.

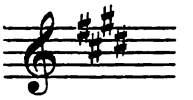
When certain notes (letters) are to be sharp or flat throughout the whole piece (with perhaps some exceptions) they are not written as accidentals, but the sharps or flats are placed on the proper degrees at the beginning of each staff and are called the **Signature.**

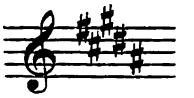
The key of C major has a blank signature . . . . . 

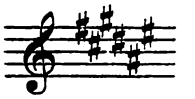
The key of G major has the signature of one sharp. . 

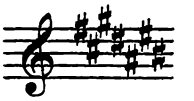
The » » D » » » » » two sharps. . 

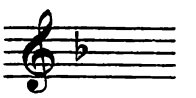
The » » A » » » » » three » . 

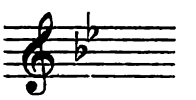
The » » E » » » » » four » . 

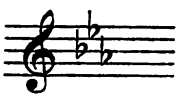
The » » B » » » » » five » . 

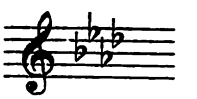
The » » F♯ » » » » » six » . 

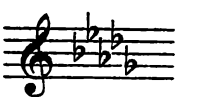
The » » C♯ » » » » » seven » . 

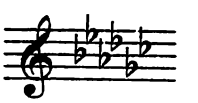
The » » F » » » » » one flat . 

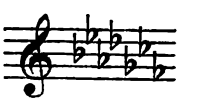
The » » B♭ » » » » » two flats . 

The » » E♭ » » » » » three » . 

The » » A♭ » » » » » four » . 

The » » D♭ » » » » » five » . 

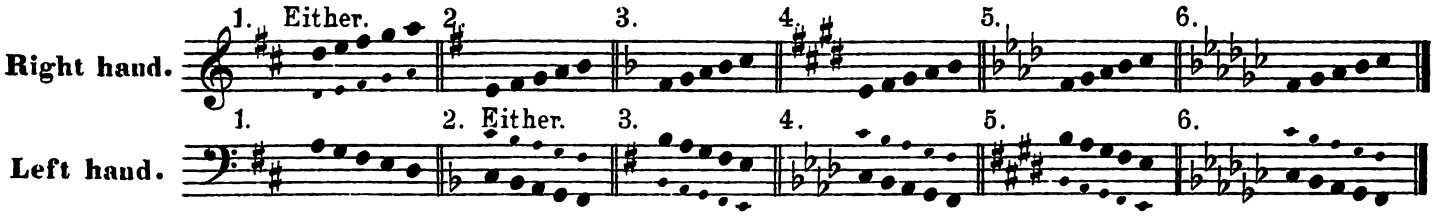
The » » G♭ » » » » » six » . 

The » » C♭ » » » » » seven » . 

Major Keys.	Number of Sharps or Flats.	Order in which they stand on the staff.
C	None	———
G	One sharp	F♯
D	Two sharps	F♯ C♯ (not C♯ F♯)
A	Three »	F♯ C♯ G♯
E	Four »	F♯ C♯ G♯ D♯
B	Five »	F♯ C♯ G♯ D♯ A♯
F♯	Six »	F♯ C♯ G♯ D♯ A♯ E♯
C♯	Seven »	F♯ C♯ G♯ D♯ A♯ E♯ B♯
F	One flat	B♭
B♭	Two flats	B♭ E♭ (not E♭ B♭)
E♭	Three »	B♭ E♭ A♭
A♭	Four »	B♭ E♭ A♭ D♭
D♭	Five »	B♭ E♭ A♭ D♭ G♭
G♭	Six »	B♭ E♭ A♭ D♭ G♭ C♭
C♭	Seven »	B♭ E♭ A♭ D♭ G♭ C♭ F♭

After the foregoing shall have been committed to memory the student should answer questions similar to these: — What is the signature of D major? **Answer.** Two sharps, F and C. Of F major? Of F♯ major? Of G♭ major? Of G major? Of A♭ major? Of A major? etc. The sharps or flats must invariably be named **in their proper order** as given in the table — not Two flats, E and B, but B and E.

Before entering upon scale-practice, the fingers should be trained to good positions on black keys — the same as on white keys — by playing exercises Nos. 1 to 12, inclusive, transposed to the five notes shown in the following keys.



Transpositions into keys which will bring the thumbs and fifth fingers upon black keys are not needed until later.

PRACTICE OF MAJOR SCALES.

The daily-study of scales is urged, not merely that one may learn to play scales well, but because scale practice tends to perfectly equalize the strength of all the fingers and to improve the touch, even for music containing no scale passages. As soon as the notes and fingering are thoroughly learned, this practice is specially serviceable in enabling the student to play rapidly without thinking of notes or fingers, as is fully illustrated in the author's **Special Studies in Presto Scales**, Op. 20. But the preliminary exercises and also the scales themselves must be taken slowly at first, in accordance with the following.

Rules for Scale Practice.

1. Hold the arms slightly away from the sides, in order to connect the notes without turning the hands whenever the thumbs and fingers cross each other.

2. Play with the fingers only, keeping the wrists flexible but quiet — never rigid.

3. Do not hold two fingers down at once: watch the fourth and fifth, particularly.

4. Connect the notes smoothly (especially those marked thus ⌣ or thus ⌢) so that the crossing of thumb and fingers shall produce no different audible effect.

Preparatory Scale Exercises.

Right hand. Fingers crossing the thumb. – Slowly.

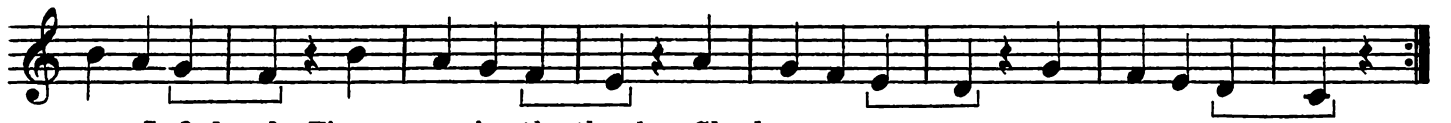
31.

Slowly.

32.

Slowly.

33.



Left hand. Fingers crossing the thumb. – Slowly.

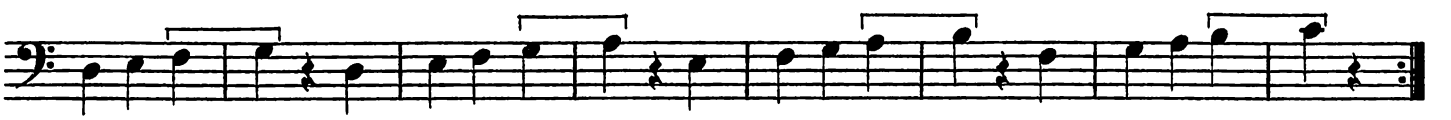
34.

Slowly.

35.

Slowly.

36.



Right hand. Thumb crossing the fingers. – Slowly.

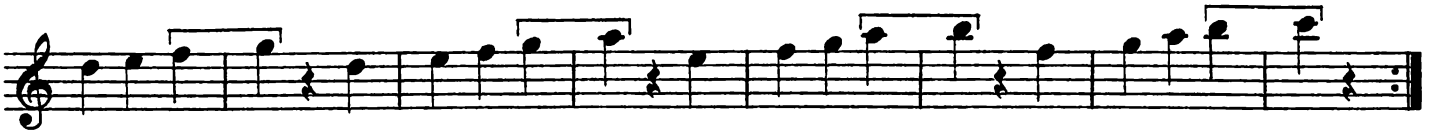
37.

Slowly.

38.

Slowly.

39.



Left hand. Thumb crossing the fingers. – Slowly.

40.

Slowly.

41.

Slowly.

42.

Right hand. Both forms of crossing. Slowly.

43.

Left hand. Both forms of crossing. Slowly.

44.

When the student shall have learned **perfectly** the six following ways of playing the scale of C major, the other major scales must be practised in the same way – each being thoroughly mastered before the next is attempted.

Right hand. Two octaves, clearly but with no accent. Fourth finger on B. – Slowly. ♩=112.

45.

Left hand. Two octaves, clearly but with no accent. Fourth finger on D. – Slowly. ♩=112.

46.

In the following scales, the accented notes must be noticeably loud and all the others **very soft.** Keep the proper fingering.

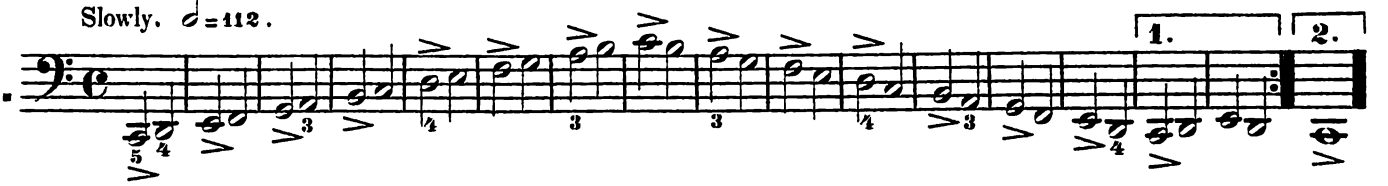
Right hand. Accent the first of every two notes, two octaves. The accented notes must not be any longer than the others. – Slowly. ♩=112.

47.

Left hand. Accent the first of every two notes, two octaves. All the notes must be of equal length.

Slowly. 𝅗𝅥 = 112.

48.

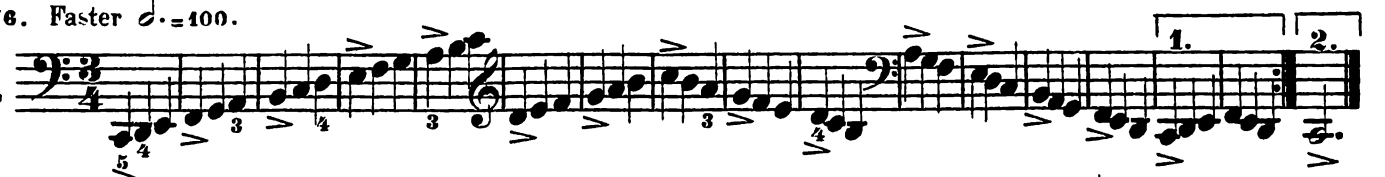


Right hand. Accent the first of every three notes, three octaves. Afterward no accent, faster. – Not too fast 𝅗𝅥. = 76. Faster 𝅗𝅥. = 100.

49.

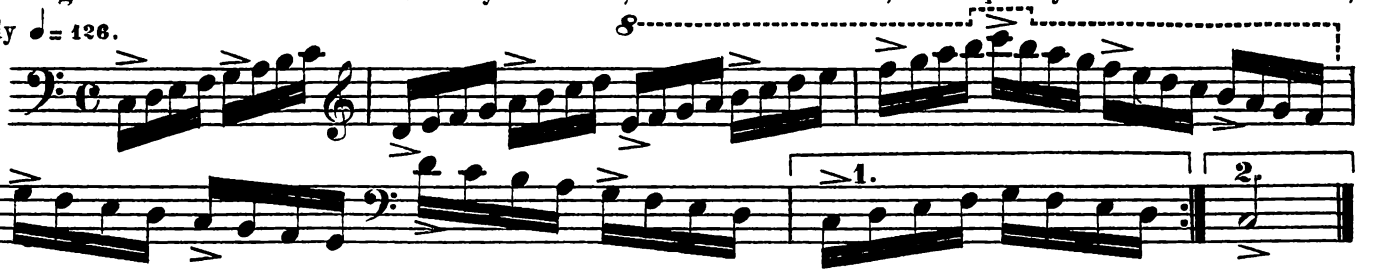
Left hand. Accent the first of every three notes, three octaves. Afterward no accent, faster. – Not too fast 𝅗𝅥. = 76. Faster 𝅗𝅥. = 100.

50.



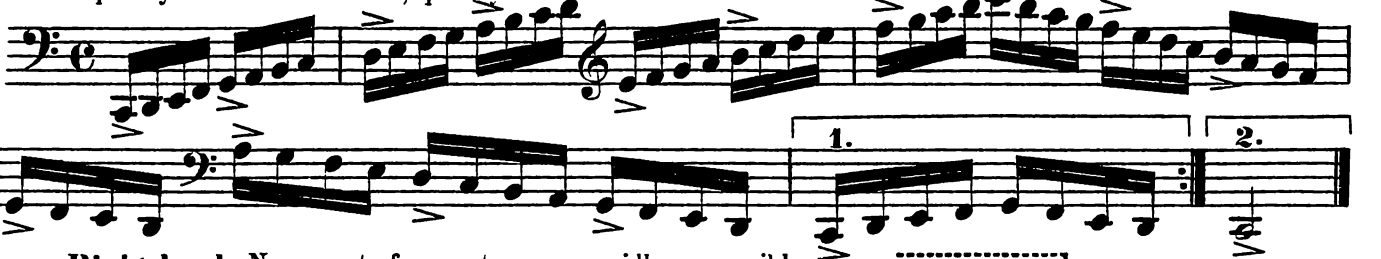
Right hand. Accent the first of every four notes, four octaves. – First, rather quickly ♩ = 100. Afterward, quickly ♩ = 126.

51.



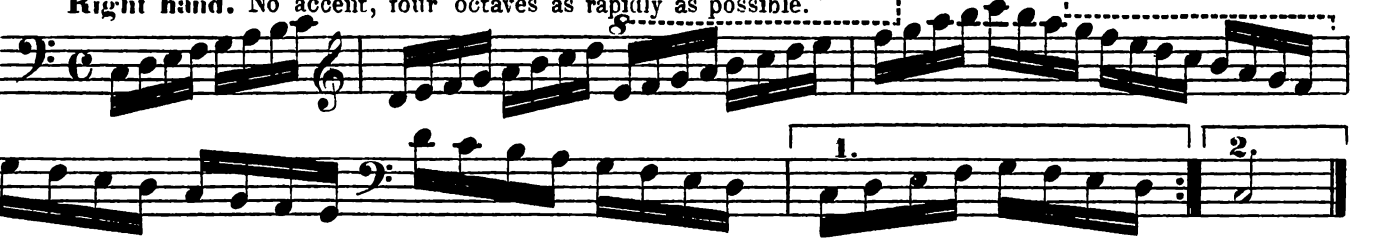
Left hand. Accent the first of every four notes, four octaves. This may be played one octave lower if desired. First, rather quickly ♩ = 100. Afterward, quickly ♩ = 126.

52.



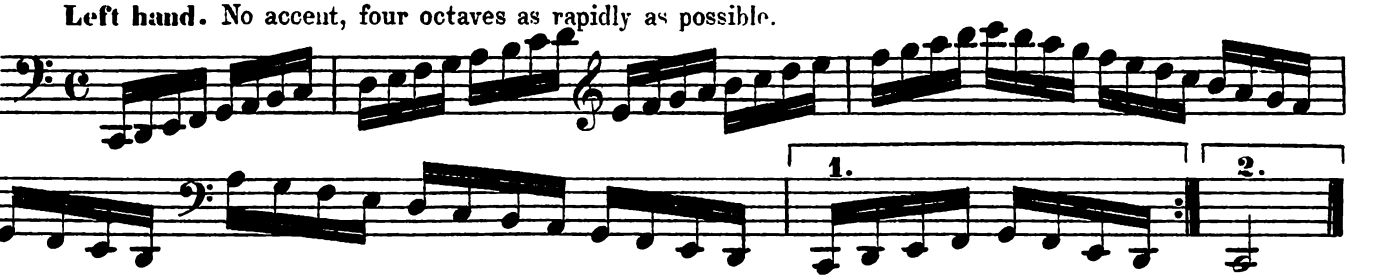
Right hand. No accent, four octaves as rapidly as possible.

53.



Left hand. No accent, four octaves as rapidly as possible.

54.



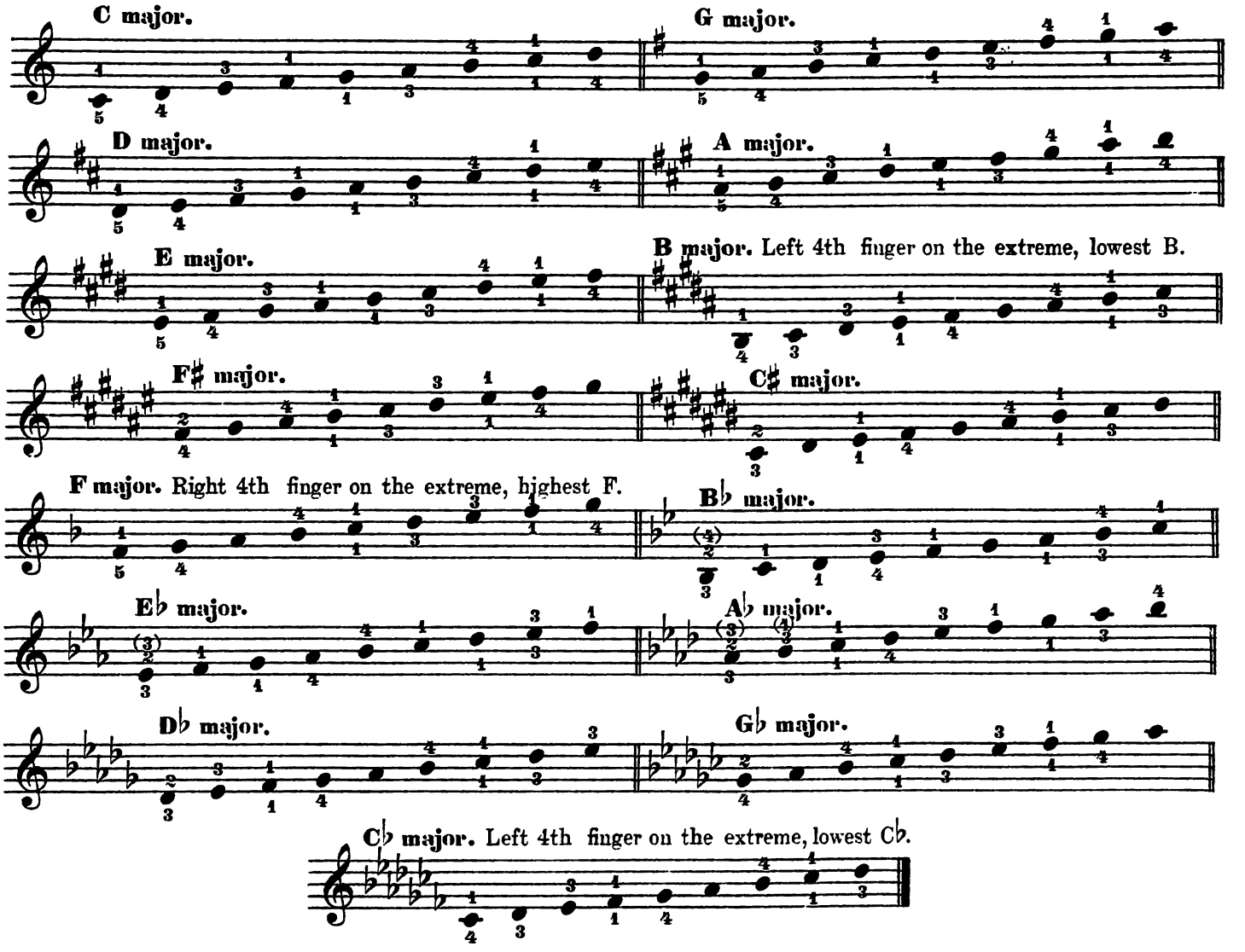
Summary of Scale Practice.

A. Each Hand Alone.

1. No accent, slowly and clearly, two octaves; to learn the notes and fingering.
2. Accent the first of every two notes, two octaves. Slowly.
3. Accent the first of every three notes, three octaves. Not too quickly.
4. No accent, three octaves. Quite fast.
5. Accent the first of every four notes, four octaves. Rather quickly. Afterward, quickly.
6. No accent, four octaves as rapidly as possible.

For still further development of scale-practice, see tables **B, C, D, E, F** etc., just after No. 186 in Part Two.

The following shows the proper fingering of the **major scales**, each of which should now be practised in the six ways given in C major. The left hand fingering is below the notes, the right hand being above.



Whatever may be the fingering of the middle parts of scales, when the lowest note falls on a black key, the right hand should play that note with the second finger; and if the highest note comes on a black key, the left hand should there use the second finger. This is shown by the right hand fingering in the flat keys above and is better than the regular fingering given in parenthesis. The fifth finger seldom appears in scales, save as the lowest in the left hand and the highest in the right, in several keys.

The following table, showing the only notes played by the fourth fingers and played by no others, (except when they are the lowest or highest notes as explained above) should be committed to memory.

Left fourth finger on	Major Scales	Right fourth finger on
D	C	B
A	G	F♯
E	D	C♯
B	A	G♯
F♯	E	D♯
Lowest B and F♯	B	A♯
F♯	F♯	A♯
F♯	C♯	A♯
G	F	B♭ and highest F
E♭	B♭	B♭
A♭	E♭	B♭
D♭	A♭	B♭
G♭	D♭	B♭
G♭	G♭	B♭
Lowest C♭ and G♭	C♭	B♭

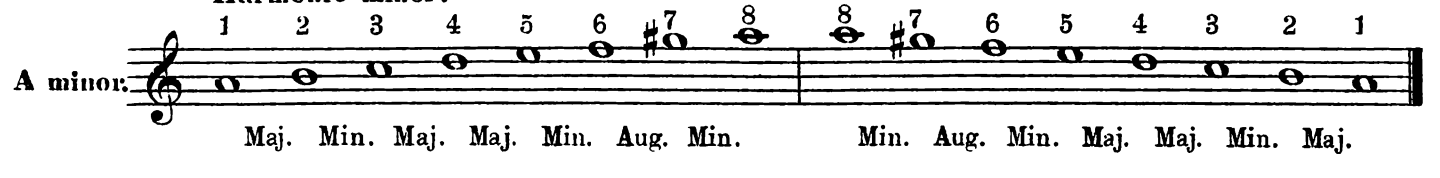
MINOR SCALES.

The minor scale most closely related to any major is called its **relative minor**; and the major is called the **relative major** (of its minor). The minor scale has its tonic, or keynote, on the third note of the **descending** major scale — in other words, the relative minor begins one step and a half (a minor third) below its relative major. **A major key and its relative minor have the same signature.** Three varieties of the minor scale are used: — the **harmonic**, the **melodic** and the **mixed**; and all of these are found in compositions by the best writers.

The Harmonic Minor Scales.

The **harmonic minor scale** has only its seventh degree chromatically raised, both in ascending and (with but few exceptions) in descending, as here shown: —

Harmonic minor.

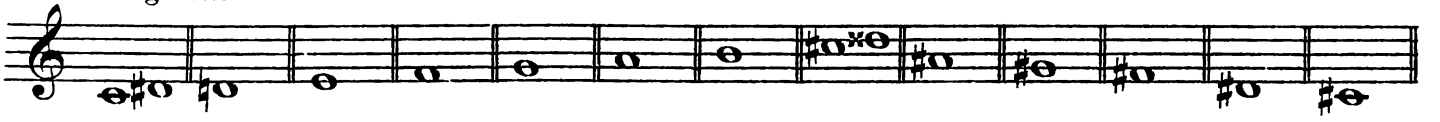


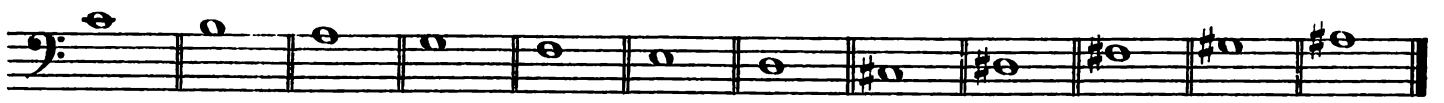
Here the major seconds come from the first to the second degrees, from the third to the fourth and from the fourth to the fifth; minor seconds come from the second to the third, from the fifth to the sixth and from the seventh to the eighth; and an **augmented** second (three half steps), from the sixth to the seventh.

An augmented second occupies two degrees and contains one step and a half.

Write an augmented second above each of the following notes.

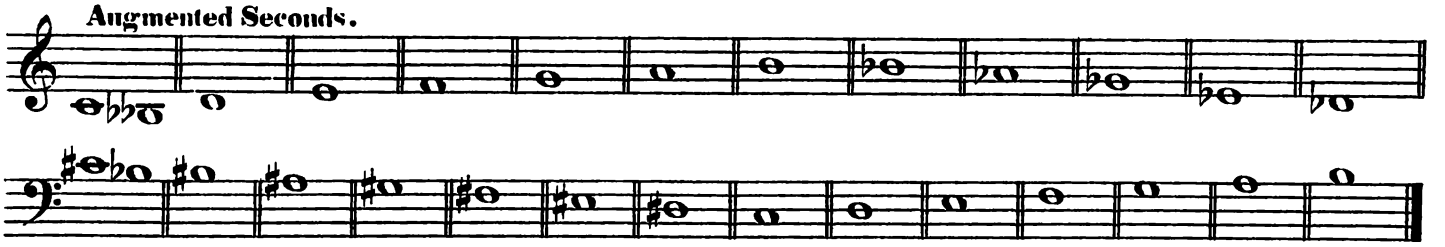
Augmented Seconds.



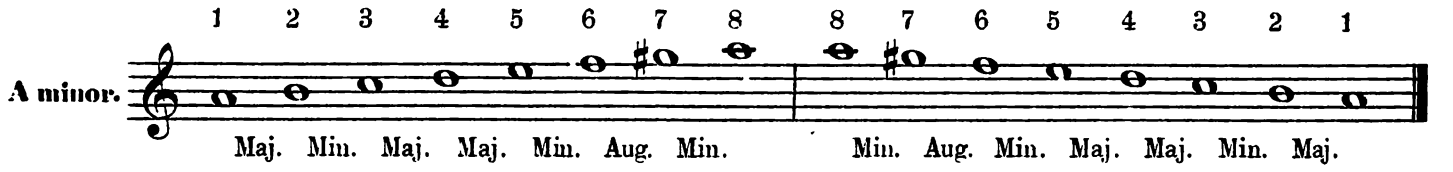


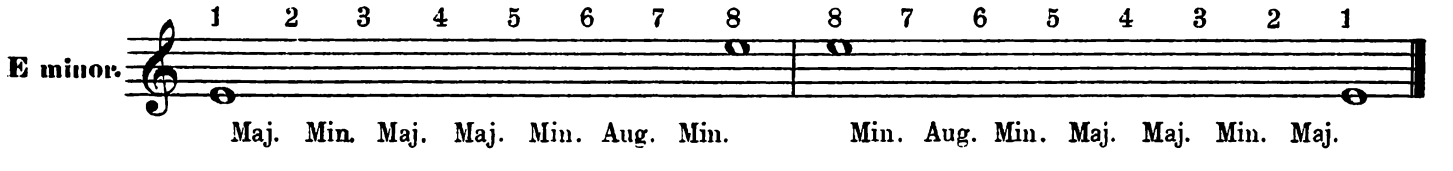
Write augmented seconds **below** the following notes.

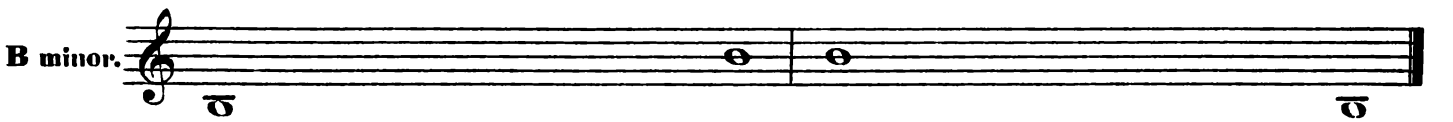
Augmented Seconds.

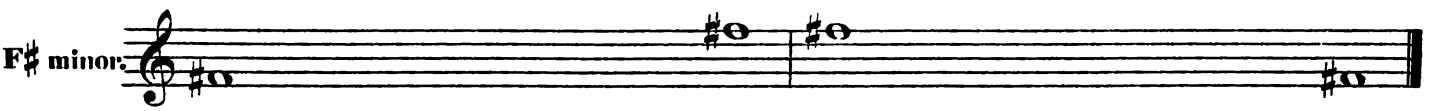


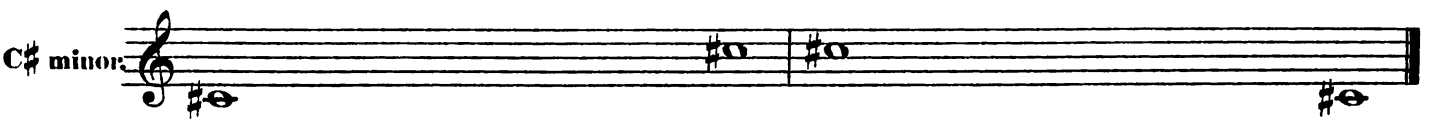
Write, now, an harmonic minor scale, ascending and descending, from each of the following notes, inserting sharps, flats and double sharps wherever needed.



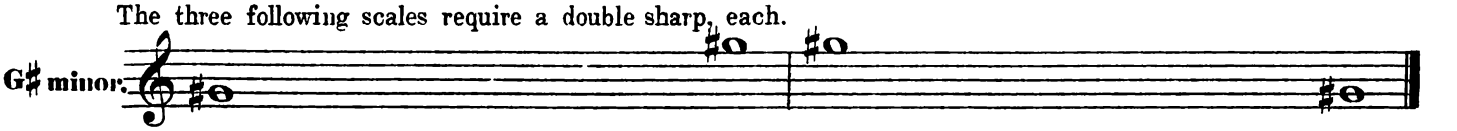


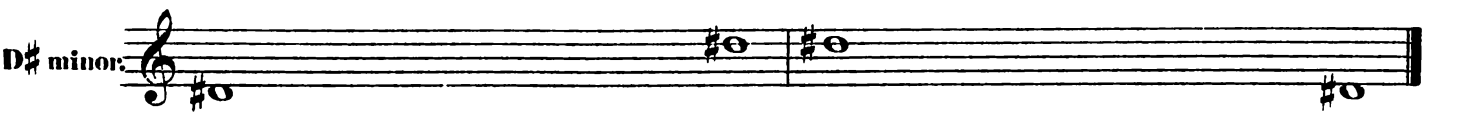


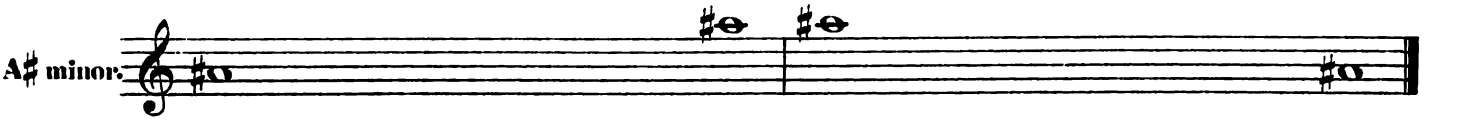


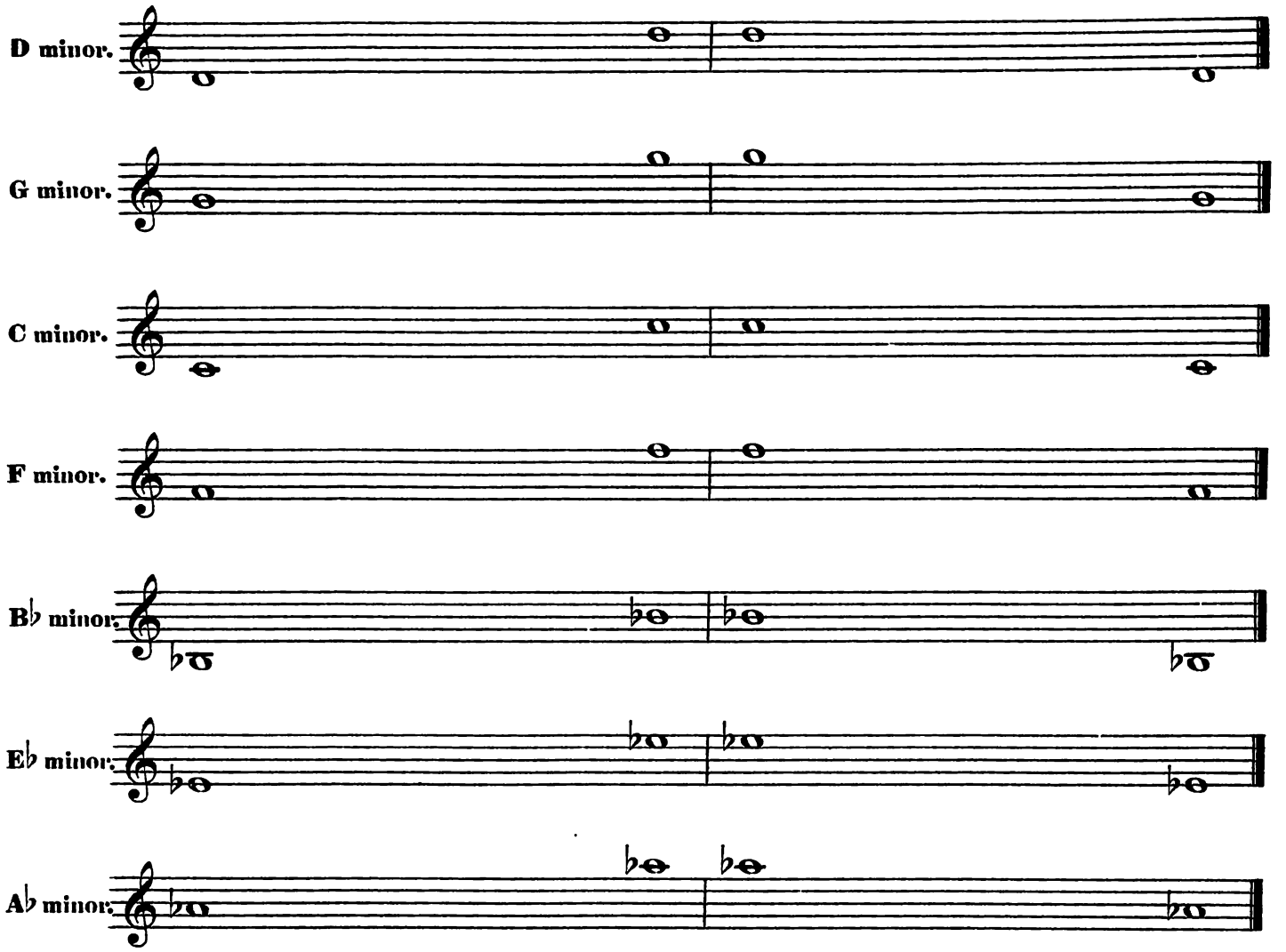


The three following scales require a double sharp, each.

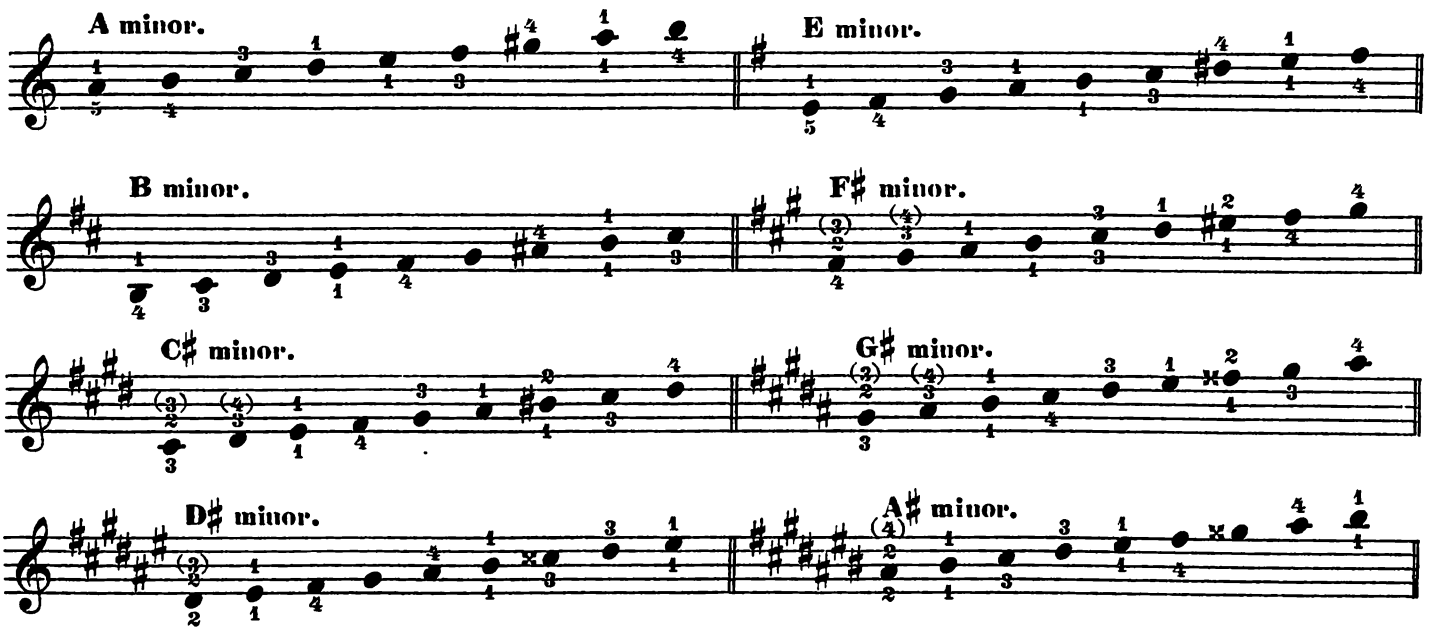


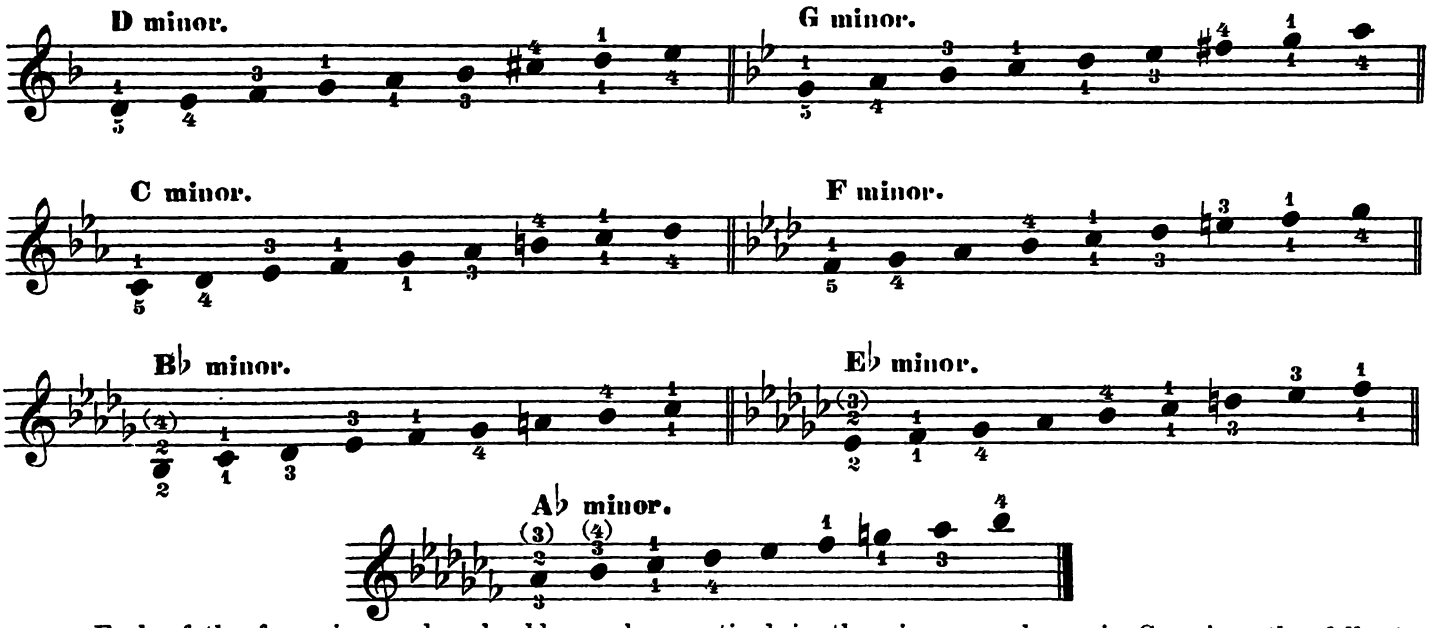






The following shows the proper fingering of the **harmonic minor scales,** the interval of the augmented second requiring special care. The fingering for the left hand is below the notes: for the right hand, above.



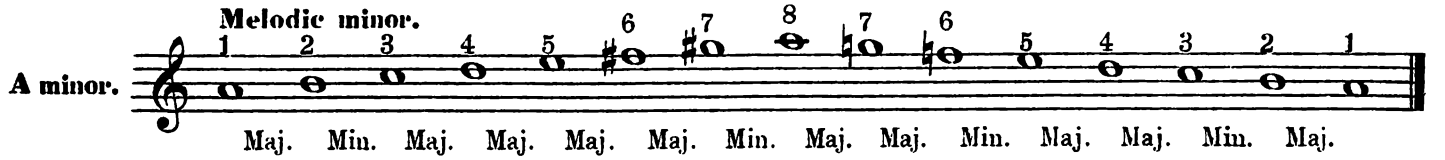


Each of the foregoing scales should now be practised in the six ways shown in C major, the following table being committed to memory.

Left fourth finger on	Harmonic Minor Scales.	Right fourth finger on
B	A	G♯
F♯	E	D♯
Lowest B and F♯	B	A♯
F♯	F♯	G♯
F♯	C♯	D♯
C♯	G♯	A♯
F♯	D♯	A♯
F♯	A♯	A♯
E	D	C♯
A	G	F♯
D	C	B♮
G	F	B♭ and highest F
G♭	B♭	B♭
G♭	E♭	B♭
D♭	A♭	B♭

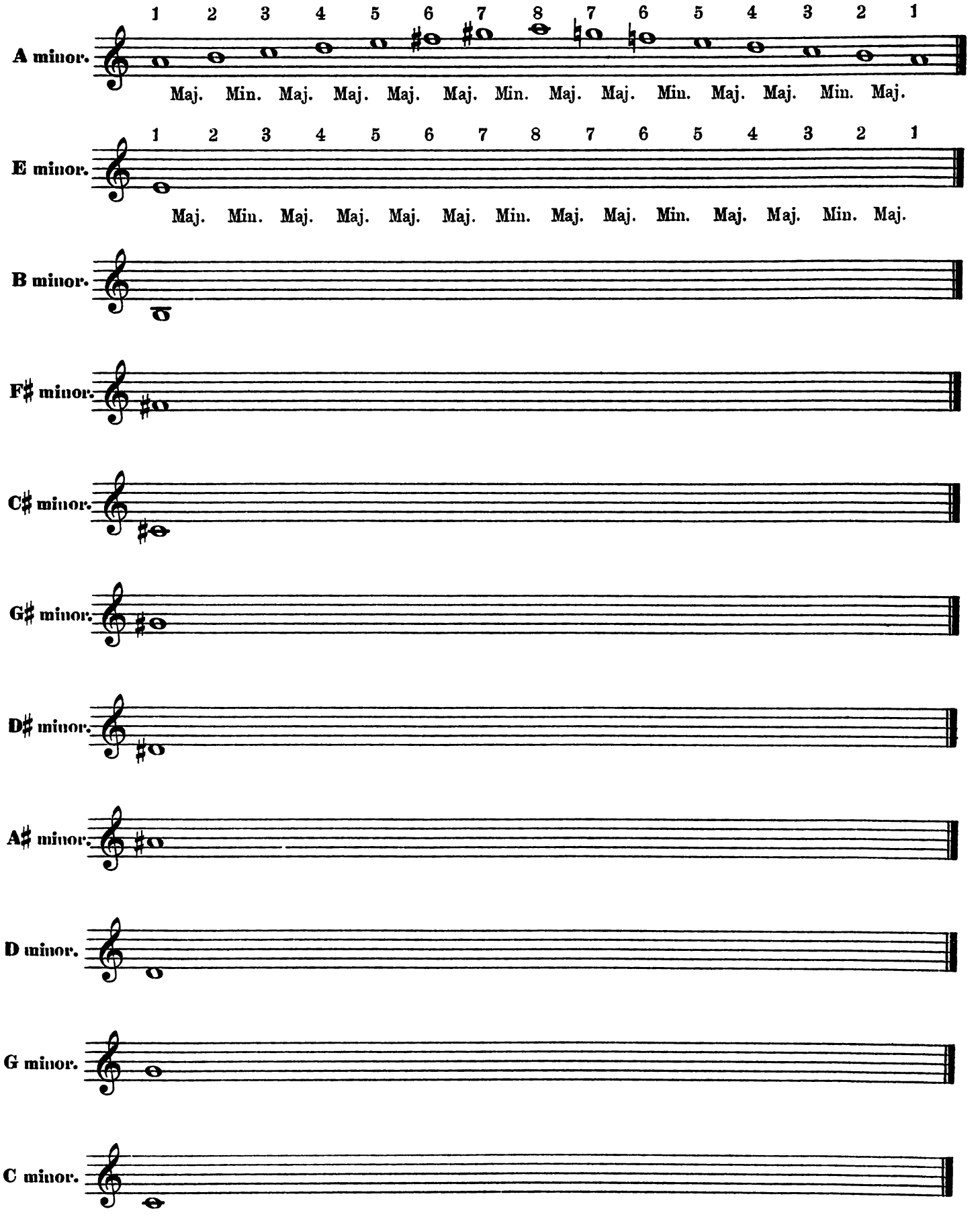
The Melodic Minor Scales.

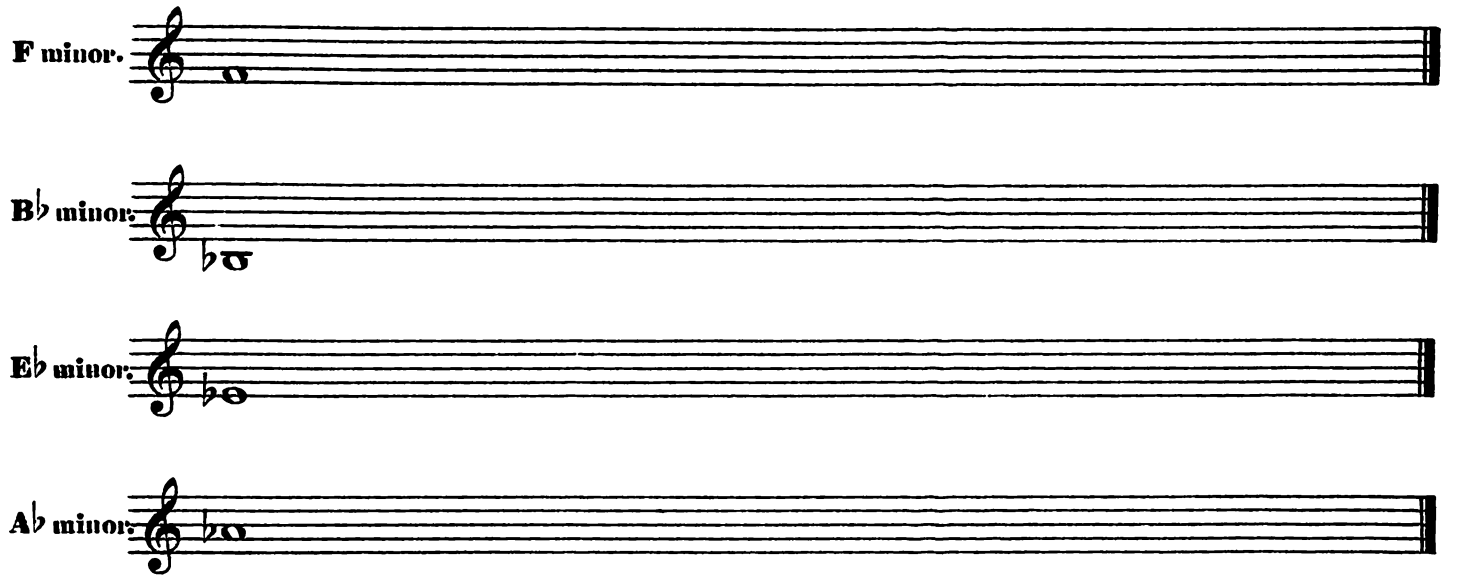
The **melodic minor scale** has its sixth and seventh degrees chromatically raised in ascending; and these are restored, to correspond with the signature, in descending, thus: —



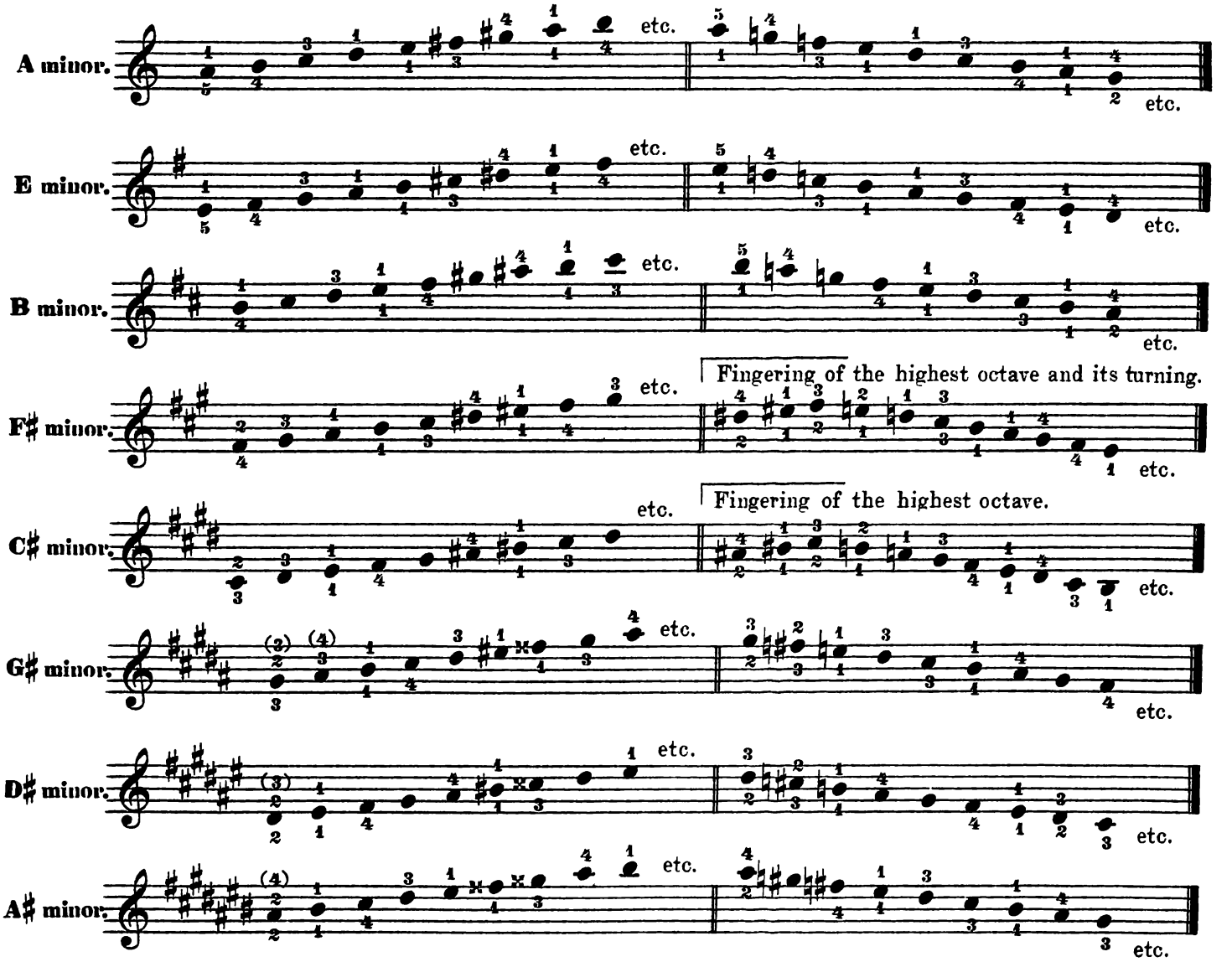
Here the minor seconds come, in ascending, only from the second degree to the third and from the seventh to the eighth; and, in descending, from the sixth to the seventh and from the third to the second — all the others being major seconds.

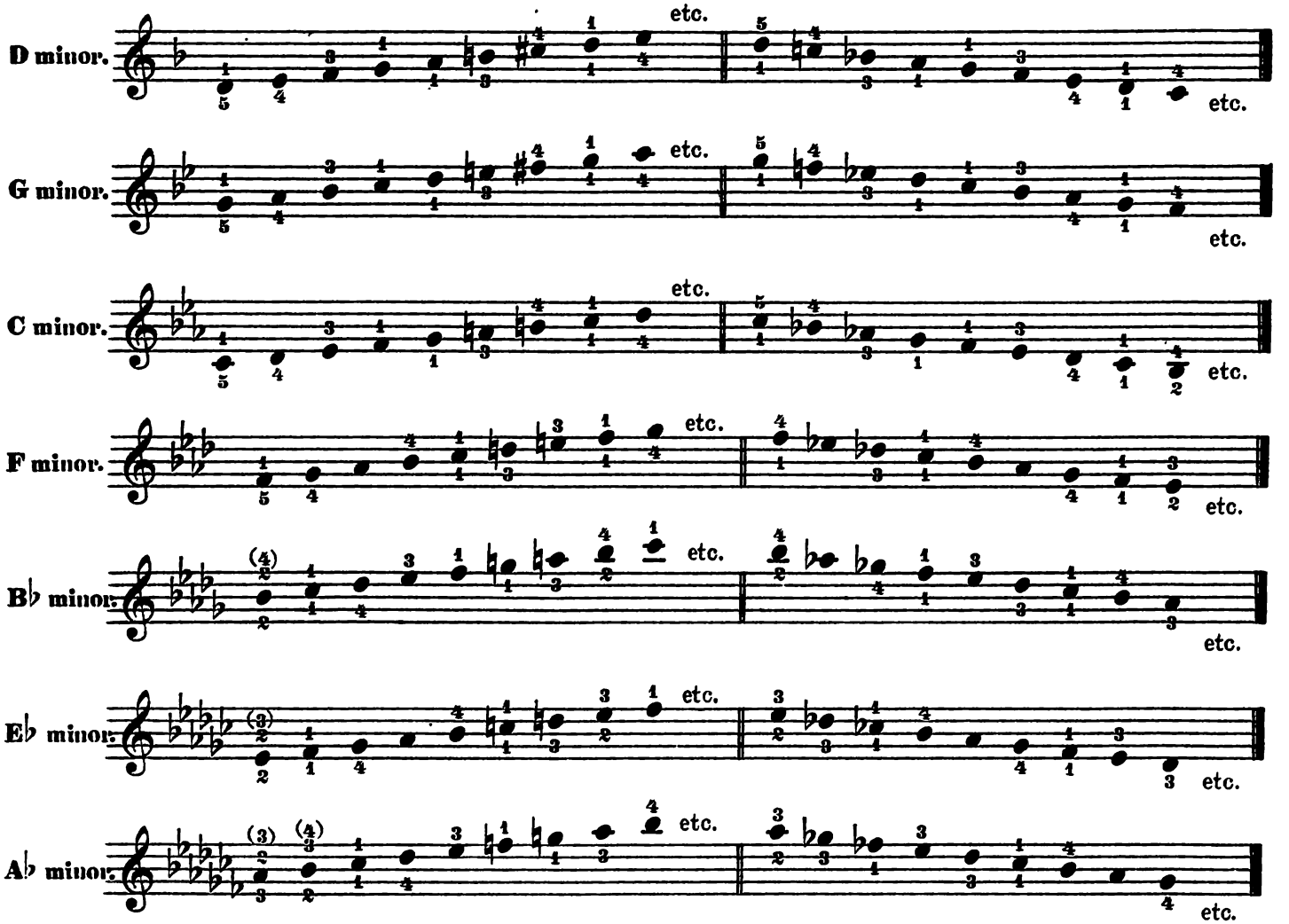
Write, now, a melodic minor scale, ascending and descending, from each of the following notes.


A minor.
1 2 3 4 5 6 7 8 7 6 5 4 3 2 1
Maj. Min. Maj. Maj. Maj. Maj. Min. Maj. Maj. Min. Maj. Maj. Min. Maj.
E minor.
1 2 3 4 5 6 7 8 7 6 5 4 3 2 1
Maj. Min. Maj. Maj. Maj. Maj. Min. Maj. Maj. Min. Maj. Maj. Min. Maj.
B minor.
F♯ minor.
C♯ minor.
G♯ minor.
D♯ minor.
A♯ minor.
D minor.
G minor.
C minor.



The fingering of the **melodic minor scales** here follows. Observe the difference between ascending and descending fingering in many scales.



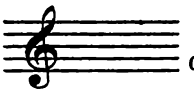


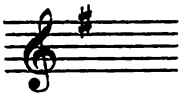
Commit to memory this table of fingering and practise each scale in the six ways first given in C major.

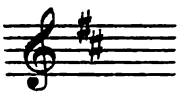
Left fourth finger on	Melodic Minor Scales.	Right fourth finger on
B	A	Up on G♯, down on G♮
F♯	E	Up on D♯, down on D♮
Lowest B and F♯	B	Up on A♯, down on A♮
F♯	F♯	Up on D♯, down on G♯
F♯	C♯	Up on A♯, down on D♯
Up on C♯, down on F♯	G♯	A♯
F♯	D♯	A♯
Up on C♯, down on F♯	A♯	A♯
E	D	Up on C♯, down on C♮
A	G	Up on F♯, down on F♮
D	C	Up on B♮, down on B♭
G	F	B♭ and highest F
Up on D♭, down on G♭	B♭	B♭
G♭	E♭	B♭
Up on D♭, down on G♭	A♭	B♭

Notwithstanding many proper exceptions, the general statement is true that while the minor has the same signature as its relative major, it has also one chromatic change in addition, which distinguishes it as minor. The following table, if perfectly committed to memory, will be found of great service.

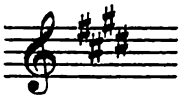
TABLE OF SIGNATURES.

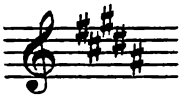
A blank signature . . . .  denotes the key of C maj. or (with G♯) of A min.

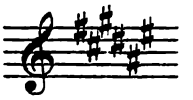
The signature of one sharp  » » » » G maj. » (» D♯) » E min.

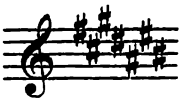
The » » two sharps  » » » » D maj. » (» A♯) » B min.

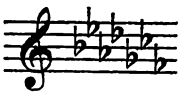
The » » three »  » » » » A maj. » (» E♯) » F♯ min.

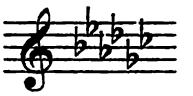
The » » four »  » » » » E maj. » (» B♯) » C♯ min.

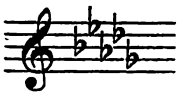
The » » five »  » » » » B maj. » (» F𝄪) » G♯ min.

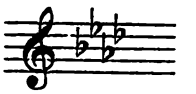
The » » six »  » » » » F♯ maj. » (» C𝄪) » D♯ min.

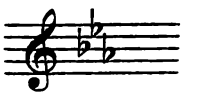
The » » seven »  » » » » C♯ maj. » (» G𝄪) » A♯ min.

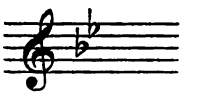
The » » seven flats  » » » » C♭ maj. » (» G♮) » A♭ min.

The » » six »  » » » » G♭ maj. » (» D♮) » E♭ min.

The » » five »  » » » » D♭ maj. » (» A♮) » B♭ min.

The » » four »  » » » » A♭ maj. » (» E♮) » F min.

The » » three »  » » » » E♭ maj. » (» B♮) » C min.

The » » two »  » » » » B♭ maj. » (» F♯) » G min.

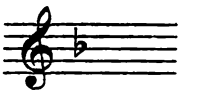
The » » one flat  » » » » F maj. » (» C♯) » D min.

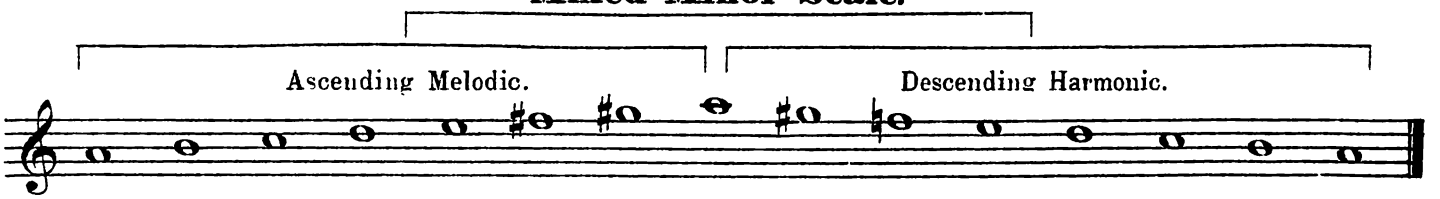
Table of Signatures.

Relative Majors.	C	G	D	A	E	B	F♯	C♯	C♭	G♭	D♭	A♭	E♭	B♭	F
Relative Minors.	A	E	B	F♯	C♯	G♯	D♯	A♯	A♭	E♭	B♭	F	C	G	D
Signatures.	Blank.	1	2	3	4	5	6	7	7	6	5	4	3	2	1
					Sharps.						Flats.				

The Mixed Minor Scales.

The **mixed minor scale** is simply a combination of the ascending melodic and of the descending harmonic minor scales, thus: —

Mixed Minor Scale.



The student who has become familiar with the harmonic and melodic minor scales will find no difficulty in playing the mixed, in the various ways already shown. Their use in miscellaneous compositions is various; and cases exist where the descending melodic form runs uninterruptedly into the harmonic, as in the first Sonata by Beethoven, Op. 2. No. 1. first movement.

Theoretical Names of Degrees.

Counting from the keynote upward, the names of the degrees of any major or minor scale are as follows: —

1. Tonic; 2. Super-tonic; 3. Mediant; 4. Sub-dominant; 5. Dominant; 6. Sub-mediant; 7. Leading-tone; 8. Tonic.

Many questions similar to the following should be answered readily by the student. What major key is represented by one sharp? One flat? Two sharps? Two flats? etc. What is the relative minor of C major? Of B♭ major? Of D major? etc. What is the relative major of D minor? Of F♯ minor? Of C minor? etc. What is the relative minor of G major? The relative major of G minor? The relative minor of B major? The relative major of B minor? etc. What minor key is represented by one sharp? One flat? Two sharps? Two flats? etc. The additional chromatic change in each minor key is always the diatonic semitone below its tonic, in other words, the leading-tone of the minor, thus: — in A♭ minor it is G♮; in G♯ minor it is F𝄪, etc.

Questions should be asked similar to these: — Which degree of the scale is the dominant? The mediant? The leading-tone? etc. What is the name of the second degree of the scale? Of the fourth? Of the sixth? etc. In the key of C (either major or minor) which is the mediant? The tonic? The leading-tone? etc. In the key of F, what is the name of E? Of B♭? Of D? etc. In what major key is E the mediant? The leading-tone? The sub-dominant? etc. In what minor key is A the leading-tone? The sub-mediant? The sub-dominant? etc.

In answering the foregoing, one should not refer to the melodic minor, but to the harmonic; and the answer of F when it should be F♯, of B when B♭ is required, etc., should not be allowed.

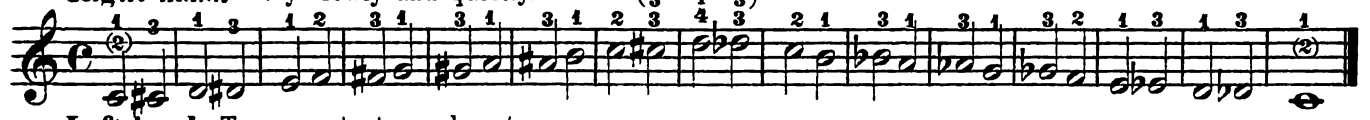
The Chromatic Scale.

The **chromatic scale** always progresses, upward or downward, by half steps, and is written with chromatic and diatonic semitones variously intermingled, according to the key in which it appears. As it embraces all the keys of the keyboard, so far as it extends, it is usually fingered the same in all keys, with occasional exceptions for its beginning and end. As the third (middle) finger is the longest, it is usually most convenient to use it on

the short, black keys. The right second finger will then always come on the upper of the contiguous white keys (on C and F) while the left second finger will play the lower of the same (B and E).

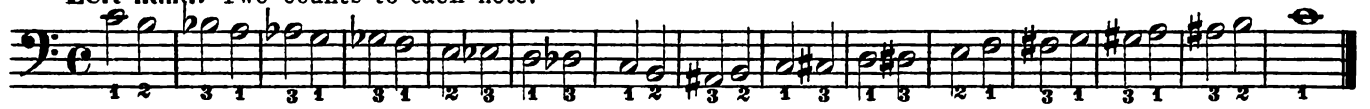
Right hand. Very slowly and quietly.

55.



Left hand. Two counts to each note.

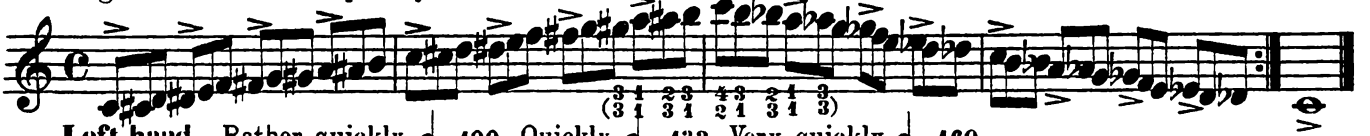
56.



Nos. 57 and 58 must be played in each **tempo** here given, first with strong accents, the intervening notes being soft but clear, and afterward with no accents whatever; making six ways for each scale. Each metronome beat here represents a group of three notes.

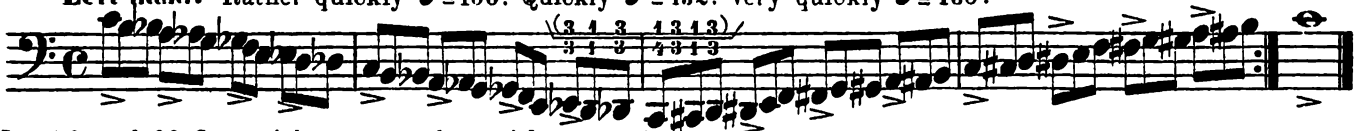
Right hand. Rather quickly ♩ = 100. Quickly ♩ = 132. Very quickly ♩ = 160.

57.



Left hand. Rather quickly ♩ = 100. Quickly ♩ = 132. Very quickly ♩ = 160.

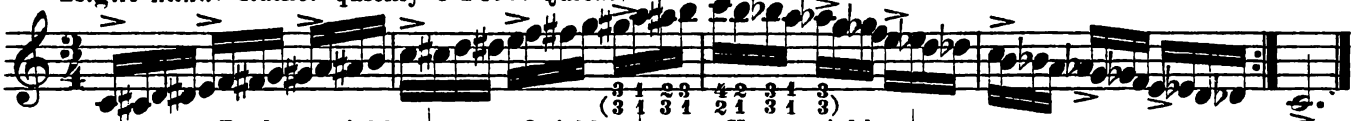
58.



Nos. 59 and 60 first with accents; then with none.

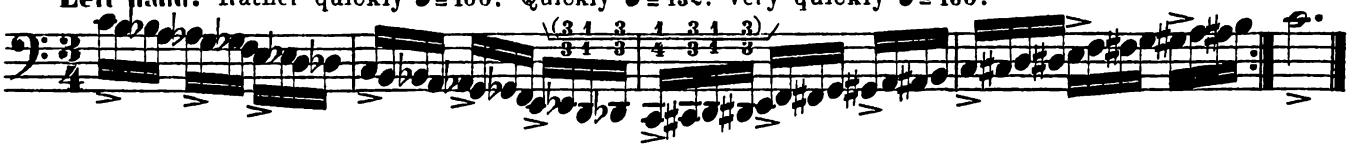
Right hand. Rather quickly ♩ = 100. Quickly ♩ = 132. Very quickly ♩ = 160.

59.



Left hand. Rather quickly ♩ = 100. Quickly ♩ = 132. Very quickly ♩ = 160.

60.



The foregoing chromatic scales, each beginning on C, are not enough to insure perfect execution when beginning elsewhere. For this reason one should now practise similar passages, two octaves, beginning on C♯; then on D; next on D♯ (E♭); and so on, beginning on each note of the chromatic scale. See, also, remarks following table **F**, page 57.

TRIADS.

When several notes are performed at the same time, they produce either concord or discord. Although two notes may stand for a chord, three is the smallest number really forming one: more are often used. The first note of a chord, that from which it is originally formed, is called the **root** (often, also, the fundamental or groundtone). Any note being selected as the root, the addition above this of the **third** and **fifth,** reckoning each interval from the root, produces what is called a **triad** or **common chord.** In the following line of musical letters, any one of them being called the root, those which are the third and fifth at its right form, with the root, a triad.

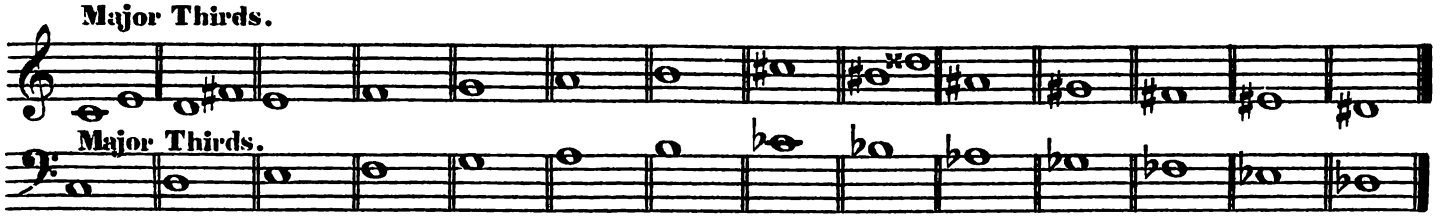
A B C D E F G A B C D E F G

If A be the root, C will be its third and E its fifth — therefore the triad of A is A C E. What would be the triad of C? Of F? Of G? etc. On playing the notes corresponding with the letters of different triads, some of these chords will sound much more cheerful than others. Triads are therefore divided into four classes, diminished, minor, major and augmented, according to the different characters of their thirds and fifths.

Explanation of Major, Minor and Diminished Thirds.

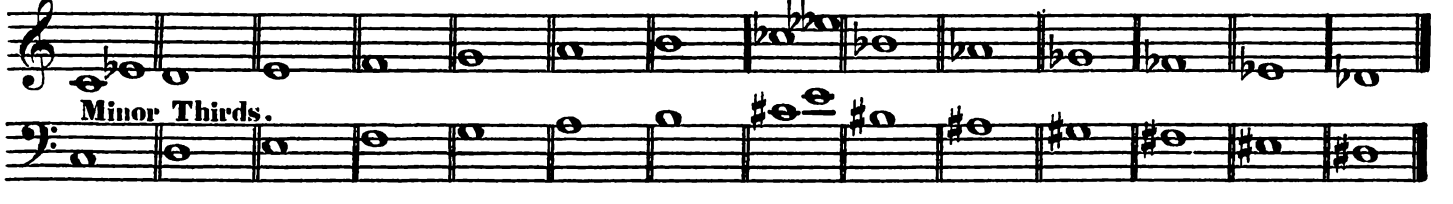
The student should now refer to the first general explanation of intervals, in order to understand thirds and fifths. — **A major third occupies three degrees and contains two steps.** — Write a major third above each of the following notes, remembering the half steps from B to C and from E to F.

Major Thirds.



A minor third occupies three degrees and contains one step and a half. This is essentially unlike the augmented second, which contains the same number of steps but occupies only two degrees. C to D♯ is an augmented second, while C to E♭ is a minor third, neither of which could properly stand in place of the other. Write a minor third above each of the following notes.

Minor Thirds.



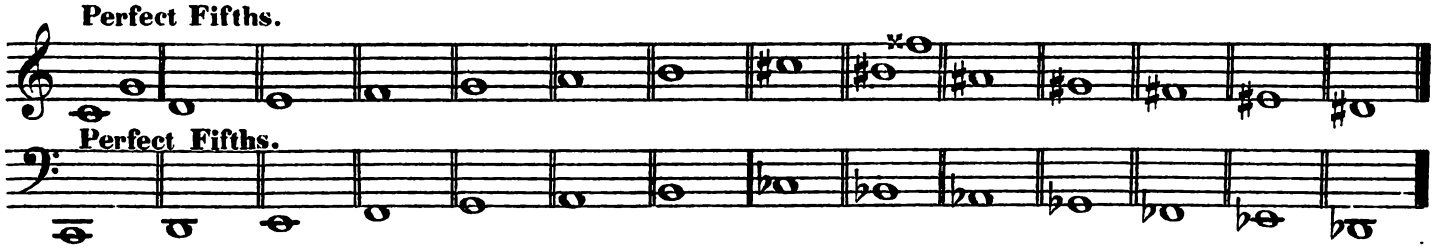
A diminished third occupies three degrees and contains one step, as from C♯ to E♭. Examples need not here be written, as diminished thirds are not used in any but chromatically changed chords.

Explanation of Perfect, Imperfect and Augmented Fifths.

A perfect fifth occupies five degrees and contains three steps and a half.

Write a perfect fifth above each of the following notes.

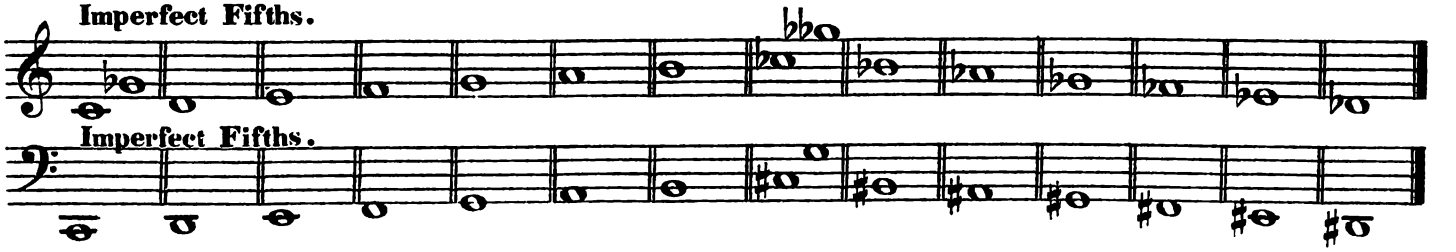
Perfect Fifths.



An imperfect (or a diminished) fifth occupies five degrees and contains three steps.

Write an imperfect fifth from each of the following notes.

Imperfect Fifths.



An augmented fifth occupies five degrees and contains four steps, as from C to G♯. These being of exceptional use need not be written.

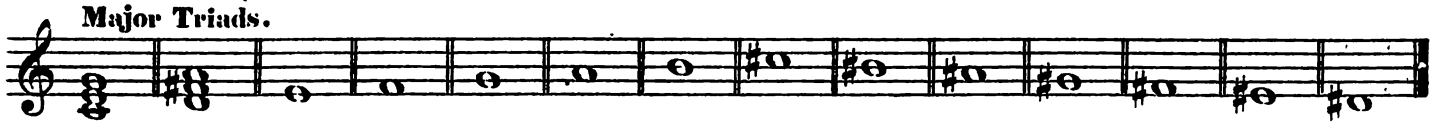
TRIAD FORMATIONS.

1. A diminished triad consists of a root, a minor third and an imperfect fifth.
2. A minor triad consists of a root, a minor third and a perfect fifth.
3. A major triad consists of a root, a major third and a perfect fifth.
4. An augmented triad consists of a root, a major third and an augmented fifth.

The triad of C, whether diminished, minor, major, or augmented, always contains the same letters, C E G, although some of these may require a sharp or a flat, thus: — C major, C E G; C minor, C E♭ G; C diminished, C E♭ G♭; C augmented, C E G♯. Likewise the triads of C♯ and of C♭ would have no other letters than C E G, whatever sharps or flats might be required. The same principle applies in forming triads on any other letter.

Write, now, a major triad on each of the following notes, by adding a major third and a perfect fifth above every note.

Major Triads.



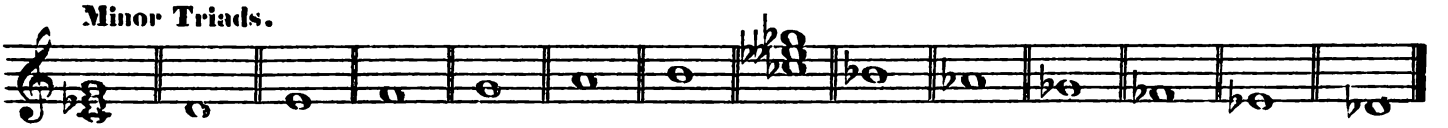
Observe the change of clef in the next.

Major Triads.

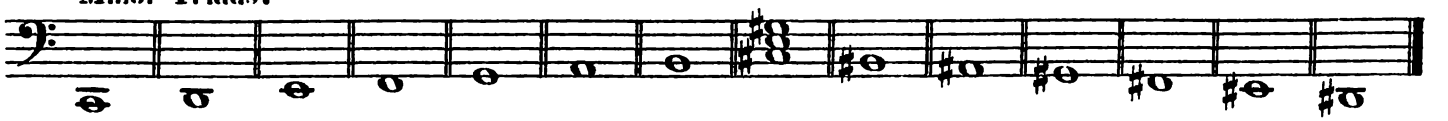
The student may now play, with no notes before him, a major triad from any note named by the teacher, as: From A. From G. From A♭. From G♯. From B, etc. The notes forming major triads may be named, also, without reading or playing them.

Write minor triads by adding a minor third and a perfect fifth above each note here given.

Minor Triads.



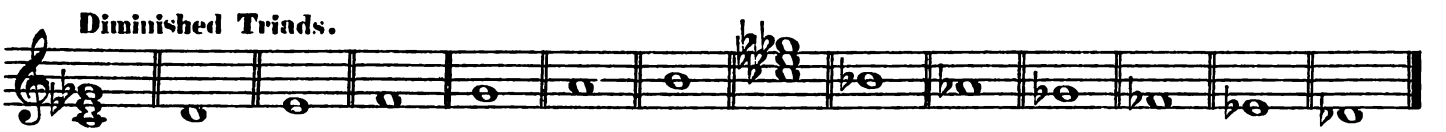
Minor Triads.



A minor triad may be played from each of various notes: From C. From E. From F♭, etc. The notes forming minor triads should now be named by the student.

Write diminished triads by adding a minor third and an imperfect fifth above each of the following notes.

Diminished Triads.

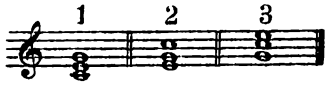


Diminished Triads.

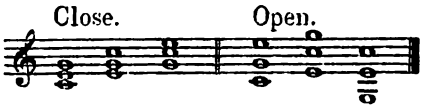
Play a diminished triad on any note mentioned. From F. From D. From B♭, etc. The student should also name the notes forming any diminished triad. — The formation of augmented triads may be learned later.

Play the triad of C major. C minor. C diminished. Likewise these three kinds of triads on any other notes — on D♭. On G. On F, etc.

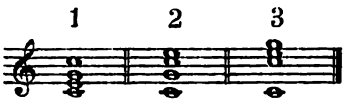
It is proper to change the order of the letters of a triad so that either the root, the third, or the fifth may come either first, second, or third in the order of their arrangement, thus: — C E G; C G E; E C G; E G C; G C E; G E C. Each of these combinations is only another form of the triad of C major. In like manner either note of a triad may be either the lowest, the middle, or the highest in the chord, thus: —



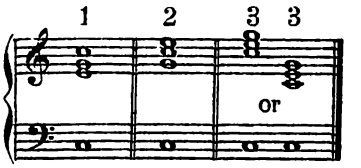
each of these being the triad of C. Either of the letters and notes, or all of them, may be duplicated, also, without changing the general name ot the triad, thus: — C E G C; G C E G; E G C E; C E G C E G; etc. When each letter of a triad is used but once, this is called **three part**, or **three voiced, harmony**; and in three voiced harmony the three chords above, numbered 1, 2, 3, are said to be respectively in the **first**, the **second**, or the **third position.** When the notes of a triad, in either position, are as close together as possible (as in the above chords) they are said to be in **close harmony**; but if they are so separated that a note, or notes, belonging to the chord might be written between each two of those already there, they are said to be in **open**, or **dispersed, harmony.**



When any one note of a triad is duplicated, **four part**, or **four voiced, harmony** is produced; and in four voiced harmony the chord of C appears in its first, second and third positions thus: —

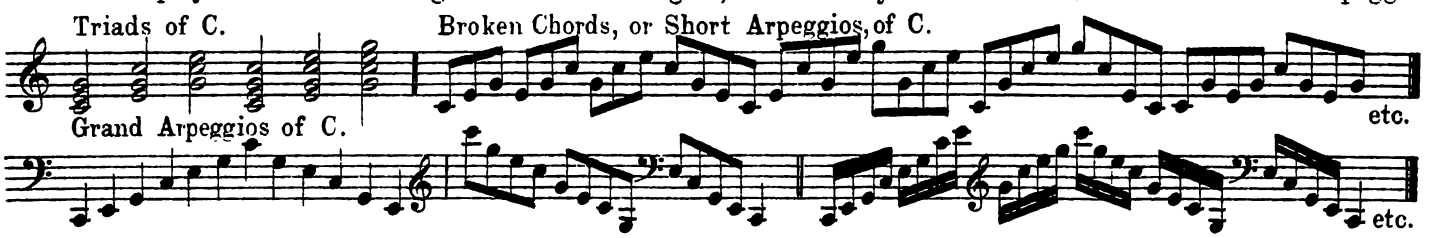


or thus:



From these examples it is seen that the notes of a chord may be widely separated. The lowest C, the middle E and the highest G of the keyboard would form the triad of C major, although in an undesirable arrangement.

When the notes of any chord appear consecutively, in any order of succession, they form a **broken chord** or **short arpeggio.** If such notes follow repeatedly in regular succession upward or downward, (as C E G C E G C E G, etc., upward, or C G E C G E C G E, etc., downward) the passage is called a **grand arpeggio.** Such a passage may extend from the lowest musical note to the highest, but is seldom shorter than two entire octaves: if it can be played without crossing the thumb or fingers, it is usually called a broken chord or short arpeggio.



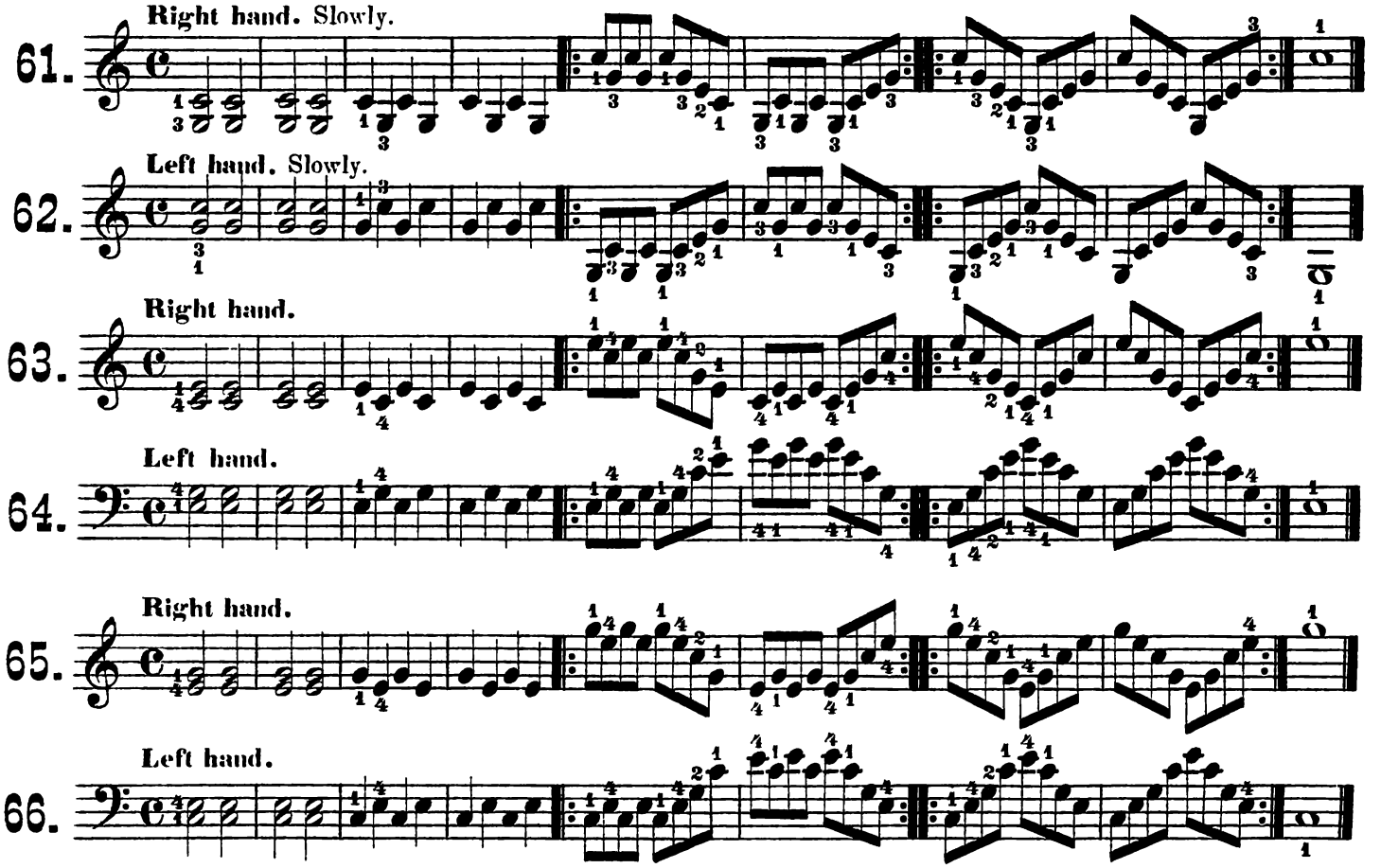
Most of these require an expanded hand, but no special preparatory exercises will be needed beyond those here given.

Although grand arpeggios are formed from broken chords, the author regards them of easier execution and therefore presents them first for practice. This opinion is based upon the fact that, after both grand arpeggios and broken chords have been studied, nearly every amateur plays more false notes and uses more improper fingering in broken chords than in grand arpeggios. This is readily explained, as grand arpeggios present regular repetitions of the same fingering, while that of broken chords is seldom twice alike in succession, except in diatonic progressions like those beginning with No. 156.

Preparatory Exercises for Grand Arpeggios.

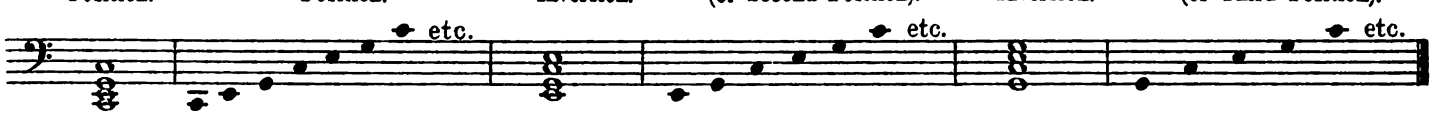
In either contracting or expanding the hand, keep the fingers as nearly as possible in the position first learned, neither straight nor curling under. Apply the former rules for scale practice. Be careful that the thumb shall not play two keys when it passes under.

Follow strictly the fingering here given, that of the half notes being such as to oblige the fingers and thumb to cross each other. — Observe the repeats.



Positions and Inversions of Grand Arpeggios.

When the root of a chord is its lowest note the chord is said to be in the **first, or fundamental, position:** when some note other than the root is the lowest the chord is said to be **inverted.** If the third of a chord is its lowest note the chord is spoken of as in the **first inversion:** the fifth being the lowest produces the **second inversion.** It is to be wished that these terms were generally retained in the naming of grand arpeggios derived from these inverted chords; but most teachers speak of the arpeggios in which the third is the lowest note as the **second position;** and of that with its fifth the lowest as the **third position.** For the student's convenience in referring to standard exercises, the latter terms will be here retained, while decided preference is given to the term **inversion.**



Rules for Grand Arpeggio Practice.

1. Hold the arms somewhat away from the sides.

2. Keep the fingers bent as in simple finger exercises.

3. Play with the fingers, not jarring the hand, and keep the wrist flexible.

4. Do not hold two keys at once when playing toward the thumb (upward in the left hand or downward in the right).

5. Connect the notes **perfectly** when playing away from the thumb (downward in the left hand or upward in the right).

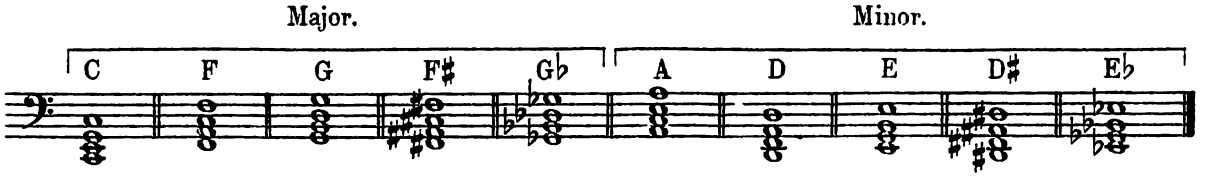
6. In accented passages, if the finger crosses just before the accent, especially toward the thumb, be sure that the accented note is right and that two keys are not struck together.

7. The notes must be of equal length: one is apt to lengthen the accented note as though it were dotted, making the next note correspondingly shorter.

The classification of grand arpeggios, which is here given, is based upon the various positions of the white and black keys of the pianoforte. These differences will be mentioned in connection with each.

First Class of Grand Arpeggios on Triads.

These make use of white keys only, or of black keys only, and include the arpeggios of C, F, G, F♯ and G♭ major, and of A, D, E, D♯ and E♭ minor. These should be committed to memory. For the benefit of any who may prefer to omit the theoretical part of this book and to confine their study to the numbered exercises, the abovenamed chords are here given. Observe the clef.



The fingering of the first position of any of these chords is the model for the first position of the others: the same is true of the first inversion; also of the second. Having learned the grand arpeggios of C major, one should be able to play those of either of the foregoing chords.

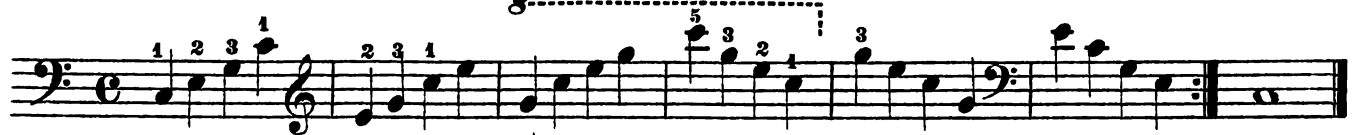
Exception. In the **first** position of the left hand, in only the keys of F♯ and G♭ major, one may use either the third or the fourth finger; also in the second inversion (third position) of the right hand in D♯ and E♭ minor. Instead of practising the three forms of arpeggio in each key before going to the next, many find it easier to play the first form in each of the abovenamed keys (all belonging to the same class), then the second form throughout, then the third. Teachers must here use their discretion.

Play very carefully; absolutely **legato,** at first quite slowly. In order to avoid too rapid playing it is well to count, either aloud or mentally, throughout all the slower exercises.

First Position.

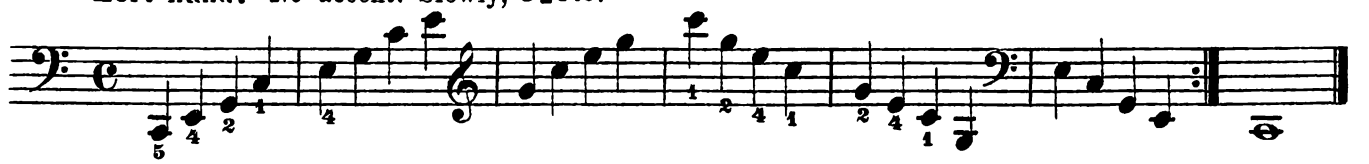
Right hand. Observe the repeat. – No accent. Slowly; ♩=120.

67.



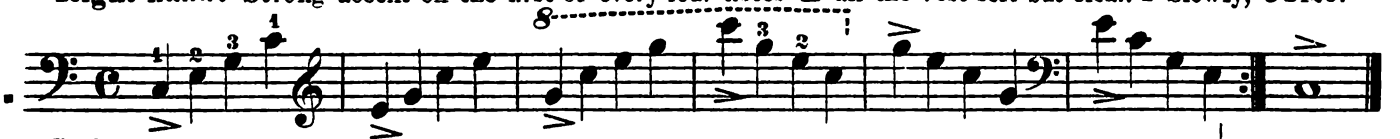
Left hand. No accent. Slowly; ♩=120.

68.



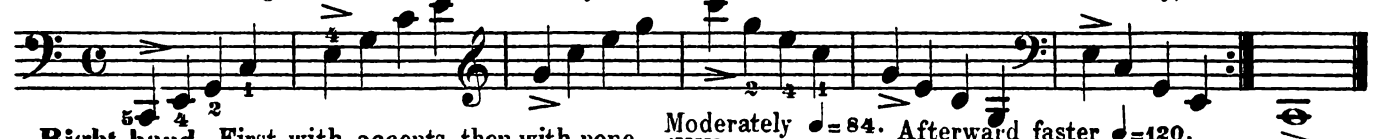
Right hand. Strong accent on the first of every four notes – all the rest soft but clear. – Slowly; ♩=120.

69.



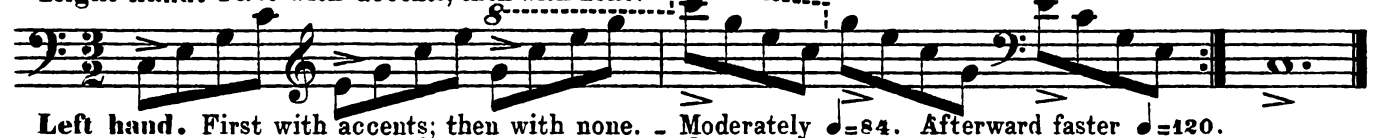
Left hand. Strong accent on the first of every four notes – the others soft but clear. – Slowly; ♩=120.

70.



Right hand. First with accents, then with none. Moderately ♩=84. Afterward faster ♩=120.

71.



Left hand. First with accents; then with none. – Moderately ♩=84. Afterward faster ♩=120.

72.

Right hand. Every note clear. Connect the whole smoothly. – No accent. Rather quickly ♩=84. Quickly ♩=132. Very quickly ♩=160.

73.

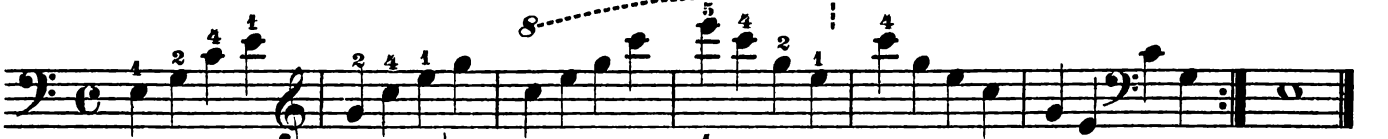
Left hand. Do not blur the notes or break the connection. – No accent. Rather quickly ♩=84. Quickly ♩=132. Very quickly ♩=160.

74.

First Inversion (or Second Position).

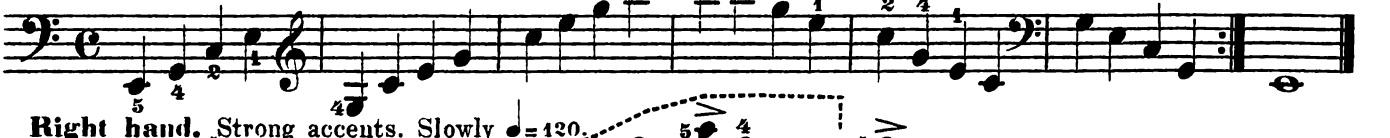
Right hand. No accent. Slowly ♩=120.

75.



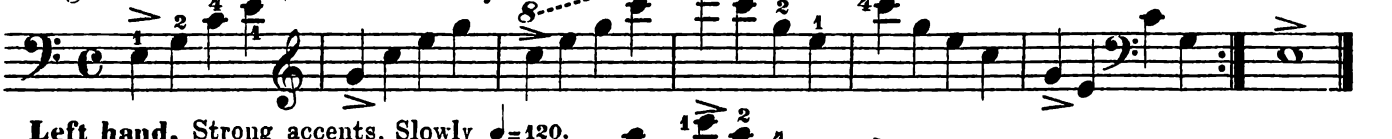
Left hand. No accent. Slowly ♩=120.

76.



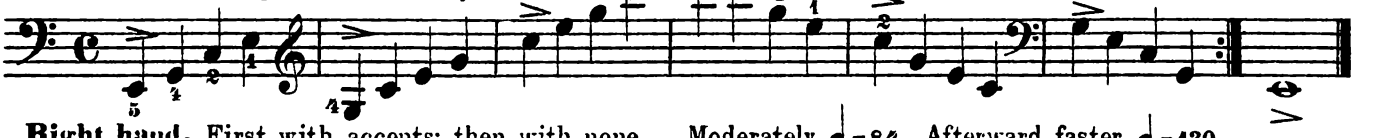
Right hand. Strong accents. Slowly ♩=120.

77.



Left hand. Strong accents. Slowly ♩=120.

78.

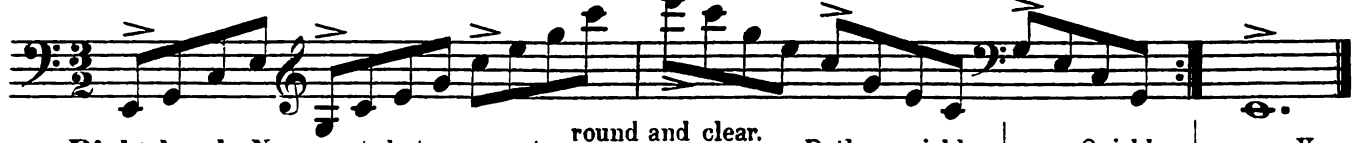


Right hand. First with accents; then with none. – Moderately ♩=84. Afterward faster ♩=120.

79.

Left hand. First with accents; then with none. - Moderately; ♩=84. Afterward faster; ♩=120.

80.



Right hand. No accent, but every note round and clear. - Rather quickly; ♩=84. Quickly; ♩=132. Very quickly; ♩=160.

81.

Left hand. No accent, but all clear and legato. - Rather quickly; ♩=84. Quickly; ♩=132. Very quickly; ♩=160.

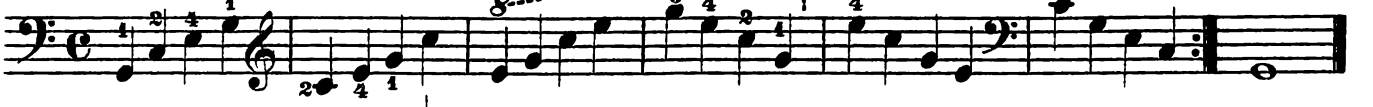
82.

Second Inversion (or Third Position).

Either hand may play the following an octave higher, or lower, if more convenient. Do not use the third finger in the right hand.

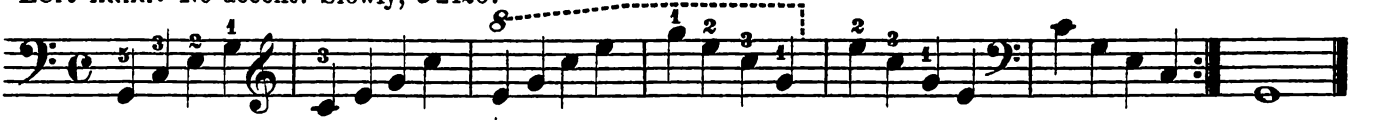
Right hand. No accent. Slowly; ♩=120.

83.



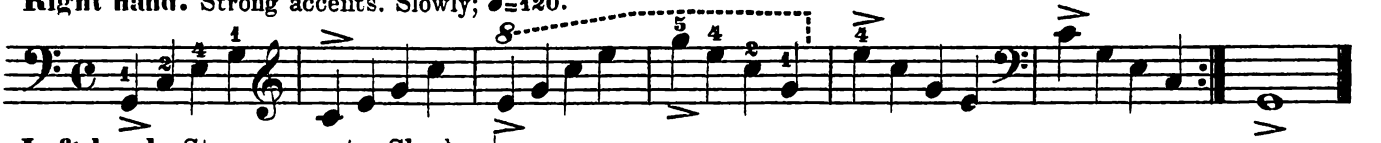
Left hand. No accent. Slowly; ♩=120.

84.



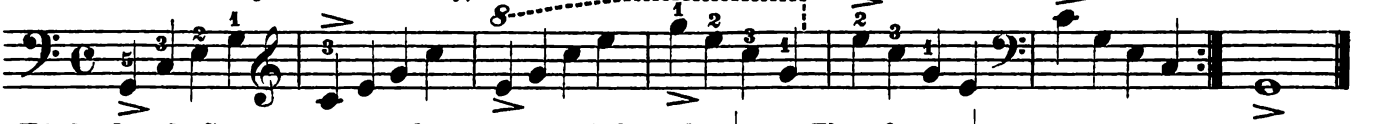
Right hand. Strong accents. Slowly; ♩=120.

85.



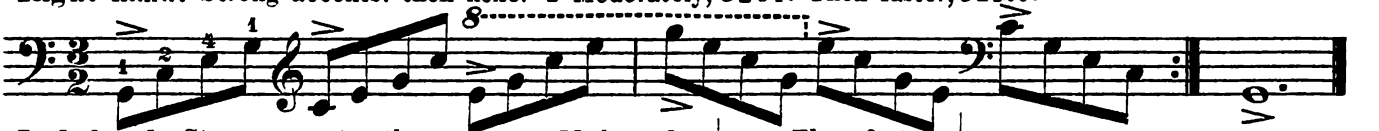
Left hand. Strong accents. Slowly; ♩=120.

86.



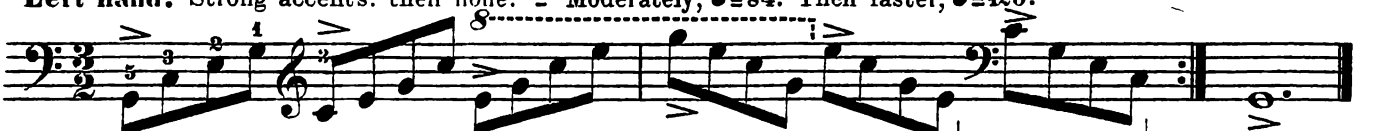
Right hand. Strong accents: then none. - Moderately; ♩=84. Then faster; ♩=120.

87.



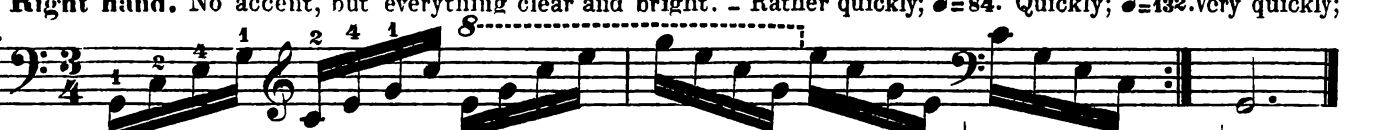
Left hand. Strong accents: then none. - Moderately; ♩=84. Then faster; ♩=120.

88.



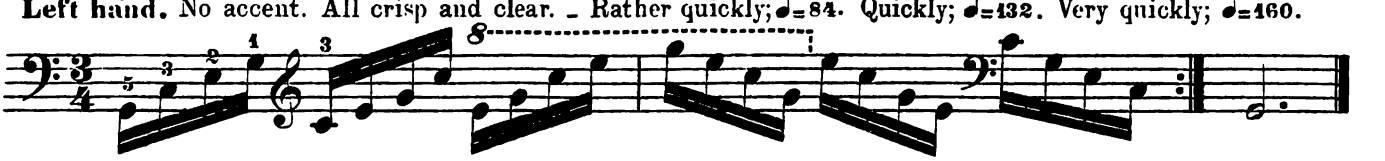
Right hand. No accent, but everything clear and bright. - Rather quickly; ♩=84. Quickly; ♩=132. Very quickly; ♩=160.

89.



Left hand. No accent. All crisp and clear. - Rather quickly; ♩=84. Quickly; ♩=132. Very quickly; ♩=160.

90.



Similar grand arpeggios on each triad of the first class, before given, should now be practised.

Summary of Grand Arpeggio Practice on Triads.

First Position.

A. Each Hand Alone.

1. No accent, clearly and slowly, four octaves.
2. Accent the first of every four notes, slowly, four octaves.
3. Accent the first of every four notes, moderately, then faster, four octaves.
4. No accent, but all clear and connected (1) rather quickly, (2) quickly, (3) very quickly, four octaves.

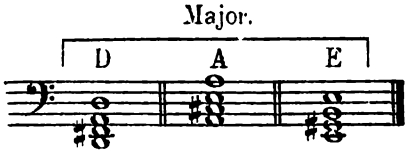
Then the first inversion (second position) in the same ways.

Then the second inversion (third position) in the same ways.

Further exercises on grand arpeggios of triads begin with No. 256. Refer also to No. 267.

Second Class of Grand Arpeggios on Triads.

These are major triads with only the third of the chord on a black key, and include the arpeggios of D, A and E major.

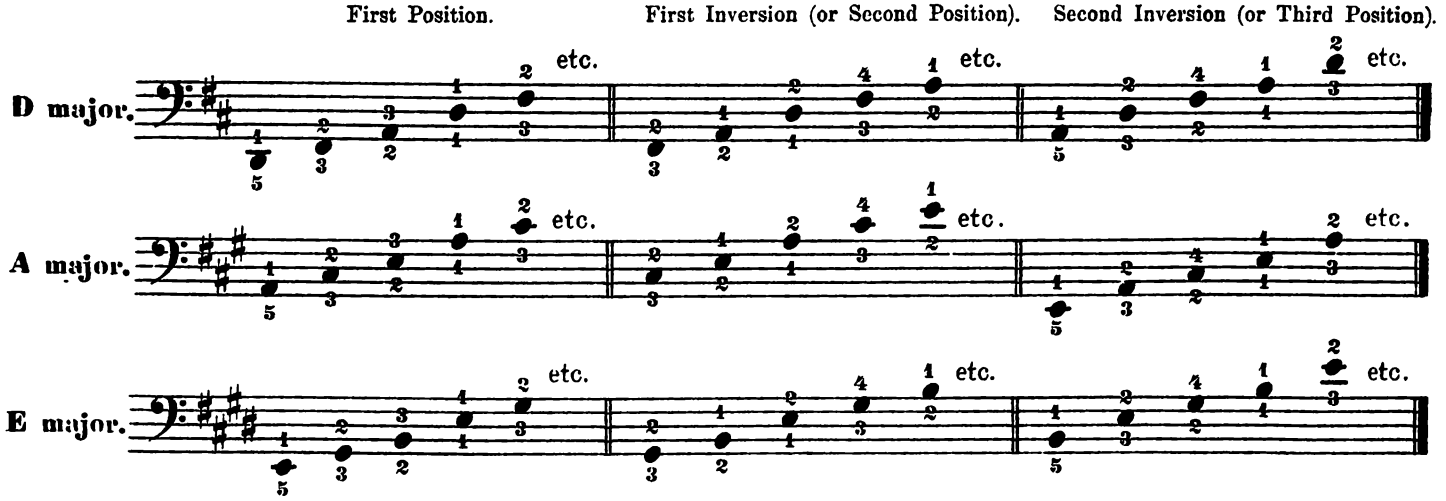


As already learned in scales, the lowest note for the right hand and the highest for the left, if coming on a black key (as in the first inversion of these) is usually to be played with the second finger, for convenience.

It is unnecessary to present the foregoing arpeggio forms written out in full, for each key: a reference to those in C major, or to the »Summary of Grand Arpeggio Practice on Triads«, should be sufficient to enable one to develop them all from the fingering here given.

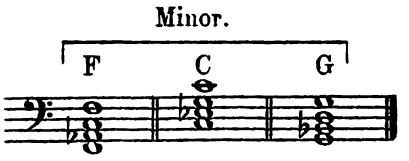
Rule. In grand arpeggios containing both black and white keys, when the first, lowest, note comes on a white key, the left hand begins with the fifth finger and the right hand with the thumb. But if this note comes on a black key, the **right** thumb comes on the **first** white key above it, and the **left** thumb comes on the **last** white key above it (within the first octave) or, what is the same thing, on the first white key below it.

Play each in the various forms shown in C major. The right hand fingering is above the notes; the left hand, below. Each hand alone, and an octave higher or lower, as may be desired.

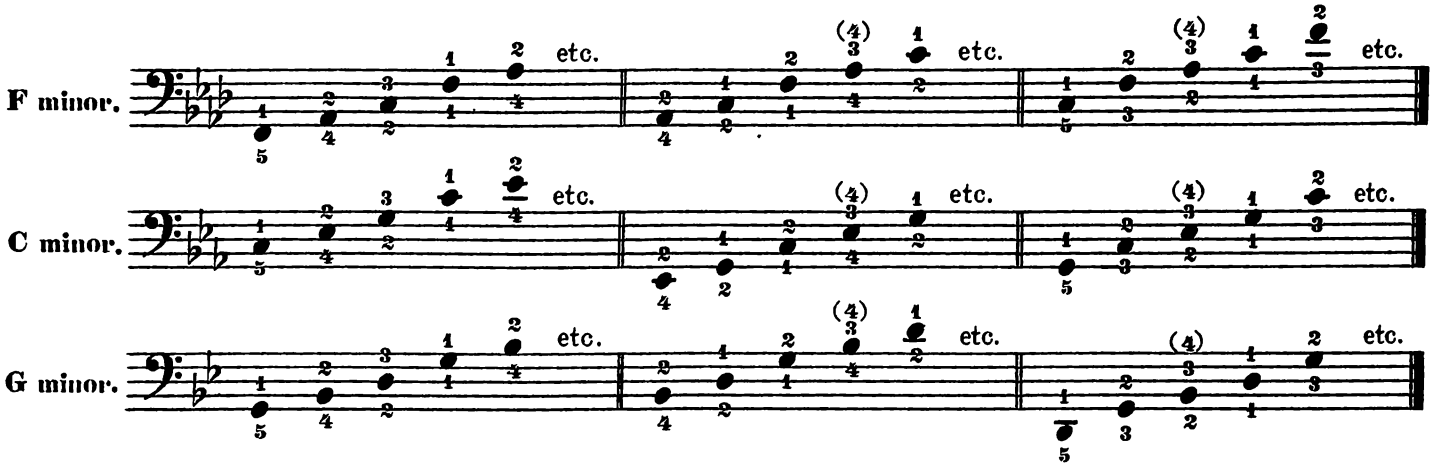


Third Class of Grand Arpeggios on Triads.

These are minor triads with only the third of the chord on a black key, and include the arpeggios of F, C and G minor.

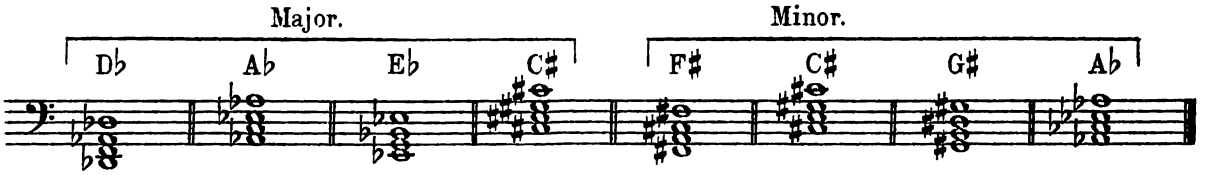


The fingering in parenthesis is allowable but the other is preferable.

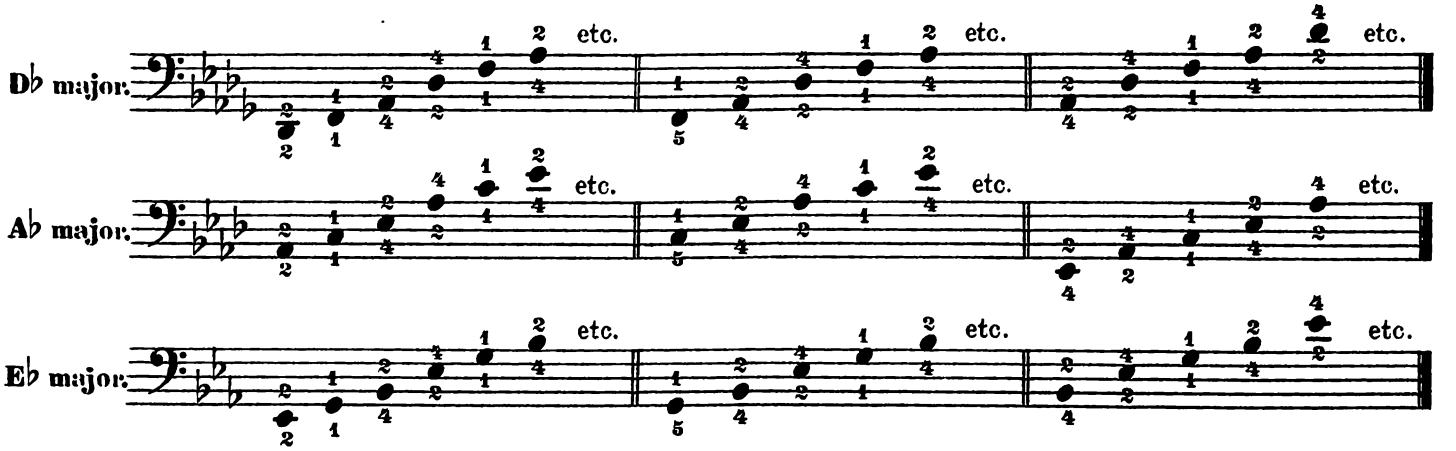


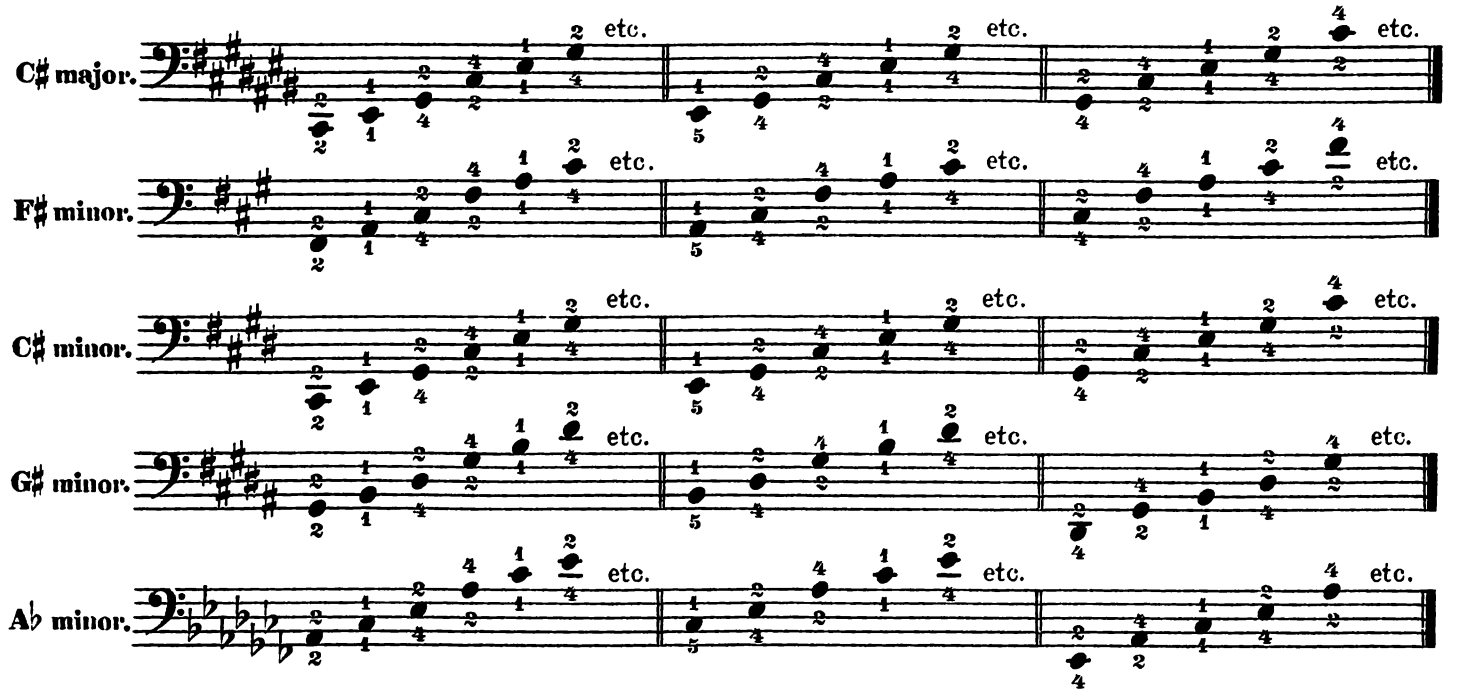
Fourth Class of Grand Arpeggios on Triads.

These comprise both major and minor triads with only the third of the chord on a white key, and include the arpeggios of D♭, A♭, E♭ and C♯ major and of F♯, C♯, G♯ and A♭ minor.



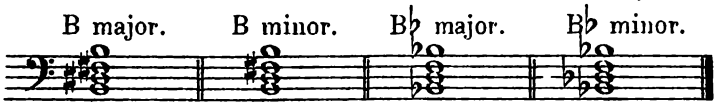
It is sometimes necessary to finger these arpeggios like those of C major; otherwise it is customary to play them, wherever they begin or end, by putting **the thumb of each hand on the only white key.** None of these should be omitted from thorough practice on the plea of its infrequent use.



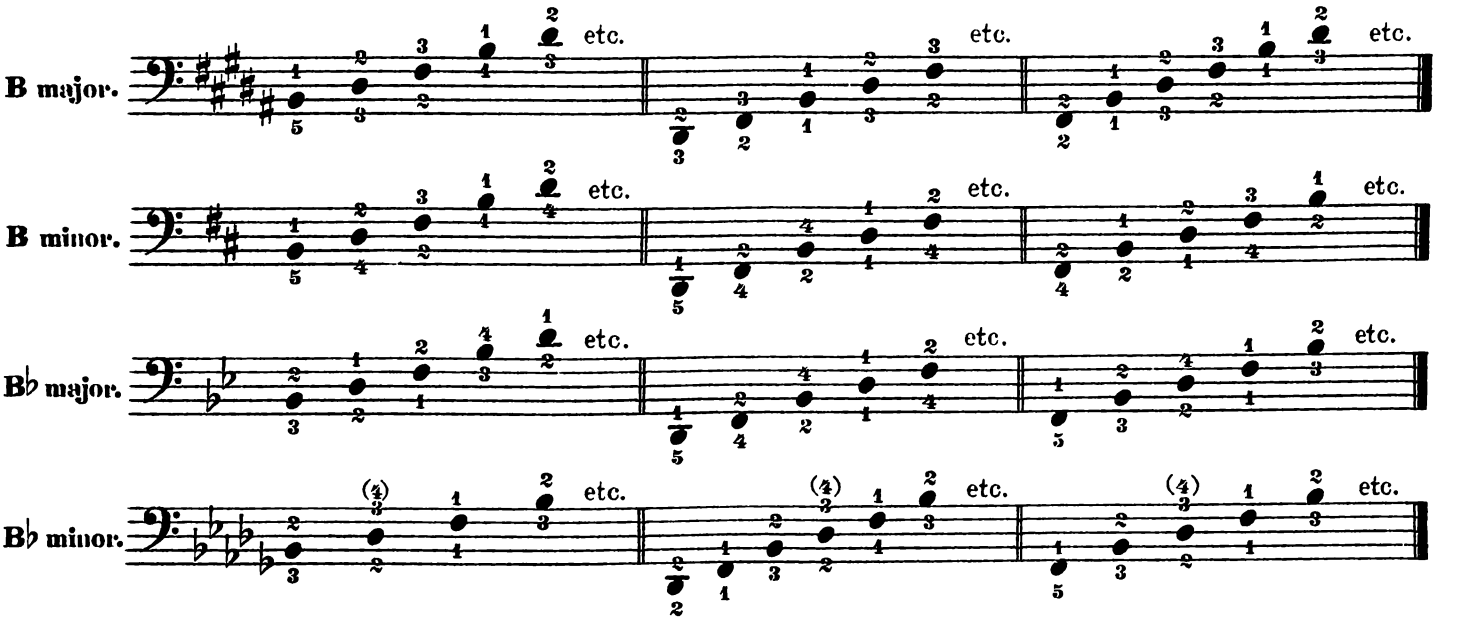


Fifth Class of Grand Arpeggios on Triads.

These comprise **the four Bs** (B major, B minor, B♭ major and B♭ minor), no two of which are fingered alike — consequently neither can be taken as a model for the others: each must be learned separately.



These should be practised in all the various ways, like the others. Where there is but one white key in the chord, put the thumb there in the arpeggio.



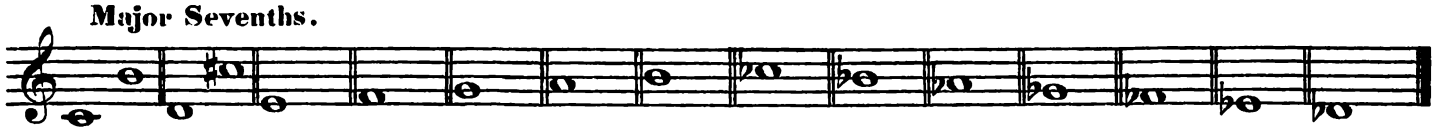
The student may profitably take up some of the progressing finger exercises, beginning with No. 152, before going on to what here follows.

Explanation of Major and Minor Sevenths.

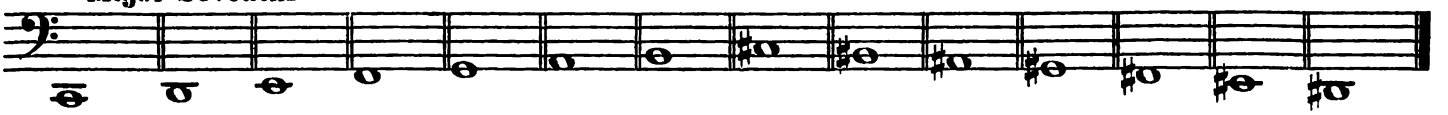
A major seventh occupies seven degrees and contains five steps and a half.

Write a major seventh above each of the following notes. Do not forget that it is but a half step from B to C and from E to F.

Major Sevenths.



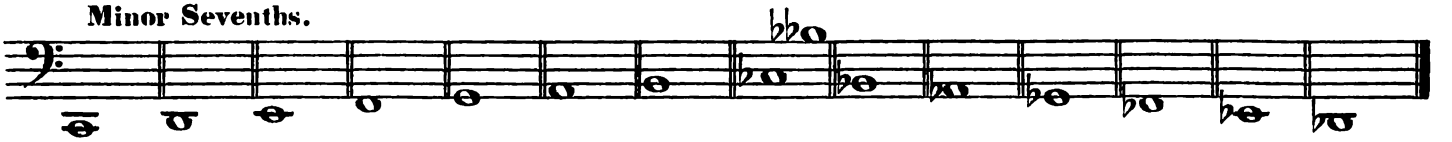
Major Sevenths.



A minor seventh occupies seven degrees and contains five steps. Write minor sevenths above these notes.

Minor Sevenths.

Minor Sevenths.



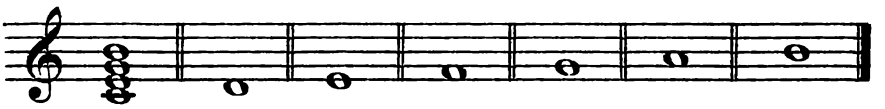
Chords of the Seventh.

A **chord of the seventh** consists of a root, third, fifth and seventh. The student can learn its formation by finding the third, fifth and seventh letters at the right of any one he may select as a root.

A B C D E F G A B C D E F G.

In this series, the chord of the seventh on A would be (the alternate letters) A, C, E, G; on G it would be G, B, D, F. What would be a chord of the seventh on C? On E? On B? etc.

Write a chord of the seventh on each of these notes, using no sharps or flats.



Chord of the Dominant Seventh.

Among these various chords of the seventh, one of the most important is that which is founded on the dominant (the fifth degree of the scale — in this case, G). A glance at the notes of this chord shows us this:

The chord of the dominant seventh consists of the fifth, seventh, second and fourth degrees of any major or minor scale and always comprises a root, major third, perfect fifth and minor seventh. No other chord contains these intervals.

Scale of C major.

1 2 3 4 5 6 7 8

Dominant Seventh Chord in C major.

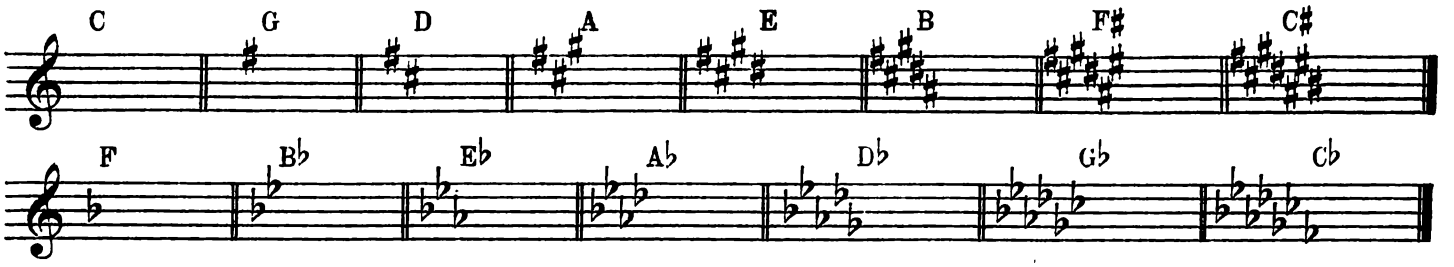
Scale of C minor.

1 2 3 4 5 6 7 8

Dominant Seventh Chord in C minor.

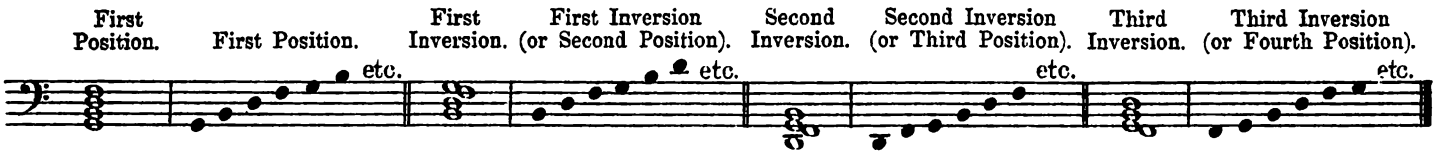
Write the dominant seventh chord in every major key.

The names of the major keys (the tonics) stand above the staff.



These chords can be inverted once more than triads, as there is one more note in each of them, the seventh. Observe the F clef, in reading the following.

Dominant Seventh Chord in the Key of C.



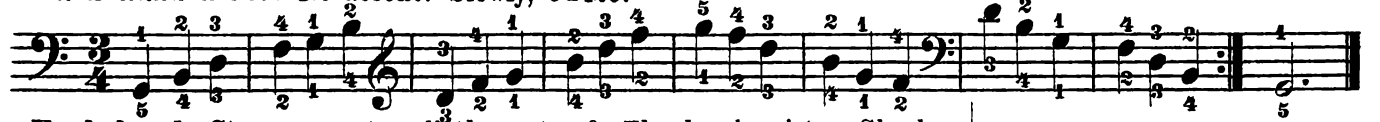
The student should now refer to the seven rules for grand arpeggio practice already given on page 34.

In the following, the fingering for the right hand is above the notes and that for the left hand is below them. Either hand may play the next few exercises an octave higher or lower, at pleasure.

First Position.

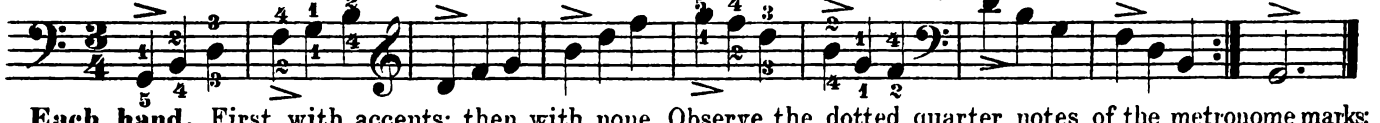
Each hand alone. No accent. Slowly; ♩=120.

91.



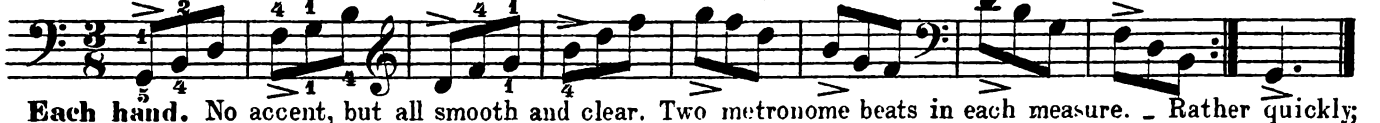
Each hand. Strong accents: all the rest soft. The hand quiet. – Slowly; ♩=120.

92.



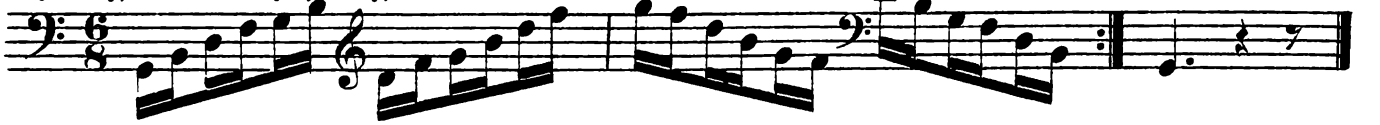
Each hand. First with accents; then with none. Observe the dotted quarter notes of the metronome marks: each beat of the metronome denotes a whole measure. – Moderately; ♩.=76. Then faster; ♩.=116. Still faster; ♩.=152.

93.

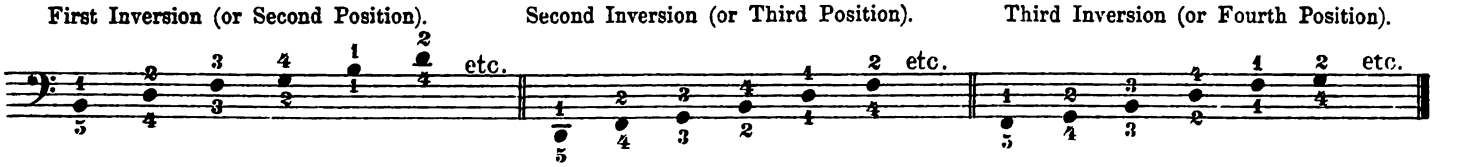


Each hand. No accent, but all smooth and clear. Two metronome beats in each measure. – Rather quickly; ♩.=84. Quickly; ♩.=104. Very quickly; ♩.=120.

94.



The three inversions of this chord should now be played in ways similar to Nos. 91, 92, 93 and 94: their fingering is here given.



Summary of Grand Arpeggio Practice on Dominant Seventh Chords.

First Position.

Each hand alone.

1. No accent, clearly and slowly, three octaves.
2. Accent the first of every three notes, slowly, three octaves.
3. Accent the first of every three notes (1) moderately, (2) faster, (3) still faster, three octaves.
4. No accent, (1) rather quickly, (2) quickly, (3) very quickly, three octaves.

Then, the first inversion (second position) in the same ways.

Next, the second inversion (third position) in the same ways.

Finally, the third inversion (fourth position) in the same ways.

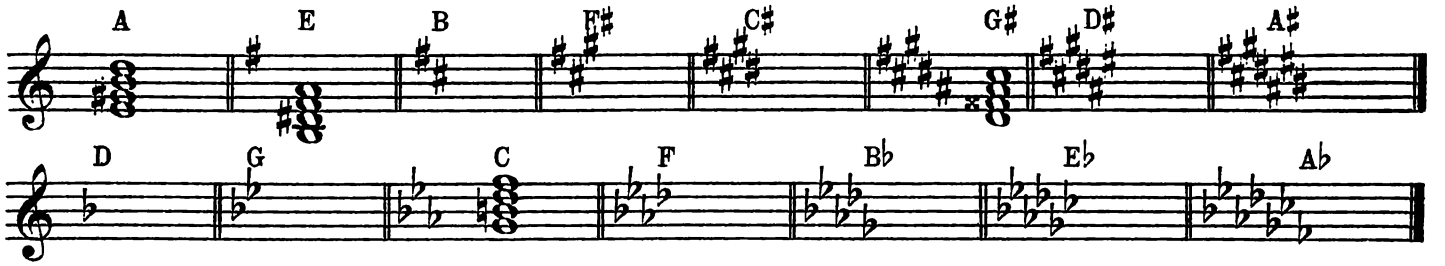
The dominant seventh arpeggios of each major key should now be played, in the order in which they have been named near the top of page 41. One should refer to the general rule for fingering grand arpeggios containing black and white keys, which will render it unnecessary that they all should appear in this work.

In seventh chord arpeggios containing some black keys, the student must guard against the almost universal fault of curving the third (middle) finger too much just before the fourth plays a black key, whereby its own force is materially weakened and the blow of the nail on the ivory is made unpleasantly audible.

The dominant seventh chord (and its arpeggio) has, **in every respect**, the same notes and fingering, whether in a major, or in a minor, key. As a very general failure clearly to understand this often presents a serious obstacle to the pupil's progress, the chord of the dominant seventh in every minor key should be written on the next staff.

Dominant Seventh Chords in Minor Keys.

The names of the minor keys (tonics) stand above the staff.

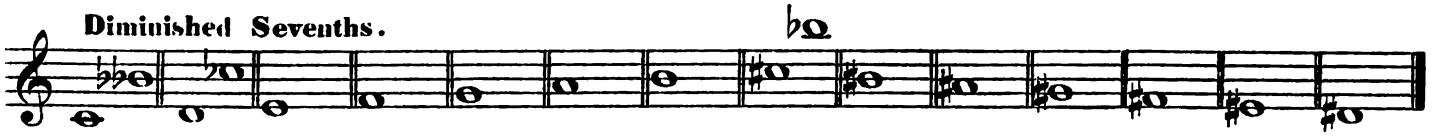


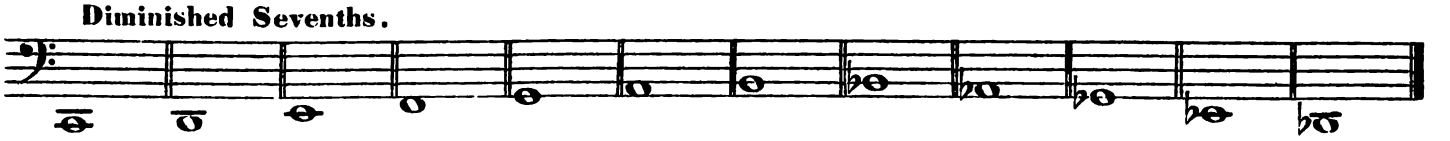
Although each of these has been played as the dominant seventh of a major key, it is desirable that they be played also with the student constantly thinking of them as in minor keys, in order to overcome the mental difficulty before mentioned.

Scale practice must not be omitted during the study of arpeggios, as the latter, causing an unnatural expansion, have a tendency to stiffen the whole hand and touch, unless combined with counteracting exercises.

A diminished seventh occupies seven degrees and contains four steps and a half.

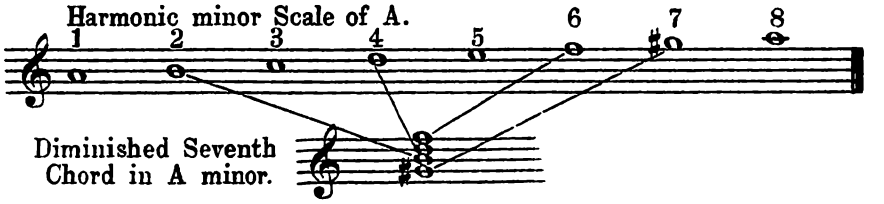
Write diminished sevenths above the following notes.





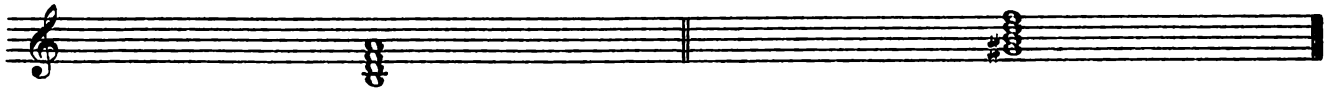
Chord of the Diminished Seventh.

In none of the preceding chords has the seventh been diminished: the triad on the leading-tone of major keys is diminished but its seventh, if it have one, is minor. **The chord of the diminished seventh** is founded originally on the leading-tone (seventh degree) of the harmonic minor scale and consists of the seventh, second, fourth and sixth degrees of that scale. It is the only chord which always comprises a root, minor third, imperfect (or diminished) fifth and diminished seventh.

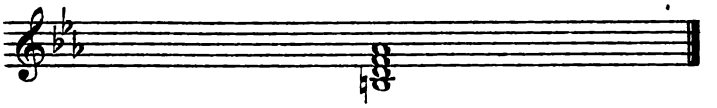


Seventh Chord on the Leading-tone, C major.
Minor Third, Imperfect Fifth, Minor Seventh.

Seventh Chord on the Leading-tone, A minor.
Minor Third. Imperfect Fifth. Diminished Seventh.



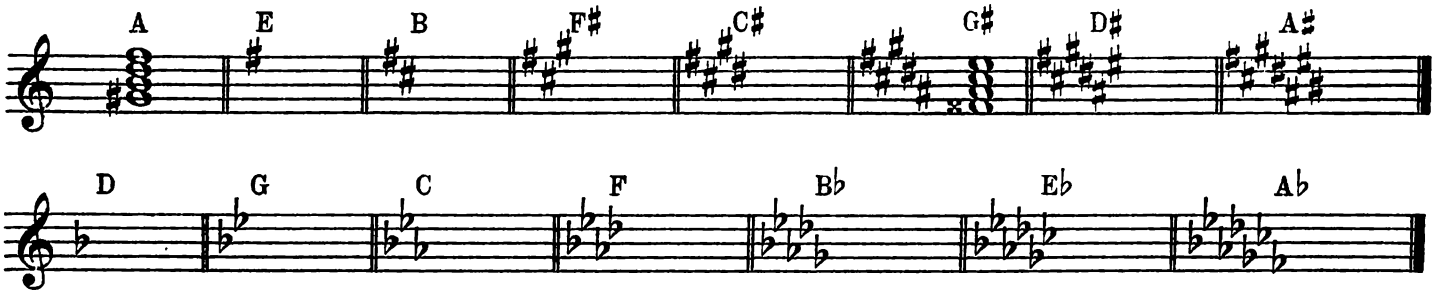
Seventh Chord on the Leading-tone, C minor.
Minor Third. Imperfect Fifth. Diminished Seventh.



Write the chord of the diminished seventh in each minor key on the next staff.

Chords of the Diminished Sevenths.

The names of the minor keys stand above the staff.

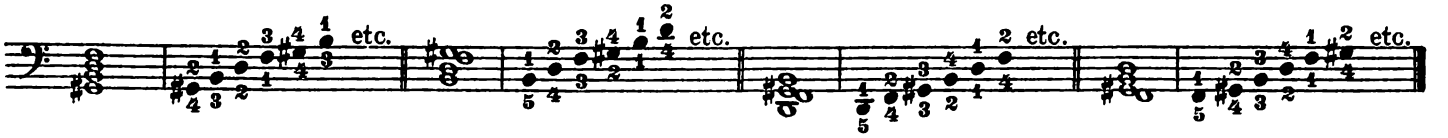


Any diminished seventh chord leaves two unoccupied piano-keys (counting both black and white) between every two belonging to the chord. This suggests a simple way of forming the chord, beginning with the leading-tone of any minor scale.

These chords admit of the same inversions as any seventh chords; and each form of arpeggio should be practised in the various ways shown under the dominant seventh. See No. 91, etc.

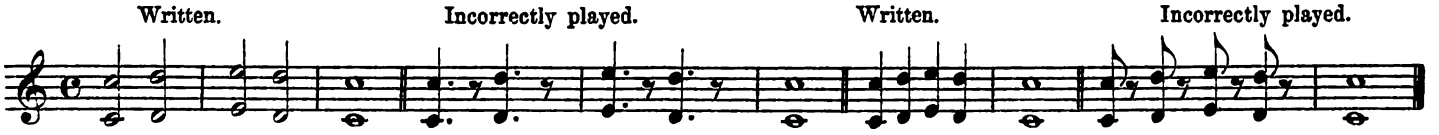
Diminished Seventh Chord in the Key of A minor.

First Position. First Position. First Inversion. First Inversion (or Second Position). Second Inversion. Second Inversion (or Third Position). Third Inversion. Third Inversion (or Fourth Position).



Octave Practice.

A very flexible wrist is indispensable to the best playing of octaves on repeated notes and in passages that are largely diatonic or that embrace no long skips. But in raising the hand from the wrist in rather slow octaves, there is danger of making the notes too short, almost **staccato** like those in Nos. 13 and 14. In order to guard against this error the hand must fall immediately after it rises from the keys, not remaining in the air at all. Allowing this fault introduces rests between the notes, where there should be none, thus: —



Rules for Octave Practice.

1. The wrist must be constantly flexible — never rigid. (Exceptions to this rule are sometimes proper in long skips and in passages of great force).

2. Except when playing with the thumb and fourth finger, the wrist must rarely be higher than the backs of the fingers. When raised too much it induces fatigue and frequently, »weeping sinews«.

3. The fifth finger must be kept sufficiently bent to strike on the tip — never on the side — if the hand is large enough and well expanded.

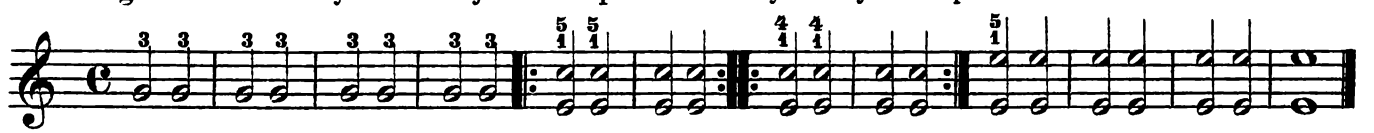
4. The hand must not be held in the air, but after leaving one key it must fall instantly to the next, allowing no rest to come between the notes, except when rests are written, or in **staccato** passages.

5. The notes of each octave, like those of any chord, must be struck exactly together, unless marked to the contrary.

Preparatory Exercises for Octaves.

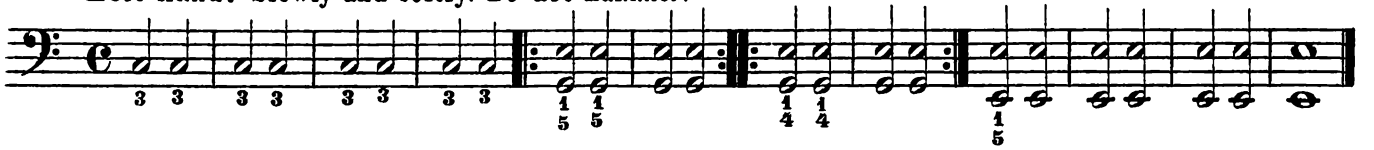
Right hand. Slowly and softly. Do not pound the keys. Play the repeats.

95.



Left hand. Slowly and softly. Do not hammer.

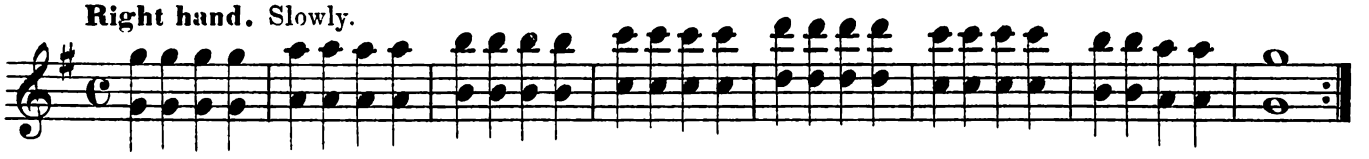
96.



Legato Octaves.

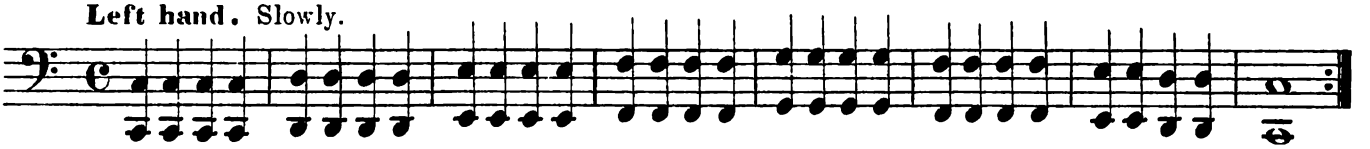
Right hand. Slowly.

97.



Left hand. Slowly.

98.



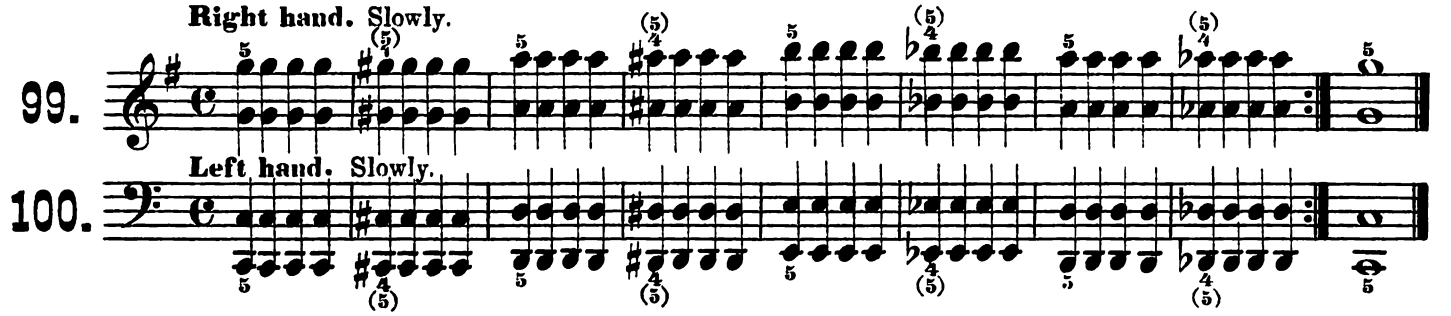
It is generally better to use the fourth fingers on the black keys, if the hand is sufficiently expanded. When this causes pain, the fifth finger should be used instead, care being taken to strike as near the ends of the black keys as possible. In the following, very narrow hands may use the fifth finger throughout.

Right hand. Slowly.

99.

Left hand. Slowly.

100.

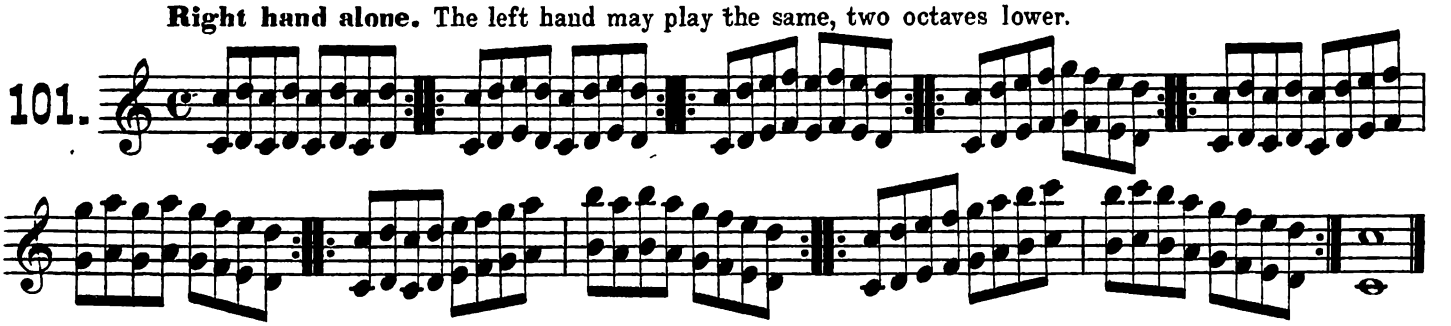


In all octaves that do not repeat notes, whether diatonic or skipping, a serious difficulty arises from the needless attempt to look at both keys of the octave played by the same hand. The exact span of the octave must be retained by the hand (except in slow **staccato** or otherwise mutually disconnected octaves) and a glance at the thumb is all that will be necessary. Even this must be dispensed with as soon as one can play accurately without looking at the keyboard.

It is recommended that the use of the fourth finger on white keys be delayed, even in pure **legato** passages, until a later stage of study when one can profitably take up the celebrated **Octave School** of Theodor Kullak.

Right hand alone. The left hand may play the same, two octaves lower.

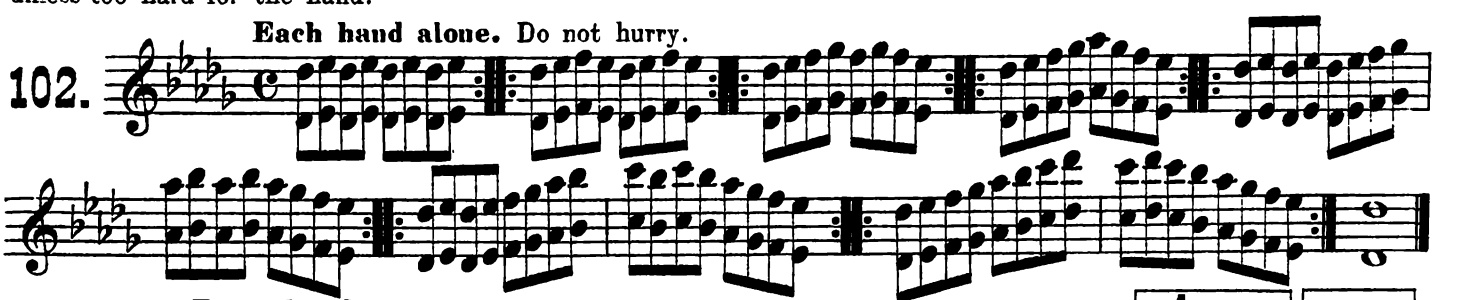
101.



The same exercise transposed into D♭ major affords occasion to use the fourth fingers on the black keys, unless too hard for the hand.

Each hand alone. Do not hurry.

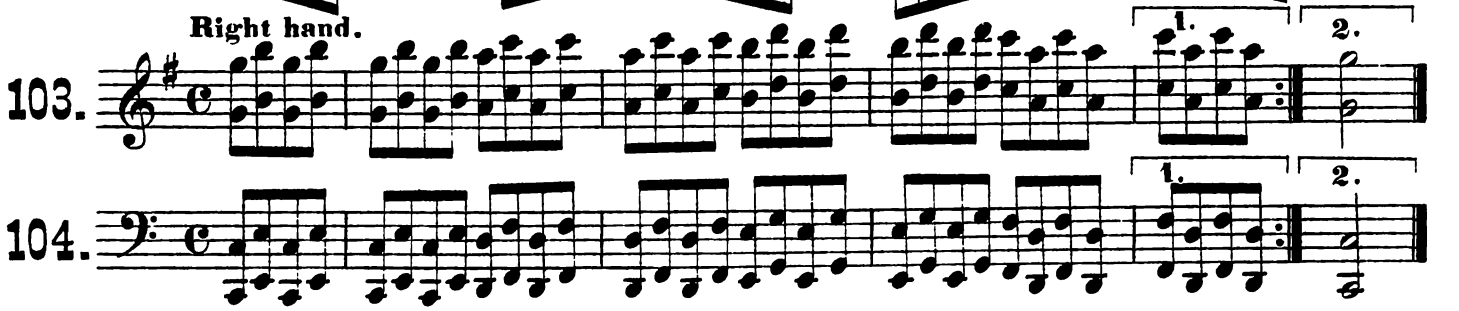
102.



Right hand.

103.

104.



See No. 265 for other octave exercises.

Slow Staccato Octaves.

When a slight pause intervenes between octaves it is well to relieve the tension of the hand by allowing the fingers to droop loosely together, not preserving the octave span when the hand is raised. If such octaves occur in soft passages, the wrist may be kept flexible throughout; but in loud passages the wrist needs to be stiffened at the instant of pressing the keys, becoming loose and flexible the moment the hand rises. The same directions apply to similar effects with any double notes and with chords.

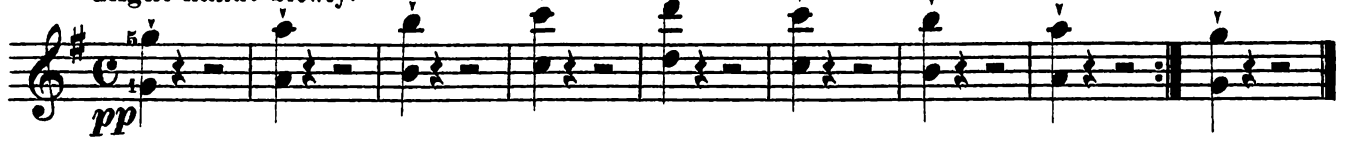
Refer to Nos. 13 and 14 and to the directions there given for playing **slow staccato** notes.

The hand must spring elastically upward, accompanied by a slighter movement of the wrist and fore-arm. Let the fingers and the whole hand come loosely together as the hand rises, opening again instantly to the octave span as the hand descends.

Play the whole exercise through as softly as possible, producing tones of great delicacy. Do not tap the keys. Be sure to play both notes of each octave.

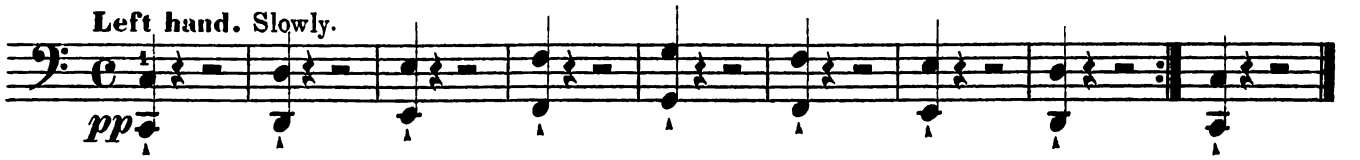
Right hand. Slowly.

105.



Left hand. Slowly.

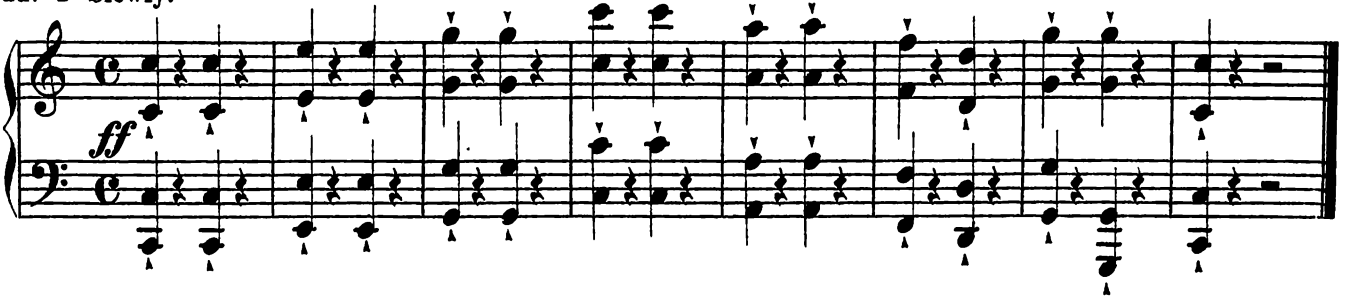
106.



Press each octave very sharply, but without any pounding or striking, and let the hands rise elastically.

Very loud. – Slowly.

107.

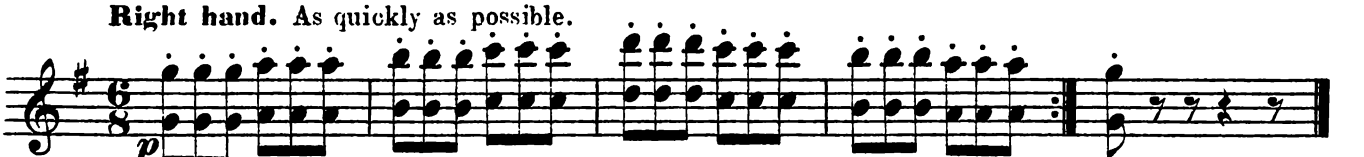


Rapid Staccato Octaves.

These are played precisely like single notes as shown in Nos. 15 to 18, inclusive. Keep the wrist very loose, tapping the keys rapidly but gently.

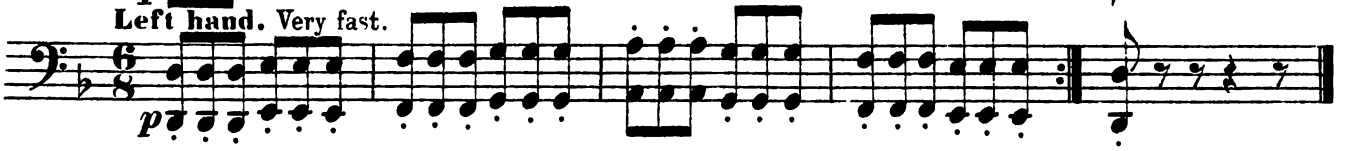
Right hand. As quickly as possible.

108.



Left hand. Very fast.

109.



See further octave exercises beginning with No. 265.

PART TWO.

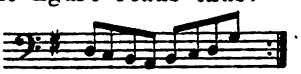
In **Part One** the student has had only the simplest exercises — those that are indispensable to persons whose only aim is to play for their own pleasure. **Part Two** leads to a further development of each principle already explained and also introduces others, but only so far as is needed for good amateur playing. At the same time, every thing here given is a necessary preparation for the study of that higher technique which belongs to concert playing and to which one may now approach easily and surely by a **systematic** practice of what follows. Useful **Schedules for Daily Practice** may be found at the close of this work as an appropriate summary of the whole.

Hitherto, with but one exception (No. 107), separate work has been assigned to each hand; and even now, when work is written for both together, it is recommended that each be exercised alone before uniting the two, especially in cases where there is danger that a fault in one hand may be concealed by accurate playing in the other, as in all passages which bring the notes constantly one octave apart.

As finger exercises which move up and down the scale require intermingled expansions and contractions, a few examples in these important items of technique are first given, although the hand has already gained much from the grand arpeggios in **Part One.**

TRANSPOSITION.

In order to transpose any exercise into another key it is necessary only to use **the same degrees** of the new key and **in the same order** as presented in the original. For example, it is desired to transpose the following figure from the key of C major to that of G major.  The figure begins on the dominant (the fifth of the scale), moves diatonically downward to the super-tonic, returning diatonically to the dominant, and skips up to the tonic, ready for the repeat. Using the same degrees of the key of G major and in the same order, the figure reads thus: —

 In F, thus:  In D♭, thus: 

The following exercises are given first in C major, but each is to be transposed into every major and minor key, **retaining the fingering as given in C major,** in order to give independence of fingering and perfect equality of touch, in the changes on black and white keys. Play each exercise, therefore, in each major key, in this order: — C, D♭ (C♯), D, E♭, E, F, F♯ (G♭), G, A♭, A, B♭, B (C♭), or in this order reversed: also afterward in the relative minor of each of these keys.

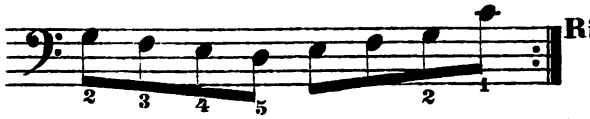
Nos. 110 to 151, inclusive, may be played an octave higher or lower, if desired. In some of the harder exercises, a slightly rolling motion of the hand is allowable.

EXPANSION.

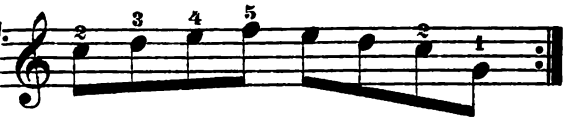
Each exercise is to be played in each metronome **tempo,** eight times in succession.

Expansion between 1-2. - Slowly; ♩=144. Rather fast; 𝅗𝅥=120. Fast; 𝅗𝅥=168.

Left hand. 110.

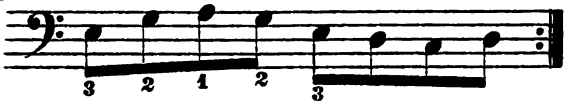


Right hand. 111.

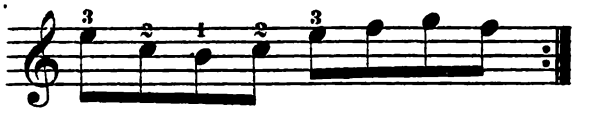


Expansion between 2-3. The same three **tempi** as before.

Left. 112.

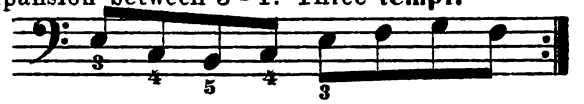


Right. 113.

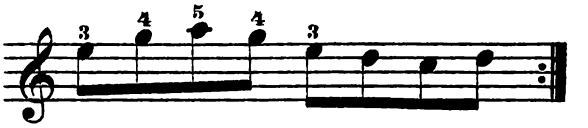


Expansion between 3-4. Three **tempi.**

Left. 114.

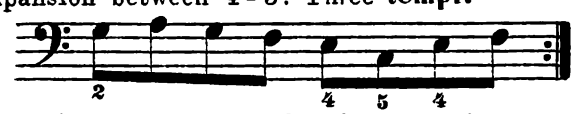


Right. 115.

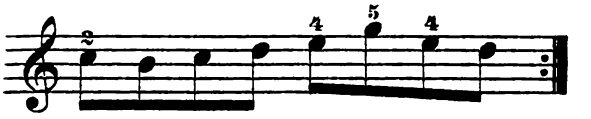


Expansion between 4-5. Three **tempi.**

Left. 116.

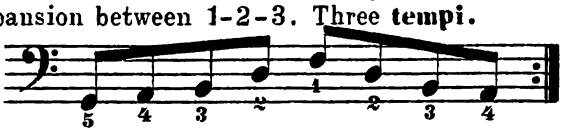


Right. 117.

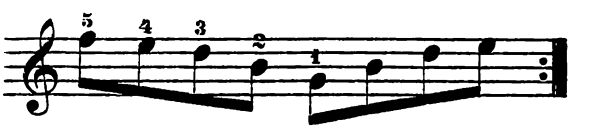


Expansion between 1-2-3. Three **tempi.**

Left. 118.

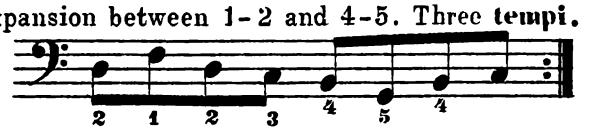


Right. 119.

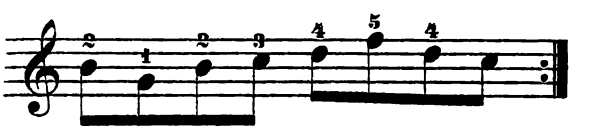


Expansion between 1-2 and 4-5. Three **tempi.**

Left. 120.

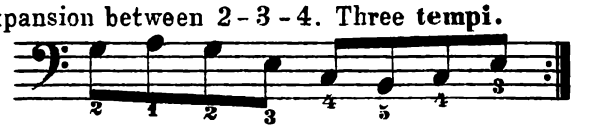


Right. 121.

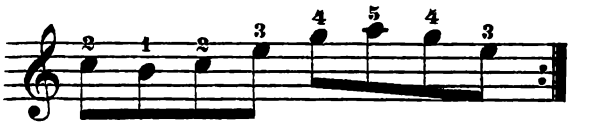


Expansion between 2-3-4. Three **tempi.**

Left. 122.

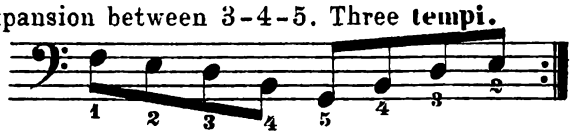


Right. 123.

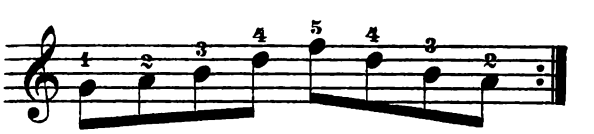


Expansion between 3-4-5. Three **tempi.**

Left. 124.

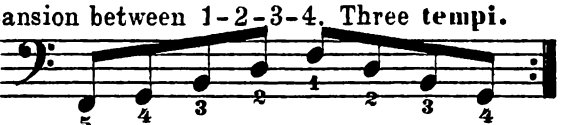


Right. 125.

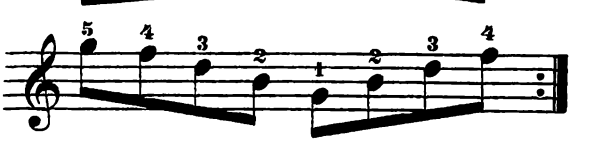


Expansion between 1-2-3-4. Three **tempi.**

Left 126.

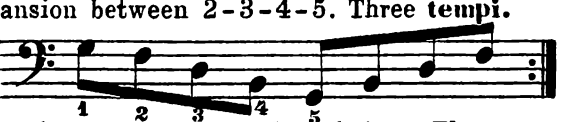


Right. 127.

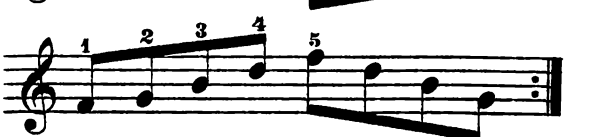


Expansion between 2-3-4-5. Three **tempi.**

Left. 128.

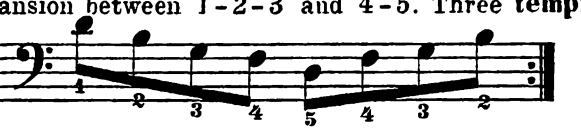


Right. 129.

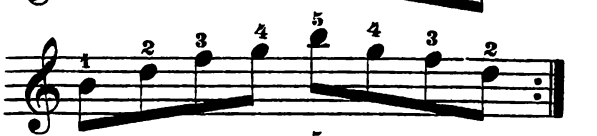


Expansion between 1-2-3 and 4-5. Three **tempi.**

Left. 130.

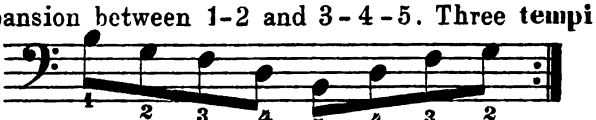


Right. 131.

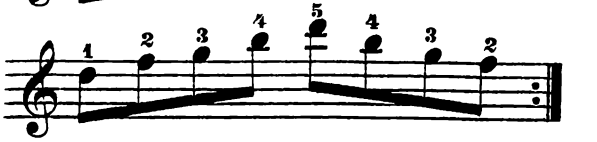


Expansion between 1-2 and 3-4-5. Three **tempi.**

Left. 132.

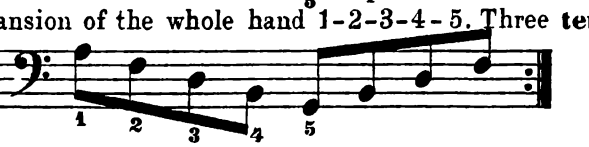


Right. 133.

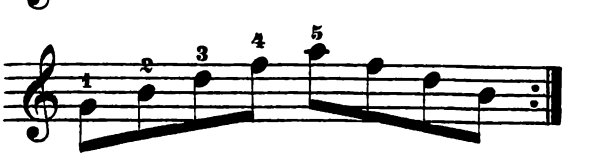


Expansion of the whole hand 1-2-3-4-5. Three **tempi.**

Left. 134.



Right. 135.

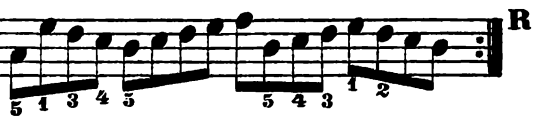


Contraction.

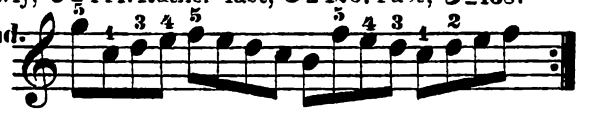
The fingering requires special attention. Transpose each exercise into every major key, each one in three **tempi** in turn.

Displacement of the second finger: contraction of ⌜1 3⌝. Slowly; ♩= 144. Rather fast; 𝅗𝅥= 120. Fast; 𝅗𝅥=168.

Left hand.
136.

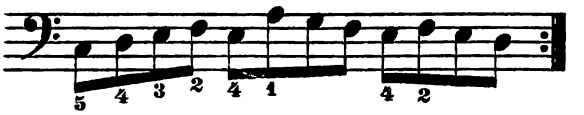


Right hand.
137.

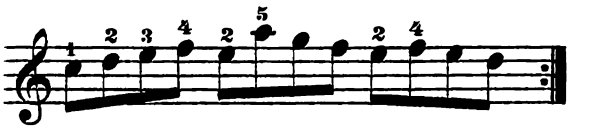


Displacement of the third finger: contraction of ⌜2 4⌝.

Left.
138.

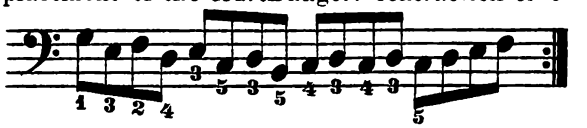


Right.
139.

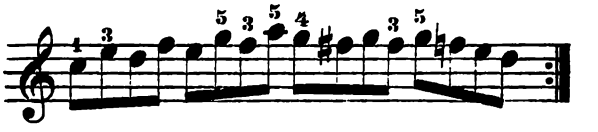


Displacement of the fourth finger: contraction of ⌜3 5⌝.

Left.
140.

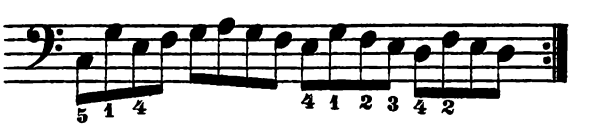


Right.
141.

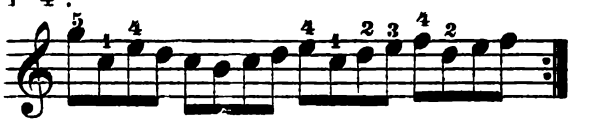


Displacement of the second and third fingers: contraction of ⌜1 4⌝.

Left.
142.

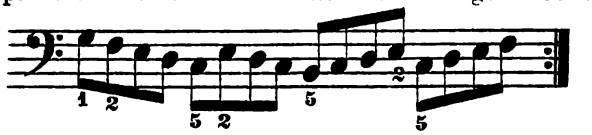


Right.
143.

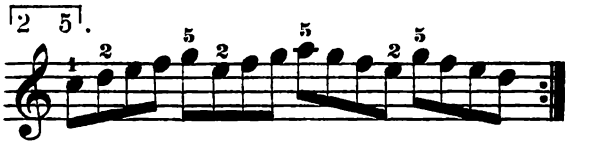


Displacement of the third and fourth fingers: contraction of ⌜2 5⌝.

Left.
144.

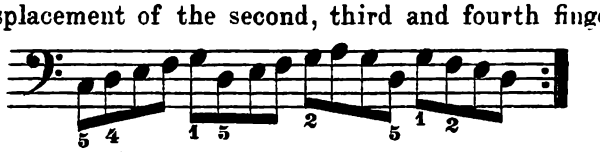


Right.
145.

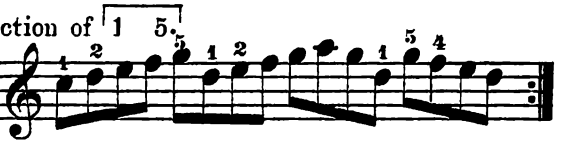


Displacement of the second, third and fourth fingers: contraction of ⌜1 5⌝.

Left.
146.



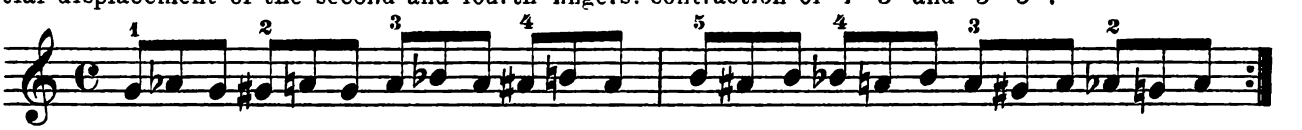
Right.
147.



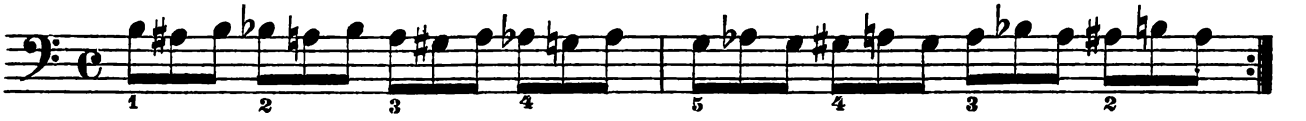
Nos. 148 and 149 four times each, in three **tempi.**

Partial displacement of the second and fourth fingers: contraction of ⌜1 3⌝ and ⌜3 5⌝.

Right.
148.



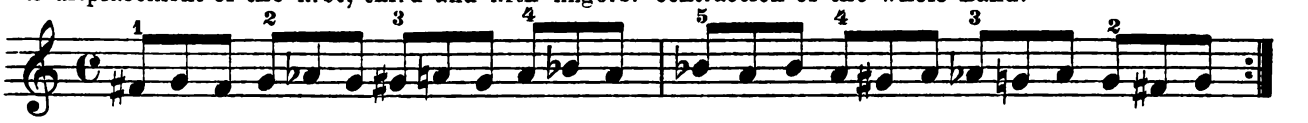
Left.
149.



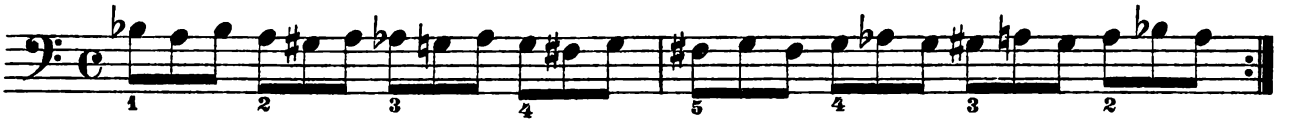
Nos. 150 and 151 four times each.

Partial displacement of the first, third and fifth fingers: contraction of the whole hand.

Right.
150.



Left.
151.



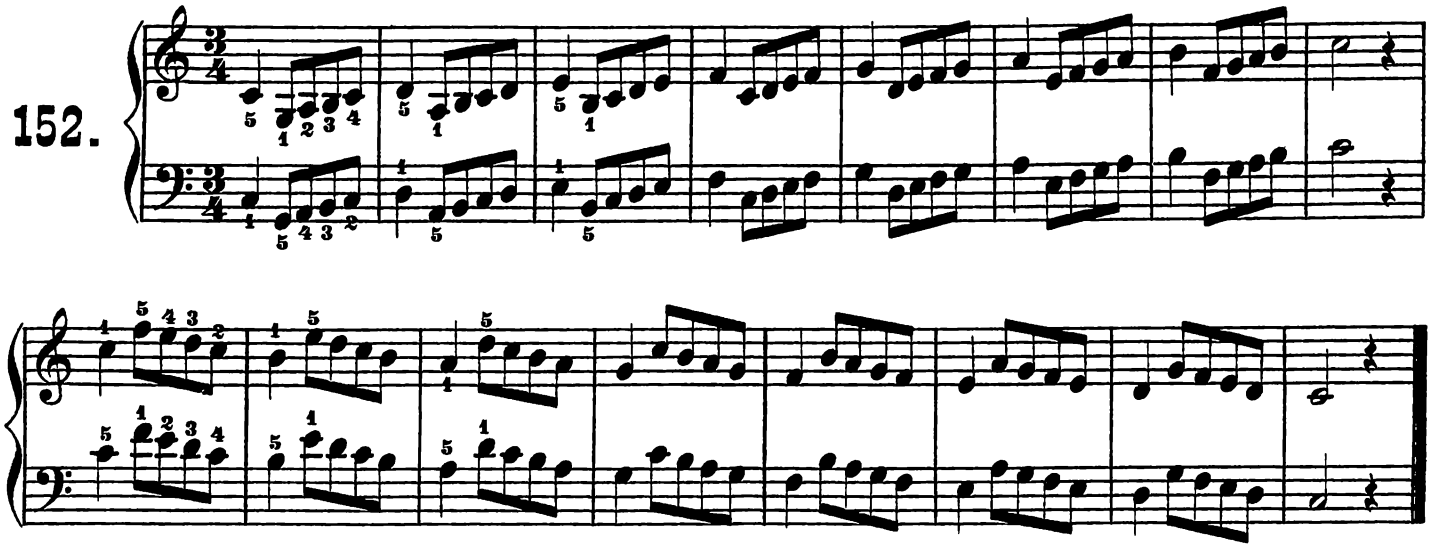
PROGRESSING FINGER EXERCISES.

These, in contradistinction to stationary exercises, move gradually up and down the keyboard. Each is to be played in at least three **tempi**, as marked in connection with No. 152, and in every major key — C, D♭ (C♯), D, E♭, E, F, F♯ (G♭), G, A♭, A, B♭, B (C♭). Either hand may play an octave higher or lower, for convenience. Observe the different notes in the metronome marks.

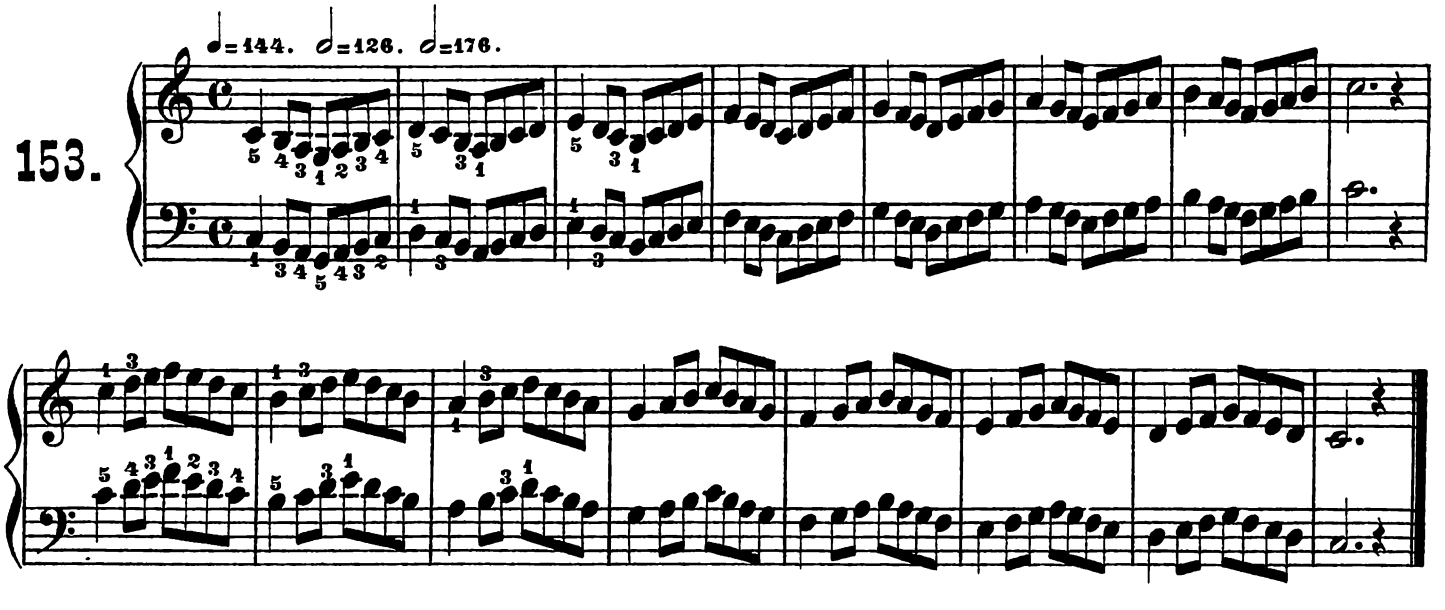
Each hand alone before uniting the two.

Moderato; ♩=120. Allegro; 𝅗𝅥.=80. Presto; 𝅗𝅥.=120.

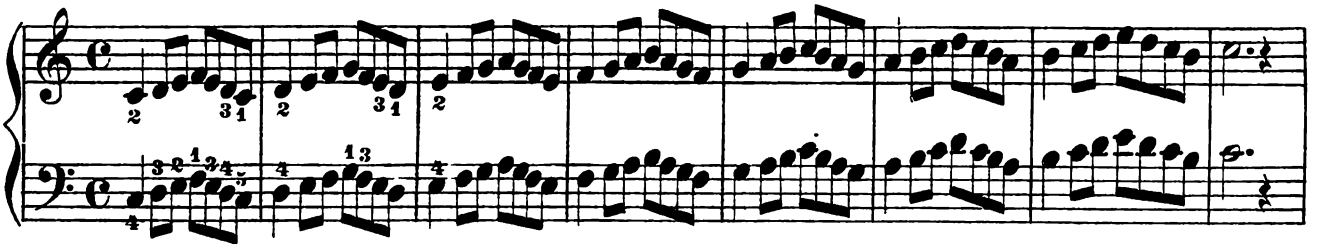
152.

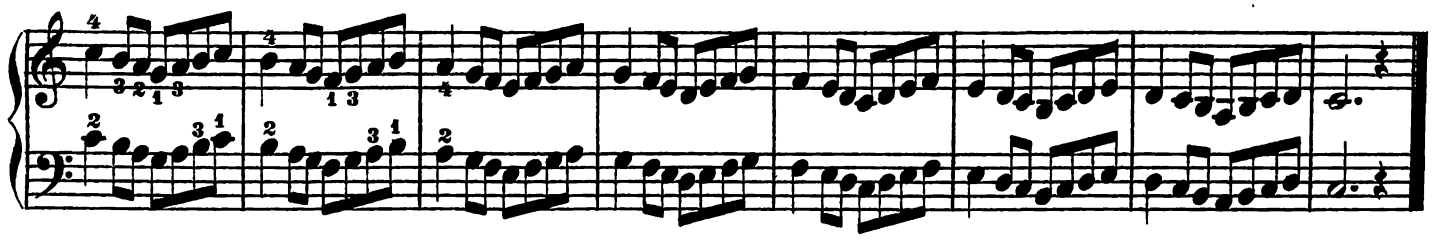


153. ♩=144. 𝅗𝅥=126. 𝅗𝅥=176.

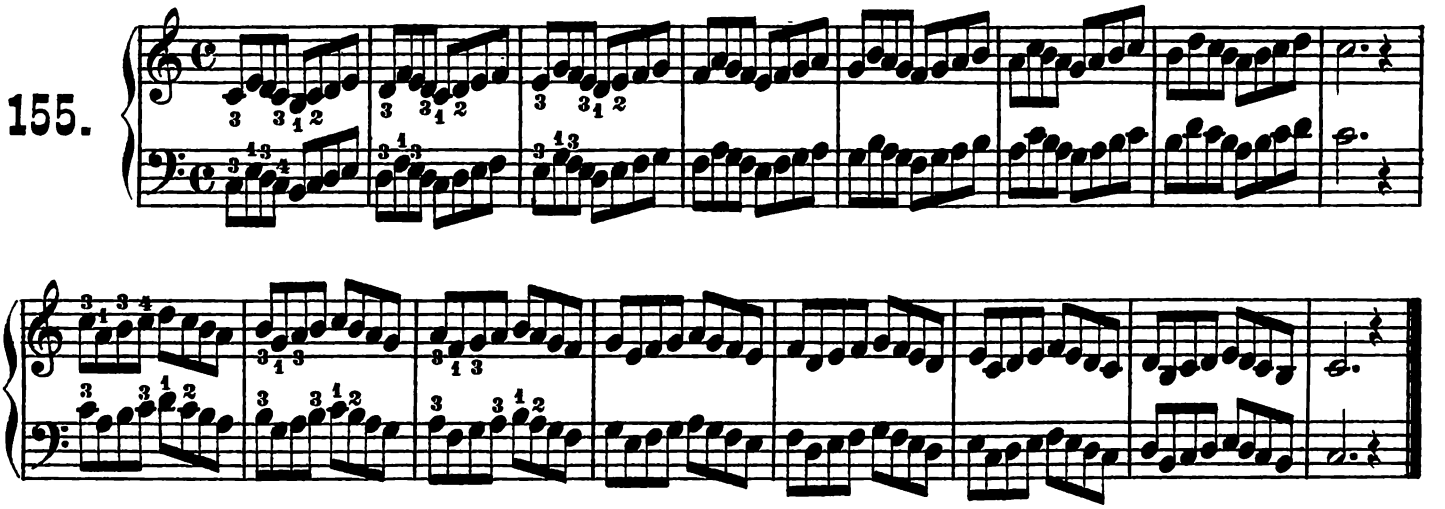


154.





155.



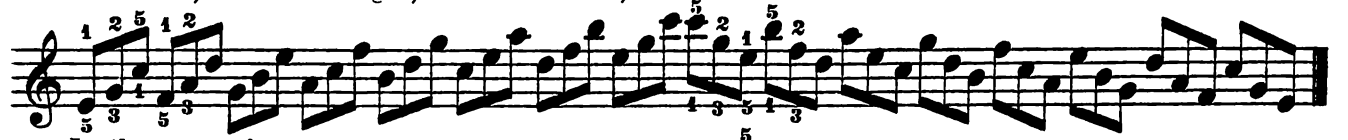
THREE NOTE BROKEN TRIADS.

Plain and Embellished.

After thorough practice on finger exercises over five keys, those over the first inversion (or second position) of triads are especially useful, the figures being transposed diatonically as before. The exercises may be played in any octave best suited to the hands and in each major key. The fingering above and below is for the right and left hand respectively. First, each hand alone: afterward, both together. Every exercise in three **tempi**, or more. Nos. 156 and 157 have inverted figures in descending, in order to preserve the same intervals between the fingers. To be practised in every major key with the fingering here given.

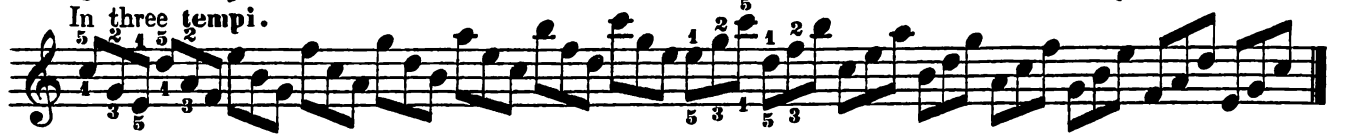
Moderato; ♩.=100. Allegro; ♩.=152. Presto; ♩.=200.

156.

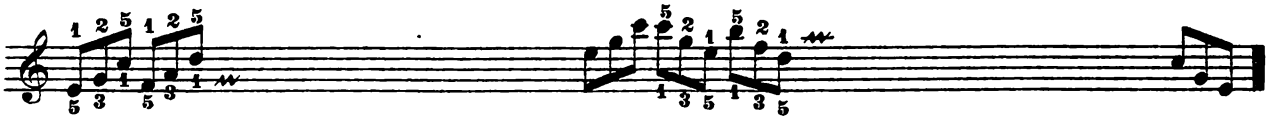


In three **tempi**.

157.



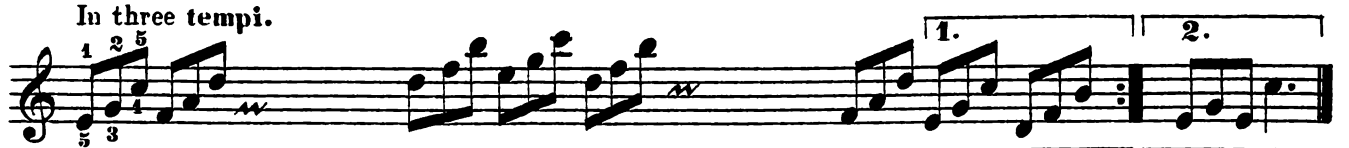
When this sign ~ stands immediately after an unfinished passage, and with no note directly above or below it, it is called a **direct**. In such cases it shows where the next note would be, if printed, and directs the player (or singer) to continue regularly the preceding progression until some change is introduced. Instead, therefore, of printing No. 156 out in full, it would be as properly and as clearly indicated thus: -



In technical exercises similar to these, the direct continues the fingering as well as the melodic figure.

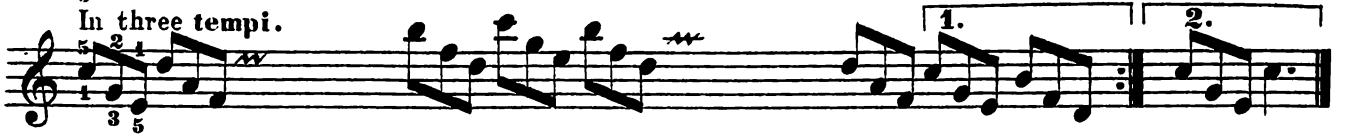
In three tempi.

158.



In three tempi.

159.

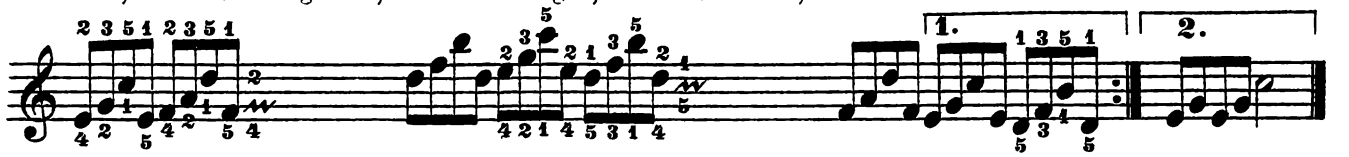


As all of the following exercises, to No. 185, inclusive, are based upon Nos. 158 and 159, it is essential that these be committed to memory; and this is recommended with reference to every exercise in this work, provided students will abstain from looking at their hands while playing, except when really necessary.

By adding to each group of No. 158 its first note, a new figure is produced, requiring new fingering. When the descending series is not inverted, the same figure being preserved, an unavoidable change of fingering often results which demands special care. Should the teacher prefer to change the figure and retain the fingering, this may be done by joining to the upward series of No. 160 the downward series of No. 161, and vice versa. So in some other exercises.

Moderato; ♩=116. Allegretto; ♩=152. Allegro; 𝅗𝅥=116. Presto; 𝅗𝅥=152.

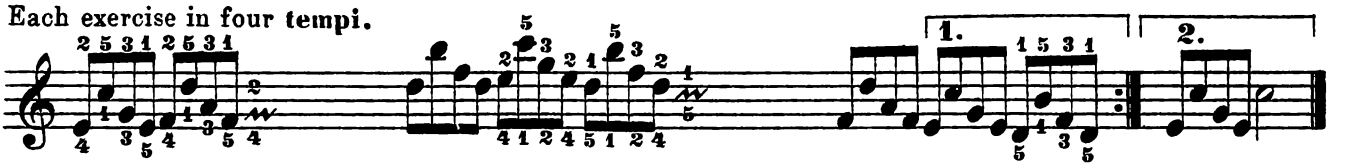
160.



Reversing the figure of No. 160 produces the following.

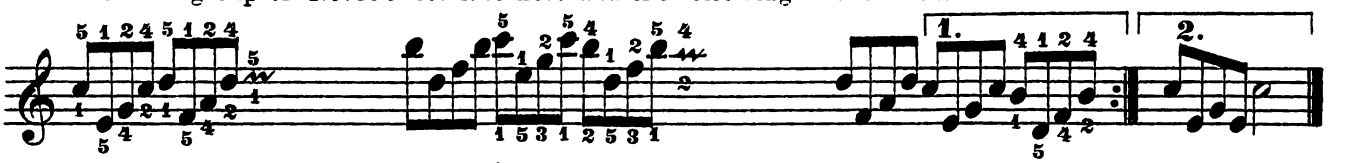
Each exercise in four tempi.

161.



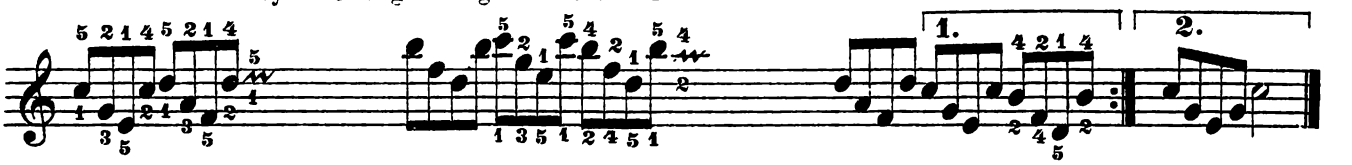
Prefix to each group of No. 158 its last note and the following is the result.

162.



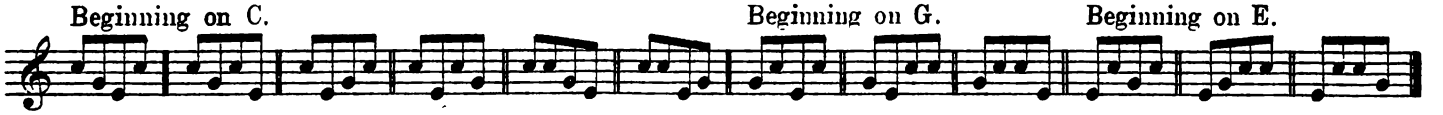
The next is formed by reversing the figure of No. 162.

163.



When either two notes (of a group of four) are the same, twelve different figures can be formed from them, simply by changing their order. For example, in No. 163 there are two Cs, one G and one E, which may be arranged in either of the following figures.

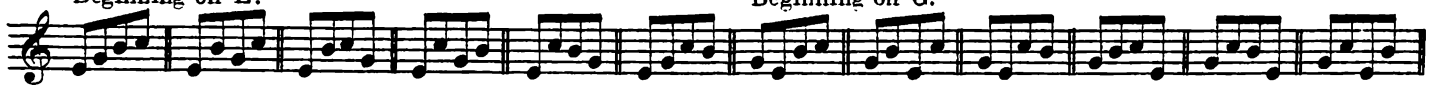
Beginning on C. Beginning on G. Beginning on E.



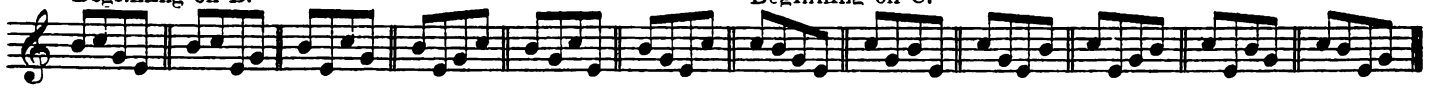
Some of these are more useful than others; and it is generally advisable to practise only the best, going on to an entirely new figure, rather than to devote a great deal of time to all that can be developed from any one.

Among the most useful forms of broken triads are those which are somewhat embellished, or elaborated, by being combined with other notes. When the four notes are all different ones, the group is susceptible of twenty-four forms, thus: —

Beginning on E. Beginning on G.

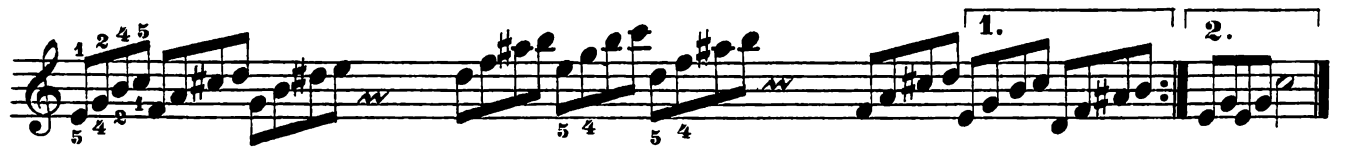


Beginning on B. Beginning on C.



The first of these is formed by writing a diatonic semitone below and before the last note in each group of No. 158. In the absence of bars, it is here understood that accidentals affect only the notes by whose side they stand.

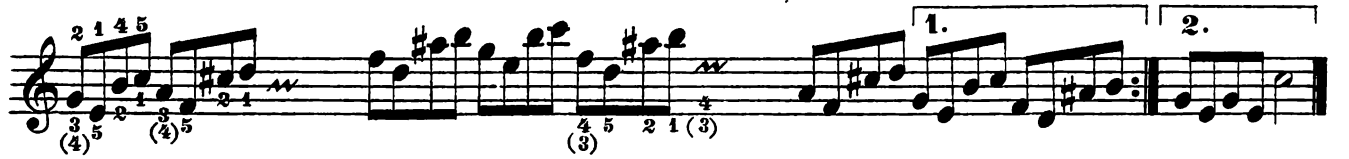
164.



Not only the notes of every group, but the last note of each and the first of the next must be well connected. Do not lift the hand from the keys.

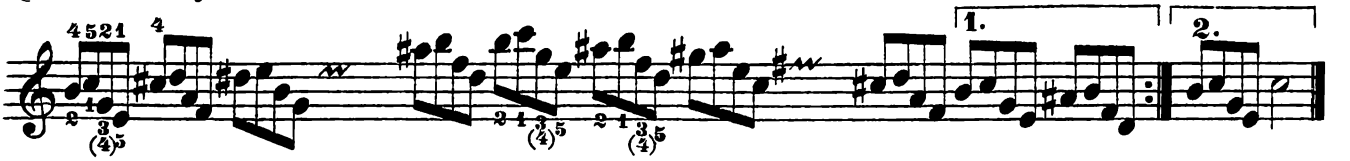
No. 165 is formed by interchanging the first two notes of No. 164. Different hands may here require different fingering.

165.



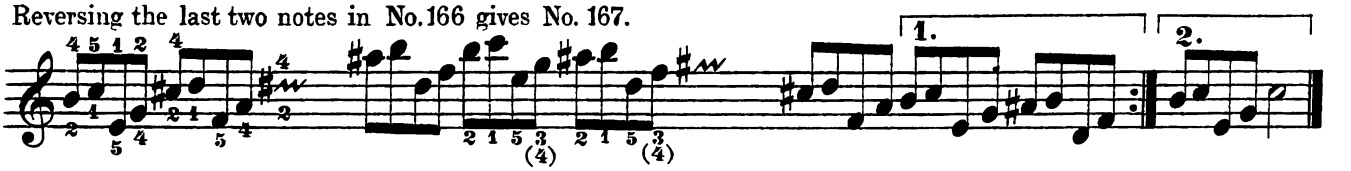
Interchange the first two notes and the last two of No. 165 to form No. 166, which is especially useful for the right fourth finger.

166.



Reversing the last two notes in No. 166 gives No. 167.

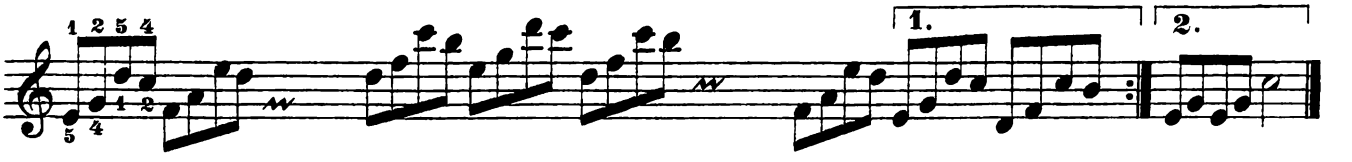
167.



Any others of the foregoing twenty-four forms may be practised, at the teacher's discretion.

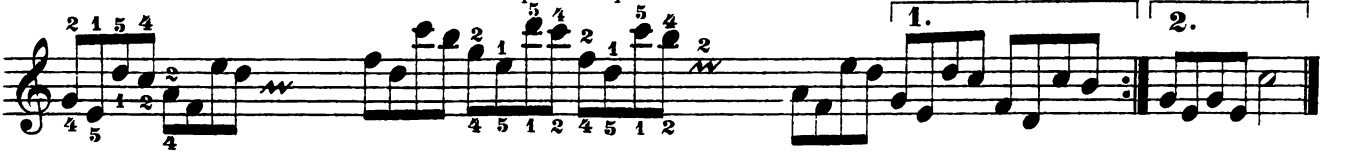
A new figure, also susceptible of twenty-four forms, here follows.

168.



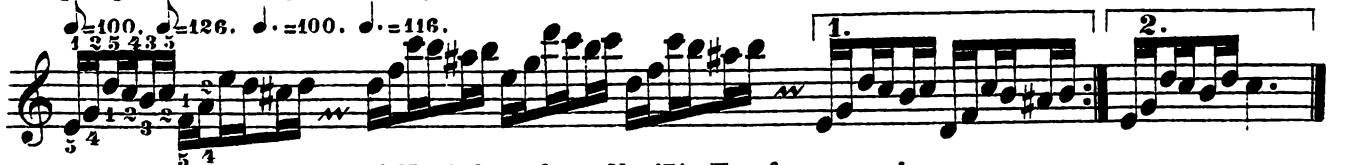
Reversing the first two notes of No 168. helps to expand the hand.

169.

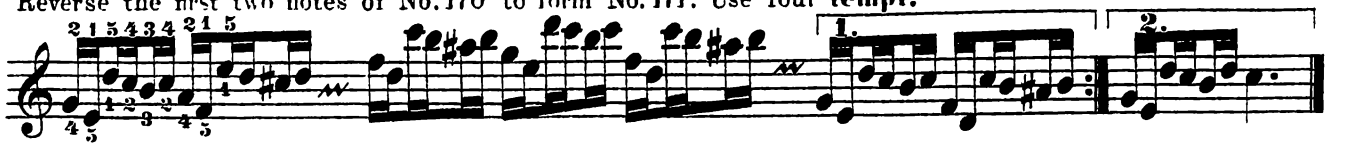


Out of the innumerable combinations that can be invented, it is impossible to make what shall always prove to be a progressive selection and arrangement, owing to the different needs of different students. Every experienced teacher, therefore, will use these and many other exercises in the order best adapted to the improvement of each pupil.

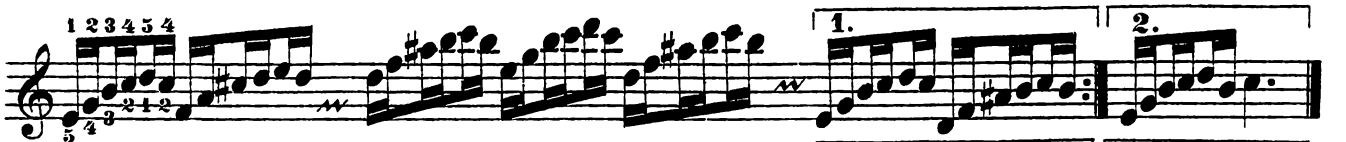
The following, which is the first of those here given which employ all five fingers in each group, must not be regarded as a group of two triplets. Use four different **tempi.** Play all the notes with nearly equal force. The group is formed by combining the figure of No. 168 with the last two notes of No. 165.

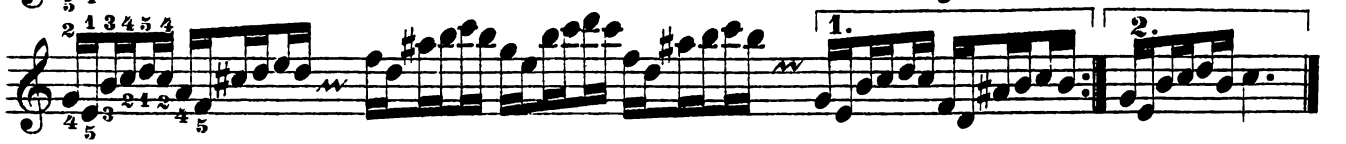
170. 

Reverse the first two notes of No. 170 to form No. 171. Use four **tempi.**

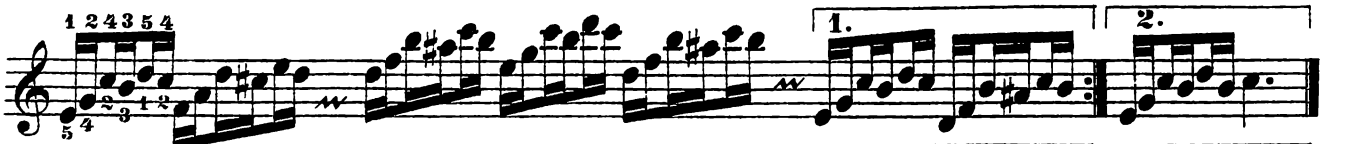
171. 

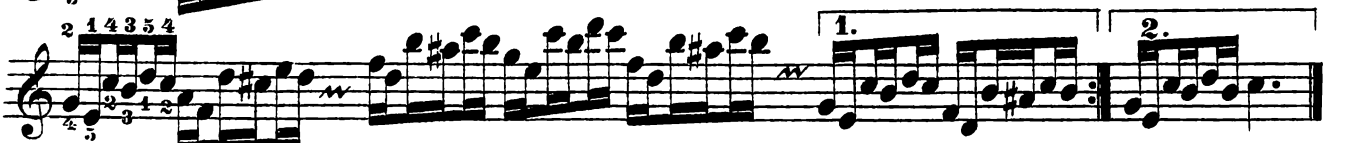
A group of six different notes can assume seven hundred and twenty different forms; and if the enthusiastic lover of technique will exhaust all six note groups with their various forms, and the eight note groups, each of which can be presented in forty thousand three hundred and twenty ways, we may reasonably hope that by that remote period some new style of pianoforte, and of brains and hands may be invented which shall give full scope to a still greater and hitherto undreamed of development of finger gymnastics. After this glance into the music of the future, we will resume work on another useful transformation of No. 170.

172. 

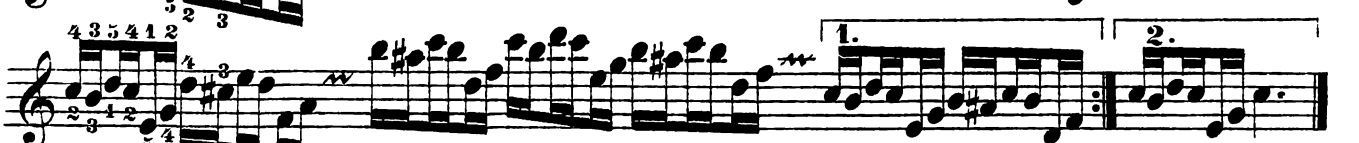
173. 

In the next four exercises it may be well to interchange the second halves of Nos. 174 and 177, as already suggested in connection with former exercises; and Nos. 175 and 176 may be treated likewise.

174. 

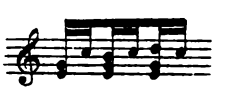
175. 

176. 

177. 

Double notes must be played exactly together.

178. 

Useful variations of No. 178 are  and 

179.

180.

181.

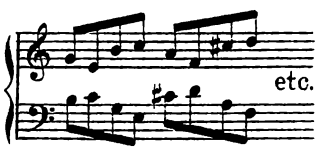
182.

183.

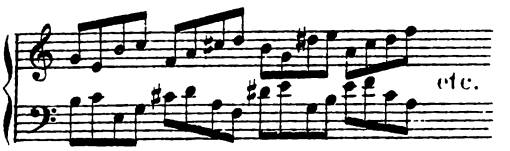
184.

185.

When the student shall be able to play the foregoing exercises, each hand alone and both together, they may be further employed by the two hands playing different forms of the same figure at the same time, thus: —



Afterward, the exercises are made still more difficult by making them irregular, thus: —



See No. 187 for further practice on three note broken triads.

☞ The daily practice of the following is recommended as a special means for developing the strength which calls for **endurance.** The figure is to be played four times consecutively in each major key, with no pause between the keys, and the ascent and descent of the following series to be four times in succession. The entire exercise, with the required repetitions, should not occupy over five minutes.

186. Four times. Four times.

and in E, F, F♯(G♭), G, A♭, A, B♭, B (C♭) and

Four times. Four times. Four times.

and in A♭, G, G♭(F♯), F, E, E♭, D, D♭(C♯), and C.

FURTHER DEVELOPMENT OF SCALE PRACTICE.

In playing scales accented in both hands, one must guard against a common fault of omitting the left hand accents. Every major and minor scale requires the following practice:

B. Both Hands Beginning One Octave Apart.

Both hands together. **Parallel Motion.**

1. No accent, clearly, two octaves. Andante.
2. Accent the first of every two notes. two octaves. Andante.
3. Accent the first of every three notes, three octaves. Moderato.
4. No accent, three octaves. Allegretto.
5. Accent the first of every four notes, four octaves. 1) Allegretto. 2) Allegro.
6. No accent, four octaves. Presto.

C. Both Hands Beginning Six Octaves Apart.

Contrary Motion.

1. No accent, clearly, two octaves. Andante.
2. Accent the first of every two notes, two octaves. Andante.
3. Accent the first of every three notes, three octaves. Moderato.
4. No accent, three octaves. Allegretto.
5. Accent the first of every four notes, two octaves. 1) Allegretto. 2) Allegro.
6. No accent, two octaves. Presto.

In practising tables **D**, **E** and **F** in the key of C major. it is practicable either to use the fingering already given, or always to begin with the thumb and fifth finger; but inasmuch as this is not possible in most other keys, it is better to retain throughout the key of C the regular fingering — the left fourth finger on D and the right on B.

D. Both Hands Beginning a Tenth Apart.

Parallel Motion.

1. No accent, clearly, two octaves. Andante.
2. Accent the first of every two notes, two octaves. Andante.
3. Accent the first of every three notes, three octaves. Moderato.
4. No accent, three octaves. Allegretto.
5. Accent the first of every four notes, four octaves. 1) Allegretto. 2) Allegro.
6. No accent, four octaves. Presto.

E. Both Hands Beginning Six Octaves and Two Notes Apart.

Contrary Motion.

Unless the instrument have a compass of more than seven octaves, table **E** can not be played in the keys beginning on F♯, G♭, G, G♯ and A♭. For these keys one must begin with the hands separated five octaves and two notes, and omit Nos. 3 and 4 in this table.

1. No accent, clearly, two octaves. Andante.
2. Accent the first of every two notes, two octaves. Andante.
3. Accent the first of every three notes, three octaves. Moderato.
4. No accent, three octaves. Allegretto.
5. Accent the first of every four notes, two octaves. 1) Allegretto. 2) Allegro.
6. No accent, two octaves. Presto.

F. Both Hands Beginning a Third Apart.

Parallel Motion.

Although this is simply table **D** reduced to the interval of a third, it will be found somewhat harder, as the hands mutually interfere.

1. No accent, two octaves. Andante.
2. Accent the first of every two notes, two octaves. Andante.
3. Accent the first of every three notes, three octaves. Moderato.
4. No accent, three octaves. Allegretto.
5. Accent the first of every four notes, four octaves. 1) Allegretto. 2) Allegro.
6. No accent, four octaves. Presto.

Chromatic scales with the hands separated 1) an octave, 2) a major sixth and 3) a minor third should be practised with accents and without: also in contrary motion.

Beside these ways of diversifying scale study, one may also practise with accents in the right hand alone; then in the left hand, only; then alternating between the two; with the right hand **staccato** and the left **legato**; then the reverse of this; with an ascending **crescendo** scale and a descending **diminuendo**; then the opposite of this; with both a **crescendo** and a **diminuendo** ascending and the same descending; with these effects reversed; with a steady **crescendo** up and down; with a long **diminuendo** up and down; with a **crescendo** in the left and a **diminuendo** in the right: with the reverse of this; and so on **ad infinitum.** As an exceptional means for technical development every major and minor scale may be fingered like the scale of C major, with the left fourth finger on the supertonic and the right on the leading-tone.

Scales of single hand thirds (frequently and erroneously called double thirds, when the thirds themselves are not double) follow No. 277, and single hand sixths, No. 292.

Scales in both hands, with rhythm diversified as in No. 256 under grand arpeggios, are scarcely endurable, even for mechanical development, because of their discordant character.

Chains of Broken Triads, or Short Arpeggios.

All the previous exercises on broken chords have been formed upon but one arrangement of the triad, its first inversion (or second position). This required, in each exercise, only one fingering and almost no mental effort. But when an exercise is not perfectly symmetrical in its progressions, the consequent irregularity of fingering introduces a new difficulty, though not a serious one. This is illustrated in what now follows.

An uninterrupted succession of broken chords on any one chord, following in the regular, progressive or retrogressive order of its inversions, forms what is called a **chain of broken chords.** If the same position or inversion of a three note chord be repeated, the fingering almost adjusts itself; but in a chain, it is usually better to finger each group in such a way as partially to prepare for the next. Many of the following are marked with two fingerings: the student is advised to try each, select the one best adapted to his hand and then to use that exclusively.

Rules for Playing Broken Chords.

1. Just before playing a broken chord, expand the hand so that each finger will be directly over the proper key.
2. Keep the fingers curved, nearly as in finger exercises.
3. Play with the fingers only, not jarring the wrist or arm, though the hand and wrist may sometimes roll slightly, if so disposed.
4. Do not hold two keys at once (except when richness and heaviness are desired).

5. Unless a group be **repeated** in the same form, do not hold the fingers extended over the keys that they have just played: let the hand come loosely together, relieving it of all tension and preparing it for the position of the next following notes.

6. Connect smoothly the last note of each group with the first of the next.

7. In accented passages, do not raise the hand just before the accented notes but connect them smoothly with the others, unless the contrary is plainly marked.

8. No change in the length of notes must be caused by the accent.

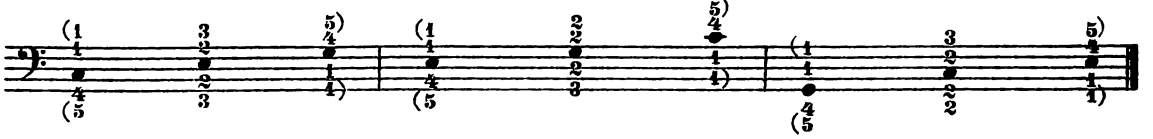
THREE NOTE BROKEN TRIADS.

Only one form, with its derivatives, is here given, as nearly all others require different fingering, somewhat similar to the four note broken triads. See No. 217, etc. The following forms should be applied to all triads having only white, or only black keys.

Model for Fingering

the Major Triads of C, F, G, F♯, G♭ and
the Minor Triads of A, D, E, D♯, E♭.

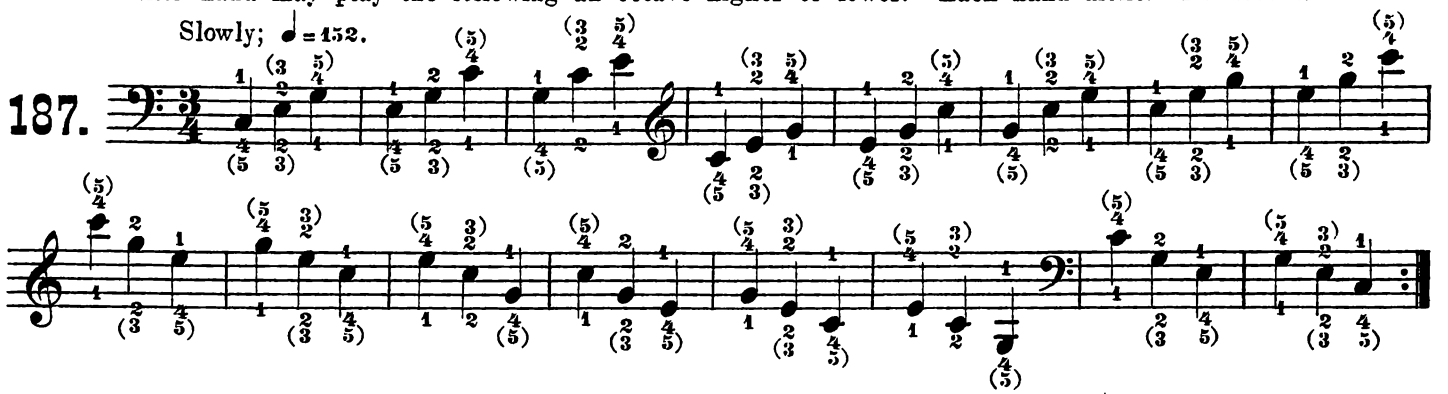
First Position. First Inversion (or Second Position). Second Inversion (or Third Position).



Either hand may play the following an octave higher or lower. Each hand alone. No accent.

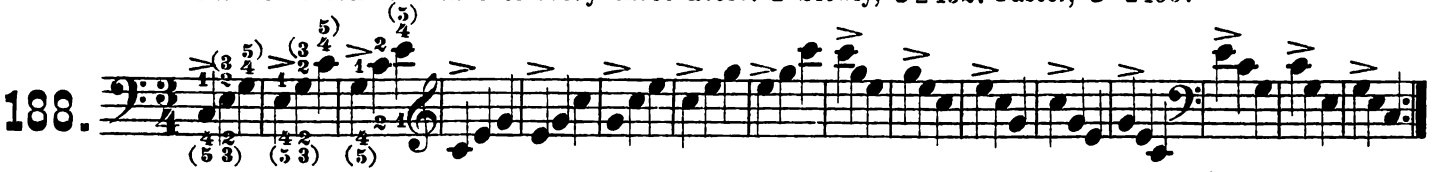
Slowly; ♩ = 152.

187.



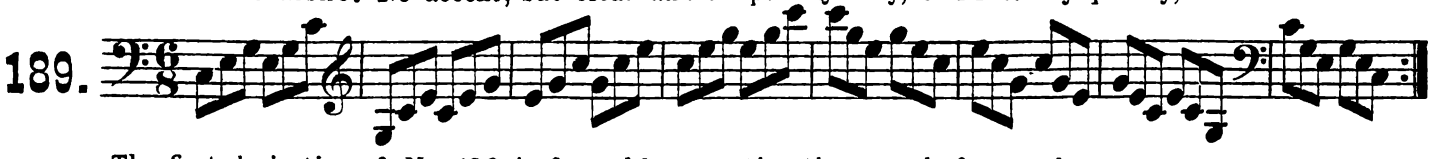
Each hand. Accent the first of every three notes. – Slowly; ♩ = 152. Faster; 𝅗𝅥. = 100.

188.



Each hand alone. No accent, but clear and crisp. – Quickly; ♩. = 152. Very quickly; ♩. = 184.

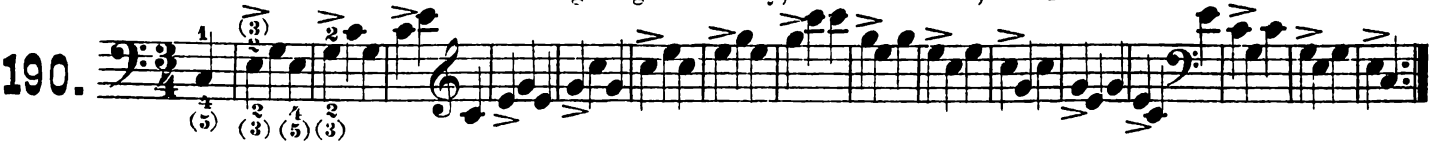
189.



The first derivative of No. 188 is formed by accenting the second of every three notes.

Each hand. Preserve the former fingering. – Slowly; ♩ = 152. Faster; 𝅗𝅥. = 100.

190.



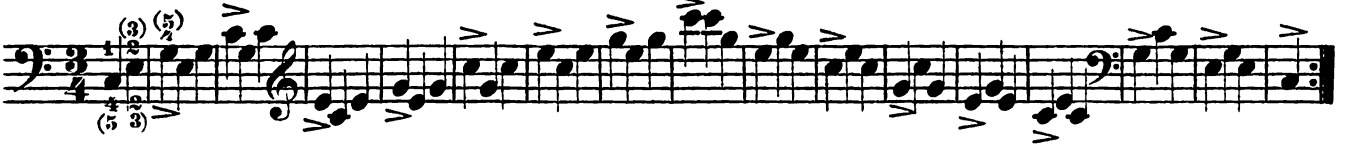
No accent, but every note distinct. - Quickly; ♩.=152. Very quickly. ♩.=184.

191.

The second derivative of No. 188 is produced by accenting the third of every three notes. The original fingering is retained.

Slowly; ♩=152. Faster; 𝅗𝅥.=100.

192.

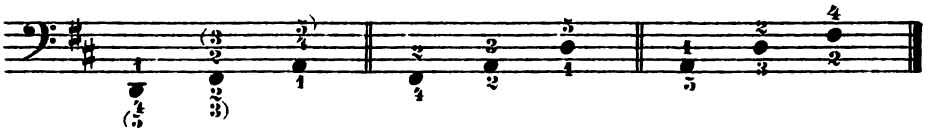


No accent. Brilliant, but smooth. - Quickly; ♩.=152. Very quickly; ♩.=184.

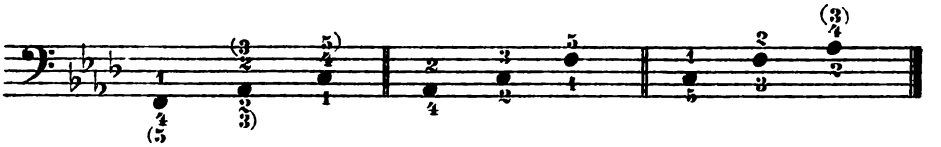
193.

When Nos. 187 to 193, inclusive, have been practised in each key of the list on page 58, the same forms are to be studied in all other major and minor keys, the fingering of which now follows in regular order.

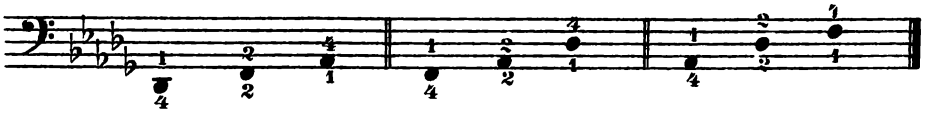
Model for Fingering the Major Triads of D, A, E.



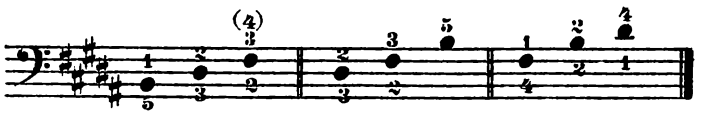
Fingering of the Minor Triads of F, C, G.



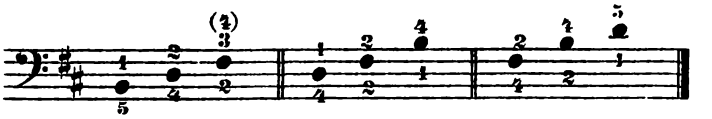
Fingering of the Major Triads of D♭, A♭, E♭, C♯ and the Minor Triads of F♯, C♯, G♯, A♭.



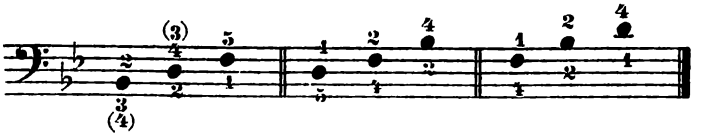
Fingering of the Major Triad of B.



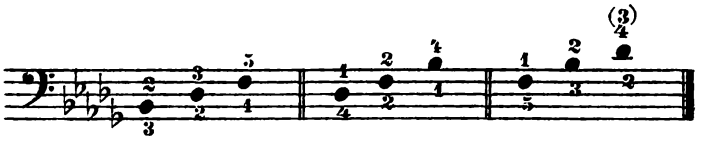
Fingering of the Minor Triad of B.



Fingering of the Major Triad of B♭.



Fingering of the Minor Triad of B♭.



See Nos. 156 and 205 for other exercises on three note triads.

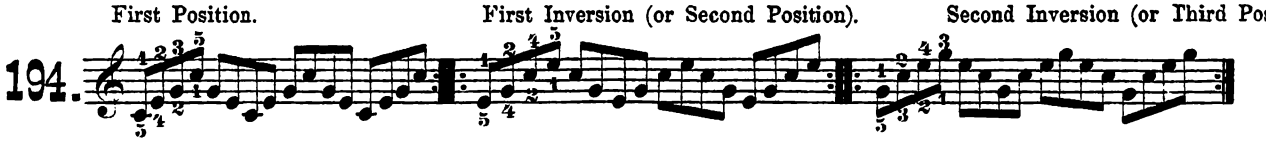
Four Note Broken Triads.

Great care must be exercised in the study of broken chords in groups of four different notes, lest permanent injury be done to the hand or wrist. Grand arpeggios, in the necessary and frequent crossing of the fingers and thumb, alternately expand and contract the hand and thus afford relief from great and constant tension: but the playing of chains of broken chords, especially the four note chords, necessitates almost uninterrupted strain which sometimes results in a lame wrist, a »weeping sinew«, or a touch which is both stiff and weak. For this reason, finger exercises over but five keys, scales, or some of the easier progressing finger exercises (see No. 152) should be practised after every period of study on four note broken chords, in order to relieve the muscles and tendons.

Refer to the rules on pages 57 and 58 for playing broken chords. Remember also the directions for resting the hands in the midst of the following study. Allow the wrist to roll gracefully, but only very slightly, if it seems naturally inclined to do so.

Preparatory Exercise.

To be played in the most convenient octave, higher or lower.



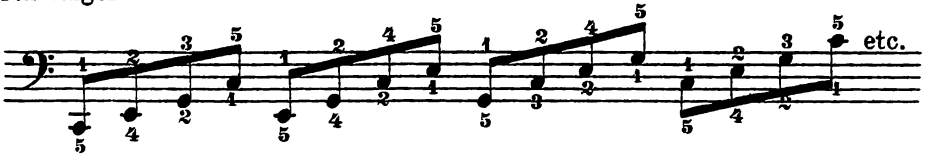
Only the three most used forms of four note broken triads are given in this work, but these present fingering sufficient for nearly all possible unembellished forms within the compass of one octave.

First Form of Four Note Broken Triads.

Model for Fingering

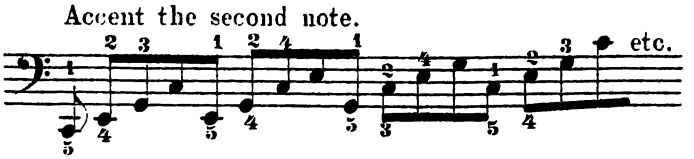
the Major Triads of C, F, G, F♯, G♭ and
the Minor Triads of A, D, E, D♯, E♭.

Exception. In the first position of F♯ and G♭ major, the left hand may use either the third or the fourth finger. Also in the second inversion (third position) of D♯ and E♭ minor, the right hand may use either the third or the fourth finger.



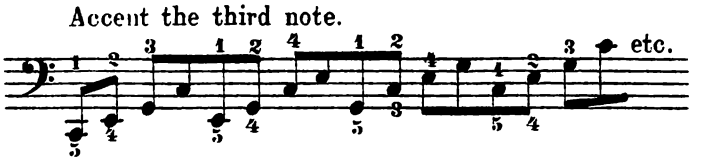
First Derivative from the First Form.

Accent the second note.



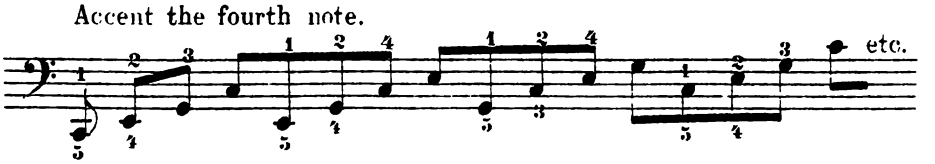
Second Derivative from the First Form.

Accent the third note.



Third Derivative from the First Form.

Accent the fourth note.

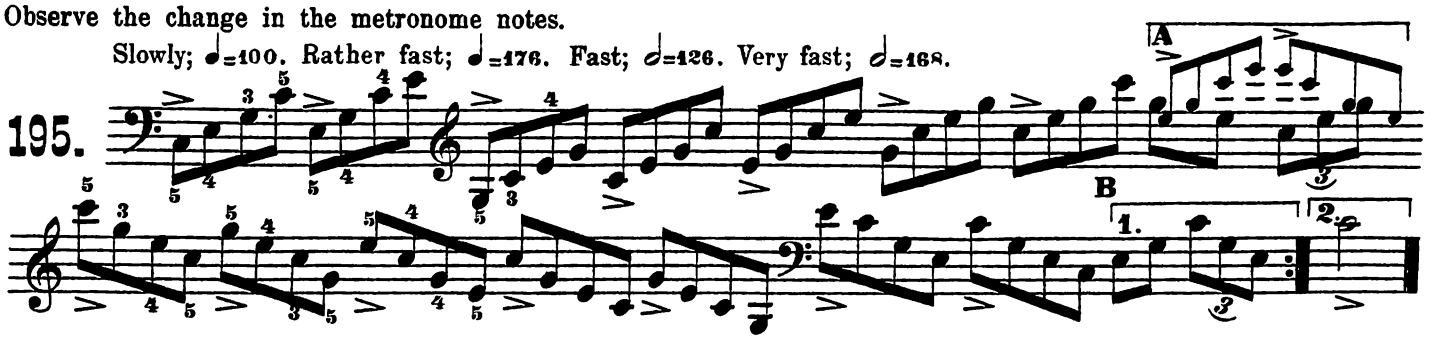


The foregoing form and its three derivatives are to be practised each in three **tempi** with accents; also very fast without accent.

In the following, either play all the large notes (omitting the small notes at **A**) in order to make the turnings at each end more agreeable; or, omit the large notes at **A** and those **after B**, repeating from the beginning and ending on the last note of the group just before **B**. In four **tempi**, the last with no accent. Observe the change in the metronome notes.

Slowly; ♩=100. Rather fast; ♩=176. Fast; 𝅗𝅥=126. Very fast; 𝅗𝅥=168.

195.

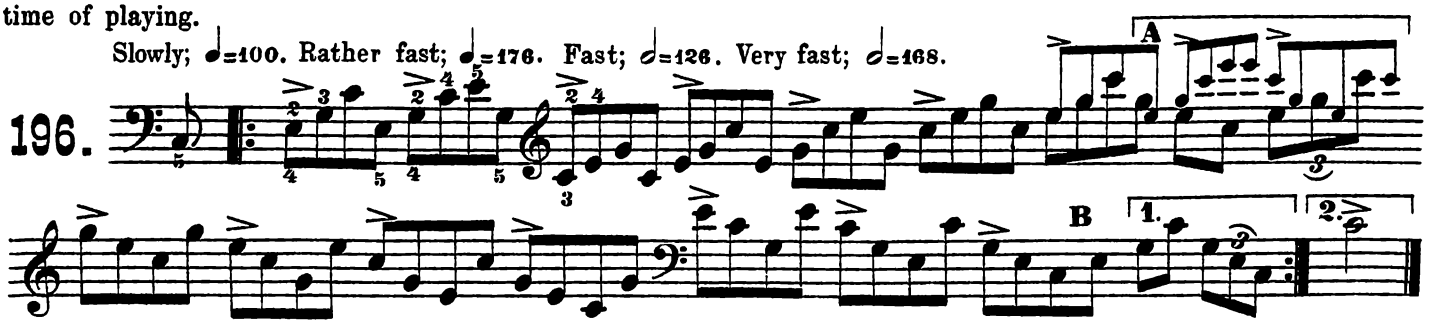


First Derivative from the First Form.

This is produced by accenting the second note in every four of the first form, but the fingering remains the same as in No. 195. Observe that the repeat does not include the first note. No accent, the fourth time of playing.

Slowly; ♩=100. Rather fast; ♩=176. Fast; 𝅗𝅥=126. Very fast; 𝅗𝅥=168.

196.

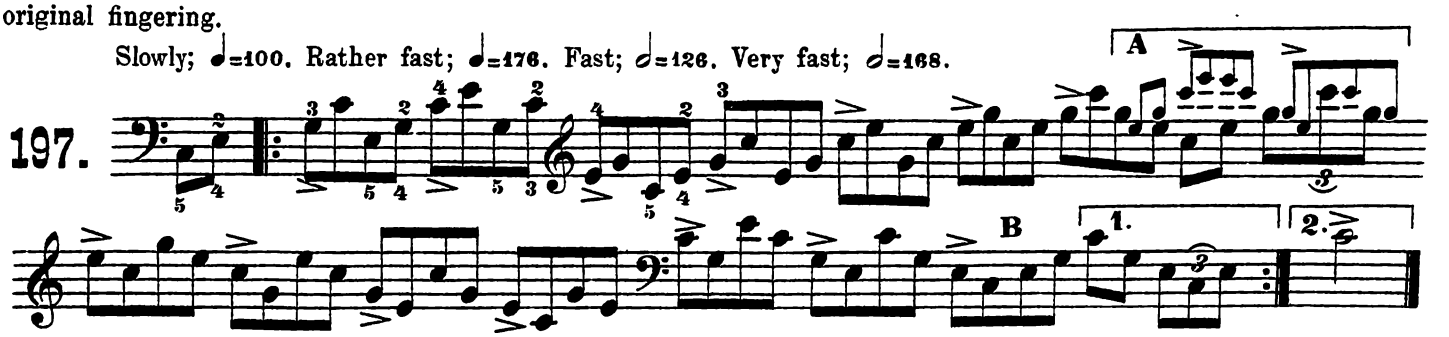


Second Derivative from the First Form.

This results from accenting the third note in every four of the first form. No change occurs in the original fingering.

Slowly; ♩=100. Rather fast; ♩=176. Fast; 𝅗𝅥=126. Very fast; 𝅗𝅥=168.

197.

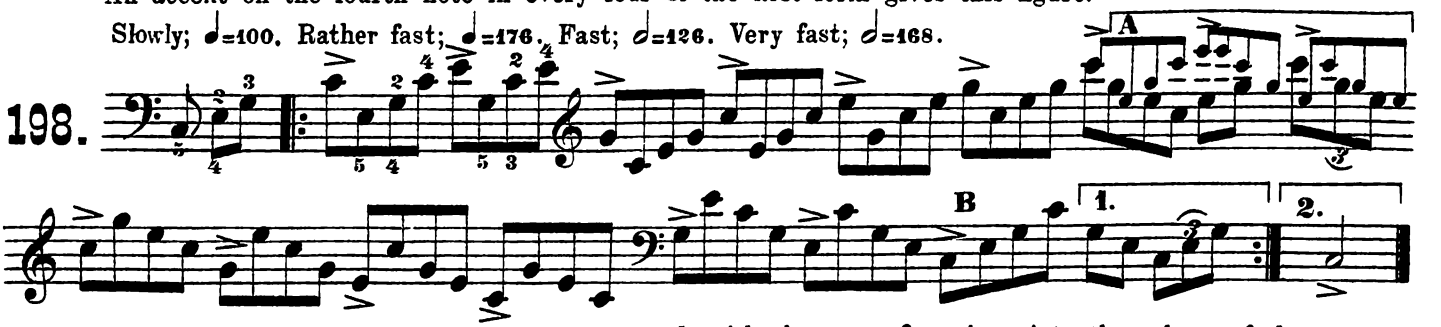


Third Derivative from the First Form.

An accent on the fourth note in every four of the first form gives this figure.

Slowly; ♩=100. Rather fast; ♩=176. Fast; 𝅗𝅥=126. Very fast; 𝅗𝅥=168.

198.

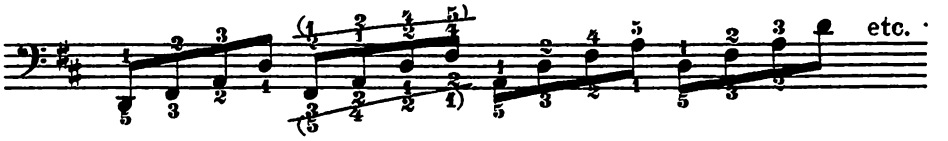


Nos. 195 to 198, inclusive, must be transposed, with the same fingering, into the others of the ten keys named on page 60, having only white, or only black keys. Then the first form and its three derivatives are to be played in all other major and minor keys in the following order.

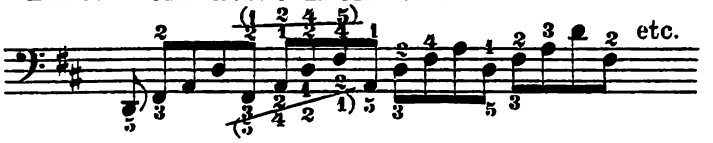
The fingering here given in parenthesis, which brings the thumbs and fifth fingers on the black keys, should not be studied until the other is acquired. Every intelligent pupil will be able to play the first form and its three derivatives from the beginnings of each, given below.

Model for Fingering the Major Triads of D, A, E.

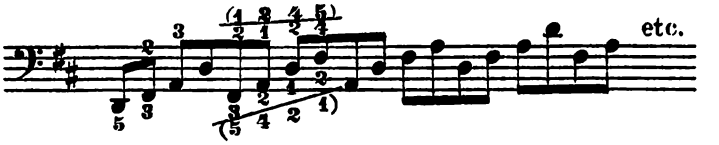
First Form.



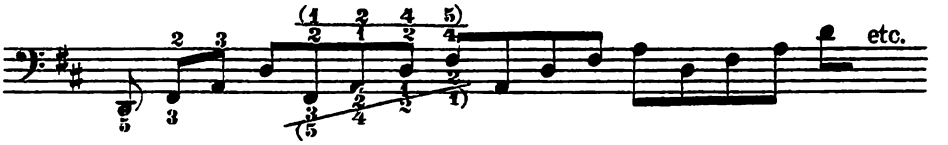
First Derivative from the First Form.



Second Derivative from the First Form.



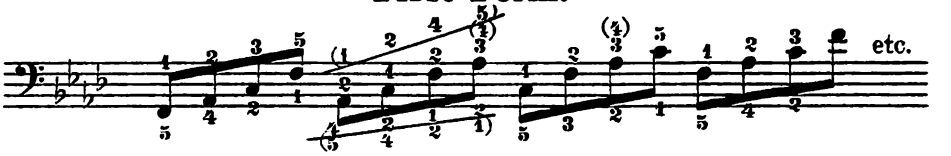
Third Derivative from the First Form.



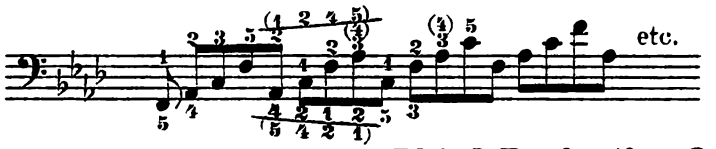
When the model for fingering applies to several keys, the teacher should not be satisfied if the pupil learns only the first, but should require each figure to be played through in each key, although it may be sometimes desirable to delay the use of the fastest tempo until later.

Model for Fingering the Minor Triads of F, C, G.

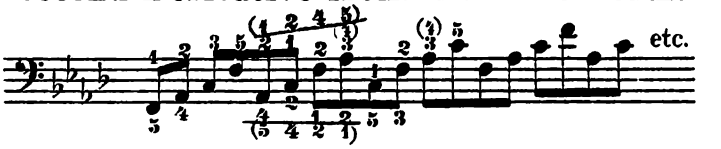
First Form.



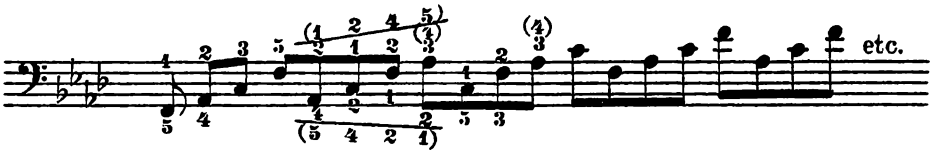
First Derivative from the First Form.



Second Derivative from the First Form.



Third Derivative from the First Form.

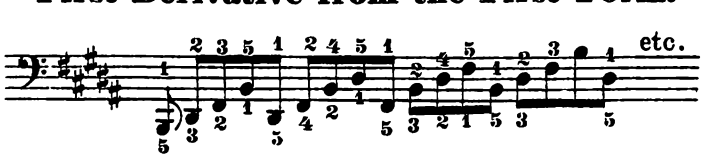


Each group of keys is to be thoroughly learned, at least in rather quick tempo, before attempting the next.

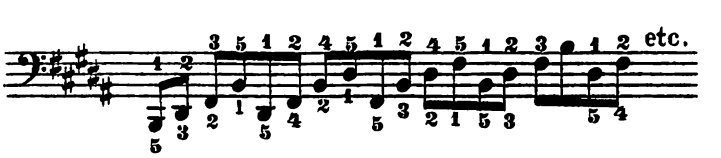
Fingering of the Major Triad of B.

First Form.

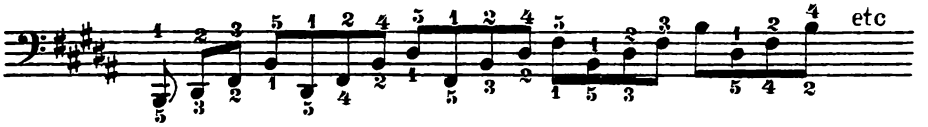
First Derivative from the First Form.



Second Derivative from the First Form.

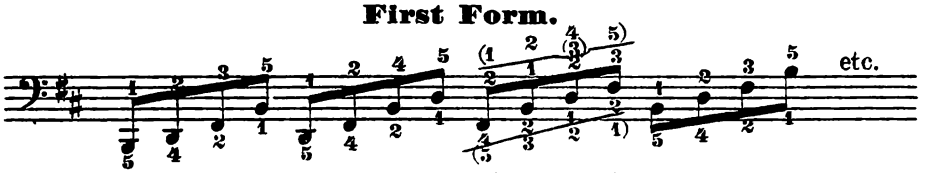


Third Derivative from the First Form.

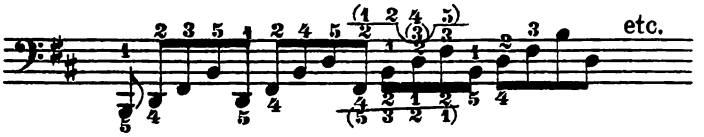


Fingering of the Minor Triad of B.

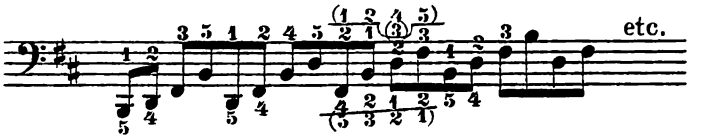
First Form.



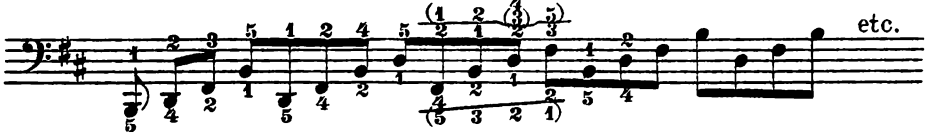
First Derivative from the First Form.



Second Derivative from the First Form.

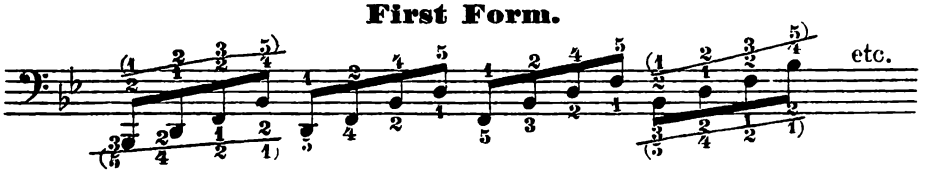


Third Derivative from the First Form.

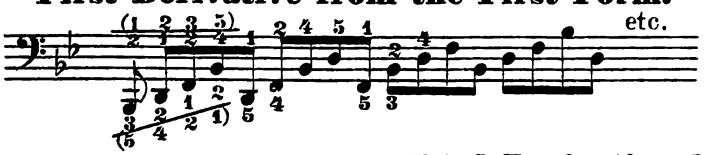


Fingering of the Major Triad of B♭.

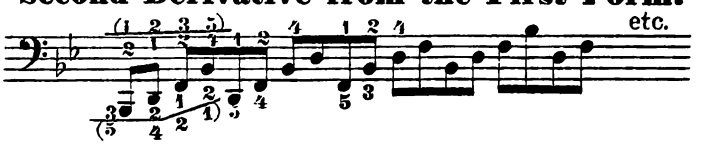
First Form.



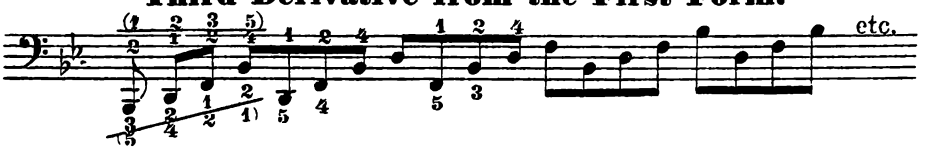
First Derivative from the First Form.



Second Derivative from the First Form.

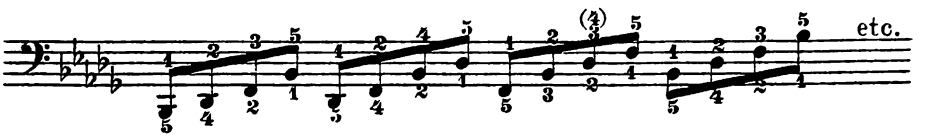


Third Derivative from the First Form.

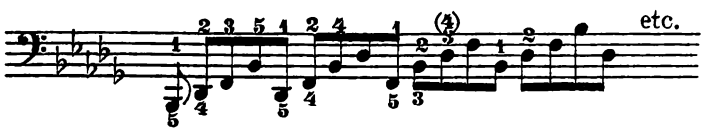


Fingering of the Minor Triad of B♭.

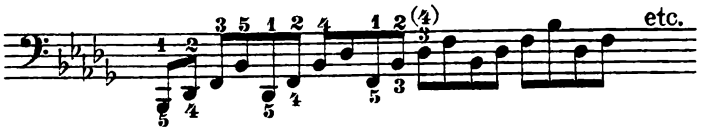
First Form.



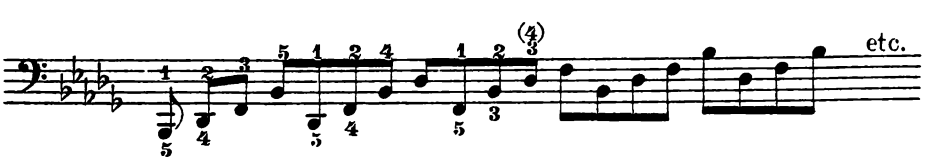
First Derivative from the First Form.



Second Derivative from the First Form.



Third Derivative from the First Form.



Second Form of Four Note Broken Triads.

Model for Fingering

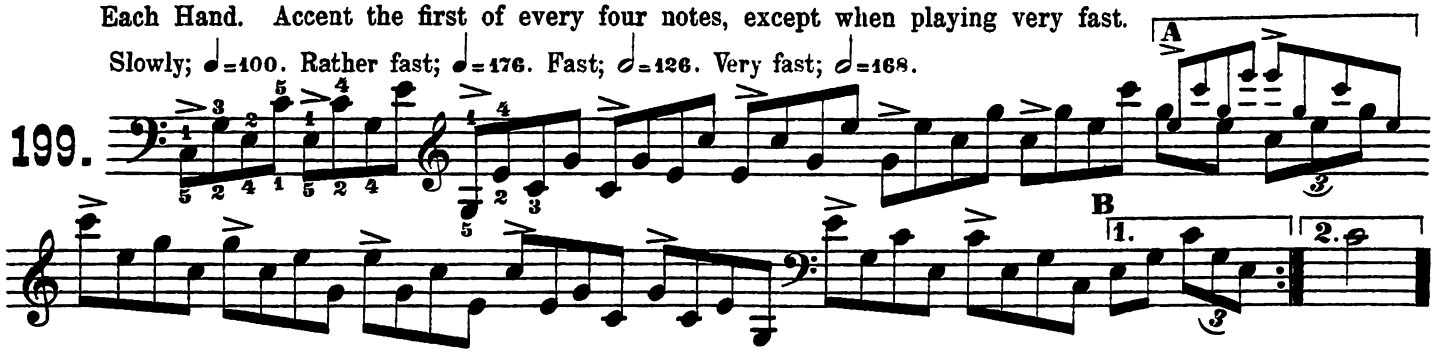
the Major Triads of C, F, G, F♯, G♭, D♭, A♭, E♭, C♯ and
the Minor Triads of A, D, E, D♯, E♭. F♯, C♯, G♯, A♭.

Remember the exceptions in the fingering of F♯ and G♭ major, and of D♯ and E♭ minor.

Each Hand. Accent the first of every four notes, except when playing very fast.

Slowly; ♩=100. Rather fast; ♩=176. Fast; 𝅗𝅥=126. Very fast; 𝅗𝅥=168.

199.

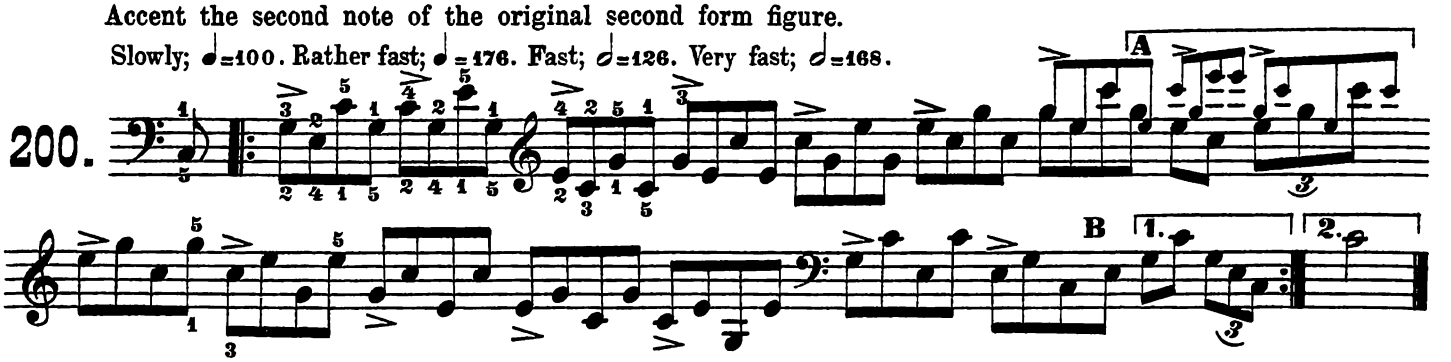


First Derivative from the Second Form.

Accent the second note of the original second form figure.

Slowly; ♩=100. Rather fast; ♩=176. Fast; 𝅗𝅥=126. Very fast; 𝅗𝅥=168.

200.

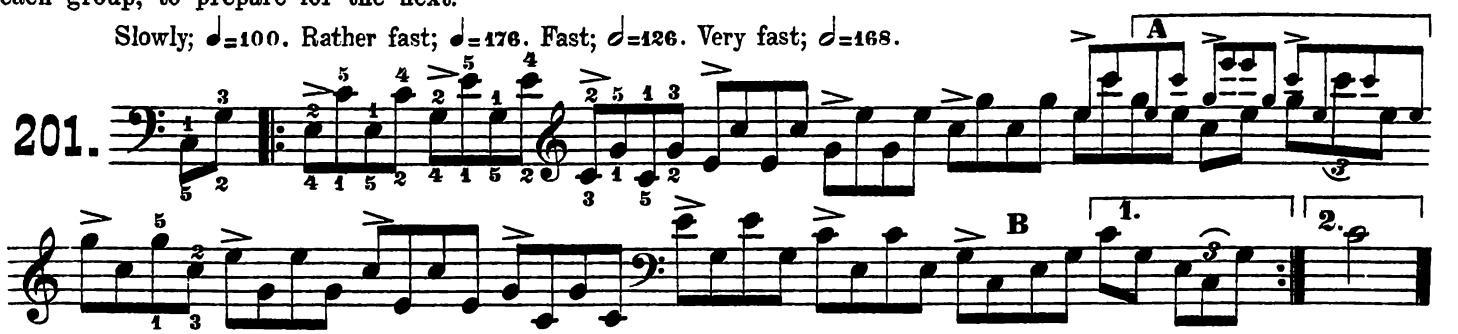


Second Derivative from the Second Form.

Accent the third note of the original figure in No. 199. Observe the necessary change of fingering in each group, to prepare for the next.

Slowly; ♩=100. Rather fast; ♩=176. Fast; 𝅗𝅥=126. Very fast; 𝅗𝅥=168.

201.

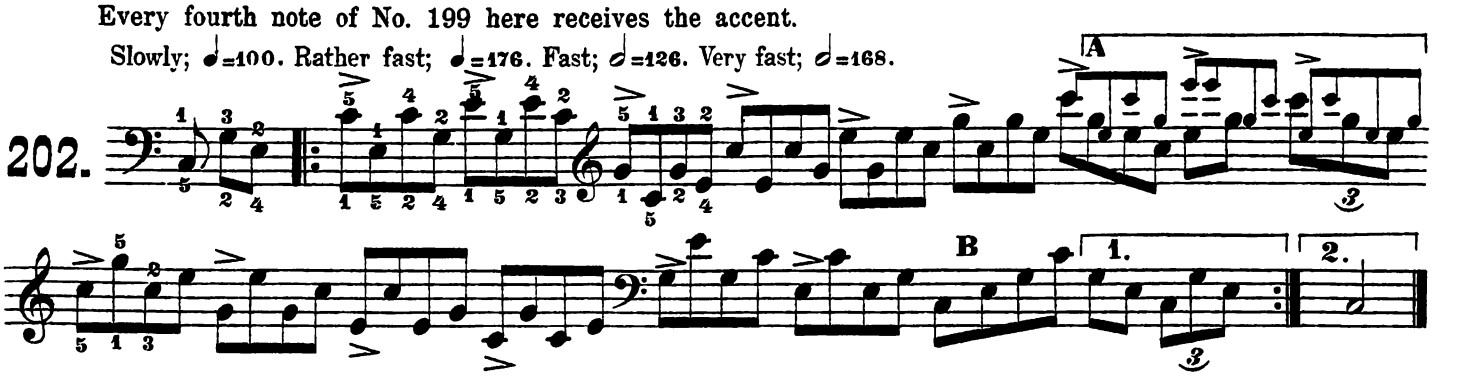


Third Derivative from the Second Form.

Every fourth note of No. 199 here receives the accent.

Slowly; ♩=100. Rather fast; ♩=176. Fast; 𝅗𝅥=126. Very fast; 𝅗𝅥=168.

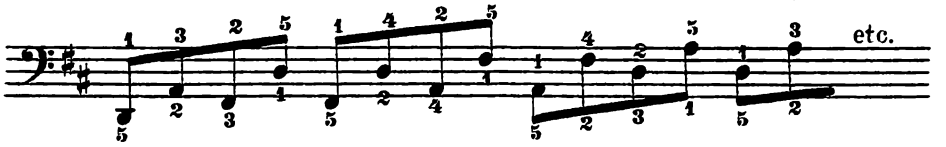
202.



The second form with its three derivatives should now be practised in each major and minor key. In the fingering here given, that in parenthesis is allowable but the other is generally preferable.

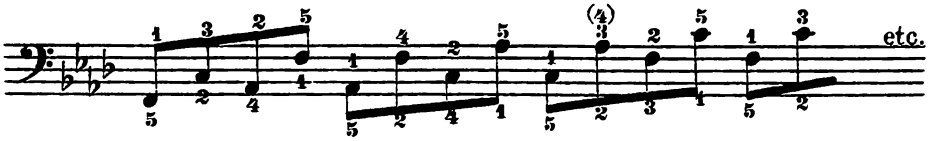
Model for Fingering the Major Triads of D, A, E.

Second Form and its Three Derivatives.



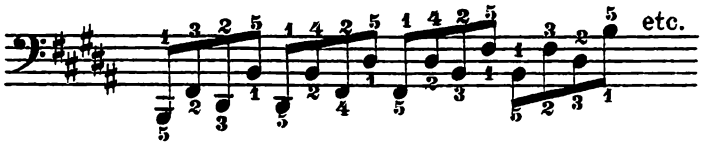
Model for Fingering the Minor Triads of F, C, G.

Second Form.



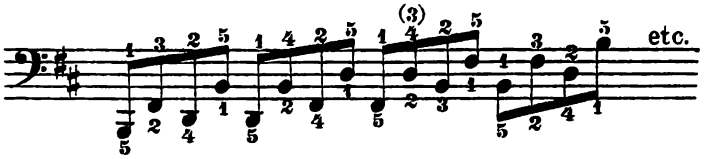
Fingering of the Major Triad of B.

Second Form.



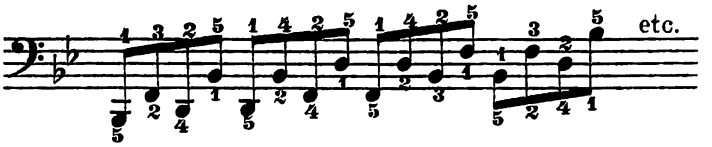
Fingering of the Minor Triad of B.

Second Form.



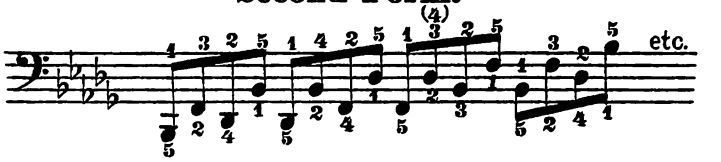
Fingering of the Major Triad of B♭.

Second Form.



Fingering of the Minor Triad of B♭.

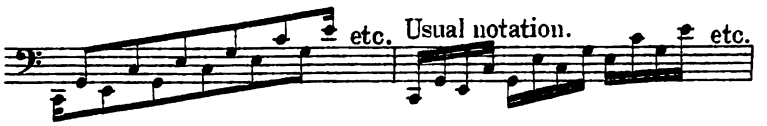
Second Form.



Third Form of Four Note Broken Triads.

If one will play the first, third, fifth and seventh groups of No. 199, omitting the intervening groups, the result will be the third form of four note broken triads. These are never to be played with accents, either here or in any other studies or compositions, unless accents are plainly marked. They form double grand arpeggios, as will be seen by playing only the first and third notes of consecutive groups (see **A** below), or only the second and fourth. They can be formed by writing the second inversion (or third position) of a grand arpeggio over the first position in such a manner that their notes will alternate, thus: —

A.



By beginning the preceding with the second note, a derivative is produced; but beginning on the third note merely reproduces the original form, and beginning on the fourth note gives again the same derivative as before.

Model for Fingering

the Major Triads of C, F, G, F♯, G♭ and

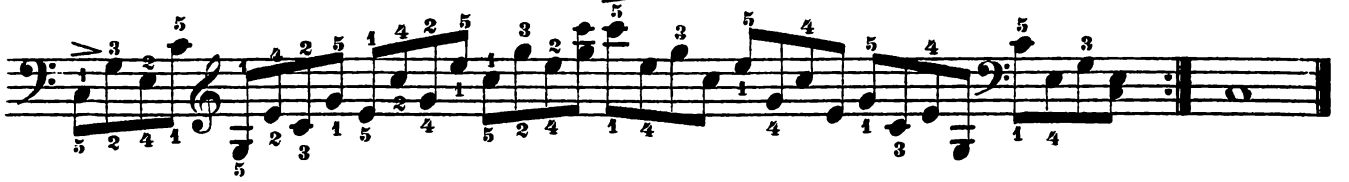
the Minor Triads of A, D, E, D♯, E♭.

Third Form.

Remember the previous exceptions in the fingering. Accent only the notes so marked, the first and the highest. Play either the large or small note, where two are printed.

Slowly; ♩= 100. Rather fast; ♩= 176. Fast; 𝅗𝅥= 126. Very fast; 𝅗𝅥= 168.

203.



If it is desired to practise the foregoing. beginning on the third of the triad (in the model, E), this will require no printed model, as the fingering is shown in the third group of No. 203, from which point one should play upward two octaves and return. Likewise one may begin on the fifth of the triad (G, in this case), by starting with the second group of No. 203. Neither of these new beginnings produces any change in either the figure or the fingering.

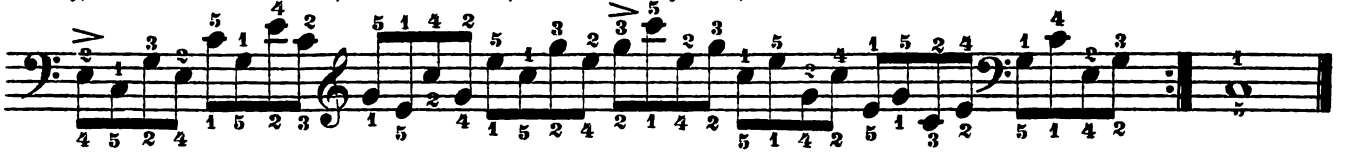
By prefixing the third of the triad to the first group of No. 203, or the fifth of the triad to the third group, one obtains the only regular derivative of the third form. See No. 204.

Regular Derivative from the Third Form.

Accent only the notes so marked.

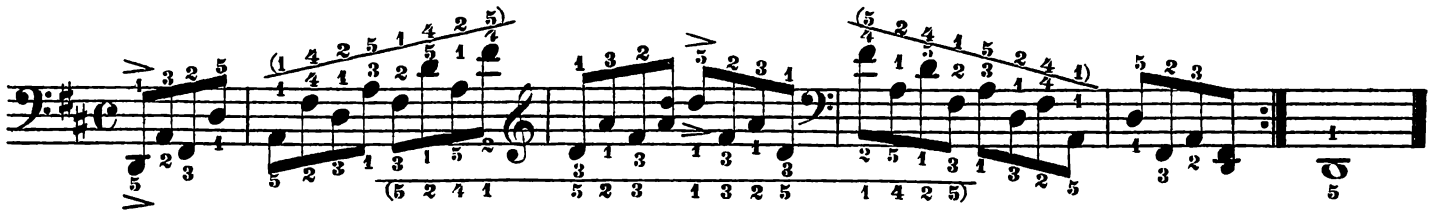
Slowly; ♩= 100. Rather fast; ♩= 176. Fast; 𝅗𝅥= 126. Very fast; 𝅗𝅥= 168.

204.

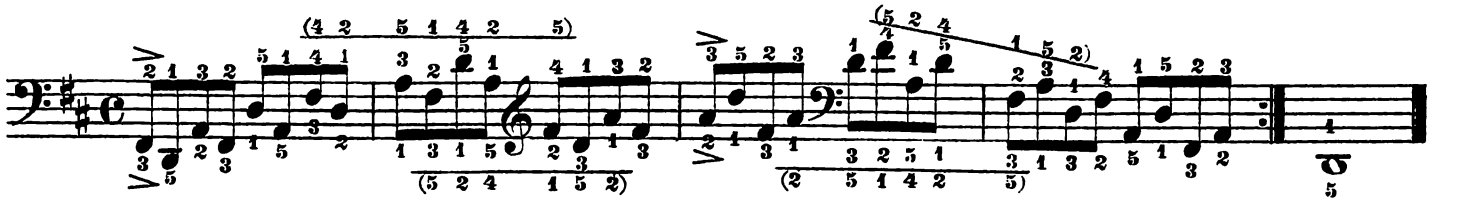


In the following, the fingering in parenthesis is less frequently used; but that which brings the thumbs and fifth fingers on the black keys is useful as a further development of technique.

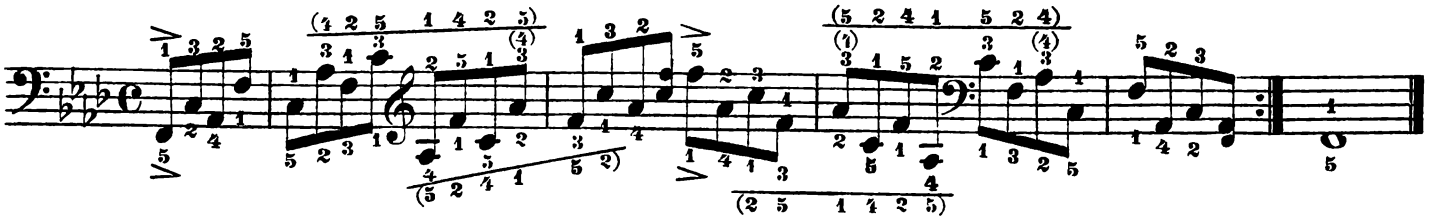
Model for Fingering the Major Triads of D, A, E.
Third Form.



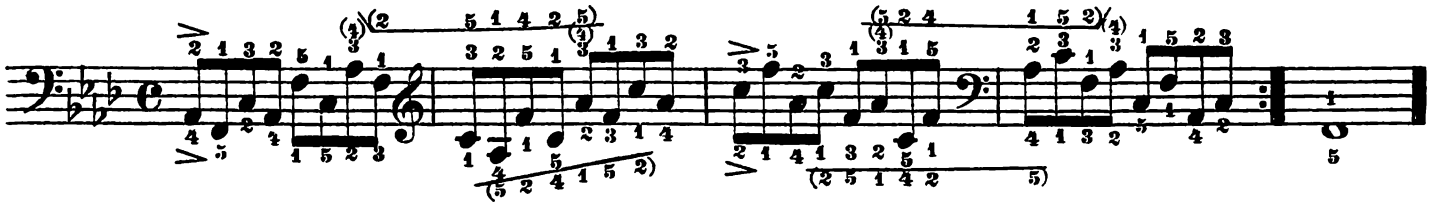
Derivative from the Third Form.



Model for Fingering the Minor Triads of F, C, G.
Third Form.



Derivative from the Third Form.

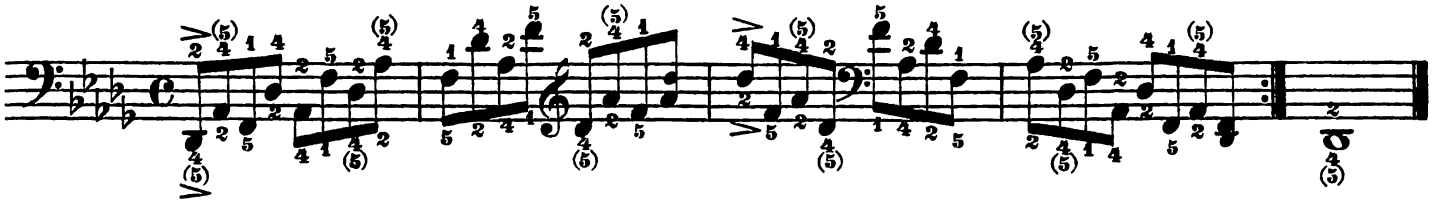


Model for Fingering.

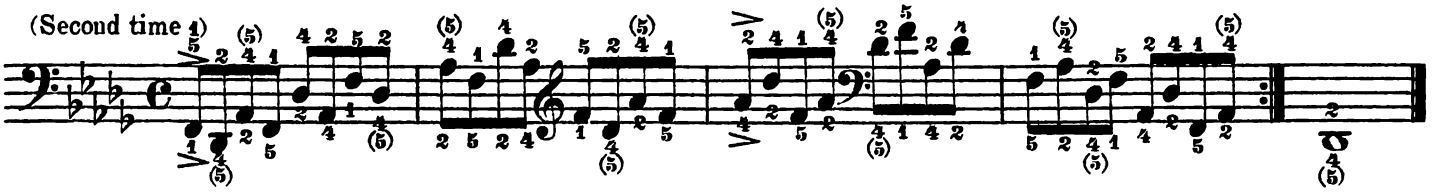
the Major Triads of D♭, A♭, E♭, C♯ and
the Minor Triads of F♯, C♯, G♯, A♭.

Third Form.

These may be fingered like the same forms in C major, or as follows:

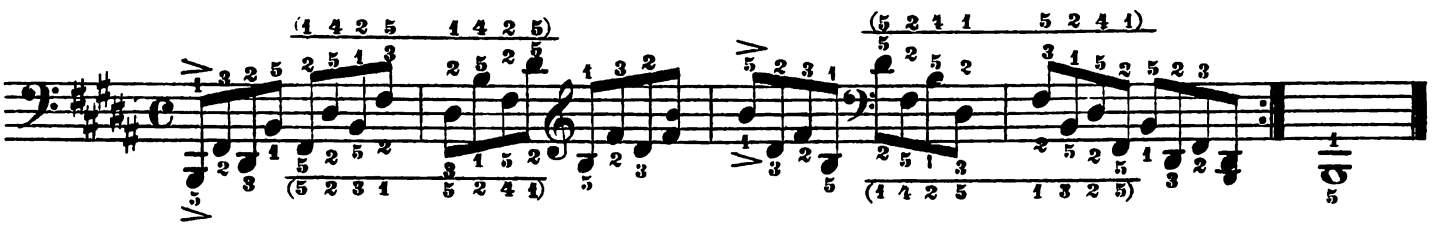


Derivative from the Third Form.

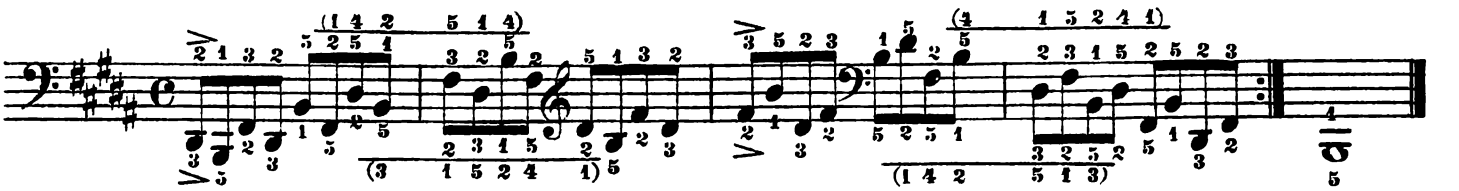


Fingering of the Major Triad of B.

Third Form.

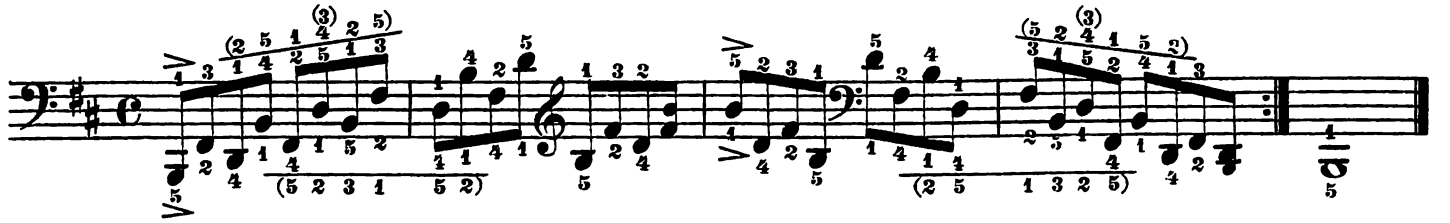


Derivative from the Third Form.

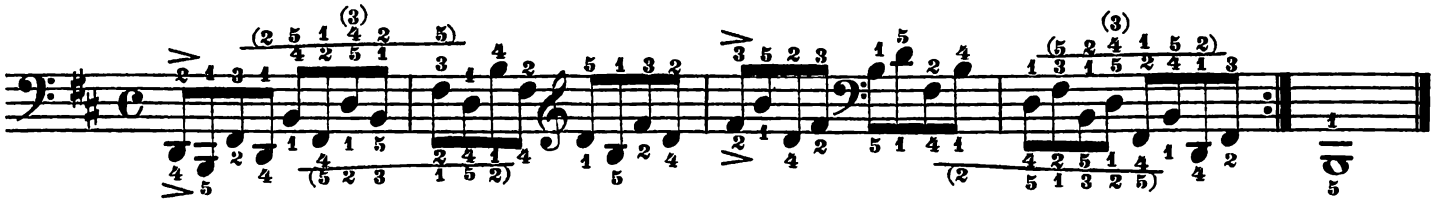


Fingering of the Minor Triad of B.

Third Form.

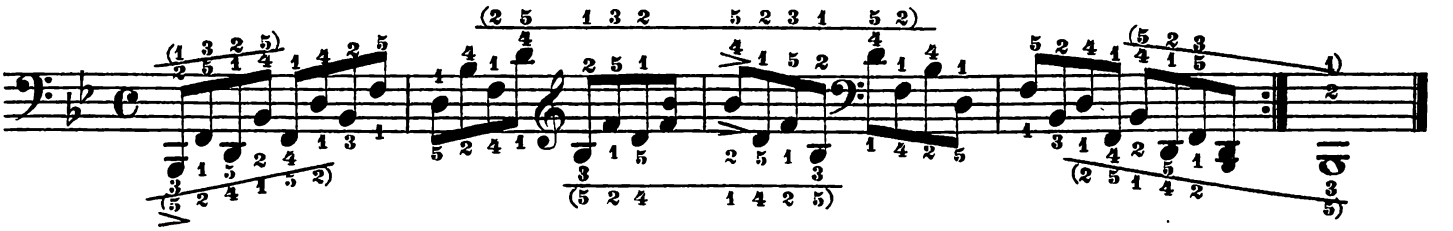


Derivative from the Third Form.

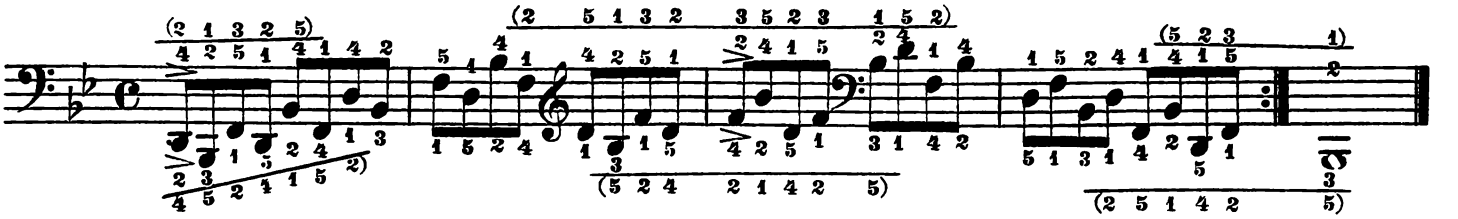


Fingering of the Major Triad of B♭.

Third Form.

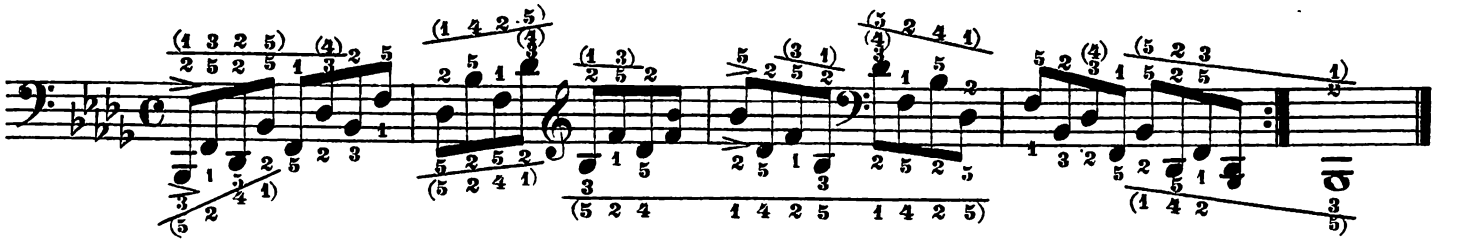


Derivative from the Third Form.

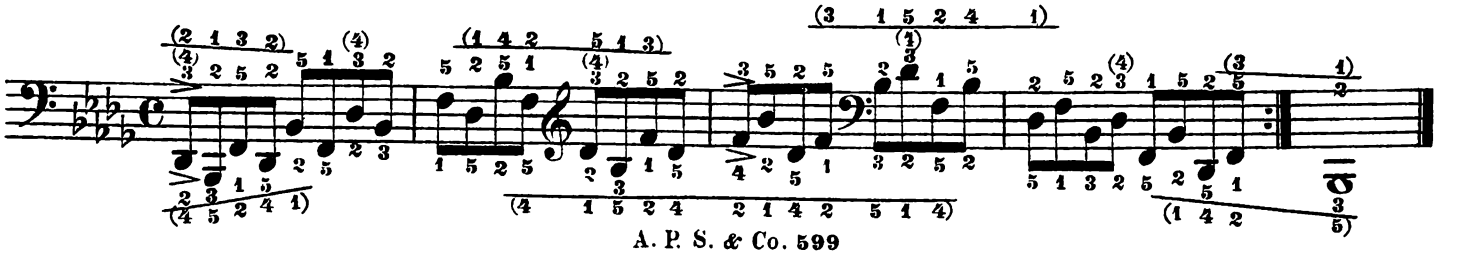


Fingering of the Minor Triad of B♭.

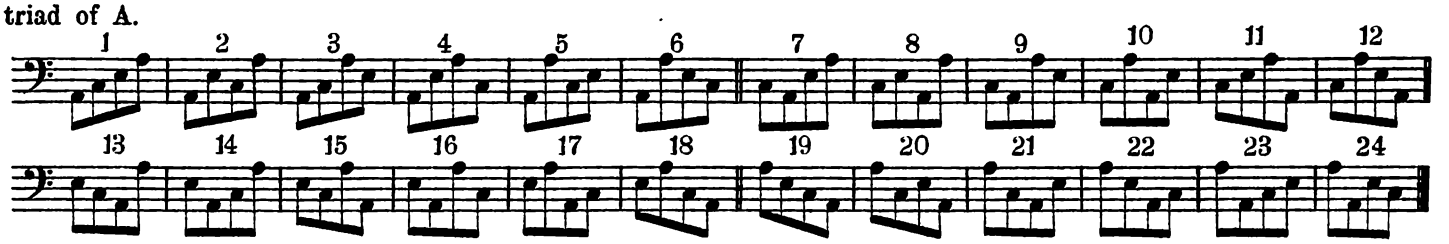
Third Form.



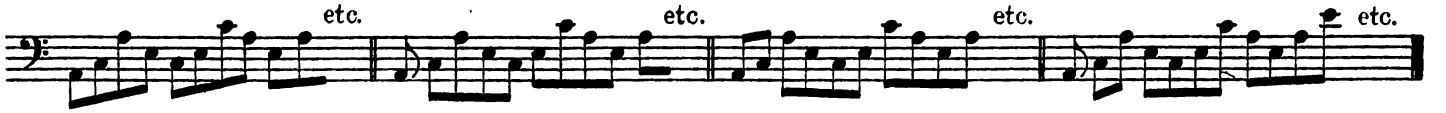
Derivative from the Third Form.



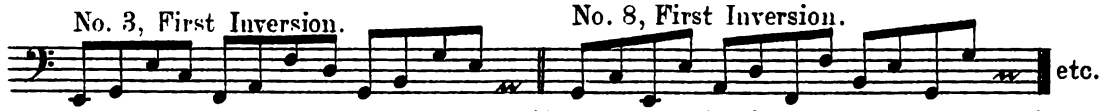
As already stated, any four note broken chord can assume twenty-four different figures; and as each of these may have three derivatives by means of accenting either its second, third, or fourth note, the whole may be presented in ninety-six different figures. The following shows the twenty-four possible forms of a four note triad of A.



No. 3 of the foregoing, with its three derivatives, would appear thus: —



The other forms are susceptible of similar changes. Instead of taking each time a new position of the same chord, as just shown, any of these may progress diatonically, like the progressing finger exercises before given, as here shown on the chord of C.

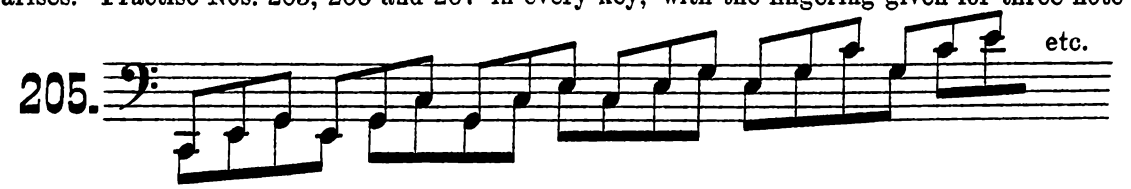


The fundamental position and second inversion (third position) of triads are not good for diatonic progressions similar to those last shown, as they necessitate the intolerable consecutive fifths, to which no one should be allowed to become accustomed, even in technical exercises.

Intermingled Three Note and Four Note Broken Triads.

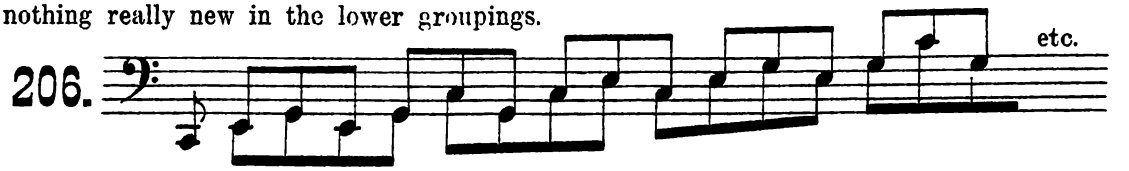
As many difficulties of execution are purely mental when they seem to be manual, a clear understanding of such is all that is needed to render them easy. As a familiar illustration of this, new combinations of exercises already learned may perhaps make them seem new in themselves; but a reference to former exercises will make them perfectly plain.

In No. 205 appears the first form of three note broken triads, as the upper grouping (over the notes) shows. By writing these in groups of fours, as shown below the notes, a figure apparently new appears, which, however, requires only the original fingering of No. 187 in three note broken triads, although a new arrangement of accents arises. Practise Nos. 205, 206 and 207 in every key, with the fingering given for three note broken triads.

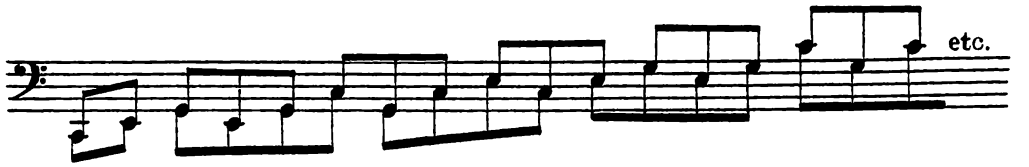


In this combination, the three derivatives of the **lower** groupings produce no figure that is not already there, though coming on different notes.

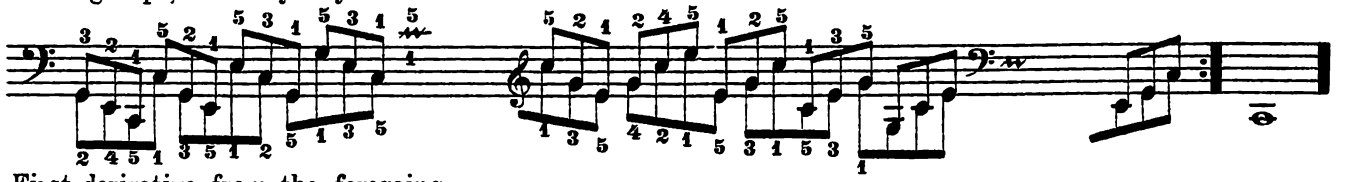
The first derivative of the three note broken triads (see No. 190) grouped in fours, appears as follows and gives nothing really new in the lower groupings.



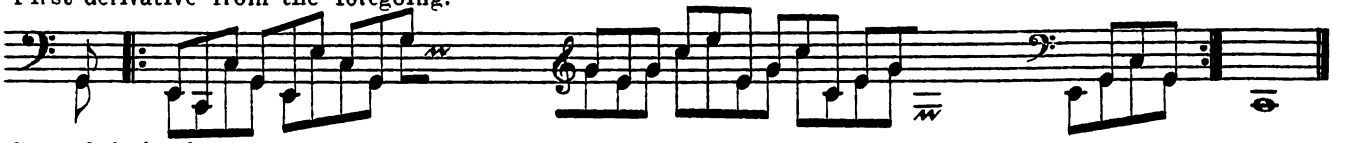
A similar lack of novelty appears in the lower, four note, grouping of the second derivative of No. 187.

207. 

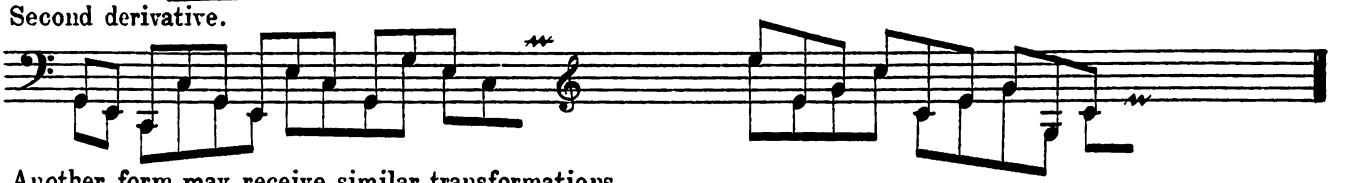
A much used form frequently appears in music, either as a three note or as a four note figure. Practise each series of groups, in every key.

208. 

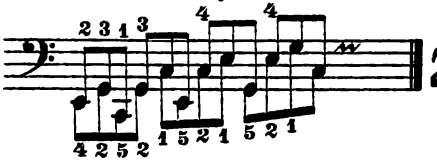
First derivative from the foregoing.

209. 

Second derivative.

210. 

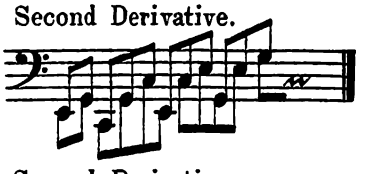
Another form may receive similar transformations.

211. 

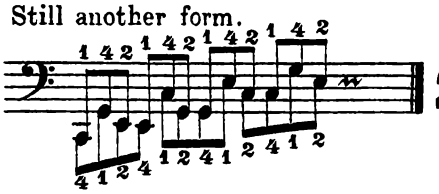
First Derivative.

212. 

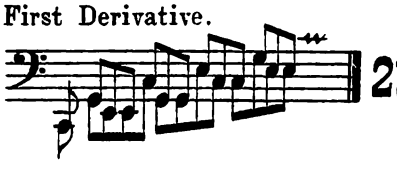
Second Derivative.

213. 

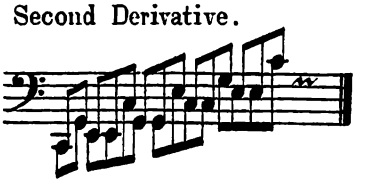
Still another form.

214. 

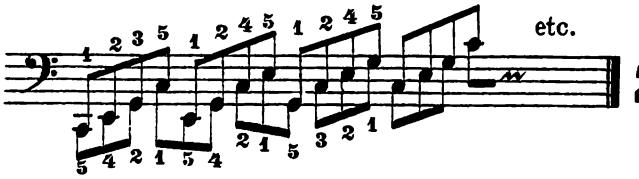
First Derivative.

215. 

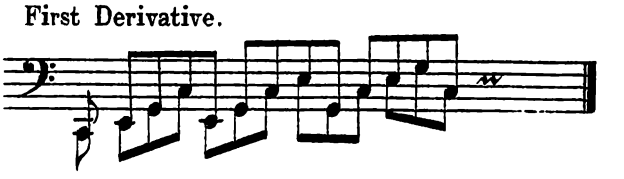
Second Derivative.

216. 

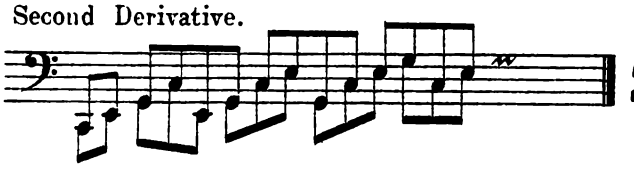
The following shows the first form of four note broken triads (see No. 195) changed into groups of three notes, but with the original fingering.

217. 

First Derivative.

218. 

Second Derivative.

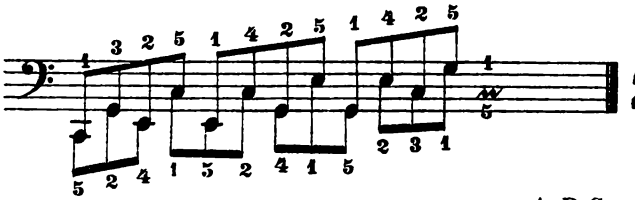
219. 

Third Derivative.

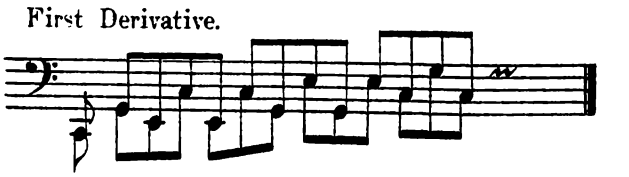
220. 

Similar transformations of the first form and its three derivatives may be practised in all other major and minor keys, with the same fingering as first given. The three note grouping is not each time new.

The three note grouping of the second form of four note broken triads appears thus: —

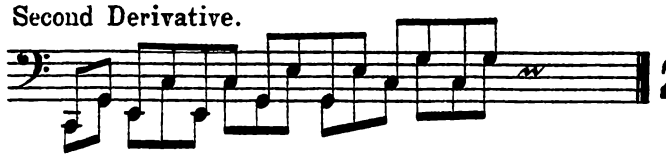
221. 

First Derivative.

222. 

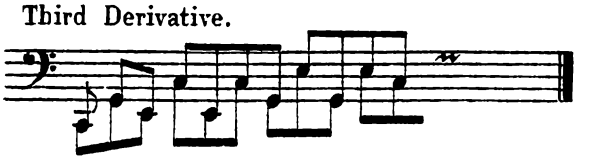
Second Derivative.

223.



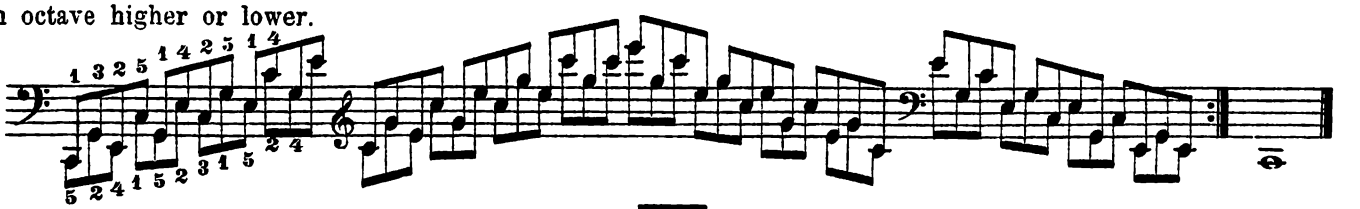
Third Derivative.

224.



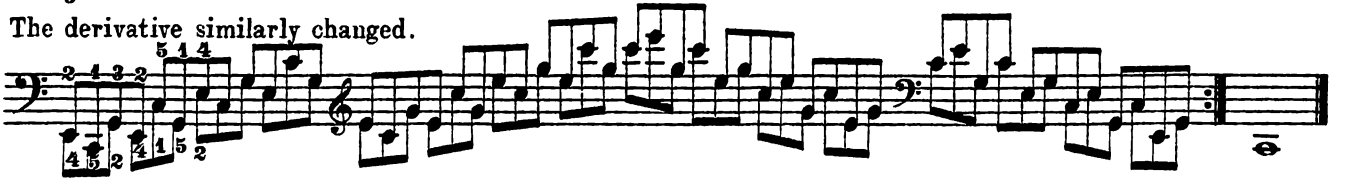
The third form of four note broken triads is very useful when presented in groups of threes. Either hand an octave higher or lower.

225.



The derivative similarly changed.

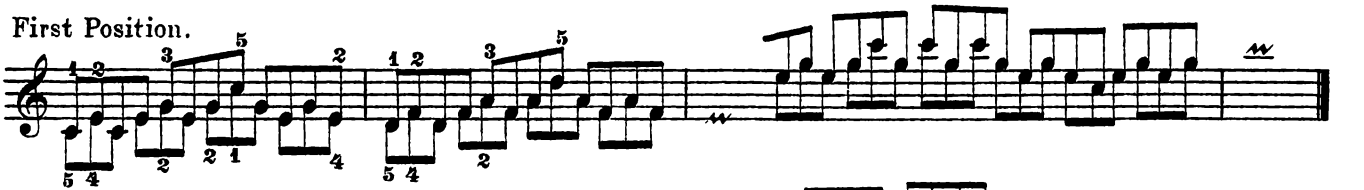
226.



Though less useful for purposes of general development than some previous exercises (see No. 170, etc.), nevertheless a certain amount of profit is found in the practice of four note broken chords progressing diatonically. Those in the fundamental position exercise the third finger of the right hand and those in the second inversion (third position) the third of the left; but the consecutive fifths, though broken, are so prominent as to make the first inversion (second position) much to be preferred. Play according to each grouping.

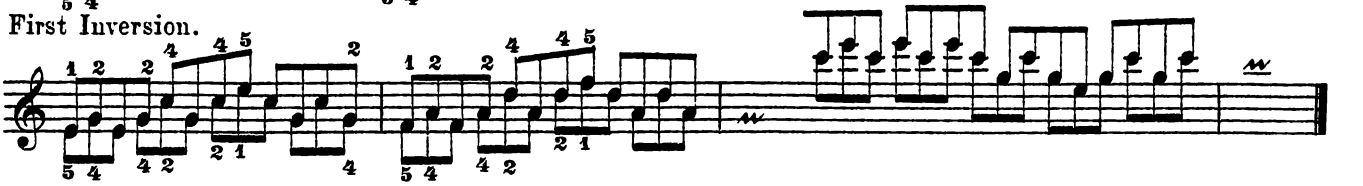
First Position.

227.



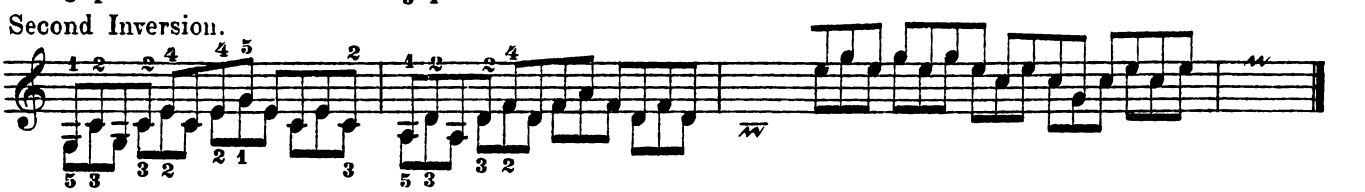
First Inversion.

228.



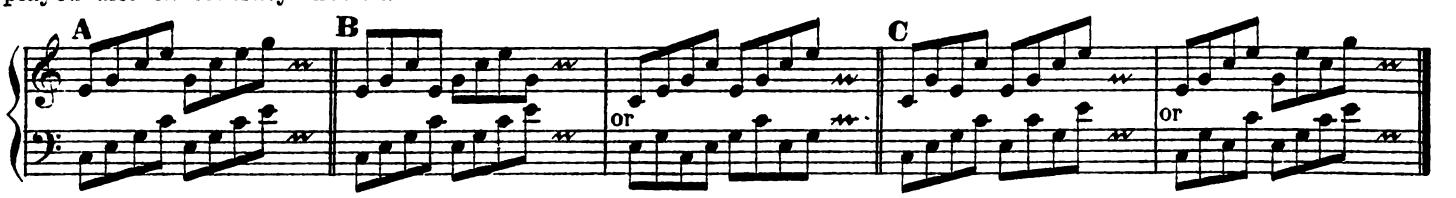
Second Inversion.

229.



These may be transposed into every major and minor key.

When all of the foregoing shall have been thoroughly practised, each hand alone, the student may play them with both hands. Then, as an approach toward more difficult work, each of the three forms already given (or others) with their derivatives may be played with both hands, each in a different position, as at **A**; or with one playing one figure and the other another derived from the same form, as at **B**; or with alternations of two figures between the hands, as at **C**, in the same, or different positions: and so on, **ad infinitum.** These may be played also in contrary motion.



Exercises for greatly expanding the hands, being somewhat dangerous, should be delayed for more advanced study.

Broken Chords of the Seventh.

Four Note Groups.

Like all chords having four different notes, a chord of the seventh with its various derivatives can assume ninety-six different figures. For the sake of system, and because the three forms first given under four note broken triads are the most used, the same will now be applied in seventh chords.

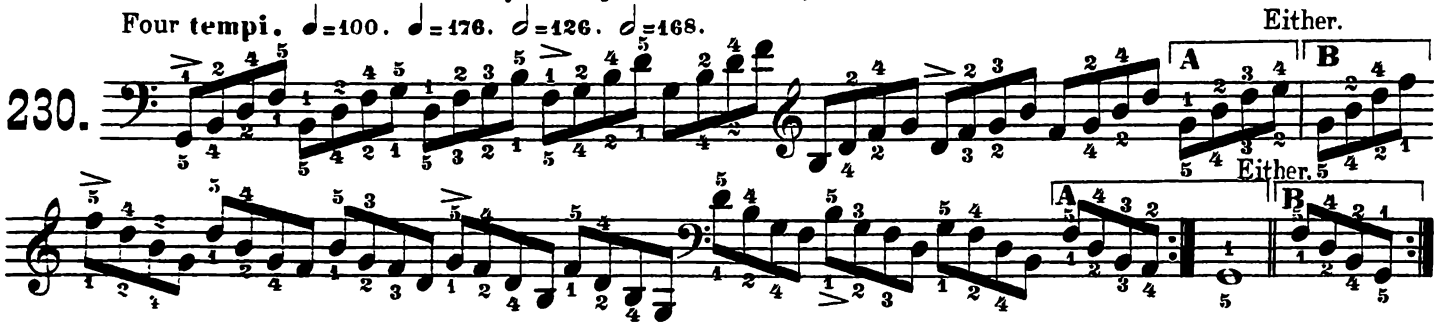
Broken Dominant Seventh Chords.

First Form.

Observe the accent marks. Play both parts marked **A**, or both marked **B**.

Four **tempi.** ♩=100. ♩=176. 𝅗𝅥=126. 𝅗𝅥=168.

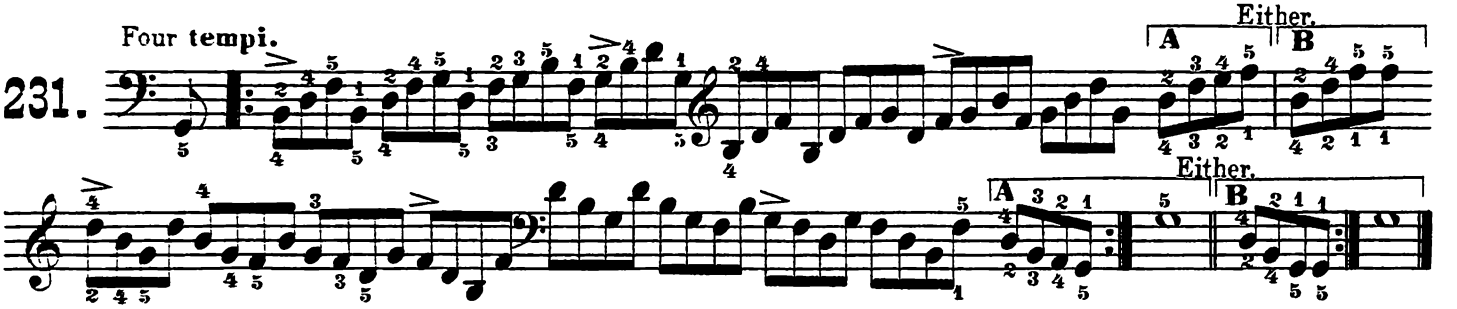
230.



First Derivative from the First Form.

Four **tempi.**

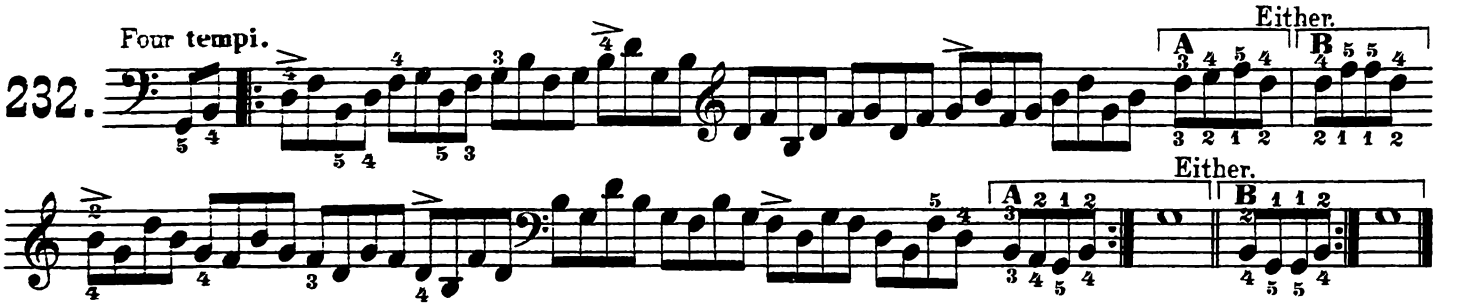
231.



Second Derivative from the First Form.

Four **tempi.**

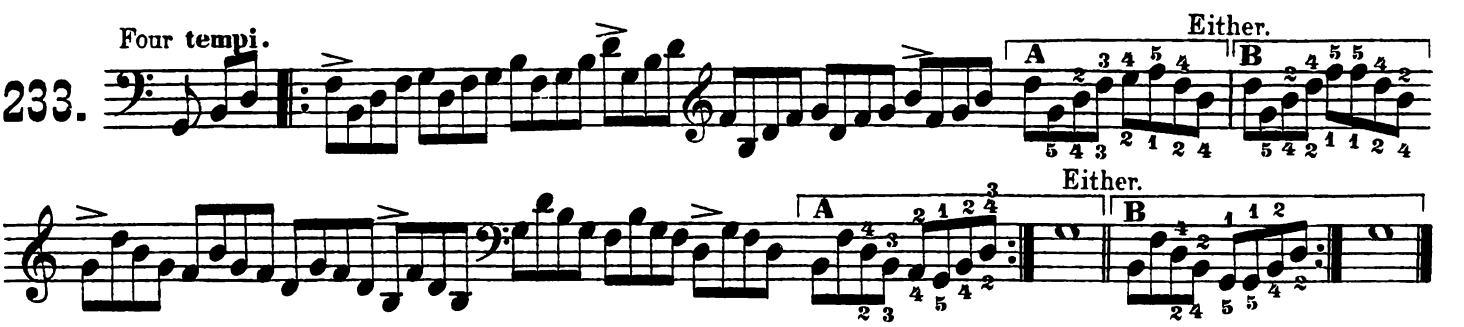
232.



Third Derivative from the First Form.

Four **tempi.**

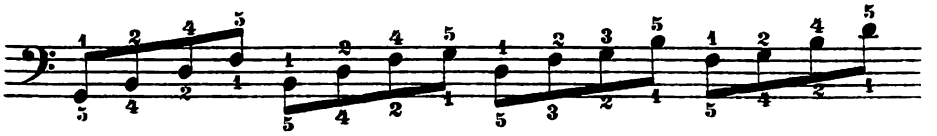
233.



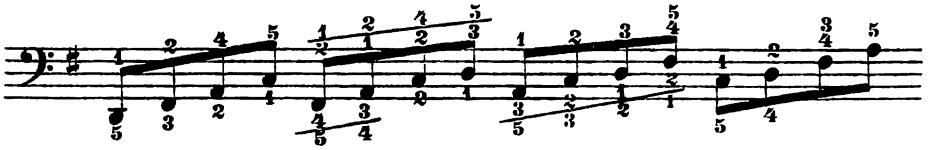
The first form, with its three derivatives, should be practised in each major and minor key, the fingering of which follows. The descending series reverses the fingering.

Fingering of the Dominant Seventh Chord in all Keys.

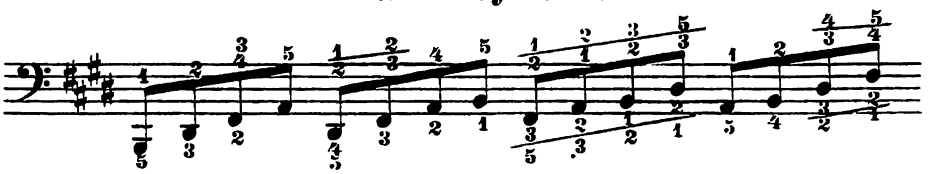
In the Key of C.



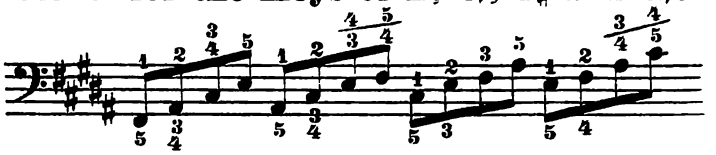
Model for the Keys of G, D and A.



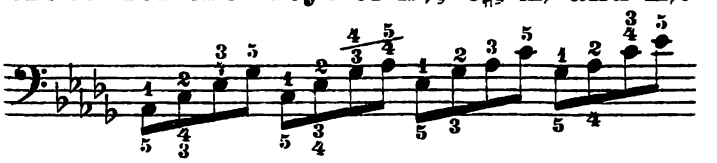
In the Key of E.



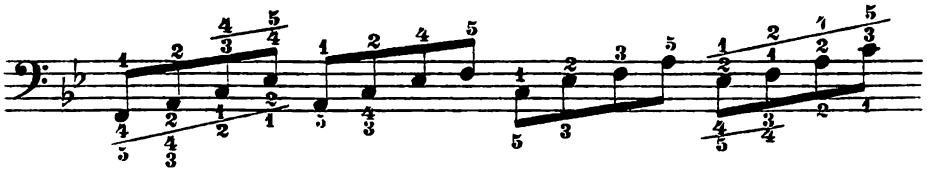
Model for the Keys of B, C♭, F♯ and G♭.



Model for the Keys of D♭, C♯, A♭ and E♭.



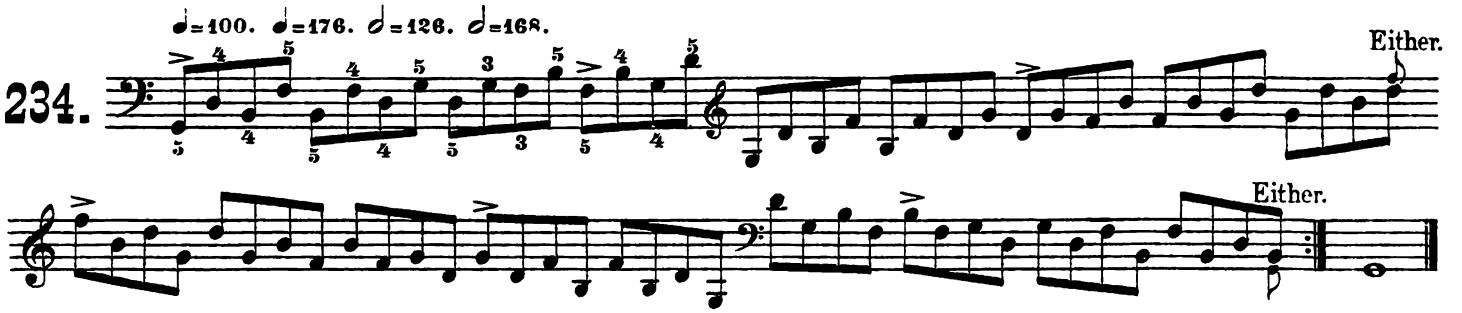
Model for the Keys of B♭ and F.



Broken Dominant Seventh Chords.

Second Form.

The proper fingering for this figure in all keys may be found in that for the first form where the right thumb and the left fifth finger come upon the lowest note in each group; and that fingering must be retained for the three derivatives. Four **tempi.** Observe the accents.



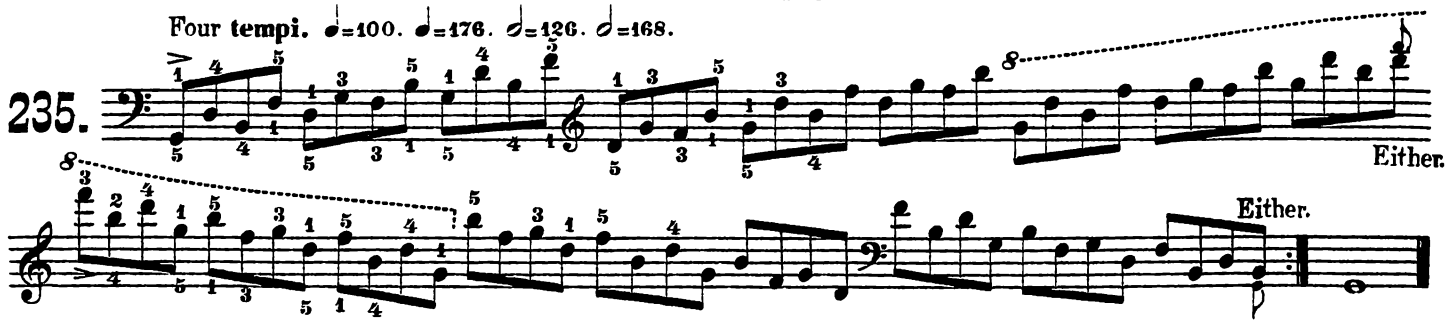
The three derivatives are obtained by beginning on the second, the third, and the fourth note for each, respectively.

Broken Dominant Seventh Chords.

Third Form.

Four tempi. ♩=100. ♩=176. 𝅗𝅥=126. 𝅗𝅥=168.

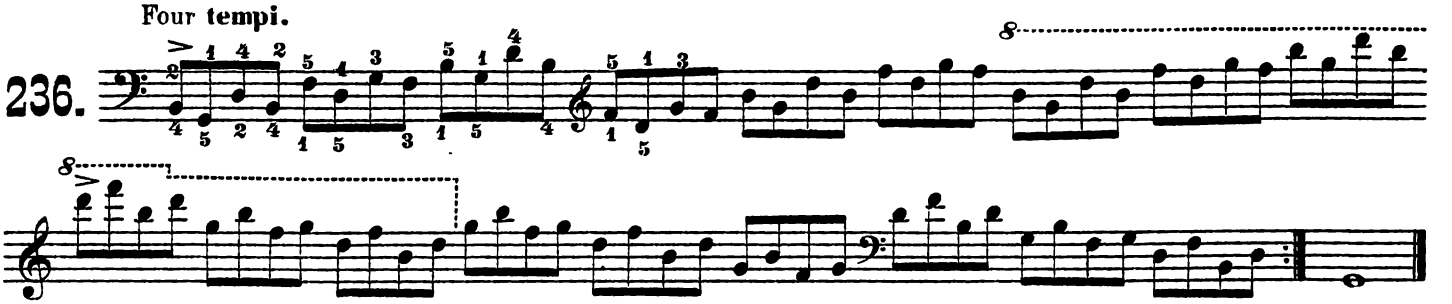
235.



Derivative from the Third Form.

Four tempi.

236.



The fingering for this third form and its derivative in other keys may be found by taking that of the first and third groups (omitting the second and fourth groups) in the models for fingering the first form. Or one may begin at a different point by adopting the inversion and fingering found in the second and fourth groups, only, of the first form.

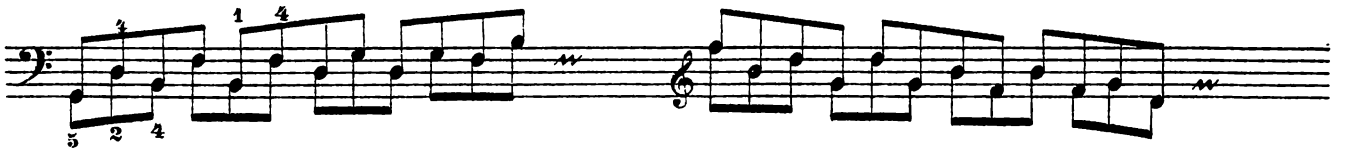
The change of any of the foregoing to groups of three notes calls for no change in the fingering. Such practice is strongly recommended.

First Form of Broken Dominant Seventh Chords in Groups of Three Notes.

237.

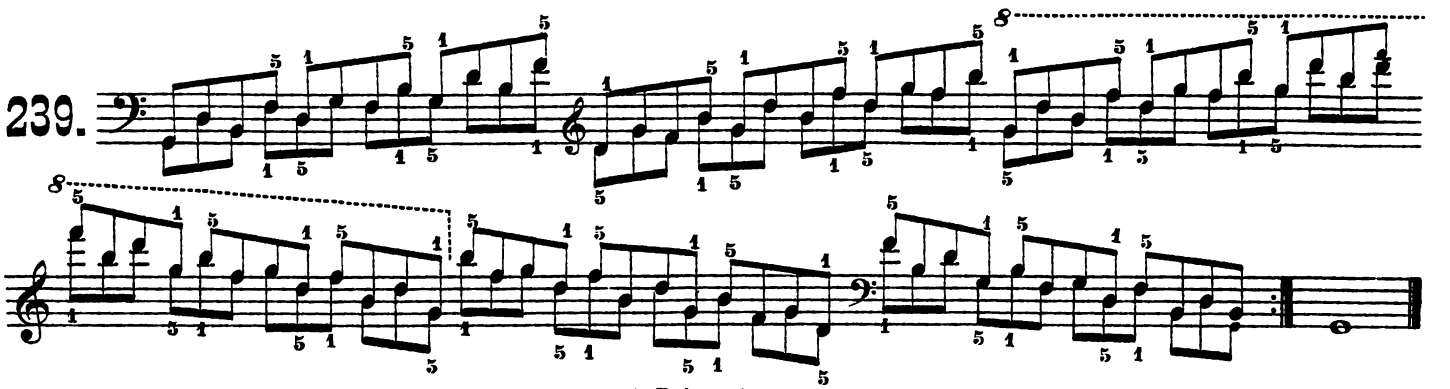
Second Form in Groups of Three Notes.

238.



Third Form in Groups of Three Notes.

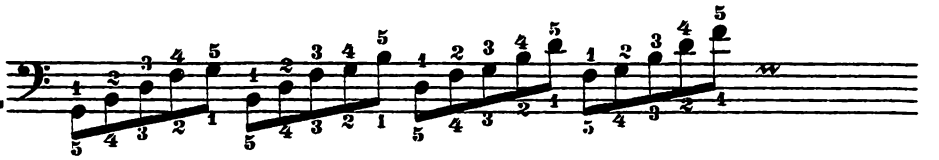
239.



Five Note Chords of the Seventh.

The fingering of these presents no difficulty, as every finger is employed in each chord, in whatever key they appear.

240.



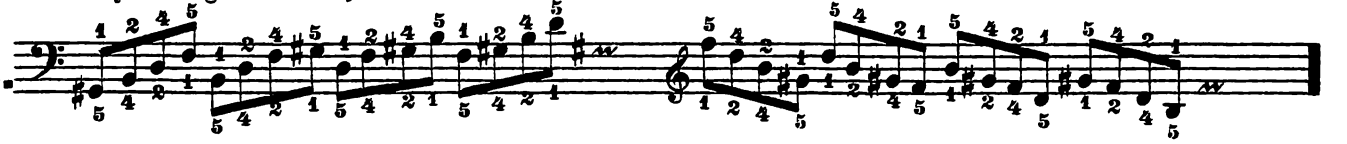
Broken Diminished Seventh Chords.

First Form.

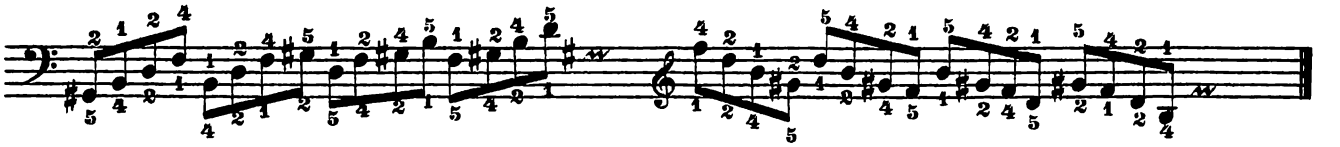
Model for Fingering in the Keys of A, C, E♭, D♯ and F♯ Minor.

Three ways are given at **A**, **B** and **C**.

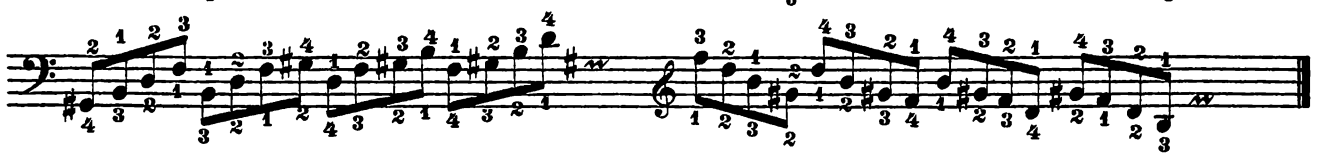
241 A.



241 B.



241 C.

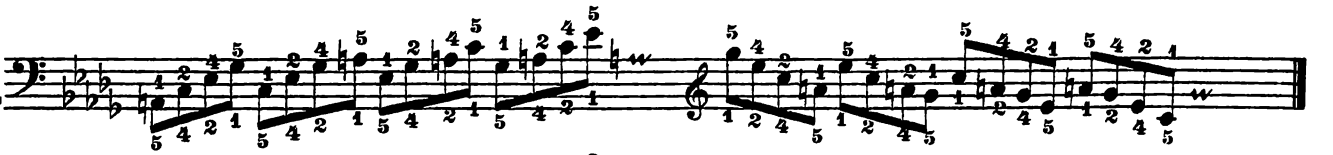


Each of the three derivatives should now follow.

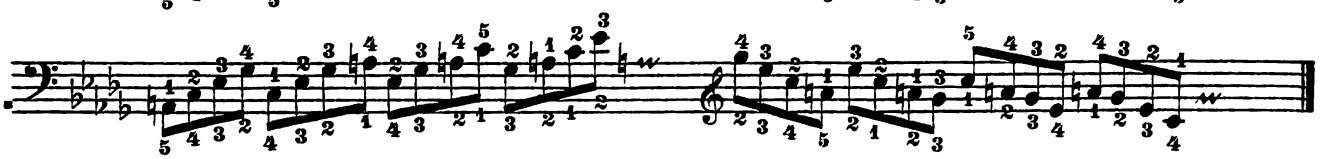
Model for Fingering in the Keys of B♭, C♯, E, G and A♯ Minor.

Two ways are given at **D** and **E**.

242 D.



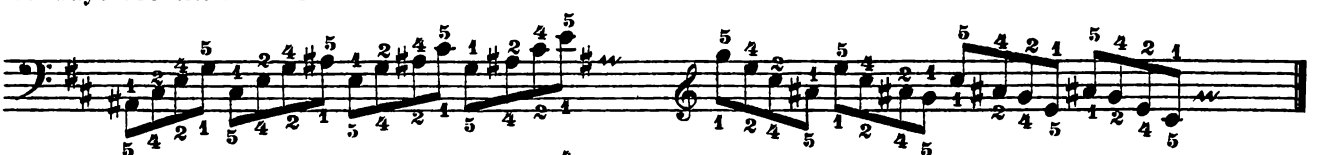
242 E.



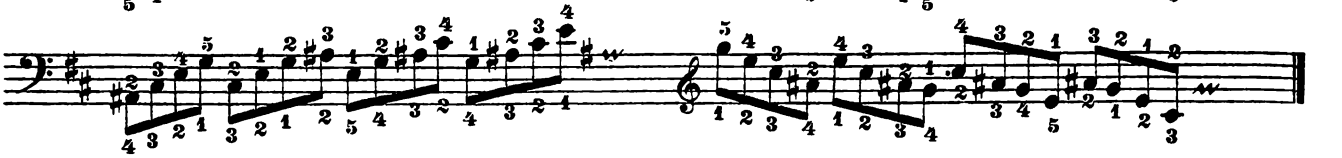
Model for Fingering in the Keys of B, D, F, A♭ and G♯ Minor.

Two ways are shown at **F** and **G**.

243 F.



243 G.



The foregoing groups of keys, five in each, comprise every minor key.

Second Form.

The fingerings shown at 241 **A**, 242 **D** and 243 **F** are those to be employed in playing the second form of broken diminished seventh chords.

244. 

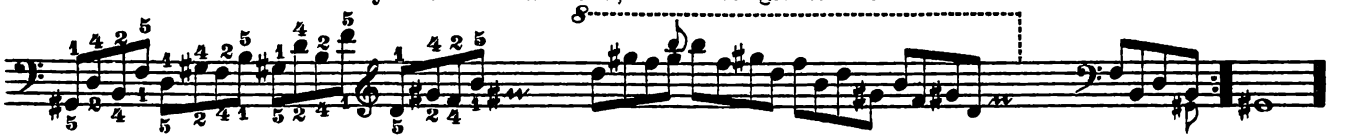
245. 

246. 

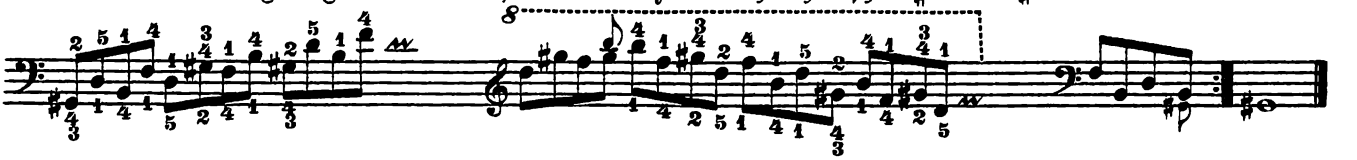
The three derivatives now follow.

Third Form.

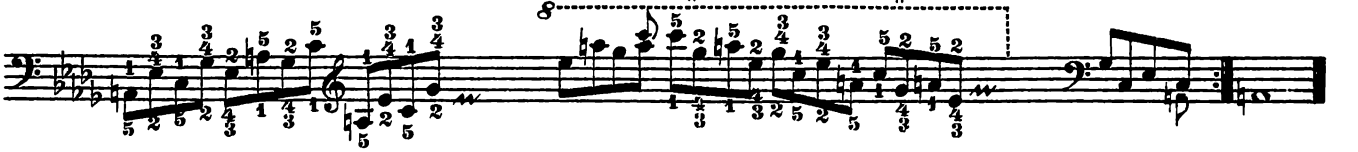
For this in all keys, the fingering of the first and third groups, or of the second and fourth, at 241 **A**, 242 **D** and 243 **F** will be found very useful in the end, even though at first it should seem difficult.

247. 

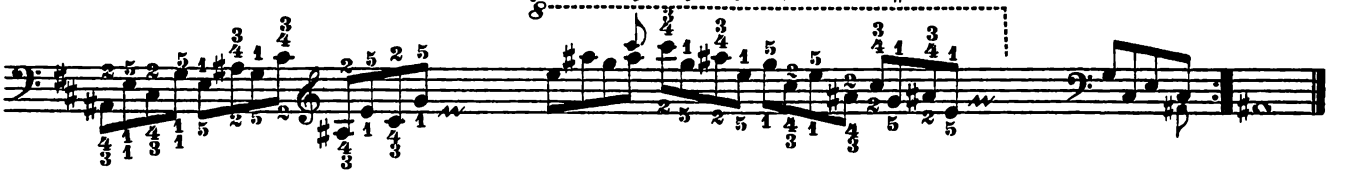
Another Fingering here follows, for the Keys of **A, C, E♭, D♯** and **F♯** Minor.

248. 

The next is for the Keys of **B♭, C♯, E, G** and **A♯** Minor.

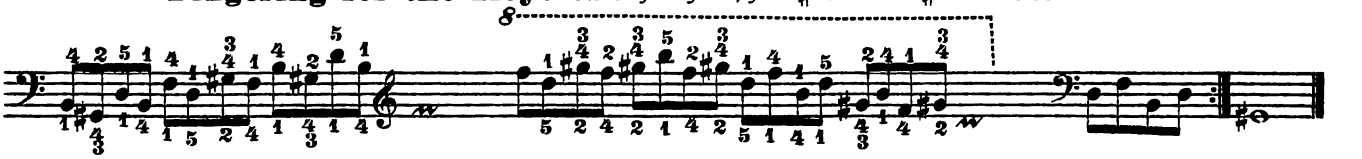
249. 

The next is for the Keys of **B, D, F, A♭** and **G♯** Minor.

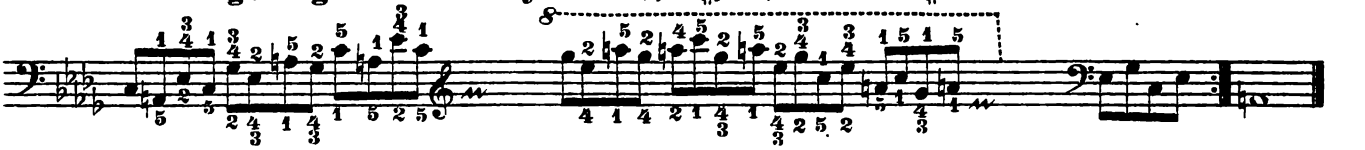
250. 

Derivative from the Third Form.

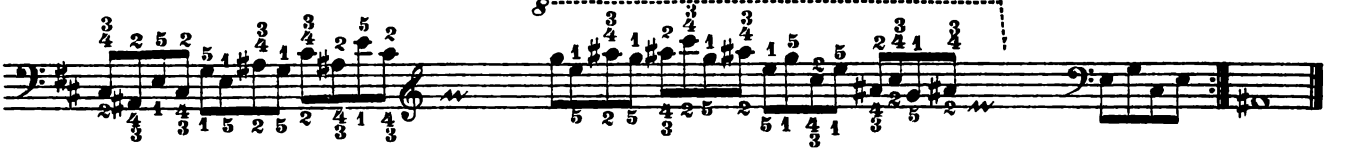
Fingering for the Keys of A, C, E♭, D♯ and F♯ Minor.

251. 

Fingering for the Keys of B♭, C♯, E, G and A♯ Minor.

252. 

Fingering for the Keys of B, D, F, A♭ and G♯ Minor.

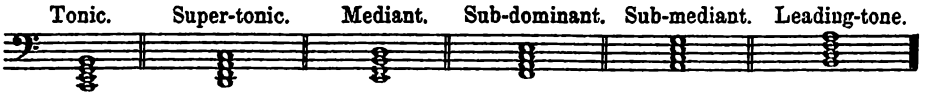
253. 

The re-arrangement of any of the foregoing in groups of three notes is desirable, though introducing no change of fingering.

Further Development of Grand Arpeggios.

Thus far, only the dominant and the diminished seventh chords have been presented in arpeggio forms. The student should now practise the grand arpeggios and broken chords on the other chords of the seventh. These are called **secondary sevenths** or **collateral sevenths** and comprise those founded on the tonic, supertonic, mediant, sub-dominant, sub-mediant and leading-tone of major and minor keys. Those on the tonic and sub-dominant are less used than some others but should be as thoroughly studied. The various models for practising the dominant sevenths should be followed in playing the secondary sevenths.

Secondary Seventh Chords in the Key of C major.

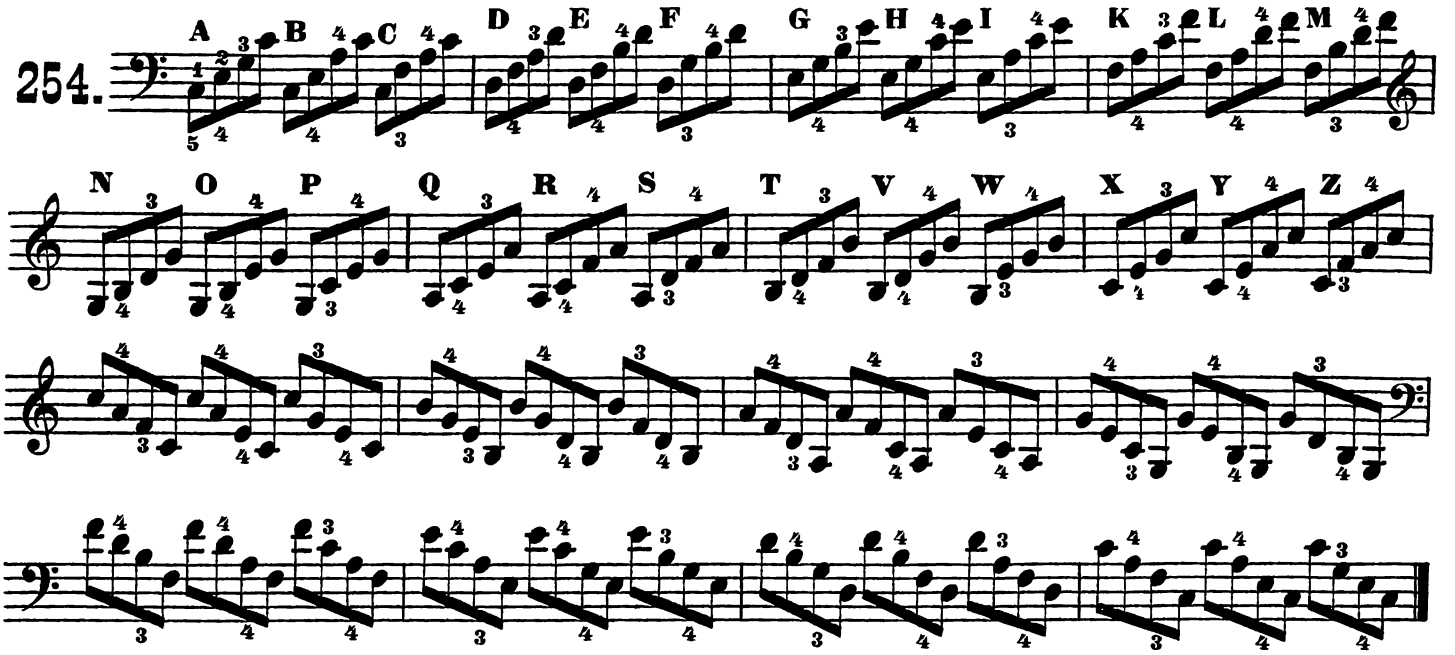


Each of these is to be practised in ways similar to Nos. 230 to 240, inclusive.

The secondary seventh chords in all other keys should now follow.

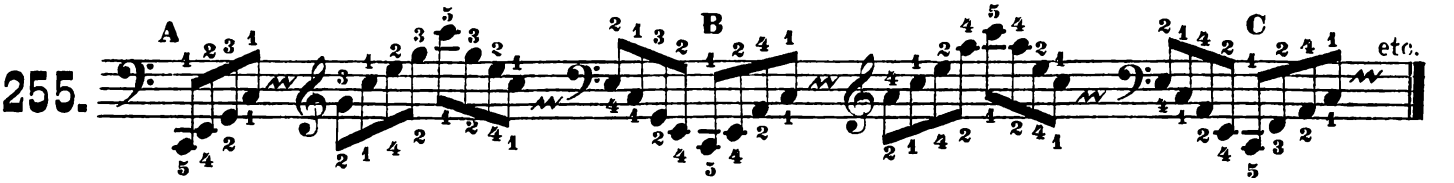
The following, as a preparation for the next series of arpeggios, may be played an octave higher or lower, by each hand and by both hands. Watch the fingering.

254.



Play a grand arpeggio, four octaves up and down (with an accent on the first of every four notes, or with no accent) on the group **A**, following it immediately by another on the group **B**, with no pause between, and so on to the group **X**, inclusive. See 255. One must begin very low on the keyboard, as the series steadily ascends. It is well to play the whole exercise Andante; then Allegro; then Presto.

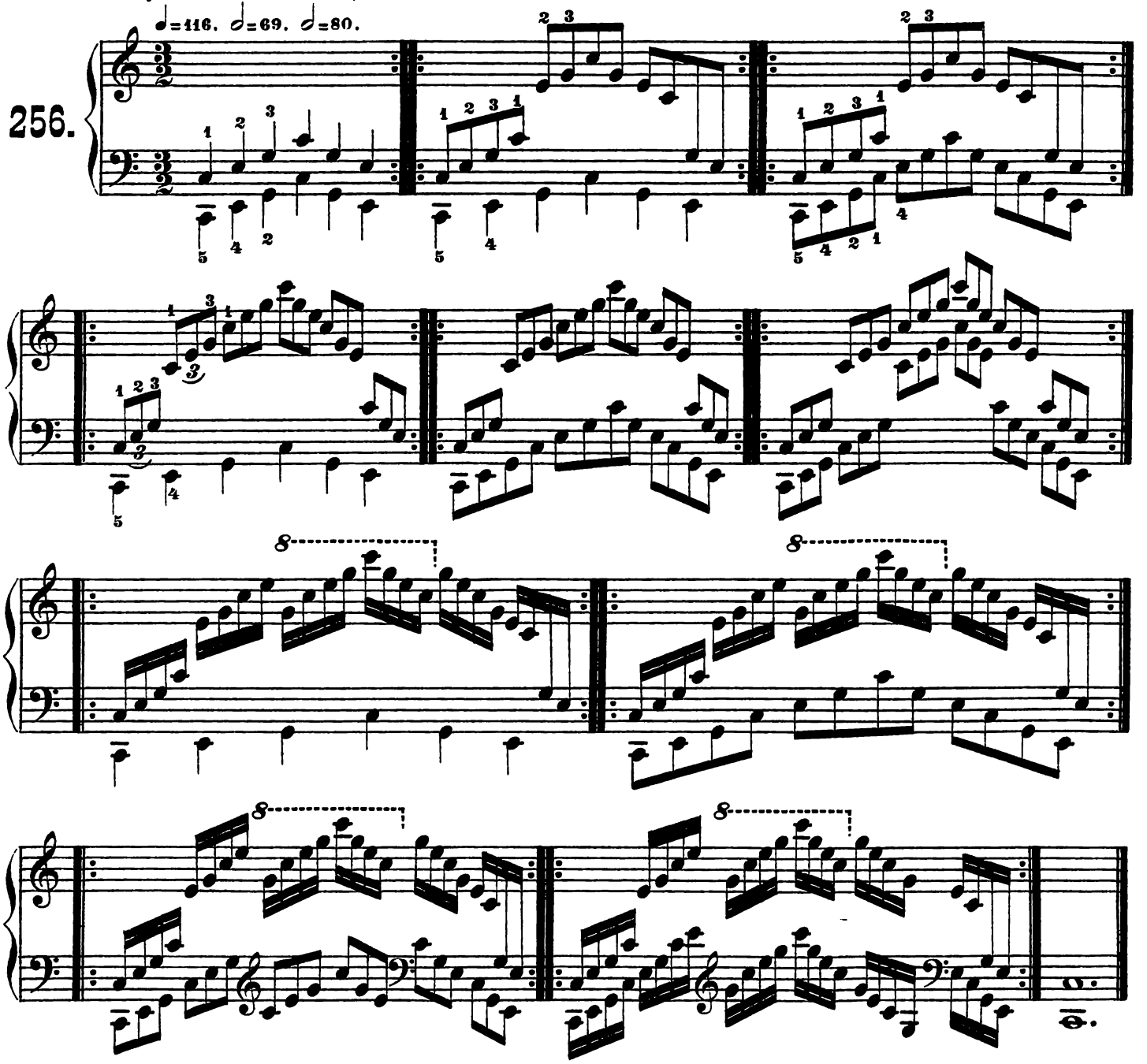
255.



The foregoing, which are all in the key of C major, should be transposed, with necessary changes of fingering, into all other keys.

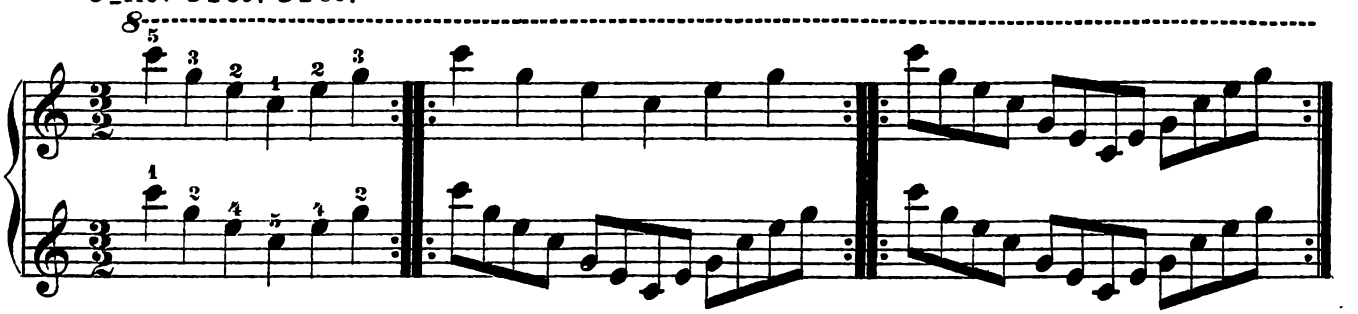
Play Nos. 256 and 257 each in three **tempi.** Observe the repeats but make no pause from beginning to end. The whole may be an octave lower, if desired.

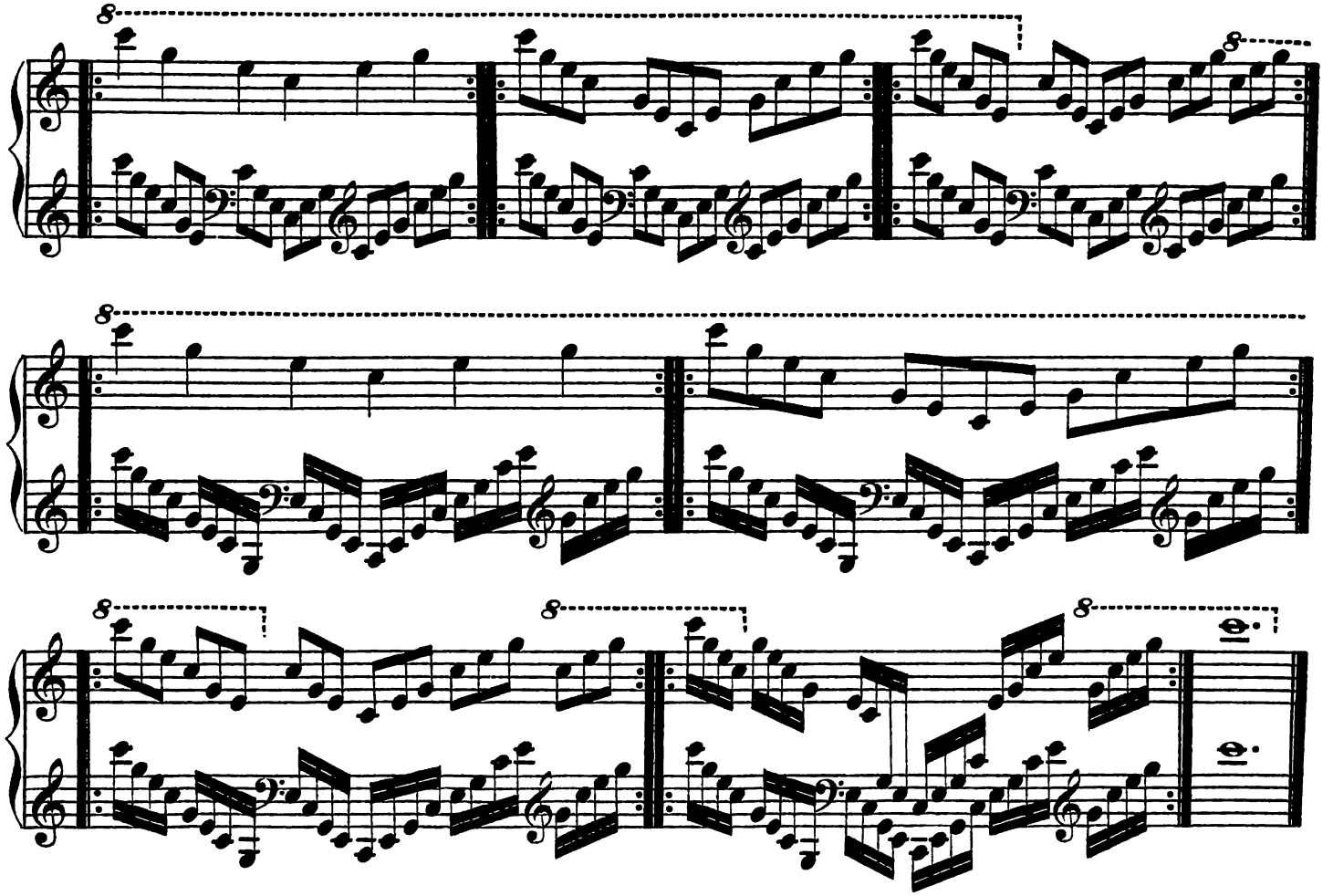
256.



This may be an octave lower, if preferred. In three **tempi.**

257.





The first inversion (second position) should now be played after the model of Nos. 256 and 257; then the second inversion (third position). After these, apply the same to every major and minor triad, with the proper fingering. Modifications of these exercises may be practised in contrary motion.

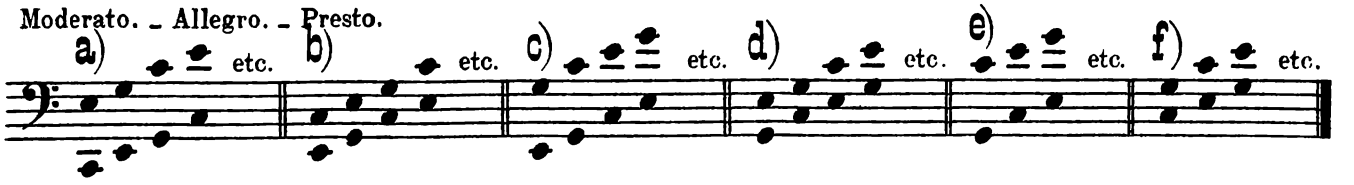
Nos. 256 and 257 may also be slightly altered for use in connection with dominant and diminished seventh chords; likewise with all secondary sevenths.

Grand arpeggios on each chord already explained may be played four octaves, up and down (see No. 258), a) with the left hand beginning on the root of the chord and the right a tenth above: likewise b) with the left beginning on the third of the chord and the right a sixth above: also c) with the left beginning on the third of the chord and the right a tenth above; and d) with the left hand beginning on the fifth of the chord and the right a sixth above. If desired, one may add e) the left hand beginning on the fifth of the chord and the right an eleventh above and f) the left hand beginning on the root of the chord and the right a fifth above.

Play four octaves upward from each of these beginnings, and return.

Moderato. – Allegro. – Presto.

258.



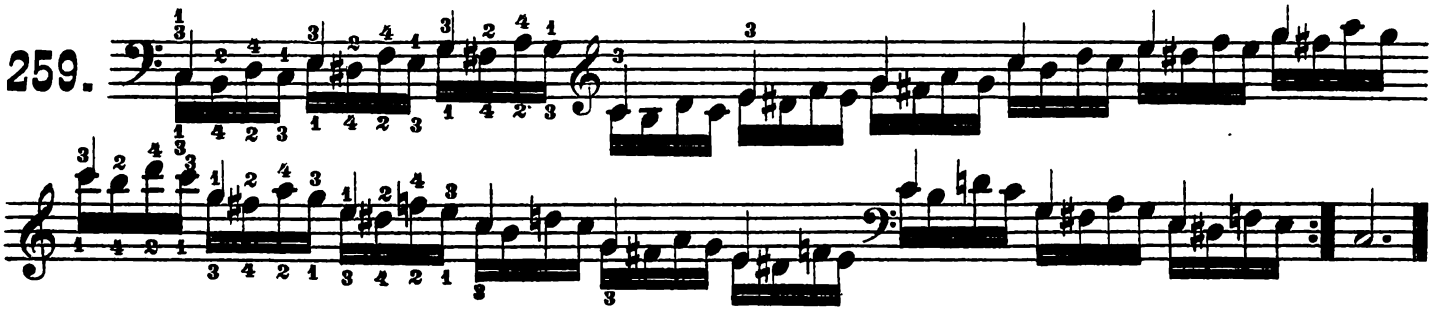
The preceding may also be played, in shorter arpeggios, in contrary motion: also in parallel motion similar to Nos. 256 and 257. The various chords of the seventh require the same treatment.

Merely as a matter for practice, it is allowable to practise all grand arpeggios, playing the lowest note, whether on a white or a black key, with the left fifth finger and the right thumb.

Grand arpeggios frequently appear in an ornamented, or embellished, form; each note of the chord being followed by the diatonic semitone below itself, the note next above it in the scale, and the note itself, thus: —

Play first only the double-stemmed quarter notes; afterward the complete run.

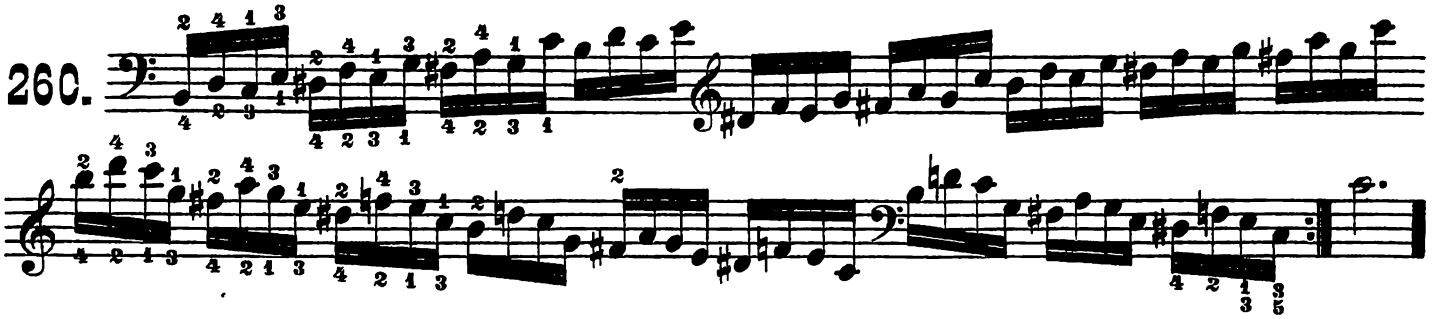
259.



The fingering must be changed somewhat, in many keys.

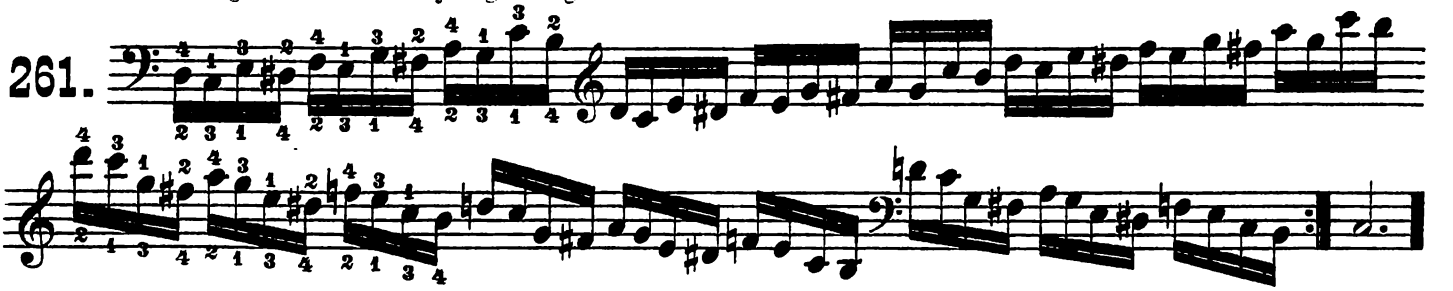
By re-grouping the same notes, beginning with the second note of the above, an agreeable variety results.

260.



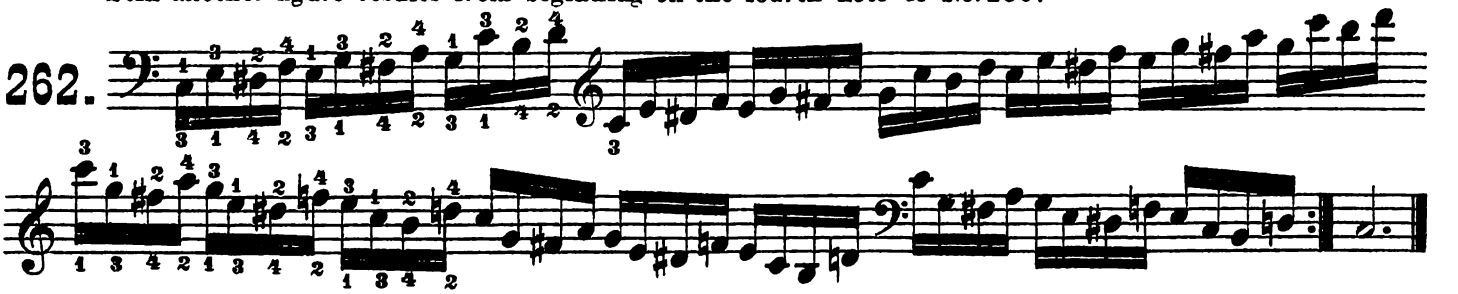
Another figure is formed by beginning on the third note of No. 259.

261.



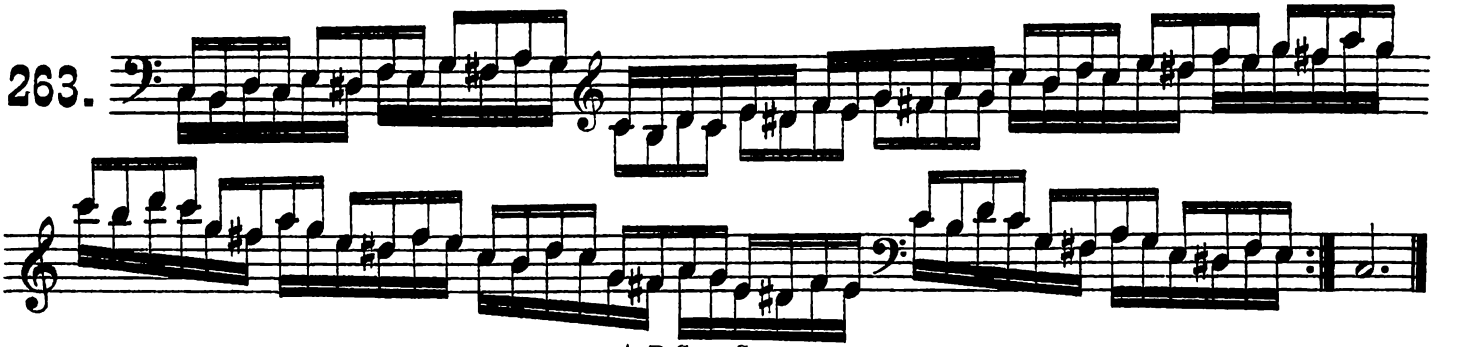
Still another figure results from beginning on the fourth note of No. 259.

262.



The last four figures are more or less intermingled when either of them is written in groups of six notes.

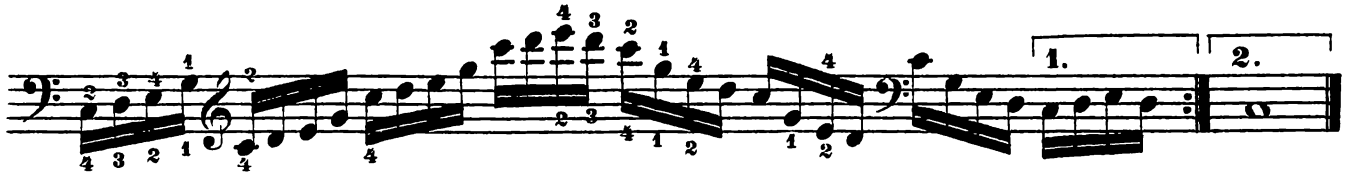
263.



The same could be practised also beginning on the second note, in the group of six; on the third; and so on. The same notes could likewise appear in groups of three notes. Any of these can be played with both hands one octave apart, or with each beginning on a different note of the chord upon which the figure is formed. This last is seldom desirable, owing to the consecutive perfect fourths, or perfect fifths, which occur in the course of the passage. The figure is much better adapted for triads than for chords of the seventh, where it is more rarely used.

Brilliant runs are common which consist of grand arpeggios interspersed with diatonic passages.

264.



All such ornamented passages are readily learned, where they occur in studies or other music, if the plain scales and arpeggios upon which they are formed have been thoroughly practised.

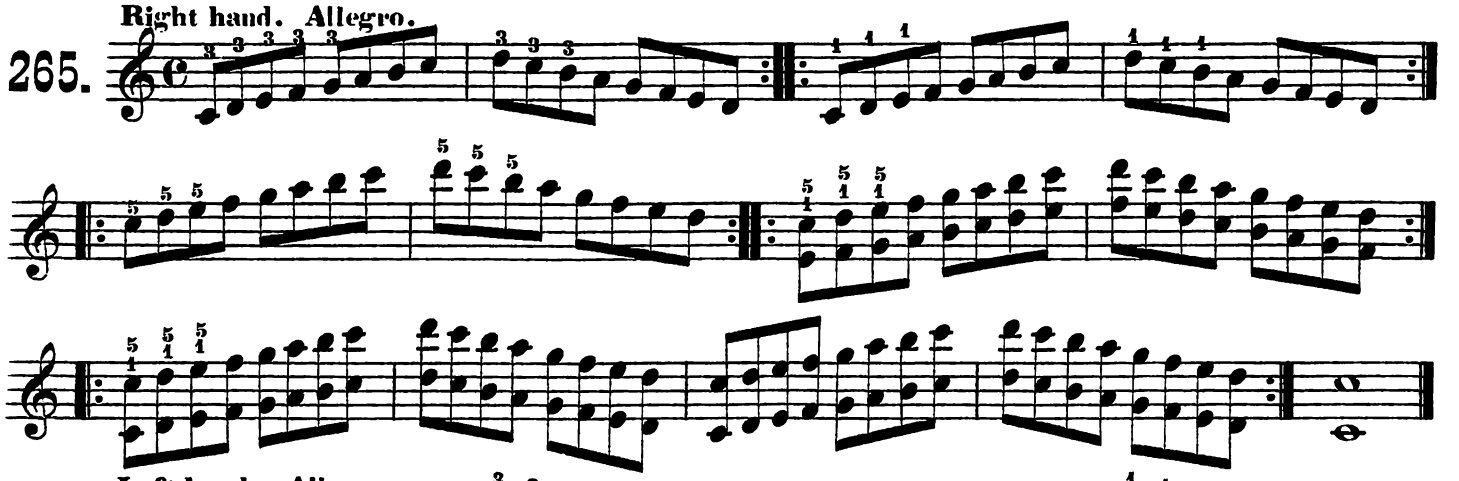
For double grand arpeggios in each hand see No. 307.

FURTHER DEVELOPMENT OF OCTAVE PRACTICE.

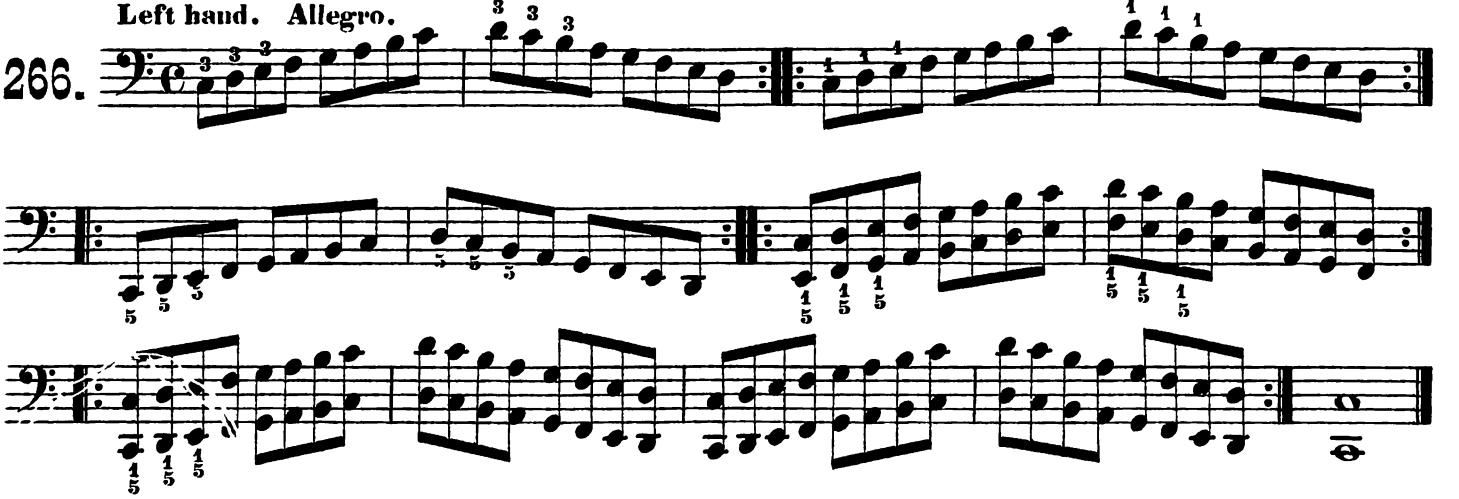
In addition to the preparatory exercises beginning with No. 95, the following serve a useful purpose before entering upon regular octave practice.

Keep the wrist loose and play with the whole hand.

265. **Right hand. Allegro.**



266. **Left hand. Allegro.**



These last two exercises may be played in every major and minor key, preparatory to other octave work.

Octaves in Scales.

All the major and minor scales should be played in double octaves as follows: —

Parallel Motion.

A. The hands beginning an octave apart.
B. The hands beginning a third apart.
C. The hands beginning a sixth apart.

These should be played

1. Very smoothly and slowly.
2. Very smoothly and quickly.
3. Very **staccato** and slowly.
4. Very **staccato** and quickly.

Octaves in Grand Arpeggios.

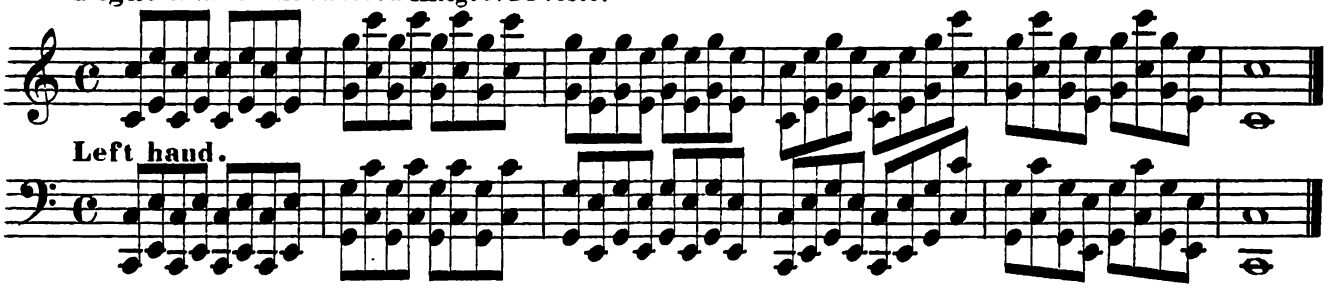
Preparatory Exercises.

Right hand. Andante. - Allegro. - Presto.

267.

Left hand.

268.



All grand arpeggios of triads should be practised in double octaves as follows: —

D. The hands beginning an octave apart.
E. The hands beginning a third apart.
F. The hands beginning a sixth apart.

Double octaves may be played on all seventh chords thus: —

G. The hands beginning an octave apart.
H. The hands beginning a third apart.
I. The hands beginning a sixth apart.

The diminished seventh arpeggios may be played according to G and H, and also thus: —

K. The hands beginning a fifth apart, and
L. The hands beginning a seventh apart.

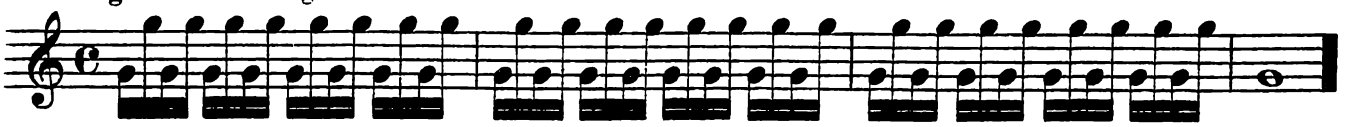
Each of the foregoing in the four ways [1, 2, 3 and 4] shown in scale octaves, above.

Broken Octaves.

These may be played in either of two ways. First: with the arm nearly quiet and the whole hand oscillating at the wrist, which must be very loose. Second: with the whole arm vibrating from the shoulder, with an imaginary fulcrum, or point of approximate quiet, about two thirds the distance from the elbow to the wrist. Each way of playing is to be learned, as being necessary for different styles of execution, in order to produce varied effects. The hand must not rise from the keys, as all must be smoothly connected.

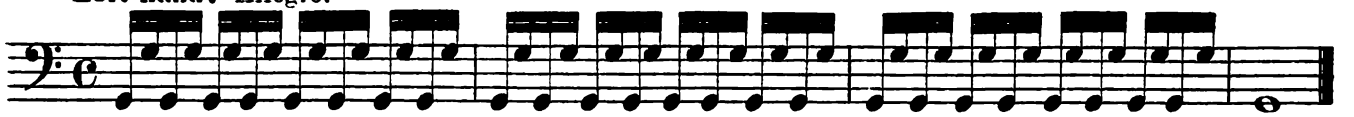
Right hand. Allegro.

269.



Left hand. Allegro.

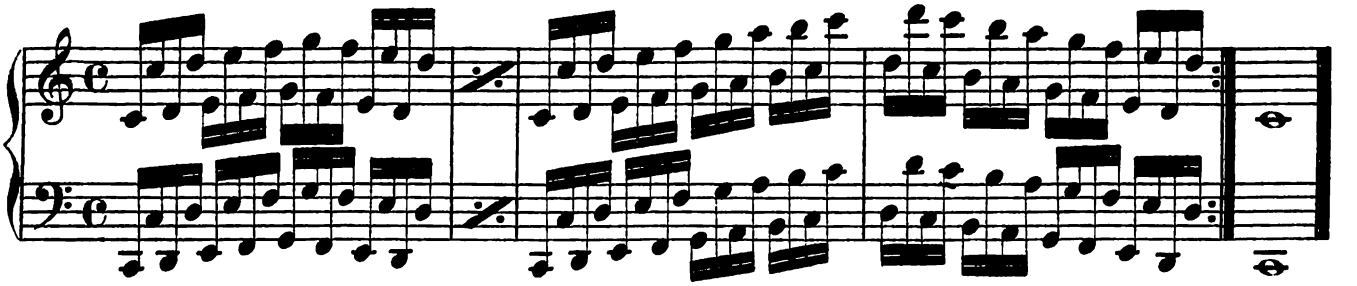
270.



Natural laws of acoustics render it undesirable (with a few exceptions) to present broken octaves where the upper note comes first.

In scale passages of broken octaves there is constant danger of striking wrong notes, because in ascending scales the first note of each broken octave is but a seventh from the preceding note, while in descending scales it is a ninth from the note before it. This sign 𝄎 repeats the preceding measure. Each hand alone; then the two together.

271.



Similar exercises should be practised in each key: also broken octaves in scales and grand arpeggios in the eleven ways from A to L inclusive, as previously marked.

SINGLE HAND THIRDS.

(Usually called Double Thirds.)

As already explained, thirds are not double unless two thirds appear simultaneously. They are usually played by both hands (except in the first inversion of four note triads ). A few finger exercises on double notes should precede the scales.

The following are to be practised on the first five notes of every major and minor key.

The double notes must be struck exactly together, with a pure finger-motion.

Right hand. Strong accents. Slowly.

272.

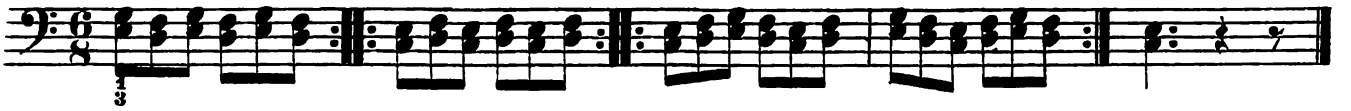
Right hand. No accents. Rapidly.

273.

Left hand. Strong accents. Slowly.

274.

Left hand. No accents. Rapidly.

275. 

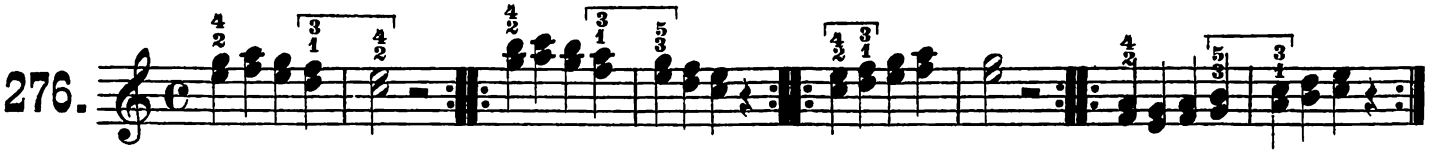
In most double note passages in one hand alone, whenever the fingers cross, only the upper of the two notes can be literally connected with the next in ascending series, and the lower of the two in descending series; but the connecting of the single note with the next is sufficient to produce a **legato** effect of the whole. It is not therefore absolutely necessary even to attempt to connect both the upper and lower notes, where the fingers cross.

Rules for Playing Scales in Single Hand Thirds.

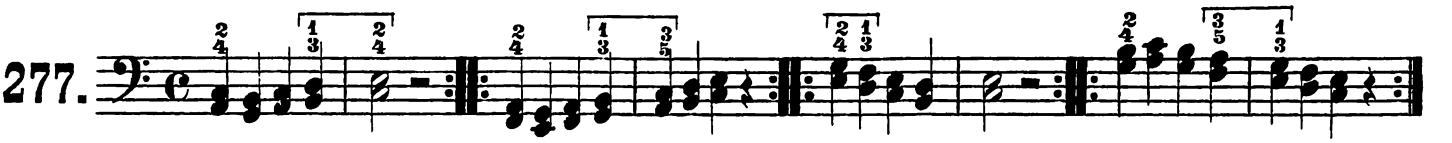
1. Point the hands slightly toward the right, in ascending scales, and toward the left, in descending.
2. Play with the fingers, only, without jarring the hand.
3. Strike the double notes exactly together.
4. When the fingers cross, in ascending connect the upper of the two notes with the next, and in descending, the lower.
5. Learn the fingering by remembering the notes played by the fifth finger in each hand in the midst of long scales. (The fifth is sometimes used exceptionally near the ends of scales.)

Each of these short, preliminary exercises should be played many times in succession. Connect the crossings marked ⌐¬.

Right hand.

276. 

Left hand.

277. 

Scales in thirds must be practised in every major and minor key in ways similar to those suggested in tables **A** and **B** under simple scales.

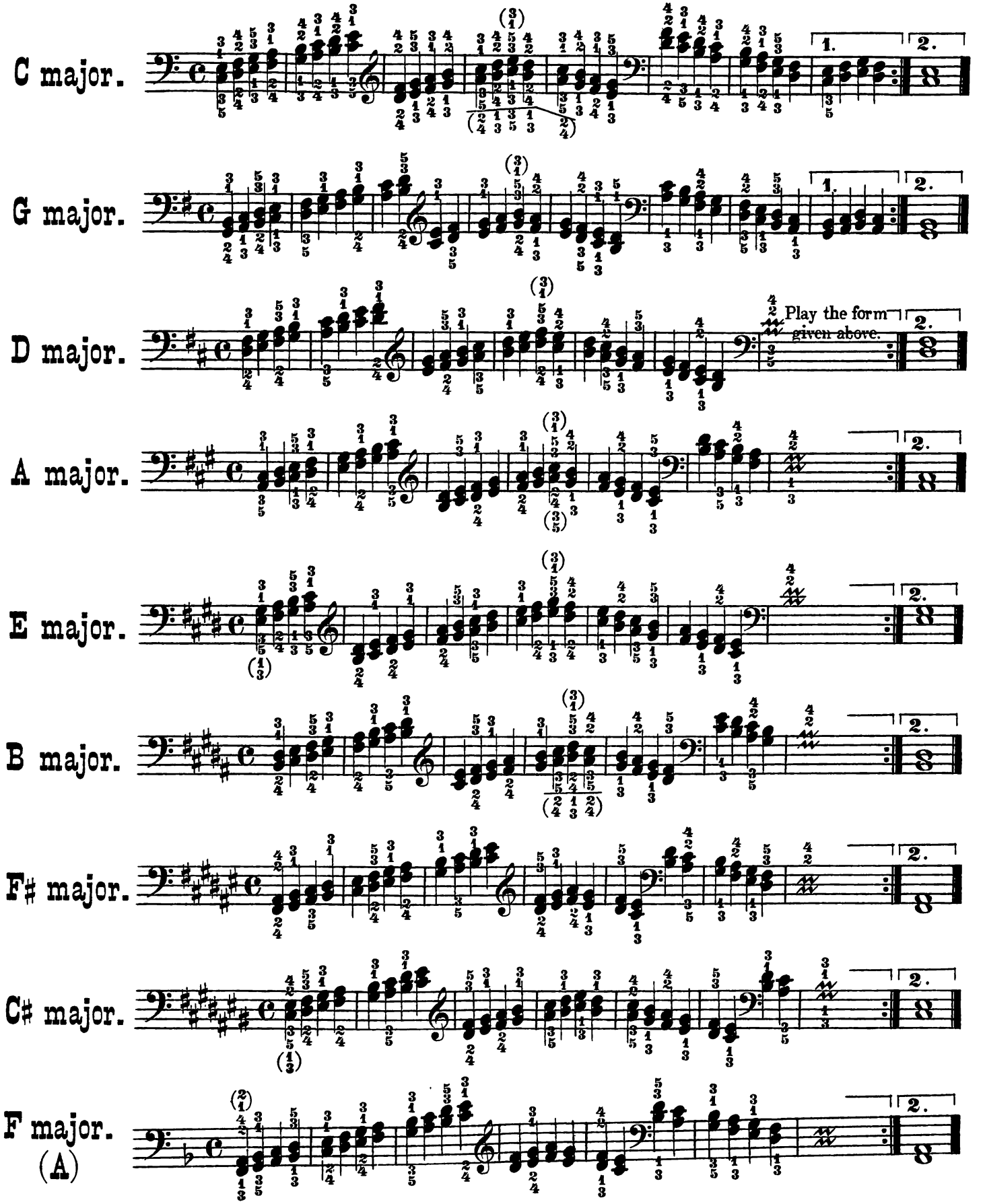
A. Each Hand Alone.

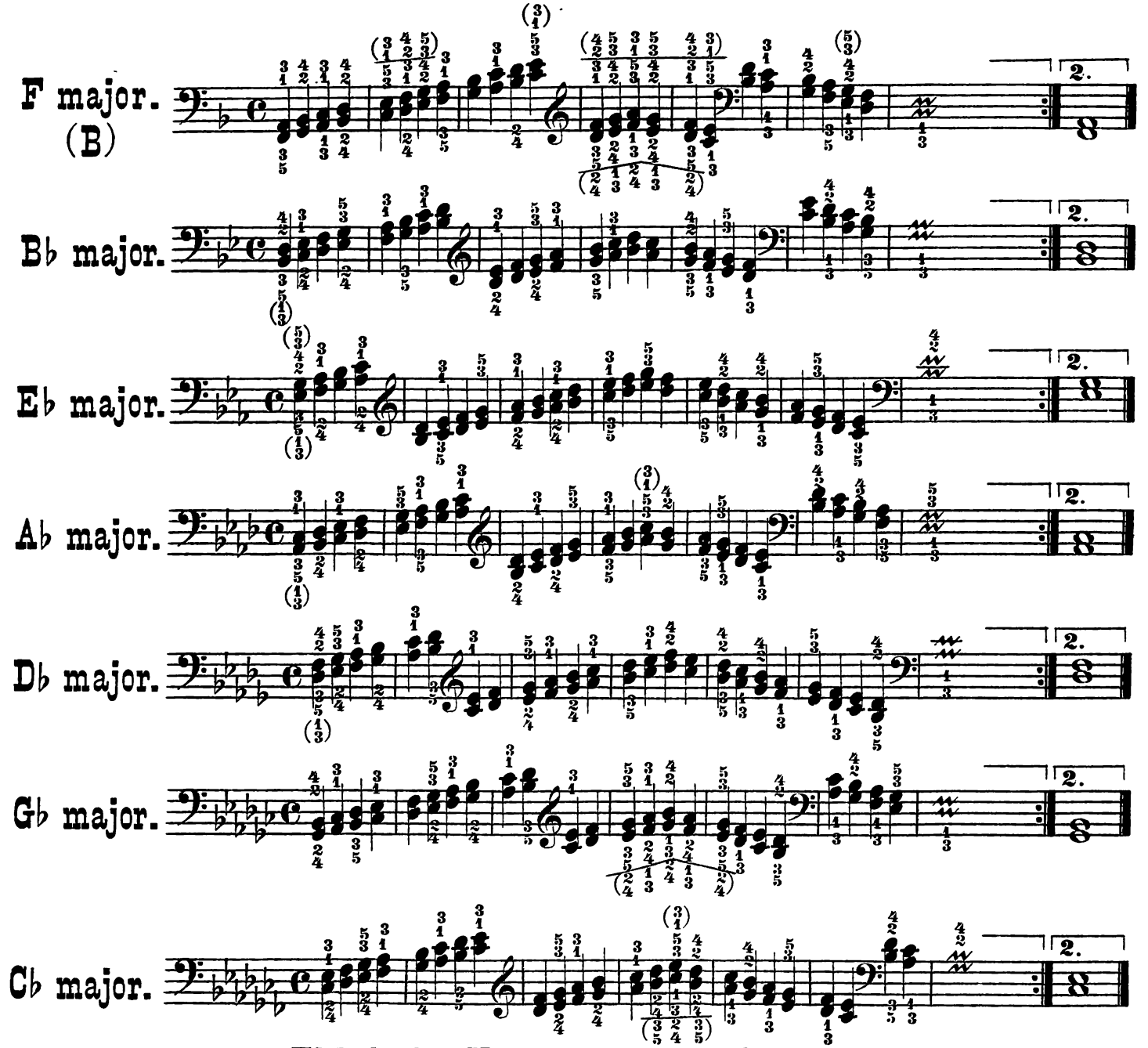
1. No accent, clearly, two octaves. Andante.
2. Accent the first of every two notes, two octaves. Andante.
3. Accent the first of every three notes, three octaves. Moderato.
4. No accent, three octaves. Allegretto.
5. Accent the first of every four notes, four octaves. 1) Allegretto. 2) Allegro.
6. No accent, four octaves. Presto.

After learning this and table **B**, on page 56, these scales may be practised in contrary motion, the hands beginning six octaves apart and playing two octaves in extent.

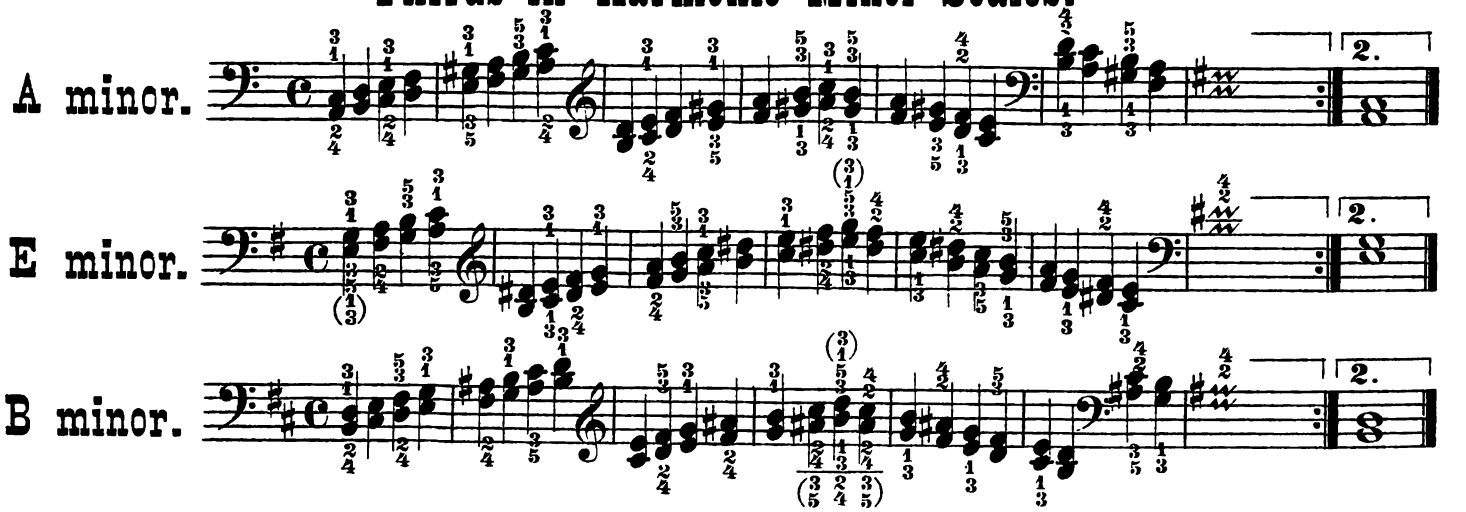
The right and left hand fingerings stand respectively above and below the notes. The exercise may be transposed to any octave, to suit either hand.

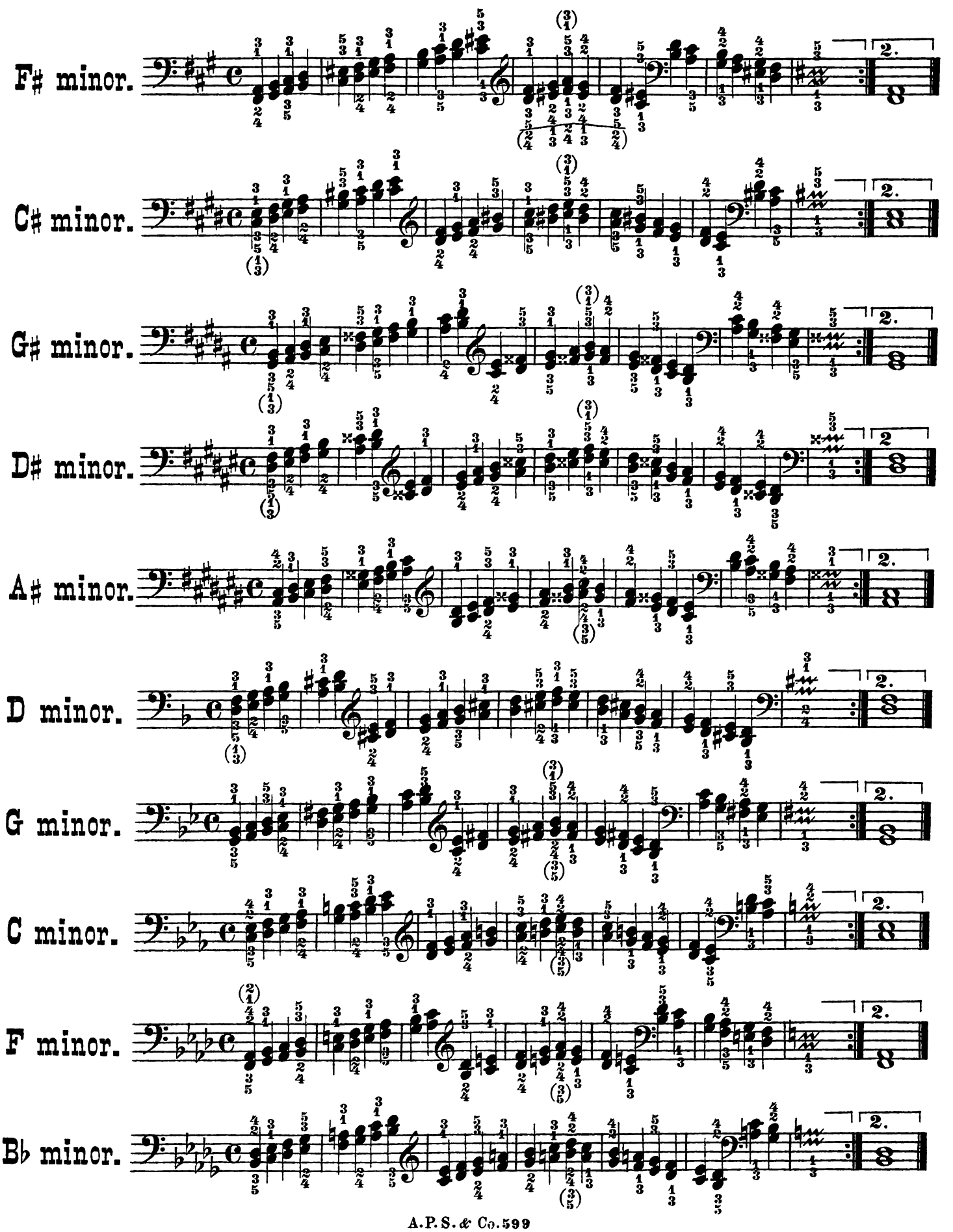
Thirds in Major Scales.

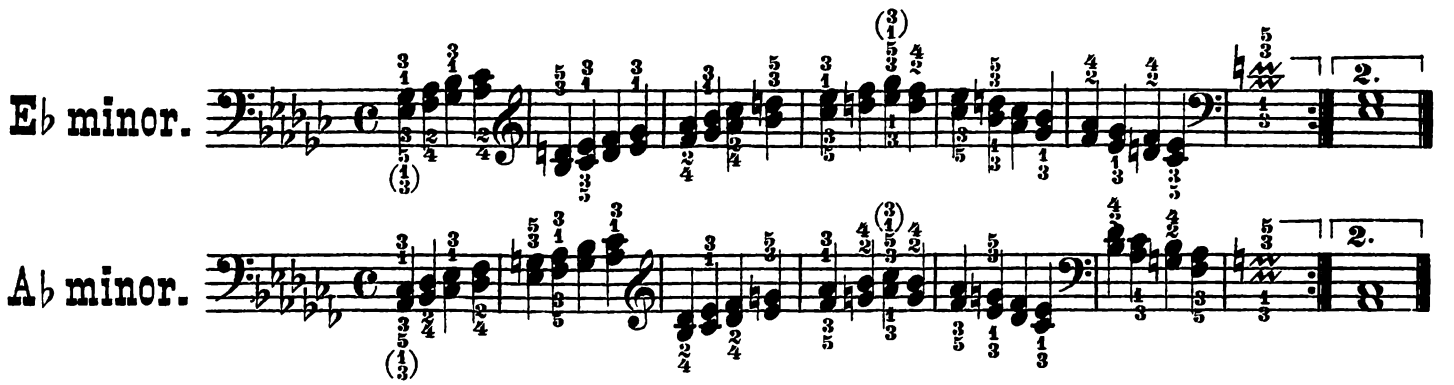




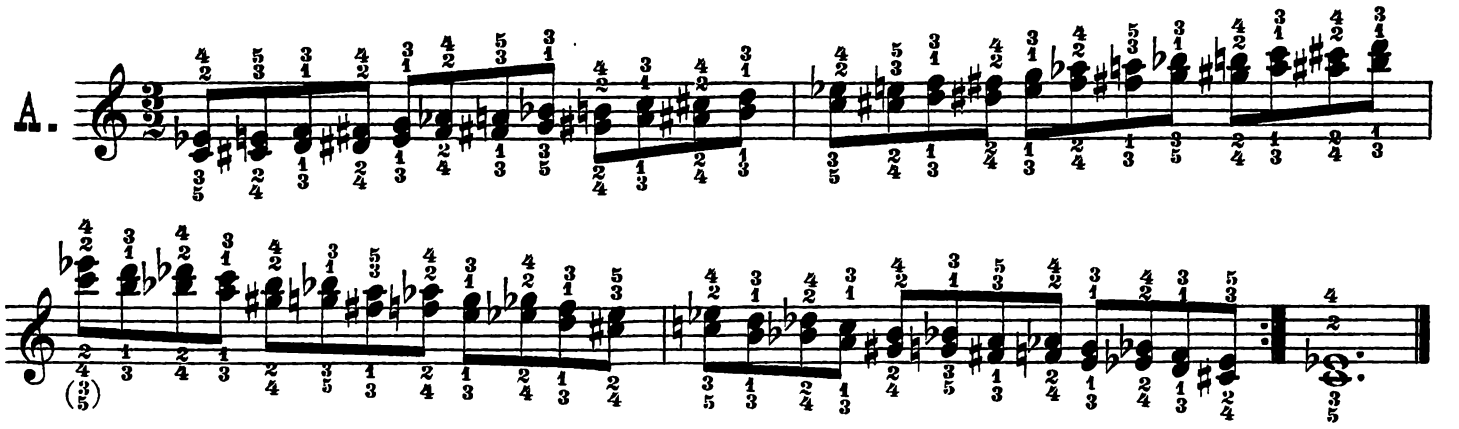
Thirds in Harmonic Minor Scales.



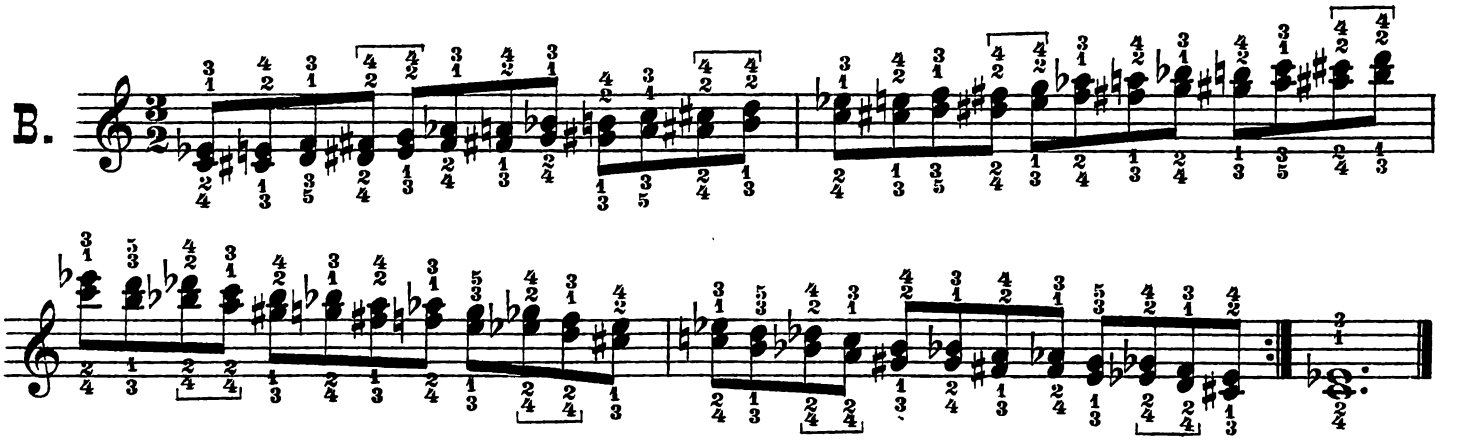

F♯ minor.
C♯ minor.
G♯ minor.
D♯ minor.
A♯ minor.
D minor.
G minor.
C minor.
F minor.
B♭ minor.



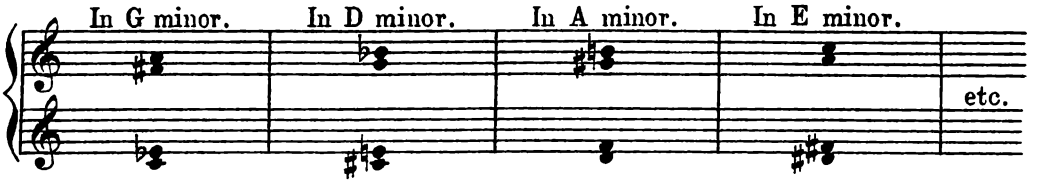
Thirds in the Chromatic Scale.



In the next exercise **(B)**, where the same fingers play twice in succession, they do not rise in going to the second keys but slip smoothly from the black down to the white.

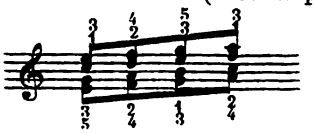


When played with both hands, chromatic scales in thirds may employ the hands one octave apart; or they may be so adjusted that the two together shall form a chord of the diminished seventh, thus: —



They may be studied also with an accent on the first of every two notes, on the first of every three, four, or six, and in groups of two, three, four, or six notes with no accent. Scales of double thirds are useful

likewise when so arranged as to produce the first inversion (second position) of triads, thus: —

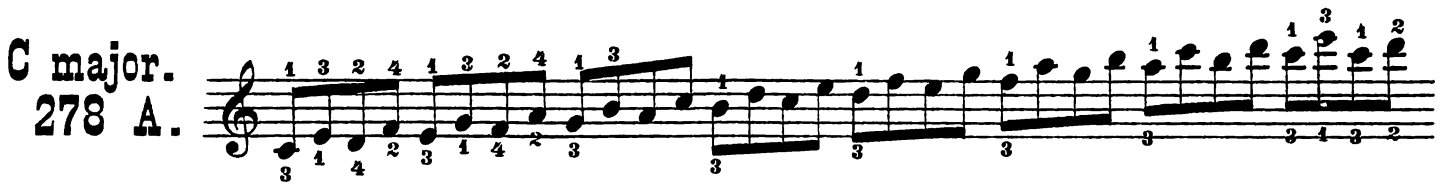


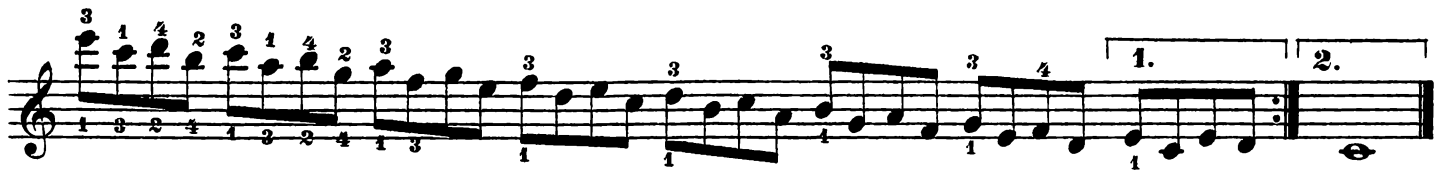
Staccato scales of thirds may be practised with the fingering already given, or with the most convenient intermingling of $\frac{3}{1}$ and $\frac{4}{2}$ ($\frac{1}{3}$ and $\frac{2}{4}$) according to the black and white keys. The scale of C major in **staccato** thirds may be played with $\frac{4}{1}$ ($\frac{1}{4}$). Some will find it easier to omit the use of the third and fifth fingers altogether, playing all the lower notes of thirds in the left hand and the upper in the right with the fourth fingers, using the second on black keys only, instead of the thumb.

BROKEN THIRDS.

These can be played with the fingering previously given in each key; but this is not most employed, the fifth finger usually being omitted altogether in broken thirds. A few examples will suffice to enable the student to play them with facility in any key.

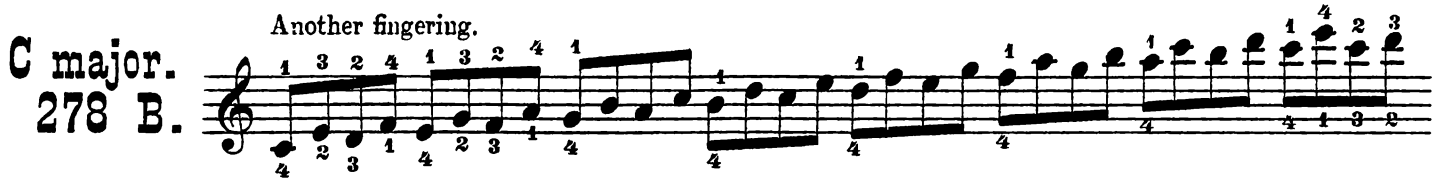
C major.
278 A.

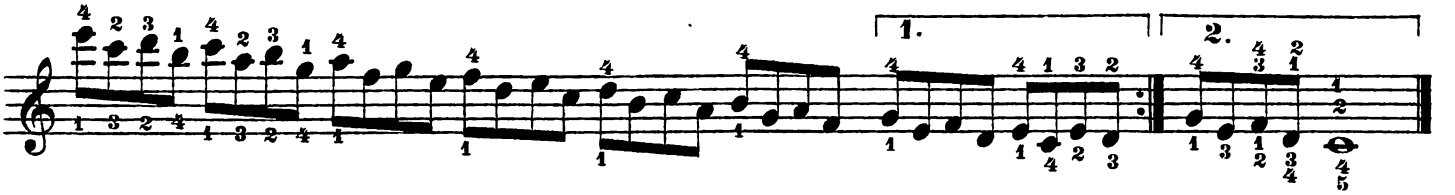




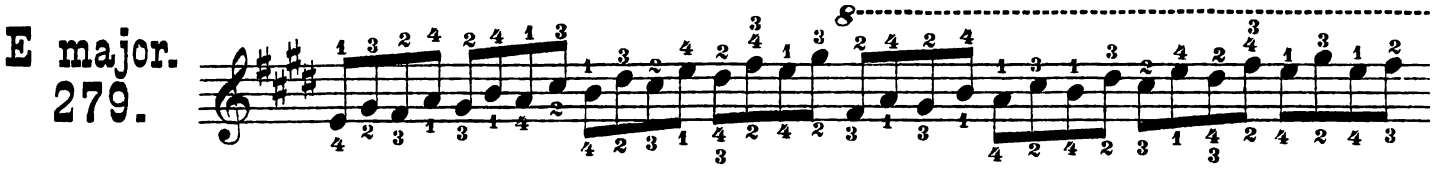
Another fingering.

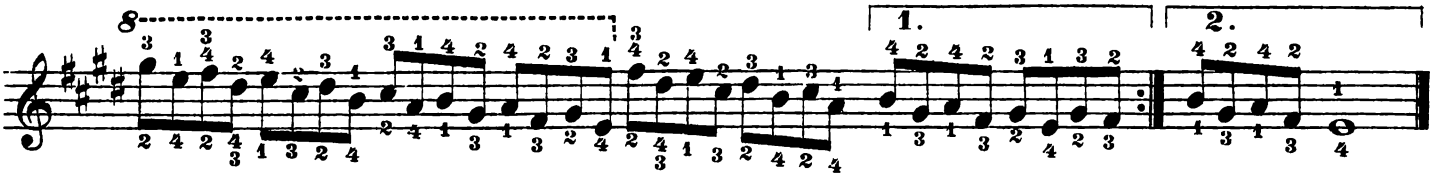
C major.
278 B.



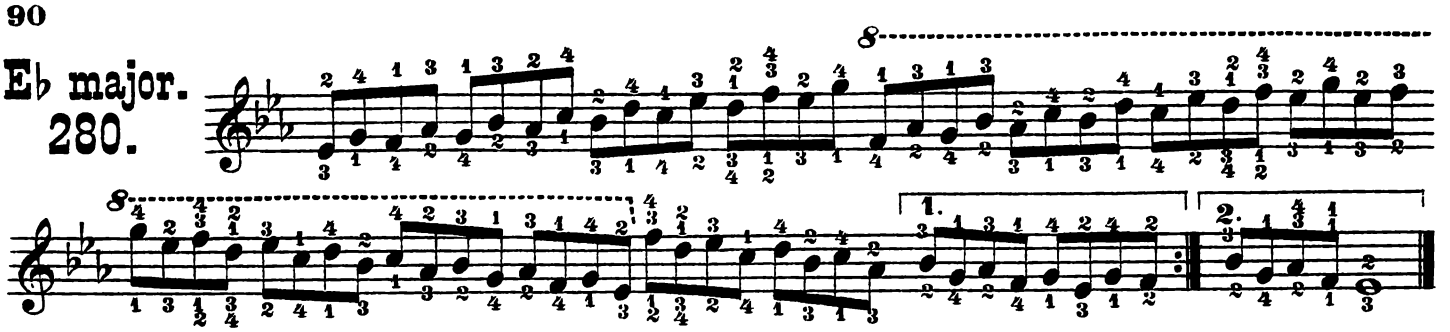


E major.
279.



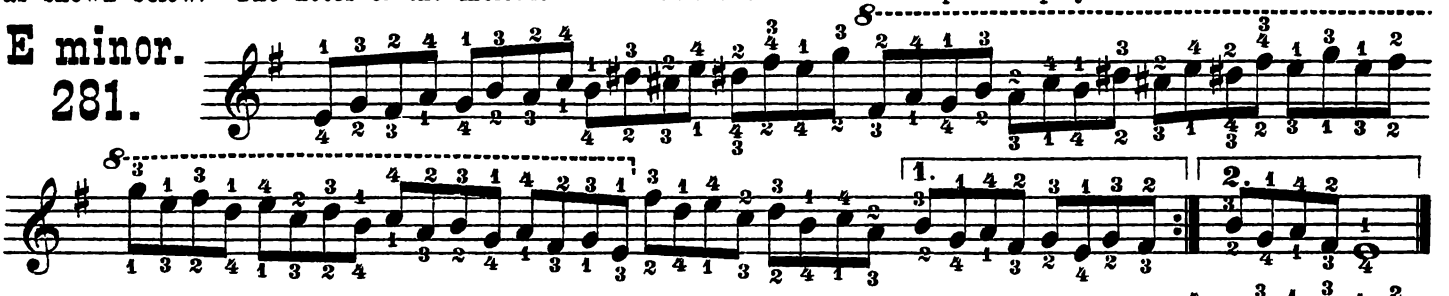


E♭ major.
280.

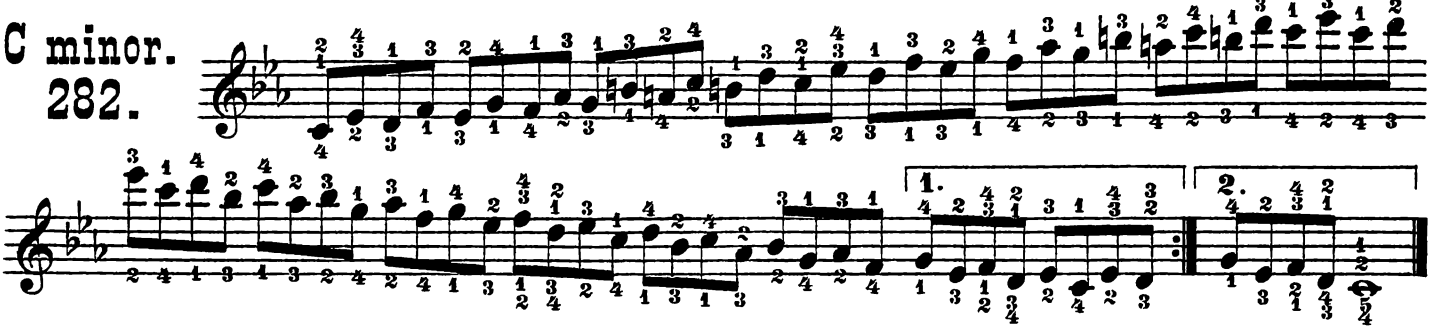


In the ascending minor scales in broken thirds, certain modifications of the usual scale form are necessary, as shown below. The notes of the melodic minor scale are for the most part employed.

E minor.
281.

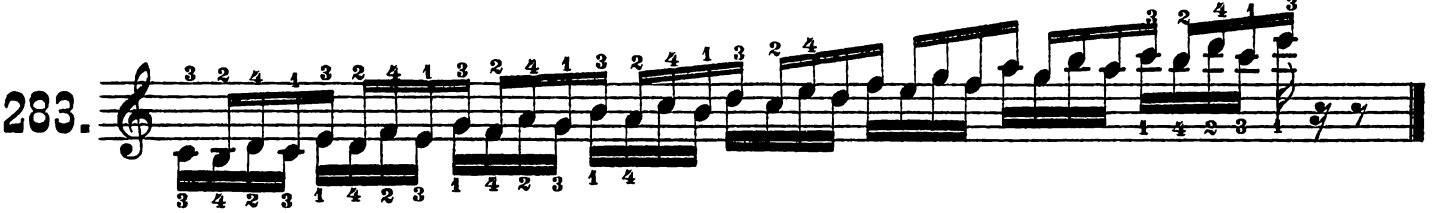


C minor.
282.

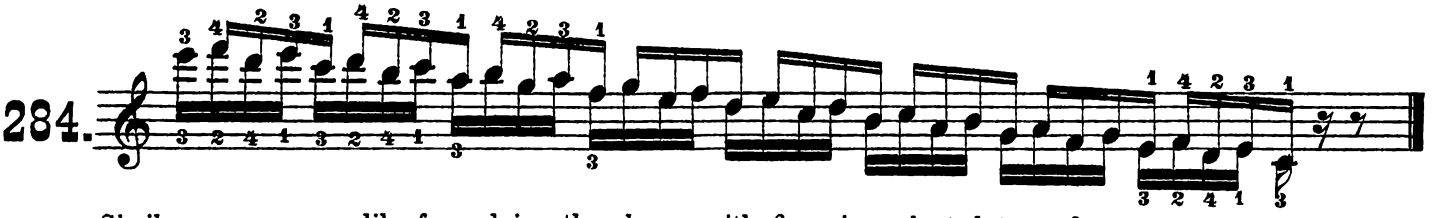


A brilliant run, frequently met with in standard compositions, is more easily fingered and played if the performer recognizes it as a derivative from a scale of broken thirds, as indicated by the lighter grouping.

283.



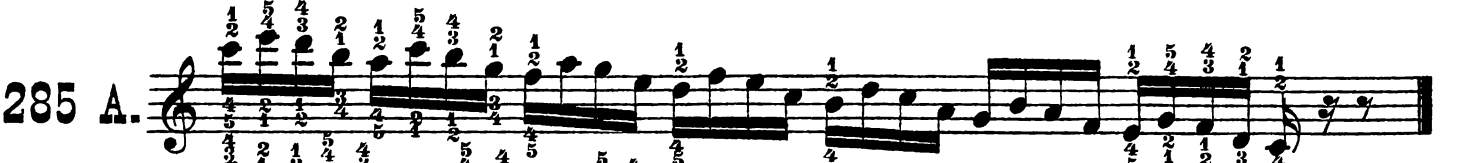
284.



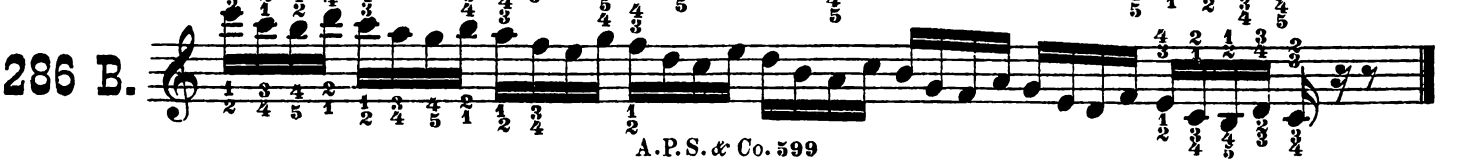
Similar runs are readily formed in other keys, with fingering adapted to each.

Runs like the following are of awkward fingering in most keys except C major and are poorly adapted to ascending passages.

285 A.



286 B.



SINGLE HAND SIXTHS.

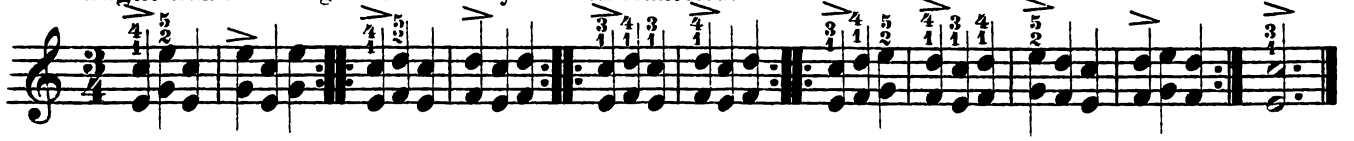
(Usually called Double Sixths.)

Play the double notes exactly together.

Keep the fingers well curved and the hand quiet.

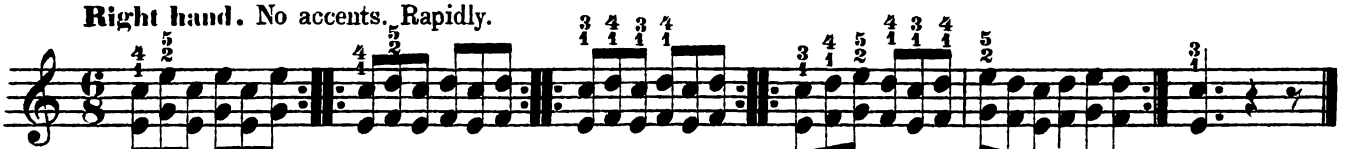
Right hand. Strong accents. Slowly and well connected.

287.



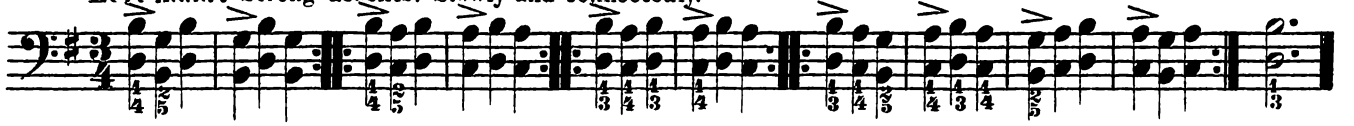
Right hand. No accents. Rapidly.

288.



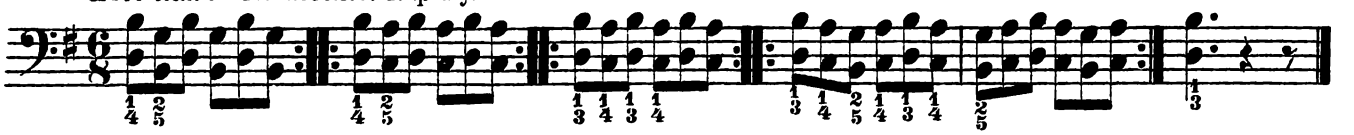
Left hand. Strong accents. Slowly and connectedly.

289.



Left hand. No accents. Rapidly.

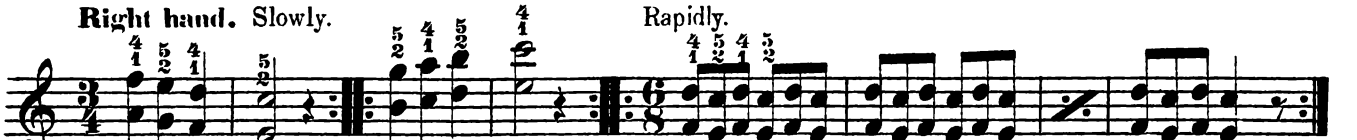
290.



When the fingers cross, the upper of the two notes must be connected with the next, in ascending, and the lower, in descending. Each exercise four times.

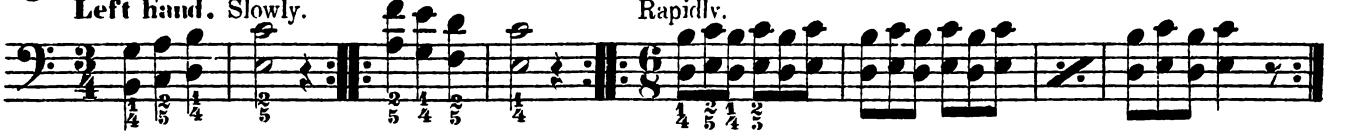
Right hand. Slowly. Rapidly.

291.



Left hand. Slowly. Rapidly.

292.

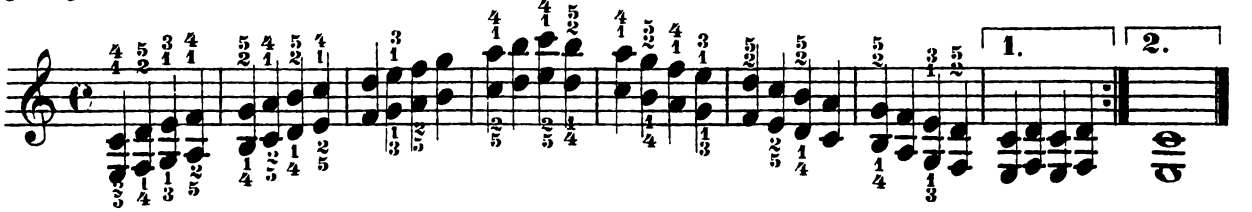


SIXTHS IN MAJOR SCALES.

Scales in sixths must be practised in each major and minor key, according to tables **A** and **B**, under simple scales. After these two tables are well learned, these double scales in sixths may be practised in contrary motion, the hands beginning six octaves apart and playing two octaves, up and down.

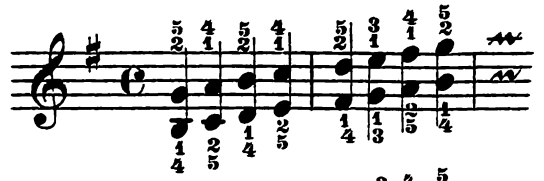
The fingering is most easily learned by remembering the notes played by the third fingers.

C major.

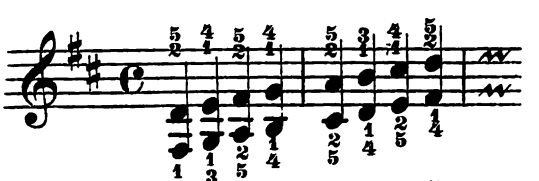


Only the notes necessary to show the fingering will be given in the remaining keys, though the full forms, **A** and **B**, pages 19 and 56, are to be practised.

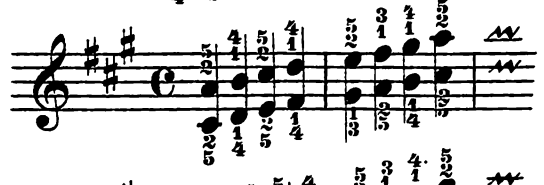
G major.



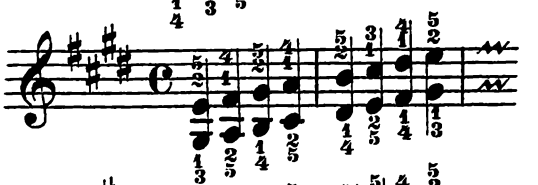
D major.



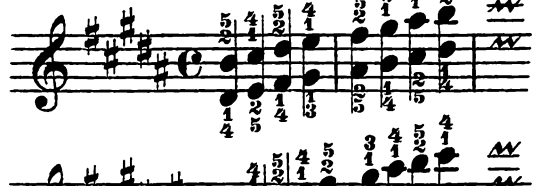
A major.



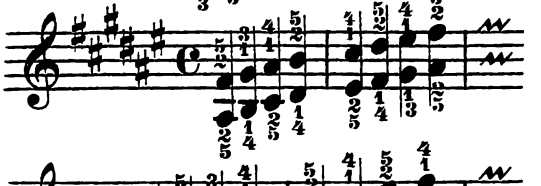
E major.



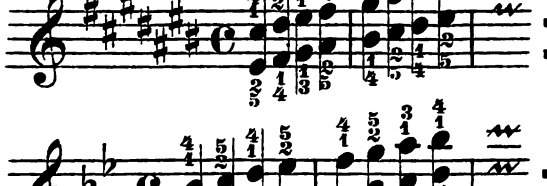
B major.



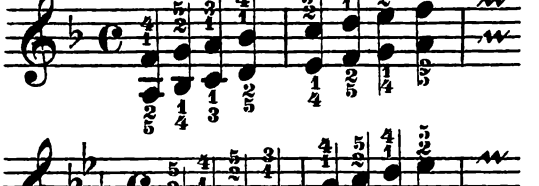
F♯ major.



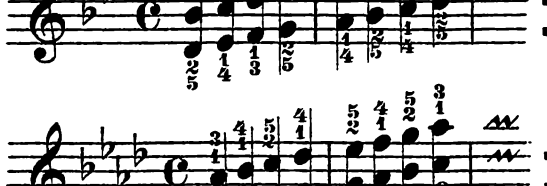
C♯ major.



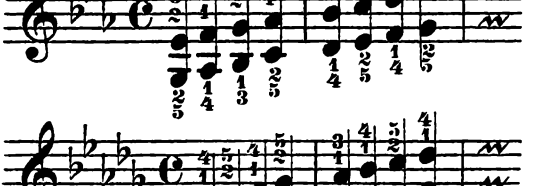
F major.



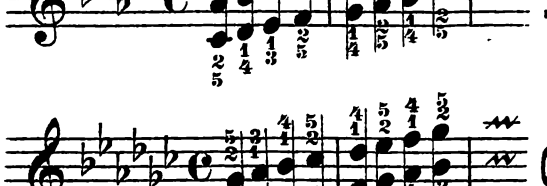
B♭ major.



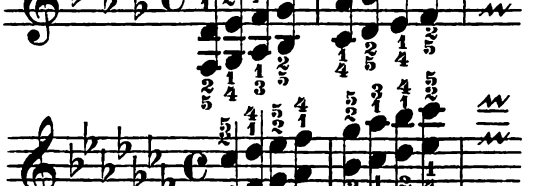
E♭ major.



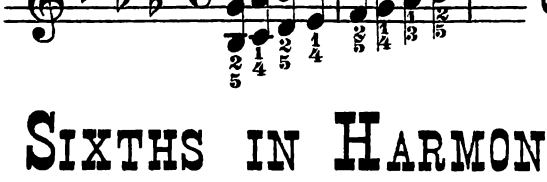
A♭ major.



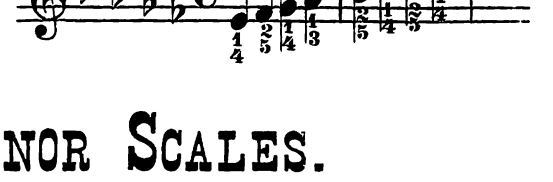
D♭ major.



G♭ major.

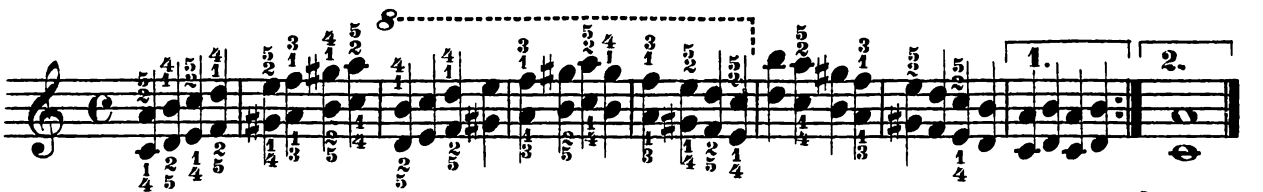


C♭ major.

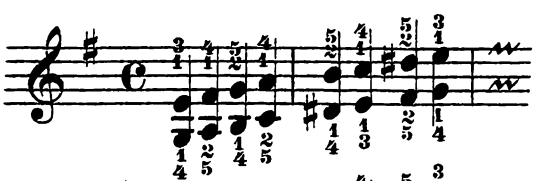


Sixths in Harmonic Minor Scales.

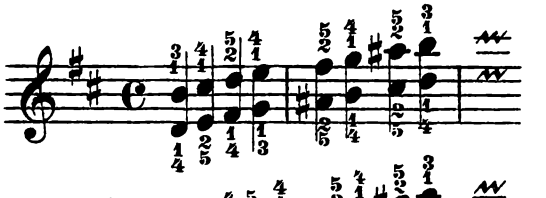
A minor.



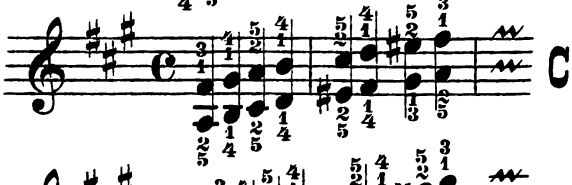
E minor.



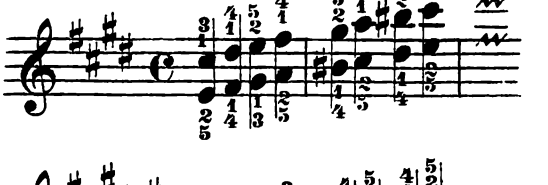
B minor.



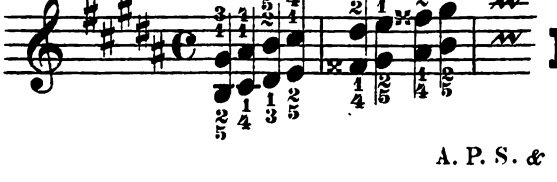
F♯ minor.



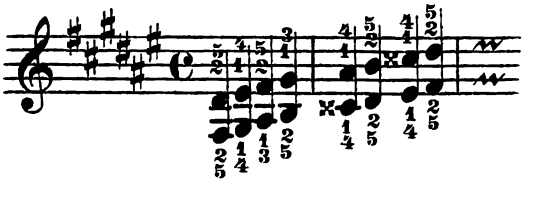
C♯ minor.



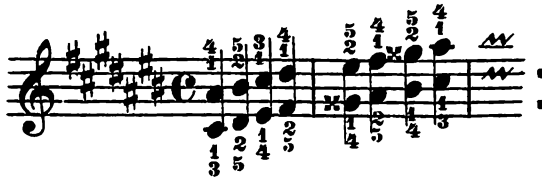
G♯ minor.



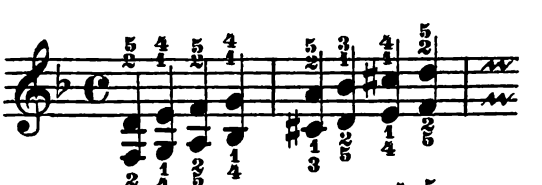
D♯ minor.



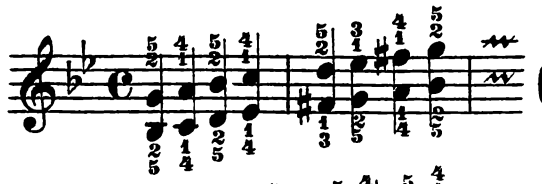
A♯ minor.



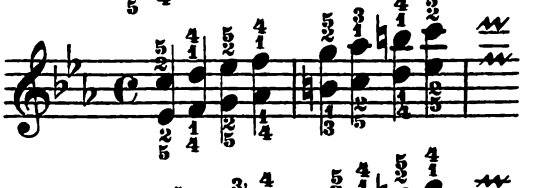
D minor.



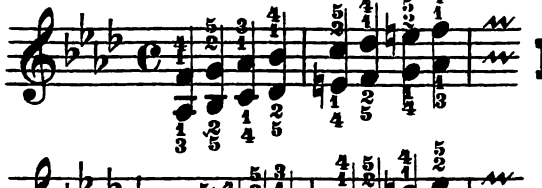
G minor.



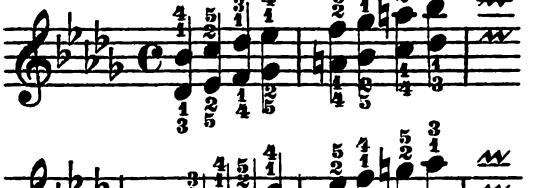
C minor.



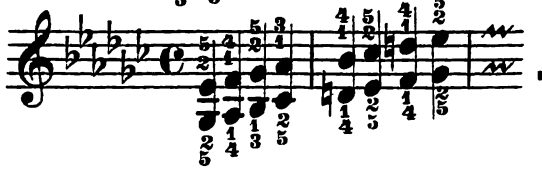
F minor.



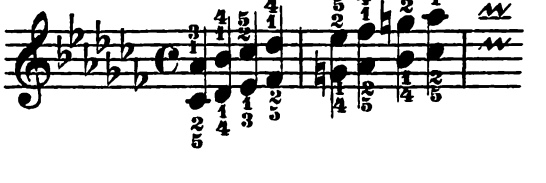
B♭ minor.



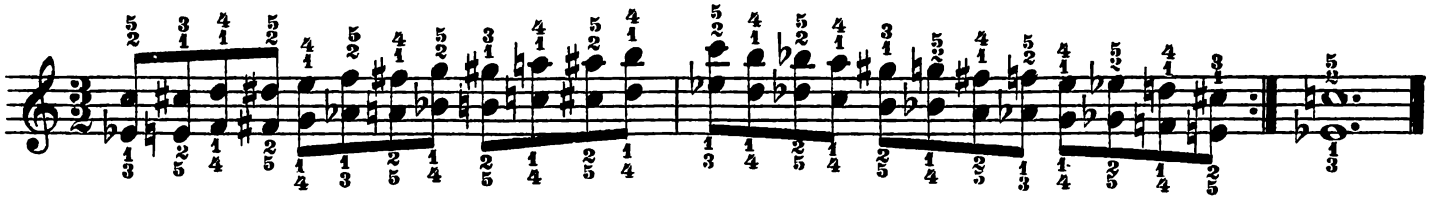
E♭ minor.



A♭ minor.

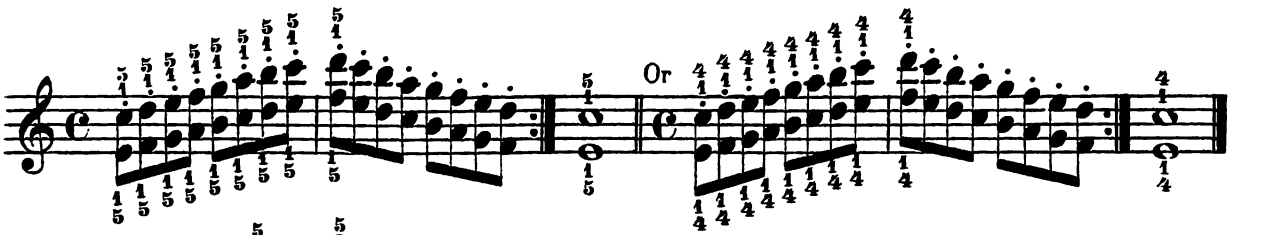


Sixths in the Chromatic Scale.

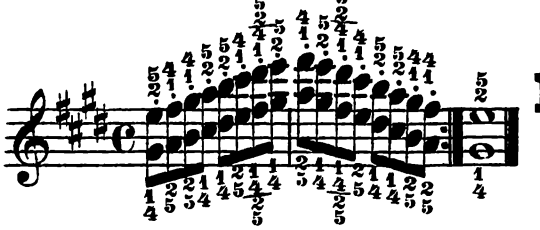


Sixths in staccato scales may be played in the key of C major with the thumb and fourth finger, or with the thumb and fifth, throughout: in other keys, with convenient interchanges of 1 and 2 and of 4 and 5. Examples in a few keys will readily suggest the proper fingering for others.

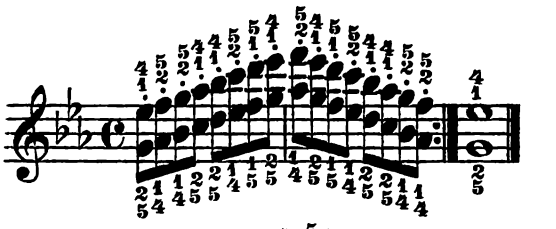
C major.
293.



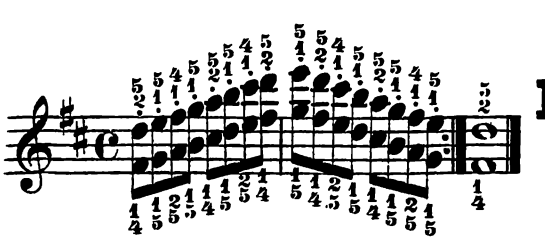
E major.
294.



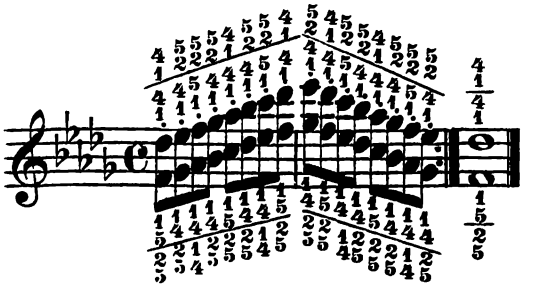
E♭ major.
295.



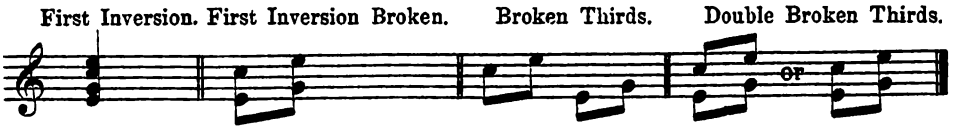
D major.
296.



D♭ major.
297.

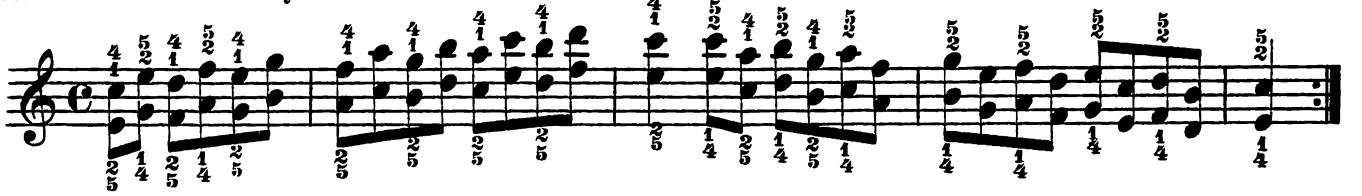


The first inversion (second position) of a triad may be so broken as to produce alternations of sixths, or double broken thirds.



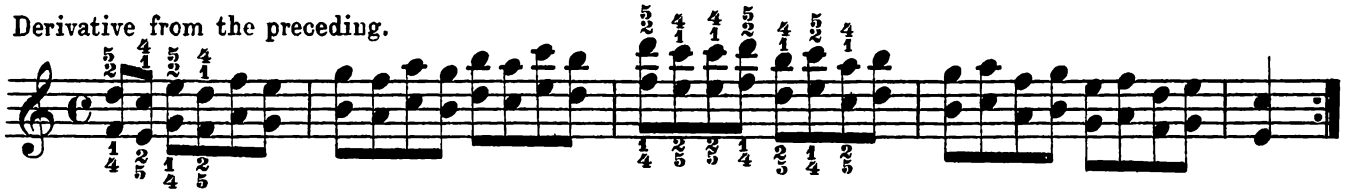
A diatonic progression of such broken triads should be practised in each key, the fingering in C major being retained in all other keys.

298.



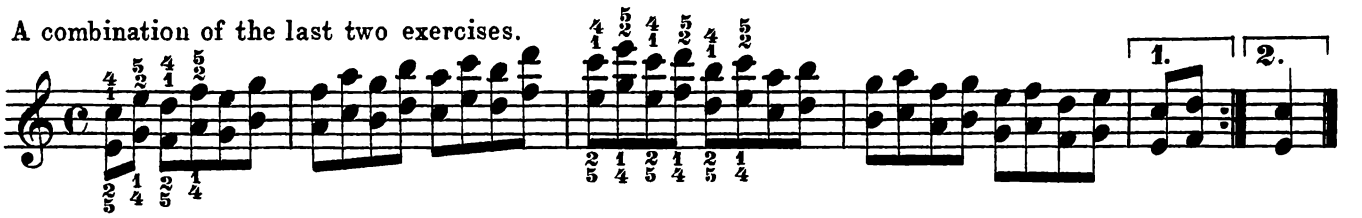
Derivative from the preceding.

299.



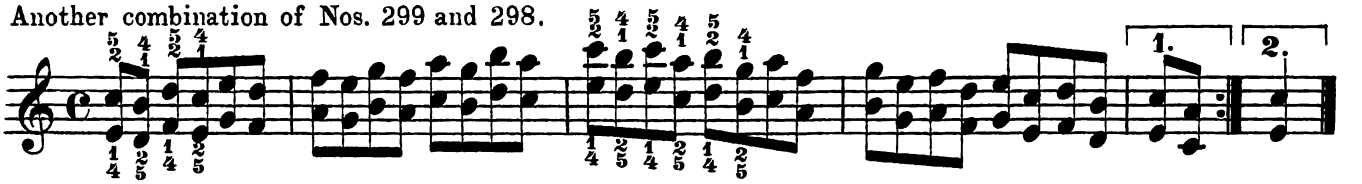
A combination of the last two exercises.

300.



Another combination of Nos. 299 and 298.

301.

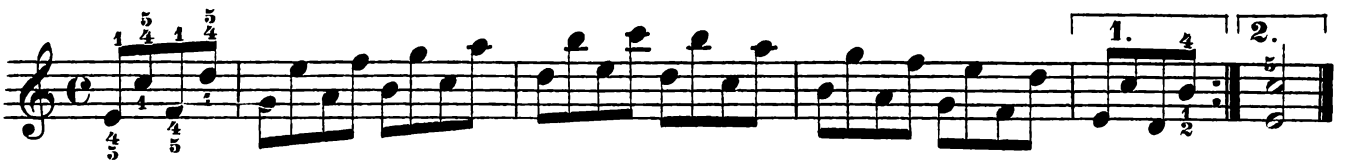


BROKEN SIXTHS.

In broken sixths, when the lower note precedes the upper, the fingering may be nearly the same as in **staccato** sixths and therefore requires no further models. The following shows the form of the figure. See directions for playing broken octaves on page 82.

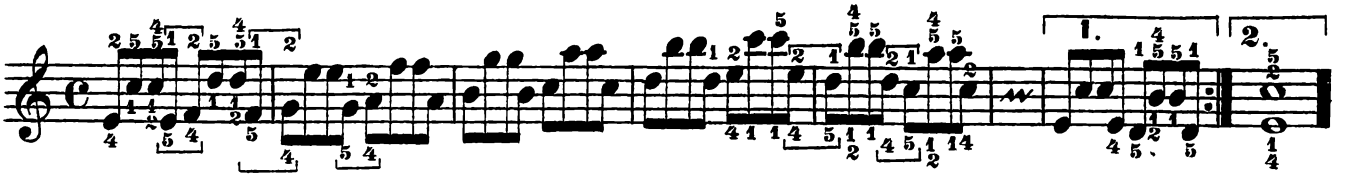
Use either the 4th or the 5th finger.

302.

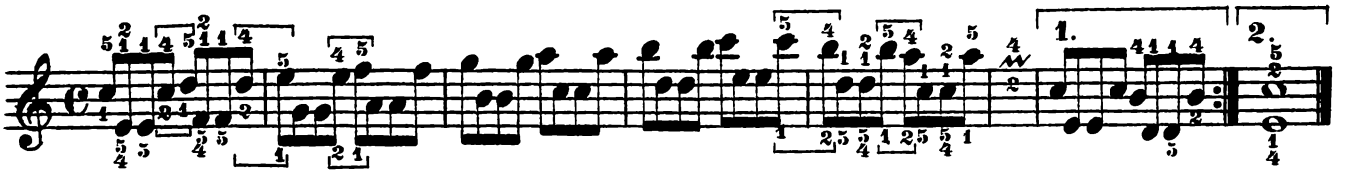


Broken sixths with the upper note preceding the lower are seldom used except in alternations with the reverse of this.

303.



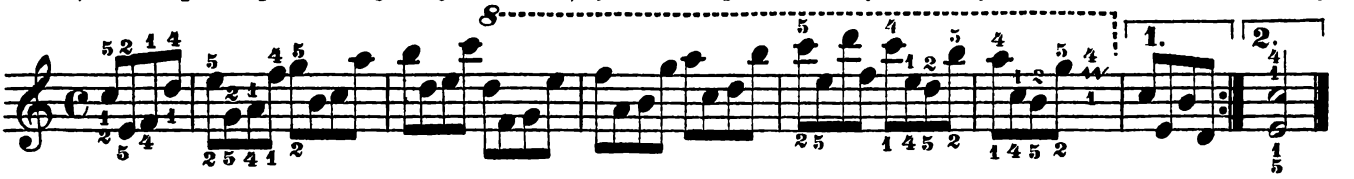
304.



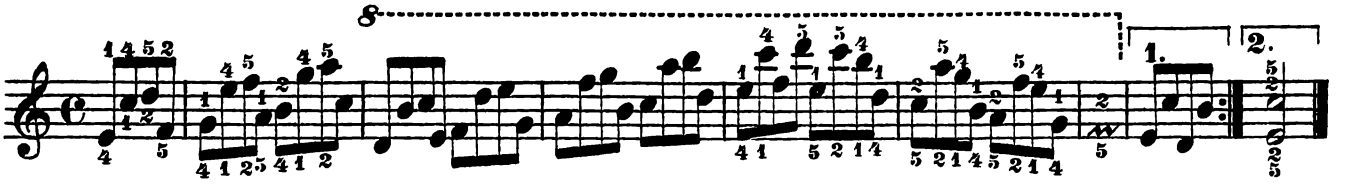
Only slight changes in the foregoing fingering are needed for other keys.

The following two exercises, though very easy in the key of C major, are more difficult when black keys are introduced, and require special fingering for each key. Their practice may be delayed for more advanced study.

305.



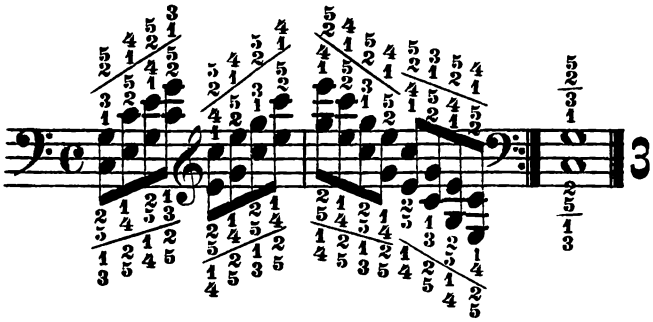
306.



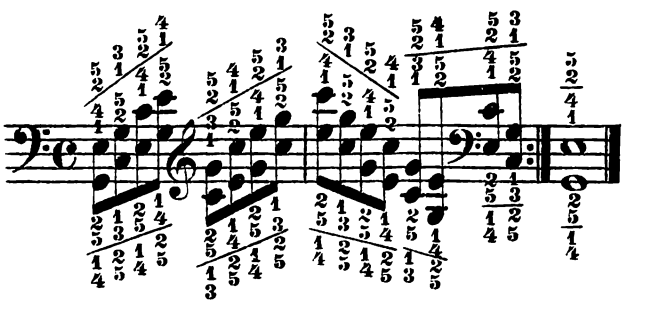
DOUBLE GRAND ARPEGGIOS IN EACH HAND.

These are far more useful than they may at first appear to be, but should not be attempted until the hands and wrists have been strengthened by good technical study. The foregoing exercises in single hand sixths are a most useful preparation for these trying passages. As the thumb necessarily comes upon a black key, in many keys, the proper fingering may be found by consulting that of the second form of four note broken triads. Care should be exercised not to substitute the third finger for the fourth, or vice versa. The form here given in the key of C major should be transposed into all others. Each way of fingering is to be studied, in order to facilitate the turning at either end of the arpeggio. The left hand fingering is below the notes.

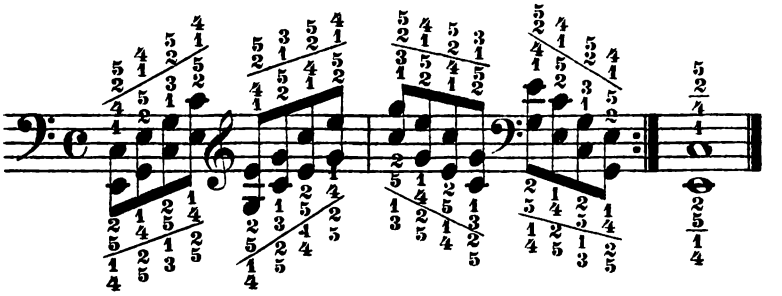
307.



308.



309.



Each of the foregoing may now be practised with both hands: afterward, No. 307 an octave lower in the left hand combined with No. 309 an octave higher in the right, — or either two together.

For still higher development of technique, the student is referred to the works of well known writers mentioned in the Introduction, more especially to the celebrated **Daily Studies** of the lamented *Carl Tausig.*

Merely going through this work once, even in the most rapid **tempo** possible, is but a fair beginning of the study here intended. The full benefit of all technical exercises can be derived only from repeated and systematic practice. To insure thorough study of fundamentals, certain forms should be studied every day, with the attempt to play each one more accurately, more clearly, more firmly, more rapidly — in every way **better** than before. The Schedule No. 1, should be followed first: afterward, each of the others, in regular succession, the whole being afterward intermingled according to the peculiar needs of each student. The distribution of study in each major and minor key, throughout the week, should be rigidly followed.

Beside what is embodied in these nine schedules, this work contains other exercises and suggestions which the student can follow as he may have need. Too much stress cannot be laid upon absolute regularity and system in study. As each schedule is to be played in two major keys and two minor, it may be well to divide the day's practice into four well separated periods, each of which may begin with the schedule played in one key only, the four keys being thus distributed through the day. Periods of entire rest, when the mind, as well as the body, shall be refreshed, must intervene between the hours allotted to study. Likewise it is desirable that, as soon as a fair degree of execution is attained, studies for expression be taken up, together with miscellaneous works from the best composers, those alone being selected which require rather less execution than the technical exercises at that time in practice.

Each schedule below given should be practised in every major and minor key according to the following table.

Weekly Distribution of Keys.

	Major Keys.	Minor Keys.
Monday	C G	A E
Tuesday	D A	B F♯
Wednesday	E B C♭	C♯ G♯ A♭
Thursday	F♯ G♭ C♯ D♭	D♯ E♭ A♯ B♭
Friday	A♭ E♭	F C
Saturday	B♭ F	G D

Should the student have insufficient time, or strength, to follow out either schedule entire, a part may be taken regularly throughout one week and the remainder, the next — scales being taken instead of arpeggios, and vice versa, in schedule No. 1. Finger exercises of some kind should be practised daily, No. 186 being one of the most useful.

Schedule of Daily Study, No. I.

1. Finger exercises Nos. 1 to 12, inclusive, transposed to the proper keys.
2. Major scales, table **A**, page 19.
3. Harmonic minor scales, table **A**.
4. Melodic minor scales, table **A**.
5. Grand arpeggios of the tonic triads, table **A**, page 37, each hand alone.
6. Grand arpeggios of the dominant seventh chord in major keys, each hand alone.
7. Grand arpeggios of the dominant seventh chord in minor keys, each hand alone.
8. Grand arpeggios of the diminished seventh chord in minor keys, each hand alone.

(More advanced.)

Schedule of Daily Study, No. 2.

1. Finger exercises, Nos. 110 to 121, inclusive, properly transposed.
2. Major scales, table **B**, page 56.
3. Harmonic minor scales, table **B**.
4. Melodic minor scales, table **B**.
5. Grand arpeggios of the tonic triads, both hands together.
6. Grand arpeggios of the dominant seventh chords, both hands together.
7. Grand arpeggios of the diminished seventh chords, both hands together.
8. No. 186. Both hands together.

Schedule of Daily Study, No. 3.

1. Finger exercises, Nos. 122 to 133, inclusive, transposed.
2. Major scales, tables **C** and **D**, page 56.
3. Harmonic minor scales, tables **C** and **D**.
4. Mixed minor scales, tables **C** and **D**.
5. Grand arpeggios of triads, No. 255, transposed.
6. Grand arpeggios of secondary seventh chords, each hand alone.
7. Scales in double octaves in three ways (see Octaves in scales, **A**, **B** and **C**, page 82).
8. No. 186.

Schedule of Daily Study, No. 4.

1. Finger exercises, Nos. 134 to 145, inclusive, transposed.
2. Major scales, tables **E** and **F**, pages 56 and 57.
3. Harmonic minor scales, tables **E** and **F**.
4. Mixed minor scales, tables **E** and **F**.
5. Grand arpeggios of triads, Nos. 256 and 257, transposed.
6. Grand arpeggios of secondary seventh chords, both hands together.
7. Grand arpeggios on triads in double octaves (see Octaves, **D**, **E** and **F**, page 82).
8. No. 186.

Schedule of Daily Study, No. 5.

1. Finger exercises, Nos. 146 to 155, inclusive, transposed.
2. Major scales in single hand thirds, pages 84 to 86.
3. Minor scales in single hand thirds.
4. Grand arpeggios of triads, No. 258 transposed.
5. Chromatic scales in various ways, each hand and both.
6. Three note broken triads, Nos. 187 to 193, inclusive, transposed.
7. Grand arpeggios on seventh chords in double octaves (see Octaves **G**, **H** and **I**, page 82).
8. No. 186.

Schedule of Daily Study, No. 6.

1. Three note broken triads, Nos. 156 to 165, inclusive, transposed.
2. Major scales in single hand sixths, pages 91 and 92.
3. Minor scales in single hand sixths.
4. Grand arpeggios of dominant seventh chords based upon No. 258.
5. Four note broken triads, Nos. 195 to 198, inclusive, transposed.
6. Various forms of simple scales, to relieve the tension on the hands.
7. Grand arpeggios on diminished seventh chords (see Octaves **K** and **L**, page 82).
8. No. 186.

Schedule of Daily Study, No. 7.

1. Three note broken triads, Nos. 166 to 175, inclusive, transposed.
2. Chromatic scale in single hand thirds.
3. Chromatic scale in single hand sixths.
4. Grand arpeggios of secondary seventh chords (see No. 258).
5. Four note broken triads, Nos. 199 to 202, inclusive, transposed.
6. Various forms of simple scales, to rest the hands.
7. Major scales in broken octaves. (see pages 82, 83).
8. No. 186.

Schedule of Daily Study, No. 8.

1. Three note broken triads, Nos. 176 to 185, inclusive, transposed.
2. Major scales in broken thirds.
3. Minor scales in broken thirds.
4. Four note broken triads, Nos. 203 and 204, transposed.
5. Various forms of simple scales.
6. Alternating sixths, Nos. 298 to 301, inclusive, transposed.
7. Harmonic minor scales in broken octaves.
8. No. 186.

Schedule of Daily Study, No. 9.

1. Broken triads, No. 228, transposed.
2. Major scales in broken sixths.
3. Minor scales in broken sixths.
4. Broken dominant seventh chords, Nos. 230 to 233, inclusive, transposed.
5. Broken diminished seventh chords, selected from Nos. 241, 242 and 243.
6. Double grand arpeggios, Nos. 307, 308 and 309, transposed.
7. Melodic minor scales in broken octaves.
8. No. 186.