


TOUCH AND TECHNIC:

—FOR—

Artistic * Piano * Playing.



BY MEANS OF A NEW COMBINATION OF EXERCISE-FORMS AND METHOD OF PRACTICE
 CONDUCTING RAPIDLY TO EQUALITY OF FINGER POWER, FACILITY
 AND EXPRESSIVE QUALITY OF TONE.

—BY—

DR. WILLIAM MASON.

+ OP. 44. +

Vol. I.—TWO-FINGER EXERCISES (School of Touch),	.	.	.	.	.	\$1.00
Vol. II.—COMPLETE SCHOOL OF SCALES (School for Brilliant Passages),	.	.	.	.	.	1.00
Vol. III.—COMPLETE SCHOOL OF ARPEGGIOS (Passage School),	1.00
Vol. IV.—SCHOOL OF OCTAVES AND BRAVOURA,	1.00

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AUTHOR'S PREFACE.

The four volumes of the present series undertake to present in orderly sequence and arrangement the entire system of pianoforte technics, as evolved in the teaching experience of the author during his professional career of more than thirty-five years. The central feature of the system is the combination of elements in the daily practice for securing the highest possible degree of flexibility, responsiveness, and versatility in the fingers, and, at the same time, educating the ear to all shades of tone-color, and securing a reposeful and exact rhythm and clear accentuation in all degrees of speed. These, I believe, are the technical qualities through which musical interpretation upon the pianoforte comes to expression.

This diversity of qualities is sought in all parts of the practice, but the elements of tone-color are mainly prepared in the Two-Finger Exercises. Meter and Rhythm are elucidated in the metrical treatment of the Scales and Arpeggios, where all the sensational and ornamental qualities of pianoforte playing are constantly held in view. The school of Octaves and Bravoura puts the finishing touches to the playing upon its sensational side.

Exercises more or less completely illustrating these principles were first published in 1867, when their practical value had already for several years been demonstrated. The Two-Finger Exercise was more fully elaborated in my Technics, 1876, and has been still more carefully explained in the first volume of Touch and Technic, 1890. The other types of exercise peculiar to this system are the accentual treatment, the harmonic changes of the diminished seventh, the principle of velocity, the principle of octave-playing, and the new apparatus of Graded Rhythms. The latter, which has been used in my teaching for more than twenty years, is found to secure in the same exercise three extremely important advantages, which are not so well united in any other exercise, or short combination of exercises, known to the writer. In the same

effort it secures an exact observance of meter and rhythm, in a combination embracing four grades of speed, geometrically developed. Out of full-pulse, rhythms grow half-pulse, quarter-pulse and eighth-pulse rhythms, all carried through at the same rate by the metronome. In connection with this, there is the transition from the full, round, reposeful, clinging legato, to the lightest and most rapid play of the fingers. In the present work, especially in volumes II and III, it has received a fuller development, and is placed in the very fore-front of the system—a position to which it is well entitled, by reason of its productive value as an educational apparatus.

All of these elements were original with this system and, after some ten years' use in private teaching, which served to test and establish their efficiency, were first published in 1867. More recently they have been copied, although without regard to method, into various instruction books, technics, and collections of exercises, thus affording additional testimony to their usefulness.

It is, perhaps, unnecessary to say, further, that great pains has been taken in the present volumes to place the system in its entirety and in its individual elements before the reader in such a way as to reveal to him (1) its fundamental principles, (2) the exercises applying them, and (3) the leading features in their relative importance, as clearly and easily as possible. In accomplishing this part of my task, I have received important assistance from my friend, Mr. W. S. B. Mathews, who for twenty-one years has been an appreciative and diligent supporter of the system, and who was once before associated with me in presenting it to the public. His ready assistance has enabled me to complete this work at a much earlier date than I should otherwise have been able to do, owing to a not very robust state of health and a stress of professional occupation.

William Mason.

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THE
COMPLETE TECHNIC OF THE SCALES.

BY MEANS OF RHYTHMIC AND METRIC TREATMENT, SYSTEMATIC GRADATIONS OF SPEED
VELOCITY, CANON, AND MANY VARIETIES OF TOUCH AND FORCE; THE
WHOLE FORMING A COMPLETE SCHOOL OF ELEGANCE AND
STYLE, IN SCALE-PASSAGES OF EVERY KIND.

BY
WILLIAM MASON.

OPUS 44. No. 2.

GENERAL INTRODUCTION.

SECTION I. The name "TOUCH AND TECHNIC" has been selected as an appropriate designation for a system of training which aims at developing, synthetically as well as analytically, all the various forms of finger-facility commonly embraced under the name of "technic;" and in connection therewith the education of a *deep, full, light, expressive touch*, without which no musical playing is possible.

The component elements of first-class piano-playing are the following:—

TUNE, (as regards the pianoforte, accuracy of execution.)

TIME, (attention to meter and rhythm.)

QUALITY OF TONE, (by different gradations and methods of touch.)

EXPRESSION { (through quality of tone as produced
or by different kinds of touch, and by
PHRASING, { inflectional emphasis and accent.)

FACILITY OF EXECUTION, { (in passages of every
and at the same time { variety of speed.)
REPOSE.

The exercises in this system contain all these elements, or the germs of them, and are intended to bring them into action and use from the very outset. Inasmuch as the qualities enumerated above are all factors in the composite unit, *good playing*, no one of them can be neglected without impairing the general result; and the habit of attending equally to each and every one of them simultaneously must be acquired at the very beginning. This is not so difficult as has generally been supposed, nor is it in violation of the principle of "*One thing at a time.*" There is but one "thing," which is *the interpretation* (or expression) *of the musical idea*; but this one thing properly considered requires equal attention to all the factors enumerated. No one of them should be lost sight of while giving

special attention to the others, because if this happens it will naturally and inevitably be found later that habits of omission have been acquired, which are difficult, if not impossible, to eradicate. They are the natural result of the incomplete and defective musical concept unconsciously established in the student's mind, through the one-sided and misleading method of practice too often permitted. Habits of this kind are fully as difficult to overcome as those of commission. It is true that exercises are generally designed for some specific purpose; but the student may lay it down as an invariable rule that, while any one special feature of playing is under study, all the other qualities of good playing should concurrently and constantly be observed in the practice.

It will be noticed by the attentive reader that the foregoing are exactly opposed to the direction often given young students, "First get the notes right, then the expression." Experience shows, beyond controversy, that better results follow the study if the musical effect is borne in mind from the very beginning.

BIRDSEYE VIEW OF TOUCH AND TECHNIC.

SEC. 2. This system of "Touch and Technic" consists of four different kinds of passage (or exercise), and it is intended that the pupil practice something of each class every day, excepting when for good reason one element or another may be temporarily intermitted, namely:—

1. TWO-FINGER EXERCISE. ("Touch and Technic," Vol. I.)
2. METRICAL SCALES. ("Touch and Technic," Vol. II.)
3. METRICAL ARPEGGIOS. ("Touch and Technic," Vol. III.)
4. SCHOOL OF OCTAVES AND BRAVOURA. ("Touch and Technic," Vol. IV.)

The daily practice is intended to embrace each of these different kinds of exercise in turn, for a few minutes only, but no one to excess. This system of technical practice imposes but slight burdens upon the pupil, and never over-exercises one set of muscles or faculties; and at the same time, through the system of metrical elaboration, absorbs and concentrates the attention to a degree otherwise unattainable in the practice of exercises. The hand is left elastic and in a high condition of artistic responsiveness, the value of which is seen positively in the superior musical quality of the playing of those trained under it; and negatively in the fact that not a single case of pianist's "cramp," so far as known, has been experienced by students practising in the diversified manner here directed.

SEC. 3. Volume I. Inasmuch as a musical and discriminative touch intelligently applied is the most important part of a player's outfit, the first volume of "Touch and Technic" is exclusively devoted to this part of the training. That volume having now been some time before the public, and many thousands of copies circulated, it is not necessary here to occupy much space with its especial features. Suffice it to say that its object is to thoroughly train the hands and fingers in all those varied manners of touching the keys, without which the different tone-colors and musical effects required in the compositions of the greatest tone-poets cannot be given adequate expression. With this end in view it aims to form the indispensable practical complement to the distinctly musical material through the study of which the musical faculties themselves are rendered *sensitive* and deepened, the tone-perceptions more delicate and discriminating, and musical feeling more refined and spiritual.

SEC. 4. Volumes II, III and IV. The present and companion volumes cover different ground, which must now be considered. Pianoforte passages consist either of *Scales*, *Arpeggios*, *Chords* or *Octaves*. These in the aggregate comprise the totality of brilliant pianoforte technic. They are not generally played in the thoughtful and impressive manner appropriate to melody, but with speed, brilliancy, and at times with almost inconceivable lightness and delicacy. The effective execution of this part of the playing has long been regarded as the distinguishing mark of a well-trained pianist, and instruction books and manuals of technics have furnished a great number of typical forms intended for training in this direction. All arbitrary combinations of tones devised for practice have, however, the great disadvantage that they are vacant of meaning, nor is it possible by simply repeating them over and over to build up out of them significant unities. The habitual reiteration of them in daily practice engenders mental habits of the most careless description, and owing to their tiresome character and arbitrary construction, the fingers derive from practising them but limited aid toward overcoming the difficulties offered by well-made bravoura pieces.

SEC. 5. In the effort to surmount these unfavorable elements of practice, in the case of certain pupils more than usually inattentive, yet with an encouraging amount of latent musical endowment, the Author, about thirty years ago, had recourse to the metrical treatment of the radical elements themselves of brilliant passages, namely, the *Scales* and *Arpeggios*. The immediate results were so gratifying, that by degrees further applications of the same principle were made in the instruction of some hundreds of pupils, a large number of whom are now concert players, high-class teachers, and accomplished musical amateurs. The system has made encouraging progress through the somewhat uncertain medium of oral teaching, and at several times its principles and methods have been given to the public in more or less completeness. But with the purpose of securing yet greater simplicity and clearness in the explanations, and of including the latest conclusions relating to it, the present volumes are offered to the consideration of teachers, and students.

SEC. 6. The fundamental principle of this system, then, is that scale, arpeggio and chord passages comprise the totality of brilliant technic. They employ comprehensively and unitedly the muscles of the fingers, wrist and arm. And the main and characteristic feature of the method of practice is, that every day the hand receives its "daily bread" in each one of these different faculties; no one being neglected, but all receiving attention, if but for a few minutes,—the entire practice occupying much less time than has generally been supposed indispensable where a high degree of technical attainment is intended.

A NEW METHOD OF DEVELOPING SPEED.

SEC. 7. The Author feels that he would be unjust to his readers, and to the experience of which the volumes of this series are the fruit, were he to fail to call attention in advance, and in a formal manner, to one of the most vital elements of the whole system of practice here exhibited, and at the same time the most novel. Reference is made to the new method of developing speed. About thirty years ago he discovered that speed could be arrived at by average pupils much more quickly by intermingling fast and slow practice in certain proportions, than by confining the attention to either one, to the exclusion of the other; and that rapid playing indeed was necessary in order to establish proper hand positions, and correct muscular action. He also found that speed would come sooner by making a sudden transition from slow practice to a very fast playing of a passage for a few times, and then recurring to the slow motions, upon which the sure order and method of the playing depended. More than twenty years ago he devised his Velocity forms, which were first printed in his *Technics*, in 1876. These had in them the germ of the entire principle, but the application was incomplete; and while many pupils experienced great benefit from this method of prac-

tice, there were others whom it still failed to reach. Some time before the publication of the *Technics* he had been in the habit of using in his own teaching a graded study of rhythm like that in No. 275 of the *Technics*, and the exercise was correctly printed in that work, but owing to its location, amid a variety of other forms of exercise with which it had no very apparent connection, its vital significance, as the central thought of the entire method of practice, was not appreciated by students, and its use has accordingly and very naturally been limited.

SEC. 8. In the present work, this principle meets the student at the very outset of his studies in every form to which metrical treatment is applied. After a very few preliminary performances of the passage, whether arpeggio or scale, he is immediately required to play it in a metrical gradation of rhythm, proceeding from whole-pulse rhythms to half-pulse, quarter-pulse, and eighth-pulse lengths, at a rate of speed already corresponding in the first grade to a strong allegro. Contrary to the impression of teachers who have not tried it, young pupils arrive at the first grades of speed by this system with very little trouble, and it is only a short time before they are able to make a successful approximation to the great rapidity of the last form, Grade IV.

The principle upon which the exercise rests is that of first making the player conscious of the musical figure out of which the exercise is composed, and of the muscular motions needed in playing it. This happens in Grade I. In Grade II, there is still time for deliberation as to figure and finger; in grade III, a degree of speed is at once taken which under the old system is not reached for a much longer time of preliminary study. And in Grade IV, we come immediately to a speed which is great even for good players. This in the case of beginners may not be reached for a little time, but if the effort be persisted in, and the incontestible testimony of the metronome be continually appealed to, in order that there may not be a weakening of the rhythmic motion for the accommodation of slow fingers, the pupil will in almost an incredibly short time seize the knack of the hand and finger motions upon which fast playing depends.

SEC. 9. It will be observed that this method of velocity differs in two important respects from all other velocity practices offered students. In the first place, the musical form is very short, and is a real unity of itself, such as appeals to every latent musical intelligence. In this respect it differs from all arbitrary formulas used as motives. Second, it admits and invites development into larger and larger unities, which as soon as formed are just as apprehensible and comprehensible (even by young pupils) as the short forms out of which they have been composed. In this respect again, it differs from all long passages developed out of arbitrary musical figures. Hence at this point the student is already in a very favorable position with reference to the high degree of speed required, since

the mental strain of conceiving the entire passage as a unity does not exist, the passage, when composed of arpeggios or scales being felt as a unity by the intuitive exercise of musical intelligence of a grade requiring little or no preliminary training.

SEC. 10. Still more important, third, are the conditions under which speed is demanded in this exercise. Instead of leaving the student to "gradually increase the speed, as he gains in ease," he is made here to *exactly double the speed* at the very first step. There is no question of waiting, he is to do it at once—intuitively. The metronome is ticking away, leaving no possible doubt as to what this exact doubling may mean. Then he goes on again to double this in turn, the metronome still going on with its relentless admonition. And, finally, he doubles once more, the metronome being still the witness.

The Author has found by experience, that in the old way of expecting the speed to be gradually increased, the majority of pupils continued with very slight increase of movement beyond the moderate dog-trot which they first happened to hit as a fast form; but in the new method the mathematical relation of the fast way to the slow way immediately preceding affords the student an enormously efficient incitation, so that as soon as the sense of time becomes quickened to the true significance of the fast form, the speed is very soon attained, even in the high grades.

SEC. 11. The principle of the fast forms, Grades III and IV, here is in no way different from that of the Velocity exercises which were so important a feature in the *Technics*, and several of his previous works. Only the *method* of making the student conscious of the high speed desired, is applied in another way. But *this method is everything*. It lies at the very foundation, and affords a way by which inexperienced players can learn the knack of playing fast, and at the same time secure what is of equal importance to the later development, *the certainty of practicing their exercises in three or four degrees of speed radically different from each other*. By this diversified speed of practice alone will brilliant playing be attained.

SEC. 12. So whatever of novelty the teacher may find in these graded exercises, and however difficult they may seem for the place they occupy in every department of this system, it is hoped that they will be faithfully attempted, in careful observance of the directions appended; which being done, the Author has no fears for the result. He desires simply that other teachers may find in this simple exercise the aid that he has invariably had from it in many years' experience in teaching.

DEFINITIONS.

SEC. 13. In the course of these works it is found convenient to employ certain terms in definite meanings, which being in part peculiar to this system, or not generally a part of the terminology of *technics*, need to be accurately defined.

Time in music includes all the elements of tone-length and duration, as also rests, pauses, holds, etc.

Meter is the measuring off of the time into a definite rate of *pulsation*, and the grouping of these into *measures* by means of accents. Every piece limits its motion in time by assuming a certain pattern of pulse-rapidity, and a certain frequency of accent. This continues to the end of what is called the *movement*; which is changed whenever there is a new *rate* of pulse, or a new *grouping* of pulses into measure. Meter holds the same place in the *time* of music that tonality holds in *tune*. In the same way that a movement is composed in a certain *meter*, so a melody is composed in a certain *key*; *i. e.*, all the tones in the melody are taken from a certain key, or are related to it. In like manner all the durations in a piece are computed by reference to the meter.

Rhythm is the rate at which the tones of the music move, as measured against the background of the meter. Hence rhythms are complicated to an endless degree, and it has not yet been found possible to form a terminology capable of expressing them clearly. In the present work the rhythms are comparatively simple, being pulse-rhythms, or half-pulse, quarter-pulse, etc., without subordinate modifications. An established rhythm of this kind in a piece of music is called a *motion*, and is generally found in the accompaniment, or the counterpoint, and rarely, in this simple form, in the melody itself.

Metrical Treatment. By metrical treatment is meant playing the form (that is to say the scale or arpeggio) in a certain kind of meter (measure).

Rhythmical Treatment. By rhythmical treatment is meant playing an exercise in *rhythmical relation*; which may be either one of two kinds, or both together: First, the different meters may be combined in it in such a way as to show their mutual relation. This takes place in all the Rhythmic Tables of the present work, such as those in Exercises 6, 7, 11, 36, 39, and many others. These are designed to correct the common imperfect misapprehension of the exact relation existing between half-pulse, quarter-pulse, and eighth-pulse motions in the same movement. Second, a single rhythmic motion may be taken and repeated over and over through the form until the rhythmus is completed by the return of the accent to the starting point. This is what takes place in all the exercises in the present work, especially in the sixes, nines, and other forms which do not complete themselves upon the first repetition of the pattern. Third, both methods may be combined in the same exercise. This takes place in all the Graded Tables, especially in those containing sixes and nines. The object of rhythmic treatment is that of intensifying the sense of rhythm, which being the representative of the mathematical part of music, requires to enter into the playing with the exactness of mathematical proportion.

Accent is a stress laid upon a tone in order to

indicate its relation to something else in the same connection.

Metrical Accents are those which mark the meter by a stress laid upon certain tones in order to indicate the boundaries of rhythmical unities. Hence two important practical considerations follow: First, the Accent must be *distinct to the ear of the hearer*, and unmistakable. This is a vital point too generally neglected. Second, every rhythmic unity has two boundaries, a beginning and an ending. The hearer must be able to distinguish both these by means of accent. The end of one unity is generally the beginning of another.

Motion-Patterns, or simply "Patterns," are outline-patterns of the *direction* which the hands take with reference to each other, in the performance of scales or arpeggios. Such as *direct* (both hands in the same direction and at octaves); *contrary*, (the hands moving in opposite directions); *canon*, (where one hand follows the other at a certain interval, repeating the same melody). *Velocity*, (the instantaneous sweep of the hands from one extreme to the other,) etc. The term "practice-forms" has been reserved for application to the different forms arising from treating the "motion-pattern" metrically. Hence every motion-pattern may afford a considerable number of "practice-forms."

REASON AND METHOD

OF

SCALE PRACTICE.

SEC. 14. To the young student and to the performing artist the daily practice of the scales is alike indispensable. So far all piano teachers agree, and have done so ever since the time of Sebastian Bach, who established the fingering as we now have it. Early in the present century Tomaschek, of Prague, invented fingering for the scales in double thirds and sixths, and these in turn have become a part of the recognized resources of the teacher and student. Nor has it been found possible to supersede the practice of the scales with any other form of exercise. Without their constant use it is not possible to impart to the playing certain qualities of *fluency*, *neatness* and *consistency* in running passages—qualities universally recognized as characteristic of well-trained pianists.

SEC. 15. A careful analysis of the elements involved in the technical treatment of the scales shows the following as the objects which this practice is calculated to secure—objects which it is immediately seen upon statement cannot be accomplished simply and directly by any other form of exercise.

OBJECTS OF SCALE PRACTICE.

1. *To form the hand to the Key* (Tonality). And this (1) with the hands singly, (2) together in the same movement, and (3) simultaneously in independent movement (contrary motions, canons, etc.).

2. *To Establish Automatic Fingering*, in such a way that the hand will of its own accord apply the established fingering to any scale, as it occurs, almost without the consciousness of preliminary reflection.

3. *To Acquire Rapidity, Lightness and Delicacy*, in such a degree that whatever the tonal style of the run the hand will spontaneously and without difficulty adapt itself to the demands.

SEC. 16 The scale treatments and motion-patterns following are those which have grown up in the experience of the author as best adapted for securing all the objects assigned above, in their respective importance and order. Further, experience warrants the claim that they do this to a degree not equalled by any combination of practice forms elsewhere proposed. The general order of the material is according to the following plan:—

GENERAL PLAN OF MATERIAL IN THE PRESENT WORK.

1. *Primary Forms* for developing Tonal Sense, Solidity of Touch, and Speed, and Exact Rhythm. (Pages 9 to 15, inclusive.)

2. *Motion-Patterns*, or simply *Patterns*, illustrating a great variety of relative motions through which the hands can be conducted in scale practice, for developing independence and reliability. (Pages 16 to 23, inclusive.)

3. *Metrical Treatment* of a few of the leading Patterns, showing the manner in which metrical treatment is to be applied to all. (Pages 24 to 29.)

4. *The Chromatic Scale* metrically treated. (Pages 30 to 32.)

5. *All the Major and Minor Scales with Fingering*. Also the *Scales in Double Thirds and Sixths*. (Pages 33 to the end.)

Throughout the work the "Directions for Practice," on page 9, must be exactly and conscientiously observed.

SEC. 17. *Caution*. While the practice of the scales scientifically adapted to the pupil's state will result in the various kinds of benefit above specified, it is imperatively necessary, in order to attain the best results, that the successive steps be carefully taken in the order in which they are here presented. The first thing in the study of the scales is to form the hand to the various tonalities, which must be done very early in the course of study—in the first grade. The practice here will mostly be slow, and the order of fingers must be taught patiently. Nothing like automatic fluency, however, will result unless every scale is played occasionally in a greater degree of speed. Hence, even in the lower grades, the graded exercises in rhythm, like those in Exercises 2, 3 and 4, must be studied. The two objects named in the table above as first and second

must be gained simultaneously. First, the scales in single-hand forms, and in short compass; then in longer forms, and the two-hand patterns are introduced. The independence of the hands will be secured by the various forms into which contrary motion enters, and the canons. These latter also conduce most rapidly to the automatic certainty of finger. Meanwhile, the varieties of touch must be observed from the very outset. As soon as a scale of one octave can be accurately and easily played slowly, it must be studied with at least two, or perhaps three, degrees of speed and force; while at the same time two varieties of touch must be alternately applied, viz., the *legato* and the *mild elastic* touches, which are described in Touch and Technic, Vol. I. Only in this way of carrying along the various qualities simultaneously can the higher excellencies of scale playing be attained.

The selection of a scale for beginning the practice has been influenced by the convenience and natural position of the fingers upon the keys; the scale of D flat bringing the hand and fingers in the most natural position possible, and carrying in the relative conformation of white and black keys a suggestion of the proper application of the fingers. The order in which one scale should follow another in practice may often be made to correspond with the key of the piece which happens to be in study. The scale of the same key will be more interesting, and the exercise of the fingers in it will render them more obedient in the difficulties of the piece, whether those difficulties be few and simple or many and complicated.

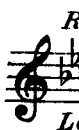
Upon the same grounds of convenience of hand the scale of C minor is here taken for the few forms introduced as illustrations of many others to be derived from the patterns of the major scales, both single and double, and above all in canon. The practice of the minor scales, moreover, cannot safely be omitted, however unpleasant it may be to the ear of the student to hear them. It is quite possible that the music students of the present generation are more sensitive than those of a generation or two ago. The emotional implications of the minor scale are felt more deeply, and there is a very natural repugnance at having to hear lamentation for certain half-hours per day. Nevertheless, they must be practiced. The standard of playing demands it, and will continue to demand it so long as the minor mode enters into pianoforte literature to the extent that it now does.

SEC. 18. Three forms of the minor scale are given in this work: (1) The true minor, or "Harmonic" minor (so called because it is obligatory wherever harmonic relations are involved), see page 34; (2) the so-called "Melodic" minor, having a major sixth and seventh in ascending (both of which are changed to minor in descending), see page 34; (3) a "mixed" form, having a major sixth and seventh in ascending, the sixth being changed to minor in descending, pages 14, 16, 18, and 32. This form was introduced by Johann Wenzel

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Tomaschek (Section 14), and has many advocates among prominent pianists, Alexander Dreyschock and Hans von Bülow, for example. The author of this method prefers it for general practice mainly for the reason that in scale passage writing it is more frequently met with throughout the works of modern Pianoforte writers than any other form. Bach, indeed, forms an important exception, as he makes much use of the old Greek modes in which the leading tone characteristic of our modern scale is lacking and its place supplied with a minor, instead of a major seventh. Students however who have mastered the descending form of the diatonic major scales will find themselves easily at home in these and without need of further special practice.

Sec. 19. The scale of D flat major is chosen for illustration

Elementary Forms of Scale Treatment.

Sec. 20. The beginning of scale treatment is to be made by exercises calculated to form the pupil's ear to the key, lead him imperceptibly to realize the tonic as the central point of the scale, around which the entire tone-series centers; at the same time the elementary motions of scale-technic are being acquired, such as the art of put-

ting the thumb under the fingers, etc. Among the many exercises which have been proposed, the author has found the following about the best for this purpose, and if administered to the pupil orally, or by imitation, with the attention centered upon the sounds produced, and upon the keyboard, the best attainable results will follow.

Exercise I. Preparatory Practice, for Fingering and for tonal Sense.

Observe carefully the fingering marked, and accent somewhat perceptibly upon the first tone in the measure. Repeat each form several times through.

Method of Practice.

Sec. 21. As soon as the foundation has been laid by the preceding exercise, proceed directly to the following preparatory studies in graded rhythms, marked a, b, and c.

1. Time. Be sure to keep the movement unbroken, and precise with the metronome from Grade I to the very end of Grade IV. Young pupils at first may play two grades; then, after a very few times through the two grades, three and very soon four.

2. Rate of movement. Begin at the metronome mark 72 for quarters. As soon as four grades can be played in this movement, advance the speed gradually, day by day, until the rate of 100 is reached. Advanced pupils will be able to play this and all the other graded exercises as fast as 152, four grades in this tempo. For pupils in the intermediate stage the speeds above 100 up to 184 may be practiced in three grades only. The intention is to secure at least three grades of speed in

every day's practice, and to advance the rate as fast as the fingers gain in facility and perhaps a trifle faster.

See what is said of the principle of speed on page 6.

3. Touch. Play Grade I with the clinging legato touch according to the directions in Vol. I of "Touch and Technic," page 8. Play Grade II with the legato touch, but with less pressure than in Grade I. Grade III is played with still less weight of finger, and Grade IV very light. These different touches are explained in Vol I of "Touch and Technic" Sec. 14, and following. The force is always to be greater in the slower grades than in the fast. In fact one of the reasons why pupils find it impossible to play rapidly is carrying the hand too heavily upon the keys. So if Grade I is played fortissimo, play Grade II forte, Grade III mezzo, and Grade IV piano. If Grade I be taken forte, each of the succeeding grades will be reduced one degree accordingly.

(2) The various forms of the finger staccato must be applied to the exercise for at least a small part of the practice every day. In Grade I the full elastic touch must be used; in Grade II a mild staccato, and so on through the grades with less and less force, but with something of the "pulling," or "drawing-in" touch throughout. The use of this touch for a part of the practice imparts greater distinctness and a more elastic and pearly quality to the tones and to running effects generally.

4. Accent. The meter must be clearly defined, whatever the speed or whatever the kind of touch employed.

Throughout Grade I full strength must be applied. The tones are all forte and of uniform power. In all other grades the accent on the first part of each measure must be decided and unmistakable to the ear.

5. Important. Observe the varied number of repetitions directed for each grade and pass immediately from each to the next without break or intermission. The slower grades are precautionary, for their speed is not so excessive as to prevent an ever present sense of full control, whereas the faster ones, especially Grade IV is in the nature of a risk. Attack it with courage and a determination to go ahead at all events.

Study a, in Graded Rhythms. *Compass of five tones.* Play Grade I twice through, Grade II four times, Grade III six times and Grade IV two times. Keep exact time from beginning to end and let there be no break in passing from one Grade to the next.

Grade I. ♩ = 72.

Right hand

Grade II.

Grade III.

Grade IV.

Fine.

Left hand

Twice through. Four times.

Six times.

Two times.

Study b, in Graded Rhythms. *Compass of nine tones.*

Grade I. ♩ = 72.

Right hand

Grade II.

Left hand Twice through.

Four times through.

Grade III.

Grade IV.

Fine.

Six times through.

Six times through.

Study c, in Graded Rhythms. *Compass of seventeen tones.*

Grade I. ♩ = 72.

Right hand

etc.

Left hand

Play once through.

Grade II.

Play twice through.

Grade III.

Play six times through.

Grade IV.

Play four times through.

e. next

Exercise 2. Rhythmical Table I. Meters of 4's, 8's, 16's, and 32's. Study in Graded Rhythms. Carefully observe the directions for time and touch, as given on the preceding page.

Grade I. *Meter of Fours.* See page 8. Sec. 21 N^o 2. Rate of Movement.

Right *etc.*
Left

Grade II. *Meter of Eights.*

Right *etc.*
Left

Grade III. *Meter of Sixteens.*

Right *etc.*
Left

Grade IV. *Meter of Thirty-twos.*

Right *etc.*
Left

Fine.

Exercise 3. Rhythmical Table II. Meters of 3's, 6's, and 12's.

Observe all the directions as to touch and time on pages 8 and 9 Proceed immediately to the Velocity exercises 6 and 7 before playing Exercise 4. (See also Vol I Touch and Technic, page 8 and following.)

Grade I. Meter of Threes.

Grade II. Meter of Sixes.

Grade III. Meter of Twelves.

A Rhythmical Table can be derived from Twos, counting two, as above in Grade I, then for Grade II play triplets and for Grade III double these again, giving sextolets for each count. The sextolets will be precisely like those in Exercise 4.

Exercise 4. Rhythmical Table III. Meters of 3's, 9's, and 27's.

Count three in a measure when playing this as a graded study in rhythm, and when using the Meter of 9's in daily practice. The rhythm of 27's, however, may be obtained by counting 9, playing triplets to each count. This is the best way for young pupils.

Grade I. Meter of Threes.


Grade II. Meter of Nines.

Grade III. Meter of Twenty-sevens.

The meter of 27's requires nine times up and down the compass of three octaves. Count three and play nine to a count; or count nine and play three to a count. The former is obligatory when it is used as a graded exercise. The latter way is the better for young students.

Exercise 5. Grade III. Meter of Eighteens.

In place of coming from the meter of 9's to that of 27's, which may be difficult for young pupils, the meter of 18's may be taken instead, each note of the triplets in the nines being subdivided into two,* instead of into three as in the 27's. Or for everyday practice the same meter may be had by counting six and playing triplets as here written.

* In the former case the measure-sextolet will have the form .

Velocity Exercises.

Sec. 22. We here enter upon the direct practice of velocity, in a method differing in many important respects from the usual exercises proposing this end. In order to gain the utmost possible benefit from this practice, observe the following directions.

(1) Play in strict time, at the metronome rate of 60, 72 or 84. (2) Hold out the first tone firmly, then, with the mind fixed upon the closing tone of the series, take aim for it and pass lightly to it, arriving there at the precise beat of the metronome. (3) Count out the rests their full time. This is very important. (4) Play with the expression marked. (5) Begin with small distances, the right hand first, then the left hand answering it in the same distance. Gradually increase the length of the run, adding one tone at each repetition, up to the limit of the present capacity. (6) Make this exercise a part of every day's practice. Its proper place is that of an appendix or supplement to the other forms of scale practice in every key. (7) Finger the last note strictly according to rule, as if going on.

Exercise 6. Velocity Ascending.

Fix the mind principally on the final tone of the series, but secondarily upon the intervening tones, which must not be indistinct.

Exercise 7. Velocity Descending.

Exercise 8. Ascending in Thirds and Tenths and Sixths.

Exercise 9. Descending in Thirds, Tenths and Sixths.

Exercise 10. Contrary Motion.

All the forms preceding are to be carried out next in the key of C minor, observing the rule of the minor scale form, according to the law on page 32. See also what is said of the "Mixed" minor scale form in Section 18, page 7.

Exercise 11. Rhythmical Table I Carried out in the Scale of C Minor.

Grade I. *Meter of Fours.* Observe all the rules of practice and touch.

Melodic form ascending.

Harmonic form descending.

Right 1 2 3 1 2 3 4 1 etc. etc.

Left (1) 5 4 3 2 1 3 2 1 4

Grade II. *Meter of Eights.*

Right etc.

Left

Grade III. *Meter of Sixteens.*

Right etc.

Left

Grade IV. *Meter of Thirtytwos.*

Right etc.

Left

Velocity in Minor.

Sec 23. In Velocity runs in the minor scale the rule regarding the use of the minor sixth in runs proceeding in thirds or sixths is occasionally disregarded in ascending. This is done in order to avoid the objectionable progression of the augmented second. Moreover the run goes so rapidly that the harmonic effect is lost. When the run in thirds or sixths, however, stops upon the sixth, the minor sixth is invariably used.

Exercise 12. Ascending.

Exercise 13. Velocity in Thirds, Sixths and Tenths. Ascending and Descending.

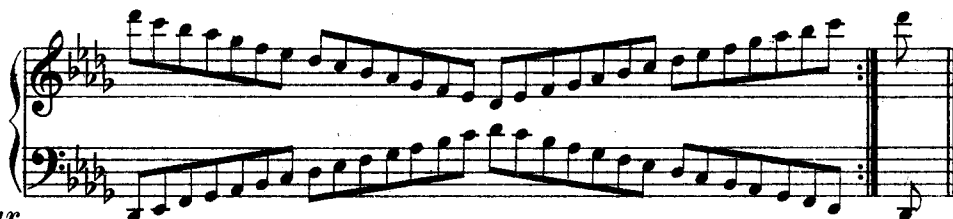
Exercise 14. Contrary Motion.

Sec. 24. *Scale Patterns for Metrical Treatment.*

The following scale-patterns illustrate different manners in which the hands are to be related in the practice of the scales, for the purpose of securing independence and certainty. They are of two kinds: forms involving *Contrary Motion*, and *Canons*. The latter represent a higher degree of independence of hand and

finger. The canons with one or more turning points moveable are the most difficult scale-forms in existence. They will follow quite naturally, however, after the canons with the upper turning point moveable, and those with the lower turning point moveable. All these forms are destined to receive metrical treatment, concerning the application of which see page 26.

Exercise 15. *Pattern Form. Scale in Contrary Motion. Each hand through Two Octaves.*



Exercise 16. *Pattern. Contrary and Similar Motion combined. Both hands starting from the Tonic.*

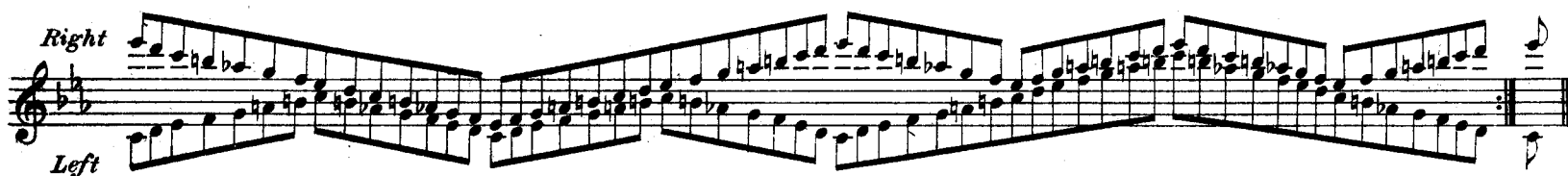


Exercise 17 (a). *Similar and Contrary Motion, the Right hand starting from the Third of the Scale.*



Exercise 17 (b). The preceding with the left hand starting an octave higher, thus bringing the hands nearer together and giving rise to thirds instead of tenths in the parallel motion.

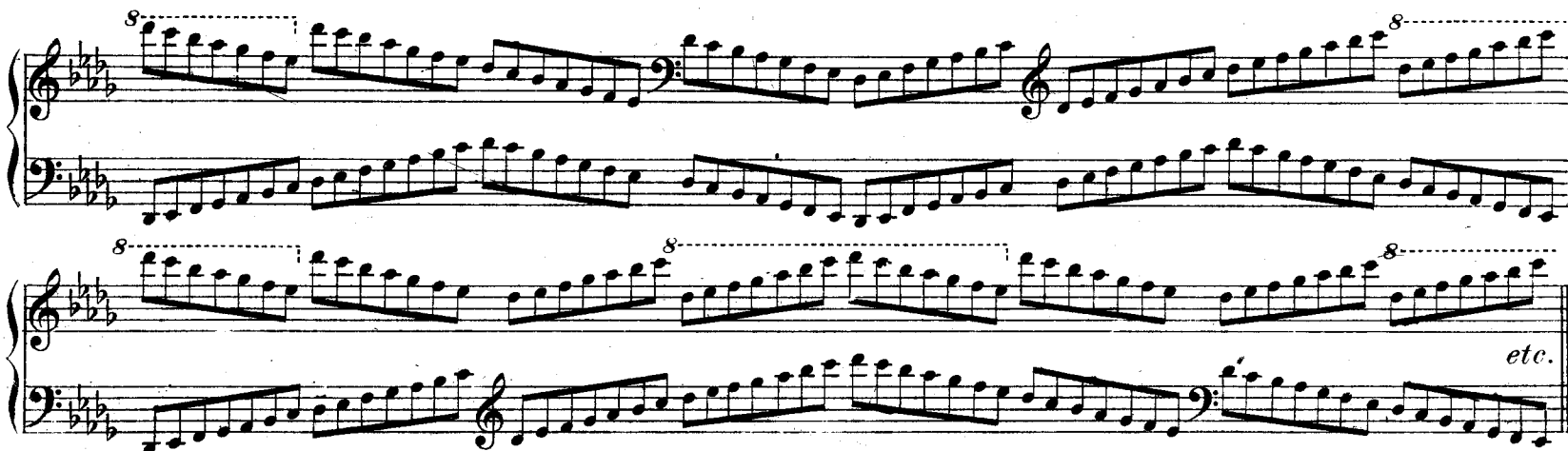
Exercise 17 (c). The preceding carried out in the Minor mode in order to illustrate the irregularity of the sixths.



Exercise 18. Inversion of exercise 17 (a). The left hand begins upon the third, the right hand upon the tonic. The same order and distances of ups and downs for each hand are observed as in ex 17 (a), but the parallel motion will give rise to sixths, instead of thirds or tenths. Owing to its similarity to the original, the notes of this form are omitted. Nevertheless it must be practiced.

Exercise 19. *Pattern. Four Octaves compass, Contrary and Similar Motion combined.*

This is the same as Ex. 16 extended to four octaves.



17 Scales in Canon form.

Sec. 25. The canon patterns are without exception the most important of all which this book contains, as well as a feature believed to be original and peculiar to it. They were in use by the author for several years prior to their first publication in the Mason and Hoadley method in 1867. A Canon is a form in which a second voice exactly repeats the melody of its leader at a definite interval behind. The most common form of Canon is the vocal form called "round," in which several singers follow each other simultaneously through a melody especially constructed with a view of furnishing a succession of agreeable chords when thus performed. Scale Canons arise naturally when the second hand begins two

tones later than the leader, both starting from the tonic and proceeding in similar motion, excepting at the turning points. Here the leader anticipates, and for two tones the parts are proceeding in contrary direction. The Canon is equally valid and musical whether the left hand lead, producing a succession of sixths in ascending and tenths in descending; or the right hand lead, producing tenths in ascending, and sixths in descending. The practical result is the same, but it is better to alternate the modes of leading than uniformly to confine the lead to either hand to the exclusion of the other. The great value of the Canon form for Scale practice is found in the individuality it gives to each hand.

Exercise 20. Scale Canons of different dimensions.

Through Fourteen tones.

Through Two Octaves.

Canon of Three Octaves.

Canon with Left Hand Leading.

Exercise 21. The Canons in Minor Mode.

The treatment of the minor scale in canon form involves peculiar difficulties, in consequence of the half melodic, half harmonic nature of the resulting effects. Upon the whole the best treatment appears to be that in which the ascending canon conforms to the melodic minor, having a major sixth in ascending. To this there are two exceptions: When the canon turns back at the sixth tone the minor sixth must be used, in order to preserve the character of the minor mode. It is the same when the canon turns at the seventh of the scale; (see Ex 7 below) here also the minor sixth must be succeeded by the major seventh, bringing out prominently the most characteristic interval of the minor mode, the augmented second. The descending forms remain harmonic in all cases. On account of the importance of this variety of scale treatment a number of minor scale canons are here written out in full. In playing them the student must be very careful to observe the fingering, especially at the upper and lower turning points.

Each form in turn is to be treated in all the principle meters especially those of 6s, 9s, 8s, 12s, and 16s. Be sure and "complete the rhythm" by repeating each form as many times as necessary. In one case it will come out after once through; in another it requires three times, and then nine times.

(1) Compass of one Octave.

(2) Through Nine tones.

(3) Compass of a Tenth.

(4) Compass of a Eleventh.

(5) Compass of a Twelfth.

(6) Compass of a Thirteenth.

(7) Compass of a Fourteenth. Notice the Harmonic form in both directions.

(8) Compass of Two octaves. Precisely the same as No 1. extended an octave.

(9) Compass of Three octaves.

The following are examples, or patterns, in which the left hand leads. All the distances must be practiced in this form as well as in the form where the right hand leads.

(10) Compass of One octave. (11) Turning on the Sixth above.

(12) Turning on the Seventh. Harmonic in both directions.

(13) Pattern extending through Four octaves.

Exercise 22. Pattern. Canon with upper turning points movable.

Pattern of continuous Canon, progressively extended from one octave to two, and then progressively reduced to its original compass. To be treated metrically.

1 2 3 4, 1 2 1 4, 1 3 2 3 1, 1 2 3 2 1 4, 1 3 2 3 1, 4 1 2 3, 1 3 2, 1 3 2 3 1, 4 1 2 3 1

3 2 1 4 3 2 1, 3 1 2 3 4 1 2 3 2 1, 1 3 2 3 1, 1 2 3 2 1 4, 1 3 2 1 4 3 2 1

2 1 3 2 1 4, 1 3 2 3 1, 1 2 3 2 1, 1 3 2 3 1, 1 2 3 4 3 2 1

2 1, 4 1 2 3 1, 3 2 1 4, 1 4 3 4 1, 3 2 1, 1 4 3 2 3 4 1

1 2 3 4, 1 4 3 2 1, 1 2 3 4 1, 4 3 2 1, 1 2 3 4

1 4 3 2 1 2 3 4, 1 4 3 2 1 3 1 2 3 4, 1 4

1 4 3 2 1, 1 2 3 4 3 2 1, 1 2 3 2 1

3 2, 1 2 3 4, 1 4 3 2 3 4 1, 1 3 3 4 1

1 2 1 4, 3 1 3 2 1 4, 1 2 3 2 1, 2 3, 1

2 1, 1 2, 1 2 3, 1 3 2 3 1

Exercise 23. *Pattern. Canon with both turning points movable.*

In ascending the up scales are an octave, and the down scales seven, in descending this is reversed, the descents being an octave and the ascents seven degrees.

Sec 26. *Pattern Forms of Double Scales.* All the following patterns should be treated metrically.

Exercise 24. *Diatonic Major Thirds through four octaves.* (Observe the legato.)

Parallel Motion.

Exercise 25. *Diatonic Double Sixths through four octaves.*

Exercise 26. Double Thirds with Parallel and Contrary Motion combined.

(1)

The same with a longer run for the left hand.

(2)

Exercise 27. Double Sixths, in Contrary and Parallel Motion.

(1)

(2)

Exercise 28. Velocity Exercise, in Double Thirds.

Exercise 29. Velocity Exercise, in Double Sixths.

Metrical treatment of the forms preceding.

Sec. 27. The success of students in this system will very largely depend upon the thoroughness with which metrical treatment is applied to the pattern-forms preceding, and the same carried out in all keys. This, obviously, will be a work requiring a great deal of time, since the resulting exercises will be extremely numerous. Nevertheless if properly distributed in the daily practice, and but a few minutes a day, (a third or half an hour at most,) for the usual number of years that students take lessons, it will be found that almost every pupil will be able to complete all the forms here indicated, and still have much time to spare.

The Rhythmical Tables on pages 10 to 15 illustrate the manner in which the principle meters arise, and their relations to each other. These are to form the foundation studies for rhythmical education, and the introduction to velocity, as explained on page 5. These forms also, are the ones which should be applied in all the scales as fast as the different keys are introduced. Very soon, however, the shorter canons must be taken up, in order to establish the fingering more thoroughly and to render the hands more independent of each other. The method of applying rhythm to these is illustrated on page 24. Next in importance after these come the contrary motions, at first in short distances, and the hands in the most natural position with relation to each other; later in longer distances, and the hands in third or sixth positions, like exercises 17 and 18. The manner of applying rhythm to these is illustrated on page 24. The double scales come later, when the hand has gained considerable power and maturity. The manner of applying rhythm to the double scales is the same as in the single forms.

All these forms, whatever the meter, must be practiced in various forms of touch, as illustrated on page 9 in the directions preceding Rhythmical Table I.

The general principles governing the practice in metrical forms are the following:

Choice of Meters. Meters of 6's, 8's, 9's, 12's, and 16's are the most important for daily use.

Exercise 30. Meter of Sixes. Count Two.

Meter of Sixes.

The musical score for Exercise 30 is presented in three staves. The top staff is for the right hand, the middle for the left hand, and the bottom for a combined view. The time signature is 6/8. The key signature has two flats (B-flat and E-flat). The music consists of a continuous rhythmic exercise of eighth and quarter notes. The piece ends with a 'Fine.' marking and a double bar line.

Grades of Speed. Combine the meters in such a way that at least two grades of speed are comprised in every exercise. That is to say, 8's and 16's in connection, (Table I, page 10); 6's and 12's, according to Table II; 9's and 27's in connection, or 9's and 16's in connection, (Table III, page 12), etc.

Complete the Form. In all cases of metrical treatment there is one principle which is absolutely universal, admitting of no exception. The rhythmical form is to be completed, by playing the pattern over and over so many times as may be necessary for bringing the accent back again upon the tone where it commenced. Sometimes this will happen at the end of a single repetition; at other times after two or three repetitions; in other cases many times through are required before the accent will fall again upon the starting point. But in every case the form must be played quite through to the end. If through inattention or sluggish rhythmic sense the meter be lost, the exercise must be begun again, and this must go on over and over until the attention is educated up to the ability to carry the accent quite through, no matter how long the form may be. On page will be found an example of meter of nines applied to the pattern exercise 19. This requires eighteen times up and down the keyboard before the form is completed. It will not escape the observation of students unusually acute in the sense of rhythm that the nines really require twice through the form before the rhythmus is completed symmetrically. The nines in Table III, (page 12) for example, are only half the complete rhythmus. For elementary purposes, however, this point may be waived, and the single form, with the accent returned to the starting point, be regarded as complete. Therefore the student and teacher must bear in mind that the partial forms indicated hereafter, with an "etc." at the end, are to be played entirely through to the end, and in practical use never left unfinished, as they are here in the notes.

In the earlier stages of practice the meter of nines should be applied to the two hands in similar motion, through a compass of two octaves, which will require nine times through to complete. In all but the compass this will resemble the nines in Table III, (page 12). Then immediately go on to the four octave compass, as follows in Exercises 30 and 31.

Exercise 31. *Direct Motion, Four Octaves compass, Meter of Nines. (Carried out.)*

This is one of the most important forms for daily practice.

Meter of Nines.

Right. *etc.*

Left.

Fine.

In like manner 6's, 12's, and 18's are to be carried through four octaves compass.

The Application of Meter to the Patterns 15 to 17 gives rise to beginnings like the following:

Exercise 32. *Pattern 15, Meter of 8's. (Carried out).*

Musical score for Exercise 32, Pattern 15, Meter of 8's. (Carried out). The score is written for piano in a key signature of three flats (B-flat, E-flat, A-flat) and a 2/4 time signature. It consists of two staves, treble and bass. The melody in the treble staff is a sequence of eighth notes with various fingerings indicated above the notes. The bass staff provides a harmonic accompaniment with eighth notes and some triplets. The exercise is divided into measures by vertical bar lines, with some measures containing slurs and accents.

Exercise 33. *Pattern 15, Meter of 6's. (Carried out).*

Musical score for Exercise 33, Pattern 15, Meter of 6's. (Carried out). The score is written for piano in a key signature of three flats and a 6/8 time signature. It consists of two staves, treble and bass. The melody in the treble staff is a sequence of eighth notes with fingerings indicated. The bass staff provides a harmonic accompaniment with eighth notes and some triplets. The exercise is divided into measures by vertical bar lines, with some measures containing slurs and accents.

Exercise 34. *Pattern 15, Meter of 9's. (Indicated). To be completed by the player.*

Musical score for Exercise 34, Pattern 15, Meter of 9's. (Indicated). To be completed by the player. The score is written for piano in a key signature of three flats and a 9/8 time signature. It consists of two staves, treble and bass. The melody in the treble staff is a sequence of eighth notes with fingerings indicated. The bass staff provides a harmonic accompaniment with eighth notes and some triplets. The exercise is divided into measures by vertical bar lines, with some measures containing slurs and accents. The score ends with "etc." indicating it should be continued by the player.

Exercise 35. *Pattern 17 Extended to Four Octaves. Meter of 16's. (Indicated).*

Musical score for Exercise 35, Pattern 17 Extended to Four Octaves. Meter of 16's. (Indicated). The score is written for piano in a key signature of three flats and a 4/4 time signature. It consists of two staves, treble and bass. The melody in the treble staff is a sequence of eighth notes with fingerings indicated. The bass staff provides a harmonic accompaniment with eighth notes and some triplets. The exercise is divided into measures by vertical bar lines, with some measures containing slurs and accents. The score ends with "etc." indicating it should be continued by the player.

Exercise 36. *Pattern 17 b, Extended to Two Octaves. Meter of 6's. (Indicated).*

Musical score for Exercise 36, Pattern 17 b, Extended to Two Octaves. Meter of 6's. (Indicated). The score is written for piano in a key signature of three flats and a 6/8 time signature. It consists of two staves, treble and bass. The melody in the treble staff is a sequence of eighth notes with fingerings indicated. The bass staff provides a harmonic accompaniment with eighth notes and some triplets. The exercise is divided into measures by vertical bar lines, with some measures containing slurs and accents. The score ends with "etc." indicating it should be continued by the player.

Exercise 37. *Pattern 18 Extended. Meter of 16's. (Indicated).*

Musical score for Exercise 37, Pattern 18 Extended. Meter of 16's. (Indicated). The score is written for piano in a key signature of three flats and a 4/4 time signature. It consists of two staves, treble and bass. The melody in the treble staff is a sequence of eighth notes with fingerings indicated. The bass staff provides a harmonic accompaniment with eighth notes and some triplets. The exercise is divided into measures by vertical bar lines, with some measures containing slurs and accents.

25

Application of Rhythm and Meter to Canons.

Although the application of meter and rhythm to scale canons appears to the young student a matter of considerable difficulty, it is in reality very simple. The accent invariably begins with the third tone of the leading voice, whether this be in the right hand or the left; the form is then repeated over and over until the accent returns to the point where it began. The following are examples which sufficiently illustrate the manner of applying meter. They are merely indications of metrical treatments which must be applied in great variety to all the canon forms given in Exercises 20 to 23.

Exercise 37. Graded Scale Exercise in Canon form. Quadruple Measure. (See Sec. 25.)

Consisting of four grades of speed combined with graduated intensities of power, and varied qualities of tone produced by different kinds of touch. The degrees of power are indicated as follows:

- | | | |
|----------------------|----------------------------|--|
| Grade I ^a | marked <i>ff</i> uniformly | <i>fortissimo</i> throughout. |
| » I ^b | <i>ff</i> and <i>f</i> | The accented tones are <i>fortissimo</i> , the unaccented <i>forte</i> . |
| » II | <i>f</i> and <i>m</i> | <i>forte</i> , <i>mezzo</i> . |
| » III | <i>m</i> and <i>p</i> | <i>mezzo</i> , <i>piano</i> . |
| » IV | <i>p</i> and <i>pp</i> | <i>piano</i> , <i>pianissimo</i> . |

In these examples the right hand leads. They should also be practised with the left hand leading.

Grade I^a ♩ = 96 Meter of 4s. Compass of two octaves and two tones.

Grade I^b ♩ = 96 Meter of 4s. Same compass as the preceding.

Grade II ♩ = 96 Meter of 8s. Compass of four octaves. Play twice through in order to complete the rhythm.

Grade III ♩ = 96 Meter of 16s. Compass of four octaves.

Twice through completes the rhythm.

Grade IV ♩ = 96 Meter of 32s. Four times through completes the rhythm.

*Note: The *8va* applies to both voices.

Graded Scale Exercise in Canon form. Triple measure.

The directions for playing are the same as in No 37.

Grades III and IV must be completed according to the directions in Sec 27.

Practise the Exercise also with the right hand leading.

Grade I^a *Meter of 3s. Compass of two octaves and four tones.*

ff Clinging legato touch.

ff

Grade I^b *Meter of 3s. Same compass as the preceding.*

ff and **f** Legato touch. Strong accent on the first part of each measure.

Grade II. *Meter of 6s. Compass of three octaves.*

f and **m.** Legato touch.

Grade III. *Meter of 12s. Compass of four octaves. Three times through completes the rhythm.*

m and **p** Both Legato touch and mild Staccato touch.

etc.

Grade IV. *Meter of 24s. Compass of four octaves. Three times through completes the rhythm.*

p and **pp** Both Legato touch and mild Staccato touch.

etc.

Exercise 40. *Pattern 19, in Meter of 9's. (Indicated.)* The pattern is comprised in the first twelve and a half measures ending at (a), and requires nine repetitions before the full Rhythmus is completed by a return of the accent to the point where it began.

Musical score for Exercise 40, consisting of four systems of piano and bass staves. The key signature is three flats (B-flat, E-flat, A-flat) and the time signature is 9/8. The score is divided into measures numbered 1 through 12 1/2 (a). The first system contains measures 1-7, the second system contains measures 8-12, and the third system contains measure 12 1/2 (a). The final measure of the third system is marked with 'etc'. The notation includes various rhythmic patterns, including triplets and accents, and is marked with '8' above the staves.

Exercise 41. *Pattern 17 b, extended to four octaves and treated in 9's.*
The Rhythmus must be fully completed.

Musical score for Exercise 41, consisting of two systems of piano and bass staves. The key signature is three flats (B-flat, E-flat, A-flat) and the time signature is 9/8. The score is divided into measures numbered 1 through 12 1/2 (a). The first system contains measures 1-7, and the second system contains measures 8-12 1/2 (a). The final measure of the second system is marked with 'etc'. The notation includes various rhythmic patterns, including triplets and accents, and is marked with '8' above the staves. Fingerings are indicated with numbers 1-5 above and below notes.

Exercise 41, b. *Pattern 18, extended to four octaves in meter of 9's.*

Treatment of the Chromatic Scale.

Sec 28. The Chromatic scale is one of the most important finger-forms which the pianist has in his stock. And in consequence of its habitual use in rapid and light passages, it is of the greatest importance that the correct fingering be acquired at the very outset of the study because a wrong fingering once acquired can hardly be corrected in a life-time.

Rule: The Right hand 2^d finger always on C and F.

The Left hand 2^d finger always on E and B.

Exercise 42. Graded Rhythms applied in the Chromatic Scale.

In beginning the following table of graded rhythms, it may perhaps be better for the student to play first the ascending scale with one hand alone. After a few repetitions immediately play it in the same time in Grade II, exactly twice as fast; then Grade III, exactly four times as fast. When the motions of the ascending scale begin to be a little familiar, introduce the descending scale in the same way, first in Grade I; then in Grade II; and finally Grade III. As soon as this is done the entire table is to be practiced, at first with each hand separately; later with both hands together. The introduction of fast playing at the very beginning has the same value in the chromatic scale as in the diatonic forms in which so universal an application has already been illustrated.

Grade I. *Meter of 3s.* Touch uniformly full, strong, and even.

Grade II. *Meter of 6s.* Accent.

Grade I. *Meter of 3s.* Touch uniformly full, strong, and even. *etc.*

Grade II. *Meter of 6s.* Accent. *etc.*

Grade III. *Meter of 12s.*

Grade IV. *Meter of 24s.*

Grade III. *Meter of 12s.* *etc.*

Grade IV. *Meter of 24s.* *etc.* *Fine.*

Exercise 43. Chromatic Scale starting from each degree in an octave. *Meter of 12s.*

The following is intended if carried out on all the degrees to render the fingering more certain.

Right *etc.*

Left

Exercise 44. *Meter of 12s.* Count Six.

Right *etc.*

Left

Exercise 45. *Meter of 6s.* Count Two.

Right *etc.*

Left

Exercise 46. Up and down one octave. *Meter of Nines.* (Completed.)

Right

Left

Exercise 47. Pattern ascending by degrees. Observe the ending of the descending scales. *Meter of 12s.*
The fingering is of great importance. Caution. Give the rests their full value.

Exercise 48. The preceding reversed.

Exercise 49. The preceding combined into a continuous exercise by omitting the long tones and the rests.
Meter of 12s.

Exercise 50. *Meter of 12s* applied to Exercise 43. Count two. The Sixtolets may be played as triplets or as three twos.

Exercise 51. The same, in continuous form, being the same as Exercise 49 in different meter.

Exercise 52. *Pattern 49 in Meter of 9s.*

Ascends to C three times before the accent comes again on Middle C at the beginning of a measure.

Chromatic Scale in various forms of contrary motion.

Exercise 53. Consisting of Patterns 47 and 48 combined in contrary motion.

Exercise 54. The preceding in continuous form.

Exercise 55. Pattern 53 in Meter of Sixes. Count Two.

Exercise 56. The preceding in continuous form.

Exercise 57. The same in Nines.

Exercise 58. In Minor Thirds. Meter of 12s. Pattern 47.

Play the above also as a continuous exercise similar to those preceding. Also apply accents of sixes and nines. Practice also with the left hand an octave lower, producing tenths instead of thirds.

Exercise 59. In Major Sixths. The preceding inverted.

Exercise 60. In Major Thirds.

Exercise 61. Minor Sixths, an inversion of the preceding.

Apply all accents as heretofore indicated.

Exercise 62. In Velocity Ascending.

Exercise 63. Velocity Descending.

Exercise 64. Velocity in contrary motion.

Exercise 65. In Minor Thirds.

Exercise 66. In Sixths. Major.

Descend in like manner.

Exercise 67. Major Thirds.

Exercise 68. Minor Sixths.

Descend in like manner.

Note.- All these forms of the Chromatic Scale should be practiced in the order in which they stand, starting from G. This affords different points of departure, and will be found to present new difficulties, which are due, probably, to the fact that the scales in these new positions appear differently on the key board.

Sec 29. The fingering of the single scales depends upon the point selected for employing the 4th finger, which is used once in every octave. If the place of this finger be mastered, all the others will fall in their proper order. The correct fingering is to be retained in all the practice of scales in this system. The prime matters here in view being, first, to form the hand to the key, and, second, to make the fingering certain and uniform. At a later period in the training of advanced pianists

there may be occasion to deviate from this fingering temporarily; but in the early and middle stages of the progress the order of fingering must be rigorously observed.

The fingering of the entire series of major and minor scales may be learned by a child in a few minutes and afterwards remembered, by the following classification and rules. These must be committed to memory when the first scale of the class is taken for practice.

Rules of Scale-Fingering.

Class First: Scales having not more than four sharps in the signature. Scales of C, G, D, A, and E, major and minor.

The careful and thorough practice of the minor scales affords a more thorough discipline for the hand than that of the major scales because in many of the former the black keys occur in different places.

Rule - Right Hand, fourth finger on Seven of the scale.

Left Hand, fourth finger on Two of the scale.

Class Second. Scales having five black keys. Scales of B, F#, C#, D^b, G^b, and C^b, with the minor scales of the same name, or enharmonic with them.

Rule - Right Hand fourth finger upon the uppermost black key of the group of three. Hence upon A# or B^b.

Left Hand fourth finger upon the lowest black key in the group of three. Hence upon F# or G^b.

Class Third. Scales in Flats, having four flats or less in the signature. Scales of A^b, E^b, B^b, and F; with the minors of the same name.

Rule - Right Hand fourth finger upon B^b.

Left Hand fourth finger upon Four of the Scale, except in F, where it falls upon Two.

Scales of the First Class. (See Rule above.) MINOR SCALES. Mixed Form.

The image displays six musical scale exercises in a mixed form, each consisting of two staves (Right Hand and Left Hand). The scales are:

- C major:** Right Hand starts on C4, Left Hand starts on C4. Fingering: RH (1, 2, 3, 4, etc., 4, 3, 2, 1), LH (5, 4, 3, 2, 1, 4, 3, 2, 1, 4, 3, 2, 1).
- C minor:** Right Hand starts on C4, Left Hand starts on C4. Fingering: RH (1, 2, 3, 4, etc., 4, 3, 2, 1), LH (5, 4, 3, 2, 1, 4, 3, 2, 1, 4, 3, 2, 1).
- G major:** Right Hand starts on G4, Left Hand starts on G3. Fingering: RH (1, 2, 3, 4, etc., 4, 3, 2, 1), LH (1, 4, 3, 2, 1, 3, 2, 1, 4, 3, 2, 1, 4, 3, 2, 1).
- G minor:** Right Hand starts on G4, Left Hand starts on G3. Fingering: RH (1, 2, 3, 4, etc., 4, 3, 2, 1), LH (1, 4, 3, 2, 1, 3, 2, 1, 4, 3, 2, 1, 4, 3, 2, 1).
- D major:** Right Hand starts on D4, Left Hand starts on D3. Fingering: RH (1, 2, 3, 4, etc., 4, 3, 2, 1), LH (1, 4, 3, 2, 1, 3, 2, 1, 4, 3, 2, 1, 4, 3, 2, 1).
- D minor:** Right Hand starts on D4, Left Hand starts on D3. Fingering: RH (1, 2, 3, 4, etc., 4, 3, 2, 1), LH (1, 4, 3, 2, 1, 3, 2, 1, 4, 3, 2, 1, 4, 3, 2, 1).

A major *etc.* A minor (Melodic) *etc.* (5) (Harmonic)

E major *etc.* (5) E minor (Melodic) *etc.* (5) (Harmonic)

Scales of the Second Class. Having five black keys each.

B major *etc.* (5) B minor *etc.* (5)

G^b major *etc.* (5) F[#] minor *etc.* or 3 2 1 4 3

D^b major *etc.* (5) C[#] minor *etc.* or 3 2 1 4 3

Scales of the Third Class. (See Rule above.)

A^b major *etc.* (5) G[#] minor *etc.* (5)

E^b major *etc.* (5) E^b minor *etc.* (5)

B^b major *etc.* (5) B^b minor *etc.* (5)

F major *etc.* (5) F minor *etc.* (5)

Minor Scales in MELODIC Form.

Minor Scales in HARMONIC Form.

A minor.

Musical notation for the A minor scale in melodic form, bass clef. The scale is written in a single line with a key signature of one flat (Bb). It includes fingering numbers (1-5) and the word "etc." to indicate continuation.

A minor.

Musical notation for the A minor scale in harmonic form, bass clef. It features a two-octave range with a key signature of one flat (Bb), including fingering and "etc." notation.

E minor.

Musical notation for the E minor scale in melodic form, bass clef. The scale is written in a single line with a key signature of two flats (Bb, Eb). It includes fingering numbers and the word "etc."

E minor.

Musical notation for the E minor scale in harmonic form, bass clef. It features a two-octave range with a key signature of two flats (Bb, Eb), including fingering and "etc." notation.

B minor.

Musical notation for the B minor scale in melodic form, bass clef. The scale is written in a single line with a key signature of two sharps (F#, C#). It includes fingering numbers and the word "etc."

B minor.

Musical notation for the B minor scale in harmonic form, bass clef. It features a two-octave range with a key signature of two sharps (F#, C#), including fingering and "etc." notation.

F# minor.

Musical notation for the F# minor scale in melodic form, bass clef. The scale is written in a single line with a key signature of three sharps (F#, C#, G#). It includes fingering numbers and the word "etc."

F# minor.

Musical notation for the F# minor scale in harmonic form, bass clef. It features a two-octave range with a key signature of three sharps (F#, C#, G#), including fingering and "etc." notation.

C# minor.

Musical notation for the C# minor scale in melodic form, bass clef. The scale is written in a single line with a key signature of three sharps (F#, C#, G#, D#). It includes fingering numbers and the word "etc."

C# minor.

Musical notation for the C# minor scale in harmonic form, bass clef. It features a two-octave range with a key signature of three sharps (F#, C#, G#, D#), including fingering and "etc." notation.

G# minor.

Musical notation for the G# minor scale in melodic form, bass clef. The scale is written in a single line with a key signature of four sharps (F#, C#, G#, D#, E#). It includes fingering numbers and the word "etc."

G# minor.

Musical notation for the G# minor scale in harmonic form, bass clef. It features a two-octave range with a key signature of four sharps (F#, C#, G#, D#, E#), including fingering and "etc." notation.

Eb minor. (D# minor has the same fingering.)

Musical notation for the Eb minor scale in melodic form, bass clef. The scale is written in a single line with a key signature of three flats (Bb, Eb, Ab). It includes fingering numbers and the word "etc."

Eb minor. (D# minor has the same fingering.)

Musical notation for the Eb minor scale in harmonic form, bass clef. It features a two-octave range with a key signature of three flats (Bb, Eb, Ab), including fingering and "etc." notation.

Bb minor.

Musical notation for the Bb minor scale in melodic form, bass clef. The scale is written in a single line with a key signature of two flats (Bb, Eb). It includes fingering numbers and the word "etc."

Bb minor.

Musical notation for the Bb minor scale in harmonic form, bass clef. It features a two-octave range with a key signature of two flats (Bb, Eb), including fingering and "etc." notation.

F minor.

Musical notation for the F minor scale in melodic form, bass clef. The scale is written in a single line with a key signature of one flat (Bb). It includes fingering numbers and the word "etc."

F minor.

Musical notation for the F minor scale in harmonic form, bass clef. It features a two-octave range with a key signature of one flat (Bb), including fingering and "etc." notation.

C minor.

Musical notation for the C minor scale in melodic form, bass clef. The scale is written in a single line with a key signature of no sharps or flats. It includes fingering numbers and the word "etc."

C minor.

Musical notation for the C minor scale in harmonic form, bass clef. It features a two-octave range with a key signature of no sharps or flats, including fingering and "etc." notation.

G minor.

Musical notation for the G minor scale in melodic form, bass clef. The scale is written in a single line with a key signature of one flat (Bb). It includes fingering numbers and the word "etc."

G minor.

Musical notation for the G minor scale in harmonic form, bass clef. It features a two-octave range with a key signature of one flat (Bb), including fingering and "etc." notation.

D minor.

Musical notation for the D minor scale in melodic form, bass clef. The scale is written in a single line with a key signature of two flats (Bb, Eb). It includes fingering numbers and the word "etc."

D minor.

Musical notation for the D minor scale in harmonic form, bass clef. It features a two-octave range with a key signature of two flats (Bb, Eb), including fingering and "etc." notation.

Scales in double Thirds.

Sec 30. The scales in double thirds are played mostly by an alternation of two pairs of fingers: R.H. $\frac{3}{1}$ $\frac{4}{2}$; L. H. $\frac{1}{3}$ $\frac{2}{4}$, which are repeated over and over except that in one place in every octave the 5th finger is employed. The place of the 5th finger is therefore the key to the fingering. In the chromatic scales of this form the 5th finger is used twice in every octave.

The most important consideration in practicing these scales is that of preserving the legato. This can be done perfectly both in ascending and descending in the two pairs first mentioned. In one direction the

3d finger is twisted over the 4th, while the thumb is curled under the 2d finger. In the other the same process is reversed. At one place the legato cannot be fully preserved. The fingers $\frac{5}{3}$ are immediately followed by $\frac{3}{1}$, the 3d finger swinging over the 5th as on a pivot. In the opposite direction the 3d finger swings over the thumb, as a pivot. In these cases the legato is to be preserved as closely as possible.

All the forms of rhythm and the Patterns already applied to the single scales should be applied to the double scales.

The image displays musical notation for scales in double thirds for five major and minor keys: C, G, D, A, and E. Each key is represented by two staves: the top staff for the right hand and the bottom staff for the left hand. The scales are written in bass clef. Fingering numbers (1-5) are placed above or below notes to indicate fingerings. The notation includes 'etc.' to indicate continuation of the scale. The keys are arranged in two columns: C major and C minor on the top row, G major and G minor on the second row, D major and D minor on the third row, A major and A minor on the fourth row, and E major and E minor on the fifth row.

B major. B minor.

F# major F# minor

D# major C# minor

A# major G# minor

E# major E# minor

Bb major Bb minor

F major F minor

Scales in double Sixths.

Sec 31. The scales in double sixths are fingered by an alternation of two pairs of fingers, $\frac{4}{1} \frac{5}{2}$; once in every octave the 3d finger is introduced, giving rise to the succession, $\frac{3}{1} \frac{4}{1} \frac{5}{2}$, the thumb being used twice. In chromatic double sixths this figure occurs twice in every octave.

The legato is to be preserved wherever possible, which

is always the case in at least one of the voices, and half the time in both.

The rhythmic tables in at least two grades if not three, are to be applied to these double scales. Also the velocity forms. This is very important, since many effects in compositions of Chopin and other fine writers turn upon the mastery of these double scale forms.

The image displays five pairs of musical staves, each representing a major and minor key. The keys are C major/minor, G major/minor, D major/minor, A major/minor, and E major/minor. Each pair consists of two staves. The left staff of each pair shows the scale with fingering numbers (1-5) and 'etc.' indicating continuation. The right staff shows the scale with triplets and other rhythmic markings. The notation is in bass clef and includes various accidentals (sharps and naturals) for the minor scales.

C major **C minor**

G major **G minor**

D major **D minor**

A major **A minor**

E major **E minor**

B major B minor

F# major F# minor

Db major C# minor

Ab major G# minor

Eb major Eb minor

Bb major Bb minor

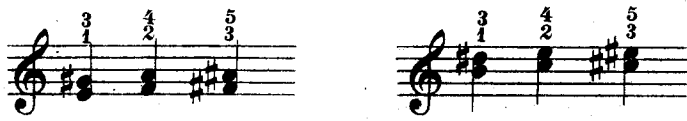
F major F minor

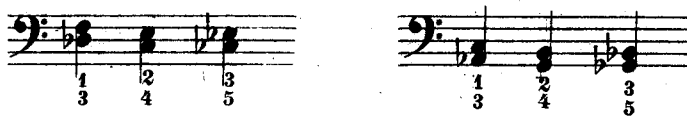
Chromatic Scale in Double Thirds.

There are several manners of fingering the chromatic scale in double thirds, but in all of them there are leading positions in each hand which determine the fingering, the controlling feature being the succession of the first three fingers upon the sequence of two white keys and the following black. These are what the student must fix in his mind.

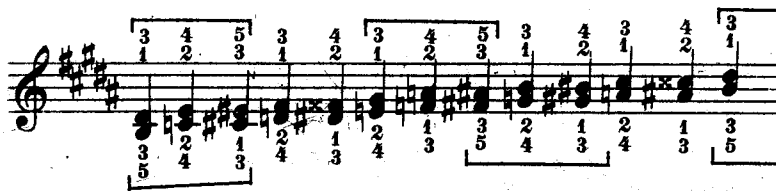
Chromatic Scale in Double Major Thirds.

The two leading positions in each octave which determine the fingering are as follows;

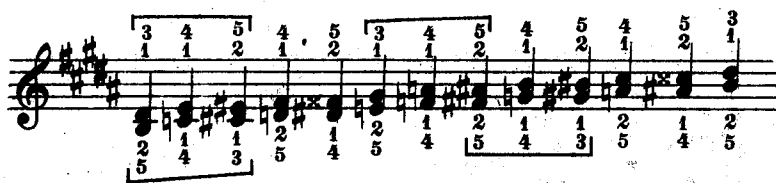
Right hand 

Left hand 

By beginning this scale in the Key of B major as follows, the leading positions of fingering are very plainly shown, as included in brackets.

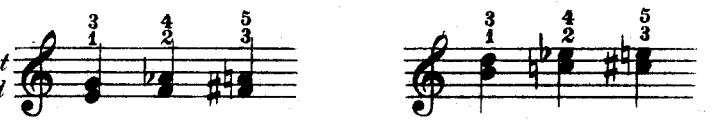


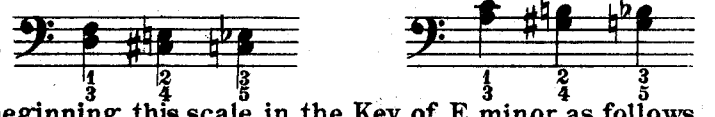
Another fingering commonly attributed to Chopin is as follows; leading positions shown in brackets.



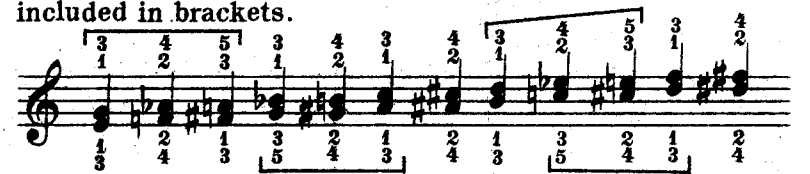
Chromatic Scale in Double Minor Thirds.

The two leading positions in each octave which determine the fingering are as follows;

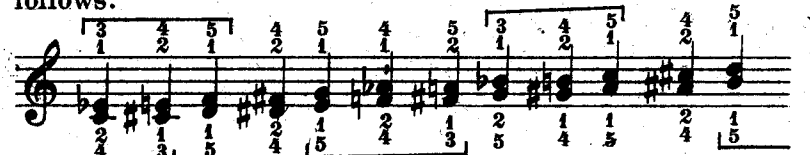
Right hand 

Left hand 

By beginning this scale in the Key of E minor as follows, the leading positions of fingering are very plainly shown, as included in brackets.



Another fingering commonly attributed to Chopin is as follows.



Yet another fingering which employs the fifth finger less than the preceding.

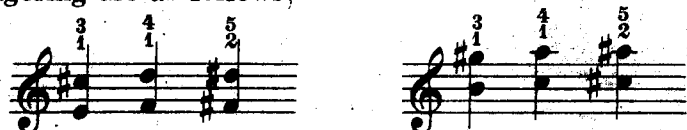


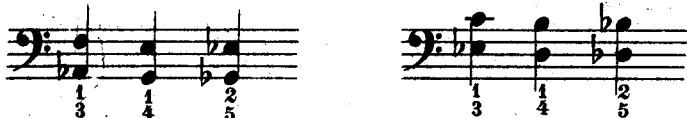
Chromatic Scale in Double Sixths.

The chromatic scales in double sixths are practicable in only one method of fingering, the essential points of applying which turn upon the selection of the two best places in every octave for employing the third finger. Whenever two white keys occur in succession, as E-F and B-C, the third and fourth fingers are used in connection with them, as shown in the examples below.

Chromatic Scale in Double Major Sixths.

The two leading positions in each octave which determine the fingering are as follows;

Right hand 

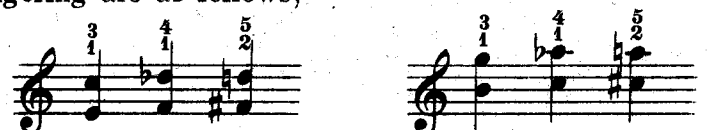
Left hand 

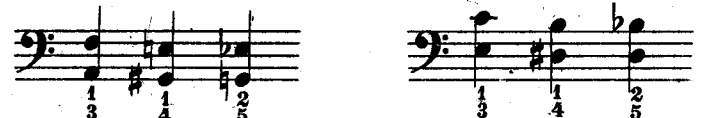
By beginning this scale in the Key of G sharp minor as follows, the leading positions of fingering are very plainly shown, as included in brackets.



Chromatic Scale in Double Minor Sixths.

The two leading positions in each octave which determine the fingering are as follows;

Right hand 

Left hand 

By beginning this scale in the Key of C major as follows, the leading positions of fingering are very plainly shown, as included in brackets.

