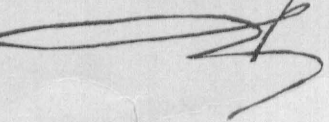


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RELAXATION STUDIES

IN THE

MUSCULAR DISCRIMINATIONS

REQUIRED FOR

TOUCH, AGILITY AND EXPRESSION

IN

PIANOFORTE PLAYING

BY

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PREFACE.

AT last I am able to offer my readers the exercise-material for the study, retention and direct teaching of the muscular expertnesses required in Piano Technique, as promised in my "Act of Touch" and "First Principles of Piano-playing."

Here I must once again insist that *no special exercises* are required in making use of those teachings. My "Method"—of teaching—does *not* consist in the use of any special exercises, nor even of mere explanation of and attention to "rules." It consists in giving properly selected pieces of actual music, to the student, and while making clear to him the interpretative requirements of such actual music, it consists in showing him at the same time how to conquer the difficulties of its performance—the technical and interpretative difficulties therein met with. Studies and Exercises are then given to serve as concentrated material for the study of the difficulties found to be barring the way, the nature of which difficulties having been previously fully explained to the student.

I do not approve of any "method" which separates the study of Execution from the study of Music. The two things, although quite distinct, should nevertheless be always studied conjointly as far as possible. Since we must acquire such habits that our musical sense will in the end serve to prompt the requisite technique, it is necessary that we should all along endeavour to weld these two—our musical faculty and our technical faculty—into a most intimate relationship; and we must never therefore, even during the early stages of learning, lose sight of that which should always form our ultimate aim—the achievement of the Beautiful in Music.

The only rational and direct method of teaching consists in constantly explaining to the pupil the *nature* of the right actions which alone will lead to successful interpretation, and also pointing out the facts which are the causes of failure, and doing this constantly during the study of actual Music—for the sake of bettering its interpretation.

It is herein mainly that my method of teaching differs from previous methods, and to which it owes such measure of success as it has attained.

Certainly it is imperative that the facts and principles which I have demonstrated in my earlier books should, as a preliminary, be cursorily explained to every pupil—child or adult—before anything else is attempted; but these facts and principles must subsequently be steadily exemplified and practically demonstrated at every step during the study of pieces, studies and technics. Every shortcoming of the pupil's technical equipment (as to Tone, Duration and Agility, &c.) must be diagnosed according to those teachings, and being thus traced to the violation of some one or other of the Laws of Touch, the pupil can then directly proceed to correct his faults—knowing the nature of them.

The particular exercises here in question do not in the least therefore interfere with the retention of any particular "method" of Technics and Studies adopted by the teacher. For they are designed to assist the student—and Artist—to acquire the correct execution of any and every technic, study or piece he may be engaged upon at any time. Obviously therefore, they are also useful in the earliest steps of every Beginner.

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The exercises are laid out in three Parts: The *First Part* is the most important, and should be adopted as "Daily Practice" not by the Beginner only, but also by the advanced player and Artist,—for many are the weary hours of practice-time ill-spent even by the Artist, when it happens that he does not keenly recall the proper muscular conditions! The *Second Part* consists of "Preparatory Studies"; while *Part III* contains the material for the study of special difficulties, and some of the Exercises of this Part also form excellent "Daily Practice." Some hints are given in the Introduction as to the order in which these Studies should be undertaken, also, with each exercise, some slight explanation of the purpose of each.

Some of the Exercises require the keyboard for their practice, others are for practice apart from the keyboard, while yet others can be used either at the Pianoforte or away from it.

At a future period I hope to issue a book of additional exercises and technics under the title of "Occasional Technics," giving further material on the same lines.

HASLEMERE, SURREY,
August 1908.

TOBIAS MATTHAY.

THE STUDY OF MUSCULAR RELAXATION.

EXERCISES IN THE MUSCULAR DISCRIMINATIONS REQUIRED IN PIANO-PLAYING.

INTRODUCTION.

IT was proved in "The Act of Touch" that success in playing is limited by the extent of our mastery of Key-Treatment in all its manifold aspects, and that all successful playing immediately therefore depends, muscularly, upon habits of proficiency and accuracy in inducing the required muscular actions and inactions. This again implies the acquisition of mental-muscular discriminations in a number of very definite directions, and primarily, in the elision of all unnecessary exertions.

The most important of these mental-muscular discriminations were formulated in a Table given on pages 195—196 of "*The Act of Touch*," and on pages 72—73 of "*The First Principles of Pianoforte playing*."* These Exercises are intended to render more easy the direct teaching of these requisite mental-muscular habits.

To understand the object and purpose of each of the exercises, the teachings of "The Act of Touch" and of "First Principles" should be studied, and the particular pages are often quoted under each exercise, where the required information can be found.

The exercises will be found to come under three distinct headings. Some are purely preparatory in character; others serve special purposes; others again, although required during the learning stage, should certainly also be adopted as DAILY PRACTICE during the whole career of the Pianist. It will indeed be found, that a little practice of certain of these exercises *every day* will save hours of Practice-time, mispent, not only in the case of the learner but also in that of the most accomplished artist. It is the common experience of most players that some preliminary time has to be spent each day in "getting one's fingers in." This usually means that the player cannot at once *accurately recall* the requisite mental-muscular discriminations. Now unless he does recall those to which he is, or should be accustomed, he cannot feel perfectly "at home." It is here especially that he will find the advantage of beginning the day's work with the "Muscular Tests" given in Part I.† A few minutes devoted to these, and to a few others perhaps, and certainly including those for "Rotation" freedom‡, followed by quite a few scales, arpeggi, or other "pet" technics of the player, will amply suffice to make him feel able at once to begin his real

* A reprint of this Table is appended at the end of this chapter, by the courtesy of Messrs. Longmans, the publishers of these works.

† Vide pages 204—214 of "The Act of Touch," and page 17 of "First Principles."

‡ Vide pages 188—193 of "The Act of Touch," and page 15 of "First Principles."

practice with a good prospect of benefit therefrom. On the other hand, if practice is begun without absolute remembrance of the correct actions, much time is lost, and pieces and studies are often "worried" into a condition less "fit" than before this—*mis-practice*!

Another distinction exists amongst these Exercises: while some of them require the Piano for their practice, others may be practised at the Piano or away from it, while yet others *must* be practised away from the instrument. The Exercises for practice apart from the Piano, are particularly valuable in cases where wrongly-formed habits of Key-treatment are found to impede the acquisition of the right muscular actions and inactions. In fact we often find, where such wrong habits are of long standing, that they can be conquered only by first "breaking their back" by such exercises and experiments as these, quite away from any Piano, since in these cases the mere sight of a keyboard is often found sufficient, irresistibly to summon up the acquired but totally wrong muscular-conditions. Where such vicious habits have been formed in connexion with the vocal organs the case is far more hopeless than that of the Piano student; for it is practically impossible visually to show the vocal sufferer what is wrong, and he can therefore be helped only through the ear and the imitative instincts. But at the Piano, now that the analysis of the required actions and inactions of the limbs is available, it is quite easy to make these actions plain—even those muscular changes of condition which are normally unaccompanied by any movement;—and this can be done by showing and practising movements—even exaggerated movements—in the required directions.

Provided there be determination, will-power and mental capacity, no one need despair of cure, even the most confirmed evil-doer, pianistically! But here, as in all other learning, it is the first step that proves hardest—the hardest task to accomplish is the first weakening of long-formed bad habits.

In the case of children, on the other hand, where these are intelligent and really desirous of learning, there is no difficulty in *at once* teaching right habits; "the slate is clean," for no habits of mental-association have as yet been formed as regards the key. All the teacher has to do here, is clearly to explain and show what is required, and it will take the child no longer to acquire the right habits than to acquire the wrong ones. But it requires painstaking care on the part of the teacher constantly to remind the child of *what is required*, for no child has great powers of concentration, and it is here that the teacher must indeed give all the aid he can.

The Exercises are divided into *three* parts, as follows:

PART I: The Chief Muscular Tests, and other permanent Daily Exercises.

PART II: Preparatory Exercises.

PART III: Exercises in important special details of Technique.

Before starting work on these exercises, it is assumed that their object and purpose has been made plain, in a more or less general or detailed way according to the student's capacity—and as recommended on pages 120—128 of "First Principles." To begin with, it is indeed most essential that the student should, in the case of each exercise, understand *why* he is required to work at it. To assist the learner in this respect, a short explanation of its purpose precedes each exercise. We must remember that the most important muscular discriminations required in Piano playing are: 1), the relaxation of the arm-supporting muscles—to obtain the effect of weight; 2), the elimination (or relaxation) of all "contrary" exertions; and 3), accuracy in timing the cessation of the required exertions; hence primarily the elision of all unnecessary and harmful exertions; hence also the title chosen for this work—RELAXATION STUDIES.

Regarding the ORDER in which these exercises should be undertaken, the answer must be the same as to all such enquiries, and that is, that there should be no fixed "course of study," since the result of

such "method" must always be to mis-fit the vast majority of cases.* Therefore, also here, the actual order in which the exercises are begun, must be determined by the requirements of each individual case. Certain laws do, however, somewhat control our choice. For the laws of Evolution do indeed apply as strongly during the process of learning to play the Piano as during every other form of growth in Nature; and we cannot transgress these laws, and yet hope to obtain the best results from our study. Thus, in learning, we must always try to master the more simple facts before proceeding to the more complex ones. Hence, also, in learning Piano-technique, we must gain some familiarity with the simpler muscular actions and motions, before attempting those which consist of a complex combination of the simpler ones.

Evidently then, it is folly to start a child on Finger-technics at the Piano—as so often done—when we realize the number and complexity of the co-ordinated actions required for the *correct* execution of such technics. And to practise them incorrectly is only putting a premium on wrong habits!

Obviously "one step at a time" is the only proper course to pursue; and the muscular problems must therefore at first be somewhat mastered in their more simple forms, such as the exercises in Part II offer, and in the simpler forms of the "Daily Tests" of Part I.

Then, in proceeding to the Piano itself, when we learn our first lesson in Key-treatment from the *instrumental* side—when we learn to depress keys into sounding, instead of at once trying to do so with *individualized* fingers (a most complex matter)†, how much more is it in accordance with natural Law, to begin by sounding chords—mere easy handfulls of notes; and after one has learnt in some measure to give motion to the key *in the proper way*, only then to proceed to the simpler exercises for the individualization of each finger—exercises for which purpose are found in Part III.

In this matter of finger-individualization much difference is also found between various learners. Some find it excessively difficult to give such discrimination—they cannot realize or "think" each separate digit, while others seem to inherit this mental segregation (separation) of the fingers, which plays so important a part in digital dexterity.‡

How futile again, to treat cases so different as these, under one inflexible and therefore futile "Course of Study!" Granted, that the finger-talented may start at once with five-finger exercises, nevertheless the others must certainly first be patiently instructed how to discriminate between their fingers mentally.

A number of these exercises do moreover come in a natural sequence. This sequence, without any further words of explanation, becomes perfectly clear from the introductory matter which accompanies each exercise.

* *Vide* p. 265, "Act of Touch."

† *i.e.*, Five-finger exercises, &c.

‡ For instance, I know a young Artist, who, if given the most complex finger-agility passage, can at once play it in any key and with any fingering at fullest speed. Others again, cannot begin to play such passages at all until the fingering has first been laboriously learnt.

TABLE*

OF THE MAIN MENTAL-MUSCULAR DISCRIMINATIONS REQUIRED TO ENABLE US TO FULFIL THE CONDITIONS OF ACTION AND IN-ACTION EMPLOYED DURING THE ACT OF TOUCH.

I. Ability independently to leave lax—unsupported by their respective muscles:—

- | | |
|---|--|
| { (a) The <i>Hand</i> ,
(b) The <i>Fore-arm</i> ,
(c) The <i>Upper-arm</i> ,
(d) The <i>Shoulder</i> , | } so that we shall be able to set free their Weight as required, independently of any downward exertion of the finger or hand. |
|---|--|

II. Isolation of the Finger's down-activity (or exertion) from that of the Hand—

—ability to exert the finger against the key, independently of any *exertion* downwards of the hand.

III. Isolation of the Hand's down-activity from that of the Arm—

—ability to exert the hand downwards behind the fingers upon the keys, even to its fullest extent, without permitting any down-activity of the Arm.

IV. Freedom of the Finger's action—

—isolation of the Finger's down-exertion from its opposite exertion—freeing the finger's down-exertion from the upward one.

V. Freedom of the Hand's Action—

—isolation of the hand's down-exertion from the upward one.

VI. Discrimination between the Thrusting and the Clinging application of the Finger against the key—

with its correlated alternative, either of *forward-supported* or *lax-left* Elbow and Upper-arm.

VII. Freedom in the rotary-adjustment of the Fore-arm—

- | |
|--|
| { —a) ability to leave the fore-arm <i>lax</i> in a tilting direction towards either side of the hand,—both fifth-finger and thumb sides of the hand.
—b) ability freely to <i>exert</i> the fore-arm rotarily in either of these directions. |
|--|

VIII. Freedom of the Wrist and Hand horizontally—

—isolation of the muscular act that moves the hand to one side laterally, from the act that moves it in the opposite direction—required to assist the thumb in turning under, and the fingers in turning over.

IX. Ability accurately to time the cessation of the down-exertion of the Finger, employed during key-descent—

—ability to "*aim*" this exertion, so that it may culminate and cease at the moment of sound emission.

X. Ability accurately to time the cessation of the down-exertion of the Hand, employed during key-descent—

—ability to *aim* the hand-exertion, so that it may also be directed by the ear, like that of the finger.

XI. Ability accurately to time the cessation of WEIGHT, employed to produce tone—

—ability to time the application of any Arm-weight employed for the creation of key-descent, so that it may culminate and cease at the moment of sound emission.†

XII. Freedom in the lateral movements required of the Finger, the Hand, the Fore-arm and the Upper-arm in bringing the finger-tips into place over their required notes, antecedent to act of key-depression—

—freedom in the lateral, or side-to-side movements: (a) of the Fingers and Thumb, (b) of the Hand, (c) of the Fore-arm, with the elbow as a pivot, and (d) of the Elbow and Upper-arm itself.

*This Table is re-printed from "The Act of Touch" by the courtesy of Messrs. Longmans, Green & Co.

†This cessation of Arm-weight must be prompted by the carefully timed cessation of the up-bearing action of the finger and hand against the wrist, at the moment that tone begins to appear during key-descent. This cessation of support at the wrist thus prompts the arm-supporting muscles to act in response to the beginning of each sound, in the case of "Weight-touch."

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RELAXATION STUDIES.

PART I.

DAILY EXERCISES.

PART I.

The Chief Muscular Tests and Other Daily Studies.

PREAMBLE: THIS, the First Part of these Studies or Exercises, is the most important one. All the Studies contained therein, should certainly be adopted as DAILY PRACTICE by all players, whether adepts of beginners. When no piano is available, they may all be practised (in a more or less modified form) on a table, or better still upon some object, a few inches high, and placed upon the executant's knees. Sometimes, indeed, it is found even more useful and effective in the earlier stages of learning, to practise them thus, than at the instrument itself.

The scope of these first *four* sets of exercises is, roughly, as follows:

Set No. I: "*BALANCING EXERCISES*"—to insure freedom of the hand and fingers vertically.

Set No. II: "*AIMING EXERCISES*"—to insure accuracy in the process of applying energy to the key.

Set No. III: "*THROW-OFF EXERCISES*"—to insure isolation of the required down-exertions of the hand and finger from the undesirable down-exertions of the arm.

Set No. IV: "*ROTATION EXERCISES*"—to insure freedom of the *fore*-arm and hand in a rotary direction.

The first three of these sets of exercises have already been cursorily explained in "*The Act of Touch*" and in "*First Principles*."* They are now more fully described, and details as to their practice and mastery are here given in addition.

* Chapter XVIII of "*The Act of Touch*" is devoted to the explanation of their application, and they are also noted on pages 17 and 77 of "*First Principles*."

SET I.

BALANCING OR FREEING EXERCISES.

FOR THE ELIMINATION OF CONTRARY-EXERTIONS IN FINGER AND HAND ACTION.

THIS exercise forms the first of the "Three Muscular Tests" mentioned in the explanatory books, to free the fingers, hand and wrist vertically from all conflicting and nullifying exertions. It may be practised as an exercise either at the Piano or away from it, and may also be employed during performance as a "test" for freedom.

PURPOSE:—A means of acquiring and retaining *freedom* during the required exertions of the finger and hand, by eliminating all *contrary* exertions from the required exertions. That is:—this exercise is designed to teach us and remind us how to use the *down*-exertions of the finger and hand unimpeded by any exertion of the corresponding *up*-muscles. The freedom thus gained enables us properly to execute the "Act of Resting," and this again renders possible the attainment of accuracy in the application of the "Muscular-sense," and it is this, finally, which renders possible the acquisition of accuracy in technical response to the musical wish—in a word, *accuracy in musical expression.**

DESCRIPTION of the Freeing or Balancing Exercises:

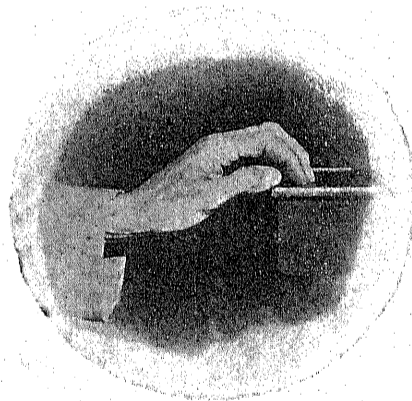
The Exercise or "Test" takes two forms: *A* and *B*. The *first* form is for the purpose of freeing the hand, and the *second* form is for freeing the fingers:

Fig. 1.



a)

Showing position of the wrist, fully raised as required in Form *A* of Exercise I.



b)

Showing position of wrist, fully lowered, as required in the same exercise.

* *Vide* "Act of Touch," Part I, Chapters IV and V; Part II, Chapter XI, "The Key"; and Part III, Chapter XIII, "Our Sense of Key-resistance"; Chapter XIV, "On Key-contact"; Chapter XV, "The Act of Resting"; and Chapter XVII, "The Required Actions and Inactions."

FORM A: *For Wrist-freedom*:—

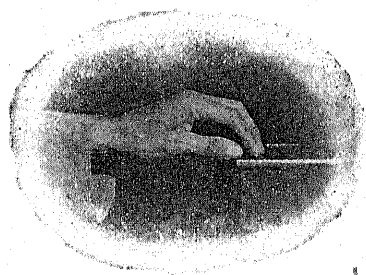
This takes the form of a slow, gentle, continuous up-and-down swaying movement of the wrist-joint; the hand lying loosely upon the keys at their surface-level (or upon the edge of a table, &c.) supported thereon by all the five fingers. The weight must remain unaltered throughout this swaying motion, and the finger-tips should remain where first placed.

FORM B: *For Finger-freedom*:—

This takes the form of a gentle and continuous rolling and unrolling of the fingers upon themselves.

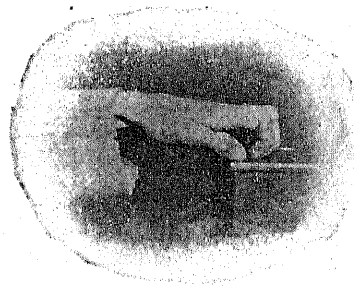
The weight here again remains constantly of the same lightness, and the finger-tips remain on same spots.

Fig. 2.



a)

Showing position of the fingers "un-rolled" as required for Form B of Exercise I.



b)

The same, fully "rolled up" as required in this form of Exercise I.

When either of these two forms is employed as AN EXERCISE, the movements should be as ample as possible; but when these same movements are employed DURING PERFORMANCE, as a test for freedom, &c., then these movements should gradually be reduced to the smallest compass compatible with their utility.

Both forms of this exercise may be practised at the Piano, or upon a table; or also upon a book or other object, placed upright upon the knees.

FURTHER DIRECTIONS for Form A, the Wrist-freeing "Test" or Exercise:

Do not *hold* the hand down upon the keys; it must *lie* upon them of its own weight. The "up" muscles (raising muscles) must be so perfectly passive, that if the hand is slid off the edge of the keyboard, it will hang absolutely limply from the wrist. If the hand be left as loose as this it will lie supported upon the keys without these going down — they will remain at their normal level. The fingers, being bent into a well-curved position, sustain the weight of the hand at its knuckles, and the other end of the hand (the wrist-end of it) of course remains supported by the arm at the wrist-joint. The arm itself should meanwhile be in its "self-supported" condition — balanced in space, just as required for the first and second Species of Touch-formation — and as explained in the "Act of Touch" and in "First Principles."

The elbow should be in the position normal to it when playing, either level with the keys, or slightly lower.

Take one or two seconds of time to complete each gentle up-and-down (swaying) motion of the wrist-joint. Be sure to do so without any jerking or sudden action. The movement should be continuous, almost indeed a mere *floating* up and down of the wrist as it were. The weight felt to be resting upon the keys (or other object) must neither decrease nor increase during this movement. It will remain unaltered, provided you really let the hand lie freely upon the keys. If you exert the hand ever so slightly during this light "Resting," or allow the arm to become a little less perfectly self-supported, or if you "stiffen" either the finger or the hand, in either of these cases the keys will at once warn you of your error, for they will then go down and sound.

Remember, there must be absolutely no restraint whatever during these movements.

FURTHER DIRECTIONS for Form B, the Finger-freeing Exercise or "Test":

Here the hand and fingers are placed upon the keys much in the same way as in the first form of this exercise. But instead of moving the wrist, you must now sway the fingers themselves backwards and forwards, in order to test their freedom from contrary-exertion. To accomplish this, place the whole of the finger-tips (in the normal playing-position) upon five adjacent keys; or place them upon a table, or other surface. Gently move the elbow forward and then backward again, while the finger-tips continue to rest on the places thus first chosen. These movements of the elbow will cause the fingers (by their front two phalanges) to roll up as it were, and again to unroll into their first position. The process being repeated as often as necessary, until the fingers are felt to be perfectly freed from all contrary exertion on the part of their "up" muscles — those lying across the knuckles on their upper side.

The four fingers become so fully bent during the forward-rolling process, that they double over upon themselves. The thumb also bends outwards and then straightens again, owing to this forward and backward swaying of the elbow; the tip of the thumb, however, cannot remain on the same spot, like the other fingers, but must be allowed slightly to slide forward and backward upon the surface of the table, &c., while it bends and unbends in doing so. *Vide* Fig. 2.

The whole process may be likened to that of rolling up a heavy Turkey carpet and unrolling it again. During the forward motion of the arm, the fingers give way and roll over upon themselves, while the fingers slacken out again as the elbow recedes.

Remember above all things, that the conditions of this "Test" are:

Firstly, that this forward and backward motion of the elbow must not cause the finger tips to slide away from the places they are resting upon in the first instance, except in the case of the thumb; for the fingers must be so free across their knuckles, that the elbow has no effect on the tips which are in contact with the table.

Secondly, the weight must remain unaltered during the exercise.

You must be so careful on this point, that on practising this "Test" at the key-board, you can freely give the required forward and backward motions without depressing the keys, while nevertheless resting upon them — at surface-level all the time. The keys will not be depressed, provided you do not relax the arm beyond its self-supported state, and provided you do not "stiffen" the fingers themselves, which

means: provided you *do* leave the raising-muscles (or "up" muscles) of the fingers *inactive*. If the keys go down and sound, this at once warns you (as in the previous form of the exercise for wrist or hand freedom) that you have not fulfilled the conditions of the "Test," and that you must continue practising it until you do.

When these exercises are practised upon a table, &c., you may, besides practising with the weight of the merely loose-lying hand (as used for the Staccato "Resting" at the piano) practise also both forms of the exercise with a *somewhat greater weight*. This greater weight must of course be obtained, as for Legato "Resting," and as for the *Third Species* of Touch,* by allowing the arm to be sufficiently relaxed for the purpose—and not self-supported, as for *Staccato-resting*. Indeed, the weight of the arm may here be allowed to take effect as fully as in a singing passage at the piano; but with this notable difference, that the weight is here, during the course of the exercise, left *continuously* relaxed, instead of being allowed to act only momentarily, as in the case of the production of a singing-tone at the piano.

During performance, this Test in both its forms (for wrist freedom, and for finger freedom) should be employed whenever you feel *uncertain of the keys*—which means, whenever you feel uncertain as to whether your wrist is free or not, or whether your fingers are free or not.

At first, when you are beginning to learn to play, or are beginning to learn technique properly, you must often employ this Test, especially the wrist (or hand) form of it. This you must do, to insure your giving proper attention to key-weight, and to *freedom* of action, and the movements must during this period be considerable. Afterwards, in fact as soon as possible, you must learn to judge both key-resistance and freedom, while exhibiting these movements less and less, until at last their amplitude will be so reduced that they are hardly noticeable. Without some *slight* wrist-motion of this kind, it is however impossible to fulfil the first essential of good Technique; and that first essential is, correct judgment as to the exact degree of energy required for the production of each note—and no playing can be musical without that. The reason why the movements here in question are required, is, that without some slight movements of this kind one cannot be sure whether the muscular resistance one experiences in playing each note is really occasioned, as it should be, by the key (before and during its movement), or whether it is occasioned by a faulty "tightening" of one's own limbs. In fact, it is no more possible to gauge Key-resistance without some such slight weighing motion of the arm and wrist, than it is possible to judge the weight of any object held in the hand, without having recourse to some "trick" of this nature. We are soon forced to learn this muscular device (or "trick") in ordinary life; but it often happens, that a student does not discover the parallel one at the Piano, and until he does so—or is instructed in these present "Tests," he cannot at all succeed in playing with musical certainty—he cannot *really play musically*.

The matter is fully explained on page 207 etc., of the "Act of Touch."

* See "Act of Touch," Chapter XIX; "First Principles," page 9.

ADDITIONAL HINTS as to practice of Exercise No. 1.

A): The first difficulty in both forms of this Exercise is, to make sure that the hand really does rest on the keys — lies lax upon them — of its own weight, and that you do not, instead, “hold” it there. To overcome this difficulty, some preparatory exercises may be found necessary, those for relaxing the hand, and also those for the arm, “arm-release” found in Part II, Sets V and VII. It may even be necessary to practise the preparatory *finger-release* exercises, before the hand will at last really lie without effort on the keys, — passive, both as regards its raising and its depressing muscles.*

As a special preparation, however, exercise the hand as follows:—

Special Preparatory Exercise for light Resting: “While keeping the Fore-arm gently supported at Elbow-level, raise the hand alone, but without any perceptible effort, until the knuckles are high above the level of the wrist and arm. Test the balance of the hand now, as in the Preparatory Exercise, Set V, which refer to. That is, sway the hand slightly up and down until you feel it is nicely balanced — *just on the point of falling of its own weight*, but not actually falling. When you have succeeded in thus getting the hand nicely supported in the air by its proper muscles, suddenly omit this gentle supporting exertion, and the hand will then readily fall of its own weight, and will dangle, as it were, from the wrist. In this condition (of hanging loosely from the wrist) now bring it over the keys, and if you now allow the arm gently to descend to the level proper to it in playing, you will find that the hand will now probably remain still in this relaxed condition, — thus really lying quite loosely on the keys at their surface-level, and supported thereon by the fingers.

B): It is absolutely essential, that the weight thus lying on the keys remains unaltered throughout the practice of both forms of this Exercise, even when *much* weight is applied, as may occasionally be done during the practice of the Exercise at a table, — although you must bear in mind when using much weight, that you must only exert the *under-tendons* of the finger and hand (to support that weight), while leaving the “up” tendons quite passive. You can only ensure the weight remaining constant in quantity, by unremittingly watching the physical sensation produced by this weight, through its being supported by the fingers upon the keys, or table.

C): The *most useful* form of the Exercise, is with the weight of the relaxed hand only, but as already pointed out, it is sometimes well to practise with all degrees of weight — from that of the hand only, as required in Staccato and in Agility-resting, up to the fullest weight required in Weight-touches.† This helps to strengthen the down-muscles of the finger and hand — the muscles which must be made strong, and upon which all tone ultimately depends. At the same time, it teaches us to use these down-exertions *without impediment*, even in the fullest *forte*. It is advisable, however, when thus practising with greater weight than that of the Hand alone, occasionally (during such practice) *suddenly to cease the weight* — just as we must do at the Piano in producing the “Third Species of Touch.”‡ This cessation of Weight should be wrought by suddenly ceasing the exertion both of the finger and of the hand, and thus allowing the *arm-supporting* muscles to be prompted into activity by a kind of reflex-action; — the muscles proper to the arm thus automatically resuming their duty of supporting it, owing to the sensation of its weight being suddenly left unsupported.§

D): Remember, when practising the *second* (or finger) form of this Exercise, that the *level of the Wrist* should change but little. The Exercise, in this finger-form, is therefore quite unlike its *first* form — in which sufficient vertical movement of the wrist-joint is the very point to be insisted upon.

* The Preparatory Finger-release Exercises in question are found in Part III, Set X.

† See Chapters XV and XVII of the “Act of Touch.”

‡ “Act of Touch,” p. 217.

§ *Vide* “Act of Touch,” p. 181; “First Principles,” p. 16.

E): As already pointed out, all the degrees of weight employed in playing may in turn be practised also in this form of the Exercise, when it is practised upon the knee, or table, &c. In this connection, note that it is very necessary constantly to notice the *sensation* of Weight experienced at the finger-tips, so that this weight may be kept quite unchanged during these Test-movements. It is particularly necessary to notice this sensation when you practise with more than the proper light weight required for the "Act of Resting." The sensation at the finger-tips *should always be*, as if the substance rested upon were of the *softest, thickest velvet*,—and this, no matter how great the weight supported.*

F): It is also sometimes useful, to practise both actions of this Exercise, with one finger alone in turn doing the work of support, instead of all five fingers participating therein. In this form, however, the Exercise may be usefully combined with the simpler preparatory forms of the "Rotation" Exercises found later on.

G): We see that both these forms of this Test-Exercise enforce the *relaxation* of the "opposing" muscles (the "up" muscles) of the Hand and Fingers, during the use of the proper muscles required in playing,—the ones we should use being those by means of which we exert the Hand and Fingers downwards upon the keys. This enables us easily and directly to teach ourselves freedom, vertically, and to retain it when gained. It hardly therefore seems necessary further to urge upon the student (and artist) the necessity for unremitting Daily Practice of this Test, as well as of the following ones.

SET II.

THE "AIMING" EXERCISES.

FOR ACQUIRING ACCURACY IN "AIMING" (OR DIRECTING) THE ACT OF TOUCH.

We here have the second of the "Three Muscular Tests" already described in the two explanatory books. It should be practised at the Piano as an exercise, and should also often be used during actual Performance as a "Test" for accuracy in directing and ceasing the tone-producing impulses. It may also, with advantage, be studied away from the instrument, when such is not available—and in a slightly modified form, on a table, the knees, &c.

*The peculiarly pleasant physical sensation accompanying such heavy "Resting," when the correct muscular conditions of *complete elasticity* are fulfilled, has no doubt led to the phrase "a velvety touch"; especially since the resulting non-percussive effect upon the ear furthers the simile; it was said of Rubinstein, that he played with a "hand of iron incased in a velvet glove"! It is a good simile, and is true physically,—for in the case of velvet, we have the muscular sensation of comfort arising from the elasticity and yielding nature of its surface, while the analogous sensation during the production of sympathetic weight-touch is caused by the state of perfect elasticity which the fingers themselves should here evince; they and the fore-arm itself being here on the point of "giving-way" (or yielding) to the weight behind them. But we cannot obtain this sensation—or any benefit from the Exercise,—unless we do really leave the fingers perfectly free and elastic in all of its three *hinges*, as one might call them. Remember, all stiffness (however slight or great) is produced solely by FAILING TO LEAVE INACTIVE the raising or "*up-pulling*" muscles of the finger when we intend to use the finger downwards upon the key. In other words, we cause the "stiffness" by using the up-pulling (or raising) exertion of the finger, when we should instead only use the down-pulling (or depressing) exertion; it being the downward exertion at the finger-tip which (by its upward *reaction*) serves to support the required weight upon the key;—the downward action at the tip of the finger upon the key re-acts upwards at the knuckle *with equal force*, and hence enables us to support weight there. Vide "Act of Touch," pages 158 and 160.

PURPOSE: To secure accuracy in directing and ceasing—and hence in “aiming” the muscular act individually required for the production of each note; accuracy, that is, in directing this muscular *act* to culminate and to cease at the very instant that tone appears.* Until such accuracy in “aiming” is gained, it remains impossible for us to master either the process of natural *Staccato*, or that of true Agility; nor shall we be able accurately to give expression to our Musical-feeling. For unless we succeed in applying to the key, *while it is movable*, the energy by means of which we *intend* to produce *the tone* of each particular note,—so that it will produce *key-motion* and nothing else,—we shall make sounds *quite different* from our intention, and the effect cannot then be musical, because it has not been intelligently directed. In other words: unless we expend solely in *key-motion* the energy intended to create tone, we shall instead expend it upon the Pads under the keys, and the muscular effort *intended to produce tone* will then fail to cause the exact tone-inflection intended by us; and being unintended, the result must therefore be more or less un-musical in effect. Moreover, as the effort is thus mis-directed, this also causes the finger to be more or less wedged against the pad under the key; whence it follows, that the key cannot then *rebound*,—a rebound which is imperatively required alike for *Staccato* and for Agility. These matters have been fully explained both in the “Act of Touch” and in “First Principles”, but as such “aiming” really forms the corner-stone of all successful Technique—in the widest acceptation of that word—the student cannot too often be reminded of it.

This “Aiming Test” is therefore the most important one of all these Tests and Exercises, for it teaches us and reminds us to watch alertly *the actual process* of key-depression, both through our muscular-sense and through our ears, and it will thus help us really to obtain the musically-intended effect from each key.

THE “AIMING” EXERCISES.”

SECTION A.

FIRST AND SIMPLE FORM.

BEFORE this Exercise can be studied in its ultimate and more complex form of *Quadruple Arpeggio*—and in all the four phases of the latter form, it must first be studied in a simpler form, dealing only with a single, easily gripped chord. Moreover, one must first master the four difficulties embraced therein, each one separately. The “*Preparation Study*” necessary for this purpose, will be full explained further on in Section *F*, at the end of this *Set II*, on page 21.

*The action of the tip of the finger downwards upon the key, reacts *upwards* at the knuckle with equal force, and hence enables us to support weight there. *Vide* “Act of Touch,” pp. 158 and 160.

DESCRIPTION of the First and Simpler Form of the "Aiming Exercise":

Play an easy chord in the *third* Species of Touch, and by Arm-movement.* Listen alertly for the appearance of the sound during key-descent, so that you may cease all weight and exertion at the very moment that tone begins. If you succeed in doing this accurately, the keys will be free to *rebound*, thus producing an absolute Staccato. Allow the wrist-joint, however, to continue falling in the meantime, that is, *after* (and beyond) the moment that sound-emission has commenced. It is this falling of the wrist *in spite of the rebounding and rising key*—with its Staccato effect—which forms so admirable a *Test* whether accuracy in cessation (or "aiming") has been accomplished, or not.†

DIRECTIONS for this Simpler Form of the "Aiming Exercise":

Point I: Before beginning the Exercise, *balance* your arm, with the hand hanging loosely over the keys, but some two or three inches distant from their surface, and with three of the fingers bent, ready for an easily stretched chord—such as *C, E* and *G*. This position is shown at (*a*), Fig. 3, on next page.

To obtain the arm in its "balanced" condition, swing it slightly upwards and downwards repeatedly until you feel it is perfectly *freed*.‡

Point II: Now allow your arm to lapse easily, so that the finger tips reach the surface of the keys quite gently, and allow this lapse to continue until the wrist has descended into its usual performing level—the fingers continuing to lie on their respective keys *without as yet depressing* these. The position thus reached is shown at (*b*), Fig. 3, next page.

Point III: As soon as the wrist reaches its playing position, release the arm still further, release it indeed to the full extent you intend *for that particular sound*—fingers and hand of course coming into responsive *action*, so that the arm-weight, thus released, may take full effect upon the keys. Meanwhile, be most alert with

* Remember, that the "Third Species" of Touch here in question is produced, by releasing the whole arm sufficiently to set free the required amount of weight, and by supporting this weight neatly upon the descending keys, through the gentle but sufficient exertion of the hand and fingers. The arm must always lapse GENTLY on to the keys, but the moment these are reached, we must, to produce a *forte*, release the whole arm *fully*, and must apply this full weight to the key (during its descent) by means of the intervening hand and fingers. *Vide* "Act of Touch," Chap. XV.

† The excellence of this Test (and its necessity) lies in the fact, that even the most dull ear can decide whether an effect is truly *staccato* or not; whereas it requires an already very alert and considerably trained ear, to detect "key-bedding" (or mis-directed energy) in a sustained note. For this "key-bedding" will not be noticeable by the untrained ear, unless it happens to cause "stickiness" far beyond the usual degree, or unless the keys are rammed down so violently (by means of a stiffly-held arm and wrist) as actually to cause extreme harshness of tone. The main evil of "key-bedding" of course lies in the fact that it produces tone-quantities and qualities *different* from those intended by the executant, and that it hence proves absolutely fatal to Musical Expression.

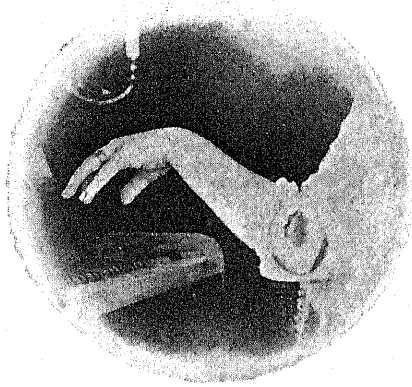
‡ This process is fully described in the Preparatory Exercises of Part II. See Set No. VII.

PART I—DAILY EXERCISES

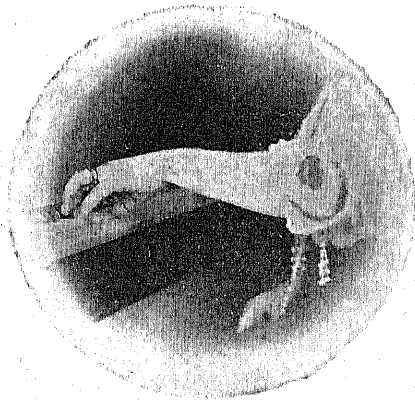
Fig. 3.

The "Aiming" Exercise.

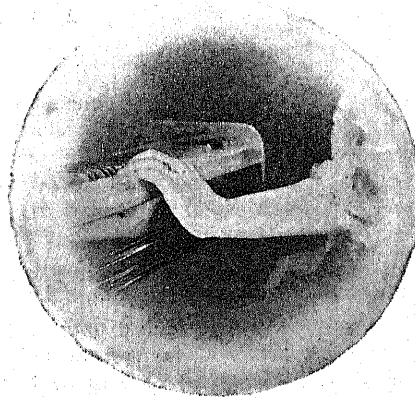
a)
"Before the drop:"



b)
"Down with the keys:"



c)
"Let go:"



your ear while the keys are descending, so that when you reach the sound *during* their descent, you may be able instantly and completely to *cease* all action of the finger and hand—at the very moment when you hear the sound *begin*. The arm and wrist are now, as it were, “left in the lurch,” owing to this sudden cessation of support at the wrist-joint.* But you must let the arm-weight *disappear* at the very instant that you have thus suddenly left it “in the lurch” at the wrist. The keys, having now no longer any weight or exertion applied to them, will also consequently instantly *rise*—thus stopping the sound through the fall of their dampers upon the strings. Meanwhile, however, you must let your wrist-joint continue its descent, and this *in spite of the rising key*; and the wrist must thus continue dropping, until it has dropped considerably below its proper level in playing,—in fact, until it is an inch or two below the level of the keyboard. This last position is shown at (c), Fig. 3.

Do not imagine, that because these various actions and positions are thus described in separated succession, that the exercise is to be thus performed as a set of three separate movements. On the contrary, there must be only *one continuous movement*, from the preliminary “balancing,” to the last and dropped position of the wrist—without any break or stop. Moreover, you must, at the moment of reaching the keys, *feel* how much weight exactly is then required to depress them, at the speed necessary for the particular tone you wish to make.†

Again, do not *begin* the production of the sound, until you have made up your mind *when exactly* the chord is to sound; for unless you do *time* each note thus, you cannot play it really with intention.‡

* That is, owing to the sudden cessation of the exertion of the hand and finger.

† To ensure your judging key-resistance correctly, always refer to Study No. I whenever necessary. *Vide* also, Note No. 2 of page 42.

‡ Remember, you are actually *un-learning to play* instead of learning to play, unless you are always careful to *intend* the Time and also the Tone of each note; and unless you are meanwhile careful to judge the resistance of the implicated keys, and do also listen for the moment their hammers reach the strings.

Chapter II, “Act of Touch,” deals more fully with these problems of musical attention.

THE "AIMING" EXERCISES.

(Continued.)

SECTION B.

THE SECOND AND PERMANENT FORM.

DESCRIPTION of the Second and Final Form:

IN this, its final form, the Exercise is to be practised in *quadruple* Arpeggio; as suggested in the Example which follows, taking both fingerings alternately. It should be practised in all of the following *four Phases*:

Phase I: *Pianissimo* Weight-touch, with rebounding key and falling Wrist (as in the simple form of the Exercise), *Staccato*.

Phase II: *Pianissimo* Transfer-touch: Continuously used weight, and *no drop* of the wrist, *Legato*.

Phase III: *Fortissimo* Weight-touch, with rebounding key, and falling wrist as in Phase I, *Staccato*.

Phase IV: *Combination* of Phases II and III: The light Resting-weight of Phase II *continuously* transferred, in conjunction with the *forte*-inducing weight of Phase III, which nevertheless *ceases* with tone-emission, precisely as in Phases I and III; again therefore, with falling wrist, although the key remains depressed, *Legato*.

The following Example gives the required form of Arpeggio:

Quadruple Arpeggio

Example No 1.

The \lrcorner signs in the above music-text show the required grouping of the fingering. The purpose of the alternative fingering is, to prevent one's becoming accustomed to commencing the fingering groups at the same moment in both hands. Still further variety may be obtained, by taking the fingering (A) with the right hand, but commencing the *left* hand with a half-group — $\frac{1}{2}$, thus reversing the left-hand fingering groups. The exercise may also begin with different inversions of the chords.

This quadruple Arpeggio should be practised in all the major and minor common chords, and with the same fingerings as given; but the same chord should never be practised too long at a time, since this is apt to induce laxity of attention.

All the Four Phases of this Exercise are equally important, and they should form the pianist's staple and permanent "first exercises" each and every day, if he wishes to commence his practice in as good "playing form" as possible.*

DIRECTIONS for the practice of the Four Phases of the "Aiming" Exercise in its permanent Form.

As to Phase I: Absolutely *pp* "Weight-touch"† with rebounding-key *Staccato*. Allow the wrist-joint to fall below key-level, during and after each key's rebound, the tone-producing weight to vanish on the appearance of the sound,—thus testing the quality of your "aim" and attention to the key, precisely as in the *first* and more simple form of this Exercise.

As to Phase II: Absolutely *pp*, the tone produced by the same slight weight as in Phase I, and hence *pp*. This weight, however, must now *not* vanish at the moment of tone-emission, but on the contrary, it must now remain *unaltered* throughout this Second Phase of the Exercise;—and you must transfer this light resting (and sounding) weight from note to note, thus producing a perfect *Legato* effect.‡

In producing *Legato*, the rules as to *horizontal* freedom and movement (of the Hand and wrist) must be strictly adhered to; and as the Exercise consists of double-notes, we must turn (or point) the hand in whichever direction the passage is at the moment travelling.§ Besides this, *rotary* freedom must always be insisted upon.

* Constant change of tonality in practising an Exercise is a great advantage, since it renders far easier of attainment that absolute CONCENTRATION OF ATTENTION (both as regards the Ear and the Muscular-sense) which is so supremely necessary. And always remember, that the whole purpose of these Exercises is, precisely to train the Ear and Muscular sense—and the prompting mind—into a state of keen alertness, and thus to lead to accuracy in muscular response, and thus again, to the achievement of musical results.

†Third Species of Touch—and weight—"initiated." *Vide* "Act of Touch," Chapter XV; "First Principles," page 5.

‡ In this second phase of the Exercise, the Weight &c. employed to produce the tone, is allowed to *continue* bearing upon the keys, unaltered in quantity, after and beyond the moment when the act of tone-production itself has been completed; for we are here not dealing with an "added-impetus" ("Act of Touch," Chapter XV; "First Principles," page 5), but with the "*pp*-transfer-touch"—that sole form of touch, in which the Act of Resting and the Act of Tone-production are one and the same thing. In this form of Touch—the "transfer" or "passing-on" Touch—the successive notes are sounded by merely transferring the weight from one set of keys to the next; and this transfer of weight must be effected by the *last used fingers* "giving way" to the next required ones,—a process analogous to that of walking, as before pointed out in "The Act of Touch." The explanation of the processes of natural *Legato* are found on pages 57, 93, 94, &c., of "First Principles," and in Chapters XI, and XV &c. of "Act of Touch."

§ *Vide* Part IV ("On Position") of "Act of Touch" and pages 22 and 107 of "First Principles."

Remember in this connection, that when the passage is moving outwards, that although you do turn the hand sufficiently outwards, you cannot make *both parts* Legato at the moment when a longer finger has to be passed over the little finger. The weight, during that moment, must be taken *by the little finger alone*, and the latter must be in the perfectly elastic condition acquired by practice of the *second* form of the Daily Exercise No. I,—the Finger-freeing Exercise. If you thus leave the little finger perfectly free, it is able to double over slightly, thus permitting you to pass a *longer* finger over it, without any break in the Legato. This also then permits you properly to *prepare* the next required two fingers over their respective notes. And without such “preparation” of each finger over, or even upon, its required note, you should never allow yourself to sound any note—for it is only by constant carefulness in such “preparation” of every note, that you can succeed in attaining clearness, as regards notes and musical sense.

As to Phase III: Like Phase No. I; but this No. III is to be practised with gradually increased tone, more and more weight being applied, until at last you can obtain a full *forte*, still of the same full, sympathetic and round quality of tone which you employed in Phase No. I, and upon which quality you must also here insist upon. All the weight and exertion employed during key-descent must vanish at the very moment of sound-emission, just as in Phase No. I, and provided this cessation is complete, the result *will* be a *perfect Staccato*.* You must listen most carefully, to make sure that this result (the perfect Staccato) does really occur, since it is this Staccato which forms the “Test,” as to whether you have “aimed” accurately, or have failed in it.†

As to Phase IV: The *combination* of Phases No. II and No. III here required, is accomplished by continuously transferring the gentle Legato “Resting” weight used in No. II (of *pp*-power only) from note to note, while nevertheless applying the full degree of energy (or weight) demanded for *ff* during each key-descent. The added energy thus used for tone-production must be “aimed” (or timed) to cease as accurately as in Phases Nos. I and III. The wrist must also be allowed

* That is, the weight of the arm and the exertion of the hand and fingers must both cease.

† Care must also be taken that the muscular conditions (those of Species III) remain the same as in Phase I of this Exercise; and this in spite of the fact that the tone-amount is to be increased until you can give a full FORTE while still insisting upon a perfectly beautiful quality, and a perfect Staccato. As the tone-producing impulse must here cease with the beginning of each sound, the same “test” must here be applied as for Phase No. I—and as for the simpler form of this Exercise first described. That is: the wrist must FALL, AFTER COMPLETION OF THE ACT OF TONE-PRODUCTION, owing to the sudden and complete cessation of all exertion on the part of the fingers and hand, accurately timed; and all weight must also vanish at that moment, owing to its being thus “left in the lurch” at the wrist.

The quality of the resulting Staccato will then either prove to you that you have succeeded in accurately “aiming” (or timing) your efforts, or it will warn you that you have failed in this, the main purpose of this Exercise.

to drop, as in those two other Phases of the Exercise, so that the tone-producing energy *may be as accurately applied* as in Staccato, although the effect is here LEGATO. The Legato is therefore here due to the continued transference of the *light* Resting-weight before mentioned, while the *forte* tone is due to a succession of vigorous but exceedingly short-lived impulses, separately delivered.

In thus accomplishing this Exercise, we are in fact producing a full Resonant Forte Tone, precisely as it should be produced—without any misdirection of energy on to the beds beneath the keys.*

THE "AIMING" EXERCISES.

(Continued.)

SECTION C.

FOR SILENT PRACTICE.

DIRECTIONS for Practice of the "Aiming" Exercise away from the Key-Board:

This Exercise may also be practised with considerable profit at a Table, or better still, upon some object a few inches high placed on the knees, which will provide a surface of about the same height as that of the keyboard. When the Exercise is thus practised, there is no question of key-descent; therefore, instead of sound being our guide *as to when to cease* the applied-energy, we must, instead, be here guided by the sensation of actual impact with the surface practised upon. But we must be careful not to allow ourselves to regard this contact *as if* it were contact with a *key-surface*; we must, on the contrary, regard this contact with a solid surface, in the light of contact with the "edge" (or beginning) of sound—or contact with the solid felt beds under the keys.†

* This drop of the wrist, when used as a "Test," should be considerable, and this proves unsightly in actual performance. During performance, this wrist-drop may, however, be gradually reduced in extent, once the sensations accompanying correctly-aimed tone are thoroughly ingrained—that is, fixed in the mind. The slightest, almost invisible movement eventually serves perfectly as a "Test" to the Artist during performance. But when this "Test" is used as an Exercise during the practice-hour, I strongly urge even the Artist to allow the full drop of the wrist to occur.

Note in this connection, that the tone-producing impulse, which here provides the FORTE, is quite a distinct act from the accompanying "Resting" which causes the LEGATO effect. The "Resting" is continuous during the exercise, but the *tone-producing impulse* must here CEASE accurately for each tone, just as accurately as in Phase No. I. The same "Test" as for Phase I must therefore also be applied in this last phase—No. IV. That is: excepting the *slight residue of continuous Weight* which causes the Legato, all exertion and weight employed to make the tone of each note, *must vanish* the very moment that you reach tone during key-descent,—so that the Wrist-joint may be *free to drop* in spite of the rebounding ascent of the implicated keys, with the associated fingers lying loosely thereon.

† If we do this, there will be little difference in TIMING, between this contact of the solid surface, and the TIMING habit acquired at the actual keyboard, and no harm will be done. But if we should allow ourselves to think of this solid contact as if it were Key-contact, then we shall be tempted to hit at the keys when we come back to the keyboard, and instead of the Exercise proving helpful to us, it may then actually lead us astray.

The contact may be made with all five finger-tips together, or we may apply only two or three, as in playing a small chord.

Not much benefit is to be derived from the practice of *Phases II and IV* away from the keyboard—unless indeed, one is compelled to be without an instrument for a lengthened period. But as an Exercise away from the keyboard, you should practise both Phases I and III—either with very little weight as in Phase I, or with the greater weight and energy as required for Phase III.

ADDITIONAL HINTS for the Study of the "Aiming" Exercises:

The most important warning is, not to "make" the wrist go down by muscular exertion, however slight. Remember, that the Arm must drop, simply because it is "left in the lurch" at the wrist; and that this "leaving in the lurch" can only be done by completely ceasing the action of both the finger and hand *sufficiently early* during key-descent. If, instead of this natural *fall* of the wrist (and arm), you allow yourself to be tempted into *putting* it down (even with the slightest of slight muscular help) you will at once quite defeat the main object of this Exercise, and you will then quite fail to derive any benefit from its practice. The temptation to depress the wrist by muscular action is very great, for it *looks so like* the real thing, hence the great need for caution in this respect, both on the part of the pupil and on that of the teacher. Here again, as everywhere else in playing, what does matter, is, not so much that the process is made to *look like* playing, but that the process really *is* that of playing, and therefore SOUNDS aright!*

You will also find, as soon as you try to increase the tone-amount beyond *pp*, that another temptation will assail you, and that if you are not careful, you will drive the whole arm down rigidly, in place of relaxing the intended *Arm-weight*. This temptation must also be firmly resisted. Remember, it is comparatively easy to give *Weight-touch*, so long as you attempt only a *pp* or a *p*; therefore, the moment you suspect the slightest tendency towards arm-force, in trying for *forte*, always go back to *pp*; and if you can succeed in producing the soft effect correctly, constantly compare the sensations accompanying its production with those of the faulty *forte*.†

To obtain Arm-releases, study Sets VI to IX of these exercises—Part II.

* *Vide* page 97 of the "Act of Touch."

† The combination of sympathetic FORTE with accurate Staccato is purposely recommended for the practice of this Exercise, since you here have to face the act of tone-production in its most difficult aspect;—the most difficult aspect, because of the muscular *contradiction* which you have to face in producing a tone requiring GRADUAL key-depression, and which must yet be ceased SUDDENLY, on account of the required Staccato. For the mere idea of sudden sound-cessation (Staccato) is likely to prompt you also into giving a SUDDEN key-depression, which last would at once destroy the intended sympathetic tone-quality. This difficulty has often prevented players from acquiring much variety in their Staccato-touches. Even amongst well-known modern Master-teachers there are some who have failed to recognize the fact that a Staccato, even in fullest *forte*, need not necessarily (because it is Staccato) be therefore of a sharp *quality* of sound!—but that it may also be given with a perfectly sympathetic (non-sudden) tone if so desired, without materially impairing its suddenness as to Duration—its Staccato character. Clearly therefore, if you succeed in mastering these two conflicting tendencies, and succeed in executing this exercise *forte* Staccato, and yet of singing character, this must then render all other forms of tone-production easier,—for you have conquered the most difficult form of it, and one which embraces in a sense the difficulties of all the others.

There is however no reason why *brilliant* touches should not also be tested in this way. As to this point a special Exercise will be found amongst the following additional ones. *Vide* Section E.

THE "AIMING" EXERCISES.

(Continued.)

SECTION D.

ADDITIONAL VARIETY OF THE "AIMING" EXERCISE.

DIRECTIONS for Extensions.

Advanced students and players will find it useful occasionally to practise this Exercise on the harmony of the Dominant 7th, in place of the common chord, and this with a variety of fingerings. Also, for the sake of practising extension, the following extended form of common-chord quadruple arpeggio may be undertaken. This extended form should, however, not be attempted until considerable facility has been gained in the previous forms of the Exercise, and it must *NEVER* be practised, if the extension between the two notes (taken simultaneously with one hand) proves in the least a strain.*

Bearing this warning in mind, the following shows the type of this "extension practice." It should be practised in all keys and inversions, and the hands should be made to start with different fingering-positions together, as suggested in the alternative fingerings indicated. A similar exercise will be found under Section "g" of the Rotation Exercises.

Ex. No 2.

The musical notation shows a quadruple arpeggio exercise in both hands. The right hand starts with a C major chord (C-E-G-B) and the left hand starts with a C major chord (C-E-G-B). The notes are played in a sequence: C, E, G, B, C, E, G, B, C, E, G, B, C, E, G, B. The right hand has fingerings 1, 2, 3, 4, 5, 3, 2, 1, 3, 2, 1, 3, 2, 1, 3, 2, 1. The left hand has fingerings 5, 4, 3, 2, 1, 3, 2, 1, 3, 2, 1, 3, 2, 1, 3, 2, 1. Below the notation, two alternative fingerings are given for the first two notes of each hand:

Or: $\begin{matrix} 2 & 1 \\ 4 & 3 \end{matrix}$ $\begin{matrix} 5 & 1 \\ 3 & 4 \end{matrix}$ etc.

Or: $\begin{matrix} 1 & 5 \\ 3 & 3 \end{matrix}$ $\begin{matrix} 2 & 1 \\ 4 & 3 \end{matrix}$ etc.

*To strain the fingers and hand into taking extreme extensions is not only dangerous, but is exceedingly likely to impair one's Technique in every respect. This, because in straining our fingers into unnatural positions, we are likely to exert *ALL* the finger-muscles—including those *opposite* in function to the required ones; and not these alone, but even the muscles which actuate the hand and arm! A muscular conflict thus arises which renders all action and movement extremely stiff and restrained, and thus tends to engender a habit which will infallibly ruin all our Technique unless nipped in the bud. When practising extensions, see to it therefore most carefully that all straining or stiffening is absolutely avoided. This form of the Exercise should be practised in all the four Phases before noted. It should also be practised quite slowly like those previous forms of the Exercise; and also, like those, it may at times be practised as a rapid arpeggio—for the sake of the practice it offers in *side-to-side* (lateral) freedom of the hand, wrist and forearm.

THE "AIMING" EXERCISES.

(Continued.)

SECTION E.

ADDITIONAL VARIETY—FOR FORWARD TOUCH.

Although the best practice of this "Aiming-Test" is obtained from the use of clinging touch (as described), nevertheless it is occasionally desirable also to test one's aiming powers while employing the "thrusting" variety of touch.*

DIRECTIONS for the "Bent-finger" form of the "Aiming" Exercise:

We have seen that the wrist will tend to drop down, when "left in the lurch" by the sudden cessation of the exertions of the hand and fingers which support it upon the keys. That is: the arm, hanging on to the fingers and hand as it does during the Third Species of Touch, cannot be prevented from *showing a slight fall at the wrist*, when thus suddenly left unsupported, although the arm is almost at once "caught up" (and supported) by its proper muscles. Now, if we bear this fact in mind, we shall realize that the converse effect must take place when we play a chord, &c., in "thrusting-touch" (instead of the clinging-touch before described) and then suddenly *leave the wrist "in the lurch"* as before. That is: instead of falling, the wrist joint will *now tend to rise* when freed from the thrusting-back action of the fingers,—this slight "give" forwards being caused by the slight forward-thrusting tendency of the elbow, which forward-thrust does not cease promptly enough to avoid showing itself as an actual slight forward movement, when thus suddenly left in the lurch by the fingers.

In this form of the Exercise, let the motion down to the keys (and with them) be that of the forearm alone; *i. e.*, a fall of the forearm while the elbow remains quiescent—without the elbow tending to hang back. Weight, in a sense, may be used, but its tendency must (in this instance) be *forward* rather than "clinging." The fingers must reach the keys in a well bent position, but they must tend to open out. And when all action and weight is stopped (at the very beginning of tone emission), the wrist-joint will then slightly *bound forwards and upwards*—a result quite different, therefore, from what happens in real weight-touch, and as previously described in the "clinging" variety of this "Aiming-exercise."†

*Remember, in this connection, that in using the "Bent-finger attitude" it is the finger which thrusts *backwards* against the Elbow, and that you must not instead give a *forward* thrust with the Elbow. The "forward" sensation is caused by the upper-arm being merely supported forwards; that is, the Elbow is prevented from falling backwards by a very slight exertion of the muscles which serve to actuate the upper-arm forwards: the exertion being no greater than will just suffice for this purpose; and it is the mere inertia of this mass, thus balanced, which, in "thrusting" touch (or "bent-finger" touch) serves to take the brunt of the finger's reaction, when this is exerted upon the key. True, in violent passages, there may also be some very slight actual forward-thrusting exertion on the part of the Upper-arm, but this exertion should always be so infinitesimal as hardly to be noticeable. *Vide*, "Act of Touch," pp. 159, 162, 165, &c., and "First Principles," pp. 13 and 14.

†This kind of action (the "forward" or "thrusting" touch) should never be practised unless in the meantime great care is exercised to preserve the Elbow in a *perfectly elastic condition*. Unless this is attended to, a most unmusically harsh effect will be produced—painful to the ear and damaging to the instrument—and to all Agility.

True, there are "methods" which do actually describe the "forward" touch here described as the *only* form of "chord attack" known! And furthermore, which seem to recommend an actual forcible *drive* forward and downward of the Elbow—with all its screamingly hideous effect, as being the proper way to obtain what they are pleased to describe as "power!" No student, with any real sense of Music, can however continue such malpractices, once he has heard how a Piano can and *should* sound;—and any "method," therefore, which advocates such forearm "driving" stands thereby condemned as fallacious. *Vide* also the warning on this point, pages 51-2.

THE "AIMING" EXERCISES.

(Continued.)

SECTION F.

THE PREPARATORY STUDY OF THE "AIMING" EXERCISES.

PREAMBLE: It was pointed out in Section *A* of these Exercises, that before even the *simple* form of the "Aiming" exercise can be successfully attempted, it is generally found necessary to lead up to this through certain *special preparatory* work. Let us now consider these special preparatory steps.

On reflection it will be seen that the correct execution of this exercise (and Performer's "Test") implies mastery in *four* distinct directions:—

- I: Ability properly to *give* the required Weight-touch.
- II: Ability to *CEASE* the required activity of the Hand and Finger at will.
- III: Ability to make the *Arm-supporting* muscles *ACT* in response to the *cessation* of the action of the Hand and Finger.
- IV: Ability to *time* this muscular effect in response to the Ear—prompted by the beginning of each sound.

Now as it is impossible to concentrate one's attention on more than one point at one moment, the best course obviously is to master each one of these difficulties separately—one at a time; hence the necessity for the following *four Stages* in learning this Exercise:—

DIRECTIONS FOR THE PRACTICE OF THE FOUR PREPARATORY STAGES OF THE "AIMING" EXERCISE.

STAGE No. I:

Learn properly to *weigh* the key down—in Third Species of Touch-formation, and in its weight-initiated form. See to it, that you do not instead push the keys down by arm-force, be it ever so slightly. The keys must be overbalanced into descent (and sound) purely by arm-weight. Do not attempt to do this loudly until quite certain of this weighing-down process.

Proceed thus:—Begin by balancing the arm, with the hand hanging loosely some two or three inches above the keyboard, and having three fingers bent ready to take, say the triad of G.— $\left. \begin{matrix} D \\ B \end{matrix} \right\} G$;—see (a) Fig. III, page 12. Now relax the arm until it gently descends, thus bringing the three finger-tips upon their intended keys. When the key-surfaces are reached allow the wrist to descend still further, until it has assumed its usual level;—see (b), Fig. III. At this moment allow the full weight (intended to be used *during key-descent*) to come into operation.*

* Do not fail in the meantime to judge Key-resistance, so that you may correctly estimate the required amount of weight.

In this *FIRST* Stage of the Exercise, *continue on the keybeds* the full weight thus used during key-descent;—which, of course, you must never do in actual Touch at the key-board, except for pianissimo,—and which is only here allowable, while learning these *first steps* in the “Aiming Exercise.”

STAGE No. II:

Proceed as in Stage I, but you must now learn accurately to *CEASE (at will)* the gentle exertion of the hand and fingers by which you were able to support the arm-weight which you relaxed upon the key during its preceding descent.

Proceed thus:—Allowing the weight you used in Stage I to continue resting on the keybeds, now first “*Test*” your wrist for freedom,—as you have learnt to do in the *first* of these Daily Exercises—the “balancing” exercise. Do this until you realize *HOW* the work of support is being done—until you can feel that the arm-weight is being supported by the fingers and hand *at the wrist-joint*, and until you can realize, that if you “let go” (or omit) this (slight) exertion, the wrist-joint will give way under the stress of the arm-weight there supported, and that it will *consequently fall*. Having realized this, *do now LET* the wrist thus drop, doing this at a definitely intended moment,—while the weight still continues to rest (through the fingers) upon the keybeds. This position of the wrist you can see by referring to (c) Fig. 3, page 12. Remember also, that this *continuance* of the weight while the wrist drops is to be done only in this preliminary stage of this Exercise.

STAGE No. III:

You must next teach your arm to re-support itself, in answer to the cessation of support at (and collapse of) the Wrist-joint, as just learnt in Stage II. Play the chord by weight, as before. *That is:*—Begin as for Stage II—weigh your chord down by arm-weight, and after first balancing the wrist, as before, count one bar, and then at the first beat of the next bar accurately *cease* the finger-and-hand exertion, as before, but instead of letting the weight remain unaffected, as in Stage II, let it now disappear; that is, let it now be caught-up in response to the commencing collapse of the wrist; which means, that the arm’s raising muscles must take charge of the arm in response to its being “left in the lurch” at the wrist—and this, owing to the carefully-timed cessation of the finger and hand’s supporting exertion. The keys being consequently released from all weight (except that of the loose-lying hand) they will now be free to jump up, and their dampers (in descending) will cause the sound to cease. See to it, that you really do cease all finger-and-hand exertion and all weight promptly, otherwise the keys cannot rise.

STAGE No. IV:

While continuing to play a chord repeatedly by weight-touch, as before, you must now finally, learn to *time* this cessation of all action and weight (which you learnt in Stage III) to occur at the very moment that sound begins. This you can only do by making

your muscles respond instantly to the prompting of your ear, which must, therefore, be on the alert for the beginning of each sound.

That is:—Having taught the arm-muscles (in Stage III) to respond to the feeling of collapse at the wrist, all that remains to be done in this last Stage, is, to teach the hand and fingers to *cease their work* at the very moment that sound is *heard* to begin.

Here it is essential that you teach your ear to be keenly alert for the beginning of sound, and that the muscles are taught to respond promptly,—the muscles of the finger and hand being taught to *cease work*, and the arm-supporting muscles taught to *act* in response to the ear, so that by this means you may learn to apply the muscular Act which is intended to provoke sound EARLY ENOUGH DURING KEY DESCENT—and that is the most important point of all.

When you have succeeded in thus executing this Exercise or “Test,” you have in fact succeeded in performing a chord, *accurately* “aimed” (or directed) as to the required effort; and the actual sound thus obtained will, therefore, in this case be precisely the one you had *intended* to produce. And unless you can always be sure of this, you cannot play with any musical certainty. Hence the supreme importance of always carefully practising this “aiming” Test in some form or other every day, before beginning your Practice of Studies and Pieces; for you can thus “start fair”—having brought your mind properly on *Key-attention*,—both your muscular-sense and aural-sense being now keenly applied to each note.

Do not fail to notice that each of the succeeding “Stages” of this preparatory Exercise includes the preceding stage, and it is only in the *last* of these stages that we actually carry out the exercise in its intended and final form of “Test”, as previously described, page 11, etc.

SET III.

THE "THROW-OFF" EXERCISES.

FOR THE ELIMINATION OF ARM-FORCE—THE ISOLATION OF FINGER AND HAND DOWN-EXERTIONS FROM THOSE OF THE ARM.

This forms the *third* of the three chief "muscular tests." It should be practised at the Piano as an exercise and a means of study, and should also be applied during performance as a "Test." It is essentially a key-board exercise. Some benefit may, however, also be derived from its practice in a modified form, away from the keyboard, when such is not available.

PURPOSE: To teach and remind us how to isolate the required down-exertions of the finger and hand from the undesirable down-exertions of the arm,—so as to enable us to use hand and fingers freely against the keys during their depression, and quite violently if necessary, but without any of the objectionable down-exertions of arm at the wrist.*

DESCRIPTION of the "Arm-elimination" Exercise :

This Exercise takes two distinct forms, both equally important. Take a little run or arpeggio at good speed, and at the end of this allow the arm, hand and fingers, as it were, to bounce off the keyboard some inches into the air. Do this either (1) with a "throw-off" or "kick-off" action, producing quite a sharp *forte* accent; or (2) with a gentle "floating-off" action, incapable of providing more than a gentle *pp*. The last note is in both cases to be perfectly *Staccato*. It is by listening to the purity of this *Staccato* that you can tell (and can thus "test" yourself) whether you have "eliminated" the arm or not; *i.e.*,

*Down-pressure of the arm (of any appreciable force) instantly and inevitably ruins Technique of every kind. It is peculiarly fatal to the attainment of all true Ease and Agility, whether of the finger, or of the hand—so-called "wrist action." Down-exertion of the arm, used in place of the required down-exertions of the finger and hand, at once produces "stickiness" in its most aggravated form. But it is unfortunately the most natural thing to do, to give such down pressure of the arm!

In everyday life, if we wish to move something or other forcibly away from us and downwards, we naturally at once apply all the down-arm muscles as well as those of the back; — while it is precisely such action which proves fatal in Piano playing. Hence the necessity of Daily Practice and Daily Reminder in this respect,—so that *Arm-force* may be eliminated as far as possible.

In order to realize the nature of the *incorrect* action, make the following experiments. Place your wrist-joint on the edge of the key-board, and force it downwards, and continue this pressure until you realize how stiff and rigid the whole arm has become—the stiffness is particularly noticeable across the elbow. Also, if you gently grip the Upper-arm close to the elbow, on its under-side, you will find that this wrong exertion makes the muscles there (the "triceps" muscle) swell out. On releasing all this strain, this muscle subsides again, and the fore-arm is then found to be lightly resting on the wrist and keys—a passive condition in which it is sometimes required, when we wish to "thicken" the tone of quick and loud "*Second Species*" passages. By repeating this experiment several times, you can easily learn to discern and to avoid the rigid kind of "down-arm" force which must be eliminated.

whether you have sounded this *final note* (and that alone is the "test" note) while only applying hand and finger-action to the keys, or whether you have permitted yourself to spoil the effect by a push downwards of the arm itself.

The *two forms* of the Exercise consist in practising respectively the *forte* and *pianissimo* "bounce-off" above described: *firstly*, with the *WHOLE* arm either kicked off or floated off, and *secondly*, with the *FOREARM* alone thus rebounding from the keyboard, either by "kick-off" or "float-off."

DURING PERFORMANCE, always have recourse to this "test" whenever you suspect the least tendency towards down-pushing in your playing. In light passages, it is the forearm alone which should rise from the keys, whereas, for more ponderous passages, you must allow the *whole* arm thus to rebound, or float off, as the case may be.

Obviously, it is only at the end of passages or runs (ending on a detached note) that you can, during actual performance, apply this test.*

DIRECTIONS for the Execution of the "Arm-elimination" Exercise:

The Directions given in the "Act of Touch" seem so clear that it is well to quote them here†:—

"Play a short run or arpeggio, and then as it were *kick* against the key-bed, doing this with the *LAST finger used*—either the little finger, or the thumb. The arm is meanwhile to float with such ex-ceeding lightness over the keyboard, that this "kick-off" will suffice to *start* the arm in an upward direction;‡ and the arm being thus started, it must then automatically "take the hint" and continue its "journey, assisted herein by its own raising muscles; the arm and hand thus rising together a considerable distance off the keys. Since the *initiative* of this "kick-off" has been given by the finger (or by the hand and finger), it will—and should—seem to the performer, as if this rising of the arm were entirely "due to the impact against the keys. § This test should be made both in *ff* and in *pp*. In the *first* case, "the end-note receives a forcible accent, and the arm seems forcibly driven-up into the air. In the *second* "case, no accent need result, and the arm then seems to float upward. ||

*It is astonishing, how greatly a whole performance can be benefited, even although this test is only applied but occasionally during it. The reason is: the moment we succeed in really correctly executing this test, be it in Exercise form or during performance,—the moment we *succeed* in playing that single end-note correctly, this single action, correctly executed, is quite sufficient keenly to remind us of the *sensation* or *feeling* of springiness which should accompany all light runs, &c. It is quite easy then to insist on this sensation *throughout the whole course* of subsequent passages, thus eliminating arm-force all the time. The fact is, we can control our muscles only by recalling the *sensations* accompanying their use. Hence, having obtained *one note* correctly, we can always play it correctly in future, provided we manage to fix these accompanying sensations indelibly on our mind. The absolute necessity for constantly attending to this matter is driven home to us, when we realize that it is only by learning the right sensations, and recalling these subsequently, that we can play at all, or do anything else requiring muscular nicety!

† *Vide*, "Act of Touch," page 210.

‡ A "kick-off" or jumping action, delivered by the finger alone, or by the finger and hand in combination, for the more forcible form of the Test.

§ Caution:—There must not be the slightest sensation of pulling or wrenching the arm upwards. The raising act should *seem* as if it were a passive rebound from the keyboard.

|| Both forms of this test,—the *pp* and the *ff*—should moreover be practised in two ways: (a), with the whole arm rising, and (b), with the forearm alone rising.

"In any case, the test is not properly fulfilled, unless the *cessation* of force is so accurately timed (at "the crucial moment) as to permit the key actually to *REBOUND* from its bed,—thus forming the effect "of absolute *staccatissimo*. No "willed" raising of the arm will at all serve the purpose—although "to the onlooker it may *SEEM* the same thing, and is for this reason so often faultily imitated from the "doings of a public performer."

The following is the form of Arpeggio best adapted for the study of the "Arm-elimination Exercise":—

Ex. No 3.

Rubato: (riten. accel.) (rit. accel.)

etc.

etc.

In this Exercise, all the notes before the final and accented note are to be employed to gain velocity, so that the arm will easily rise at the end of the passage—it is like taking a preliminary run before taking a jump. These preliminary notes, even in the *forte* (or "kick-off" form of the Exercise) must therefore always be played lightly and perfectly springily.*

*This springiness must be carefully attended to—the keys (and fingers) must seem to be resilient ("bouncy") like well pumped-up bicycle tyres.

In the *forte* form, it is only the *last note* which is to be played quite forte, with a sharp brilliant form of touch, towards which this same "kick-off" greatly helps one. In the "float-off" form (*pp*), the preliminary notes should be played more in the form of "Passing-on" Weight touch;* and in this form of the exercise, there is hardly any noticeable accent on the last note—the slightest "flick" against the keybeds suffices to start the arm in its upward journey.

To sum up: The above Exercise is to be practised in four varieties; the "kick-off" and "float-off," accompanied by a movement of the whole arm, and again with the forearm alone moving. Thus:

- | | | |
|-------------------------------------|---|--------------------------------------|
| (1) Whole arm rising | } | (a) "Kick-off" <i>f</i> . |
| | { | (b) "Float-off" <i>p</i> . |
| (2) Forearm only rising † | } | (a) "Kick-off" <i>f</i> . |
| | { | (b) "Float-off" <i>p</i> . |

Fig. 4 shows the position taken during the execution of this Exercise. At *a*, the left hand is taking the preliminary run down the keyboard. At *b*, it has risen, *forearm* alone; and at *c* the *whole* arm has risen instead. See next page.

*See "Act of Touch," *pp* 186, S. 28; 187; 219, Note; and 241, § 7, &c.

† It is interesting to note, that the unconscious habit of letting either the *whole* arm or the *fore* arm alone rise at the ends of passages, has such a strong influence on the kind of Technique chosen, that any strong bias, thus shown, often colours the entire *readings* of an artist, helping greatly to give him his particular individuality of execution. It is easy to call cases to mind. The difference is not so much the actual mere difference in movement—of whole arm or forearm; but because this difference in movement implies the two totally different forms of Technique we know as "clinging" and "thrusting" touches, respectively.

Fig. 4.



a)

Preliminary to the "Throw-up."



b)

Fore-arm thrown-up.



c)

Whole-arm thrown-up.

THE PRELIMINARY STUDY OF ARM-ELIMINATION EXERCISES.

Before this Exercise is practised in a continuous sequence of runs or arpeggi, as just described, it is usually found necessary to practise it in an easier and somewhat different form. The student usually finds it difficult to leave his arm "easy," either during the preliminary run or during the final kick-off of the exercise—and this ease is, of course, the very point aimed at in this Exercise. Therefore, instead of at once attempting the Exercise in its final form (as first described), the student should take only one arpeggio (or run) at a time. And instead of merely letting the arm rise, he should not only let it be thrown up (as required in the exercise) but should then *let it fall right down on to his knees*—with arm, hand and fingers perfectly lax.*

This *preliminary* Exercise only differs from the *permanent* form of it in this last respect, viz., that the hand and arm are to be allowed to fall upon the knees, instead of falling back upon the keyboard. The first part of the Exercise remains the same; hence the following Directions: Take a short run or arpeggio, and at the end of it, by means of the last-used finger† give a forcible little action against the key and its bed, quite short-lived—so as to produce *Staccatissimo*, and either *f* or *p*, and so that the arm will be prompted to rise by the *rebounding of the key itself*. Allow either the forearm or the whole arm to rise in consequence of this kick against the key-beds, and just as shown in Fig. 4. Instead of allowing the up-thrown arm to remain up, in this case let it at once fall limply (of its own weight) on to your knees, and let it remain lying there a few moments—sufficiently long to give you the opportunity of recognizing the sensation of release thus obtained.‡

In practising this preliminary form of the Exercise, with its complete fall of the hand and arm on to your knees, be most careful that the ascent of the arm is prompted by the rebounding key, and that it *at once falls again*, of its own weight, unassisted muscularly—the descent forming an unbroken continuation of the ascent. Be quite sure of these two points: (1), insist on your not putting the arm down muscularly—the temptation is great; and (2), insist on the arm rising in response to the key's rebound,—the arm beginning to rise owing to the rebound obtained from the key-beds, and then continuing to rise (a foot or more) owing to its raising muscles having *automatically* come into action. You must not "will" the arm to rise; you must insist on its obeying the sensation derived from the

*It will be noticed, that in such lax condition, the hand itself tends to turn over (palm upwards)—and this is as it should be, for this position leaves the bones of the fore-arm in their "natural"—(muscularly unaffected) state.

† In conjunction with hand-exertion, when required.

‡ The full release of the arm thus obtained, forms an excellent way of attaining *Weight-touch*; — after such release, successfully executed, the *Weight* difficulty is often found to be solved.

rebounding key—the result being, that it will *seem* to you as if the kick (or jump) against the key-beds really threw your arm up into the air. Do not be satisfied until you can fulfil both these conditions perfectly. And until you have found or re-found the knack of this, do not begin your daily practice of pieces and studies.

You will also find, before this Exercise can be properly mastered, that another point must also be mastered in conjunction with it; and that is, the *rotary* freedom of the Fore-arm. And this, because the accent required for the last note (given either by the little finger or thumb) cannot be given freely unless these laws of rotary adjustment (*i. e.*, for *rotary freedom*) are implicitly obeyed. Wherefore some practice of the *next Set of Exercises*, No. IV, must be undertaken along with the present ones; and this necessity for rotary freedom must always be borne in mind, when giving the accent required for the last note of the present “throw-off” Exercises.

Beginners, and those with small hands, will at first find it difficult to practise the Exercise in the given form of Arpeggio, owing to the extensions involved. Small hands should therefore at first take the Exercise on a five-finger basis, as shown in the next Example—No. 4. Even this, however, should at first be practised with each hand alone, because it will then be easier to give proper attention to the muscular requirements previously explained; and also because it is less difficult to acquire mastery over the “Rotation” difficulties, when only one hand at a time is dealt with. This easier form of the Exercise should, therefore, be learnt in the stages, as shown—Example 4a, 4b, and 4c.*

Ex. No 4a

*The rotary adjustments of the fore-arm (and hand), are always required in the *opposite* direction at the same moment when a passage is played in *similar motion* by the two hands. This conflict between the states of the two hands (compared to each other) is naturally apt to lead to a “stiffening” of both hands—unless the two hands have been rendered independent of one another in this respect. Hence, it is best to take the exercise by *contrary* motion when the hands are first used together in this Exercise, since the rotary changes are then required in the same direction, in both hands. The steps *A*, *B* and *C*, in Examples 4 and 5 are designed *gradually* to overcome this difficulty.

At first practise separately the left hand and right hand of the above Examples, Nos. 44. Practise it in all keys—C major taken first of course.

Ex NO 4b

It is of no use practising the two parts separately in this last case, since it is the very *contrariness* of the Rotation-adjustment which here forms the chief element for practice.

Ex. No 4c

After the five-finger form has thus been mastered (Example No. 4, *a, b, c*), the student should take groups of arpeggi, as shown in Example 5, *a, b* and *c*. After that, he should be ready for the permanent form of the Exercise, as previously given—Example No. 3, page 26; and this last form of it should then be adopted as “Daily Practice”—as should be the first two “Tests” already discussed—alike by artist and student.

Ex No 5a

This last may also be practised in closer positions :—

Ex. No 5^b

Also again, with the R. H. only one position higher than the left hand, as in "Note" 5a.

Ex. No 5^c

Also, with R. H., beginning on G sharp, etc.

AN ADDITIONAL FORM of this exercise is given in *Part III*, Set No. XIII—for Agility testing. This will be found to include with the "throwing-off" principle, also that of repeated notes—a principle which forms so admirable a "test" for absence of "key-bedding" in quick passages.* Advanced students and players will derive great benefit from this, and it may be substituted by them for the simpler forms here dealt with; but this substitution should not be made until Example 3 has thoroughly served its purpose.

For practice away from the instrument this Exercise is not very suitable. But where no instrument is available for the time, Example No. 4 may be practised with some advantage on a Table, &c.† Instead of attempting to practise this Exercise away from the piano, it is however far better to substitute the *two sets of Exercises* given later on (Form B of Set X) for freeing the finger-action, and Form B of Set XI for freeing the hand-action. These Exercises are intended for practice away from the instrument, and they indeed really form the proper *preparation* for the Exercise we have just discussed. And although they

*"Key-bedding" is a term denoting the application of force to the pads under the keys—the application of force too late in key-descent, too late to produce key-movement and tone.

†A dumb or semi-dumb keyboard is in such rare case better than none at all; provided not too much time is given to it, and provided the player constantly tries to remember the *SENSATIONS* of touch occurring with a real keyboard, with its requirement of *increase* of speed during the short-lived descent of each key.

need not necessarily form a part of the "Daily Preparatory Study" of the advanced player, or artist, yet even such will derive great benefit from their occasional practice.

The student, however, should be urged to adopt these two sets of Exercises (Sets X and XI) for a lengthened period as "Daily Practice"—until, indeed, he has become an adept.

SET IV.

ROTATION EXERCISES.

FOR THE STUDY OF ROTARY FREEDOM OF THE FORE-ARM, WRIST AND HAND.

PURPOSE OF THE ROTATION EXERCISES: To secure equality of power for all the fingers—through the proper distribution of weight and exertion by means of the alternate relaxation and exertion of the rotation-muscles of the Fore-arm; and thus to secure not only *evenness* of Touch, but also the option of making notes prominent at will, either at the thumb-side of the hand, or at its little-finger side. To secure also, evenness in the "Resting" with all its attendant advantages.*

*The intervention of the "Rotation-principle" is *not* noticeable when the hand is supported upon the keys by fingers at *both sides* of the hand—the little finger side as well as the thumb side—both the sets of muscles that produce rotation (*i.e.*, twisting) of the fore-arm in this case almost equally passive, except for the unnoticeable, but very slight rotary exertion towards the thumb, which enables us to hold our hands level and not tilted towards the little finger. But the case is different, when fingers at *one side only* of the hand are required. In this last case, manifestly the only way to *prevent* the hand from falling over (or tilting down) at the *other* side—the side with no finger on the keyboard, is to give a gentle *rotary* tilting (or twisting) exertion of the arm *downwards* in the direction of the fingers used upon the keys, and therefore *upwards* at the side of the hand which has no support upon the keys. Moreover, such rotary exertion of the fore-arm does not necessarily lead to any actual visible twisting or tilting of the fore-arm and hand;—on the contrary, the fore-arm's rotary exertion may, if desired, be only just sufficient to prevent the hand from *dropping* at the side which is *not* supported by the fingers upon the keys. In crisp, brilliant touches, however, there may be a decided rotary *exertion downwards* to help those fingers which *are* engaged in sounding notes—an exertion which must of course cease at the very moment that sound begins.

It should also be noticed, when we set free *upper arm* weight in "Third Species" (for Singing-touch, &c.) that *this can only be brought to bear upon the keys at one or other* side of the hand, by giving this same rotary-exertion of the fore-arm in the required direction. True, the sensation of releasing (upper-arm) weight will be (or should be) the only noticeable one—nevertheless, this *weight* can only be *conveyed* to the required side of the hand by this same slight *rotary* exertion of the fore-arm. These changes in the state of the fore-arm, rotarily, apply equally therefore in Singing-touches and in Passage-touches; and these changes must constantly correspond to the side of the hand where a finger has to act at the moment—whether thumb-side or little-finger side of the hand;—a muscular "adjustment" of the fore-arm which must therefore accurately balance each particular finger's exertion against the keys. There is indeed hardly a passage of any kind which does not greatly depend upon the accuracy of this co-operation; unless it is during an absolutely soft "First Species" Passage, when there is but little *change* from note to note. Hence the enormous importance of striving to acquire and to maintain accuracy in this muscular partnership between finger and fore-arm rotarily.

The so-called "weakness" of the fifth and fourth fingers for instance, arises mainly from ignorance of the constant application of this law of Rotation;—for if we hold the fore-arm, rotarily, in the least degree stiffly, or exert it wrongly—and rotate (or hold it *away*) from the required fingers, those fingers will inevitably suffer, often indeed to the extent of extinction, thus causing them to appear perfectly helpless! The beginner, for this reason, always seems to have "weak" 4th and 5th fingers. With really fully relaxed forearm rotation-muscles the thumb would be *turned upwards*. To enable you to roll the hand over, so that the thumb may be able to reach the keyboard, you must give a slight rotary twist to the forearm; this slight exertion the beginner then prolongs, and thus renders his little finger, etc., helpless. Besides these constant adjustments, which for the most part are quite invisible,—excepting in so far that they suggest freedom to the eye when they are properly provided, there also occur cases in which this adjustment of the fore-arm's rotary action and release may with advantage be allowed to show itself in the form of an actual tilting of the hand. This was termed "Seitenschlag" ("Side-stroke") by the Germans, and it implies a rotary movement of the hand (and forearm), in place of the usual down-movements of either the finger, hand or arm. *Vide* Chapter XVII, of the "Act of Touch," and page 15, &c, of "First Principles." *Vide* also Note, page 42 of this present work.

GENERAL DESCRIPTION of the Rotation Exercises:

Two distinct kinds of Exercises are here given for practice in the Rotation-principle. The first kind is for practice apart from the keyboard, while the second kind is for practice at the instrument. Each kind, moreover, is divided into practice for the Thumb-side of the hand, and practice for the Little-finger side of the hand, respectively. And the keyboard exercises subdivide still further into exercises: (1) for producing the sounds mainly by *release* rotarily, and (2) for producing it purely by Exertion, rotarily.

SECTION A of the ROTATION EXERCISES.**SILENT EXERCISES FOR PRACTICE APART FROM THE KEYBOARD.**

These *silent* exercises take two forms: The *first* form is for the purpose of gaining rotary freedom towards the little finger-side of the hand, and teaching one to give alternately the required rotary-exertion towards the thumb, and to cease this. The *second* form is for rotary freedom towards the thumb—and, therefore, takes the form of alternate rotary exertion towards the little-finger and its cessation.

DESCRIPTION of Form I of the SILENT Exercises for Rotation—For the practice of Rotary Exertion toward the thumb and its cessation:

- 1): Rest the hand, supported by the thumb, on the edge of a table, &c., as at (a) Fig. 5. Place the hand in its usual level position, as at the Keyboard—or better still, tilt it up considerably at its little finger-side.
- 2): After balancing the hand and arm in this position for a few moments,
- 3): Allow the little finger side of the hand to drop (or tilt) down without moving the Elbow itself; see Fig. 5, at (b).
- 4): Now roll or tilt the fore-arm, hand and wrist back again towards the thumb (which has continued to support the hand) and thus resume the first position, as at (a), Fig. 5.

See next page for Fig. 5.

Fig. 5.



a)

The Hand, after being raised by the upward-rolling exertion of the Fore-arm.



b)

The hand in its dropped condition, hanging from its thumb—owing to the *release* of the Fore-arm, rotarily, towards little finger.

FURTHER DIRECTIONS:

As regards Step I:—Realize, if you let your hand rest (with perhaps a little arm-weight) on the edge of the table, supported thereon by the thumb, that the *other* side of the hand will inevitably tilt (or drop) down at that side (the little-finger side), unless you provide a slight but sufficient rotary (or twisting) exertion of the forearm *upwards* at that little-finger side; in other words, a twisting exertion of the Forearm, which will tend to roll the hand over *towards the thumb*, and which will, therefore, tend to raise the little-finger-side of the hand.

As regards Step II:—This rotary “balancing” (or weighing) is to enable you to make sure (as in Test No. 1) that you are not in the least stiffening your hand and arm rotarily, in trying to maintain the required positions.

As regards Step III:—The tilt or drop, here required, should result solely from your now suddenly *omitting* the slight exertion of the forearm, which held the little-finger side of your hand *up* in Steps I and II. You must take great care not to move the hand down *muscularly*, in trying to tilt it as required; it must be left to *roll over*, apparently by its own weight. There is no difficulty in this, if you carefully time the moment of cessation, and see to it, that this cessation of the forearm’s *upholding* action is complete, and not merely partial.

As these “Rotation” difficulties have been the ones least understood of all the problems of Technique, it is as well to give the following *alternative directions* for this part of the Exercise; as these matters may thus become clearer:—

ALTERNATIVE DIRECTIONS:

Step A:—Starting with the hand hanging by its thumb from a Table, ledge, or other projection, *raise* the little finger side of the hand by MEANS of a rotary-*exertion* of the forearm *towards* the thumb side of the hand, thus supporting the little finger of the hand in the air, while the other side of the hand is supported on the table by the thumb;—*Vide a*, Fig. 5.

Step B:—Support the hand thus for a few moments in a somewhat highly tilted-up position, and balance it, as a test for freedom.

Step C:—Now time this rotary up-holding exertion of the forearm *to cease* suddenly, so that the little-finger side of the hand, before held up by this exertion, is now free to drop—while the opposite side of the hand remains hanging on to the table by its thumb;—*Vide b*, Fig. 5.

DESCRIPTION of Form II of the SILENT Exercises for Rotation—For the practice of Rotary Exertion towards the thumb and its cessation:

This second form of the silent exercise is similar to the last, but with this difference, that the little finger must now support the hand on the Table, &c., in place of the thumb.

- 1): Let the little finger now support the hand upon the table, as at (*a*) Fig. 6.
- 2): As before, balance the hand and arm thus, and then—
- 3): Allow the hand to roll over (or tilt) towards the thumb, as at (*b*), Fig. 6.
- 4): Now, roll the hand back to its first position, the thumb-side well raised, by means of the twisting or rotary exertion in question.

Fig. 6.



a)

The hand, held up at its thumb side, by rotary exertion of fore-arm upwards—towards the little finger.



b)

The hand, hanging from the little finger, and dropped, owing to the cessation (or omission) of the fore-arm's rotary exertion.

FURTHER DIRECTIONS: As this form of the Exercise is precisely the reverse of *Form I*, the same remarks apply, excepting of course that we now deal with the forearm's exertion in twisting *upwards* at the thumb-side, and downwards towards the little-finger side of the hand, instead of the reverse as in *Form I*.

The following alternative wording of the Directions may, however, prove useful:—

Step a:—Start with the hand hanging by its little finger from a ledge, at at *b*, Fig. 6; and then *RAISE* the thumb-side of the hand, by means of a rotary exertion of the forearm, downwards and *towards* the little finger-side of the hand, until the thumb is highly tilted-up, as at *a*, Fig 6.

Step b:—Balance the hand and forearm—testing for freedom; and then —

Step c:—Suddenly *omit* this rotary exertion of the forearm—which prevents the thumb side of the hand from rolling over; and the exertion being omitted, the hand will then tilt down,—thus resuming the position started from,—Fig. 6, at *b*.

ADDITIONAL HINTS on the practice of these Silent Rotation Exercises:

a:—Notice, that forearm-rotation occurs from the elbow, and that the forearm (and the hand with it) can be twisted or turned almost like a wheel on its axis, thus bringing the palm of the hand either upwards or downwards,—the possible movement being, however, limited to little more than half a complete revolution of the hand.

When the hand hangs suspended by one of its extreme fingers, the palm and back of the hand are almost brought into a perpendicular position—in place of the horizontal one employed at the keyboard; and the knuckles must, therefore, then be turned *upwards*, to bring the hand back to its ordinary level position; or into a position, with the 5th finger knuckle rather higher than usual, as will be found advantageous in this Exercise. Remember also, that the main feature of the Exercise is, to acquire the knack of omitting this upholding exertion, and to acquire promptness and completeness in this omission.*

b:—It is best to practise with but little weight,—the two different degrees of weight employed for the two forms of the "*Resting*" do very well. † Occasionally, lapses of the whole arm may be practised; but in this case, the full weight should be let go only at the moment of descent—as in "*Third Species*" of Touch. In all other cases, the weight employed should remain *unvaried* during the exercise. This one can test for oneself, by using one's *other* hand as the ledge practised upon.

c:—All the fingers, in turn, may also be used as the pivot upon which to practise the Rotation-lapse and exertion; the extreme fingers (the thumb and little finger) are, however, the most instructive to work with.

d:—Instead of practising with the "*flat*" finger as shown, it is also often useful to employ the fully "*bent*" position of the fingers; for the rotation-adjustments are required just as much during brilliant playing as during singing passages.

e:—In executing this gymnastic exercise, it will *seem* AS IF IT WERE THE LITTLE FINGER (OR THUMB) that provoked the rotation *towards* itself. And although this is indeed *how it should feel*; nevertheless, it is the rotary change in the state of the forearm which really causes the effect.

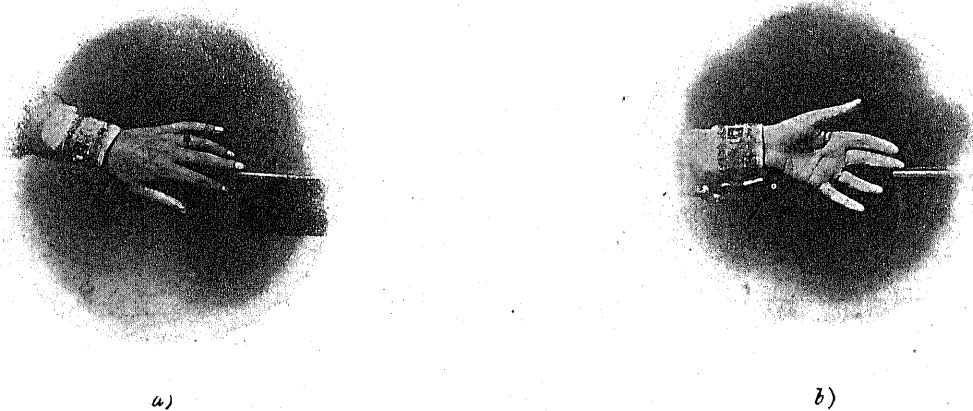
*In turning the hand over towards the thumb, strictly speaking it is not a *complete relaxation* towards that side of the hand. For we have actually to make a slight rotary *exertion* towards the thumb, to bring the knuckles of the hand *upwards*. But the exertion required is so exceedingly slight, as indeed to be imperceptible; and anyway it must be accompanied by the fullest possible relaxation of the *opposite* set of muscles. In supporting the hand and arm upon the little finger, we shall however find, that the arm and hand are quite ready to *topple over* towards the thumb of their own weight, provided we succeed in *omitting* the up-holding rotary exertion.

† Either the weight only of the loose-lying hand, as in *Staccato*, or with a slight measure of Whole-arm weight, as in "*Legato-resting*."

Subsidiary Form of this study:

This extra form of the exercise sums up, as it were, all the rotation *movements*, and it may, therefore, in a measure, supplant the forms just given, when sufficient familiarity with the rotation-principle has been gained through them. It consists simply in *freely* rolling the forearm round as far as it will go, in each direction, while resting upon some kind of ledge (with each finger in turn), as shown in Fig. 7, where the rotation is shown upon the middle-finger as pivot. This exercise is hence partially active, and partially passive. The wrist-joint should not alter its level in executing this manœuvre; it should merely rotate partially, like the axle of a wheel. To ensure **NO ROTATION OF THE UPPER ARM** during the practice of such Forearm-rotation, it is often a good plan to hold the elbow *lightly* against the side of the body. This also applies to the practice of *all* the foregoing Rotation-exercises.

Fig. 7.



Subsidiary form of Rotation Exercise.

This form of silent Rotation-exercise (Fig. 7) must be practised both with "flat" and "bent" finger. And the continuous Resting implied, may with advantage be here varied from that of the mere weight of the hand, to *THAT OF THE WHOLE ARM*.

Extension Exercise, in conjunction with Silent Rotation Exercise:—This silent exercise can be formed into an admirable *Extension Exercise*, if, during its practice, we allow the finger to *give way* laterally—in each direction in turn; the finger-tip, as it were remaining behind, when the forearm rotates upon it—like a top toppling over. Each finger, in turn, should be thus practised, and this, especially in the *bent* finger attitude.

In this form, of *combined extension and rotation*, the exercise has a splendid bracing-up effect upon the fingers, when they happen to be "out of practice"; and its permanent adoption is, therefore, warmly commended.

**SECTION B of the ROTARY EXERCISES:
FOR PRACTICE AT THE PIANOFORTE.**

DESCRIPTION: Play a broken octave scale, accenting all the *outer* notes when the passage travels in the direction *away* from the body; and accenting all the *inner* notes when the passage travels towards the body. These accents are to be given by means of the Rotary process; and they are to be given (1) purely by rotary exertion, and (2) by weight-lapse in conjunction with it—as required in brilliant passages und in *cantabile* passages respectively. The hands should at first be practised separately, but afterwards together and by contrary motion; and lastly, the exercise should be practised in similar motion, which is its permanent form for “Daily Practice.”*

The following Examples (Nos. 6, 7, and 8) show the forms taken:

Ex. No 6.
Allegro.

1.)

2.)

*Vide Note as to the difficulty of passages by similar motion on page 30, referring to “Set III” Exercises.

Ex. No 7

Musical score for Exercise No. 7. It consists of two staves, treble and bass clef. The key signature has two sharps (F# and C#). The piece is divided into two measures. The first measure starts with a forte (f) dynamic in the treble and piano (p) in the bass. The second measure starts with piano (p) in the treble and forte (f) in the bass. Both hands play a series of eighth notes with accents, alternating between the two hands in a rotation exercise. The notes are grouped by slurs and have dynamic markings.

Ex. No 8.

Musical score for Exercise No. 8. It consists of two staves, treble and bass clef. The key signature has two sharps (F# and C#). The piece is divided into two measures. The first measure starts with piano (pp) in the treble and forte (f) in the bass. The second measure starts with forte (f) in the treble and piano (pp) in the bass. Both hands play a series of eighth notes with accents, alternating between the two hands in a rotation exercise. The notes are grouped by slurs and have dynamic markings.

The hands, in this last Ex., may also be taken a tenth apart, or better still, only one octave apart.

In all these last Examples, play the accented notes *f*, and the unaccented notes *p*.

Practice these examples at first on the white keys only—in C major, afterwards in all the major and minor keys, and also as a chromatic scale.

DIRECTIONS: You must remain in contact with the keyboard from the first note until the last note of each passage; *i. e.*, the “Resting” must remain unbroken, and this, in spite of the *Staccati* given for each alternate note. The last note of the passage should take the form either of the “kick-off” or “float-off” described under Set No. III. Afterwards the passage may also be practised perfectly *legato*, provided you have first mastered this process of accentuation by rotation-adjustment. See Exs. 6 to 8.

Remember the directions given for the practice of the distinction between *active* Rotation and *passive* Rotation in the “General Directions” for this exercise, and in the Note on pp. 34-5, since the same rules also apply here. And be sure, therefore, to practise this form of the Exercise not only with the various “Passage-touches”—1st Species, 2nd Species, &c., but also with *singing touch* for the emphasized notes; and in this last-named case

sustain the notes thus emphasized, instead of playing them Staccato as in the examples shown.*

An actual rotary *movement*, although unnecessary, is quite allowable in this Exercise, and is, in fact, advantageous sometimes, to insure the acquisition of freedom.

It is best not to let either the thumb or little finger *quit the key-surfaces*, when these fingers are engaged in playing the *unaccented* notes, but it is helpful to play the accented notes from a little distance, always provided that care is taken not to hit the keys.†

Before you attempt to take this Exercise up to time, practise it quite slowly, preparing each "Rotation-touch" note in the following manner:—

SECTION C of the ROTATION EXERCISES.

PREPARATORY PRACTICE OF THE LAST EXERCISE.

Description and Directions for the LEFT hand:

Begin by testing for freedom, rotarily, thus: While resting lightly upon the first note of the broken octave-scale passage by means of *thumb*, gently *balance* the hand and arm *rotarily*, the little finger being thereby gently raised and lowered towards its note—the octave, and allowed to touch that key, but without sounding it. Let that side of the hand move several inches during this process, but without the lower (octave note) being quitted by the thumb. See Fig. 8.‡

*In brilliant passages the accents are given purely by a short-lived rotary-exertion of the fore-arm; but when you give the accents in *cantando* tone (Melody Touch) this requires Third Species of Touch. That is: the melody notes are here given each time by a Release of the Upper-arm, and the *weight*, thus released, is, as it were, "carried" to the required side of the hand by a slight and unconsciously-given rotary exertion of the fore-arm,—thus forming a combination of fore-arm rotary exertion with Upper-arm lapse. Or, to put this in other words: In *brilliant* passages, the "Rotation-accent" is derived purely from a rotary-exertion of the fore-arm, helping the implicated fingers. But in *cantabile*, Upper-arm weight-release gives you the required energy, and the rotary-exertion of the fore-arm here only serves to *transmit* this weight to the finger requiring its help.

† You can quite easily avoid hitting the key down even when playing the notes from a considerable distance, always provided you are very careful to make a *non-percussive* contact with the key-surface. That is, you may continue the swing of the finger down upon the key unbrokenly *into* a descent *with* the key, and nevertheless you can insist on judging: the key's resistance *on the way down*.

In the case of students who have fallen into the bad habit of hitting or tapping *at* the keys, it is best for a time to forbid any "finger-raising" whatsoever, and to insist upon everything being played strictly "from the surface" of the keyboard—without any of the fingers quitting the keyboard surface. *Vide page 13.*

‡ If stiffness is suspected during this "balancing" process let the thumb rest upon its key *AT SURFACE-LEVEL*, instead of keeping it depressed.

Fig. 8.



The little finger of the left hand balancing in the air, previous to its free descent and subsequent exertion during the act of Rotation-touch.

Continue this balancing motion (up and down) at the little finger side of the hand, until you are satisfied that the rotation-muscles have ceased to conflict—and that your arm and hand are therefore “free” rotarily. After you have satisfied yourself on this point, and while once again allowing the little finger to reach its key quite lightly, *follow* this descent (without break in the movement) by actually sounding the little-finger note, helping the finger in its action upon the descending key by giving a short sharp rotary *exertion* of the forearm. The result should be a bright, brilliant tone, and quite *Staccato*, owing to the key being left free to rebound.

Take great care that the help given by the forearm is really given by *rotary-exertion* and not by “down-arm” exertion.

Having thus sounded the fifth finger note, do not let that finger quit the surface of its key, although the key has rebounded. On the contrary, now use *that* finger as a pivot and guide, so that the thumb, hereupon releasing its key, may *feel its way* to the next note of the scale—at surface-level. Then proceed as before. Sound the thumb notes softly, but the fifth-finger notes loudly.

Practise in the same way with the right hand, taking a descending scale. After that, play the fifth finger notes *by weight (cantabile)* instead of by the sharp action just practised.*

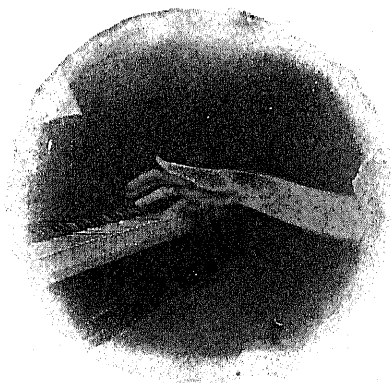
After having thus learnt to give accents with the fifth-finger helped by “rotation,” you must then go through the same process for the sake of the other side of the hand,—the thumb side. Here again, first learn to make a free balancing motion, of the thumb towards

*In this connection, re-study the remarks made on the application of Weight through Rotation found at the beginning of these Rotation-Exercises, under “Purpose” of these Exercises, and the *Notes* on previous page and on page 34.

the keys without sounding them, and then again follow-up such free motion towards the keys, by actually sounding them; the fifth finger now remains lightly on its key, and afterwards shifts up or down the scale, without leaving the keyboard surface,—dragged along it, as it were, while the thumb now provides the accented notes. It is well to give a tolerably “high-stepping” action to the *thumb*, which now plays *forte*, but the little-finger (sounding its notes *piano*) should not quit the key-surface.

Be sure, however, before attempting to sound the accented notes by means of the thumb, again to give sufficient time to the preliminary and *silent* balancing process,—in this instance towards the thumb’s note, and with the little finger lightly resting upon its key,—either at depressed or surface-level. Continue thus “testing” for rotary freedom, until

Fig. 9.



The thumb of the right hand balancing in the air, previous to its action in Rotation-touch.

quite sure you have attained it for the time. *Vide* Fig. 9. And always renew this silent balancing (or testing) for both sides of the hand in turn, whenever there is the slightest suspicion of any rotary “tightening.” Such rotary-stiffness is indeed a pitfall most players are only too prone to fall into; and even when the bad habit has been eradicated in a measure, one is only too ready to relapse into it. Constant testing as here described, and vigilance during actual performance, are the only safeguards.

After having well practised the “sharp-toned” rotary accents with the thumb, practise also the production of the *weight-accent* (singing-tone) with the thumb by the help of these rotary-adjustments.*

*Remember, it is the released Upper-arm Weight which is now rendered available by the thumb, owing to a slight rotary-exertion of the Fore-arm.

Not till all this preparatory work has been correctly accomplished, should one proceed to take the scale-passages, etc., as before given on Page 40, etc. These, of course, must also be practised both in Singing and Passage-touch methods.

SECTION D of the ROTATION EXERCISES.

PREPARATORY GYMNASTICS.

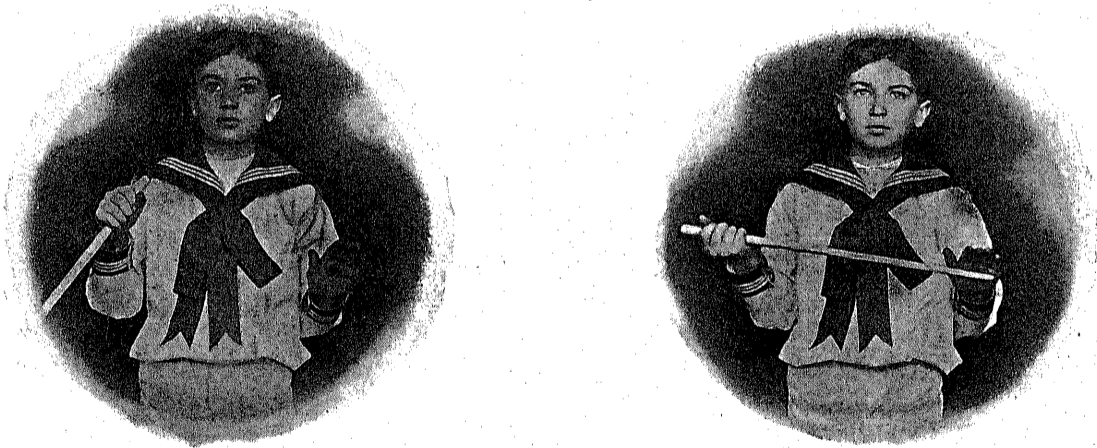
Those who do not at once realize the nature of these rotary actions (or changes of state) of the forearm, should, before attempting even the preceding "Preparatory Exercise," learn the required action through the following simple gymnastic exercises:—

DIRECTIONS: Hold the forearm forward as in playing, and grasp a short light stick—a ruler, or paper knife, or a very long pencil will do—with all the fingers closed upon it, so that the stick, being held at one end, stands out *at right angles* to the forearm—protruding at least some six inches or more from the side of the hand.

In the *first* form of this gymnastic, for the practice of rotation *towards the little-finger*, let the stick thus protrude *from the little-finger side* of the hand. Hold the stick horizontally. Now place your *other* hand in such a position, that by rotating the stick, you can by means of it *hit* the palm of this *other* hand, which must be held downwards to receive the blow. The forearm, therefore, seems to play the part of the axle of a wheel, while the stick represents one spoke of such a wheel. Do not rest satisfied until you can *freely* hit the palm of the other hand by thus twisting the forearm round like a wheel.

Figure 10 *a* and *b*, shows the positions assumed, before hitting and after.

Fig. 10.



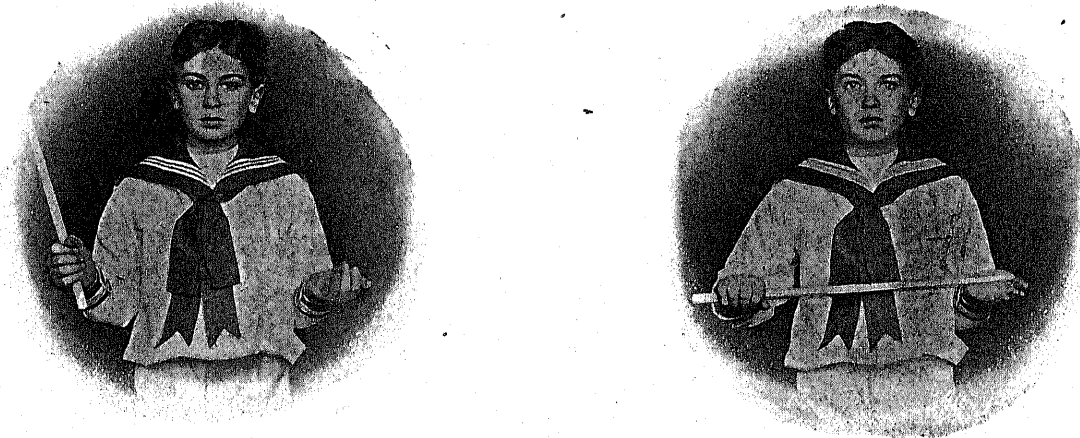
a) *b)*
Preparatory gymnastic-exercise for Rotation, for Rotation *towards little-finger*.

Be careful that the action is purely *rotary*—there must not be any stabbing action of the forearm instead. And the stick should really hit with a stinging sensation, it should not be a mere pressing.

As soon as you have succeeded in obtaining a free, stinging hit by means of this twisting of the forearm, lay down the stick, and placing the thumb upon the keyboard, try to apply the rotary motion thus learnt, to the sounding of a note by the *fifth* finger. The action should be much the same as when using the stick, but be careful in the meantime that you hit—the *STRING*—by means of the key, and that you do not instead hit at the key!*

Having thus learnt to apply the rotary action “behind” the little finger, again take up the ruler, or stick, and by means of a similar gymnastic (or experiment) now learn to rotate towards the *thumb*-side of the hand. The ruler, or stick, must now be held protruding as far as possible from the thumb-side of the hand. It should be held pointing upwards, with the knuckles turned well down; and you should now hold the other hand with its palm also turned *upwards*; this will enable you to hit the palm of that hand with the stick, by a twist of the forearm as before. Figure 11 (*a* and *b*) shows the nature of the movements here required.

Fig. 11.



a)

b)

Preparatory Rotation gymnastic; for Rotation towards the thumb.

Again, as soon as the action is understood, transfer it to the keyboard, before the impression has worn off.

*At the Keyboard, this rotary motion is slightly different, because we then have a pivot, in the form of a finger, upon which to rotate.

Always refer to this little gymnastic or experiment, whenever there is any doubt as to the rotary actions.*

SECTION E of the ROTARY EXERCISES.

ADDITIONAL FORM, ON THE GRAND ARPEGGIO.

After having thoroughly mastered the application of the Rotation-principle in the scale, as shown in Section B of these Rotation-exercises, this principle should then also be applied and practised in the form of an Arpeggio, as shown in the following Example No. 9; and this, also, should be adopted as "Daily Practice":—

Ex. N^o 9.

*Additional experiment:—Those who find it difficult to understand the application of the rotation-principle, should practise the following, either at the keyboard, or away from it:

a:—Let all five finger-tips rest on the table, or keyboard, and let them support the weight of the lax hand, or also a little arm-weight, the fingers well bent.

b:—Raise all the fingers, excepting the thumb and fifth finger, and see to it in the meantime that everything remains as free as before.

The hand and arm are now resting on the fifth finger and thumb only, supported by these.

c:—Now suddenly let the fifth finger collapse, and the hand (being still supported by the thumb at the opposite side) will roll over to the little-finger side.

d:—Raise this (little-finger) side of the hand again, but be sure to do so by employing only the exertion of the little finger itself for this purpose, and no other exertion, and thus regain the position that obtained in (b).

e:—Now let the thumb in its turn collapse, when that side of the hand will fall, the opposite side being still kept up by its little finger. The thumb, in its turn, must then raise this side of the hand.

Practise this sequence of steps a number of times, as it forms an excellent demonstration of the fact that the arm will roll over to the side not rotarily supported,—a support which you see can therefore be given either (a), by the finger reacting upwards from the keys, or (b) by the rotation-muscles of the forearm, twisting the hand upwards at that side.

Common chords and their inversions should be thus practised in all the major and minor keys. Also Dominant Sevenths and their inversions; and Diminished Sevenths also occasionally. Refer to *Ex. 9*, on preceding page.

SECTION F of the ROTATION EXERCISES.

ADDITIONAL FORM, ON THE ARPEGGIO GROUP.

It will be noticed, that so far we have only dealt with the application of the Rotation-principle in connection with the *extreme* fingers of the hand—the little finger and thumb. We must now learn to apply the same principle to the “inside” fingers—the remaining three fingers, the index, middle, and ring fingers.

The practice of the group or “broken” arpeggio will give us this opportunity, if we practise it in the form next given, while accenting the alternate notes. See following Example, No. 10A.

Ex. No 10a

Practise this also with the accentuation reversed.

Practise this “broken-arpeggio” on the white keys at first.

Afterwards, this should be practised in all major and minor keys, and some keys should certainly be practised every day. It is indeed well to adopt this as a permanent feature of the pianist’s Daily Practice throughout his career, even when the preceding simpler forms of Rotation Exercise are no longer felt to be so necessary.

SECTION G of the ROTATION EXERCISES.

ADDITIONAL FORM—THE EXTENSION IN CONNECTION WITH THE ROTATION.

This is for *advanced* students and players only. The arpeggio "group" just discussed, forms an excellent *extension exercise* when it is altered into the form shown in Example No. 10, (b). This is similar to the extension form of the "Aiming Exercises," Section D, (which see); and the greatest care must be taken, when practising such extension, to do so without the slightest stiffening. If the extreme extension here given causes the slightest straining, the exercise must be discontinued in this form, until it is found possible to undertake it without any such straining. It should, of course, be practised in all keys and inversions, and also with the accentuation reversed.

Ex. No 10^b

I)

II)

SECTION H of the ROTATION EXERCISES.

AS TO ROTATION TECHNICS.

Technical Exercises, on the following pattern—Example No. 11, are also useful in thus learning to apply the Rotation-principle (or Rotation-adjustment) to *all* the fingers in turn:—

Ex. No. 11.

a) etc.

b) etc.

Or, for large hands, the "Extension-principle" can also be practised as in the following Example No. 12:

Ex. No. 12.

a) etc.

b) etc.

CONCLUDING ADVICE ON THE ROTATION EXERCISES.

Rotary freedom should also be most carefully studied during the practice of the exercises preceding these—the exercises on Arm-elimination, the “Throw-off” exercises, Set III. Rotary exertion is required each time the fifth finger or thumb is used to give either the “kick-off” or the “float-off” form of that exercise, excepting in absolute *pp*—when hardly any *change* is required on the part of the forearm-rotation muscles.

Above all things, do not omit to practise selections both of Technics and of Studies designed to overcome this Rotation difficulty. Czerny, “the father of modern Technique,” was obviously well aware of the enormous importance of overcoming the difficulty underlying passages requiring this particular change in muscular state. On referring to his “Fingerfertigkeit,” his “Virtuosen-Schule” and other sets of his Studies, we see that he *CONSTANTLY PRESENTS THIS DIFFICULTY TO THE STUDENT*, in some guise or other. How very far-sighted he was in this, becomes clear when we remember, that it is impossible to play *hardly any passage* with ease or evenness, unless this very same “Rotation-element” has been thoroughly mastered in all its forms, whether applied as actual rotary-movement or merely as a change of muscular state on the part of the rotation-muscles, carefully adjusted to the requirements of each of the five fingers.

Here it may be well to point out, that *all* such Studies, etc., should be practised in a great variety of Touches. The most useful Touches for such Studies are the following:

Second Species—this particularly, in all its varieties.

First Species.

Always Staccato and Legato forms of both.

Also occasionally: “Passing-on” Touch, and Third Species.

Besides practising *second* Species, in its natural form, it should also be practised in several “hybrid” forms. Such, for instance, as its combination with the “artificial legato element”—that is, with a slight but continuous hand-pressure;* and again, for FORTES, with a little *continuous* weight added—an exceptionally heavy form of the “Resting,” which, however, should usually be provided *by forearm-weight* alone, and not by upper-arm weight, as usual in “Third Species” and elsewhere.

Here the student must be urgently reminded of the overwhelming importance always to leave the Elbow in an “elastic” state. The warning is particularly necessary for “Second Species,” but it applies also to the other Species. Also, the following reminder:

* *Vide*, p. 271 of “Act of Touch,” and page 19 of “First Principles.”

In trying to keep the arm supported (off) the keys, as it should be in Second Species, you are very apt to hold the Elbow (and in fact the *whole* arm) *in a slightly "fixed" state*. Now this is absolutely fatal! The arm, at the elbow, should never feel as if "held" or "fixed" there. On the contrary, you must *poise* it so carefully and loosely, that while it does not really fall, nor rest upon the keys (in "second species") it is on the very point of doing so. If your arm is thus perfectly easily "poised," it will be free to *come into sympathetic vibration* with the rapidly recurring "throw" or swing of the hand and finger. The arm, thus vibrated by the reaction of the finger and hand movements, will indeed here considerably enhance the tone-volume of the Second Species passages.

You will find a Special Exercise for thus as it were *attuning* this arm-vibration to the requirements of the finger and hand in Set XVIII. The *forte* playing of quick finger-passages, etc., remains impossible until this sympathetic vibrational adjustment has been attained between Finger and Arm.

Remember, it all depends on the free *poise* of the Arm, realized as freedom of the Elbow. Never allow any stiffness there, and the whole arm is perfectly free, and it will obey and help each finger in your quick passages.*

* This sympathetic "vibration of the arm which arises in rapid passages—provided the arm is really perfectly "poised"—has been totally misinterpreted by certain recent German writers, who have consequently given a very dangerous misdirection to the student, and that is, that "the hand should be vibrated *by the arm*,"—thus giving a totally wrong impression of what should occur.

See also, Notes on pages 59 and 61; the 2d Note on page 20; and the Note on page 81. See also: "Act of Touch", page 271; and "First Principles", page 19.

RELAXATION STUDIES.

PART II.

PREPARATORY EXERCISES.

PART II.

Preparatory Exercises.

PREAMBLE: The first four of these studies are “preparatory” in the sense that they should be studied *before* anything else is attempted, as they give us that general idea of Ease and Relaxation so important throughout the study of our instrument — or any other musical instrument. This does not imply that they are useless later on. On the contrary, all who evince a tendency towards stiffness, should again and again re-practise these first four simple exercises.

In practising these, always bear in mind their main purpose. This main purpose is not so much for the “exercise” of the particular muscles concerned — for the sake of “gaining strength”—but on the contrary, it is to teach us and to remind us *how* to let those particular portions of the limb give way; in a word, to teach us how to *omit* the exertions of the “contrary-muscles” — the *exertion* of which would unfailingly *prevent* our gaining, or retaining technical efficiency.* Or again, differently put, these exercises are not so much designed to teach us certain *exertions*, as to teach us accuracy in the *omission* of these, and how this feels. Hence it is quite useless merely to try to perform these exercises, since the profit to be derived from them depends entirely on the degree of thought and observation applied during their practice—on the degree of mental concentration given to the *muscular sensations* which accompany their execution—so that we may learn to omit the wrong exertions, and provide only the right ones.

For this is the real purpose of these four preparatory exercises — to teach us to *recognize* the *sensations* which accompany the proper relaxation of those quite slight exertions which serve to support, (or to *hold up*) the Hand, Arm and Shoulder, respectively. In practising exercises designed for such purpose — and there are many other similar ones in this volume besides these four — it must therefore be constantly borne in mind, that we can only derive practical benefit from such study, provided we are *careful to note these muscular sensations, or their absence*.

But this benefit is considerable — for if we have vividly fixed these sensations in our mind, we can, by recalling them, provoke the muscular *relaxations* in question, and can also control the omission of these relaxations (i.e., the *action* of those muscles) whenever required.

Sets IX, X, XI and XII of these exercises are also much of the same nature, and the remarks just made apply therefore to these Exercises with equal force.

* This indeed applies to the majority of Exercises contained in this book; the only real exceptions are those Exercises which are mainly intended to teach Finger down-exertion. Here is the only case where we really need to cultivate “strength” in order to play successfully. (55)

SET V.

FOR THE STUDY OF HAND-RELEASE.

This set of exercises, and the three following ones, are for practice away from the keyboard. They are preparatory, in the sense that keyboard practice should not be begun until they have been mastered.

PURPOSE OF SET V.—*The study of hand-release: To enable one to leave the hand (or wrist) loose, vertically.*

No form of "Resting" is possible without such loose-lying hand, and without this, it is impossible to attain accuracy and *certainty* of tone in performance. Also, unless we can "rest" lightly enough on the keyboard, to remain at its surface-level, we can neither provide a *natural staccato*, nor true agility. These same *up-holding* muscles of the hand must likewise be relaxed *during* those down-exertions of the hand which are required at other times, either momentarily or continuously.*

Hence this preparatory exercise teaches us *how* to provide the correct state of the *hand* in all correct playing—one of the most important steps (and one of the first) towards the acquisition of a good technique.†

DESCRIPTION of the Hand-release Exercise.

This consists of three steps:

- 1): *Raise the hand.*
- 2): *Balance the hand, while raised.*
- 3): *Let it drop of its own weight.*

That is: after having raised the fore-arm (and wrist) slightly higher than in their usual playing-position,

*Further explanations of this matter will be found in Chapter XV of the "Act of Touch," and pp. 4 and 5 of "First Principles."

†*As to Key-weight:* In choosing a piano for performance and for practice, it also follows that it is best to avoid one in which the keys have been so balanced that *they are unable to bear the weight of the loose-lying hand*. For if the keys have been "leaded" in front to such an extreme extent as *not* to allow of such "Resting," this will inevitably compel the player to *hold* his own hand more or less stiffly *supported by its muscles*; thus leading at once to a smaller or greater extent of stiffening, with all its vitiating effects on the whole technique of the performer.

The whole point is, that the weight of the key *must suffice* to carry the weight of the hand or at least a good part of its weight. It also follows that this absolutely *necessary* degree of key-weight varies with different performers—the key-weight required by a small, light hand is naturally far lighter than that required by a large, heavy hand. The ignorant amateur is of course attracted by such an absurdly light and misleading key—he imagines he will be able to play "more easily" because of it!—and fails to realize, that a mere half ounce or ounce of weight counts for little, when one considers the efforts actually required,—efforts amounting to many pounds for single *ff* chords! No doubt, when the real facts of Technique are a little better understood by every Piano-maker, these mistakes will be rectified, and we shall no longer find artists compelled to struggle with difficulties, gratuitously provided by the maker to please the fancy of the incapable! This question of actual key weight (at surface-level), is quite distinct from that of *smoothness of action*. The two things must not be confounded. A key-mechanism which is in itself clumsy (or sticky) during its movement, is simply a bad machine; and should of course be avoided even more stringently than an over-lightened key.

Step 1): Gently raise the hand (with knuckles turned upwards) until it is raised almost to its highest limit. *Vide* Fig. 12.

Fig. 12.



The hand, raised and dropped.

Step 2): While retaining this high position of the hand, *carefully balance it*; that is, let the hand move slightly up and down, so that you can realise the sensation of the hand's weight—it being supported by its muscles, but just on the point of dropping.

Step 3): Now, suddenly omit this slight sustaining exertion, and thus allow the hand to drop of its own weight—as also shown in Fig. 12. Be sure that this drop of the hand is caused solely by the prompt and complete *cessation* of the slight exertion which you found was sufficient to sustain the hand during the “balancing” or weighing stage—the hand *must not* be moved down muscularly. Always time this drop of the hand to occur at a definite moment—count four and then drop it at “one”.

FURTHER DIRECTIONS: The process of “weighing” consists in raising the hand gently and freely, and then allowing it to begin to fall *slightly*, and repeating this upward and downward *swaying* until the hand is felt to be freely *poised* in the air; the wrist and arm of course not moving in the meantime.

Having thus learnt to execute, and to recognize the *sensation* accompanying the slight supporting-exertion required thus to *poise* the hand in the air—and the exertion is very slight indeed—it will then be found comparatively easy to give the required loose drop of the hand, since this is obtained the moment you *fully* and really omit the exertion that *holds* the hand up. The hand will then indeed be in so loose a condition that it will be free to “dangle” from the wrist,—and it is precisely such perfectly free state (or condition) of the raising muscles of the hand which is required *in all forms of playing*.

Many students find it easier at first to acquire this knack of balancing the hand and then dropping it (through the prompt and complete omission of its upholding exertion), by at first practising the release of the *forearm*, as given in the next set of Exercises. It is more easy to become conscious of the weight of the supported forearm than of the very light weight of the hand, for the latter weight is so slight indeed, that it is at first difficult to recognise when it is supported, instead of being left loose as it should be.

• Where there is any difficulty in this respect, it is certainly best to take the forearm-release *first*, and the hand-drop *second* in order. All these four Release Exercises should moreover be practised in close succession, and compared to each other, as they will assist each other.

ADDITIONAL HINTS, applying to all four of these preparatory Exercises:

These additional hints are useful for all four of these exercises, since they all four deal with processes so very similar in character:

As already pointed out, much of the benefit to be derived from these Exercises depends on the degree of *mnemonic* effort given; that is, upon the degree of mental concentration directed towards *remembering* the *sensations* accompanying the poising and subsequent letting go of the limb practised.*

It will be noticed, that each of these Exercises consists of *three* distinct acts: (a) the raising, (b) the poising or balancing, and (c) the dropping of the concerned portion of the limb. Now it is essential that you should carefully note the presence or absence of muscular sensation in *each* of these three cases.

Any deviation afterwards from the recognized sensations will then instantly warn us of impending incorrectness muscularly, not only during the practice of these exercises, but also subsequently, at the keyboard itself.

As to act "a":—In raising the portion of the limb under training, do so as gently, easily and unrestrainedly as possible—there must not be the slightest sensation of any resistance, except that caused by the actual (very light) weight of the limb itself; the limb must in fact seem to rise as easily as a feather blown upwards.

As to act "b":—Perfectly balance (or poise) the portion raised. That is, carefully balance it, as you would do any outside object the weight of which you wish to test—allow it first to rise a little, and then to subside again, until precisely the required exertion is correctly found.†

The exertion required is very small indeed, provided you leave the *opposite* muscles thoroughly relaxed. Realize in fact that the exertion is indeed *less* than that required to balance the *smallest object* in the hand;—for in balancing any *outside* object you always have to balance your own limbs in addition to it.

It is therefore sometimes also a good plan to begin by learning to balance some small object (such as a coin) and then to balance the limb without such additional weight.

As to act "c":—Having carefully obtained the state of "poise," and having noted the accompanying sensation, allow the portion of the limb thus balanced to *drop* suddenly, and do this at a pre-intended moment. The difficulty is to ensure a timed, but genuine drop of the limb,—to ensure its falling solely by its own weight,—by our *ceasing* all supporting exertion suddenly and completely. Carefully guard therefore against *making* it move down, even by the slightest muscular exertion;—it must fall, simply because you have completely ceased to hold it up.

The absence of such complete and prompt release forms one of the most serious obstacles against the acquisition of correct (i.e. *easy*) technique. Hence the importance of the *balancing stage* included in each of these four exercises, for this teaches us to poise and to use our limbs without unnecessary effort, and thus teaches us to avoid "stiffness." ‡

*That is, we must form *close habits of mental association*, between the muscular *sensations* accompanying them and the exact muscular activities and releases which give us the required movements and stresses of the limbs in playing. For it is only by being able accurately to recall the sensation of stimulus (resistance against muscular effort) and its cessation that we shall succeed in "willing" the re-accomplishment of each muscular act.

†In weighing anything, we alternately provide an exertion too great and too small to support the "balanced" object, and we are thus able to find *the mean* between over-exertion and under-exertion—the precise degree of exertion required to support the object. If we have good muscular memories, we can even give the arbitrary name to such weight in ounces and pounds.

‡Stiffness (unless caused by rheumatism) always means non-elimination of the contrary exertions.

Another cogent reason for well practising balancing act "b," is, that for the First and Second *Species* of Touch-formation, you must learn to *poise* the upper-arm and forearm accurately, and without having learnt that you cannot succeed in acquiring Agility.*

ADDITIONAL FORM of Hand-release Exercise:

Besides thus practising the release of the *up*-holding muscles of the hand, it is well to practise the release of the *opposite* set; the release of those very muscles which *must* be used during the act of key-depression, and which pull the hand downwards. This "release" is best practised by the simple device of *reversing* the hand—with its palm upwards, and re-practising the preceding exercise in that form. The hand, palm upwards, is in this case gently lifted, is then balanced in that raised position, and is then allowed to drop back into its first position. This forms very useful practice indeed.†

SET VI.

FOR THE STUDY OF FORE-ARM RELEASE.

PURPOSE OF SET VI.—*The Study of Fore-arm Release: to enable one to leave the fore-arm un-supported by its own muscles.*

In playing, the condition of the fore-arm must at all times be perfectly "free" and loose, vertically—it must never be held rigidly. But besides such poised freedom, the weight of the fore-arm alone is also at times required to be available. That is: besides being able to hold our fore-arm supported easily and without restraint, we must also be able to *let it go* still more, and indeed to such an extent, that its weight may be set free to act behind the hand and fingers upon the keys. Moreover, we must learn to employ this fore-arm weight independently of the weight of the *upper-arm*, which last is more often required.‡

* It is not enough to prevent arm-weight lying on the key-beds in these forms of Touch, the arm must be *poised so neatly by its own muscles* that it seems verily to "float" over the keyboard—the *Elbow must ever be elastic*.

† This form of the Exercise assists the acquisition of neat timing in the *omission* of hand-force;—and unless such omission (or cessation) of hand-force can be accurately timed, it is impossible properly to "aim" the Act of Touch in its forms of *Second Species* and *Third Species*. *Vide* Chap. XIX, "Act of Touch," and pp. 9 and 10 "First Principles."

‡ For instance, when we wish to play rapid passages with a thicker and larger tone than can be obtained under pure *Second Species* of Touch-formation, we can increase the *tone-volume* of this Species very materially, if we here slightly increase the continuous weight of the Act of Resting beyond its normal. That is: we may for this purpose slightly *increase* the weight of the continuous "Resting" beyond the normal while nevertheless giving the short-lived tone-producing "added-impetus" in the usual form of *Second Species*. ("Act of Touch": Chapter XV.) And this slightly heavier "Resting" should here be obtained by allowing the weight of the *forearm* alone (and not that of the upper-arm) to lie loosely behind fingers and hand in such passages. The degree of relaxation (or absence of support) here required on the part of the Forearm, must be determined by the *speed* of the passage and required amount of tone. The quicker and louder the passage, the more pronounced may this weight be; but this continuously-resting weight must never be so great as to *rest on the keybeds*, since that would at once cause the passage to become sticky, blurred and indistinct; or would, anyway, render the passage "wooden," *because wanting in tone-inflection*. Remember, that such *extra* Resting-weight can only be successfully carried along without causing stickiness or woodenness, provided the rapidly-recurring finger-and-hand actions are sufficiently forcible to *balance* this extra weight, and thus prevent its coming to rest on the key-beds. Provided this balance is maintained, the weight is kept off the key-beds, and vibrated, much in the same way that our bodies are prevented from actually resting on the ground in the act of *running*,—the rapidly-recurring actions of the legs keep our bodies really floating in the air. In a word, too much weight on the key-beds is absolutely fatal to all Agility. *Vide* pp. 51—2, also: "On certain exceptional forms of Staccato and Legato"—Appendix to Part III, "The Act of Touch."

DESCRIPTION of Fore-arm release Exercise:

- 1): *Raise the fore-arm.*
- 2): *Balance the fore-arm in the raised position.*
- 3): *Let it drop of its own weight.*

Like the preceding Exercise, this one consists of three distinct steps: While holding the elbow slightly forward (as in playing) and with the upper-arm perfectly freely balanced in that position, *Step 1)* raise the fore-arm only, until it is almost at right angles with the upper-arm as at (a) Fig. 13. Now *Step 2)* weigh or balance the fore-

Fig. 13.



a)

The fore-arm raised.



b)

The fore-arm dropped.

arm, until it is so accurately *poised* that you feel it is on the verge of falling. From this balanced, poised, or "ready-to-fall" condition, now *Step 3)* let the fore-arm alone fall—as at (b) Fig. 13. Be sure that it falls solely of its own weight—purely by release of its own supporting muscles, purely by your omitting the exertion which you felt *balanced* it in *Step 2)*, and be sure not to help its descent by "putting it down" muscularly.

FURTHER DIRECTIONS: Carefully re-read the Directions given for the previous Exercise, for the same advice applies to this one. *Vide* especially pages 57 to 59 "Further Directions," and "Additional Hints" to Set VI.

SET VII.

FOR THE STUDY OF UPPER-ARM (WHOLE-ARM) RELEASE.

PURPOSE OF SET VII.—*The Study of Whole-arm Release: to enable one to obtain the free-set weight of the whole arm when required.*

The weight of the whole arm (slightly released) is required for the second, or *Legato* form of the Act of Resting; the whole arm is here continuously, although but slightly, released, to compel the fingers to retain their keys depressed for natural *Legato*.

Complete or partial release of the weight of the whole arm is also required for the "Added-impetus" in its form of *third* species: the weight is in this case individually and separately provided during the production only of each note. Unless such releases can be given promptly and fully, it is impossible to acquire either a really sympathetic singing tone, or any large volume of tone of good quality.

The converse state is equally important: we must learn to keep the upper-arm neatly *poised* by its own muscles, otherwise its weight will inevitably hinder agility.*

DESCRIPTION of Whole-arm release Exercise;

- 1): *Raise the whole-arm.*
- 2): *Balance (or poise) it in this raised position.*
- 3): *Let it fall of its own weight.*

As in the two preceding Exercises, this one also consists of three distinct steps:

While standing erect, *Step 1*) raise the whole-arm straight in front of you until the wrist is nearly on a level with the shoulder, as shown at (a) Fig. 14. While maintaining this position, *Step 2*) carefully weigh and balance the arm, noting that the exertion of thus sustaining the upper-arm is not felt on the arm itself, but across the shoulders. Having thus obtained the perfectly balanced—"just falling"—condition, *Step 3*) suddenly and completely omit this supporting exertion, so that the arm falls limply, of its own weight, as shown at (b) Fig. 14. Be sure to re-study in connection with this Exercise the "Further Directions" and "Additional Hints" to Set VI, pp. 57 and 58.

*In playing, it is indeed of first importance to acquire the use of the free-left Upper-arm weight. But as soon as this is done, we must learn to apply this weight to the keys as economically as possible; never more so than is required by the key for each individual sound,—and we must rely on our muscular sense to prompt us to give this accurately.

Agility is indeed very often ruined by allowing the Upper-arm unconsciously to lapse continuously upon the keys, thus compelling the fingers to travel with far too heavy a load, and thus also ruining all power of tone-inflection.

Moreover, it is difficult to acquire that really "floating" or *balanced* condition of the Upper-arm, which is invariably required for all *Staccato* passages, and for *Agility* passages. Here it is not enough that the arm does *not lie upon* the fingers; it is not enough that it is well supported—and not bearing upon the keys. No, this self-support of the arm must be given without the slightest stiffening—the arm must be elastically supported in a state of perfect *ease* by its own muscles. It must in fact be in precisely that "balanced," *poised* condition, described as necessary in all these four exercises *before* we attempt to drop the limb. And without this preliminary *poising* we cannot be sure that the limb is really falling by its own weight, and is not instead being pushed down against its own raising muscles. It is this neatly balanced condition of the arm which is so desirable for all *Agility* and *Staccato*,—and we should therefore assure ourselves (by use of No. 1 Set of Tests) that the arm really is in this easy condition *in between* all the successive (almost momentary) acts of tone-production, and that we have not been unwary enough to allow it to "become heavier" on the keys.

When we do require the Upper-arm weight—for *Third Species*, *further* relaxations (beyond this normally easily-balanced condition) are of course required for the production of the sounds, but the arm must instantly resume its balanced condition—the greater relaxations are only applied during the short space of key-descent.

In the case of *Legato*, or *Tenuto*, the "self-support" is only a very little less complete than in this perfectly and neatly *poised* state—the arm is relaxed only in sufficient measure to keep the keys depressed and no more. *Vide* p. 52.

Fig. 14.



a)

The whole arm raised.



b)

The whole arm dropped.

ALTERNATIVE FORM of this Exercise:

This Exercise (for upper-arm release) can also be practised with the arm bent at right angles. In this case recline in a soft chair, so that when the elbow is allowed to fall back, it may strike upon the soft part of the chair. The fore-arm, in this form of the Exercise, is supported by its own muscles, and the rising and falling is here effected by a change in the condition of the upper-arm alone. The two positions are shown at *a* and *b*, Fig. 15.

FURTHER DIRECTIONS: The same advice applies to this Exercise as given for the two preceding ones, hence carefully re-read the directions given for these.

Be sure that the Upper-arm is really released. Even when it is allowed to fall, there is often a strong temptation to let it fall "under control," i.e., without fully relaxing its supporting-muscles. . . . See to it therefore that the fall is absolutely free. If this be found difficult, it is sometimes a good plan to keep the arm raised long enough to *tire* slightly its sustaining muscles—across the shoulders, etc., and by thus *learning to recognise* the sensation of the exertion which *prevents* the arm from falling, we are then more likely to recognise the sensation of *omitting* this exertion, and shall thus learn *what to omit* doing, and thus obtain arm-weight through mere lapse of its own muscles — without restraint.

Fig. 15



a)

The bent arm raised.



b)

The bent arm dropped.

ADDITIONAL EXERCISES for obtaining Upper-arm Release:

Those who have formed wrong notions as to the state of the arm in playing, and those who naturally "stiffen-up", often find it extremely difficult to learn to play by "weight"—with a full round tone, owing to their inability to give the required releases of the upper-arm.

THE TWO FOLLOWING DEVICES may here prove helpful:

No. 1) : Be seated at the Piano, but turn round, facing at right angles away from its keyboard. Sit quite close up to the piano—as close as possible. Now raise your upper-arm, balancing the elbow some four inches or so above the keys, the fore-arm being in a perfectly *upright* position, while the hand is allowed to hang loosely from the wrist-joint. After keeping the arm thus lightly poised a few inches over the keys for a few moments, let it drop down of its own weight—quite without restraint. If you thus allow it to drop really freely, the notes the elbow happens to fall upon will sound quite strongly. This will prove to you how easy it is to obtain quite a large quantity of tone by mere weight-release—without the slightest exertion whatsoever. By subsequently letting the elbow drop on to the interval of the *third*, *B flat* and *D flat*, you can avoid the very inharmonious effect at first produced by letting the elbow drop "anyhow" on the keyboard; but first of all make sure that you really do obtain the "drop." After this has become easy, use this weight-release while timing the fingers to "take" or receive this weight upon the keys, in the form of a chord, &c.

No. II): The other device in question consists, in laying the whole arm quite limply upon a table. After making sure that the arm lies thus absolutely "dead" upon the table, *first* try to raise it at the wrist, by means of a slight down-exertion of the hand and fingers upon the table. Afterwards, cause it to rise at the elbow, by a slight exertion—an exceedingly slight exertion—of the forearm, itself bearing upon the table at the wrist; and finally, raise it with the finger-tips alone touching the table.

Set VIII will here also help towards the understanding of this slight fore-arm action.*

ADDITIONAL EXERCISE for obtaining Whole-arm Release in conjunction with exerted fingers.

PURPOSE: One of the first and most important muscular difficulties the student has to face, is the difficulty of leaving lax the whole arm—lax at the elbow and shoulder, while nevertheless *using* his finger (and hand) exertions against the keys. "Weight-touch" of course remains impossible unless this contradictory combination can be effected, for the fingers must clutch the keys while the whole arm is more or less perfectly relaxed. Obviously the difficulty is really mental,—we have not learnt to "think" arm-relaxation in combination with a clenching of the fingers; and the following exercise therefore suggests itself as helpful.

DESCRIPTION: Standing erect, practise the whole-arm *fall* as first described, page 61, and then, while insisting upon this perfectly free fall and subsequent dangling of the arm, by degrees learn to *clench the fingers* during such free fall of the arm—without allowing this "grip" of the fingers to impair the perfectly loose fall of the arm.

Or, you may practise the arm *fall* while holding a ball or other convenient object—holding it very freely at first, but gradually learning to hold it quite firmly, while nevertheless being most careful not in the least to impair the arm's fall and swing. †

ANOTHER SUGGESTIVE DEVICE OF A SIMILAR NATURE (for cultivating this required finger "grip" in conjunction with arm-fall) is as follows:

Raise the arm and hand, the hand remaining palm downwards. Now with the other hand throw a small ball or other small object upwards, towards the already raised hand, and allow the last-named to fall down towards the rising ball and to catch it. The less arm-jerk there is in this process the better—the arm should merely fall while the fingers do the "catching." Or, the device may take the following form:—

Hold a ball, etc., with arm raised, and palm downwards; now let the ball *drop*, but proceed to catch it before it has fallen far.

A slight down-action of the arm cannot here be very well avoided, since it would otherwise be impossible for the arm to gain upon the descending ball—arm and ball, really left to themselves, would fall *at the same speed*, unless of course the ball happens to be so very light, that the large surface presented to the air would retard it sufficiently to enable the arm to catch-up on it, although falling only of its own weight.

* The device pointed out in the "Act of Touch" (page 179) is often of help in acquiring Arm-release: Lie well back in a straight-backed chair placed sufficiently near to the piano. This releases the strain upon the muscles of the back, which are required to keep one in the vertical position, and the necessary action of which is often confused with the raising-muscles of the arm and shoulder—*vide* Set VIII. The opposite fault is also often met with: the performer, in his endeavours to leave arm and shoulder free, also (and of course unnecessarily) releases the muscles of his back, thus causing a most ugly and unhealthy stoop—or "hunch-back." *See* Note, next page.

† This form of exercise is also helpful towards the acquisition of that freely supported (poised) *almost* falling elbow, so necessary for "Second Species" and also for the cross between second and third Species—that most useful of all passage-touches. Refer to advice re-Arm-vibration, on page 52.

SET VIII.

FOR THE STUDY OF SHOULDER RELEASE.

PURPOSE OF SET VIII.—*The Study of Shoulder Release: To ensure the shoulder being left free.*

If we lift the shoulder, or exert it upwards, we also lift or support the upper-arm. Hence, if we wish to obtain the full measure of available weight, we must leave the shoulders themselves lax, and must not hold them muscularly supported.*

DESCRIPTION of Shoulder-Release Exercise.

- 1): *Raise both shoulders.*
- 2): *Swing both arms, with shoulders still up.*
- 3): *Drop shoulders, freely.*

Standing erect, *Step 1*) raise both shoulders as high as you conveniently can, as at (a) Fig. 16.



a)
The shoulders raised.

Fig. 16.



b)
The shoulders dropped.

*In playing, it is quite unnecessary ever actually to raise or lower the shoulders, but some artists show their unconscious sense of the necessity of *shoulder-freedom*, by actually raising their shoulders before playing a full *forte* chord, &c., and playing it, accompanied by an actual drop of the shoulders—an ugly movement, and one they would probably not have adopted, excellent artists as they are, had they but known the *explanation* of the muscular conditions which they have rightly, although unconsciously, judged to be the necessary ones. But until the Analysis of Technique (as shown in the "Act of Touch") was available, everyone had to grope along for the right effects,—hence the adoption (and teaching!) of all kinds of fads in the way of unnecessary movements and positions when they happened to accompany a musically-successful effect, since Position or Movement were mistakenly assumed to be the ultimate *cause* of the successful Technique!

In the learning stage, moreover, it is necessary to begin by exaggerating the *necessary* movements, and to perform other movements, which although in themselves unnecessary, nevertheless *suggest the right muscular conditions*. And it is certainly better to play with exaggerated and uncouth movements than to sit like a statue—and to play badly! *Vide* also, note on preceding page.

While maintaining this raised position of the shoulders, nevertheless freely swing both arms backwards and forwards (*Step 2*) until you recognise the sensation of the raised shoulder supporting the freely-swinging arm. This supporting sensation having been realised, (*Step 3*) suddenly and completely omit this support, and the shoulders will then drop freely into their normal and correct position, as at (*b*) Fig. 16. You can in this way learn to recognise whether your shoulders are left free or not.

FURTHER DIRECTIONS: Before dropping the shoulders and while swinging the arms, be most careful that the arms swing really freely, and are not moved backwards and forwards *stiffly*. You have to learn to discriminate between the muscles of the shoulders and those of the arm, so that the arms can be swung quite unrestrainedly, in spite of the shoulders being held in the raised position.

SET IX.

FOR THE STUDY OF FORE-ARM ACTION IN CONJUNCTION WITH UPPER-ARM INACTION.

PURPOSE OF THIS EXERCISE: *To enable one to exert the fore-arm downwards, while nevertheless leaving the upper-arm un-exerted, and with its weight available.*

In certain special kinds of Touch, we have to lever the *weight* of the upper-arm und shoulder upon the keys by means of a *slight* exertion of the fore-arm itself; but this very slight down-exertion of the fore-arm must be given while nevertheless leaving the upper-arm itself perfectly free—*i.e.*, unexerted, lax or released. This exercise is designed to teach this subtle, but very necessary discrimination.*

This Exercise is, strictly speaking, not at all a “preparatory” one; for it should not be given to those in a primary stage. It is really a special exercise, but it is “preparatory” for this special purpose.

DESCRIPTION of Exercise for Teaching Upper-arm Lapse in Conjunction with Fore-arm Down-Exertion:

- 1) : *Raise the upper-arm by slightly exerting the fore-arm downwards upon a table, &c.*
- 2) : *Balance the upper-arm in this raised position for a few moments by means of this action of the fore-arm.*
- 3) : *Let the upper-arm fall, owing to the cessation of this supporting exertion of the fore-arm.*

*Inability to provide the combination of these two somewhat contradictory conditions of the upper-arm and fore-arm, is at the root of much harshness of tone. Unless this combination can be given, the whole arm is rigidly poked and forced into the keyboard when certain *fortes* are required, instead of the arm being employed under the free and yet active conditions here under consideration,—conditions which make for fullness of tone, even with “bent” fingers.

Sit in front of a table and lay the hand and wrist-joint on the edge of it, the knuckles being turned upwards as in playing. The arm should be slightly extended, and the general position should be as like the playing position as possible; and the hands should lie apart on the table at a distance of about two octaves. Leave both forearm and upper-arm perfectly lax, so that their whole weight may lie supported on the table by the wrist-joint. Now, *without in the least altering the lax condition of the upper-arm*, 1) exert the forearm, alone, downwards at the wrist upon the table. A very slight exertion (if given by the forearm only) will suffice to *raise* the elbow (*i. e.*, the upper-arm) some six inches or so—and the resulting movement of the elbow is slightly outwards besides being upwards. The upper-arm, being thus supported in a raised position by the forearm's exertion (and solely by that); 2), balance it in that position, moving slightly up and down. After this, 3), suddenly and completely *cease* this slight effort, and the elbow (and upper-arm) will then fall by its own weight, and will thus regain the position started from.

ALTERNATIVE FORM: This exercise may also be conveniently practised by using the *other* arm as a support; for this purpose bend the exercising arm at right angles in front of you, and rest its wrist upon the wrist of the *other* arm, which should be turned edgewise (thumb up) to receive it. *Vide*, Fig. 17, *a* and *b*.

Fig. 17.

*a)*

The right upper-arm hanging loose.

*b)*

The upper-arm driven up by fore-arm.

Further Directions follow over leaf:

FURTHER DIRECTIONS: Be careful *not* to lift the Elbow by a lifting action of the *upper-arm* itself, in place of the required *fore-arm* effort. If you lift the upper-arm by its own muscles, you will notice that the weight at once vanishes from the table, or other surface practised upon; whereas, if you use the fore-arm alone—as the lever by which to raise the *lax* upper-arm, then the ponderous weight of the upper-arm will continue to rest upon the table, through the wrist-joint, remaining unchanged throughout the exercise.

Also, do not try to obtain the effect of force at the wrist-joint by *pushing* both fore-arm and upper-arm down upon it. Remember, the requisites are:—perfectly lax upper-arm, and fore-arm leverage only.

Set XII, Part III of these Exercises, will be found to be another and more advanced form of this Exercise.

RELAXATION STUDIES.

PART III.

SPECIAL EXERCISES.

PART III.

Special Exercises.

SET X.

THE STUDY OF FINGER-ACTION AND ITS CESSATION.

PREAMBLE: The sets of *Finger-exercises* which here follow, and which are for use apart from the Piano, are the most important of all these SPECIAL Exercises; indeed, they are perhaps more important than any others in this volume. Although these Finger-exercises need not necessarily be adopted as permanent "Daily Studies"—like the four sets we considered in Part I—nevertheless, in the earlier stages of acquiring Touch-habits, these Finger-studies should be practised *DAILY*, and indeed several times a day. In addition, these Exercises offer most valuable material to those, who, although they have acquired good Touch-habits, yet find themselves unable to keep up their practice at the instrument itself. These finger-exercises, in both their forms—at the instrument and away from it—are indeed particularly valuable in this respect; and it will be found, when one is unable to practise for some time, that an occasional few minutes devoted to these silent exercises, with each finger, will serve to keep one "fit" in quite a surprising way; especially when they are practised, as they should be, in conjunction with the *Rotation Exercises*, and an occasional turn at the remaining three of the four "Daily Tests" treated of in Part I. This beneficial result is not to be wondered at, seeing that all our technical powers depend primarily on the very muscles here practised; that is, upon the strength, staying-power and freedom of the muscles which actuate the fingers. Clearly, therefore, it is also most advantageous to practise these Finger-exercises when the fingers are really deficient in strength, since by means of these exercises we can exercise to any desired extent those very muscles of the fingers upon which devolves most of the hard work of playing.*

* One of the best "discrimination" exercises for the acquisition of correct notions as to finger and hand "action," is the one suggested on page 170 of "The Act of Touch": The hand is placed reverse-side (palm-side) uppermost upon the knee. Movements of the finger or of the hand are then practised, a resistance being provided by placing the end of a pencil, &c., upon the end of the particular lever to be exercised. Thus, in practising the finger, the pencil is placed upon the *knuckle-phalange* at the end furthest removed from the hand; while if we wish to practise hand-action, we place the pencil upon the hand vertically over the knuckle—upon the end of the hand-lever. The action is the *same*, muscularly, as at the Piano, although the movements of the finger and hand are upwards. To practise the actions with hands thus reversed (up-side down), has the advantage that it eliminates any faulty preconceptions there may be,—preconceptions which will impede all progress, and which may be difficult to eradicate so long as the hand is placed in its usual position at the keyboard.

It must not be thought that I am here pandering to the popular fallacy of "want of strength," &c.—one of the fallacies adopted as an excuse by teachers who find themselves incompetent to correct their pupils' technical deficiencies. Much of such seeming "want of strength" must always be diagnosed as the consequence of incorrect technique. Since, however, our Touch-combinations (of arm or hand, &c.) cannot affect or even reach the keyboard at all without the inter-

These finger-exercises take two forms, corresponding to the two quite distinct duties the fingers have to fulfil in playing, for the fingers help to provide alike the "Act of Resting" and the "Added-impetus"—the *first* of which demands a *continuous* although slight action on the part of the fingers, while the *second* demands a *short-lived* but sometimes quite forcible action on their part.*

THE FIRST FORM OF THESE EXERCISES (the continuous-exertion form) may sometimes, for the sake of gaining mere actual finger-strength, be practised with a good deal of energy and weight, although such strong *continuous* exertion is quite contrary to all the laws of Piano-playing itself.

THE SECOND FORM OF THESE EXERCISES (or momentary-exertion form) should certainly be practised with all three of those distinct muscular-combinations which I have termed the "*Three Species of Touch-Formation.*"†

Both forms of these exercises must moreover be practised in both the finger-attitudes available at the Fiano, viz. in the "fat" or clinging attitude, and in the "bent" or thrusting attitude, since both forms of technique are equally important.‡

DESCRIPTION of the Finger-training Exercises:

FORM A. *Continuous exertion, for practising the transmission of Resting-weight, as required for Staccato and Legato, respectively.*

- I) With the weight only of the loose-lying hand—as required for STACCATO-resting.
- II) With the addition of a slight degree of arm-weight—as required for LEGATO-resting.

vention of the fingers, it is true that our tone-capacity is ultimately limited by the strength of the individual digits. . . On a par with this "want-of-strength" fallacy, is another, viz.: that a student's possibilities can be judged from the mere appearance of his hand,—and we consequently hear the jargon about "a good hand," or a "bad hand for the Piano."

True, the hand, fingers and thumb must be sufficiently large easily to take an octave, but after this is conceded the rest is idle talk. It is like trying to judge the capacity of a steam locomotive from the appearance of its wheels! Granted, that the size of the wheels differs in an Express or Goods engine, yet the power and effectiveness of the locomotive does not depend upon its wheels, but upon its "engine"; that is, upon its cylinders, &c., and especially upon its boiler capacity—its steam-forming capacity. Likewise the Pianist does not depend upon the size, etc., of his finger-levers, but upon the "engine" which serves to actuate them—it depends upon the conformation of his muscles, especially those situated on the forearm and upperarm, and it depends on his nervous constitution, that is, whether there is a tendency towards freedom or towards "stiffness." The actual length or fatness of the digits is quite unimportant. Some of the finest artists have indeed possessed most "unpromising" and ugly-looking hands. Let us then hear no more of these unmeaning phrases, but let us ascribe weaknesses and faults to their true causes.

* That is: (a) the fingers have to carry that light but *continuously* resting weight from key to key, upon the degree of which depends the difference between natural Legato and Staccato; and (b), they also have to transmit to the key those merely *momentary* actions *added* to this Resting, upon which depends the creation of the tone itself in all touches, excepting the softest; but which momentary actions must nevertheless be considerably energetic for certain touches. *Vide* Chap. XV, &c., "The Act of Touch," and page 4, &c., "First Principles."

† *Vide* Note in Appendix "The distinction between Touch-species and Touch-movements"; also, *Vide* Note I on page 77.

‡ *Vide* Chap. XVII, "Act of Touch," and page 13, &c., of "First Principles."

Practise both I and II (Staccato and Legato), thus:—

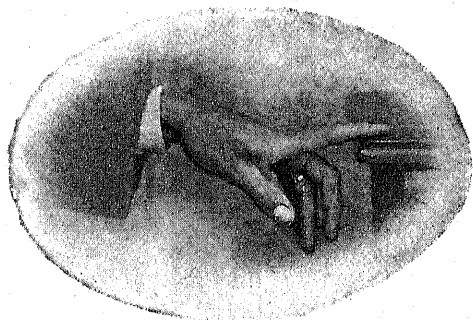
- a) After placing the tip of one finger upon a table and with the knuckles of the hand dropped at their lowest, *heave the knuckles upwards* by means of a gentle exertion of the finger, until the knuckles are fully raised.
- b) For a few moments support the light weight thus raised.
- c) From this raised position, *suddenly* allow the knuckles to fall into their initial (and very low) position, owing to the sudden and complete *cessation* of the finger's exertion, carefully timed.

Practise the exercise in both finger-attitudes—the “flat” and the “bent,” thus:—

I) For the practice of the flat, or clinging attitude:

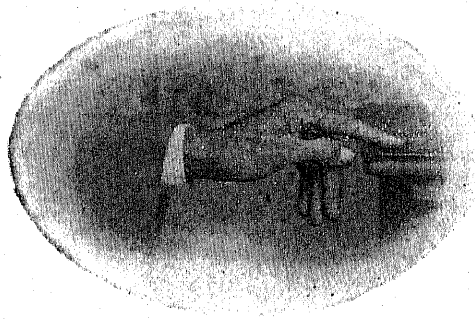
This form of the exercise is begun with the fleshy part of the tip of the finger reaching the table, the wrist-joint about level with the finger-tip, but with the knuckles well below the level of the table, and the finger itself limp and fully straightened-out. This *flat-finger* starting-position is shown at *a*) in Fig. 18.

Fig. 18.



a)

The knuckles, hanging loosely.



b)

The knuckles, heaved up by the finger.

The finger must now raise, or heave the knuckles up (by means of a clinging action), and in doing so, it must remain straight and perfectly elastic, its under tendons alone being exerted. The fully-raised position of the knuckles thus reached, is shown at *b*) Fig. 18.

After this, the finger, in collapsing, must give way *as a whole*.*

*For “clinging finger,” be most careful to exert only the *knuckle-phalange* of the finger—the portion next to the hand. The two front phalanges should, in fact, remain quite passive and limp, almost turning “inside out,” to obtain their full elasticity for “singing” touch.

II) For the practice of the bent or thrusting attitude:

To begin this form of the exercise, place the *tip* of the finger on the table (the part of the finger nearest the nail), the nail-phalange being vertical, or even bent under. The wrist should be about level with the *furthest-removed* portion of the knuckle-phalange, and with the knuckles sunk until their under-surface is almost as low as the surface of the table;—the finger itself being in its fullest curved position. This *bent-finger* starting-position is shown at *a*) Fig. 19.

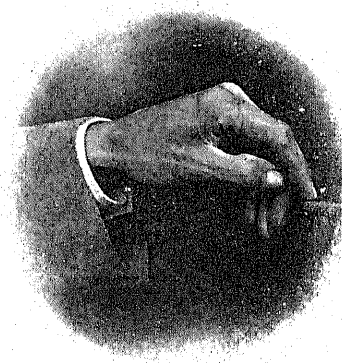
Now again heave-up (or raise) the knuckles, in this case by means of a *thrusting* action of the finger, the finger gradually uncurving itself during this process with a certain firmness resulting from its thrusting-action. The resulting fully-raised position of the knuckles is shown at *b*) Fig. 19.

Fig. 19.



a)

The knuckle, fallen in.



b)

The knuckle, heaved up by the finger.

In thrusting-touch it is the *knuckle-phalange* which must now collapse (at the right moment), and the nail-phalange must double under during this collapse of the finger, while the knuckles fall back into the low position started from.*

* Caution is necessary in learning to distinguish between the "Thrusting" and "Clinging" touch-methods, both when used at the Piano, and when applied during these Exercises, especially here—where the *actions* have to be given without sound, and actually with the *movements* reversed. Carefully therefore study the following warnings:

- a*) For *clinging* touch (in which the upper-arm should tend to hang on to the elastically-folding finger), be careful not to give a *pull* of the upper-arm in place of the required weight-release,—weight is required, but no pulling.
- b*) In *thrusting* touch (in which the upper-arm *tends* forwards against the resisting finger), be careful not to push or press forward with the arm and body; it is the *finger* alone which must "thrust"—by re-action backwards against the almost passive upper-arm.
- c*) In *singing* touch, moreover, the activity of the finger must never be anything more than a tension on its *under-side*,—under no circumstances let the finger become stiff, by use of the contrary tendons—those on its upper surface.
- d*) Again, in *brilliant*-touch, take care that the necessary "thrust" arises from the right muscles. It is true, a certain resistance may be felt on the *outer* portion of the nail-phalange and the next one, and across the hinge (or joint) uniting those two; but as far as possible avoid using the tendons going up the *back of the hand*,—the necessary curve and thrust can be given quite well without stiffening the whole hand.

FURTHER DIRECTIONS: In practising these silent Exercises, be seated before a table or other ledge of a convenient height.*

Practise one finger at a time. When practising with the lightest form of weight (the weight of the hand only is required for Staccato) let the hand *hang* in at the knuckles;† and notice that for the *flat* finger form, the knuckles are lower than the table itself; whereas with the *bent* finger, their underside barely reaches the same level as that of the table.

See to it, in the first place, that the finger is exerted only just sufficiently to raise the knuckles up. This must be done without altering the weight-conditions, without altering the height of the wrist, and without shifting the tip of the finger on the table.‡

In the second place, be careful to continue supporting for some moments the slight weight thus raised, *balancing* it without altering its degree, either of Staccato-resting or Legato-resting, and without altering the positions attained.

In the third place, be sure that the knuckles are not moved or forced down muscularly, but that they fall into their initial position *purely by weight*—purely owing to the sudden omission (or cessation) of the slight finger-exertion which had raised the knuckles, and had kept them up in the two previous steps of the exercise. Be sure also on every repetition of the exercise *definitely to time* this cessation.§

ADDITIONAL FORM of this silent Exercise—for strengthening the finger.

When your purpose is to strengthen the fingers themselves, you may also practise this “continuous” form of the silent exercise, with a considerable measure of arm-weight behind the finger. But the exercise must be cautiously practised in this form. Be careful to avoid rigid down-arm force, and also arm-weight itself in too great measure, otherwise you risk doing more harm than good to the fingers. Meanwhile, always remember,

* It is convenient sometimes to lie back in a chair, and to practise with the fingers placed on some object, about six inches high, placed upon one's knees.

† The knuckles therefore lower than the fingers or wrist.

‡ It is important to realise, that the *action* (or exertion) which causes the upward movement of the *knuckles* in these exercises, *corresponds precisely* to the action of the finger in playing; i.e.—when the finger reaches the key in playing, its action against the key *would* cause the knuckles to ascend, were the key not to *give way* at that very moment. In fact we find, if we exert the finger too forcibly, or too long against the key, that the knuckles are driven up precisely as they are in this exercise—unless the finger's action is overpowered by a gross excess of arm-weight or force. This rising of the knuckles, as a consequence of the finger's action against an immovable surface, may also serve to make clear the law of “action and re-action” to those who find it difficult to realise it. *Vide* page 158, “Act of Touch,” and page 8 of “First Principles.”

§ This exercise, in both its forms, A and B, is hence very helpful in teaching us to *cease work* at the proper moment, not only as required in *fortes*, &c., but also as required during the process of *Legato*. For the process of *transferring* the Resting-weight from key to key (or from finger to finger), both in Staccato and Legato, consists in accurately timing the “cessation” of the last-used finger's exertion, so that the next finger may automatically take up its duty. Accuracy in thus timing the “cessation” of the action of the particular finger which happens to be supporting the resting-weight at the moment—so that this weight may be *passed-on* to the next finger and may thus sound the next note, this accuracy in timing also forms the main secret of all real *pianissimo* passage playing. For unless we can thus *passively pass-on* the resting-weight, we shall probably fall into the error (error in such *pp* passages) of *willing* the finger into action which should sound the next note, and by so doing shall actually prevent that note from sounding at all!—unless, again, we clumsily use far too much weight, and thus obtain far more tone than a *Pianissimo!* *Vide* “Act of Touch,” Chap. XV, and “First Principles,” pp. 6 and 7.

that finger-force and arm-weight, when they are combined in such considerable measure as here suggested, must NEVER be thus used at the Piano, excepting during the momentary flash of key-descent.*

As to Bent and Flat finger forms:—Remember also, that the difference between the *bent* and *flat* finger action of the finger should determine the position from which you *start* the finger on its journey downwards. Remember, if you start with the finger fully bent, the exercise must take the form of “bent” or thrusting-touch; whereas, if you start with the finger quite limp and straightened-out, you *may* succeed in giving “flat” or clinging touch action.

The exercise in fact thus forms an admirable way of learning to recognize the radical distinction between these two touch-methods.

FORM B of the Finger-training Exercises:—

for the practice of the short-lived finger-actions required for the “Added-impetus” (the Act of Tone-production as apart from the Act of “Resting”):—

So long as you cannot give the almost MOMENTARY actions of the fingers (&c.), here required, so long must all true Technique remain a closed book to you—not only as regards Agility, but also as regards accuracy in the duration of Staccato, and in the quantity and quality of Tone-production itself. Hence again, the importance of these particular sets of Exercises.

DESCRIPTION: Assume the same initial position as for *a*) of Form *A*, with the knuckles fully dropped in, and the finger-tip upon the table, etc. But instead of raising the knuckles and then *keeping them raised* (as in Form *A*) here give a sharp, short action against the table by means of the finger, so that the knuckles are *tossed up*—quite a momentary action in this case; the knuckles *at once* falling back into their initial dropped position.

* Bear in mind that no greater force need ever reach the key-beds in playing than will barely suffice to keep the keys depressed for Legato; any force beyond *pp*-power must always be applied but momentarily—*lasting only during key-descent*. Nevertheless, for the gymnastic purposes of this Exercise (away from the Piano), one may employ a good deal of force continuously. It will indeed be perceived, that in *all* its forms, the practice of this Exercise must promote ACCURACY IN CESSATION—the most important factor of all as regards the Act of Touch. For it should be noted that the main point of this Exercise—in all its many forms—is the suddenness, completeness and accuracy with which we must *omit* or “cease” the exertions of the fingers, &c., employed. Even when we do practise this exercise in defiance of all the laws of Piano-technique, as just recommended,—with *continuously* applied finger-exertions, and full weight continuously resting upon them, even here the great point is, definitely to *time* the *cessation* of this force, and thus help to learn *what* to omit doing, *how* to omit it, and how to *time* the omission. Therefore, sustain the weight (by means of each finger in turn) a definite duration of time, say, while counting a slow “four,” and see to it that the “cessation” occurs promptly at the next “one.”

This form of the exercise is to be practised under all three of the muscular-combinations termed "the Three Species of Touch-formation"; and of course all under "bent" as well as "flat" finger conditions.*

DIRECTIONS: In practising this momentary form of the exercise, be seated at a table, etc., as before. The difference between the two forms is, that a sharp exceedingly short-lived action must here be given in place of the prolonged one, practised under Form A. By means of this almost jerk-like action, delivered solely by finger-movement against the table, you must *toss* the knuckles up from their previously fully-dropped position.

In practising the three distinct Species of Finger-touch (Finger-movement) by means of this exercise, bear the following points in mind:—

- a) In practising the *first Species*, you must limit not only the *movement* but also the *exertion* to the finger alone, against a loose-lying hand—there must not be the slightest exertion of the hand, either upwards or downwards. The hand must lie loosely on the keys, and the elbow must be freely, loosely poised.†
- b): In practising *second Species* (remember "Finger-touch"), while the wrist itself is now tossed-up, owing to the addition of hand force behind the finger, yet the *knuckle* and *wrist* should remain on the same level, while the fore-arm itself (with wrist) is tossed-up.‡

Be most careful not to give a *downward exertion of the arm* in place of the intended hand-and-finger combination which alone forms Second Species—the upper-arm must remain freely poised.

- c): Lastly, in practising *Third Species*, you must release *either* the fore-arm or the whole arm momentarily, and this either partially or fully, as desired—so that the fingers (in conjunction with hand-exertion) may have the work of tossing-up the whole weight thus provided. Elbow, wrist and knuckle should here rise together, and remain level with each other—the finger alone becoming depressed, relatively to the knuckle and wrist.

This form of the Exercise may thus serve to help one to a more definite understanding of the true distinctions between the three Species of Touch, and also to a better understanding of the relationship of these Species of Touch-*CONSTRUCTION* and the

*The three species of Finger-touch are: a) Finger alone exerted: b) Hand exerted behind finger, and c) Arm-weight momentarily relaxed behind finger and hand;—and all three showing finger-movement. *Vide* also, page 51.

† Light rippling Agility-passages remain impossible of attainment, unless you can give these light, momentary actions of the fingers, quite dissociated from Hand-exertion — without the least suspicion of it.

‡The knuckle, hand and wrist should retain their *relative* position, or level, during this form of the Exercise, otherwise you will be practising the action of "Hand-touch" (i.e., hand-movement) in place of the *intended* Finger-touch in its *second species* form. This matter becomes clearer when you have read the directions as to Hand-touch in the next set of Exercises. Refer also to the Appendix-note, on the distinction between Action and Movement.

accompanying mere *movements* either of the finger, hand or arm. But do not put off practising the Exercise until you have thoroughly understood these distinctions. The great thing is to *try* to practise with those distinctions in view. *Vide* also the Note in APPENDIX: "On the distinction between Touch-species and Touch-movements."*

SET XI.

FOR HAND-ACTION AND ITS CESSATION.

A set of Exercises, similar to those just described for the finger, should be practised while substituting hand-*movements* for the finger-*movements* practised in the last Exercises.

Manifestly, these Hand-touch exercises are not so important as those for finger-touch (or movement), since in practising the last-named in the *Second* and *Third* Species of Touch, you have already thoroughly exercised the hand-muscles themselves, and this in spite of the fact that the downward movement shown was that of the finger. In substituting hand-movement for the previous finger-movement, now see to it, that the finger retains its position *relatively to the hand*—that is all. The knuckles do not here move up alone (or remain level with the wrist) for Second Species; on the contrary, in this exercise, the wrist-joint itself must now rise up—higher than the knuckles, and must then fall back again—to a lower level than that of the knuckles.†

DESCRIPTION OF FORM A:—*Continuous Exertion Exercise for Hand-touch*:—

Place the tips of several fingers (or all of them) on a table, while the *wrist-joint* is fully dropped, as shown at *b*) Fig. 1. (The first "Test" Exercise, page 4.)

- a): From this lowest position, heave the wrist up—gently—until it is at its fullest height, as shown at *a*) Fig. 1.
- b): Thus raised, sustain the wrist a few moments.
- c): Suddenly let it drop of its own weight.

As in the previous finger-exercises, practise these either *a*), with the slight forms of weight required for either of the two forms of Resting, or *b*), with a considerable degree of weight, when required for strengthening purposes.

Employ either the Bent or the Flat forms of finger-attitude.

**Vide* also "Act of Touch,"—Chap. XIX: "The Three Species of Touch-formation."

† Mere difference in *movement*—that of the hand in place of the finger—presents no difficulty, once we have learned to give the correct exertions and their prompt cessation in all three Species of Touch, as practised in the preceding exercises. Nevertheless, students who may be wanting in sufficient keenness of discrimination between the movements of the hand as distinct from those of the finger and arm, will do well to practise these Exercises in their aspect of hand-movement, practising them indeed daily if necessary.

FORM B:—*Momentary-exertion Exercise for Hand-touch*:—

From a similar initial position—with the wrist at its lowest—give a *momentary* action of the hand (and finger), so that the wrist-joint itself is *tossed-up*, its return being immediate, owing to gravity alone.*

Practise this form of the exercise in the two *species* of Touch available under hand-movement, viz.: Second and Third Species. Alternately practise with bent and flat finger-attitudes.

Re-read the advice given relatively to the practice of the Finger-exercises—the last Set of exercises. Little can be added, as the same advice applies here. Notice, of course, that the distinction between the two exercises is, that in practising the finger-touch form, you move the finger relatively to the hand; whereas in the hand-touch form, you move the hand relatively to the forearm—the fingers in the meantime not changing their position relatively to the hand, either in “bent” or in “flat” finger forms of this Exercise.

SET XII.

FOR THE FURTHER STUDY OF FORE-ARM ACTION IN CONJUNCTION WITH UPPER-ARM LAXITY.

After having practised the contrast between finger and hand movements, one should follow this by contrasting hand-movement with that of *forearm* movement. An exercise, admirably calculated to serve this purpose has already been described in Part II—Set IX, the last of the “preparatory exercises.” *Vide* page 66.

This will now be recognized as similar in character to FORM A of the two sets of exercises just discussed—those for the finger and hand respectively.

DIRECTIONS: First re-practise the fore-arm exercise, as described in *PART II*, in its continuous-exertion form; viz.,—

- a): Lift the lax upper-arm, through the reaction derived from the fore-arm by gently pressing the wrist-joint upon a table, &c.
- b): Poise or balance the lax upper-arm for a few moments thus, by means of the fore-arm’s supporting effort.
- c): Let it drop.

* Note, that it is “action” (i.e., *exertion*) which is here referred to, and that *action* does not necessarily imply *movement*. In addition to hand-exertion, an *exertion of the finger* is required in all hand-touches, although nothing is visible except a movement of the hand. The finger of course must retain its position unchanged relatively to the hand, in such form of Touch-movements.

After this, while employing the same conditions as before, now practise the exercise with only a quite MOMENTARY action—as in Form “B” of the Finger and Hand Exercises. Thus:—

While resting the wrist-joint upon a table (or upon the other arm, held to receive it) TOSS UP the elbow (that is, the upper-arm), by means of a sufficiently energetic, but QUITE MOMENTARY down-exertion of the fore-arm, the elbow instantly dropping back into its former position.

The difficulty to be overcome is, to give the necessary *action* (or exertion) of the forearm, while not disturbing the fully lax or “let-go” condition of the upper-arm.

Refer to the advice given for this exercise, under its “Set IX” form,—page 66-8 where Fig. 17 will also be found, illustrating it.

SET XIII.

AGILITY-TESTING EXERCISES.

ADDITIONAL FORMS OF THE “THROW-OFF” EXERCISE, FOR THE ELISION OF ARM-STIFFNESS, &C.

FORM A; *Closest-position Arpeggi.*

DESCRIPTION: The benefit to be derived, technically, from the study of the “throw-off” *principle* (as studied in Part I) and from the REPETITION-NOTE *principle*, may with advantage be combined in one exercise by advanced students and players, who should adopt it as “Daily Practice,” since both forms of study make for the elision of arm-force, without which elision Agility cannot be attained.

This combination-exercise takes the form of Arpeggi, up or down the instrument, with a “throw-off” or “kick-off” at the end of each. These are played *in the closest position* possible—the hands taking adjacent inversions (or positions) of the same harmony. Consequently, we obtain a close sequence of note-repetitions, the one hand repeating the very notes just played by the preceding hand. The slightest *prolongation* of any of the notes sounded by the *preceding hand*, will under these circumstances instantly mar (or even entirely prevent) the sounding notes by the *succeeding hand*, and will thus warn the student of his misdoing.

Effectively to serve their purpose, these “close-position” arpeggi should be practised *quite swiftly*—at fullest agility. At first they should be practised quite lightly; afterwards they should also be practised quite *forte*.

In the *ascending* form, (Ex. 13a) the left hand must be *legato*, while in the *descending* form, (Ex. 13b.) the right hand is to give the *legato*. A true legato

cannot be given by the *other* hand; on the contrary, this other hand must give a perfectly "resilient" touch—that is: the notes in this hand must be so well executed and *timed* in their production—the *cessation* of the impulse delivered to each key must be so precisely timed, that the keys are left free really to *REBOUND*, or bounce back.*

Practise the exercise in both the *first* and the *second* Species of Touch. Practise it also in the "hybrid" Second Species with extra heavy "Resting," *i.e.*, with a continuous weight slightly heavier than the usual Legato-weight resting on the keys and vibrating with the fingers.†

Ex. No 13a

This Example is continued on next page.

* If accuracy in "cessation" is not attended to when the passage is executed properly up to time, unclearness will at once result, and this will thus warn the player of his fault. Such unclearness may be occasioned in three ways: (a) by applying an unsuitable degree of Weight; (b) by actually exerting the whole arm downwards, rigidly; or (c), by prolonging beyond the proper instant the required exertions of the finger and hand. Always be careful to leave the Elbow perfectly free, forwards and backwards, as learnt in Test No. 1—page 5, etc. Re-study Note 3 on page 59 as to Agility.

† In giving the passages, *forte*, a certain additional degree of arm-weight may here be carried by the fingers, not only without harm, but with actual benefit to the tone. This "special form" of touch (a hybrid *Second Species*) can of course only be adopted when the passage is taken at sufficient speed, in conjunction with a good forceful finger-attack upon the string! This extra weight, thus "resting," should not be obtained from the Upper-arm, but from the Fore-arm mostly, and it should never be greater than the fingers can easily *prevent* resting on the key-beds—by their sharp, kick-like actions against these; otherwise, such extra weight will inevitably more or less lock or wedge the hands against the key-beds, and will thus impede all Speed and Tone. *Vide* pp. 269, 271 and 226 of "Act of Touch," and p. 98 of "First Principles" for further explanations of this "occasional" form of touch. Also re-study advice on page 52 of this present volume—Elbow-freedom in "Second Species." Also see page 59 and Note on page 28.

Then take the same harmonies a semi-tone higher (in arpeggio:)

And so on, a semi-tone higher each time through a number of keys.

Then return the reverse way, thus:—

And again continue to ring the same changes of harmony on the same Bassnote:—

And then again play the whole set of harmonies a semi-tone higher, each time until sufficiently practised.

FURTHER HINTS: The reason why this Exercise forms so admirable a Test and Lesson in Agility, is to be found in the fact, that unless Arm-force (and also almost all Arm-weight) is thoroughly eliminated from the *leading* hand, its notes will be kept depressed too long to allow of their rising in time for the following hand to re-sound them. In playing the notes of this "leading" hand (the *right* hand in ascending, and the *left* hand in descending) see to it therefore (a), that the fingers DO CEASE their action for each note EARLY ENOUGH in key-descent, and (b), that the arm remains "light enough" to enable them thus to *cease work*,—so that the keys may in their turn be free to bounce back, fingers and all. At the same time, while insisting on this "bouncing" key—a true Staccato—see to it also, that each key is properly "prepared," i.e., that each key is securely found and taken hold upon (by its surface) *before its actual depression*;—for you must not give way to the ever-present temptation merely to hit or tap *at* the keys, when a passage is intended to be "light." Remember, that to obtain "lightness" in a passage, lightness is required *at the bottom level* of the keyboard, and that such lightness at the right place does not in the least preclude a good firm foot-hold (or *finger-hold* rather) upon the keyboard *at its surface level*; and without which firmness at the proper place—at the top-level of keyboard—all Execution becomes insecure, and uncontrolled as to tone.*

A slight clinging effect with the first two phalanges against the key-surfaces is beneficial in such light passages, since it gives the required "grip" of the keys, while it nevertheless permits us to leave the *key-beds* perfectly free of any continuous pressure.†

Always carefully attend to these two points—(a) the grip at the surface-level, and (b) the freedom at the bottom-level of the keyboard, and the very moment you have succeeded in this you will find that the main difficulties of the problem of Agility have vanished.

This Exercise may also be practised on arpeggi of the Diminished Seventh; and also with excellent results, on Dominant Sevenths and their Inversions.

IN ADDITION to the "throw-off" form shown in the last Examples (No. 13 *a* and *b*) this closest position of the Arpeggio may also occasionally be practised as a *continuous* rising and falling grand arpeggio—without stopping for any rising of the arm at the top or bottom limits.

FORM B, of the Agility-testing Exercises.

CLOSEST-POSITION SCALES.

This form of exercise is precisely similar in principle to the one just considered, but it forms even a more severe "test" for wrong-doing against the laws of Agility. Diatonic scales are here practised (like the Arpeggi) in their closest position; i. e., with the hands sounding adjacent notes—at the interval of a second, in fact.

To serve their purpose, these close-position scales should be executed at *great* speed and in this case they also become less unbearably ugly than they seem at first. This exercise, with the hands treading so close upon each other's heels (with their close note-reiterations) provides, indeed, such splendid training in the avoidance of "key-bedding," that one should persuade oneself to put up with its uncouth effect upon the ear.

* Remember, you can perfectly well "prepare" and take hold upon the keys, whilst nevertheless playing with a good "swinging" finger movement—from a well-raised position. The descent to the key and the succeeding descent WITH the key may form one unbroken movement, and yet you can feel and judge the key *on the way down*. See also, Notes pp. 13, 42 and 91.

† *Vide*: Note on Intensified key-contact, page 185, of "Act of Touch," etc.

A minor is perhaps not worth altering, since the increased turning-under from the ring-finger on G sharp would, with some hands, counterbalance the advantage gained.

D minor, with ring-finger or middle-finger on B flat, would however certainly be a better fingering for many hands than the old fingering.

Several of the melodic minor scales could be improved for the left hand on this principle, but the descending fingerings would have to differ from the ascending ones. Try the melodic minors of A, G, F, C and D.

Reference to the imperfections in the orthodox fingering of scales naturally opens-up the whole question of the PRINCIPLES of fingering, and although this does not strictly come under "Touch," yet a little advice on this subject is here desirable. This will be found in a Note given in the APPENDIX. *Vide*: "Some general principles governing the choice and memorizing of Fingering."

FORM C, of the Agility-testing Exercises.

Even more searching than the last Ex., are scales, &c., taken by alternate hands, as in the following Examples—Fig. 15. These should be practised (with their proper scale fingerings) at as great a speed as possible; for the greater the speed the more severe do they become as a "test" against "key-bedding." On an Upright piano, not provided with the "repetition-lever," they cannot be practised so quickly as on a Grand provided with that mechanical device; but the Exercise is quite as effective, if not more so.*

This form of the exercise is, of course, for more advanced players. Bear in mind the advice given for Forms A and B.

No 15^a
Prestissimo.
leggiere

The musical notation for No 15^a is written on a single staff. It begins with a treble clef and a key signature of three sharps (F#, C#, G#). The tempo is marked 'Prestissimo' and the style is 'leggiere'. The piece is divided into two main sections. The first section is for the right hand (R.H.) and consists of a series of eighth-note patterns with accents. The second section is for the left hand (L.H.) and consists of a series of eighth-note patterns with accents. The notation includes various articulations such as 'R.H. marcato' and 'L.H. leggiero'. The piece ends with 'etc.'.

Also, with reversed accents, thus, more difficult still:—

Ex. No 15^b

The musical notation for Ex. No 15^b is written on a single staff. It begins with a treble clef and a key signature of three sharps (F#, C#, G#). The piece is divided into two main sections. The first section is for the right hand (R.H.) and consists of a series of eighth-note patterns with accents. The second section is for the left hand (L.H.) and consists of a series of eighth-note patterns with accents. The notation includes various articulations such as 'R.H. marcato' and 'L.H. leggiero'. The piece ends with 'etc.'.

*On an Upright unprovided with the repetition-lever, the actual speed in such repeated-notes passages is limited, since the keys must in this case be allowed to rise almost completely before they can be re-sounded.

Further variations:

Ex. N^o 15^c

staccato
R.
legato
L.

etc. etc.

legato
R.
stacc.
L.

Ex. N^o 15^d

R.
L.

etc. etc.

These will be found still more difficult with their accents reversed. All keys, major and minors, should thus be practised.

ARPEGGI may also be practised on the same principle. Thus:—

Ex. N^o 16.

R. H.
L. H.

etc. etc.

SET XIV.

FOR THE ELIMINATION OF HAND FORCE.

The following exercises form excellent further schooling for Staccato and Agility.

We must remember, that in passages of extreme Agility, and in light, diaphanous passage-playing (the *first* Species of Touch in fact) that the hand must lie passively on the keyboard behind the fingers, whilst these alone do the necessary work. Hence the necessity of being able to "eliminate" the down-exertions of the hand when required; exertions which we are always prone to give in sympathy with finger-exertion, but which exertions will at once spoil the desired lightness of such passages. These following exercises also form an admirable introduction to the practice of Hand-touches, and for Octave playing also;

for they facilitate the preliminary unrestrained fall of the hand on the keyboard.* They are, therefore, strongly commended to the student, and even to the advanced player. In reality, these exercises form the logical continuation of the "throw-off," or *arm-elimination* exercises studied in Part I. There we learnt to "toss-up" the whole arm, or the forearm alone, by means of the re-actions derived from the down exertions of the finger *and the hand* against the keys.

We must now learn to toss-up the hand itself in a similar way, by the action of the fingers alone; this we can do easily enough provided we leave the *down*-muscles of the hand passive during the process.

In fact, the best way to understand the present Exercise, is to practise it first with the *whole-arm* "throw-off"—as in the *Third* of the "Daily Tests" discussed in Part I; then to throw up the *fore-arm* alone, and lastly to take the next step in order, and that is: to let the *hand alone* rise as a re-action of the fingers' action against the keyboard. These Hand throw-up exercises take several forms. The earlier ones are really "preparatory," while the later ones may well become part of the advanced player's repertory of Daily Exercises.

These exercises, when taken at a moderate rate, should always take the double-note form; but when taken at full speed, single notes and double notes are equally useful. The double-note form is as follows, a sequence of "inverted slurs"—rhythmical groups of two sounds with the "kick-off" accent on the last one; thus:—

Ex. No 17.

The musical notation for Exercise No. 17 consists of two staves, treble and bass clef. It features double-note chords with slurs over them, indicating a sequence of notes. Fingerings (1-5) are indicated above and below the notes. The exercise is divided into sections labeled 'ossia:' and 'etc.'.

DIRECTIONS:

- a) : After placing the middle finger and thumb of the right hand on the interval of a third, C—E, and while retaining the fore-arm in its self-supported (or balanced) condition, sound those notes in *first Species of Touch*,† and use no more Resting-weight than will just suffice to keep these keys lightly depressed.

* And they also teach promptness in the cessation of the subsequent *exertions* of the hand, when such are employed.

† *Vide* Note p. 77 as to "three species" of Touch-construction.

- b) : Having the index and ring fingers comfortably raised over D—F, now bring these fingers into contact with their keys, continuing (or “following-up”) this down-movement with a kick-like action against the key-beds, so that in the very sounding of these notes, the fingers *kick back* the knuckle of the hand,—causing the hand to rise about an inch or so into the air, as shown in Fig. 20:—

Fig. 20.



- c) : The hand must not remain raised, but must *at once* by its own weight fall back upon the keyboard, where it must be lightly *caught* (as it were) by the first two fingers again—the thumb and second fingers, but now on the notes *D* and *F*, thus sounding the first notes of the next “inverted slur,” and thus forming a gradually ascending sequence of such slurs. The descending sequence is also available. *Vide* Example No. 17.

The process for the left hand is similar to the one described for the right hand. The hands should at first be practised separately. Afterwards, the hands should be practised simultaneously, as shown in the Example.

Besides practising the “kick-off” effect, as here described, you may also practise a more gentle form, almost a “float-off”. But this cannot be a true “float-off” here, since that would imply *Weight* and gradually applied finger-force; and the whole point of this present exercise is not only to do without the factor of *Weight*, but even to omit *Hand-force*.* In a word, it is absolutely essential here to practise pure *First Species*—finger-activity alone, without the slightest suspicion of hand-action. With the *sudden* finger-attack used, the

* In one sense, certainly, “*Weight*” is ever present. The self-supported arm (in these light touches) should always be so perfectly “poised” that there is always plenty of *give* at the Elbow—in sympathy with the fingers even in “*First Species*.” But the element of *SEPARATE RELEASE* of weight for each note (*Third Species*) does not apply here. *Vide* Set XVIII, on freeing the arm—“*Arm-vibration*.” Also refer to page 52.

Ex. No 19a

Left Hand, octave lower

etc. etc.

or: 3 5 / 2 4 / 1 3

or: 3 5 / 4 2 / 3 5

This should be practised in all keys. Taken in the form of Dominant Sevenths, or their inversions, an agreeable and interesting variation of this exercise is obtained.

It may also be practised in double-note (quadruple) arpeggio, and then forms also good practise in the substitution of fingers, as for instance:—

Ex. No 19b

R.H. 3 2 1 2 3 4 5 / 4 3 2 1 2 3 4

L.H. 2 1 3 2 1 3 4 / 1 3 2 1 3 4 5

(or 4) (4) (4) (4)

SET XV.

FOR THE STUDY OF OCTAVE PLAYING.

PREAMBLE: There are several distinct factors which together make for ease in octave-playing. Obvious enough is the necessity for vertical freedom of the hand, or wrist; but just as important, if not more so, is the necessity for its freedom *rotarily*. Still more important (and indeed the most difficult thing to acquire in octave-playing) is, the making of *proper contact* with the keys. The temptation to hit the keys down, or to hit at them, is so great in octave-playing, that far more failures result here from this fault than anywhere else in playing. And this, because when octaves are played rapidly, and with plenty of hand-motion, it may certainly *seem* to the onlooker like key-hitting; and the unwitting are hence misled into "banging away" at the key-board, in imitation of what their eyes seem to tell them. Accuracy of notes, and accuracy of tone in octave-playing nevertheless depends precisely on the degree of care bestowed on this very point—on the proper and careful "preparation" of each set of two notes. So far from really hitting at the keys, the finger-tips must fall quite lightly upon the keys, and must nevertheless *nicely* "take hold" of the keys *at their surface level* before they are used for the production of each set of two sounds. The limit of speed at which you can effect this "preparation" successfully, is in fact the limit of speed at which you can play octave-passages successfully.*

* Vide first Note on page 83, as to "playing from a distance," but *without hitting*. Also 2d Note page 42, and 3d Note page 13.

It behoves everyone therefore to give most pointed attention to key-contact, this being the most important and difficult factor in octave playing. In reality, we here have still another light thrown on a matter so strongly insisted upon all along in these teachings, and that is, the importance of properly attending to the ACT OF RESTING. And we shall find, on studying this matter of Key-contact so closely as is here imperative, that we do really *rest* on the keyboard in successful octave-playing (and at *surface-level* mostly) however strange and impossible to grasp that truth may seem, when first propounded to the student — and to the teacher and artist who has formed wrong ideas on the subject.

The exercise given for the proper practice of octave "preparation" (or key-contact making) and here given *last* in order, is therefore the most important of all these octave exercises. It is however not advisable to study this — the progression from key to key — until freedom has been acquired both rotarily and vertically in the actual sounding of the octave-sounds. Hence these octave exercises take the form of *Three Steps*. The first of these steps is for *rotary* freedom; the second is for *vertical* freedom, and it is the third and last which takes the form of "Note-preparation Exercises" — which are to teach us the proper mode of *progression* from octave to octave *without* hitting at the keys.

In the preparatory stage of learning, Set XIV and Set XIII will also help us to a better understanding of the required movements and the accompanying conditions of the hand, fingers and arm.*

Directions for the Three Steps towards Octave Playing.

OCTAVE PLAYING, STEP I:—*For Rotary Freedom:*

Take the following Clementi-type of exercise first—Ex. No. 20, next page. It should be practised while giving an actual *rotary movement*—"Rotation-touch" therefore. The soft notes should be sounded with but little (if any) preliminary raising of the finger from off the keyboard-surface; but the accented notes should be played from a distance of an inch or more (as shown in Figures 8 and 9, pp. 43-4). Take care when "playing from a distance," that key-contact is effected with the least concussion possible; and always *with the intention* of realizing the actual "*resistance-to-movement*" which the keys in question offer at the moment, and of THINKING the subsequent actual movement of the key which forms the act of making the tone.

Take great care also, that all effort is fully ceased the very instant that each sound appears—always excepting that slight residue of weight required to keep those keys depressed. Each time you practise this exercise do not stop until you have satisfied yourself that you have regained accuracy in respect to this cessation or OMISSION of the efforts used, *early enough in key-descent*. And the exercise should be again and again undertaken, so long as you feel the least doubt on this point. Practise the following example on other notes besides the suggested ones. Those unable to reach the octave with ease, should at first practise all these exercises at the interval of a *sixth*, &c.

*Agility in octave playing depends as much on the same "Two Laws of Agility" as does Finger-agility itself. That is: we must learn to eliminate all rigid "down-arm" force, and even arm-weight itself in a great measure, and we must learn accurately to time the *cessation* of the exertions employed—those of the hand and finger. Hence the "throw-off" tests apply here with equal imperativeness. Hence also, we must in the first place insist upon facility being acquired *in the close-position arpeggio and scale*—Set XIV. After that, the following special exercises should be proceeded with.

Ex. No 20

Step I.

OCTAVE PLAYING, STEP II,—*Vertical Movement combined with Rotary Freedom*:—

As soon as you are able to give the rotation-accent as freely with the thumb as with the little-finger, you should find no difficulty in *combining these two forms of freedom*; that is, you should not find it difficult to play both the notes concerned in the previous "step" *simultaneously*, as shown in the following Example (No. 21); thus playing the octave itself, perfectly freed from all *rotary stiffness*:—

Ex. No 21

Step II.

Left Hand octave lower.

Be sure to *feel* the two keys employed firmly under your finger-tips while the keys are still at surface-level, but nevertheless avoid all feeling of solidity when at their bottom-level.* Bear in mind also, that the fingers, during the moment of key-descent, must themselves be *firm enough to transmit to the keys* the force supplied by the action of the hand. Above all, always THINK the two distinct sounds forming each octave.†

Rhythmically, see to it, that each set of three or more octaves each time *leads up* to the fourth, and accented octave.

It is not really necessary, either in the last example or in this one, that the fingers engaged should at all *quit the surface of the keyboard* during any part of the exercise. Where there is any temptation to hit at the keys, it is indeed desirable that these two exercises should be practised while the finger-tips remain neatly but sufficiently firmly and continuously knit against the key-surfaces throughout the course of the exercise; the keys being of course allowed to bounce back to their upper-level (thus producing Staccato)

* Remember, the motion to the key and the motion WITH the key may form one continuous, unbroken descent. *Vide* Note p. 83 and Notes on next page, and Preamble on p. 90.

† That is: Do not merely "plunk" your hand down solidly like a hoof. The same advice applies in playing chords—always *mean* the individual sounds composing each chord, and there is some chance of their sounding musical.

and each key being accompanied in its return to this upper-level with the finger-tip nicely knit against it and loose-lying hand. The fingers thus remain in contact with their respective keys throughout the exercise—in spite of the Staccato, and this *contact* should thus be continuously and individually felt, until one has learnt not to hit. After one has learnt this, one may also learn to play “from a distance,” and may then do this not only without risk of doing harm, but with hope of benefit. In the meantime, in trying to obtain this unbroken key-contact, see to it that the keys are left perfectly free to rebound—under no circumstances must there ever be any “firmness” against the *key-beds*. The required “firmness” should be only against a *movable* or moving key, and should be derived solely from the two front phalanges of the fingers. Preparatory work for “Hand-touch” may here be required.*

PREPARATORY TECHNICS IN HAND TOUCH:—

The gradual acquisition of good Hand-touch (formerly mis-termed “Wrist-touch”) will be assisted by the practice of exercises on the following plan:—

An exercise on the repeated-notes principle; practise this at first with every *fourth* note accented, then with every *third* note accented, then with every *second* note, and finally with the accents so closed-up, that *each* note is played *forte*. The Tempo of the *semiquaver* must remain unaltered throughout this exercise, and we are thus as it were gradually persuaded into playing freely, even when giving the notes *forte*. Do not practise for any length of time on the same notes, it tires the ear, and thus renders it more difficult to give the required closeness of attention. See Ex. 22, next page.

* *Exercise on the Preparatory Fall of the Hand:* In the case of students who cannot at all discriminate between hand-exertions and arm-exertions, the several “arm-elimination” exercises already discussed should be followed (or preceded) by some preparatory practice *with ample preliminary movements*, as in the following form of exercise:—

Raise the hand well off the keys—but without raising the wrist joint itself—raise the hand so much that the finger-tips are about on a level with, or even higher than the top of the wrist. From this exaggeratedly high position, learn to let the hand *drop* upon the keys; at first allow all five fingers to reach the keys together, but afterwards only allow three fingers (forming a triad, &c.) to do so. The hand must fall solely of its own weight; it *must not be helped down* muscularly. If you succeed in thus letting the hand fall “lifelessly” upon the keys, the keys will not go down, and there will not be any sound—the weight of loose left hand is not sufficient to sound them. After you have learnt to provide this “drop” with some facility, and have thus realised that the motion *towards the keyboard must be quite effortless*, not till then may you begin to learn how to “follow-on”—to continue—this light fall *upon* the keys by the necessary effort which will cause them to descend, and to sound their strings. This last is done, by following the drop (and contact) unbrokenly with the necessary *exertion* of the hand and implicated fingers which will give us the tone,—and this muscular combination represents Second Species of Touch-formation.

Notice, when the complete process is properly executed, that the actual *movement* of the hand remains unbroken up to the very moment of tone-emission. That is: the gentle fall (or preliminary drop) of the hand upon the key is *continued* without break, by the necessary *action* which depresses the key and creates the sound, and this action must of course cease instantly that the sound is reached. Obviously, before attempting this Ex., Set V—on Hand-release—should be mastered.

d)

e)

Finally

OCTAVE PLAYING, STEP III:—*Exercises in note-preparation—for gaining certainty in passing from Octave to Octave:—*

PREAMBLE: This forms the most important of all these octave-exercises. The same principle may also be usefully applied when “learning the notes” of finger-passages, when any difficulty is found in sounding the right notes, as often happens in the case of extensions and skips. This Exercise-principle consists in passing the fingers on to their new keys the moment the preceding notes have been sounded; and while making this *progression* from key to key as nearly instantaneous as possible, nevertheless doing so *without sounding the new keys*, and yet reaching these securely—and making the contact upon them, at their surface-level, quite firmly. It should in fact seem to the player *as if the re-bounce of the last-sounded key impelled him on to the surface of the next key*. Once this point has been gained, we have succeeded in acquiring a most necessary automatic habit; and that is, *to find the place of each successive note in a passage as a distance from each preceding note*.

Until this last point has been gained, there will always be “uncertainty as to notes”;—for, until this habit has been acquired, the notes are thought of as *separate* “things,” to be “shot at” as it were, instead of their being realised as a *sequence of distances* automatically taken, but more or less consciously chosen as to *tone and time*.*

This “preparation” of notes indeed becomes automatic, once we have firmly made a habit of that part of Technique which, in these Teachings, has been named “the Act of Resting.” *Vide*, “Act of Touch,” pp. 112 and 135; “First Principles,” pp. 4 and 5.

DESCRIPTION:

Play, in Octaves, one octave of an ascending or descending scale; or take a short arpeggio in the same way.

Take it at first with a *long pause* after each individual progression; thus:—

* There is no successful artist who has not learnt this lesson, although he may not be sufficiently of an analytical disposition to recognise that this *continuity* of technique forms the explanation of his “certainty.”

Ex. N^o 24.

R. H.

L. H., octave lower.

silent

silent

silent

simile

Sound the demisemiquaver (the “32nd note”) sharply, and *staccatissimo*; and let it be so short in duration, that the keys, in rebounding, seem to land you *instantly* and firmly upon the two notes forming the next octave, but *without sounding these*. Then sound that octave, and proceed similarly with the next.*

Complete the octave of ascending or descending scale, or arpeggio, whichever has been chosen.

Repeat this *same* octave of scale etc., several times, until the process has become somewhat familiar. Then execute the whole octave of scale etc. without stop, *presto*;—at the top speed of the demisemiquavers, without any pauses. See to it that the progressions are made without quitting the key-board surface.

Practise each hand separately at first, afterwards practise them together.

Practise the exercise *pp*, and also *ff*.

Practise all the scales in this way, and ALL the arpeggi too; taking different keys on different days.

Also practise on this same principle all octave passages and skips met with; also any “Finger” passages found difficult.

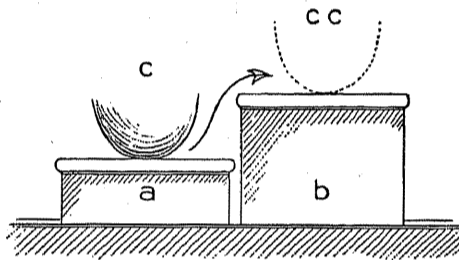
FURTHER DIRECTIONS: Play each octave so freely, and cease all action so neatly at the very moment of tone-emission, that the keys, in re-bounding, form an absolute *Staccatissimo*; and be sure to allow this actual rebound of the two implicated keys to *impel* and prompt the hand and arm into the necessary horizontal (sideway) movement which serves to bring the finger-tips upon the two keys next required but while *not sounding these last-named*. This motion, from the first-sounded octave to the second and *silent* octave must be so quick as to seem instantaneous in its progression from the *bottom-level* of the first set of two keys to the *surface-level* of the second set.† And remember, although the front two phalanges are to take hold upon these last two keys with sufficient firmness, nevertheless these keys must *not be depressed*. Their depression must ensue *subsequently*, when you feel those notes to be *musically* due.

* Each time, before sounding the octave, *think* the distance to the next silent one.

† In fact, you must rely upon the *up-springing* of the preceding keys to prompt, suggest and *automatically time* that required lateral motion of the hand and arm which will bring the two fingers over their new keys, and land them upon these neatly and *without percussion*.

In a word: the arrival of the fingers upon the new keys should be automatic and instantaneous, while the actual *sounding* of them must be *willed*. To succeed in this, you must think each time of the two (or more) sets of notes simultaneously—as one thing. Thus, in beginning the exercise (before sounding the first octave) you must think not only of the two “A”s, but you must also have in your mind *the progression from them to the two “B”s*. Thus think each group of two octaves, completely, before sounding the first octave of each group. Remember especially, to sound the first note like the shortest *acciacatura*, and persist until it seems as if it were the impetus of the ascending keys which impelled you on to the next keys, your finger-tips apparently *mounting* the very *edge* of the next key, as suggested in Figure 21. Be sure to *think* of each octave as consisting of two individual sounds—not *one* sound.

Fig. 21.



a and *b* are two Piano-keys seen facing,—*a* depressed, and *b* non-depressed. *c* and *cc* represent the tip of the little-finger, before and after its horizontal progression.

MORE ADVANCED FORM OF THIS EXERCISE:—After having thoroughly learnt the process of correct progression from octave to octave, by means of the last-considered exercise, more difficult exercises in the following form should be undertaken. *

In practising these groups, the point is to *pre-see* or pre-think *the whole quick progression of notes* forming each short arpeggio figure, before sounding the first of the octaves concerned. Thus, in Example 25, No. I, play the first dotted quaver, but do not start on the rest of that arpeggio (*E*, *G* and *C*) until you have thoroughly foreseen the whole set of *progressions*—the distances—from *E* to *G*, and also from *G* to *G*. When you have mentally pictured the complete *sequence* of the progressions (*transitions*, or key-board spaces) leading to the last note of each group forming the arpeggio, then proceed to sound them, but not before. Also, do sound them in as rapid succession as possible—each arpeggio-group like a flash, in fact. Practise these groups in all keys; and commence successively with all the inversions. Vide pp. 81—2. Do not try the more extended ones until you can do the short ones fairly well.

* See next page for Ex. 25.

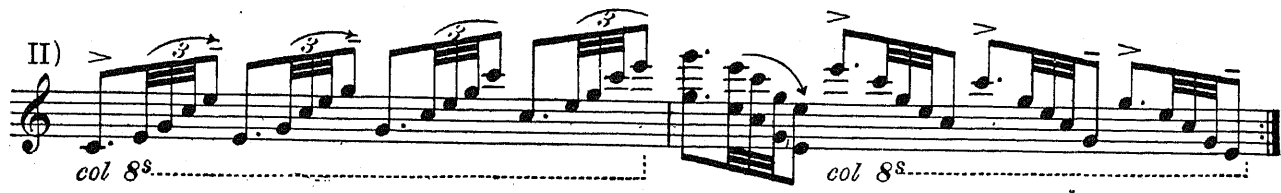
Ex. No 25.

I) *R.H.*



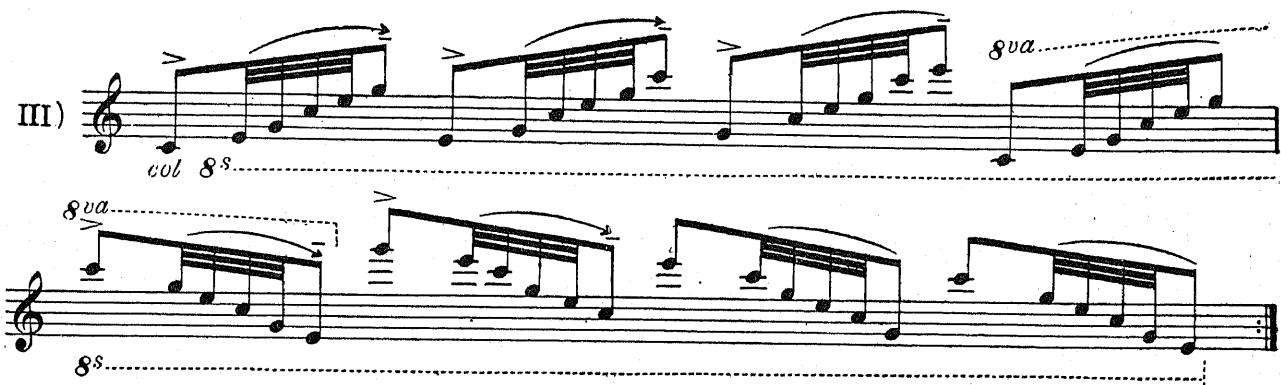
L.H. octave lower

II)



col 8s

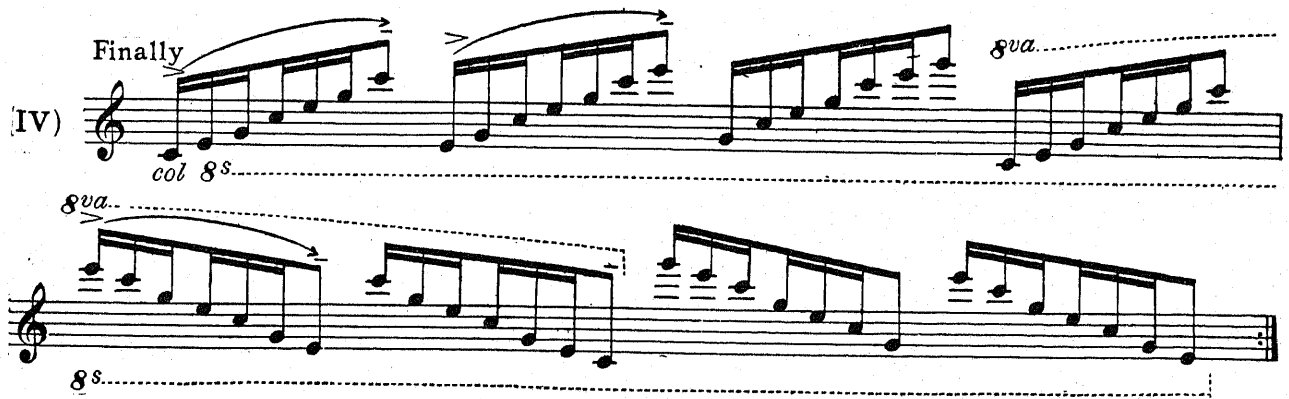
III)



8va

IV)

Finally



col 8s

8va

In practising these Speed-exercises, *keep quite close to the keyboard*—that is, without actually quitting the keyboard surface—without any senseless hand-raising! At the required speed there is no time for it.* Be careful, moreover, that the *elbow itself does not move* during the rapid little arpeggio-group. Before beginning each group, place the elbow in such a position that you can conveniently reach *all* the notes of the little arpeggio-group. This means, that the elbow must be held outwardly from the body in sufficient measure to allow you to reach the furthest *outlying* notes by a movement of the *forearm* alone; that is, so that you can reach the *highest* notes required in that arpeggio-group by the right hand, and the *LOWEST* notes required by the left hand, without any displacement of the elbow. The forearm can easily enough be turned *inwards* (with the elbows outwards) before you start sounding any of the notes of the arpeggio. Do not, however, exaggerate this outward placing of the elbow; it is only required in sufficient measure to enable you easily to reach the extreme outer notes of the figure you are about to play. The movement during the arpeggio is a fan-like one, executed by the forearm alone, turning on the elbow. All rapid skips should thus be executed—without elbow-movement. It is the only way of obtaining certainty in such skips, and a composer is ill-advised who writes skips beyond this two-octave extent *at full speed*, for beyond that compass the skip must be accompanied by a movement of the elbow itself (or upper-arm) and this at once renders the passage cumbrous and uncertain.† *Vide*, in this connection, Set XX, on Upper-arm Rotation, which action is required for Fore-arm skips—without displacement of the Elbow.

* The proper movement feels much like a *glissando*. (*Vide* p. 219, "Act of Touch.") Really *rest* on the keyboard during the whole of each arpeggio-group, not too heavily, but also not too lightly. *Vide* Preamble p. 95.

† Such passages are, however, to be found sometimes, written purposely because of their difficulty, for virtuoso-display.

SET XVI.

FOR THE STUDY OF FINGER-INDIVIDUALISATION.

PREAMBLE: "Finger-individualisation" is a term denoting both cleanliness and clearness in passage-playing,—the opposite to "sloppiness" "Cleanliness" depends on the absence of wrong notes or split notes, while "clearness" depends on rhythmical perfection—upon accuracy in the minute sub-division of the time-beats.

Finger-individualisation hence demands from us:—

- a) Ability to distinguish and to direct each finger individually.*
- b) Ability to use each finger in the *way* required; and
- c) Ability to *time* the action and cessation of each, accurately.

The vast majority of exercises in this volume are designed to help us towards correct action of the fingers, and the timing of the culmination and cessation of such action; such, indeed, is the purpose of the Freeing and Aiming exercises, and the "Throw-off" and "Rotation" Exercises of Part I; and of the Agility-testing Exercise, Set XIII of this Part. But there yet remains to be dealt with, one more "special" form of exercise for the fingers, and the purpose of this one is, to teach us freedom of the finger *while other notes are being held down*,—so that the holding down of notes by one or more fingers may not tend to impede the free action of the *remaining* fingers of the same hand, and thus prevent these remaining fingers from doing their work easily. In fact, you must learn to leave any desired fingers perfectly free at the knuckle, although you may be holding keys depressed by these fingers.

But this opens up the whole question of DISCRIMINATION BETWEEN THE FINGERS, and it will, therefore, be well to glance at the various forms of exercises required for this purpose at the Piano itself. These roughly come under the following three categories:—

- I): *The repetition or shake principle.*
- II): *The five-finger figuration principle, and its extensions into Scales and Arpeggi.*
- III): *The knuckle-freeing principle during down-retention of keys—concerned in this particular set of Exercises.*

That is: *firstly*, we must learn to direct the action of each individual finger independently of the others. This is done through simple exercises on the shake or repeated-note principle, followed by a few exercises on the five-finger principle on five adjacent white notes—

*By "distinguishing" between the fingers, is meant the power of mentally directing them, so that we are able to move solely the intended fingers, and not others, instead. That, of course, is the first step towards being able to play right notes; but the *main* factor in finding the right notes on the keyboard lies in close obedience to the Law of Resting, so that each note may be found as a direct measurement from each preceding note—as recalled to mind in the last set of exercises, on Octave-playing.

as found in most books of Technics. We must also become familiar with all other possible keyboard positions of the fingers; this ground may be roughly covered by practising a few "five-finger" and "shake" exercises respectively in *contracted* positions—on five adjacent semitones, and again in *extended* positions, such as we find in the diminished seventh and dominant seventh harmonies; and again, in progressions of double notes.

Secondly, we have to learn to *connect* such *fingering positions* (or portions of them) into continuous passages, such as the Scale and Arpeggio. This we should not begin to do, until we have studied the horizontal (side-to-side) freedom of the hand (or wrist) and thumb. For this special purpose Exercises will be found in the set next following—Set XVII. And *thirdly*, during these studies, we should also in the meantime study the principle with which we are concerned in this particular set of exercises—the *freeing of the knuckle*, while holding notes down.*

Certain primary difficulties, however, face the beginner, and these should in a measure be overcome BEFORE any exercises at all are undertaken at the keyboard itself. Most children (and adults), unless they have practised on a keyboard, &c., find it extremely difficult to give even the roughest discrimination between the fingers,—they cannot at all "think" each individual digit, and are at first liable to move any finger other than the intended one!

In cases, where such roughest of discriminatory power is lacking, it is best to seek to overcome this deficiency in a measure before any work whatever is undertaken at the keyboard itself. It is better to learn to distinguish between the fingers (in at least a general and rough way) by means of exercises designed for this purpose *and executed at a table*, &c., rather than to go to the keyboard and there acquire *wrong habits of key-depression*, simply because the mind is necessarily so engrossed with the sheer difficulty of putting down the right fingers, that it has no attention to spare for key-treatment itself; and until such attention can be given, no keyboard should be touched.

Certainly, even children should not be permitted to go to the keyboard, until they have a sufficiently clear idea of what are the *mechanical* demands of the key-lever itself.† And in the same way, they should also acquire some individuality of finger away from the key-

* Work on all these exercises should also in the meantime be supplemented by a careful choice of Studies and Pieces, bearing on these same difficulties. As soon as the student is fit for them, no better Exercises and Studies can be found than judiciously selected ones from CZERNY'S *Virtuosen-Schule* and *Fingerfertigkeit*. A good course of SCARLATTI Sonatas, &c., is also indispensable at this stage; being so rhythmical, they require the greatest nicety of phrasing and execution generally—besides prompting towards good finger-individualisation. All three of these works are indeed indispensable to the Pianist-learner. The child of course requires easier material, than these provide.

† The child should understand those "first laws of the key" described in the first three pages of "First Principles"—it should know (1), that it is only by creating key-speed that it can make any sound, and that the degree of this key-speed alone determines the loudness; (2), that the tone-producing action against the key should practically always be *momentary*, since it is impossible to induce speed, once the key is down—because of the fall back of the hammer; (3), that this moment must be listened for—and this for each and every note; and (4), that the resistance of the key itself must always be realized and judged, so that the right degree of force may be applied each time in response to this sensation of key-resistance. Children do not as a rule find it difficult to realise these things, if they are properly pointed out. It is only adults who find it difficult, when they are suffering from wrong ideas, firmly ingrained. *Vide* "Act of Touch," and "First Principles" for fuller details on all these points.

board before attacking the problems of TOUCH. Indeed, no key should ever be depressed, without a conscious or unconscious attention to this matter,—no note should ever be sounded without a *definite purpose* as to the quantity and quality of the sound, otherwise one immediately risks the formation of bad habits of Attention, *MUSICALLY*—and that is the worst of all possible faults!

Further even, the study of some of the most important muscular-discriminations (leading to freedom, &c.) should also be attacked before going to the keyboard, provided, of course, that the child is sufficiently intelligently interested to do this—for it is far easier thus to prevent the formation of bad habits. The requisite material for such silent study is to be found in Parts I and II of this volume, and the exercises next to be considered offer further material.

Coming now to our plan of campaign, the primary exercises *preceding* keyboard practice should be somewhat as follows:

DESCRIPTION of Preliminary Exercises:

Allow all five fingers to rest upon a table or other suitable surface, and in a curved position as usual in a five-finger exercise on the white keys. (a), Lift one finger at a time, about an inch or so, and then let it *fall* by its own weight upon the table. Endeavour to eradicate all idea of “action” in the finger’s descent upon the table, so that this descent may be, as far as possible, really a drop. After having, in a measure, succeeded in thus gently letting the finger fall; also (b), practise it hitting the table with a sharp rap. Always, however, bear in mind that this second form of Exercise does NOT *really* represent the action required at the Piano:—it is only done here for the sake of the preparatory practice it offers us.*)

Moreover, the fingers may thus be practised either a), reaching the table as for the five adjacent *white* keys; or b), they may also be practised closer together than that—“contracted” as for five adjacent chromatic notes; or again, c), they may be practised as far apart as they can conveniently reach, to represent “extension”; but here particularly bear in mind, that the exercise is not only useless but positively harmful, unless it is practised with perfect freedom.

This practice of the fall of the finger should at once be followed by some study of Set X, p. 71.

The practice of such exercises as these two sets should be continued, until the first difficulty has in a measure been overcome—the difficulty of distinguishing between the

* Hitting the table is not representative of the action required at the Piano, for the key-surface itself must never be really “hit” in playing. At best, therefore, the rap against the table can only represent the impact of the finger against the bed under the key, as sometimes permissible;—or (as in bright passages for instance) it may be considered to represent the act of hitting the *String* in such passages.

These two given forms of exercise, when subsequently *combined* at the Piano, do however give the actions required of the finger; for we here have the preliminary unpercussive fall upon the key, followed by the sharp action *with the key* by means of which we may hit the string. These two movements may be either separate, or of unbroken continuity.

fingers and moving them independently of each other. For the moment the next stage is taken up—*at the Piano*, it is absolutely essential to endeavour to discriminate further; that is, one must then consider each time how—in what manner—the key itself shall be depressed.

This SECOND stage, undertaken at the piano, begins with the practice of exercises on the *repeated note* or *shake* principle. These should be practised merely repeating one finger at a time at first, and with sufficient time between each repeated sounding, to give time not only for consideration as to *how* each coming note should be sounded, but also, how each preceding note *has* been sounded. The action here required (against the key) should be of the MOMENTARY nature associated with Staccato and with *all* proper tone-production—except the *pp*-tenuto. It is essential to practise at first with “rebounding key” (Staccato);—only in this way is the learner at once taught to realize how exceedingly short-lived the Act of Touch really is. *

The remaining fingers, not engaged in sounding notes, should meanwhile repose lightly on the *surface* of the keyboard—these fingers should remain upon the keys all through the Exercises, but without depressing their keys. The following examples are some of the best formulas for this kind of practice:—

Ex. NO 26.

R.H. ⁵/₄/₃/₂ silently held, at surface level.

L.H. octave lower.

* We see therefore, that after we have in a measure learnt mentally to *separate* one finger from another—away from the Piano, we must then learn to do this at the Piano, and must here *at once* insist upon properly *aiming* the tone-producing action,—we must learn to direct the key's motion and *stop* working at the moment that sound is reached. And *Staccato* therefore offers infinitely more safe practice during this stage than does *Legato*.

After this, we must learn to increase the Resting-weight slightly—and thus learn to give Tenuto and Legato.

The old misconceptions on this point of procedure mainly arose from the assumption that notes had to be *held down* forcibly—but which they never should be. It also arose from the criminally wrong teaching, that the fingers and hands have to be “pulled” up to create Staccato!—Whereas, we now know that accuracy in Staccato *depends purely on a carefully prompt and complete cessation of all work and weight upon the key*, thus leaving it free to rebound with the finger etc., the moment that string-contact has been completed by its means; while the correct process of natural Legato consists in merely supporting a very slight (but sufficient) degree of Arm-weight through the fingers—sufficient to retain the keys depressed. *Vide Note*, p. 121, also “First Principles” p. 129.

As soon as possible, let this Exercise take the following forms:—

Ex. N^o 27^a

R. H. Adagio. silently held, at surface level.

L. H., octave lower.

Ex. N^o 27^b

R. H. Allegro.

a)

b)

c) etc. d) etc.

These, again, may be practised while sounding different intervals, as follows:—

Ex. N^o 28.

a) p f p f

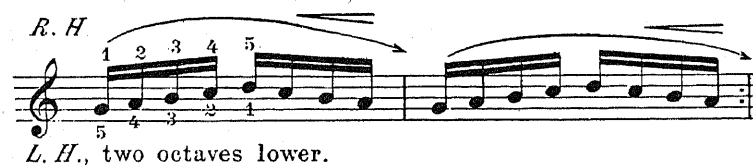
b) c) etc. d) etc. or also: etc.

Five Finger Exercises: After this, the student must practise a sufficient number (but not an excessive number) of "five finger exercises"—exercises in which all five fingers are engaged in sounding notes, in various successions. Whenever found desirable, however, the practice of the preceding form of exercise (on the repeated-note or shake principle) should always be resumed.

But besides the practice of exercises such as these, the student should also *AT ONCE STUDY ACTUAL MUSIC*—Music, of course always chosen of a difficulty well within his powers.

The five-finger exercises themselves should also invariably be practised *rhythmically*,—not necessarily with any noticeable accents, but certainly always, realized as progressions of notes towards rhythmical landmarks.*

It is unnecessary to give examples of the many forms five-finger exercises can take, beginning with the most obvious succession of notes, such as the following:—

Ex. N^o 29.

The five-finger exercise can also take numberless more complicated melodic forms.

These forms have been so fully dealt with in all the legions of old fashioned so-called "Instruction Books," that any of these will offer the required material, from which a sufficient number of examples may be selected, but always practised rhythmically.†

The practice of such five-finger exercises should of course not be limited to the white keys—all tonalities and positions are available, and they should also be practised in contracted positions, such as:—

Ex. N^o 30

* The student is here referred to the advice given in "First Principles" on this point, in "Advice to Teachers, and Self-Teachers," page 126.

† Some of the best Five-finger compilations are those of BERINGER'S—"Daily Practice"; PLAIDY; ALOYS SCHMIDT; CESI and CAMILLE STAMATY; the last is wisely arranged rhythmically. KUNZ'S "200 Canons" also are excellent, but are for those a little more advanced. For beginners, some of the best teaching material is however found in MRS. SPENCER CURWEN'S "The Child Pianist." My own forthcoming "OCCASIONAL TECHNIQS" will also contain exercise-material of this nature.

Extensions, on diminished and dominant-seventh harmonies, etc., should likewise be practised.

Above all things remember when practising such exercises, always to consider the tone-amount and quality required for each note, and the laws of ease in Technique generally; otherwise, instead of being beneficial, such exercises will certainly do harm technically—as well as musically.

After such single-note five-finger exercises have been mastered in some measure, they must also be undertaken with two fingers of each hand sounding two notes together—in successions of thirds.

Now this, at last, brings us to the SPECIAL EXERCISE here in question, which will teach us to “hold” or sustain notes perfectly freely.

DESCRIPTION of Special Exercises for freeing the knuckles for the acquisition of freedom of knuckle (and finger) while keys are held down:

While sounding the semiquavers (16th notes) in the following exercises by means of Hand-touch (“wrist-touch”), let the remaining fingers, which hold the long notes, do this so freely as to allow a free movement of the knuckles, during the necessary up-and-down movement of the hand.

Vide Example 31 on next page.

The whole point of the exercise is, that the fingers engaged in holding down notes, *must do this so freely*, as to permit that up-and-down *movement of the knuckles* which represents “Hand-touch”—or “Wrist-touch.” In fact, this exercise is a keyboard-form of the exercise already studied under Set XI.*

* The importance of these exercises, bearing upon this point—freedom of the knuckles—cannot be exaggerated, since its absence will inevitably prevent the attainment of any ease in Technique. For unless you learn to leave the hand (that is, the knuckles) perfectly mobile, both during the holding-down of notes *and during the sounding of them*, everything connected with finger-action and hand-action will necessarily become restrained, and will hence become difficult and ineffective. Realise (as regard difficulties of Agility) that it is far more often a finger which is holding a note down which does the mischief, than the fingers actually used in sounding notes. Hence the necessity of learning to hold notes down *quite lightly*, while nevertheless sounding notes by other fingers of the same hand.

Although this exercise deals with laws, disobedience of which will thus entail such far-reaching evils, yet it is unfortunately too difficult an exercise to be at once undertaken by the beginner. It should, however, be attacked as soon as possible.

The following examples show the forms this exercise should take:

Ex. No 31.

a) *ff* *p* *ff* etc.
ff *ff* *p* *ff* etc.
p *ff* *p* *ff*

b) *p* *f* etc.
f *p* *f*

c) *f* *p* etc.
f *p* etc.
p *f*

d) *p* *f* etc.
f *p* *f* etc.
f *w* *sf*

e) *sf* etc.
 Finally *sf* etc.
sf

f) *sf* etc.
sf

g) *sf* etc.
sf

and most difficult of all:

h) *1* *2* *3* *4* *5* and: *1* *2* *3* *4* *5*
6 *4* *3* *2* *1* *5* *4* *3* *2* *1*

For contractions, practise on the set of notes given at *h* and *i*. For extensions, practise the exercise on Dominant and Diminished Sevenths.*

* See next page for "Further Directions".

FURTHER DIRECTIONS: Note well, that you cannot derive any benefit from the practice of these exercises, unless the holding fingers *are left so free and mobile*, that they easily *give* to the vertical movements of the hand in sounding the notes.

The slightest *stiffening of the fingers* against the key-beds will instantly cause them to stiffen also against their knuckles (that is, against those of the hand) and will thus create that immobility there which we wish to learn to avoid. Bear in mind, also, the rules as to "Rotation"—for they apply here as everywhere. Practise this exercise mostly with "bent" finger, but the flat finger should sometimes also be submitted to drilling under this discipline.

Do not forget to practise this exercise also in contractions and extensions as suggested at *e* and *f*.

ADDITIONAL EXERCISE for knuckle freedom:—

A very useful "combination" exercise is the following one. It combines practice of ROTARY FREEDOM with FINGER-FREEDOM—at the knuckle. Want of rotary freedom is indeed usually at the bottom of a bad "double-note" technique, although this is the last thing that occurs to anyone at first as being the cause. Any passages in double-notes found "difficult," should therefore be given some practice on this principle:

DESCRIPTION:—

Place any two fingers of one hand on two notes; and while remaining on these quite lightly, rotate the fore-arm *on itself*, both ways. Do this without the slightest effort—let the wrist and hand simply roll over, and back again with absolute freedom, the two finger-tips remaining on their respective notes in the meantime.

So long as the fingers are pressed and wedged firmly between the knuckles and the keys, it will be found impossible thus to rotate the fore-arm *without raising the wrist*: but when the knuckles are left free, it will be found quite easy really to *rotate* the fore-arm and wrist—without displacing them sideways, nor upwards and downwards.

Use a *third* in the first place as "holding notes," employing successively $\frac{5}{3}$, $\frac{2}{4}$ and $\frac{1}{3}$ of each hand. Let the weight employed be that either of the whole arm (as for *f* weight-touch) or any degree lighter, up to the "Staccato-resting"—in which last case the two notes concerned will not be held depressed, but at "surface-level"; and this last is indeed the best form of the exercise.

Also practise with other fingerings and intervals.

Even a more searching exercise:—Place *all five fingers* on their notes and to keep the tips of all five fingers on their respective keys *at surface-level*, while freely rotating the forearm (and wrist). See to it, that you do really rotate the forearm (from the elbow) and not the upper-arm also.

The knuckles are alternately raised and lowered beyond their proper level at alternate sides of the hand during such proper rotation of the forearm. There should be no movement of the elbow, nor may the finger-tips either quit or depress their keys.*

* When chord-extensions are found to cause "stiffening," practise this exercise on such chords, and the fault will soon be alleviated.

SET XVII.

FOR THE STUDY OF THE HORIZONTAL (LATERAL) FREEDOM OF THE THUMB AND HAND.

PREAMBLE: After the fingers have learnt to reach the right notes in the five-finger positions, the next step is, to learn to connect these groups of notes, — (or portions of such groups) into chains or sequences of progressions, and thus form Scales and Arpeggi. This can only be done evenly and without break, by acquiring freedom of movement in the *to-and-fro* (i.e., lateral or horizontal) motions of the Thumb and Hand — and therefore also of the Wrist-joint and connected Forearm, thus horizontally.*

To overcome the primary awkwardness of these movements, it is best to practise them at first at a table, &c., before proceeding to practise them at the instrument itself.

We will, therefore, first consider these *preparatory* Exercises.

DIRECTIONS for Preparatory Exercises in lateral freedom, for use apart from the keyboard.

A) *For the passage of the thumb under the hand:—*

Place the four finger-tips (omitting the thumb) on a table, resting gently upon them. Extend the thumb well outwards from the hand, while still touching the table with it, thus *sliding* along the table-surface with the tip of the thumb. Allow the *wrist-joint* to help this movement, by swinging inwards, without change of level, but do not move the Elbow. See Fig. 22, at *a*.

Then reverse the whole movement, and move the thumb as far in the opposite direction as convenient, passing its nail-joint well under the hand. Here again allow a movement of the wrist to help the thumb. See Fig. 22, at *b*.

Note well, that the wrist moves *inwards* in the first case, while it moves *outwards* in the last case, and that it does not change its level during the process. The thumb—sliding on the surface of the table—must meanwhile not change the position of its *nail-phalange*; this must remain at *right angles to the edge of the table*, precisely as when used at the Piano. Again, the thumb, in passing under the hand, should do so sufficiently to enable it to reach just under the little finger; the wrist being turned sufficiently *outwards* to permit this; the top of the hand meanwhile retaining its level position throughout the exercise.

* See "First Principles," pp. 22 and 94. Also "Act of To h," pp. 297—300, &c.

B) *For the passage of the fingers and hand over the thumb:—*

For the passage of the hand over the stationary thumb, the opposite exercise should now be practised:—

The thumb itself now serves as the *pivot*, and while the *actions* are really the same as in the previous form of the exercise, yet the actual movements which result from these actions are widely different. For the wrist-joint must now remain stationary, and the tip of the thumb also must remain on its chosen place on the table. The hand alone must here provide the necessary movement. This movement is alternately inwards and outwards, and the hand thus passes the fingers over the thumb, and then again recedes from it, helping the fingers to extend as far away from the thumb as possible. See Fig. 23, *a* and *b*.

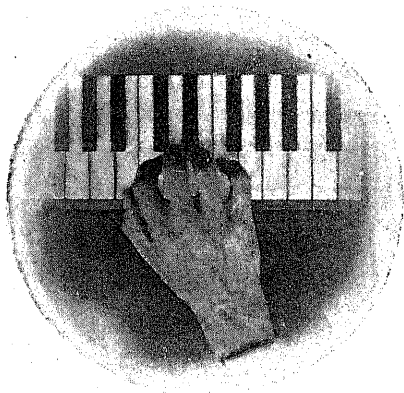
The hand, in thus "passing over," should move sufficiently *inwards* to enable the LITTLE-FINGER to touch the table *beyond* the place on which the thumb is resting. And again, in receding from the thumb, the hand should do so to the full extension the thumb will allow, without its tip quitting its place on the table; and the little-finger is thus enabled to give its furthest extension away from the thumb. Needless to add, that the whole object of this little gymnastic is to attain *freedom of movement*. It would, therefore, be futile to practise it, without keenly bearing this point in mind. The to-and-fro movement of the hand and of the thumb should be practised as *swiftly as possible*—with plenty of "wait" between each swift movement; but this movement must be given *absolutely without the slightest restraint* of any kind—otherwise more harm will be done than good. And for this reason the extent of the movement should not be greater than can easily be reached. In this form of the Exercise the Wrist remains stationary.

The accompanying Figures—Nos. 22, *a* and *b*, and 23, *a* and *b*—should be carefully compared. They are, for convenience, shown as a keyboard exercise, instead of the table-exercise here in question.

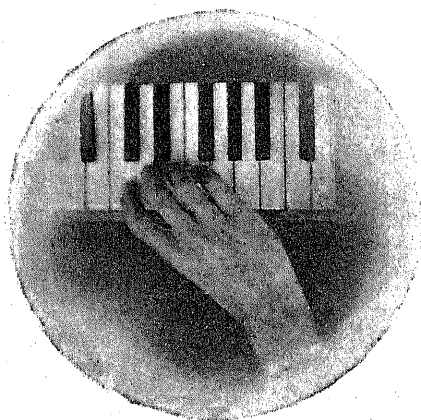
These movements, as already explained, should *both* result *mainly from an exertion of the thumb and of the hand*, and should usually *not* be induced by any action on the part of the arm.*)

* This is all fully described in "Act of Touch," pp. 189-191.

Fig. 22.



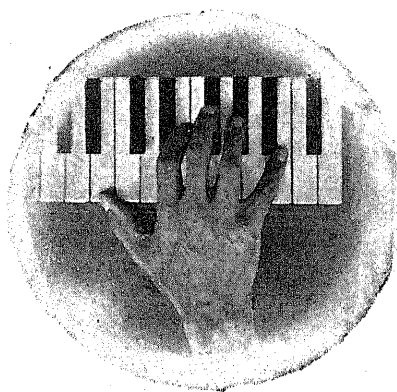
a)



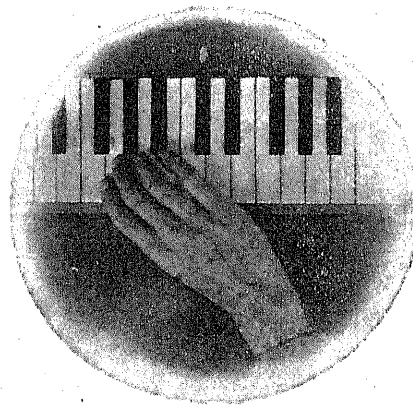
b)

a exhibits the thumb on the note *B* before it has moved, and *b* when it has moved under the hand to the note *G*; the finger-tips remaining stationary upon their keys (*C*, *D*, *E* and *F*), but the wrist-joint moving laterally to help the thumb's motion.

Fig. 23.



a)



b)

a shows the thumb extended from the hand; while *b* shows how the hand has "passed over" the thumb, the thumb still being on its note *B*, and the wrist-joint not having altered its position in space.

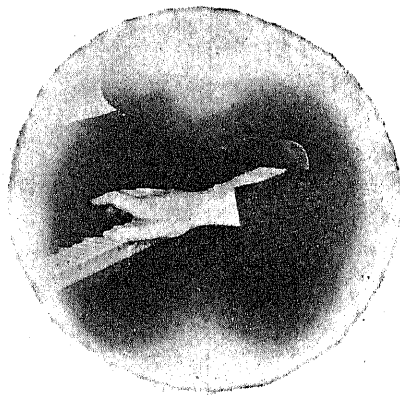
ARPEGGIO-PLAYING:—The practical application of this principle in arpeggio-playing will best make clear how these two apparently dissimilar motions of the wrist and hand are mostly due to a motion of the hand itself, either at its wrist-end or its knuckle-end, and how the combination of these motions enables the fore-arm to travel up and down the keyboard:—

Take the rising arpeggio of *C* major with the right hand:—Play *c*, *e*, *g* with the hand in the normal "five-finger" position—middle-finger straight with its key. On reaching "*g*" (with the middle-finger) you have to pass the thumb under. Now to enable you to do this, you must turn the Wrist *outwards*. That is, *the hand* must take the Forearm travel up

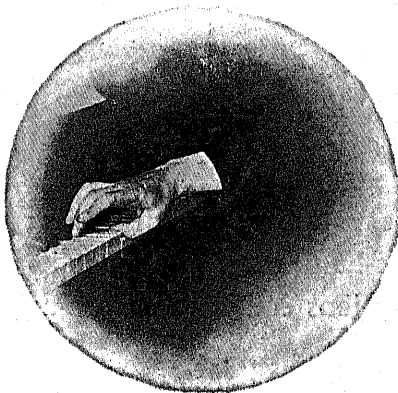
the keyboard to that extent. Being thus able to play the next thumb-note—*c*, you will next require the index-finger on the *e*. To enable you to reach this note you have to pass the fingers back from over the thumb; the motion here required being mostly one of the hand itself, which is now free to move at its finger or knuckle-end, although the forearm must also travel still further up the keyboard—which it should continue to do during the playing of the subsequent note of the middle-finger. The hand therefore alternately moves at its wrist-end and its knuckle-end, whichever happens to be free; i.e.,—the knuckle-end moves when the thumb acts as the pivot of motion, and the wrist-end moves when one of the other fingers acts as a pivot. This duplex motion of the hand and forearm is moreover a *continuous* one, thus gradually allowing the hand and arm to travel up the keyboard, and enabling the fingers always to be “prepared” in good time over their respective notes.

The process is of course reversed in descending; and also for the left hand.*

Fig. 24.



A)



B)

* A somewhat similar process is required in the Scale, but with far less to-and-from motion of the wrist. This is fully described p. 299, “Act of Touch.”

The motion of the fingers and hand over the thumb is perhaps less well shown in Fig. 22 than in Fig. No. 24 on preceding page. Here, at "A," we see the extended thumb holding its note; and at "B," the hand has been turned round fully—laterally—to enable the middle finger to reach over for the interval of a fourth.

Preliminary Lateral-motion Exercises at the Keyboard:

After some preliminary work of this kind, away from the keyboard, a similar form of exercise should be practised at the piano:

DESCRIPTION of Preliminary Exercises at the keyboard, for lateral freedom.

A) For the passage of the thumb under the hand:—

Place all the fingers of the left hand, except the thumb, on the surface of four white keys,—say *F*, *E*, *D* and *C*. Let ONE finger only at a time hold its key *depressed*, doing this firmly but *lightly*. Now sound *G* by means of the thumb, and then swiftly move it under the holding finger, so as to reach the note *next beyond* the held one. After carefully sounding that note, let the thumb smartly resume its position again over *G*, and then sound that note.*)

The to-and-fro movements of the thumb must be perfectly free, and the notes must invariably be "prepared" before being sounded. The wrist-joint, moving quite freely, must help these lateral movements of the thumb. The larger extensions may also be practised. Fig. 22 (on page 111) shows the nature of the required conjoint movement of the thumb and wrist-joint here required, but remember, the illustration given the *right* hand instead of the left.

B) For the passage of the hand over the thumb:—

Now use the thumb itself as the pivot, as in the corresponding exercise at the table.

Place the thumb upon a key, either at the surface-level of the key, or at its depressed level—and lightly so in the latter case. While keeping the thumb in its place, sound a note alternately on each side of the thumb's note in turn by all the remaining fingers—2, 3, 4 and 5. Afterwards, sound each time a note further off on each side of the holding thumb, until the fullest extension possible is reached

* Thus when *F* is held down by the index finger of the left hand, the thumb will play *G* and *E* alternately; while if the ring finger is holding its note depressed—the *D*, then the thumb must play *G* and *C* alternately. Similarly with the other fingers,—when *E* is held by the middle finger, the thumb plays *G* and *D* alternately, while the little finger holding *C* will cause the thumb to play *G* and *B*. Remember, that *all* the four fingers except the thumb remain *all* the time over their respective notes (from *F* to *C*) and that the thumb sounds its *G* alternately with the other notes, taken by "pass-under." The right hand of course must be exercised similarly.

—over the thumb, and again away from it, by all the fingers in turn. Fig. 23 and 24 exhibit the positions reached by this conjoint movement of the thumb and hand. See pages 111 and 112.

Here again, the hand (by its free movements) must help the thumb to reach its notes. During such movements the hand should retain its level position, while the wrist-joint nevertheless retains its position in space unchanged, both laterally and vertically. Always be careful to keep the Rotation adjustments free.

After some preliminary work of this nature, ordinary technics bearing on this matter should be practised, such as are found in every Primer. Two exceptionally good ones, however, are the following: The first one is simple enough for the veriest beginner, while the second one is so excellent an exercise, that it should often form part even of the artist's "Daily Practice."

No. II:—Easy form of technic for lateral freedom:—

Ex. No 32.

The image shows two systems of musical notation for Exercise No. 32. The first system consists of two staves (treble and bass clef) with a key signature of one sharp (F#). The music is in 4/4 time. Above the first measure of the first system, there is a bracketed sequence of numbers: 5, 4, 3, 2. Below the notes, there are fingering numbers: 1, 2, 3, 4, 5, 1, 2, 3, 4, 5, 1, 2, 3, 4, 5, 1, 2, 3, 4, 5. The second system continues the exercise with similar notation, including a repeat sign at the end.

Ex. N^o 33.

The image shows two systems of musical notation for Exercise No. 33. Each system consists of a grand staff with a treble and bass clef. The first system includes fingerings: the right hand starts with 5, 4, 3, 2; the left hand starts with 2, 3, 4, 5. Subsequent notes are marked with circled fingerings: (5, 4, 3, 2), (2, 3, 4, 5), (2, 3, 4, 5), (2, 3, 4, 5), and (2, 3, 4, 5). The second system continues the exercise with similar rhythmic patterns and articulations.

In No. 32 all the fingers in turn pass backwards and forwards over the thumb, which continues to sound the same note. In No. 33, it is the thumb which has to travel from side to side, while the fingers, each one in turn, are engaged upon the central note throughout the exercise. The passing over and under should include the largest extension which can be conveniently taken without any stiffening or straining. The notes reached must therefore be either less far apart, or further apart than in the examples, according to the reach of hand.

No. II:—Advanced form of technic for lateral freedom:—

In practising this technic, careful attention should be paid to the Directions which follow.

Ex N^o 34

Form A

The image shows a single system of musical notation for Exercise No. 34, Form A. It consists of a grand staff with a treble and bass clef. The right hand starts with a circled '5' above the first note. The left hand starts with a circled '5' below the first note. The notation includes complex rhythmic patterns and fingerings. Above the treble staff, there are circled fingerings: 1 2 4 (1) 4 2 1 4 (1) 4 1 4 (1) 4 3 (1) 3 4 1 4 4 1 4. Below the bass staff, there are circled fingerings: 1 2 3 (1) 3 2 1 4 (1) 4 4 (1) 4 4 (1) 4 4 (1) 4 1 4. The system is enclosed in a large oval shape. At the top right of the system, it says 'Or 3 1 3'. At the bottom left, it says '5'. At the bottom center, it says 'Or 3 1 3'.

DIRECTIONS for the practice of Example, No. 34 on previous page,
Form *A*: for lateral thumb-movement:—

When the little finger is engaged in holding its note, the thumb must first move towards the little finger, and must then move away from it. In executing this alternate contraction and extension, the thumb must be helped by a free (but very ample) movement of the hand and wrist-joint itself:—*i. e.*, when the thumb moves towards the little finger, the *hand* must turn well *inwards* (the wrist swinging *outwards*) so as to bring the thumb over its extreme outer note; and again, as the thumb extends away to the octave, the wrist-joint must swing well *inwards*, helped in this by the ample *outward* turning of the hand. And all this must be done *without in the least* displacing the Elbow.

Remember, when the fifth finger holds its note, that the elbow must be placed in a position sufficiently *outwards*, to enable the thumb to reach its extremest “under” note—the note closest to the fifth finger, and the elbow *must then remain in that position* for the rest of that exercise.

The held notes should always be kept but lightly depressed,—if considered advisable they should even be held only at *surface*-level. The semi-quavers should be played Legato, especially where the notes are repeated. Guard also against any tilting of the hand towards the fifth finger—it should slope rather *inwards* than *outwards*.

DIRECTIONS for the practice of above Example No. 34, Form *B*: for lateral passage of hand:

On the other hand, when the *thumb* sustains its note, it is the little finger which must move to and fro—towards the thumb, and again away from it. In this form of the exercise, it is requisite that the *wrist* itself (and forearm) be not displaced from the position they were placed in at the beginning of the exercise—a position which should be sufficiently *outwards* to enable the little-finger to reach its octave-note easily, and which will enable it to do so *without* being herein helped by horizontal (or lateral) movements of the wrist (and arm). Therefore,

SET XVIII.

VIBRATION OF FINGER, HAND AND ARM.

PURPOSE: To bring the arm into unison and sympathy with the finger and hand in rapid passages.

Certain strong and yet rapid passages (both in the form of Finger-touches and Hand-touches) need arm-weight to give the proper tonal value to them. This takes the form of a *hybrid* second-third Species. In such touches, the arm—the whole arm—is more or less *on the point* of being lapsed, and in this finely poised condition it is easily “vibrated” (owing to reaction from the key) by the rapidly repeated impetuses given by the hand and fingers. Or, it may actually be slightly released, either continuously or only momentarily.*)

To acquire this particular co-ordination of arm, hand and fingers, the following little exercise is invaluable.

DESCRIPTION:

Balance the well-raised arm, with hand and fingers held in the playing-position, but a foot or so above the level of the keyboard. See to it, that the arm is just balanced—almost on the point of falling, much as described in Set VII (whole arm release). Now *vibrate the hand*, as in shaking a pepper-box; doing this continuously for some seconds or even minutes. The actual movement should, however, not be greater than will cause the finger-tips to move about a quarter of an inch, or but little more.

Allow this *tremolo* of the hand to *bring in its train* a sympathetic vibration of the whole arm—hardly however recognisable by the eye.

Be careful not to give an arm-jerk in place of the described hand-tremolo. It is permissible that it may appear to you *as if* the hand were vibrated by the arm. But be very careful not to tighten up the arm in the endeavour to give this continuous quick hand-tremolo, nor to shake the arm, in place of shaking the hand. Stop at once, when you find your-

*For instance, the opening finger-passages of Beethoven's E flat Concerto, or the left hand hybrid “Hand Touch” passages of the Scherzo of the E flat Sonata, Op. 31.

Without released arm-weight, 2nd Species is but a cold thin tone; therefore, in such “thick” passages, arm-weight must be allowed to help, in spite of the fact, that at such speed a true *Third* Species Touch is not possible. Hence a hybrid is here required. The arm itself may be actually released *continuously* (although but slightly), or it may be put into a vibratile state by rapid re-iterations of *release* and self-support, thus helping, as it were to swing the hand and fingers with the keys. *Vide* pp. 81 and 52 of this work; also “Act of Touch,” page 271, &c.; “First Principles,” page 98.

self thus calling upon the wrong muscles. The correct action is executed without the slightest straining—almost a floating of the arm and hand in the air—a mere tremble of the hand—and the whole arm along with it, in consequence of these hand-jerks.

When this has been learnt, gradually lower the arm so as to bring the finger-tips into contact with the keyboard, and continue to execute the same vibration, but now with the keys, beginning *pp* and gradually rising to a full *forte*. It is best, at first, to take a small chord for this purpose. Later on, transmit the hybrid touch, thus learnt, to each finger individually, in various passages built on the scale or arpeggio, or in passages selected from actual musical works requiring such vigorous "finger-touch." Above all things, remember to KEEP THE ELBOW FREE—forward and backwards,*) also, of course the forearm rotation element.

It is quite probable, that in such vibratory touches, slight actions of the arm muscles themselves may actually help the tone. It certainly is so in bent finger touch, where the upper-arm is of course in a "forwardly-supported" state. No doubt the vibrations of the arm here *seen* in all such hybrid touches, and *also* in true "Second-species," has helped to mislead certain recent German writers on technique into the fallacy, that "all touch consists of 'arm-throw'!"—a fallacy absurd enough, when we recognize all the classes of touch produced purely by arm-lapse; and again those exceedingly light ones produced by individual finger actions, practically quite unaided by any other *action*, or CHANGE in the muscular-condition. See also, Note p. 88, on "Free-arm" even with First Species Touch.

SET XIX.

FOR THE STUDY OF TONAL INDIVIDUALISATION BETWEEN THE FINGERS.

The problem of enabling any finger at will to make its note stand out prominently above the other fingers of the same hand has usually been found difficult, simply because the process has not been understood. It is really quite an easy matter.

Non-attention to the *rotary* adjustments of the fore-arm is the most fruitful cause of the difficulty†; also, non-recognition of the fact, that in Singing-passages, *Weight* must be "taken" by the required finger, and not by the others.

That is: the would-be prominent finger must be "ready" to give the required *exertion*—it must be ready, therefore, to take the full brunt of the *arm-weight* released for the purpose of each particular melody-note, and assisted towards its side of the hand by the necessary *rotary exertion* of the forearm. In brilliant-toned passages, on the other hand, the prominent finger merely provides the necessary exertion, but in this case

* Here we perceive another reason why the "Finger-freeing Test" (page 5) proves so extremely suggestive and effective. This test—with its forward-and-backward movements of the Elbow—should here be re-practised with this fresh light on it.

†Vide pp. 15 etc., "First Principles," and Chap. XVIII of "Act of Touch."

without the prompting of released Weight—although we shall still require a rotary *exertion* of the fore-arm in its favour.

Many forms of Exercises have been devised for the acquisition of facility in these respects. The following is the best form of study; this exercise has four stages:—

DESCRIPTION:—

Stage I: Play a chord repeatedly by Weight-touch, and Tenuto.

Stage II: Play chords in the same manner, but keep only ONE note of each chord in turn depressed, while the remainder are allowed to rebound—causing STACCATO, thus: *—

Ex. N^o 36

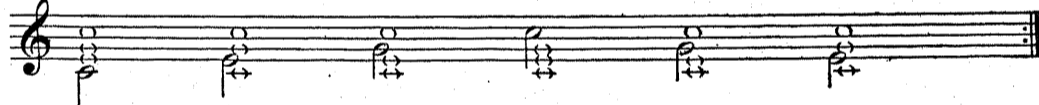
Stage II) for Right Hand



Stage III: While still playing by "Weight"-touch, now allow ONLY ONE NOTE of each chord to be sounded in turn, while the remaining fingers simultaneously reach the remaining notes, BUT DO NOT SOUND THESE:—

Ex. N^o 37

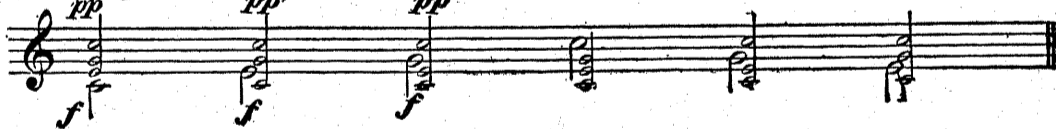
Stage III) The (o) notes not to be sounded, only touched.



Stage IV: Now allow the notes, not sounded in the last preceding Stage of the exercise, to be sounded *pp.*, but while still sounding one note (in turn) of each chord quite FORTE:—

Ex. N^o 38.

Stage IV)



*Although this exercise is noted down for the right hand, it should of course receive equal practice from the left hand.

ADDITIONAL DIRECTIONS: In the first place, be sure that you learn to play all the melody notes *really* by "Weight-touch" — these notes must seem to go down "of themselves." They must not be "put down," but each required finger must be so neatly timed in its exertion as to receive the arm-weight (released each time for the purpose) "at the top" of the key, i.e., before the key begins to move, and during its subsequent descent, *but not* when the key is down — since that would be too late.* See to it, that the forearm rotation-muscles freely help the fingers, as required at each side of the hand.

In Stage III, see to it, that all four fingers reach the keyboard at the very same moment, firmly but nevertheless quite lightly. The fingers not engaged in sounding notes will find no difficulty in doing this, provided you do not hit down with the hand. The required "firmness" — a very light firmness indeed! — is obtained by an extremely slight action of the two front (and smallest) phalanges of the finger, as described in a Note on page 185 of "The Act of Touch."

In practising Stage II, remember that *Staccato* depends purely upon your accuracy in "aiming" and *ceasing* the actions which take the key down, thus allowing the keys to rebound, with the finger-tips resting upon them. There must be no futile "pulling-up" of the fingers; this would quite ruin all tonal accuracy.†

ANOTHER USEFUL EXERCISE is the following one. It explains itself:—

Ex. No 39.
Stage I)

Stage II)

Stage III)

The same advice applies to this Exercise as to the previous one; and it should, of course, also be practised with the left hand.

* See Set VII, pp. 61-64 etc., for the acquisition of "Weight-touch."

† The total fallacy, taught in so many "Primers," that the finger or hand should be *pulled up*, to obtain *Staccato*, has probably done more mischief, both physically and musically than any other in connection with Piano playing — being the direct cause indeed of so many "broken-down hands," and great loss of expression-power. *Vide* Note on p. 93.

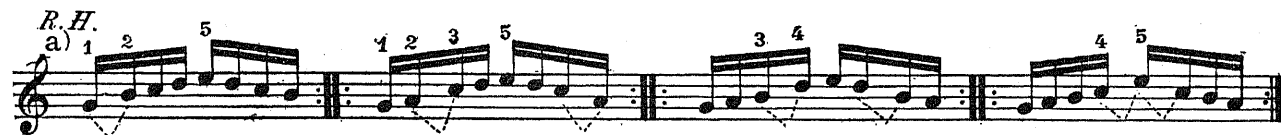
SET XX.

FOR THE PRACTICE OF SOME SUBSIDIARY ACTIONS—LATERAL MOTIONS OF THE FINGER AND FORE-ARM.

I) For the Side-to-side (lateral) motions of the fingers:—

Although obviously important, these actions do not require much special exercising, since we cannot practise any passage built on chord-positions—arpeggi and such like—without obtaining the requisite training in this respect. Only in the case of the beginner do these muscles require special training for a time. This practice is begun in the simple five-finger exercise, lying on adjacent white keys. Afterwards, various intervals must be taken between the fingers in turn, to accustom them to the necessary extensions sideways. For instance, as indicated in Example No. 40:—

Ex. No 40.



This kind of exercise must afterwards be amplified into sequential ascending and descending exercises, such as the following:—

Ex. No 41.



The image contains two sets of musical exercises, labeled c) and d). Each set consists of two staves of music. Exercise c) shows a sequence of notes with fingerings 2, 3, 5, 4, 3, 2, 1, 2, 3, 4, 5, 4, 3, 2, 1. Exercise d) shows a sequence of notes with fingerings 5, 4, 3, 2, 1, 2, 3, 4, 5, 4, 3, 2, 1. Both exercises are marked with 'etc.' at the end of the first staff. The exercises are designed to practice lateral motions of the finger and fore-arm.

Always make a point of practising such exercises in *ALL KEYS*, major and minor. Also, they may be practised in forms giving greater contractions, and again in others, giving greater extensions. Examples of such will be found amongst the forthcoming "*Occasional Technics*" already alluded to.

Such preliminary exercises (in conjunction with Set XVII) pave the way for the practice of the arpeggio, during which, of course, these side-to-side actions of the fingers are much required.* Remember, in all this kind of practice—the practice of the *Extension*—most carefully to guard against practising the passages "stiffly"; you must insist on the fingers moving into position over the required notes *without any sensible effort*. In this connection, it is well sometimes purposely to place the fingers on five notes which can only be reached with considerable difficulty, and then thoroughly to *relax the hand and fingers*, while still remaining on the chosen notes. In thus taking an extreme and unfamiliar extension, you are almost sure, at first, to call into action *MANY quite unnecessary muscles*, and by then trying to *relax* fully (while remaining upon the same notes) you will discover how very small is the effort really required to bring the fingers into position, and you will thus learn to apply solely the correct efforts, and in the very slight measure required.

For Exercises away from the Piano, see next page.

* *Vide* p. 109.

Lateral Exercises away from the Piano:

Ex. I.) : Let the hand lie flat upon a table, &c., and then in turn move each finger sideways, at first as far to the left as possible, and then to the right.
Do this swiftly, while insisting upon perfect freedom in these movements.

For cultivating these lateral (extension) actions of the fingers (when deficient) the following little Sandow-like gymnastic may be found useful, but it must not be practised continuously, not too long at a time and not too forcibly:—

Ex. II.) : Take quite a thin, small elastic band. Place it across the nail-phalanges of two or more fingers. Spread the fingers in question apart (by their own muscles) and retain them thus extended *for a few moments*, until only very slightly fatigued. Freely move hand and fingers vertically and rotarily, as a “test” for freedom. Treat all the fingers alike.

For the “full extension,” and “full contraction” of the fingers sideways such exercises as these are also useful when one is not able to obtain sufficient practice at the keyboard itself. Such gymnastics, however, can only prove helpful provided they are *properly* practised; that is, while most carefully bearing in mind that *FREEDOM OF ACTION* is the very first requisite at the Piano. If practised with forcible straining or even without absolute freedom, they will inevitably do far more harm than good,—since they will then suggest wrong muscular habits, difficult to eradicate—and “stiffening” is one of the worst to deal with.

II.): For Rotation of the upper-arm:

Upon this, partly, depends our power of moving the FORE-ARM and WRIST laterally—from side to side, with the elbow as an axis, as required for the taking of those small skips so often occurring in modern music; a movement of the forearm and wrist, also required when extending the fingers across the thumb, and *vice versa*.*

Although the rotation of the upper-arm is not so often required as are many of the other actions, nevertheless it is well occasionally to give it some Special Practice. Thus:—

Extend the whole arm straight out in front of the body, and then twist it (the whole arm from the shoulder) upon itself in both directions—at first

* This fan-like (lateral) movement of the fore-arm at (and with) the wrist is really a very complex one, being made up of three distinct actions,—the aforesaid *upper-arm* rotation, in conjunction with a raising and lowering action of the fore-arm, and also a slight rotary change of the fore-arm itself. The *visible motion* should seem to be *purely a lateral one of the fore-arm*, without any displacement of the elbow; nevertheless this motion is built up of these three quite distinct actions. See also page 109.

rotating the palm of the hand upwards, and then rotating the palm downwards again, into its normal position.

It is well thus to give special practice to this *upper-arm* rotation, even if only for the sake of learning thoroughly to distinguish between it *and the rotation of the fore-arm*.*

Until this distinction has been realized and practically mastered, the student is often likely to substitute *upper-arm* rotation when *fore-arm* rotation is really intended: and this forms a great impediment to the acquisition of free technique, since the rotation obtained by the agency of the Upper-arm *with elbow actually rotating* is so much more clumsy than that obtained by rotation of the Fore-arm alone, with quiescent elbow. The two forms of rotation should therefore often be contrasted, as an exercise away from the Piano. The rotation of the *forearm alone* can be ensured either by holding the elbow against one's ribs, or by extending the elbow, and placing the fore-arm at right angles to it—across one's chest, and then rotating the forearm only,— doing this fully each way, but always gently, without any jerk and without restraint.

SET XXI.

FOR THE STUDY OF PEDALLING.

PREAMBLE: While "pedalling" does not properly come under the heading of Touch—or Key-treatment, yet this work on "Relaxation" would not be complete without reference to this important department of Piano-playing. Indeed, it is quite impossible to exaggerate the importance of good "pedalling"—the use of the Dampér Pedal. However excellent the Key-technique may be, its effect musically may be totally wrecked by inefficient Pedalling. Not only is bad pedalling capable of ruining all clearness of phrasing and beauty of harmonic effect, but on the other hand good pedalling can materially assist even the actual tone-beauty of our Touch, and it form one of our most potent Means of Expression. There are three chief features requiring attention in the use of the Damper Pedal:—

- I): Judgment as to when to depress it.
- II): Judgment as to when to lift it.
- III): The requisite Technique of depressing it, and lifting it.

Undoubtedly the most important of these points is that referring to the *lifting*. In fact, so important is this point, that advice as to Pedalling might be summed up in these words:—

- a): "Up at the right time."
- b): "Sufficiently up."
- c): "Sufficiently long up!"

* See Set No. IV for Forearm Rotation.

That is: *a*) "let it rise early enough"—so that the dampers may descend early enough and may thus prevent any over-lapping of the harmonies, or of the phrases; *b*), "let it rise sufficiently"—so that the dampers may really reach their strings, and thus prevent smudging; and *c*), "keep it sufficiently long up"—so that the beautiful effect of sound-prolongation may be used as economically as possible, and may thus be intensified in its effect.*

Judgment as to the use of the Pedal, as to the proper occasion for its use, is a matter which belongs to the province of *I n t e r p r e t a t i o n*—like the proper application of the various forms of Touch in performance. The discussion of this part of Pedal-technique is, therefore, here out of place.†

Part of the problem of pedalling, however, depends on the mere *FOOT-TECHNIQUE* of depression and ascension, and this certainly does come into the province of this Treatise. Several points must here be studied:

I): The Descent of the Pedal.

As regards the actual putting down of the pedal, this should nearly always be done sharply, swiftly, and yet without using unnecessary force, and certainly without *hitting* it. The heel should, in resting on the ground, take the weight of the leg, so that the toe may rest quite lightly on the pedal at its surface-level, and continuously so, except when its depression is required. ‡

* How often indeed do we find a pianist labouring under the delusion that he is phrasing most clearly and distinctly because he is taking his hands off the keyboard at the right moment — while all the time he is "fogging" his whole performance by carelessly continuous pedalling! Remember, not only must you be attentive "with your fingertips against the keys," but also, you must be equally attentive *WITH YOUR FOOT*;—for no amount of hand and arm-lifting will in the least help the listener, if you retain your pedal depressed at the ends of your phrases and sentences; and although to yourself the phrasing may seem clear as crystal, to the listener it will be but a dirty, muddy slough of despond! In short, realise that your foot "holds down" notes not only as effectually as do your fingers, but far more so. It is quite absurd to be careful about the details and inflections of *Legato* and *Staccato* from finger to finger, and meanwhile to nullify all such care, through gross carelessness on the part of your right foot. Yes, be indeed careful to listen for the inflections of Duration dependent on your fingertips; but remember, that your foot has even a vastly greater say in the matter. Listen not only *for* your fingers, but also *for* what that right foot of yours has to do, and is doing—or un-doing—all the time.

The glamour and fullness wrought by the Damper-pedal in prolonging masses of sound, forms indeed a terrible temptation. Nevertheless, like the "Brass" of an Orchestra, it is precisely by eliminating the effect wherever possible, that we can enhance its value. The total absence of "Pedal" for a whole line, or more, is in itself often a striking effect,—yet how rarely does the player realise this! A careful "Ear" for the pedal has indeed greatly contributed to the charm of such players as LISZT, RUBINSTEIN and PADEREWSKI for instance, to quote only from among the older players.

† The judicious use of the pedal, like the judicious application of Touch-forms, depends on our having a properly-formed musical Taste and Judgment—acquired by the study of Music itself, or through the help a real teacher can give in these matters.

There are certainly some few rough and ready "RULES OF THUMB" which can be learnt, such as the following:

Never hold the pedal *through* two different Harmonies,—nor do so when the harmonies are ornamented with "passing notes" in the lower registers; and certainly never destroy the clearness of your phrasing, by holding the pedal beyond the ends of phrases. Also, do not hold it through important rests and intended *Staccato*-marks—unless for special effects. Again, do not interfere with melodic clearness,—but while "changing" the pedal sufficiently often for this purpose, do nevertheless use it, not only to give the requisite prolongations of the melody-notes, but also to enhance their Tone-quality and carrying power. In the meantime do not forget to let it rise sufficiently to enable the dampers fully to reach their strings,—that is the most important point of all.

‡ There are cases, in *legatissimo*—when an extremely delayed syncopated pedal is required,—for super-legato, etc., and a comparatively slow descent may here contribute towards the required lagging effect. See Section V, p. 128.

It is, however, with regard to the *Ascent* of the pedal that considerable variety of procedure is possible:—

II): Syncopated Rising of Pedal.

In the first place, there is the problem of *Legato*-pedalling. We must for this purpose learn to use it "in syncopation." That is, when playing passages legato by means of the pedal—such as chord-passages, and bass and melody notes depending for their prolongation on it, the pedal must be kept depressed *as a normal position* for the whole duration of each phrase, being in the meantime momentarily raised, wherever the changes of Harmony or Melody and Bass notes, or passing notes, &c, require it. Such "change" (in prolongation) must be effected by letting the pedal *rise at the moment* that the new harmony or melody note, &c., IS SOUNDED; its re-depression following immediately and automatically after such sounding of the notes.

In such passages, therefore, the pedal *RISES* at the very moment the new notes begin to sound, and immediately afterwards resumes its depressed condition, and this is done automatically—each sound being thus "damped" (by the descent of the dampers) at the very birth of the next sound, and thus causing the Legato effect.*

III): The Pedalling of Detached Chords.

Only for the first note of a phrase, or for detached chords and notes, can the pedal be put *down* at the same moment with the fingers. It is often advisable to do this in such cases, for the sake of obtaining the fullest possible resonance.

IV): Duration of Ascent.

The duration of the *depression of the Dampers*—the "upness" of the Pedal—must be considered next. In Legato pedalling, as just considered, the pedal must not go down *too soon* after its ascent, otherwise it will *fail to damp* the preceding harmonies, &c., and there will be a bad case of "smudging," exactly the same as if the pedal had not been allowed to rise sufficiently to enable the dampers thoroughly to rest upon their strings.

We see, therefore, that the pedal must not only rise *sufficiently*, but it must *remain up LONG ENOUGH* to serve its purpose—that of killing the previous sounds.

* That is, the pedal goes *up* as the keys in question go *down*, and the pedal then drops down, like an echo—the descent thus being a syncopation closely following upon the sounding of the notes, and yet soon enough after the sounding of these, to prevent their dampers from descending—as they would do were the fingers to quit the keys concerned before their sounds had been "caught" by the Pedal.

And the lower the pitch of the notes the more powerful are the strings, and the longer, therefore, must the dampers be allowed to remain in contact with them—before again allowing the pedal to re-descend.*

V): Super-Legato Pedalling.

And not only do we require such "syncopated" pedalling to produce the effect of precise Legato in such passages, but we sometimes must even exaggerate this syncopation to such an extent, as will suffice to create an actual *overlapping* of the sounds—thus producing the effect of *super-legato* (over-legato) similar to that produced by the fingers in such cases.†)

VI): Speed of Ascent.

This brings us to another very important point, and that is the *actual speed* at which the pedal is allowed to rise. There is, in fact, a distinct difference between damping *suddenly* and damping *gradually*; although this difference is not so marked as the difference between "sudden" key-depression and "gradual" key-depression.

Just as in the case of Touch, you must learn both kinds of Pedal technique—since the one is sometimes appropriate, sometimes the other.‡

VII): Half-Damping Effects.

An OVER-SHORT damping is, however sometimes required, and this for an effect occasionally to be met with, viz.; when a Bass-note is required to be prolonged against moving harmonies, &c., above it. This effect is not possible in all passages, but it is available, provided the Bass-note is sufficiently low to have strongly vibrating strings, and provided that the moving harmonies are in the form of comparatively lightly sounded notes, well removed from the Bass as to pitch.§

* When a large bell or gong, &c., is sounding, manifestly it is of no use merely tapping at it with the finger-tips or hand to stop its sound—you must *remain in contact* with the bell, &c., long enough really to stop its vibrations.

† An excellent instance of the employment of *Super-Legato* pedalling is found in the slow movement of Beethoven's "Appassionata" Sonata. The true effect of this movement cannot be obtained if we let the pedal instantly fly up at each change of harmony. On the contrary, we must here allow it to *rise quite gently*,—with the *un-percussive contact* of the dampers as next described; and the damping of each preceding chord must be so late, as thoroughly to *mellow* the chord-successions by its overlapping-legato. The sympathetic effect of the "Weight-touch" required in this movement is also very materially enhanced by this means. See last Note, p. 126.

‡ The ascent of the pedal must however not be slow *beyond a certain measure*, else this may cause an unpleasant "twang" from the strings.

§ Of course, where the Piano is provided with the so-called "*sostenente*" pedal, there is no difficulty of this kind. This extra pedal, by the way, requires simply the same treatment as the ordinary damper-pedal, as used syncopatedly for Legato.

We can in this case, by employing a sufficiently short-lived "damping," manage to efface the upper-harmonies, while still allowing the more strongly-vibrating bass strings to continue sounding. The pedal, being up only for an instant, does not here stop the vibrations of the low, strongly-sounding strings, while the upper ones, owing to their being far thinner (and, therefore, less persistent), are nevertheless sufficiently affected by the momentary damper-contact. In fact, we here purposely employ the inefficient damping discussed under *IV*,—"The duration of the Ascent."

This kind of pedalling has often been faultily described as "half-pedalling," which would mean, either an *insufficient* raising of the dampers for them to leave the strings, or else, an insufficient rising of the Pedal, insufficient to allow the dampers to touch their strings—and alluded to as a fault under paragraph *IV*. (p. 121), and under "Rules of Thumb". (Note, p. 126.)

The effect just described, that of holding "half" the notes—the lower ones, and killing the higher ones, is, however, not at all produced in this supposed way; on the contrary, it is only by the too sudden re-depression of the pedal, as previously described, that the effect can be accomplished.

PEDAL EXERCISES.

We will now consider some exercises bearing on these chief varieties of pedal use:

EXERCISE I: *For the study of Legato (syncopated) pedalling:—*

DESCRIPTION:

Play a double-octave scale, as in Example No. 42, slowly and *forte*. By means of the pedal make it Legato.

To succeed in this, keep the pedal *continuously depressed*, except at the moment that each successive sound appears. That is, the pedal must allow the dampers to reach the strings of the notes already sounded, at the very moment that the new strings are set in motion.*

After damping the previous sounds in this way, the pedal must at once resume its previous, depressed position.

This descent of the pedal must take place *soon enough* to prevent the dampers of the notes just sounded from falling—owing to the keys being quitted; and must yet be *sufficiently late*, thoroughly to damp the previous sounds.

SEE next page for Ex. No. 42.

* In a word, the pedal must reach its upper limit, at the very moment when the fingers reach their lowest limit.

Ex. No 42.

Moderato.

up an octave
and down again.

The black line of arrows is intended to suggest the required movements of the pedal. Do not sound the octaves too staccato, otherwise the exercise becomes extremely difficult. Remember the following points:

- I): Let the pedal come up *at* each next chord.
- II): Let it come up completely.
- III): Let it remain up long enough.

EXERCISE II): *For the eradication of "up-jerk"—over-suddenness in "changing" the Pedal:—*

DESCRIPTION:

This exercise is practised without sounding any notes. Depress the pedal, count a bar of common time, and at "one" of the next bar let the dampers touch the strings for an instant.

While executing this action as quickly as possible—the action of the pedal rising and being re-depressed, you must nevertheless let the pedal rise *so neatly* that the dampers *do not cause the least sound* in coming into contact with the strings.

If the pedal is allowed to fly up too suddenly, or is re-depressed too soon, the strings will be set into motion more or less strongly. The slightest sounding of the strings must, therefore, be regarded as proof that pedalling has been inefficient.*

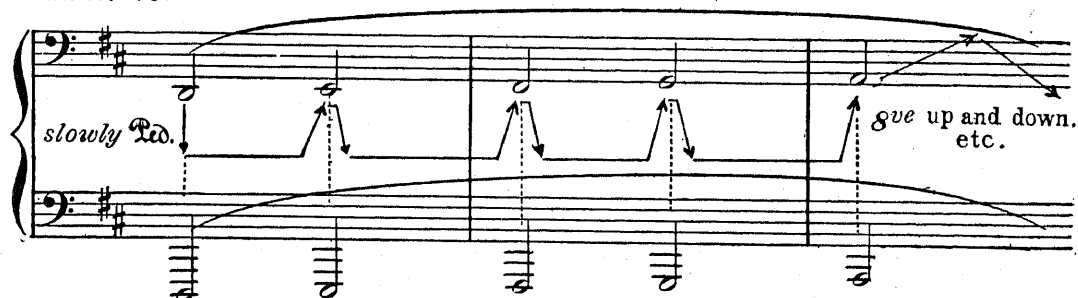
You must, therefore, learn to put the pedal *down* quite promptly while nevertheless letting it *ascend comparatively slowly*, i. e.,—without *hitting* the strings by means of the dampers.

* If the pedal is allowed to fly up too jerkily, not only are we likely to occasion a nasty noise from the strings and pedal itself, but such over-suddenness in the ascent, and too short a duration of the "up" position, will inevitably cause bad smudging of the passage, as the dampers do not then remain long enough against their strings to stop their vibrations. Refer to §§ IV and VII of this Set, pages 127 and 128.

EXERCISE III) : *Test for over-sudden pedalling*:—

Further to guard against such over-sudden pedalling, practice a scale in the low bass, quite legato, in Finger-touch, as in Example No. 43.

Ex. No 43.



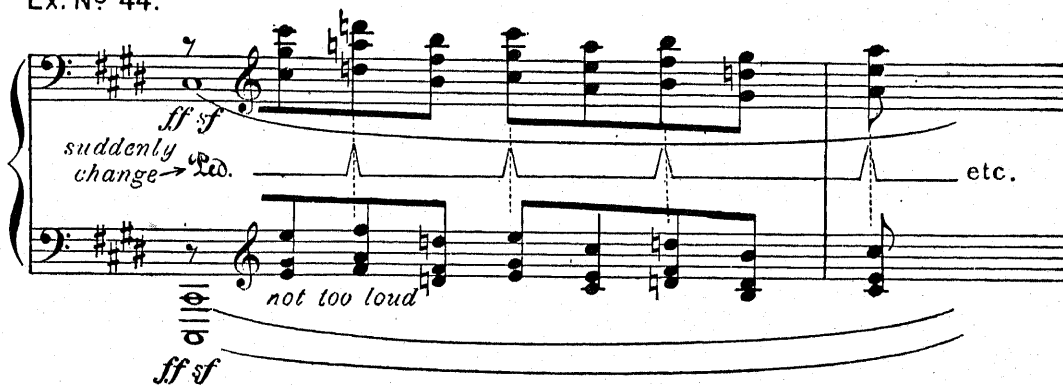
Play this quite slowly while applying the "syncopated" pedalling to it.

A scale pedalled like this, forms a good test whether the lesson of the previous exercise has been learnt, or not,—always provided, of course, that you hold the pedal down each time up to the very moment of sounding each new note.

EXERCISE IV) : *For "Half Damping"*:—

As an exercise for sustaining bass notes, &c., while damping the higher notes, practise passages of the following nature:—taking care here to make the pedalling so "sudden," as *NOT* to stop the bass notes. The pedal must not remain up even for an instant.

Ex. No 44.



The line of arrows indicates the movement of the pedal—a mere little "jerk" upwards.

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APPENDIX.

APPENDIX.

NOTE No. I.

SOME GENERAL PRINCIPLES GOVERNING THE CHOICE AND MEMORIZING OF FINGERING.

Examinations reveal the fact, that even in this comparatively simple matter one finds no general knowledge of the *laws* governing the choice of fingering, or of those relating to the memorizing of the fingering chosen. In fact, there even seems to be very little suspicion, generally, that such laws exist! There are indeed plenty of excellent musicians who fancy that the determining of fingering is a purely arbitrary matter, not coming under any natural laws. True, there are some amongst the more capable teachers, who *do* recognise some of these laws and rules; these particular laws not having been left so totally undiscovered as those relating to Tone-production and Agility.

There is no space here to go at length into the many details connected with Fingering; attention can only be drawn to a few of the more salient principles.

Fingering Groups. The first and main point, is, to recognise that all fingering consists of *groups* of fingers lying upon groups of notes—groups forming either complete or incomplete sets of *five-finger positions* on the keyboard. These five-finger positions may lie, (a) on five adjacent white keys (or white and black keys), or (b), they may be contracted into five adjacent semitones, or even into repetitions of the same note, or any combination of such; or (c), they may be extended into every variety of chord-position, ornamented or not with passing notes, &c.

Groups of *fingering positions*, thus formed, may be connected by lateral motions of the thumb and hand (and arm) into chains of successive groups, either similar or diverse in composition, and in this way we obtain scale and arpeggio passages of all kinds—diatonic or chromatic, with passing notes and repeated notes, or without.

Choosing Fingering. Our first concern in choosing fingering, must therefore be to analyse the passage we wish to finger, so that the most convenient groups of notes may be found upon which to place the fingers. In doing this, two things must be borne in mind, 1), the particular conformation of each hand, and 2), the places on the keyboard best suited for the process of "turning under" the thumb, or "turning over" the fingers, so that the successive and co-related groups of fingers and notes may be most easily connected-up into unbroken passages.

Memorizing Fingering. In memorizing Fingering, precisely the same process has to be pursued. In itself, it is *of no use* remembering that "the thumb goes here," or that "the little finger goes there"; it is only when these particular fingers are used as landmarks, to suggest to us *where* the successive finger-note *groupings* commence and end, that we can proceed to memorize the fingering. For we can only memorize Fingering in one way, and that is, by making sure that we recognise the successive complete or incomplete *sets* or groups of fingers, and by then forcing ourselves to connect these sets of fingers mentally with the particular sets of notes on the keyboard concerned in each group.

Diatonic Scales. Thus, in learning the diatonic scales, we find that they all consist of *two groups* of fingering—123, and 1234; now we can only proceed to memorize the fingering, by associating these fingering-groups with the particular portions of the keyboard to which they have to be applied; and the moment we succeed in thus forming a fixed association of fingers and notes, that moment we "know" the scale in question.*

The same thing applies with equal force to any other kind of passage we may wish to learn,—the only way is indelibly to connect *finger-groups* with *note-groups*.

Rhythm and Fingering often conflict. In thus looking for fingering-grouping, the beginner is often extremely puzzled, by the fact that the fingering-grouping is far more often than not totally at variance with *the rhythmical groupings* of the notes, for instance in the following example:



* Vide Note, page 84, "On the incorrectness of some of the traditional Scale-fingerings."

This CONFLICT between the groups of rhythm and the groups of fingering must therefore constantly be borne in mind, both when choosing fingering and when learning fingering, so that the rhythmical accentuation of the passage may not mislead us into choosing uncomfortable fingering-groups.

Turning under the Thumb.

As regards that very important matter, choice of the position for turning under the thumb, the point is, to enable it to "pass under" wherever possible while one of the other fingers is upon a *black key*,—or, put the other way: to enable the crossing of the fingers over the thumb to be effected *towards a black key*; or, when no black key is available, to arrange matters so that the turning point may offer the least necessary extension. As an instance, the following example (for the right hand) shows the proper place for the thumb:—

Ex. N^o 46.

When the interval after the black key is inconveniently or unusually large, this rule may be disregarded, for instance:—

Ex. N^o 47.

Fingering of Chord-positions.

Another point which puzzles many students, is, whether to take the ring finger or the middle-finger in common-chord positions and their inversions. A very simple rule here is, to use the *middle* finger after the little finger, when the interval between those fingers is so large as a *fourth*, viz:—

Ex. N^o 48.

but to use the *ring*-finger instead of the middle-finger when the interval is only a *minor* third; viz:—

Ex. N^o 49.

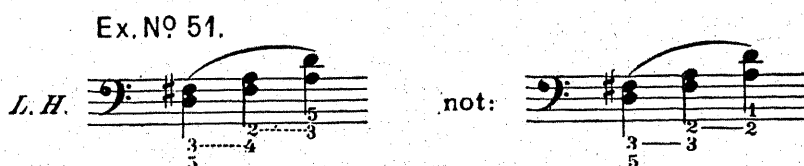
We may use *either* of those two fingers, when the interval next to the fifth finger is a *major* third; large hands usually preferring the ring-finger, while smaller hands usually need the middle finger.

Then there is the question of fingering sequential passages. When a passage consists of sets of notes repeated in ascending or descending sequence, it is found far easier to take each with identical finger-grouping,—it is far easier to keep the finger-figuration in agreement with the note-figuration than to confuse the performer's finger-rhythm sense by altering the fingering of the successive groups (of similarly sounding notes) in accordance with the laws of key-position. It is often easier in such cases even to finger quite irrespective of the claims of the white and black keys, the thumb even going on black keys when necessary. Thus in the third group:—



Re-iterated Notes. When notes are reiterated in close succession *during finger-touch passages*, it is found more easy to “think” such passages and to play them more clearly, if we substitute fingers while repeating the notes. It is found far easier to control the *tone-inflections* (and the rhythm generally) of such repetitions when we substitute fingers, than when we repeat the same finger in close succession. This even applies when one or more notes intervene between such repetitions—in the case of mordents, &c., where an accent is required on the last note. The rule does not apply so strongly in Hand-touch or Arm-touch passages, since these are slower in *tempo* than quick finger-passages, and there is therefore in this case more time to direct the tone-inflections. Also, the mental mechanical advantage is not so great then, as the movements are identical for each note in Hand-touch.*

It is, however, always well to employ the device of substitution of fingers, when a double-note passage consists partly of repetitions; thus:—



* When strong accents are required in passage-work of all kinds, we should remember that the easiest and most effective way is always, whenever possible, to give such accents by means of the *next species of touch* to the touch normally used during the passage. Thus, in a *first-species* passage, the strong accents should be given in *second-species*; while in *Second-species* passages the accents should be done in *Third-species* Touch-action. Or, in any of the *Species*, the accents may be provided by help of the rotary exertions of the Forearm.

This last fingering would either endanger the *legato*, or else the clearness of the reiterated notes—they would probably become tied notes.

**Sliding of
Thumb, &c.**

Amongst other subsidiary matters, is the occasional use of the *slide* from a black key to a white key, taken either with the thumb, or the little finger, and sometimes also with other fingers. For instance:—

Ex. N^o 5



Enough has here been said to convince the intelligent student how necessary it is to look rather for the principles of things, than to rely on mere haphazard results—even in this matter of Fingering.

NOTE No. II.

THE DISTINCTION BETWEEN TOUCH-SPECIES AND TOUCH-MOVEMENTS.

This presents very little difficulty to those having no prejudices on the subject. Children, indeed, generally find it simple enough to grasp, easily and fully—they having no wrong preconceptions to fight against.

But the case is widely different with those who have been brought up in total ignorance of the true laws of Touch; and this, not because it is inherently difficult to understand how the effects of Touch are wrought by the various simple combinations of Arm-weight, Hand-force, and Finger-force, accompanied by certain co-ordinated and optional movements; but because such sufferers have formed certain wrong ideas on the subject, and find it an extremely hard task to reverse these mental impressions. These sufferers have, in fact, learnt to regard the idea of MOVEMENT as the sole constituent of Touch—not movement *of the key* or *with the key* (as one should conceive it), but movements of the Arm, Hand, and Finger *towards* or *at* the key, and these sufferers are hence fixedly imbued with the mistaken notion that all distinctions of Touch depend on the mere preliminary movements *towards* the Keyboard. Nevertheless, these very preliminary movements are so unessential, that they may be entirely omitted if desired!

Once learnt, it is extremely difficult to eradicate such upside-down notions, and, to learn instead to regard all *preliminary* movements as of small account, and to realise that even the movements of the limbs *with* the keys are merely the outward accompaniment of those many and quite distinct *muscular changes of state* which are the true cause of all distinctions in sound-quantity and quality, and which are indeed the cause of those very movements themselves! Indeed, until such fallacies have been quite effaced from the mind, it seems hopeless to try to understand the true nature and rationale of any Touch-effects—as first demonstrated in “The Act of Touch.” The whole matter has been so fully gone into there (and also even in “First Principles”) that it almost seems supererogation to add further explanations. A few additional comments may, however, help those who are unfortunate enough to have such wrong preconceptions to fight against.

The first point, of course, is to disabuse the mind of that fetish-idea, that Touch consists of movements of the limbs *towards* and *at* the keys. True, the term “Touch” does include all those movements of the limbs which accompany the act of playing—preliminary and otherwise,—but remember, the term also includes the movements of *the keys themselves*, and the particular actions and inactions of our muscles (most of them invisible)

which enable us to *move* each key in the required way, by means of the various energies communicated to our Finger, Hand and Arm—changes sometimes accompanied by one kind of *movement*, sometimes by another. And the term moreover includes the act of producing all the differences of *duration* associated with the words Legato and Staccato—Duration as to the time the keys are held down or are not held down *after* the completion of the act of making the sound itself.

In a word, "Touch" is merely a generic term, including *everything* that appertains to the physical act of playing—the Act of Tone-production—the act of sounding notes at the Piano.

Hence we can speak of:—

I): *Species of Touch*—

—referring to the muscular actions and lapses of action by means of which we produce the effects upon the key which cause the tone—and besides the three chief forms (or Species) of such Touch-Construction there are innumerable varieties, combinations, and mutations.

II): *Movements of Touch*—

—referring merely to the movements which may *accompany* the previously referred-to actions and lapses—movements optionally of the finger, hand and arm (and of the forearm, rotarily) towards and with the keys.

III): *Duration of Touch*—

—referring to Legato and Staccato, with all the intervening differences, and which differences depend upon what we do to the key *after* the sound has been made.

Possibly those suffering under the before-mentioned persistent preconceptions might find their way smoothed, if for a moment they merely substituted another term, the word "Playing", in place of "Touch"? Thus—

- 1): The three chief Species of *playing*.
- 2): The three chief movements of *playing*.
- 3): The absence or presence of Duration in *playing*.

As to the teaching of these related but distinct facts of Species and Movement, one may commence at either end. One may begin by taking a *movement*, say Finger-movement, and show how we can sound notes by using *only* (and solely) finger-force (First *Species*), this being of course accompanied by finger-motion, and then point out how we can also apply *hand-force* "behind" the finger, and so enhance the tone (Second *Species*), and how this additional energy thus supplied by the *action* (exertion) of the hand, and received by the finger at its knuckle-end, may nevertheless exhibit no other *motion* than that of the finger itself—provided the finger-exertion is slightly in excess of that of the hand, and thus *prevents* the hand from displaying to the eye the work it is indeed doing

during such "finger-touch". After this, we can demonstrate how this same mere *finger-motion* can have its tone still further enhanced by allowing *arm-weight* to be set free during the moment of each key-descent (Third *Species*); the force derived from the weight of the arm being here received by the correspondingly exerted finger and hand, and thus brought to bear upon the key, while only *appearing to the eye* to consist of finger "action"—oh, how much misunderstood word!* In this way, we can take "finger-touch" (i. e. Finger-movement during Touch) and show how its three Species can be built up *by addition* as it were.

Or, we can commence the teaching of this matter in the reverse way, and show how the three Species of the Touch-act can take different forms of Movement. In this case, we should begin with Weight-touch (third *Species*)—and indeed it is usually best to start at this end—and show the pupil how the keys can be weighed down into sounding, apparently, by the mere lapse of the arm-supporting muscles. Having thus instructed the pupil how to obtain *pp*-weight-touch *tenuto*, after this, we should proceed to teach the cessation of Weight at the moment of tone-emission (the "first Muscular Test," in fact) thus obtaining *staccato* purely by cessation of all force upon the key at the right moment; and follow this, by the production of *forte* Weight-touch. Then show, how this same Weight-touch really consists of the three elements: (1) Arm-weight, (2) Hand-force, and (3) Finger-force—and at the same time show how this triple combination may be accompanied by a *movement* optionally of the arm, hand or finger.

After this, show how the arm-weight may be deleted—thus leaving *second* Species, and illustrate how this again may optionally show either *finger-movement* or *hand-movement*. And lastly, delete the hand-force, thus creating *first* Species, with of course its sole form of accompanying movement—that of the finger.

In any case, it is best to go over the ground with each pupil not only by "SUBTRACTION" like this, but also in the preceding way of "addition,"—the very contradiction there seems in these two ways, helps to make the paramount facts clearer, and also helps to obliterate the difficulty as to the relationship of Species and Movement.

The acquisition of the innumerable varieties of Touch-species and movements (including the important hybrid second-third species forming "arm-vibration," etc.†) follows easily enough, once the fundamental distinctions here discussed have been thoroughly realized and mastered.

* Most Piano-people quite misapprehend the word "action" in relation to Piano-playing, and imagine it must always signify *movement*, quite forgetting that we can "act" with any degree of muscular force, and yet not produce any motion whatever.

† *Vide*, pp. 51 and 52, &c.