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THE  
STENOGRAFIK TEECHER.

ADAPTED FOR USE AS A TEXT BOOK IN

COMMON SCHOOLS, HIGH SCHOOLS, ACADEMIES,  
AND COLLEGES.

"It would be madness and inconsistency to suppose that things which have never yet been performed can be performed without employing some hitherto untried means."—*Lord Bacon's "Novum Organum."*

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By JOHN BROWN SMITH,  
Author of "THE STENOGRAFIK TEECHER," ETC.

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SECOND EDITION.

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AMHERST, MASS. :  
PUBLISHED BY J. B. AND E. G. SMITH.  
1878.



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THE  
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## INTRODUCTION.



The appreciative reception extended by some of the most progressive and best informed writers of the old short-hand systems, to the first edition of the imperfect and hastily prepared small pamphlet issued under the name of the "First Fonakigrafisk Teecher," has insured its existence as an established aggressive system of writing, which aspires to supplant the cumbersome long-hand script, as well as the old imperfect systems of short-hand.

In naming the new system, the author followed in the footsteps of the authors of one hundred different English Stenographic systems, who have selected a special name to designate the most prominent feature of their special system. A more extended experience and investigation of the past history of Stenography, has impressed the injustice of such practice upon the mind of the author. In truth, it would be rightly considered as utterly presumptuous, for any person who may have made additional discoveries in any of the established sciences or arts, such as Geology or Sculpture, to insist upon appropriating all the past labors of his predecessors, in building up, under a new name, already established sciences or arts. To aid openly or silently in perpetuating such injustice on the rights, labors and honors of the glorious old pioneers of English Stenography, is a thing the author can no longer aid or countenance in any manner whatever. Hence, as per a previous

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announcement, the Literary style of this system shall be known simply as Chirography (Kirografy), and the reporting style as Stenography, (Stenografy).

The author has endeavored to supply a long felt need in England and America. The English speaking people have suffered patiently for generations, because of a barbarous orthography. The time has now arrived when the teachers, of both England and America, are ripe for changes which shall go to the bottom and reform our system of spelling in our Common Schools, High Schools, Academies and Colleges. Tiro, the father of short-hand, who lived in the days of Cicero, did not live to see it introduced in the public schools; but after his death it was further improved by Vipsanius, Philargyrus, Aquilla, and Seneca the philosopher, and introduced into schools by the practical Romans, where for centuries it was taught as a branch of study. Can our people afford to be less practical? The success which has attended the introduction of Stenography into the primary schools of France, in teaching a phonetic orthography and enunciation and in teaching deaf-mutes, has been remarkable. In England and America there has been marked success in the same direction wherever the attempt has been made. Experience has demonstrated that children can acquire the rudimentary elements of an English education in from one to two years less time, even where the clumsy expedient of diacritical marks are resorted to for teaching a phonetic orthography.

Teachers and parents will readily appreciate the great practical value of using a Kirografik or Literary style of writing, which is founded upon a Stenographic alphabet for the purpose of teaching children a phonetic orthography and correct enunciation. Its value cannot be overestimated in aiding children to acquire a correct pronunciation of their native language, and also foreign languages. The most important point that can come before teachers and school boards, will naturally be to arrive at an intelligent decision in regard to the real merit, for this purpose, of the various systems of short-hand. This question can be determined by a few simple tests. The system of Kirografy employed for this purpose, should be entirely devoid of all Stenographic contraction; it should have simply an alphabetical basis of a simple sign or letter, or each simple or compound sound; the vowels and consonants should be regularly



intercolated or inserted in their natural order, as in the common script; the system should be devoid of shading except for ornamental purposes, or it will be illegible when written with a pencil, and the vowels or consonants should never be pointed in laterally (inserted afterwards) as it is a damage to speed. The system presented in this manual is the only one now in use which fully meet these essential conditions in every particular. For a more complete examination of the subject the reader is referred to the following review of the leading Stenographic Alphabets of the world.

#### STENOGRAPHIC ALPHABETS.

The Stenographic systems of the world may perhaps be classed, for the sake of comparison, as resting on four entirely different fundamental ideas, principles, or lines of thought, viz :

1. The first line of thought, dates in origin, back to the beginning of human drawings on sand or bark to represent objects of nature. Its history is seen in the hieroglyphics of the ancients, and its developement has given us the common long-hand script. Another stage of developement began about 63 B. C. when Tiro invented the first Stenography and made an approach toward the geometrical basis for signs or letters, but still imitating the common script. Gabelsberger's German Stenography is perhaps a leading exponent of the modern development of this principle. 2.—The second line of thought centers on the idea of having mathematical signs the same shape, but light and shaded for cognate pairs of sounds. Pitman's English Phonography is the leading exponent of this principle. 3.—The third line of thought centers on the idea of having the pairs of cognate signs the same mathematical shape, but long and short. Duploye's French system represents this principle to a great extent. 4.—The fourth competitive system in the World's market, centers upon the principle of having cognate pairs of mathematical signs the same shape, but written in the reversed direction. The new Stenography, of which the author is the inventor, is believed to be the first system ever built upon this alphabetic principle. We will briefly compare the three old foundations for systems with the new innovation, as follows :

1. Taking Alfred Geiger's Stenography (an adaptation of Gabels-

berber's Principles to the English language) as a good specimen of the first alphabetic basis, it is found that the alphabet is constructed upon the basis of the common long-hand script with circles, hooks, dots, meandering lines, loops, slanting strokes and waving thin lines. The new Stenography on the contrary has mathematical simple lines, curves, loops, circles, strokes, hooks and waving thin lines. There is an absence of shading in both systems. The Gabelsberger alphabet has a number of compound signs, but the new Stenography has none—all being made with a simple mathematical movement. Gabelberger's system is not strictly phonetic—the new Stenography is.

What appears as the strongest point in favor of Gabelsberger's system, is its capacity for adaptation and use as a Universal European Stenography, to a certain extent at least. This advantage may be secured in that system by conformity to the foundation upon which it is built, viz: by writing similar words in the different European languages with the same outline, as far as it is possible to do so on account of their different orthographies and variable prefix and affix terminations. This desirable advantage has been entirely overlooked and consequently unprovided for in Mr. Pitman's Phonography and all its reduplications and differentiated reduplications in America—they can never aspire to the position of a Universal system for Europe or the Aryan family of languages. The new Stenography (the reporting style) on the contrary has been developed with this view in the mind of its inventor; consequently the principle has been introduced of writing the prefixes and affixes of compound words with uniform signs according to their meaning. The reader will perceive at a glance, that if the prefixes and affixes of the whole Aryan family of languages are written with uniform Stenographic signs according to their meaning, there will be secured at once a nearer approach to a Universal European system of short-hand than even Gabelsberger's system ever dreamed of. In fact the languages of the whole world (those which have advanced beyond the primitive or monosyllabic period of development) can be written with, at least, uniform prefixes and affixes if we adopt this new principle of writing them by their meaning. This new principle is strictly in harmony with language building, and in fact, is so extremely simple that it is astonishing to think

that all previous Stenographies have entirely overlooked it. It is "as simple and easy as nature itself." The old Stenographies generally use arbitrary signs without regard to either the meaning or sound of prefixes and affixes.

#### PHONOGRAPHY.

2. The second alphabetical principle is represented by Mr. Pitman's Phonography. This system is founded upon the idea of making the cognate signs the same shape, but using thin and thick lines for the distinction of cognate sounds. It also disconnects the vowels by inserting them afterwards by using light or heavy dots or dashes.

Willis, in 1602, introduced the phonetic principle in Stenography by omitting the *c* from his alphabet. In 1635 Maud left the *q* out of his alphabet. Lewis left all silent letters out of his system. Tiffin in 1750 published the first phonetic system of short-hand. Roe in 1802 published a phonetic system. Harding's modification of Taylor's system was the first system to introduce the principle of shading—it was used first to distinguish *v* from *f*. Mr. Radcliffe of Plymouth introduced the idea of leaving out vowels in writing. Taylor introduced the idea of writing vowels by a dot in any position. Harding introduced about fifty years ago, the principle of writing *a*, *e*, *i*, by a dot for each, in three positions. Gurney also wrote five vowels by three dots—classing *a* and *e* together and *o* *u* together. Mr. Pitman gathered up those points of his predecessors and brought out his Phonography in 1837. An examination of his system reveals the fact that he borrowed outright the signs for *t*, *m*, and *n* from some of the older systems.

Mr. Pitman seemed to gather what appeared to him the good material from the older systems and systematized it into one of his own. All honor is due him for this and for his long persevering labors in this field; but we must not forget that the verdict of posterity will soon correct the extravagant claims of some of his well meaning admirers. It is now beginning to be realized by progressive Stenographers in both England and America, that Mr. Pitman utterly failed to make the best possible arrangement of the material in his possession. It is a remarkable fact that in Mr. Pitman's Phonography and all its reduplications up or down, to Mr. Linds-

ley's differentiated reduplication of Pitman's alphabetical principle (which he calls Tachygraphy), the fundamental idea of their alphabet is violated in all their reporting styles. It is a common thing to strike signs for prefixes and affixes and other purposes, in the two opposing directions, for the sake of good angles in the joinings. As their alphabet is based upon the idea of having the same shape for cognate signs, this practice is a concession to the weakness of their alphabetical principle. It produces inharmony between their alphabets and their reporting styles, and is in direct conflict with the vital foundation principle of their systems. Such a fact is a positive demonstration that their alphabetic basis is wrong, because they had to change it when they advanced to their reporting styles. The same objection is found in the Duploye French principle and also in the German principle.

The inventor of the new Stenography saw that the old systems were self-condemned, and unscientific in their very foundations, and developed the new Stenography upon the idea of having the alphabetical cognate sounds written the same shape, but in reversed directions, thus securing complete harmony between the fundamental principle of the alphabet and the actual practice in the reporting style. It is impossible to remedy this defect in the old systems—only change to the new principle will rectify such inconsistencies. Shading is universally acknowledged as impracticable in pencil reporting and injurious to speed in pen reporting.

#### DUPLOYE'S STENOGRAPHY.

3. It is unnecessary to consider the third alphabetical principle as seen in Duploye's French system, for the same objection applies to it as to Mr. Pitman's system. These objections will finally rule any system out of the field in the contest for "survival of the fittest."

#### THE NEW STENOGRAPHY.

4. The fourth alphabetical principle of writing cognate sounds the same shape but struck in the reversed direction, is seen to be an actual necessity in practice in the reporting styles of other systems, and what is established as sound practice for a reporting style, must be as sound when applied as a fundamental principle for an alphabet. Other systems admit the superiority of the prin-

ciple by using it in actual practice. 1.—Shading is not employed in the new Stenography, which is a strong point in its favor. 2.—As now improved, the circles, hooks, loops, etc., are all read in the order of writing them—thus making all the principles of contraction as “simple as nature itself.” The old systems never dreamed of realizing such order. 3.—The Alphabet introduces the principle of writing the short sounds with *forward* motion, and the long cognate sounds with *backward* motion. The consonantal signs have been classed so that the Guttural, Palatal, Dento-palatal and Labial sounds, have signs struck in uniform directions for each class. These points are not found in old systems. 4.—The Literary style is the first Kirografk system in the world, that has a Stenographic alphabet, from which is developed a system of writing *without* any contractions whatever. 5.—Another feature is, that the improved Literary style is now written by joining vowel and consonant signs together in words in the order of reading them—no vowels are inserted afterwards, as in other systems. The Reporting Style writes words of one syllable without omission of vowels, when necessary. The Rule of Position is also employed to express cognate pairs of sounds without the necessity of writing them. Tachygraphy, to a certain extent, also returns to this practice of the old Stenographies, but throws away the valuable material of Positions for expressing vowel sounds; while Phonography expresses vowel sounds in the same position, which have no relation, or are not suggestive, thereby, making it difficult for the Reporter to read promptly his notes. 6.—All the principles of contraction (except shading) found in English systems, and what is valuable in European systems, besides original principles never found in any previous system, are introduced in the Reporting Styles—thus, making a truly Stenographic system. 7.—The new principle of contraction introduced in this system of writing prefixes and affixes by their meaning, points out the way of securing an International system of Stenography, which shall be in harmony with the fundamental principles of the Science of Language.

#### ILLEGIBILITY OF SHADED ALPHABETS.

The illegibility of shaded alphabets, is one of the many drawbacks which render them unfit for a Literary Style of penmanship.

The following Phrases, when written rapidly in a shaded alphabet with a pencil, forcibly illustrate this fact, as they may be read for *two, three* or more meanings, viz :

I got it on "*tick*" or I got it on *Dick* : let us have *peace* or let us have *peas* : an old *time* man or an old *dime* man : he *caned* his wife or he *gained* his wife : *wait* for me or *wade* for me : ask for his *Jane* or ask for his *chain* : a poor *rack* or a poor *rag* : *good bye* sir or *got pie* sir or *cod pie* sir : etc.

#### ACKNOWLEDGEMENTS.

The author desires to return his heartfelt thanks to those who came forward so nobly in the hour of weakness of the new system. Mr. E. C. Hoyt, author of the most perfect system of Phonography, besides being a first-class Law Reporter in the Courts of Mich., is a noble example of firmness and backbone among Stenographic authors towards new systems. The comprehensive, progressive, unflinching men with opinions of their own, who abandoned the old systems and stood bravely through thick and thin for the new Stenography, have the everlasting gratitude of the author. They all have rendered valuable aid in various ways. Many of them possess talents of a very high order which enables them to thoroughly appreciate a new system which has merit. Amongst this number are D. N. Waterbury M. D., Dr. Wm. J. Vogt, John Shock P. M., Daniel Guerin, Wm. C. Albro, Atty., Wm. U. Dame, M. L. Freeman, F. M. Bowell, E. B. Parke, Prof. W. C. Stewart and others.

The author acknowledges his indebtedness to the labors of the ancient pioneers in Chirography and Stenography, as embodied in the common Roman Script and Tironian Notes and their differentiated applications, as seen in Gabelsbergers Principles and Pitmans Phonography. To Mr. Lindsley's differentiated reduplication of the Pitman principle the author looks for paternal affection, because he remembers with pleasure, that he was taught the rudiments of short-hand from Mr. Lindsley's own pen. While the new system is the progressive offspring of Tachygraphy, it is far more, because it reaches out and claims for its paternity the whole Stenographic World of thought—past and present.

D. O. PARKER  
LAWYER  
DALLAS, TEXAS

# THE KIROGRAFIK TEECHER.

## LESSON I.

1. Write the signs and letters for the following vowel sounds on the blackboard.



Ee I Ay Ai E A Eu U Ah Aa

The names and sounds of these signs and letters are the same. They are heard in the words *eel, ill, ail, air, ell, at, her, up, are, ask.*

a. For the purpose of distinguishing between the Kirografik characters and the corresponding letters in print and script, the former are called *signs* and the latter *letters*.

b. These signs are arranged in cognate pairs, long or voiced, and short or voiceless.

c. It will be observed, that the general principle governing in the assignment of the characters in so-called cognate pairs, is that of having the signs for the long and short sounds the same shape, but struck in different directions. Signs formed of a *straight line* are exceptions to the rule.

REM.—1. The Phonetic method of teaching is adopted, as being most in harmony with the simple indications of nature. The be-

ginner should observe a single sign at one time, and then learn its name, which, in all cases, is the sound it represents. If the teacher prefers the *word method* of instruction it can be used, either with or without the *Phonic method*. The absurdity of teaching children to recognize even a small proportion of ordinary words, before they can analyze their phonetic elements, is apparent. Less than fifty Phonic elements mastered, give a key that will enable any child to recognize any ordinary word in print, after a short period of drill; but it would require many hundreds, or even thousands of *word hieroglyphics* to express the ordinary talk of children. Such a tax on the child's memory is unreasonable; it may be a good way to master the present barbarous orthography, but it is out of place in any natural method. *Phonic analysis* first, then *word reading* without analysis is nature's progressive method. The present unphonetic orthography can best be mastered by combining it with Phonic writing.

REM.—2. After the student or class has learned the names, sounds, forms and directions of these signs, they should then put them on paper with pen and ink. It is best for the teacher to dictate the lesson, as the pupil becomes familiar with the sounds in this way.



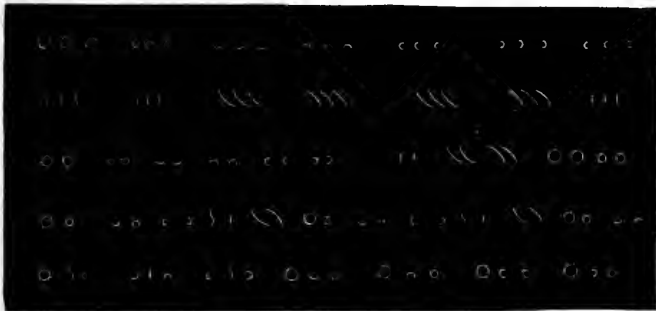
REM.—3. A pen is the best instrument to use in writing for new beginners. The pen should be held between the first and second fingers and steadied with the thumb, as it is when held in the usual way. It should also be held so that the pen-holder and elbow point



away from the body. Both sides of the pen-points should press equally upon the paper. A smooth motion is secured, by adroitly turning the pen while tracing the curved signs. The preceding cut illustrates the manner of holding the pen when writing the Kiro-grafik signs, although, for writing common script, the usual method is best. The practical experience of the teacher will be the best guide in mastering further details on this point.

REM.—4. The following method of drill will be found to serve as a guide to the teacher's dictation exercises. The pupil may practice privately on these exercises, and they should be repeated until thoroughly mastered. The aptness of the pupil will determine the length of time to be spent on each exercise.

*DRILL NO. 1.*



REM.—5. The writing exercises should be written on ruled paper, at first, the pupil leaving every other line vacant, for corrections by the teacher, with ink of a different color. The pupil should then go over the exercise and correct errors, then re-copy it as many times as is necessary to secure a fair degree of speed and accuracy. Writing from dictation should begin with the first lesson, and as every new principle and new combination of signs is mastered, it should be turned into matter for drills. Only by persevering attention to the minute details of both the elements and their subsequent practice, can the highest degree of success be attained. The teacher may safely leave the dictation to an assistant, or to one of the members of the class, after the first exercise, but invariably the

exercises should be corrected by the teacher himself, or herself. A good plan, is, for the class, or a portion of it, to meet together and take turns at reading the exercises. When not convenient to meet in this way, students should secure the services of a friend to read the exercises to them for practice. It is also a good plan for students to pronounce aloud, or mentally, the name or sound of each sign while tracing it upon the paper. Master only six or eight signs in this way at one time. When the alphabet is thoroughly learned so that the sign for, and power of each sound comes instantly to the mind, commence and go through each succeeding exercise very carefully, tracing the lines as though drawing with the pen; this should be done slowly and accurately.

2. Write the signs and letters for the following vowels and diphthongs on the blackboard.



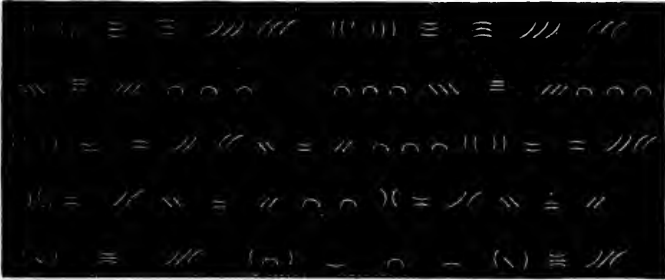
Au O Oh Oe Oo Uu Ie Oi Ou Iu

The names and sounds of these signs and letters are the same. They are heard in the words *awe, on, owe, obey, ooze, put, eye, boy, how, hew* and *unite*. A double *uu* is used for the sound in *put*, and a double *oo* for its cognate in *ooze*. *Iu* is used to represent the diphthong in *hew* and *unite*.

d. The proper size to make the vowel signs in ordinary writing is as follows: The circle for long *Ee* should be one thirty-second, and for short *I* one sixty-fourth of an inch in diameter; the semicircles for long *Ay* and short *Ai*, and for *E* and *A* should be made one thirty-second of an inch in diameter; make the sign for *Eu*, short *U*, long *Ie*, *Oi* and *Ou* one

sixteenth of an inch in diameter; and make the curved lines for *Au*; *Oh*, *Oe*, *O*, *Oo*, *Uu* and *Iu* about three thirty-seconds of an inch in diameter or length.

DRILL NO. 2.



REM.—6. It is proper to give a brief presentation of the reasons why the vowel scale has been classified as above. Although it is not intended to give a treatise on the pronunciation of the language—that is beyond the scope of this book—yet it is not our purpose to avoid the issues which the Phonetic Science of the future *must* grapple with. While the author's individual views are given, they are not intended to interfere with the practice of teachers who differ in opinion. Science alone can settle it.

REM.—7. The division of the alphabetical sounds in the language, into different classes, has been in accordance with their organic formation. The lingualized vowels *Ee*, *I*, *Ay*, *Ai*, *E*, *A*, *Eu*, *U*, *Ah* and *Aa*, are classed as cognate pairs. A diphthongal glide is combined with the short *ay* element in *ai* before *r*. The organic formation of vowels of this class is similar—all being produced through a flattened or horizontal slit mouth aperture. The labialized vowels *Au*, *O*, *Oh*, *Oe*, *Oo*, and *Uu*, are classed as cognate pairs. The organic formation of this class is similar—all being produced through a rounded mouth aperture. The extremes of each scale, *Ah* and *Au*, *Ee* and *Oo*, approach closely in organic character. The diphthongs *Ie*, *Oi*, *Ou*, and *Iu*, are compound unions of simple elements. Long *ie* is a union of *ah* and *ee*, *oi* of *au* and *i*, *ou* of *ah*

and *oo* or *uu*; *iu* is a union of a slight *y* or *i* element, with an *oo* or *uu* element, as in *her*, *mute*, *union*.

REM.—8. The signs are classed together in pairs, formed by the same organs, and representing as closely as possible, cognate, voiced and voiceless sounds. The classification of the vowels is somewhat different from the old system, but it is believed to be much better and approaching nearer scientific truthfulness. The greatest point of divergence is in classing *e* and *a*, and *eu* in *her* and *u*, as cognate pairs. The introduction of *u* among the linguallized vowels, (instead of leaving it among the labialized vowels as in other systems) is, perhaps, the greatest innovation. It can be readily determined by a few simple experiments, that this change is in accordance with its organic formation. Let the teacher or student stand before a mirror, and observe carefully the organs of vocal utterance: then sound the *aa*, in *ask*, slowly, followed by *u* in *us*, and he will find, that the position of the vocal organs are organically identical. The same experiment can be repeated, by placing the *aa*, in *ask*, before *k*, with a like result. Then, perform the same experiments with the labialized vowels *au*, or *o*, and it will readily be seen by a series of such experiments, that *u* is a linguallized vowel in organic formation. A series of similar experiments with *e* and *a*, will result in finding that they are more closely related with each other, (although not perfectly cognate) than with the long *ah* or *ee*, or, indeed, any of the other vowels. The truth of the matter is found, in the fact, that many of the so-called cognate pairs of vowel sounds, are really not perfect cognate pairs. Prof. March, President of the Spelling Reform Association, recognized this difficulty, in his address before the International Philological Convention at Philadelphia in 1876, when he said :

“ The *e* of *met* is different in quality from its long as heard in *may*, the *i* of *fit* from its long as heard in *fee*; so that it is doubtful whether one character will do for both, whether we must not have different characters for each short and long, after the manner of old time-observing tongues. ”

Again, a quotation in point is given, taken from the article on the “ Principles of Pronunciation of Webster’s Pictorial Unabridged Dictionary. ” In speaking of the character of the sound *e* in *met*, it is said :

“This is not a short sound of the long *ee*. It has usually been considered as the *shut* or extreme short sound of *ay* in *fate*; but most orthoepists at the present day, while allowing it to be a nearly related sound, regard it as distinct, being slightly more open than the radical part of *ay*, and lacking the vanish: both rare intermediate between *ah* and *ee*, the tongue not being so much depressed as for the former, nor raised so high toward the palate as for the latter.”

Again, Webster says of the short *a* in *add*:

“With respect to its position in the scale of sounds, it is a palatal vowel, intermediate between *ah* and *ee*, the tongue being raised higher than for *ah*, and not so high as for *ee*.”

It will be observed that Webster classes both *e* and *a* as intermediate between *ah* and *ee*. Taking the same view of their organic formation, they have, in consequence, been classed as a pair, although not perfectly cognate.

REM.—9. The vowel sounds in *air*, *et*, *at*, *urge*, *ut*, *ot*, occur only before a consonant. The *o* has two sounds as found in the words *or*, *nor*, and *on*, but such minute varieties of sound will confuse many; hence, for a practical alphabet, it is thought best to avoid making too many signs. The vowel sound before *r* in monosyllables should be written with *Au* in such words as *or*, *nor*, *form*, *lord*, *north*; and also in such accented syllables as *for'mer*, *or'chard*, *abhor'*, but an accented syllable followed by a vowel should have the *o* sign, as in *for'eign*, *or'ange*, *tor'rid*. On the contrary the short vowel sounds in *ill*, *ask*, *obey* and *put*, occur both before and after single consonants. In such words as *pity* and *kitty* the *i* is more abrupt and explosive than the *y*, but in the word *ability* only the first *i* is abrupt, while the final *i* and *y* are softer. It would be impractical to represent such minute distinctions in a common Kirography intended for the masses. *Aa* is found in *idea*, *phenomena* and *Judea*; *oe* in *octavo*, *calico*, *studio* and *vertigo*; and *uu* in the preposition *to* when it is unaccented.

## LESSON II.

3. Write the signs and letters for the following Labial consonants on the blackboard:



*Wh w f v p b m*

The names and sounds of these signs and letters are: *Whi, Wi, Fi, Vi, Pi, Bi, Mi*. They represent the sounds of these signs and letters as heard in the words *whip, wit* and *twit, fifth, vivify, pip, bib, mimic*.

a. It will be observed that these labial or lip consonants are all written inclined to the right, or slanting upward at an angle of forty-five degrees. The principle observed in the assignment of the signs to this class of sounds, is that of striking all the labial consonants in the same general direction. The signs are arranged in pairs, long and short, with the exception of *m* which has no recognized cognate sound.

b. These labial consonant signs are generally written with the upward stroke. *Whi* and *Wi* are semi-circles divided at

an angle of forty-five degrees to the right; their diameter is about three thirty seconds of an inch. The others are made five thirty seconds of an inch in diameter or length. *Pi* and *Bi* are quarter circles, and *Fi* and *Vi* are waved lines.

REM.—10. The class should drill on the consonant signs as described in Lesson II. As the consonantal sounds cannot be sounded alone, the short *i* vowel has been placed either before or after (generally after) the sounds, such as *Bi*, *Pi*, etc. The class should name the signs by pronouncing the different consonants in combination with the short *i* sound. When it becomes necessary to distinguish between initial and final consonants the *i* element is placed before the final and after the initial sign. *Ip*, *Ib*, *Ik*, etc., denote the names and sounds of *p*, *b*, and *k*, when final. Initial and final consonant diphthongal combinations are designated in the same manner. *Tri*, *Dri*, *Spri*, are the names of initial combinations, but, *Itr*, *Idr*, *Ispr*, are the names of the same combinations when final: The initial combinations are more perfectly diphthongal than the final, and for practical uses this difference is recognized by giving a variation of names for the same consonant combination.

## DRILL NO. 3.



4. Write the signs and letters for the following Dento-palatal consonants on the blackboard:



*y* *iu* *z* *s* *thi* *ith* *d* *t* *n*

The names and sounds of these signs and letters are: *Yi, Iu, Zi, Si, Thi, Ith, Di, Ti, Ni*. They represent the sounds of these signs and letters as heard in the words *Yi* and *minion, unite, iz, sis, the, oath, did, tit, ninny*.

c. This class of dento-palatal sounds are formed with the organs of the front mouth and palate. They have signs given them which are struck near the horizontal direction, because they occur more frequently than any other class of sounds in the language. The Kirografik signs, in many words, would look like Oriental perpendicular script, if this class of sounds had perpendicular signs given them. Lineality of writing is attained in a great measure in this way.

d. *Yi* and *Iu* are semi-circles cut horizontally, and *Zi* and *Si* oval or egg loops, but the *Zi* loop is left with a slight opening on either end. The diameter of these signs should be three thirty seconds of an inch—the latter two, less in the short diameter. *Thi* and *Ith* are waved lines, *Di* and *Ti* quarter circles, and *Ni* a horizontal straight line; the diameter or length of these signs are five thirty seconds of an inch in ordinary writing. Students may make all the signs larger or smaller, provided the general proportions are maintained throughout. The Lessons near the close of the book show the actual size and proportions of signs as used by advanced writers. Full length signs, such as *Hi, Ti, Ki, etc.*, are reduced in size to about one eighth of an inch in length. The necessities of different temperaments and styles of hand-writing preclude the idea of having fixed limits to the size of signs. To preserve the relative proportions between the sizes of signs is the only possible unvarying rule that can be given for all purposes of writing.



## DRILL NO. 4.



REM.—11. The *Iu* diphthongal sign has been introduced in both the vowel and consonant charts, because it is really a union of a slight *y* or *i* and the *oo* or *uu* elements.

5. Write the signs and letters for the following Palatal consonants on the blackboard:

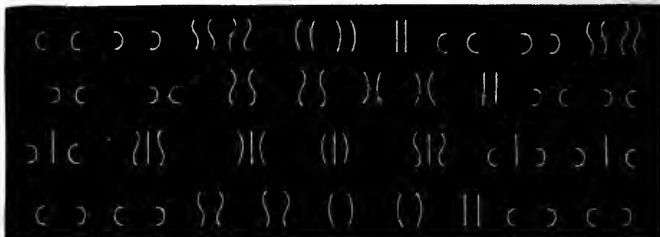


The names and sounds of these signs and letters are: *Zhi*, *Shi*, *Il*, *Li*, *Ji*, *Chi*, *Hi*. They represent the sounds of these signs and letters as heard in the words *azure*, *flash*, *ill*, *late*, *judge*, *church*, *hit*.

e. This class of palatal sounds are formed with the organs of the middle mouth and palate; *Hi* is an exception, as it conforms to the configuration of the organs in any class of sounds with which it is pronounced. The Palatals are struck in a perpendicular direction.

f. The signs for these letters are made the following size, viz: *Zhi* and *Shi* three thirty seconds of an inch in diameter; *Il*, *Li*, *Ji*, *Chi*, and *Hi*, five thirty seconds of an inch in length.

## DRILL NO. 5.



REM.—12. The sign for *l* is made interchangeable with *li* in order to have better angles in joining signs into words, as will be seen in the succeeding Lesson on Joinings. The *Ji* and *Chi* sounds are usually considered as compound elements, corresponding nearly to a union of *d* and *zh*, and *t* and *sh*. In a practical alphabet it is better to assign to them distinct signs.

6. Write the signs and letters for the following Guttural consonants on the blackboard :



The names and sounds of these signs and letters are : *Ir*, *Ri*, *Och*, *Ich*, *Gi*, *Ki*, *Ing*. They represent the sounds of these signs and letters as heard in the words *fir*, *rich*, *loch*, *Dach*, *gig*, *kick*, *ing* and *ink*.

*g*. This class of guttural sounds are formed with the organs of the back mouth and palate. The initial *Ri*

and final *Ir* and also *Och* and *Ich* signs, are made interchangeable in order to secure good angles in their joinings with other signs, as will be seen in a succeeding Lesson.

*h.* The signs for these letters are made the following size, viz: *Ir* and *Ri* three thirty seconds of an inch in diameter; *Och*, *Ich*, *Gi*, *Ki* and *Ing* five thirty seconds of an inch in length.

REM.—13. It will be observed that the Labial, Dento-palatal, Palatal and Guttural classes of consonants, have signs which are struck in a general uniform direction, for each class of sounds. No classification of these sounds, however, can be made without seeming irregularities—such as the two *Ir* and *Ri* sounds. Some *R*'s are formed with the root of the tongue and hard palate; others, with the tip of the tongue reversed and palate; again, some are strongly trilled, and others slightly or not at all.

REM.—14. Diagrams and Mnemonic aids, to the memory of pupils who need them, are often of great service. The teacher will find the following appropriate and suggestive for this purpose:



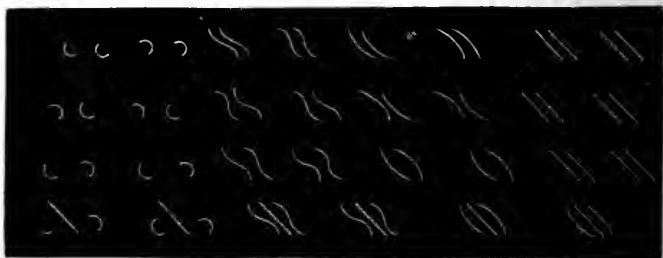
REM.—15. Let the pupil point out the geometric outlines of each sign, in the above circles, while naming it. The alphabetical signs are all formed on geometrical principles, and drill of this kind will not only teach pupils the first elements of dots, lines, circles, squares, right angles, acute and obtuse angles, but will also prepare them for taking lessons in mechanical and artistic drawing.

REM.—16. To remember the strokes for *t* and *d*, note that the *t* sign is the T-op quarter circle; and *d* is the D-own quarter circle in a circle. The arch 9 and the arch 10 shows that the strokes for *p-k*, and *g-b*, form the up and down arches. The initial *Ri* turns to the right, and the final *Ir* turns to the left as in the word *are*. The line 7 and 8, divides the circle for the *R* signs. The line 9 and 10, di-

vides the circle for *Zhi* and *Shi*. In this way the teacher can point out all the signs, and make it interesting and instructive to the class.

REM.—17. The teacher can explain the analogy between the different classes of sounds and their signs, by drawing a diagram similar to the face and head diagram in the engraving. In addition to the classification already explained to the pupil, it can be more strongly impressed upon the mind in the following manner: The classification of the consonants are illustrated, by showing that the sounds formed by the same organs are written in the same general direction, thus: The Labials *Whi, Wi, Fi, Vi, Pi, Bi,* and *Mi*, are struck upwards at an angle of forty-five degrees; the Dento-palatals *Yi, lu, Zi, Si, Thi, Ith, De, Ti,* and *Ni* are struck in a general horizontal direction, to secure lineality, as they are the most frequent occurring class of consonants; the Palatals *Zhi, Shi, Il, Li, Ji, Chi* and also *Hi*, are written in a perpendicular direction; and the Gutturals *Ir, Ri, Och, Ich, Gi, Ki,* and *Ing*, are written downwards, with an angle of forty-five degrees to the right.

DRILL NO. 6.



### LESSON III.

#### FORWARD AND BACKWARD MOTION.

7. In order to secure uniformity as far as possible, the principle has been introduced of writing the voiced or long signs with *backward* motion, and the voiceless or short signs with *forward* motion. The diagrams numbered 1, 2, and 3, illustrate *forward* motion, and the diagrams 4, 5, and 6, illustrate *backward* motion, as follows: Put the diagrams on the blackboard:



*Forward Motion.*

*Backward Motion.*

#### RULES IN RHYME.

1. When the pen moves as the hands of a clock,  
Or as driving a screw into a block,  
We say *forward* in Kirografk hand,  
The reverse is *backward* all understand.

2. To write the alphabet *alone*, all should know  
 How the pen for every sign should go;  
 Just trace all the *voiced* signs with *backward* motion,  
*Forward* for *voiceless* signs without exception.

a. The teacher may now have the class write from dictation the voiced or long signs of the alphabet with *backward* motion, as follows: Teacher reads.— *Ee, Ay, E, Eu, Ah, Au, Oh, Oo, Ie, Oi, Ou, Wi, Vi, Bi, Mi, Yi, Zi, Thi, Di, Ni, Zhi, Il, Ji, Hi, Ir, Och, Gi, Ing.*

The pupils write down as the teacher dictates, and then read the exercises as

DRILL NO. 7.



b. The teacher may now dictate to the class the short signs, to be written down with *forward* motion. Teacher reads.— *I, Ai, A, U, Aa, O, Oe, Uu, Iu, Whi, Fi, Pi, Si, Ith, Ti, Li, Chi, Ri, Ich, Ki.* (Repeated).

The pupils write down the above as the teacher dictates, and then read it as

DRILL NO. 8.



c. The teacher may dictate the whole alphabet in the following order, and the class may write it down and then re-

read it. It will be noticed that the alphabet is arranged in so-called cognate pairs, with the classes following each other in regular order. Teacher reads.— *Ee, I, Ay, Ai, E, A, Eu, U, Ah, Aa, Au, O, Oh, Oe, Oo, Uu, Ie, Oi, Ou, Whi, Wi, Fi, Vi, Pi, Bi, Mi, Yi, Iu, Zi, Si, Thi, Ith, Di, Ti, Ni, Zhi, Shi, Il, Li, Ji, Chi, Hi, Ir. Ri. Och. Ich, Gi, Ki, Ing.* The class writes down the above as the teacher dictates, and then re-reads as

## DRILL NO. 9.



REM.—18. Pupils should practice on the alphabet ten minutes each day, until they have gained a fair degree of accuracy and speed. The teacher should direct them to practice on large circles and scrolls, to give free and graceful motion to the hand. The teacher should also correct, minutely, the faults of pupils in writing. Pupils should acquire speed enough to write the alphabet as given in Drill No. 9 in from fifteen to twenty seconds, at least, before proceeding with new exercises—it is not sufficient to write fast, but it *must* be written accurately.

REM.—19. The signs in *the* and *thin*, *wit* and *whit*, *azure* and *sure* are really cognate sounds, and not compound sounds as in the ordinary alphabet; they are given simple signs accordingly.

REM.—20. The Lessons are not to be taken as samples of how much a pupil should learn at one time, as they are so arranged that they may be divided into smaller lessons, or two may be mastered at a time in some cases. The main point to be gained, is thoroughness; have each pupil in the class comprehend fully the minutest details.

REM.—21. The Continuous Nasals are *Ing*, *Hi*, *Ne*, and *Mi*. The cognate of *Ing* is *n* before *k* in *ink*, and it is written with the *Ing*

sign because *k* always follows it and thus prevents confusion. (The cognate short sounds of *Ing*, *Hi*, *Ni* and *Mi* are written with half length signs in the extended Alphabet used for Foreign Languages. These short length signs may be used in English if preferred—their names are, *Ink*, *Hie*, *Nie* and *Mie*. *Ink* is found in such words as *ink*, *brink*, *bank* and *sink*: *Hie* in 'and the pronunciation of *hand* by some people, as also in the aspirate *h* of some Foreign Languages: *Nie* is found in such words as *hint* and *mint*; and *Mie* in such words as *lamp* and *limp*. But these fine distinctions are rather impracticable for use in a general alphabet for the mass of English people.

REM.—22. The explosives *Gi*, *Ki*, *Ji*, *Chi*, *Di*, *Ti*, *Bi* and *Pi*, are classed together because of their abrupt character.

The Continuous Dividers are *Il*, *Li*, *Thi*, *Ith*, *Vi* and *Fi*. They are distinguished in their organic formation by the fact that the tongue or lower lip divides the mouth in two. For the *L* the tip of the tongue divides the mouth by coming in close contact with the palate; for the *Th* the tip of the tongue divides the mouth by touching or projecting between the teeth; and for the *V* and *F* the lower lip divides the mouth by pressing against the upper front teeth.

The Continuous Sibilants are *Zhi*, *Shi*, *Zi* and *Si*, and are distinguished by their hissing character. The Coalescents are *Wi*, *Whi* and *Yi*, called so, because of their readiness to unite with vowel sounds. The initial *Ri* is called trilled because of its rough trilled character; it approaches near the *Zi* in its organic character, and the final or smooth *Ir* is palatal.

REM.—23. Common sense and practicality have been duly considered in assigning the signs to the vowels. Long *Ee* and short *I* are very common final vowels, and they have given to them the easiest made and joined vowel signs. The two small circles in such words as *infinity*, *ability*, *similarity*, *city*, *depletingly*, *defeatingly*, and *fieeing*, illustrate how difficult it would be to write them with the sign for *Ah* or *Au*, which are very rarely used, as final sounds, in English.



## LESSON IV.

### JOINED VOWELS AND CONSONANTS.

8. If the *Right* hand be held up, with the first finger bent, *forward* motion will be seen, as in diagram 1; and if the *Left* hand be held up in the same way, *backward* motion will be seen, as in diagram 4.



### *Joined Vowels and Consonants.*

a. As a general Rule the vowel signs for *Ay*, *Ai*, *E* and *A* are joined to consonants, as in diagrams 3 and 6; *Ay* and *Ai* join to perpendicular signs, *E* and *A* to horizontal and slanting signs as hooks.

b. Initial *Ri* and final *Ir* are made interchangeable when necessary to secure good outlines for words; they are also joined by a large initial or final hook, to other signs, as seen in diagrams 2 and 5. When a good angle can not be secured by the large initial or final hook, then either *Ir* or *Ri* are used as may secure the best angle—*acute angles are considered the best.*

c. The consonantal signs are generally written in one direction, for the purpose of securing uniformity; the Labials are struck from the line of writing, upward, at an angle of forty-five degrees; the Dento-palatals are struck on the line of writing from left to right in a horizontal direction; the Palatals are struck downward in a perpendicular direction, so as to rest on the line of writing; and the Gutturals are struck downward at an angle of forty-five degrees to the right, so as to rest on the line of writing. When more acute angles can be secured in word outlines, consonant signs are struck in two directions.

d. The vowel signs are struck in two directions, (with a few exceptions,) choosing that which secures the most acute angles. This rule applies to consonant signs in some cases.

#### RULES IN RHYME.

3. 'Twill give better angles in the short-hand school,  
To write Consonants two ways by rule;  
Distinctness of outline may sometimes demand  
For Vowels, both the back and forward hand.
4. Then on all the consonant strokes that curve,  
Turn the circles inside, and ne'er swerve;  
With circles *I* and *Ee* the same course pursue,  
Inside of vowel curves trace them too.
5. Join the *Si* and *Zi* loop to voiced vowel curves **backward**,  
But for the voiceless curves, loop forward;  
But small circles for cognate vowels *I* and *Ee*,  
Outside straight line angles traced must be.
6. It adds ease, speed, grace and beauty to written lines,  
To join with acute angles, many signs;  
To secure distinct outlines is not so hard,  
If *short-ticks*, are added in words like *card*.

e. When necessary to secure a good angle in joining vowels and consonants, or consonants and consonants to each

other, it is sometimes necessary to add an extra *short tick*, struck in any direction, (though generally at right angles). This tick is made shorter than the diphthongal vowel signs so as not to conflict with them.

*f.* In addition to the *Ri* and *Ir* already treated of, the *Il* and *Li*, and the *Och* and *Ich* signs, are made interchangeable with their own cognates. Use the sign which makes the most *acute angle* and requires the least number of extra *short-ticks* in the joinings. When angles are equally good with both signs, give preference to the forward motion *Ri*, *Li* and *Ich* signs.

REM.—24. The interchangeable signs may be regarded, practically, as double signs for their respective sounds. Practical considerations, of great importance, constrained the author to make these signs interchangeable in this way—the student will perceive the advantages of this rule without further comment.

REM.—25. There are two theories as regards the organic formation of the sounds in *unite* and *mute*. The adherents of the first theory, claim that these sounds are vowel diphthongs, formed by a union of short *i* and *oo* or *uu*;—the second theory, claims that *both* are a union of simple consonant *yi* and vowel *oo* or *uu* elements—the element, as in *mute*, having less of the *yi* element. We incline towards the opinion that the second theory is the correct one, and therefore, have made the *Yi* and *Iu* signs interchangeable, according as may be required for the best angles. Practically, it is thought best to write this diphthong with a single *Iu* for the elements in such words as *mute* and *unite*, although the sound in *unite* has unmistakable *yi* and *oo* or *uu* elements.

REM.—26. A few exercises are given in the common Orthography, as a Writing Exercise, and then repeated in the Kirograffk Alphabet, as a Phonic Reading Exercise.

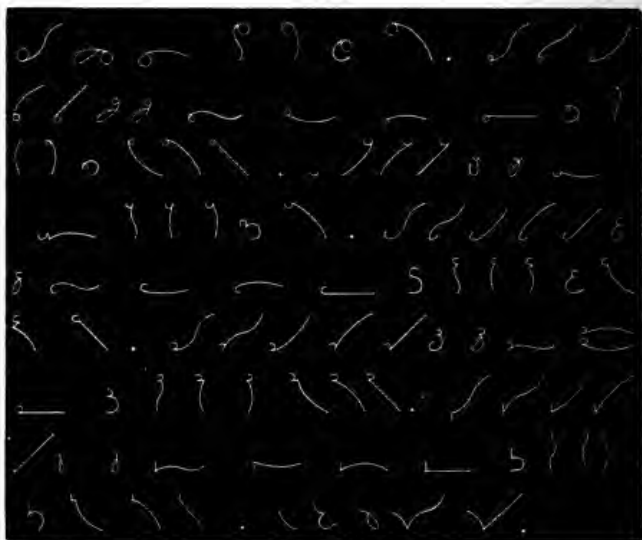
The English alphabet contains three useless letters—*c*, *q*, *x* equal to *s*, *k*, *ks*. The Phonic alphabet contains a sign for each sound; hence, in writing words, use only the signs which represent the actual elementary sounds in them. Perhaps the greatest difficulty will be experienced in catching the true sound of the short vowels.

Always call the short vowels by the names given in the alphabet. The short sounds in the words *ask, up, man, air, ill, not, obey, pull* will give the long sound by singing them, nearly as in *father, urge, men, ale, eel, naught, old, pool*.

#### WRITING EXERCISE I.

Eve, Stee, eat, eel, each, ear, eke. Iv, if, ib, ip, im, is, iss, ith, id, it, in, ish, i-li, ij, itch, i-ri, ig, ik, ing. Aye, abe, ape, aim, ayes, ace, aid, ate, ale, age, aitch, air, ache. Ev, ef, ebb, ep, em. ez, es, eth, ed, et, en, esh, ell, edge, eteli, e-ir, egg, ek, eng. Av, af, ab, ap, am, az, as, ath, add, at, an, ash, al, aj, ach, ag, ak, ang. Uv, uf, ub, up, um, uz, us, uth, ud, ut, un, ush, ũ-li, udge, nch, eu-ri, ug, uk, ung. As, are, ask, aa-f, aa-m.

#### PHONIC READING EXERCISE I.



## WRITING EXERCISE II.

Awed, aught, awn, all, aug, auk. Ov, off, ob, op, om, os, ōs, oth, odd, ot, on, osh, ol. Och! ō-ri, og, ok, ong. Ope, os, oath, ode, oat, own, o'er, oak, owing. Ooze oot, oos. I've, I'm, eyes, ice, eyed, Isle, ire, ike, eyeing. Oil, out, owl, ouch, our.

## PHONIC READING EXERCISE II.

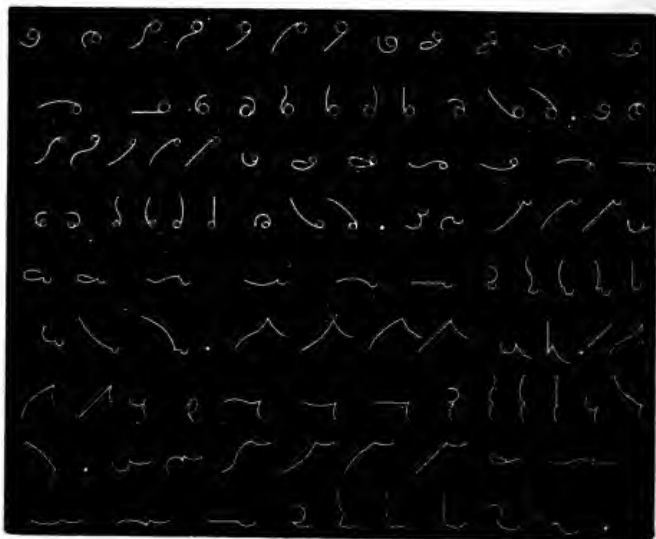


REM.—27. Any one who studies this book without a teacher should go through the Exercises and Drills and then correct them with even more care, if possible, than when following the instructions and advice of a teacher.

## WRITING EXERCISE III.

We, whee, vee, fee, bee, pea, me, ye, zee, see, thee, de, tea, knee, zhee, she, lea, jee, chee, he, re, gee, key. We, whee, vi, fi, bi, pi, mi, yi, zi, si, thi, di, ti, ni, zhi, shi, li, ji, chi, hi, iu-i, gi, ki. Way, whey, bay, pay, may, yea, Zey. say, they, day, tay, nay, shay, lay, jay, chay, hay, ray, gay, kay. Fah, bah, pah, mah, yah, ha! Faw, paw, maw, yaw, saw, thaw, daw, knaw, shaw, law, jaw, haw, raw, gaw, kaw. Yo, whoa, vo, bow, poe, mow, so, though, doe, toe, no, show, low, Joe, hoe, roe, go.

## PHONIC READING EXERCISE III.



## LESSON V.

### ANGLES AND CURVES.

9. When signs are joined together, they are written without lifting the pen, the second commencing where the first ends. Pronounce each sound aloud as it is written, calling them by the phonetic names in the alphabet, thus: *h* is to be named *Hi*, not *aitch*, etc.

All signs in words are joined into one outline. As each sign has a fixed form and direction, its union with all other signs is in accordance with geometric laws.

The angle of union of signs is, hence, either *right*, *acute*, or *obtuse*.



*Angles and Curves.*

a. Every letter in the Alphabet is written in the direction of the strokes in diagram 1. All the strokes are made in a perpendicular, horizontal, or slanting direction. The slanting strokes may vary in direction from 30 to 60 degrees from the horizontal, because such latitude is conducive to lineality, grace of outline and rapid penmanship. Both the initial and final *R* are classed with the right angles in diagram 5, although they are, strictly, more than right angles, in accordance with this principle of latitude for slanting signs.

b. The signs for *ing*, *li*, *mi*, and *ni* in diagram 1 are *right* lines. The signs for *g-k*, in diagram 3, are a lower half circle, while *p-b* in diagram 6 is the upper half circle. The signs for *g-b* and *j-ch* in diagram 2 are *facing* curves. Most of the vowel signs are small curves or circles. The cognate pairs of signs are all *facing* curves. The signs *d-t* in diagram 4 are *opposing* curves in the same direction.

#### RIGHT ANGLES.

c. The signs *m-ng*, *ng-m*, *h-n*, *n-h*, *ou-ie*, *ie-ou*, *ou-oi*, and *oi-u* when joined form right angles.



The curves *p-k*, *g-b*, *j-d* and *t-ch* unite in half circles, but the cords of these curves, as shown in the outlines preceding them, unite in right angles. Such Facing curves always unite without an angle.

#### ACUTE ANGLES.

d. The signs for *h-m*, *m-h*, *m-m*, *h-h*, *ng-ng* unite in acute angles. The facing curves *j-b*, *p-ch*, *t-b*, unite without angles,—*p-p* and *b-b* with angles. The cords of these curves unite in acute angles.





## OBTUSE ANGLES.

e. The signs for *ng-n*, *n-ng*, *h-ng*, *ng-h*, unite by forming obtuse angles. The facing curves *g-d*, *t-k*, *j-g*, and *k-ch* unite by forming angles; the cords of these curves unite in obtuse angles.



## SAME CURVES REPEATED.



f. The curves for the signs *di*, *ti*, *thi*, *ith*, *vi*, *fi*, *il*, *li*, *ji*, *chi*, *pi*, *bi*, *gi*, *ki*, *zhi*, *shi*, *ir*, *ri*, *och*, *ich*, when repeated must form an angle in all cases.



## OPPOSING AND FACING CURVES IN THE SAME DIRECTION.

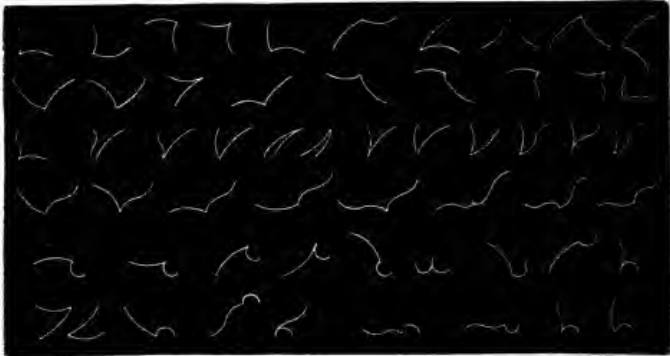
g. The opposing curves in the same direction *b-p*, *p-b*, *d-t*, *t-d*, *g-k*, *k-g*, *j-ch*, *ch-j*, unite in waved lines without forming angles, but *thi-ith*, *ith-thi*, *v-f*, *f-v*, unite by forming angles, and are Facing curves in the same direction. The invariable rule which enables the student to distinguish between Facing and Opposing curves, is, to remember that Opposing curves that unite with an angle are always struck by reversing the movement of the pen, as in *j-t* *d-ch*; but Facing curves, and

Opposing curves in the same direction that unite without an angle, are always struck, without reversing the movement of the pen, as in *d-g* and *g-k*.



DRILL NO. 10.

OPPOSING AND FACING CURVES IN DIFFERENT DIRECTIONS.



*h.* All opposing curves in different directions must join by forming angles.

FACING CURVES.

*i.* 1.—Facing curves whose cords would form acute angles: *j-b*, *p-ch*, *p-d*, *t-b*, *g-ch*.



2.—Curves that face acute angles formed of right lines: *M-ch*, *h-b*, *p-h*, *m-d*, *ng-ch*, *t-m*, *j-m*.

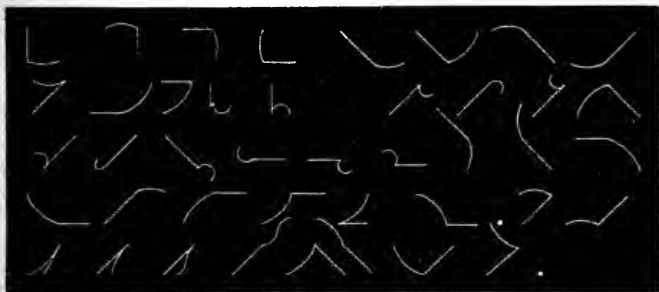


3.—Facing curves whose cords would form obtuse angles : G-d, t-k, j-g, k-ch, p-t, d-b. Such Facing curves always unite with an angle.



## DRILL NO. 11.

## RIGHT LINES AND CURVES JOINED TOGETHER.



7. Right lines and curves joined together become modified by the laws of motion in actual practice. The sharp angles are rounded off to a greater extent than shown in the engravings. All such junctions should be mastered so that the two strokes are written with only one movement of the pen. Do not make too much of the angles. These junctions exhibit various modifications of angles, but the principal ones are *distinct* angles, as in *h-j* and *k-ng*; *half* angles, as in *h-d* and *p-ng*; and *no* angles, as in *h-g*, *n-k*, *p-n*, *d-m*, and *j-ng*. In writing with the pen the *half* angles are usually, however, joined together, as in *no* angles.

REM.—28. The basis of the Kirografik signs (being Right lines, Curves, Circles, Semi-circles, Loops and Hooks, written in various directions) constitute lines of beauty and speed. In the actual practice of rapid penmanship, the original geometrical signs become modified and filled with the meaning and life which results from all motion. Kirografy engraved with precision appears stiff and angular; this appearance disappears when modified by the spirit of motion imparted by a flowing pen. The laws of motion demand this as a necessity which compensates, by adding ease and flowing gracefulness to the appearance of the penmanship.

REM.—29. The mechanical movements of the pen in writing being forward on the direct line of writing, all sidewise movements are more or less subordinated to them. All perpendicular strokes will be shorter than those written slanting upward, or slanting downward or forward horizontally; this principle applies to all words which extend far below or above the line of writing, as they will be brought more into lineality by making the signs shorter and thus avoid encroaching on the rules of geometrical position.

REM.—30. Curves and Angles are modified by motion in various ways: 1, All horizontal curves will be segments of an ellipse cut through the long diameter instead of segments of a circle. 2, The perpendicular curves convexed to the right are curved most near the beginning, and those curves convexed to the left are curved most at the end. 3, Upward or downward slanting curves are also irregularly curved near one end, according to the direction of striking them. 4, Motion will be more retarded near the beginning and end of horizontal curves than in the middle, while it will be retarded in the middle of perpendicular curves consequent on change of direction. 5, Obtuse angles are made more acute by changing the angle of slanting straight lines, or by modifying the convexity of curves; thus, the sign *Ing*, in the outlines *n-ng* will be nearer perpendicular than when standing alone; while in *h-ng* it will be nearer horizontal; and *Di* before *Ing* will be more curved at its termination than when it occurs before downward *Mi*. 6, All junctions of signs where a hook, circle or loop occurs, require a little deviation from the rigid geometrical figure, for the sake of securing graceful unions.

REM.—31. In ornamental writing it will add to the appearance

of the penmanship to shade some of the signs, or make them heavy where the laws of motion make it easy and natural. Straight lines should be shaded uniformly throughout their entire length, but curved signs should be shaded heaviest either at, before or after, the middle—the shading tapering off gradually toward the ends as is most convenient. Different temperaments will write heavy or shaded, light or flowing as is most natural to them. This capacity for suiting the requirements of different styles of penmanship by using shading only where natural, is one of the strongest advantages of the common long-hand script, as well as one of the serious defects of the old Stenografik Alphabets.

REM. 32. According to mechanical law, increase of speed must be attended with decrease of force; hence, in rapid penmanship, it is utterly impossible to shade or write as heavy as when writing deliberately. One of the glories of the old long-hand script is its adaptability for use with either a pen or pencil. A Kirografik Alphabet intended to be the basis of a Stenografik system for the greatest possible speed, should not be limited by the burden of shaded signs which make it impossible to secure legibility of writing with a pencil. One of the chief defects of Stenografik Alphabets is overcome in the *shadeless* Kirografik Alphabet. The writer will naturally adopt as small a scale of penmanship in rapid writing as is consistent with legibility, because short roads are travelled sooner than long distances. These remarks upon the modifications of motion upon outlines, are not in conflict with the geometrical laws of outline for signs, because these modifications are solely the effect of rapid speed or motion upon outlines, and they even appear to a less extent when geometrical accuracy is aimed at by writers.

REM.—33. Young writers should have their attention called by their teacher, to the fact that Facing curves unite *without* an angle in such junctions as *T-D*, *P-K*, *G-B*, *P-Ch*, and *J-B*; but such junctions as *T-K*, *P-T*, *G-D* unite with an angle. Facing curves are more easily written than opposing curves, except where the latter unite without an angle and extend in the same direction. In joining consonants together in one outline many opposing curves can be joined without angles, because the vowels are omitted. Such junctions as *P-B*, *D-T*, *T,D*, *G-K*, and *K-G*, unite without an

angle in the same direction, with the exception of *P-B*, which may be written also without an angle as a facing curve. By a careful assignment of curves to frequently occurring classes of sounds, a foundation is secured for a much larger number of these easy junctions in the reporting styles than is possible with the old Stenographic assignment of signs to sounds.

REM.—34. The straight line consonant signs *Hi*, *Mi*, *Ni*, and *Ing* are doubled in length to represent two of the same sound; or they may be retraced backward near the first sign—this method is generally preferable except that it requires two instead of one movement of the pen.

#### RULES IN RHYME.

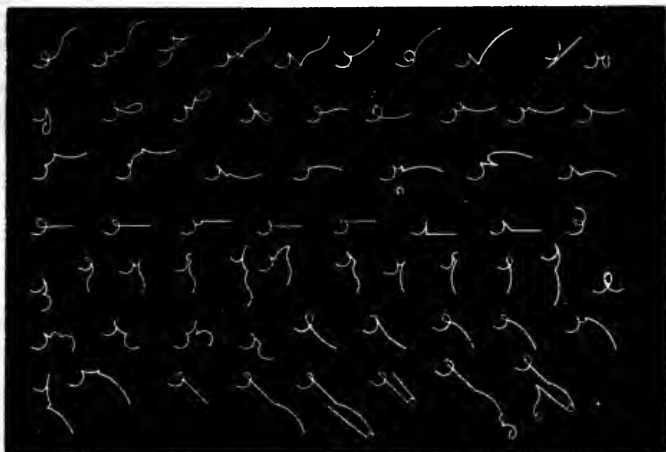
7. When consonants alone are joined together,  
A few good rules will save much bother;  
All opposing curves in the same direction,  
Unite in waved lines without intersection.
8. All opposing curves whose cords would form angles,  
And facing curves whose cords form obtuse angles,  
Should be written to form an angle in all cases,  
And like *Vi-Pi* and *Pi-Ti* take their places.
9. The facing curves whose cords would form right angles,  
And those whose curves form acute angles,  
Must be joined together without angles in one,  
Like *Ji-Ni* in join, and *Pi-Ni* in pun.
10. Opposing curves in different directions,  
The same curve if in repetition,  
Curves that form acute angles if formed of right lines,  
All these must make angles in joined signs.
11. Let the other unions of curves and right lines,  
Blend in graceful consonantal signs;  
The angles are sacrificed for speed in writing,  
Because graceful forms are more inviting.

#### WRITING EXERCISE IV.

Weave, wave, wove, waif, wife, web, weep, wipe, womb,  
ways, was, woes, woos, wise, with, weed, wade, wed, wad,

wooded, would, wide, wit, wait, wet, wight, wean, win, wane, wen, wan, won, wine, wish, wash, will, wail, well, wall, wool, wile, wage, wedge, witch, watch, Weir, ware, war, woer, wire, wig, wag, weak, wick, wake, walk, woke, wing, wink, winking, winging, winkers, winkingly.

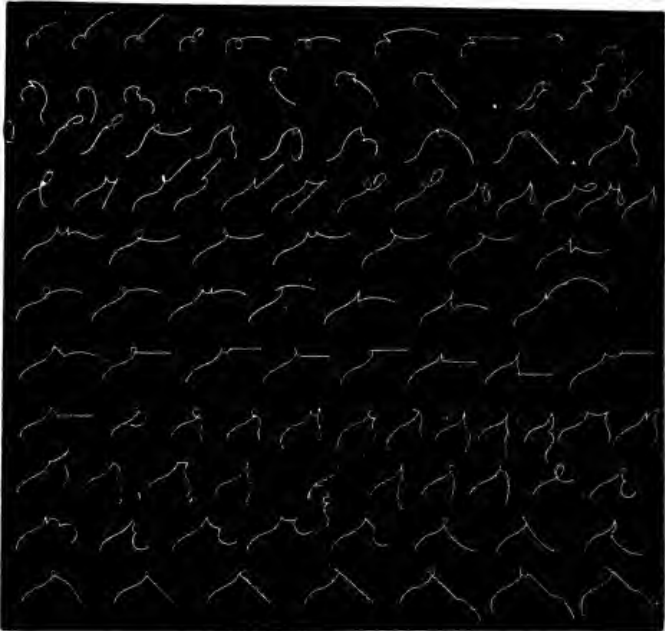
## PHONIC READING EXERCISE IV.



## WRITING EXERCISE V.

Whiff, whip, whim, whizz, wheat, whit, white, whine, wheel, whale, while, which, whirl, where, whig, whack, whang. Viv, vive, vim, viz, vis, vid, vil, vichy, vir, vick, ving. File, feej, fame, fem, fam, fum, foam, fees, phiz, phase, fuz, foes, face, fuss, faith, feed, fid, fade, fed, fad, fud, feet, fit, fate, fat, fut, fought, foot, fight, fin, fain, fen, fan, fun, fawn, phone, fine, fish, feel, fill, fail, fell, fal, ful, fall, fol, foal, full, fool, file, foil, ful, fuel, fudge, Fitch, fetch, fear, fir, fare, fur, far, four, fire, fig, fag, fog, fick, fing, feng, fañg, fink, fenk, fank.

## PHONIC READING EXERCISE V.



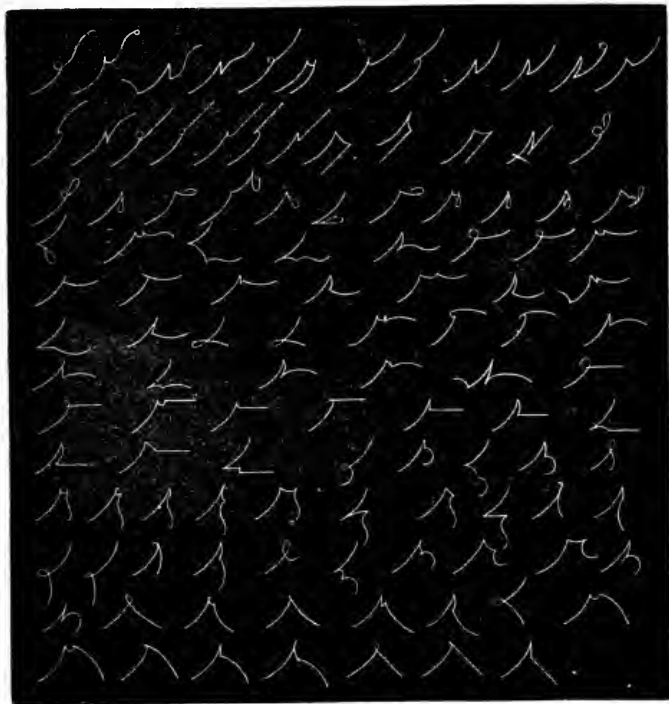
## WRITING EXERCISE VI.

Biv, bevy, above, buff, bib, babe. heb, bab, bub, bob, booby, bibe, bap, bup, beam, bim, bem, bam. bum, balm, baum, boam, boom, bees, biz, buss, bows, boozy, buys, boys, beaus, base, buss, boss. bias, bass, bathe, bath, both, booth, bead, bid, bade, bed, bad. bud, bod. bode, bood, abide, Boyd, bowed, beat, bit, bait, bet, bat, but, bought, boat, boot, bite, about, bean, bin, bane, ben, ban, bun, bon, bone, boon, bine, Boyne, bish, bush, bash, bosh, bill, bail, bell,



bul, bawl, bowl, bull, bile, boil, badge, budge, beach, bitch, batch, botch. beer, bare. burr, bar, bore, boor, bower, big, beg, bag, bug, bog, beak, bake, bake, back, buck, baulk, bing, bang, bung.

## PHONIC READING EXERCISE VI.

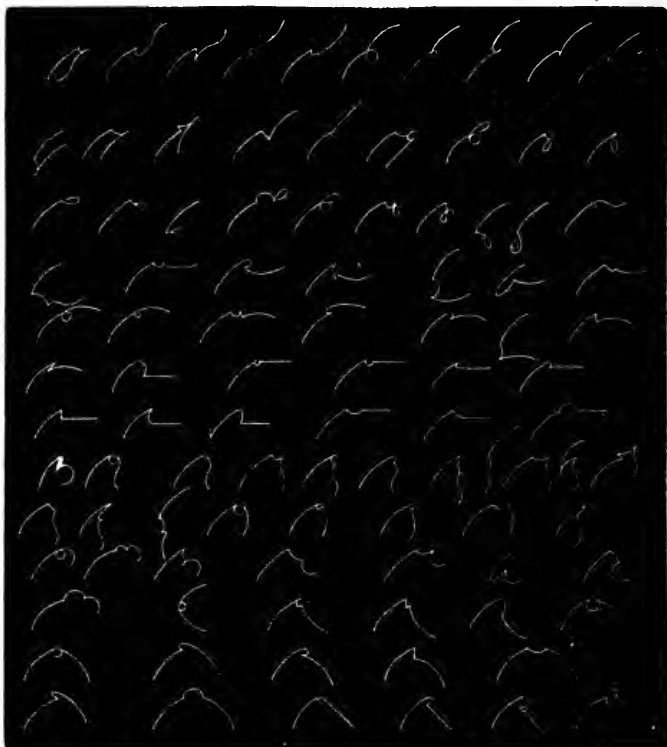


## WRITING EXERCISE VII.

Pave, pev, puff, pib, peb, peep, pip, pep. pap, pup, pop, pope, poop, pipe, pim. poem, peas, pays, paws, Poe's, pies, poise, pews, peace, pae, pussy, pass, pözy, pith, path, paid,

pūd, pawed, pod, poed, pied, peat, pit, pate, pet, pat, pot,  
pūt, pout, peony, pin, pain, pen, pan, pun, pawn, upon,  
pony, pine, puny, push, peal, pill, pail, pel, pal, Paul, pol,  
pole, pull, pool, pile, Powell, podge, peach, pitch, patch,  
poach, pouch, peer, pair, purr, par, pore, poor, pyre, pure,  
pig, peg, pug, pog, peak, pick, peck, pack, puck, poke, pike,  
puke, ping, pang, pawing, pooing.

## PHONIC READING EXERCISE VII.



## LESSON VI.

### PHONIC ANALYSIS.

10. Phonic Analysis is the art of minutely analyzing vowel and consonant sounds, so that they may have uniform unvarying letters, signs or digraphs assigned them in the orthography of words. One letter, sign, digraph or trigraph for the same simple or compound sound is the fundamental basis of all correct Phonic Analysis. The orthography of the English language, on the contrary, is founded upon arbitrary, erroneous, contradictory and unreasoning principles of Phonic Analysis, which *must* be abolished before any real progress in the art of writing by sound can be attained. A brief key is furnished to aid teachers in teaching their pupils to easily comprehend the differences between the common orthography and Phonic spelling. Words are

given illustrating the varieties of letters and digraphs, used for the same sound in the common orthography. The letters or digraphs representing the same sound are italicized.

#### VOWEL SOUNDS.

a. 1. *I* is found in the words *it*, *been*, *myth*, *barley*, *plaguey*, *busy*, *women*, *circuit*, *forfeit*, *English*, *sieve* and *mountain*.

2. *Ee* is found in the words *eel*, *eve*, *eave*, *mien*, *marine*, *people*, *key*, *quay*, *conceit*.

3. *Ai* is found in *air*, *care*, *where*, *their*, *bear*.

4. *Ay* is found in *aye*, *ale*, *ail*, *may*, *they*, *able*, *gaol*, *gauge*, *veil*, *great*, *fete*, *eight*, *straight*, and *boquet*.

5. *E* is found in *ell*, *many*, *said*, *head*, *says*, and *guess*.

6. *A* is found in *at*.

7. *Eu* is found in *her*, *earth*, *word*, *journey*, *urge*, *mirth* and *myrrh*.

8. *U* is found in *up*, *but*, *love*, *double*, *hiccough*, *wonder*, *blood*, *bludgeon* and *region*.

9. *Ah* is found in *ah!* *father*, *bazaar*, *brahma*, *aunt* and *guard*.

10. *Aa* is found in *ask*, *a* (indefinite article), *away*, *America*, *Hannah* and *laugh*.

11. *Au* is found in *all*, *awl*, *aught*, *ought*, *awe*, *order*, *for*, *God*, *George*.

12. *O* is found in *on*, *what*, *cough*, *honor*, and *encore*.

13. *Oe* is found in *obey* and *chromo*.

14. *Oh* is found in *old*, *toe*, *O!* *Oh!* *owe*, *below*, *though*, *oat*, *four*, *door* and *beau*.

15. *Uu* is found in *pull*, *to*, *wolf*, *could* and *foot*.

16. *Oo* is found in *who, pool, two, drew, true, recruiting, brute, soup, through, lieu, ghoul.*

## DIPHTHONG SOUNDS.

b. 1. *Ie* is found in *I* (pronoun), *eye, ayes, idle, die, dye, nigh, height, style, Isle, choir, my, Guy, geyser.*

2. *Oi* is found in *oil, boy, and chamois.*

3. *Ou* is found in *how, plow, plough, owl, our, hour.*

4. *Iu* is found in *mute. unite, hew, beauty, hue, feud, view, ewe* and *eulogy.*

## CONSONANT SOUNDS.

c. 1. *Wi* is found in *we, one, queen, Tweed, and buoy.*

2. *Whi* is found in *why.*

3. *Vi* is found in *of, nephew* (sometimes), and *vivid.*

4. *Fi* is found in *if, fife, muff, tough, phonic, and lymph.*

5. *Bi* is found in *babe, and snubbed,*

6. *Pi* is found in *people, mapped* and *hiccough.*

7. *Mi* is found in *mum, mammon, thumb, salmon, damned, apothegm* and *limp.*

8. *Yi* is found in *union, yet, and million.*

9. *Zi* is found in *zest, is, days, buzz, hens, robs, places, chaise, schism, Xenophon, discern* and *suffice.*

10. *Si* is found in *siss, sits, place, cite, quartz, sword, schism, science.*

11. *Thi* is found in *then, father* and *bathe.*

12. *Ith* is found in *thin, bath, withe, fifth, width* and *hundredths.*

13. *Di* is found in *deed, muddy, bobbed, bdelium, treated* and *deeded.*

14. *Ti* is found in *tight, tuft, butt, Thomas, phthisic, yatch, hoped* and *snatched.*

15. *Ni* is found in *night, known, impugn, pend, demesne, gnaw.*
16. *Zhi* is found in *azure, decision and measure.*
17. *Shi* is found in *she, wish, sure, ancient, motion, conscience, mission, crustaceous.*
18. *L* is found in *all, Isle, lull, and Llan (Welsh).*
19. *Ji* is found in *joy, gem, age, edge, and singe.*
20. *Chi* is found in *chill, each, wretch, Dutch.*
21. *Hi* is found in *he and behold.*
22. *R* is found in *are, air, myrrh, burr, rich, poor, horrid, wrong, Rhine.*
23. *Ich* or *Och* is found in *Loch, Och!* and *Dach.* [Scotch, Irish, German and Polish *ch.*]
24. *Gi* is found in *go, ghost, sagged, gaged.*
25. *Ki* is found in *kick, cap, chromo, queen, ache, sceptic, Christ, school.*
26. *Ing* is found in *sing* and *single*, The *n* and *g* have the *Ni-Gi* sound in such words as *en-gulf*; and the *Ni-Ki* sound in *en-quire*.

## DOUBLE CONSONANT SOUNDS.

- d. 1. *Ks* is equivalent to *X* in *explain.*
2. *Gz* is equivalent to *X* in *exact.*
3. *Ngk* is found in *ink, think, uncle,*
4. *Ngks* is found in *Linx* and *linx-eyed.*
5. *Ng-Gi* is found in *hunger hung-ger, singer sing-ger, linger ling-ger, finger fing-ger* and *Congress kong-gres.*

REM.—35. *E* before *l* is silent in *shovel, (vl) hazel, ravel, mantel, shrivel, snivel* and *weasel*; but in most words the *e* is sounded. *I* is also silent before *l* in *devil, (vl) evil, civil*, but sounded in *civilian*. Most words ending in *en* and *on* have the *e* silent as in *golden goldn, holden, reason reazn, and treason treazn*; but they are sounded in *chicken, sudden, women, linen, woolen, kitchen, hyphen, upon, thereon* and *whereon*.

## LESSON VII.

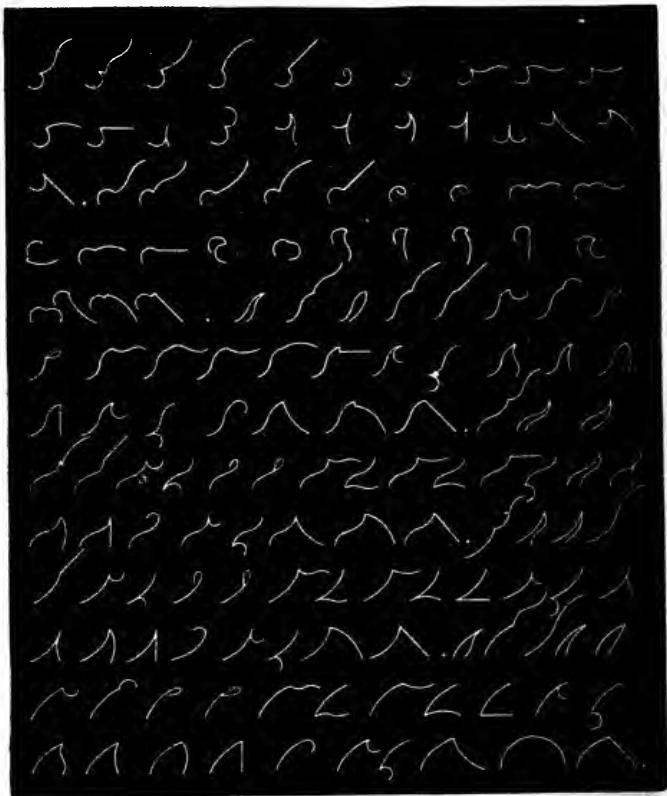
### JOINED SIGNS.

11. When consonants are joined together either with or without vowels, they are written without lifting the pen—the second commencing where the first ends, etc. They are always struck in the direction which will secure the most acute angles in the word outline. In cases where equally good outlines are secured by striking in two directions, the choice always should be in favor of the slanting upward or horizontal direction.

a. The following signs are written in two directions when good angles demand it, viz. : *Wi, Whi, Vi, Fi, Bi, Pi, Mi, Zhi, Shi, L, Ji, Chi, Hi, R* and *Ing*. *Zi* and *Si* may be written in any direction, but usually horizontal when alone, and slanting up or down forty-five degrees when joined to other signs—they are also joined with the open and shut loop to other signs when convenient. (See Phonic Reading Exercise IX and Drill No. 14.)

## DRILL NO. 12.

## JOINED CONSONANTS.

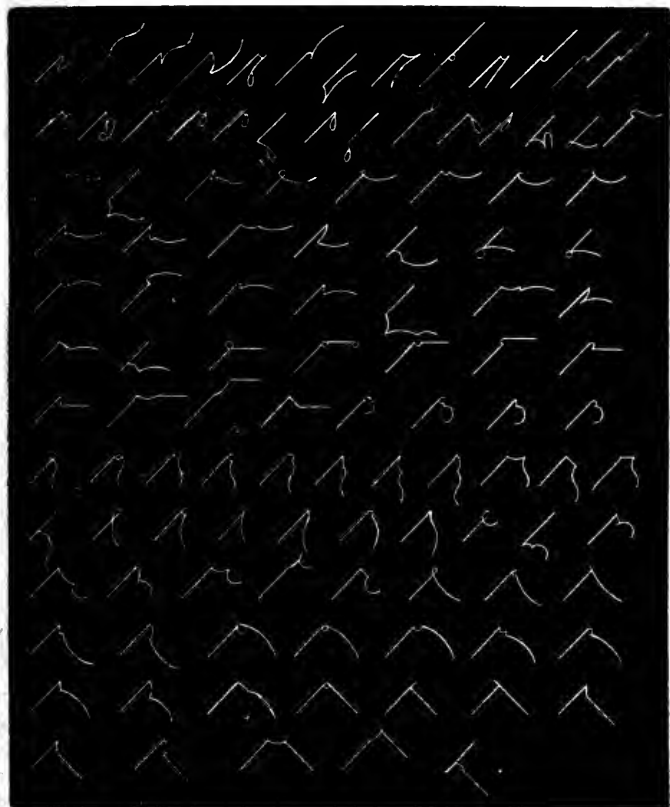


REM.—36. If these exercises are thoroughly mastered, the practical application of the general principles governing in joining signs will be familiar to the student. Practical illustrations of this kind are much preferable to a profusion of rules, which necessarily must have exceptions. *The best angles and most beautiful word*



*owlines, are the only rules governing in these joinings.* These combinations are all made in harmony with the geometrical principles explained in Lesson V. The pupil should read these Exercises by mentally, or otherwise expressing the name of each joined consonantal combination, as already alluded to in a previous Lesson.

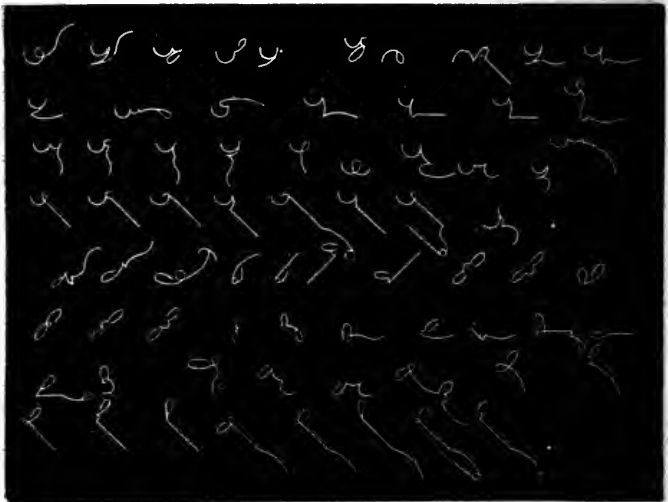
## PHONIC READING EXERCISE VIII.



## WRITING EXERCISE VIII.

Moove, miff, muff, mob, Mapes, map, mop, mope, mim,  
 maim, mem, main, mum, maze, muzzy, miss, mace, mess,  
 mass, muss, moss, moose, mice, mouse, muse, mith, meth,  
 math, moth, mouth, meed, mid, made, ined, mad, mud,  
 Maud, mode, mood, mewed, meet, mit, mate, met, mat, mut,  
 motto, mote, moot, mite, mute, mean, minuie, mane, men,  
 mau, money, moan, moon, mine, mish, mesh, mush, mash,  
 meal, mill, mail, mell, mal, mul maul, mol, mole, mile, moil,  
 mule, midge, medge, Madge, mudge, match, much, mere,  
 mare, myrrh, mar, mör, more, Moore, mire, mig, neg, mag,  
 mug, mog, meek, mick, make, mek, mack, muck, mock,  
 mike, ming, meng, mang, mung, mawing, mong, mowing,  
 mooing, mewing.

## PHONIC READING EXERCISE IX.



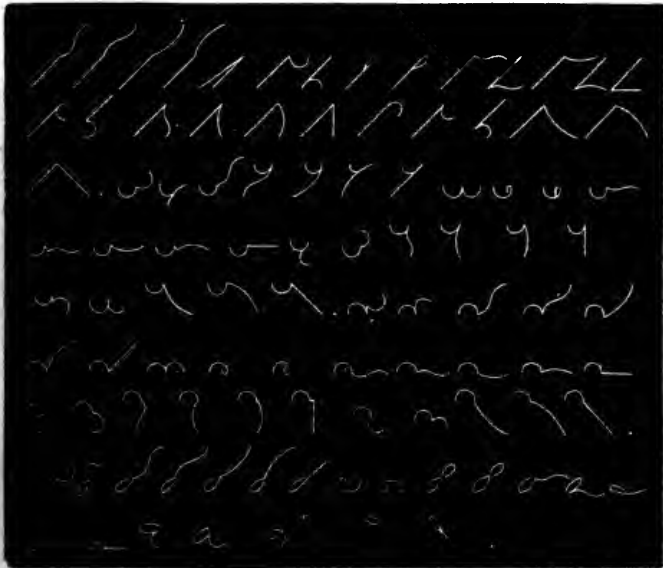
## WRITING EXERCISE IX.

Ye've, you've, yeas, ewes, you, yes, use, using, youth, you'd, Yates, yet, yacht, yawn, yon, yield, Yale, yell, yawl, you'll, yidge, year, yard, yore, your, yoke, ying, yeng, yang, yong, yankee, young, Yingling, were.

Zouave, zoof, zebra, zip, zim, zem, zum, zez, zaz, zooz, zis, zes, zas, zus, zaas, zith, zed, zide, Zenas, zone, zounds, zish, zeal, Czar, Zoar, zigzag, Keke, zack, zing, zang, zung, zink, sink, sunk, sinking, Sankey.

## DRILL NO. 13.

## JOINED CONSONANTS.









Azure, shiver, shave, shev, shove, sheaf, shef, shaf, shuffle, sheep, ship, shape, shep, shap, shop, shame, Shem, sham, shum, Shay's, Shaw's, shows, shoes, shies, sheathe, sheath, showeth, shoeth, shieth, shade, shed, shad, shudder, shod, showed, shoe, should, shied, sheet, shut, shot, shoot, shin, shun, shone, shine, shale, shell, shall, shawl, shoal, shear, share, shore, sure, shire, shower, shaggy, sugar, shake, shock, shook, shing, sheng, shang.

## WRITING EXERCISE XIV.

Leave, live, lave, levity, love, live, leaf, Lafy, left, laugh, loft, loaf, aloof, life, Libby, lab, lub, lob, lobe, leap, lip, leper, lap, lop, lope, loop, limb, lame, lem, lam, loam, loom, lime, Lees, Lizzie, lazy, laws, lows, loze, lies, lease, lice, lace, less, loss, lass, loose, lice, lith, lath, loth, lythe, lid, laid, led, lad, lud, lode, lewed, lide, Loyd, loud, lit, late, let, latter, lot, loot, light, lout, lean, Lynn, lane, lens, lun, lawn, lone, loon, pine, loin, leisure, Lozier, lash, ledge, lodge, latch, lear, lair, lyric, Lord, lore, lyre, lowering, league, leg, lag, lug, log, logy, leak, lick, lake, luck, lock, look, like, luke, ling, leng, lang, lung, long, lowing, lieing, allowing.

## WRITING EXERCISE XV.

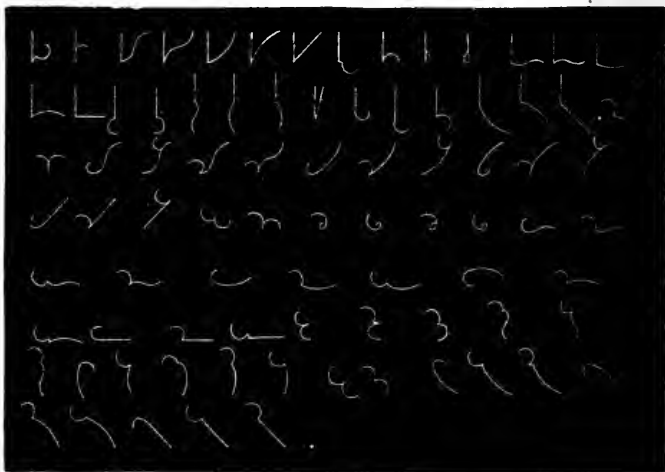
Jove, jiffy, Jeff, jaf, jib, jabber, job, Job, jibe, jip, Jim, jam, jum, Jay's, jaws, Joe's, Jew's, juice, Joyce, just, jostle, joist, Judd, jewed, jet, jut, jot, Jute, Jean, gin, Jane, John, Jone's, join, June, gill, jail, jelly, jolly, jewel, judge, jeer, journey, jig, jag, jug, jog, Jake, Jack, joke, jingle, jungle.

Chieve, Chev, chief, chaff, chub, cheap, chip, chap, chop, chum, chime, cheese, chose, choose, chase, chess, choice, chewed, chide, cheat, chit, chat, chin, chain, chill, child, cheer, chair, cherry, charred, chore, chewed, chug, cheek,

chick, check, chuck, chalk, choke, ching, cheng, chang, chung, chewing.

DRILL NO. 16.

JOINED CONSONANTS.



WRITING EXERCISE XVI.

Heave, have, hove, hive, half, huff, hoff, hoof, hub, Hobb, heap, hip, happen, hop, hope, hoop, him, hem, ham, hum, hom, home, Hume, his, Haye's, has, hawes, hose, Hugh's, hiss, hess, huss, hoss, house, hayeth, heth, hath, hoeth, heweth, heed, hid, hade, head, had, huddle, hawed, had, hoed, hide, hewed, heat, hit, hate, hat, hut, haughty, hoot, height, Hoyt, Haynes, hen, hun, hon, hone, hound, hewn, hash, hush, heal, hill, hale, hal, hull, haul, holly, whole, wholly, Hoyle, hawl, hodge, hitch, hatch, hotch, hear, hair, her, hard, horrid, hoary, hire, hewer, higgles, haggle, hug,



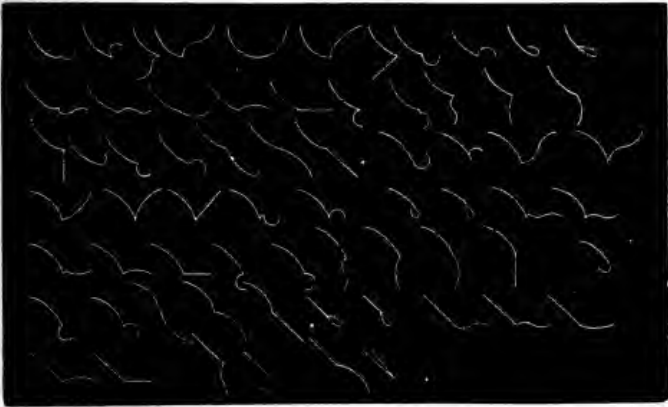
hog, Hoag, hick, hack, hock, hoax, hook, hing, hang, hung, hong, hoeing hewing.

WRITING EXERCISE XVII.

Reeve, rave, rev, rav, rove, rive, reef, riff, ref, raf, ruff, roof, rib, reb, rab, rub, rob, robe, ruby, reap, rip, rape, rep, rap, rup, rop, rope, ripe, ream, rim, rem, ram, rum, rom, Rome, room, rhyme, raise, rose, ruse, rise, rouse, race, rust, rasp, Ross, ruise, rice, Royce, wreathe, wreath, rith, wrath, wroth, roweth, rueth, writhe, reed, rid, raid, red, ruddy, rod, rode, rude, ride, writ, rate, rat, rut, rot, wrote, root, write, rout, rind, rain, wren, ran, run, roan, Rhine, rowen, rouge, rash, rush, reel, rill, rail, rel, rally, role, rule, ride, Royal, Rowel, Ridge, rage, rudge, reach, reach, rich, wretch, ratch, roach, rooch, rear, rare, roar, rig, rag, rug, rog, rogue, reek, rick, rake, wreck, rack, rock, rook, ring, reng, rang, rung, wrong, rueing.

DRILL NO. 17.

JOINED CONSONANTS.



## WRITING EXERCISE XVIII.

Give, gave, Gough, gab, gob, gobble, gape, gap, Guppy, game, gam, gum, gaze, guzzle, goes, guise, guess, gas, gust, goose, geth, gath, gad, God, goad, good, guide, gate, get, gat, got, goat, gout, gain, again, gan, gun, gone, gown, gash, gush, gill, gale, gal, gull, Gaul, goal, guile, ghou, engage, gudge, gouge, gear, girth, gore, gig, gag, gog, gang, gong.

## WRITING EXERCISE XIX.

Cave, cough, cove, cuff, calf, cafe, cab, cub, cob, keep, kip, cape, kept, cap, cup, cop, coke, coop, came, kam, come, calm, com, comb, coomb, keys, cause, cows, kiss, case, cost, Keith, kith, uncouth, kid, Kade, ked, kad, cud, cod, code, cooed, could, cowled, cued, kit, Kate, ket, cat, cut, caught, cot, coat, coot, kite, Coit, cute, keen, kin, cane, ken, can, country, con, cone, coon, kind, coin, cowl, Kewen, cash, cowish, keel, kill, kale, kel, kal, cull, coal, cool, chyle, coil, cage, catch, coach, couch, care, cur, car, core, kig, keg, kag, cog, kick, cake, coke, cook, king, keng, kang, king, kong, cooing, coying, cawing, cueing.

## WRITING EXERCISE XX.

Tosh, toyish, till, tale, tell, tal, tul, tall, țole, tool, tile, toil, teach, touch, tear, tare, turf, tar, tore, tour, tire, tower, teeg, tig, teg, tug, tog, tige, tick, take, teck, tack, tuck, talk, token, took, tike, ting, tang, tongue, tongs, tying, toying, towing.

Knave, navy, novice, Naphey, enough, knife, nib, neb, nub, nob, neap, nip, nape, nep, nap, nim, name, nem, nam, numb, nom, naves, nez, nose, news, noise, neice, ness, nas, noose, nice, neath, nath, nothing, need, ned, nod, node, neat,

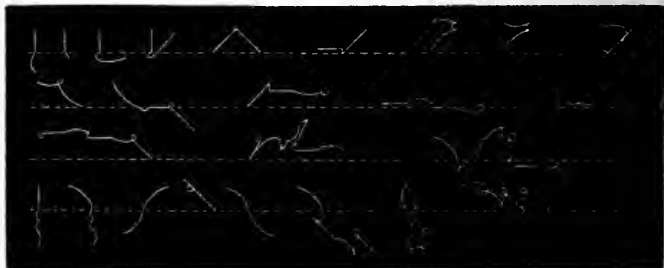
knit, net, nat, nut, not, note, night, Nute, ninny, nanny,  
nun, non, known, noon, nine, noun.

## LESSON VIII.

### GENERAL PRINCIPLES.

12. Lineality is secured in long words by having the first upward or downward full length sign, as *Mi* or *Hi*, rest on the line of writing. Double length outlines as *Pi-Bi*, *Ki-Gi*, are divided in the middle by the line of writing. Words with only horizontals rest on the line of writing.

#### LINE OF WRITING.



a. Words with *Vi*, *Fi*, *Bi*, *Pi*, *Mi*, *Il*, *Li*, *Ji*, *Chi*, *Hi* and *Ing* combinations with each other, or with other upward or

downward signs, are written in both the *up* and *down* direction. Lineality in the most difficult words in the language, may be secured in this way.

#### WRITING EXERCISE XXI.

Secure lineality as far as possible in such words as :Approbrium, appropriately, approbation, momentum, vivify, vermifuge, geneologically, physiologically, geologically, theologically, pathologically, Lexicographically, psychologically, accordingly, horticulturally, rockingly, shockingly, conglomeration.

REM.—38. Double Consonants.—As a general rule, consonant sounds are not doubled in spoken language, and should not be in written language. Compound words, as *book-case*, and terminations in *Di* or *Ti* preceded by the same sound are doubled as *added*, *wedded*. Teachers who prefer to write double consonants as a more accurate, Phonic drill, can do so in all cases where they are clearly double in the common pronunciation. When the initial and final *r* sounds are united in such words as *peerage-peer'rage*, *wiry-wir'ry*, *poorer-poor'rer*, use only one *r* sign. The reason for this is found in the fact, that the adoption of the Scotch practice is far more conducive to simplicity and ease of utterance. They join the *r* in all cases, to the second syllable, in words like the following; *he'ro*, *glō'ry*, *poo'rer*, *pee'rage*, etc.

#### WRITING EXERCISE XXII.

Double consonants are not used in such words as the following: Holy, wholly, fully, foully, allot, collect, commute, correct, attend, apply, annoy, afflict, adduce, accrue, abbreviate, keenness, soulless, common, commit, appoint, attract, connect, afflict, carrol, barrel, barren, merry, torrid, horrid, borrowed, furrowed, Irish, iris, glory, lurid, poorer, boring, airy, peerage, erring, searing, securing, barrack, period, carriage, marriage, opportunity, misstate, attend, necessary,

illegal, alledge, immoral, arrest, arrogate, arrow, array, innocent, innovate, account, accrue, acclaim, adduce, afflict, affect, cannot.

REM.—39. Assimilation of Consonants.—There is a very important principle in constant operation in the construction and development of language, viz: voiced sounds assimilate with voiced sounds only; and voiceless sounds assimilate only with voiceless sounds; there are a few exceptions found with the voiceless *th* in such words as *breadth*, etc., other exceptions are found with the liquids and nasals *Mi, Ni, R, L, Ing*,—all of which are voiced sounds, but they readily assimilate with both voiced and voiceless sounds. This principle gives a definite rule for adding *Si* or *Zi* and *Di* or *Ti* as terminations to words, because *Zi* and *Di* unite only with voiced sounds and *Si* and *Ti* unite only with voiceless sounds;—of course this means outside of the exceptions already noted.

Be careful to write *Ti* in words that have this sound, as *hatched* (*hatcht*). Do not write *ed* for *Di* as in *loved* (*lovd*).

#### WRITING EXERCISE XXIII.

Banged, sagged, aged, adds, enraged, robbed, loved, grooved, moved, seized, ticks, tricked, etched, its, apt, oaths, heft, lift, massed, splashed, lashed, hissed, passed, best, kissed, missed, blessed, hanged, banked, planked, and, ant, tempt, damp, heard, hurt, cored, court, breadth, width, hundredth, thousandth, millionth, billionth, trillionth, quadrillionth, decillionth, fifth, fifteenth, tenth, ninth, eighth, fourth, sixth.

REM.—40. The vocal *Thi* and aspirate *th*; are, in very many words, confounded by most students. A list of the common words having these sounds are given in the two following Exercises. The word *thither* contains both sounds.

#### WRITING EXERCISE XXIV.

[The voiced *Thi* sign.]

Then, this, these, those, than, that, the, their, them,

thence, therefore, thine, worthy, bequeath, beneath, writhed, heathen, thither, though, thou, thus, thy, thyself, themselves, thereat, therefor, thereby, thereabouts, thereafter, therein, therefrom, thereof, thereinto, thereon, thereout, theirs, thereto, thereunto, thereupon, therewhile, thereunder, therewithal, therewith, thenadays, thenceforth, thenceforward, thencefrom, they, father, fathom, hither, loathe, loathsome, mother, brother, mouthed, moulder, breathing, brothel, brethren, southeast, southerliness, southerly, southern, southing, southly, southward, south, (v.) northeast, norther, northerliness, northerly, northern, northerner, northerly, northernmost, northing, northward, north-west, whither, whitherward, whithersoever, whether, weather, weather-board, weather-cock, weather-gage, weather-strip, weather-wise, booth, seething, seethe, wreath, breathe, scathe, lithe, blithe, swathe, clothe, scythe, whither, smother, sheathe, neither, either, booth, oaths, burthen, farthing, lather, leather, together.

#### WRITING EXERCISE XXV.

[The voiceless *lth* sound.]

Broth, breath, mouth, moth, froth, frith, fifteenth, fiftieth, fifth, faith, thane, thank, thought, thaw, theandric, theanthropic, theater, theatre, theave, Theban, Thebes, theft, thearchy, theiform, south, (n.) southdom, southsea, southness, north, north-man, theine, theism, theme, theodolite, northmost, northiness, Northumbrian, northwardly, scath, bath, Theogony, theological, theology, theopathic, theopathy, pith, lath, Lithograph, Seth, earth, dearth, nothing, author, theophilanthropic, theorem, theory, Theosophical, Therapeutic, ether, youth, Sabbath, Mythology, parenthesis, leviathan, hypothesis, therf-bread, therial, thermal, thermo-cur-

rent, Thermology, antipathy, arithmetic, antithesis, anathema, apothegm, thermometer, Thermoscopic, thesis, Thespian, theta, thew, zenith, betroth, bismuth, anthem, ethics, method, truths, troth, thick, thin, thicket, thief, thieve, thigh, thilk, sheath, path, both, myth, plethoric, synthesis, thill, thimble, thing, think, third, thirtieth. three, thirl, thirst, thirteenth, thistle, thole, Thor, thong, thorax, Thornia, thorn, thorough, Thorp, Thoth, thought, thousandth, Thrace, thrack, thrall-  
dom, thrapple, thrash, thrive, thraw, thread, threap, threat, threave, threshold, threw, thrice, thrift, thrill, thrive, throat, throb, throe, throne, throng, throttle, throw, thrum. thrush, thirst, thud, Thug, thumb, Thummim, thump, thunder, thurl, Thursday, thus (resin), thwack, thwart, Thyroid, withe, oath, Pathologic, pathos, pathway, Smith, Theodore, sayeth, doeth, goeth, lieth, dieth, knoweth, roweth, hoeth.

REM.—41. It is now generally conceded, that *Iu* loses the *Yi* element when preceded in the same syllable by a Dental consonant. The reason for this is explained by the fact, that it is difficult to utter the *y* element immediately following the *Ji*, *Chl*, *Zhi*, *Shi*, *R*, *Di*, *Ti*, *Ni*, *Zi*, *Si*, *L* and *Th* sounds when combined in the same syllable, because the organs of utterance are already in a position to pass with perfect ease to the utterance of *Oo* or *Uu*, and it is very difficult to touch the intermediate *y* element. The tendency of the development of the language is, *to ease of utterance*; sooner or later it will surely come about; hence, the indications of nature are, that all this class of words must be spoken without the *y* element. We, therefore recommend that they be written so, until such time as this question is settled by Science.

#### WRITING EXERCISE XXVI.

Use *Oo* in such a words as :

New, duty, tune, lute, lewd, delusion, exclusion, blue, blew, glue, flue, flew, Loo, lieu, lurid, lucid, fluid, plural, lunar, fluke, flute, flume, news, new, nuisance, nude, nudity,



suit, soup, sued, sues, superior, superfine, thew, thurible, injure, injury, perjure, exposure, composure, abjure, jury, July, juice, sure, sugar, shoo, shew, shoed, Shooke, rue, rood, rude, brood, brewd, drew, rule, prude, prune, brute, spruce, truce, true, truth, brutal, frugal, rural, rumor, ruler, ruby, Druid, bruin, prudish, brew, grew, crew, drew, shrew, tour, root, issue.

#### WRITING EXERCISE XXVII.

Use *Iu* in such words as :

Unity, unicorn, uniform, unify, union, unique, unison, unit, unite, universal, universe, University, univocal, univocation, Unitarianism, ubiquity, actual, amulet, calumet, century, educate, manual, petulent, punctual, regulate, ritual, rivulet, saturate, strenuous, titular, tortuous, virtuous, actuate, document, emulate, fabulous, genuine, globular, gradual, granular, manuscript, monument, mutual, jocular, popular, secular, adventurous, ambiguous, assiduous, bituminous, circuitous, conspicuous, contemptuous, ingenuous, continuous, miraculous, perspicuous, ridiculous, tempestuous, infinitude, impunity, execute, diminutive, retributive, rapturous, capture, creature, culture, failure, feature, figure, fixture, flexure, fracture, future, gesture, jointure, juncture, lecture, mixture, moisture, nature, nurture, pasture, picture, rupture, vulture, departure, avenue, revenue, continue, indenture, measure, pleasure, treasure, embrasure, leisure, chew, usury, erasure, disclosure, assure, pressure, fissure, tonsure.

REM.—42. The *Iu* sign should be used always when it begins a word, or any syllable of a word, although a Dental consonant precedes it in the immediate syllable, in such words as in Exercise XXVII. Use the short *Uu* sound in such words as :

Would, should, wool, shoot, multitude, solitude, longitude,

latitude, rectitude, student, studions, studious, dubious, institute, constitution, constitute, sedulous.

#### WRITING EXERCISE XXVIII.

Use *Shi* for *Ch* in words like these :

1—Shagreen, chagrin, chaise, chamade, chamois, champagne, champerty, champertor, champignon, chancre, chandelier, chanson, chaperon, charade, charlatan, chasselas, chateaux, chatoyant, chaumontelle, chemise, cheval, chevaux, chevalier, chivalry, chivalrous, chivalric, chevisance, chevron, chicane, chiminage.

Use *Ki* for *Ch* in words like these :

2—Chalcedony, chalcography, chaldaic, chalybeate, cham, chambrell, chamlet, chameleon, chamomile, chaos, character, chasm, chelonian, cheley, chemistry, chersonese, chiaro-scuro, chiliad, chilifactive, chimera, chiragro, chirolgy, chiroyraphy, chiromancy, chiropodist, chirurgion, chlamys, chlorous, chlorine, chlorophyl, chlorosis, choir, choler, choliambic, chondrodite, choral, choragus, chord, choreus, chorion, chorography, chorepiscopal, chrism, chrismatory, Christ, christendom, chromatic, chronic, chronical, chyle, chyme, chrysalis, chronography.

Use *Gi* in words like these :

3—Gay, go, gammon, gabardine, gabion, gellinaceous, gomphosis, gordian, guillotine, grundsel, guttural, keg, geese, geld, get, drugged, gig, giggy, gibbous, gibberish, giggle, gild, gil, gimlet, gimmel, gird.

Use *Ji* for *g* or *dg* in words like these :

4—Genius, generous, gentian, gentleman, gerund, gilliflower, gypsey, gyve, gyre, mange, cridge, ledge, wedge, bridge, age, sage, rage, adage, change, range, danger, ranger, prestige, flange, peerage, age, ridge, Sedgewick, sledge,

smudge, trudge, danger, stranger, ginger, plunger, singeing, impinging.

Some of the longest words in the language :

5—Transubstantiations, transmigratory, transportations, disadvantageously, theophilanthropically, circumambulations, circumnavigations, circumferences, contradictingly, contradictorily, contradistinguishingly, accomplishments, accordingly, unconstitutionally, consequentially, simultaneously, miscellaneously, pusillanimously, maladministrations, advertisements, inexperienced, plenipotentiaries, re-incarnations, uncomplimentary, mathematically, super-inducements, superintendents, magnanimously, extraordinarily, perambulations, imprescriptibleness, horticulturists, providentially, stenographically.

REM.—43. The general rule for short *Oe*, is, to use it in unaccented syllables as in paragraph 1—Exercise XXIX. The words in paragraph 2—Exercise XXIX are pronounced with the short *Oe* in some parts of the country, and with the long *Oh* in others places. We, leave it with the Teacher to decide which to use—the tendency hower, seems to be growing towards the short sound, but it must never be confounded with the short *u* in *up*.

#### WRITING EXERCISE XXIX.

1—Obey, only, phonic, bravado, Farrago, lumbago, octavo, plumbago, potato, tomato, tornado, virago, volcano, embargo, flamingo, martello, merino, morocco, palmetto, stiletto, tobacco, buffalo, calico, cameo, domino, indigo, nuncio, olio, studio, vertigo, opinion. omit, symphony, sycophant, sophomore, hypocrite, pioneer, parody, reprobate.

2—Most, only, boat, bolster, bolt, bone, both, broke, broken, choke, cloak, close, coke, coat, coax, colt, coulter, comb, dolt, folks, goat, hold, homely, home, jolt, load, molten, molt, open, pole, polka, poultice, poultry, revolt, road,

rogue, soap, sloth, smoke, sofa, spoken, stone, story, swollen, toad, upholsterer, hole, holy, wholesome, rote, wrote, yoke, yolk.

Use *Ing* in such words as these :

3—Sing, singer, singly, singing, wing, king, whang, bang, bring, stripling, yearling, condemning, contemning, anger, finger, hunger, wronging, longing, longer, stringer, diphthongal, canker, clangor, concord, concourse, congress, conquest, singular, extinguish, elongate, delinquent, tangle, tingle, jingle, single, ingot, ingle, gangrene, fungus, ink, sink, bank, sank, lank, tank, rank, think, link, brink, wink, rink, drink, blink, slink, slunk, drunk, drank, drunk, bank, canker, function, tinker, trinket, twinkle, distinctly, conquest, concourse, concord.

REM.—44. The short Italian *Aa* in *ask* is given more prominence in this than in the previous edition. The tendency is to use this sound in preference to the drawling long *Ay* in the language. This tendency secures grace as well as ease in pronunciation. With few exceptions, nobody in ordinary conversation, *drawls* out the long *Ay* sound in the article *aa*, then, why write it? Sound always the word *aa* as in the following sentence: “*aa* picture of *aa* kite and *aa* balloon will not always please *aa* boy.” Words with this prefix should be written with the *aa* sign as *aavoid*, *aaway*, *aabout*. There may be a few words and phrases when strongly emphasized, which will sound better with the long *Ay* sound as, “*Ay* mighty maze, and all without *aa* plan.” The word *the* is written with the short *I* sign.

NOTE:—In using this sign for the word *Aa*, we are only following in the footsteps of the practice in the public schools of Massachusetts. The series of “Analytical Readers” of Richard Edwards, L.L.D., President of the Illinois State University, adopts this practice—they are used in the public schools in this place.

## WRITING EXERCISE XXX.

Words with the short Italian *Aa* :

Away, avoid, aft, after, amass, America, Asia, arnica, algebra, Africa, Asa, Arabia, advance, advantage, alabaster, alas, amass, answer, ant, ask, asp, enhance, enchant, example, Arabia, Eliza, Iowa, Waft, vast, veranda, fast, flask, bask, basket, blast, branch, brass, bass, blanch, bath, pass, past, pastor, pastime, plaster, prance, polka, pasture, pilaster, path, Mass, mask, mast, mastiff, mischance, Minnesota, Martha, staff, slant, sample, slander, surpass, soda, Celia, shaft, dance, dastard, Deborah, disaster, draff, draft, draught, task, trance, Noah, last, lance, launch, lass, lava, Laura, Julia, chaff, chance, chandler, chant, hast, hasp, Hannah, raff, raft, rafter, rasp, repast, gasp, glance, glass, graft, grass, ghastly, graff, graft, grant, grasp, Georgia, cask, cast, clasp, class, Cuba, Canada, Cora, Cordelia, Clara, casket, castle, contrast, craft, quaff, Augusta, Anna, Indiana.

REM—45. The vowel sound *Eu* in *her* is one of the most frequent sounds in the language. It is to be regretted that it is not used with more regard for unvarying rules. Terminations having the same meaning should always have the same orthography. Even when they are of different Etymological derivation, they should be made to conform to the proper dress belonging to that termination. To write the *agent or doer* in such words as *stayer, layer, prayer, worker, weigher*, with *Eu* in the termination, should be followed with uniformity in *Doctor, author, abettor, Mayor* and *minor*. It is an insult to a child's reason to have it otherwise. The adjective termination ought to be different in the language. We merely suggest that adjectives might be written with the *E*, and common nouns ending in *R* might be written without the vowel, as *papr* for *paper*; such practice would improve the language and remove one of its inconsistencies—we only offer it, however, as a suggestion.

NOTE 1. Such words as *curry* and *hurry* are usually pronounced with the short *u* sound as in *up*. The sounds *Ay-Eu* in *prayer* (one who prays), must not be confounded with the *Ai* sound in *prayer* (a petition or supplication), etc.

NOTE 2. Max Müller in his second series of lectures on the "Science of Language," page 134, Sec. 7, says: "There is, besides, the most troublesome of all vowels, the neutral vowel, sometimes called *Uroocal*. Professor Willis defines it as the natural vowel of the reed, Mr. Ellis as the voice in its least modified form. Some people hear it everywhere, others imagine they can distinguish various shades of it. We know it best in short closed syllables, such as *but*, *dust*, etc. It is supposed to be long in *absurd*. Sir John Hershel hears but one and the same vowel in *spurt*, *assert*, *bird*, *virtue*, *dove oven*, *double*, *blood*, Sheridan and Smart distinguish between the vowels heard in *bird* and *work*, in *whirl'd* and *world*. *There is no doubt that in English all unaccented syllables have a tendency towards it.*"

#### WRITING EXERCISE XXXI.

##### 1—Words with the sound of *Eu* in *her* :

Inferred, infernal, urge, other, earth, error, early, earnest, were, word, world, worthy, weigher, worker. Whirr, whirl, Verde, verdant, verses, versus, vertical, verdure, virtue, vernon. Fir, fur, furrier, further. Bird, burn, burr, burden, burrow, birth. Purr, pur, per, prayer, (one who prays), payer, person, pertinace, perquisite, perpetrate, perturbation, pervious, persecutor, persevere, perquisite, perpetrate, permanent, permeate, perjurer, perforate, perfecter, proper, prompter. Mercy, mirth, myrrh, myrtle, maternal. Yearn. Sir, cir, circum—, circle, certain, surd. Third, thorough, thermal. Dirt, dirge, durham. Term, turn, Turk. Nurture. Shirley, supernal, slayer. Lurk, learn, layer. Journey. Churn, church. Her, hurt, herd, healer. Gurney, girt, gird, girdle. Kurd, curd, cur, curdle, carder, cooper. Recur, curfew, furlong, disbursed, purring, recurring, furry,

##### 2.—Words with *E* in *en* :

Very, ferry, ferule, berry, bury, perry, peril, perilous, merry, derry, Terry, sherry, Jerry, cherry, heritage, Gerry, Peradventure, peregrinate, peremptory, perish, periwig, perhaps, etc.

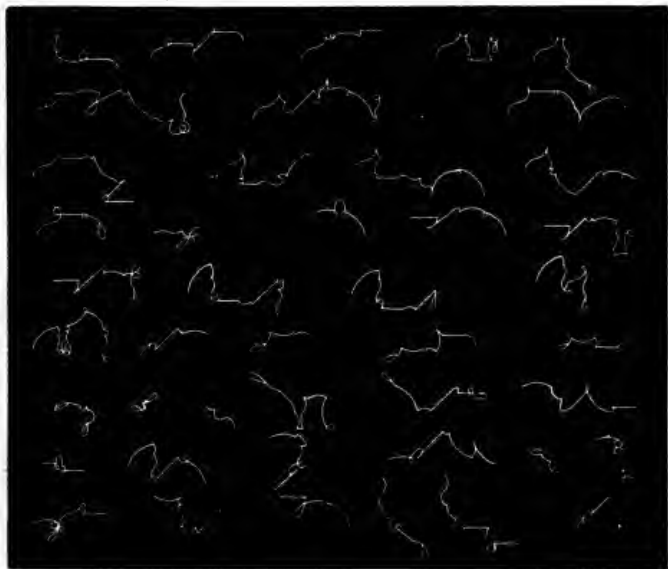
## WRITING EXERCISE XXXII.

Jaw breaking words :

Phagedena, phenomena, phaeton, phalangious, phalanx, phantasmagorial, pharmaceutically, phenicopter, phenogamian, philanthropy, philanthropic, phlegmatic, phœnix, phthisis, plithisic, pneumatic, pneumatology, pneumatocele, polynomial, polyonomous, polyphyllous, polysyllabicaly, psammite, pseudo, pseudochina, pseudonymous, psittaceous, psoas, psora, physchology, psychomancy, ptarmigan, ptisan, ptolemaic, pyalism, ptysmagogue, Czar, Ctesilas, Ctesiphon, bdellium, gnostic, larynx, laryngean, schism.

## PHONIC READING EXERCISE XXXII.

Jaw breaking words :



## LESSON IX.

### ACQUIREMENT OF SPEED.

13. The first step necessary for every student to take, in the acquirement of speed, is to thoroughly master the Alphabet, directions for writing the Signs, elements of Phonetic Analysis, Joinings, Drills, and Phonic Reading Exercises. The more thorough the work is performed in this mastery of the elementary principles, the sooner the pupil will be prepared for the next step.

The second step, is the practical acquirement of the highest speed compatible with the temperament of the pupil. The student should begin a series of Drills on the elements by practicing on the Alphabetical Signs, until both consonants and vowels can be written in about fifteen seconds of time. Then begin practice on the Joinings, Drills, Writing, and Phonic Reading Exercises, until they can be written with the greatest mechanical rapidity. Then practice from dictation, by having the reader or speaker dictate so as to tax the writer's powers to the



utmost, for a short time every day, for five or ten minutes. Then let this practice be carried into other fields of Literature, Composition, or Correspondence, until the acquirement of speed has been equal to at least double that of the common long-hand script. Some will gain a speed equal to three or more times that of the ordinary script, but persevering practice is the only short road to success. The school room is the natural place to begin the study of Kirography.

## HOW YOUR OWN ROW.

*Alice Cary.*

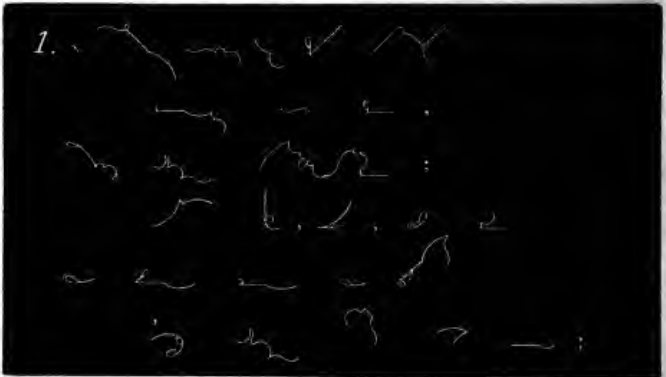
1. I think there are some maxims  
    Under the sun,  
    Scarce worth preservation;  
    But here, boys, is one  
    So sound and so simple  
    'Tis worth while to know;  
    All in a single line,  
    How your own row!
2. If you want to have riches,  
    And want to have friends,  
    Don't trample the means down  
    And look for the ends;  
    But always remember,  
    Wherever you go,  
    The wisdom of practicing  
    How your own row!
3. Don't just sit and pray  
    For increase of your store,  
    But work; who will help himself,

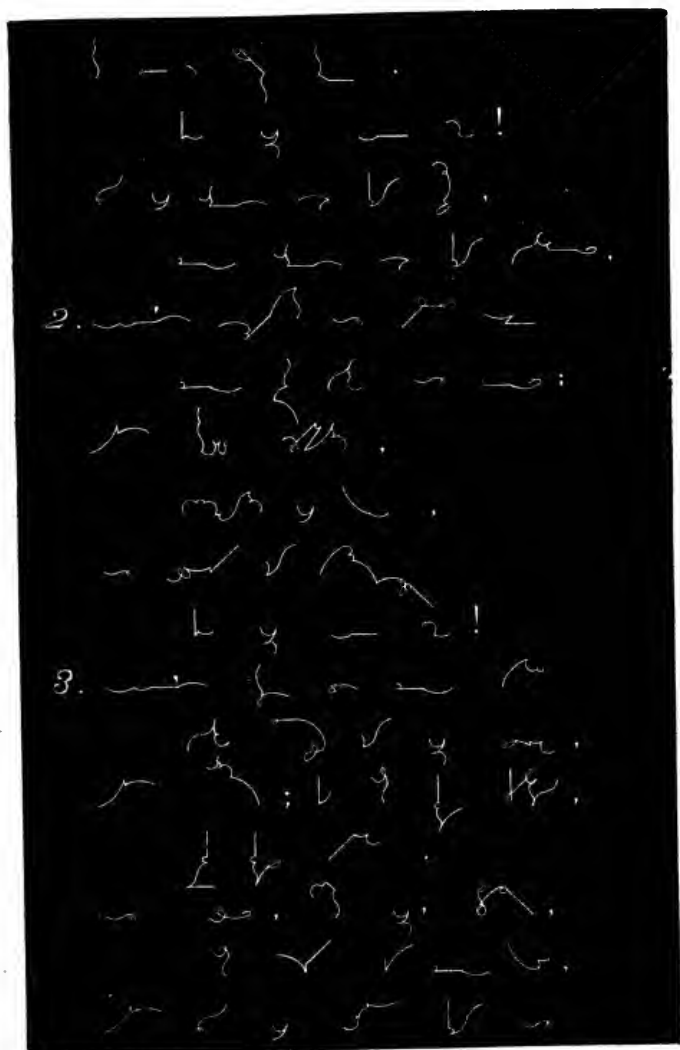
Heaven helps more.  
 The weeds, while you're sleeping,  
 Will come up and grow,  
 But if you would have the  
 Full ear, you must hoe!

4. Nor will it do ously  
 To hoe out the weeds,  
 You must make the ground mellow  
 And put in the seeds;  
 And when the young blade  
 Pushes through, you must know  
 There is nothing will strengthen  
 Its growth like the hoe!
5. There's no use of saying  
 What will be will be;  
 Once try it, my lack-brain,  
 And see what you'll see!  
 Why, just small potatoes,  
 And a few in a row;  
 You'd better take hold, then,  
 And honestly hoe!

HOE YOUR OWN ROW.

*Alice Cary.*







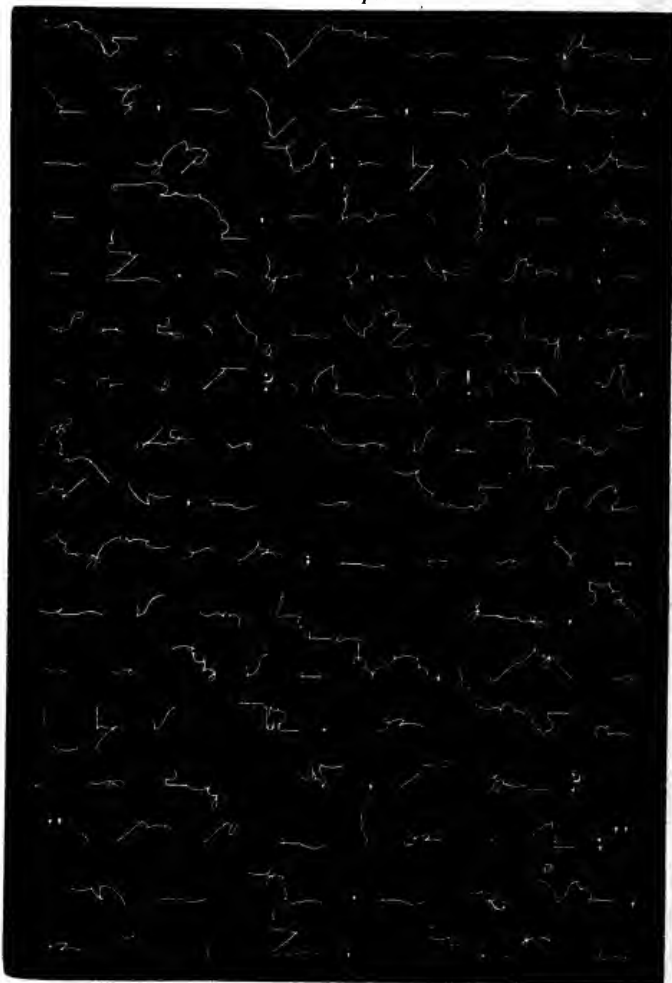
## EDUCATION.

*Phillips.*

Education is a companion that no misfortune can depress, no clime destroy, no enemy alienate, no despotism enslave; at home a friend, abroad an introduction, in solitude a solace, in society an ornament. It chastens vice, it guides virtue, it gives at once a grace and government to genius, Without it what is man? A splendid slave! A reasoning savage, vacillating between the dignity of an intelligence derived from God, and the degradation of passions participated with brutes; and in the accident of their alternate ascendancy, shuddering at the terrors of an hereafter, or embracing the horrid hope of annihilation. Without education what is this wondrous world, man's residence?

“A mighty maze and all without a plan;” a dark and desolate, and dreary cavern, without wealth or ornament, or order. But light up within it the torch of knowledge, and how wondrous the transition! The seasons change (with new meaning), the atmosphere breathes (with a fragrance imparted by invisible flowers), the landscape leaves (in the light of new radiance), earth unfolds (fairer fruits), ocean rolls (in more magnificence), the heavens display their constellated canopy, and the grand animated spectacle of nature rises revealed before him; its varieties regulated, its mysteries resolved: The phenomena which bewilder, the prejudices which debase, the superstitions which enslave vanish before education. Like the holy symbol which blazed upon the cloud before the hesitating Constantine, if man but follow its precepts purely, it not only will lead him to the victories of this world, but open the very portals of omnipotence for his admission.

## EDUCATION.

*Phillips.*

Handwritten text in a cursive script, likely representing a literary style. The text is arranged in approximately 15 lines, though the characters are highly stylized and difficult to decipher. The script features fluid, connected letters with varying line thicknesses and some decorative flourishes. The overall appearance is that of a personal or artistic manuscript.

## LESSON X.

### ALPHABETICS.

*a.* Alphabetics is the science or art of transcribing languages by an alphabet. It may properly be subdivided into four branches, viz: 1.—Phonology or the art of making Phonetic Analysis of the elementary sounds of Language: 2.—Chirography (Kirografy) or the art of writing: 3.—Typography or the art of printing: 4.—and Stenography (Stenografy) or the art of writing in short-hand, by using abbreviations.

*b.* It is self-evident that there can be no real science or art of Alphabetics, unless it is founded upon the simple, but all potential laws of Mathematics. To place the science on this foundation will secure a common or Universal Alphabet adapted for the transliteration or transcription of all languages with practically one alphabet for common script, type, and short-hand. A common Mathematical, Kirografik, Typografik and Stenografik Alphabet should be as far as possible an embodiment of these five essential conditions. Other essential conditions are needful such as securing an alphabet that is pleasing to the eye, graceful in appearance and which does not have too many letters with extended comet like tails, either below or above the line of writing. The beauty of



the Roman type is marred by too many of such letter forms.

c. The Mathematical Alphabet presented here is nearly completed for all the languages in the world. It will be extended in "How to Make the English Language Scientific and Universal." The fundamental difference, between the script and short-hand signs and the type letters, is that there is an open or shut circle added to the script signs for the type letter. Each type letter has some part of it struck in the same direction as the corresponding script sign. Capital signs or letters may be shaded or made thick in some part of the sign for script, and enlarged in size for type letters.

d. The chaotic conglomeration called an Alphabet, now in common use for script and type, requires a child to master about a half dozen Alphabets to acquire what might be accomplished with *one* Mathematical Alphabet. No apology is required for adding another new one to the long list already before the public. The fact that none of them even attempt to secure one Alphabet for script, short-hand and type, is sufficient reason for presenting this one. If years of labor and time can be spared, to the unborn millions of the coming future, by the adoption of an Alphabet based on this principle—and it can, then it is the duty of all humanitarians to encourage such a desirable Alphabetic reform.

e. It will not be necessary to have a complete new set of steel dies made, in order to make practical use of the type letters in the Mathematical Alphabet. By cutting, filing and reversing, such letters as v, h, q, d, a, o, c, e, q, u, s, g, p, and figures 6, 9, 3, can be made serviceable for a goodly number of the type letters. Then again the Ellis-Pitman and other new alphabets, have dies now for quite a number of letters, as can be seen by a comparison with the Mathematical Alphabet.

[A Universal Kirografik, Stenografik and Typografik Alphabet.]

|   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |
|---|-----|-----|-----|-----|-----|-----|-----|-----|---|
| A | o o | o o | o o | o o | o o | o o | o o | o o | A |
| B | o o | o o | o o | o o | o o | o o | o o | o o | B |
| C | o o | o o | o o | o o | o o | o o | o o | o o | C |
| D | o o | o o |     |     | o o | o o | o o | o o | D |
| E | o o | o o | o o | o o | o o |     | o o |     | E |
| F |     | o o | o o | o o |     |     |     | o o | F |
| G | o o | o o | o o | o o | o o | o o | o o | o o | G |
| H |     |     | o o | o o | o o | o o | o o | o o | H |
| I | o o | o o | o o | o o | o o | o o | o o | o o | I |
| K | { } |     |     | o o | o o | o o | o o | o o | K |
| L | o o | o o | o o | o o | o o | o o | o o | o o | L |
| M | o o | o o | o o | o o | o o | o o | o o | o o | M |
| N | o o | o o | o o | o o | o o | o o | o o | o o | N |
| P | o o | o o | o o | o o | o o | o o | o o | o o | P |
| R | o o | o o | o o | o o | o o | o o | o o | o o | R |
| S | o o | o o | o o | o o | o o | o o | o o | o o | S |
|   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   |   |

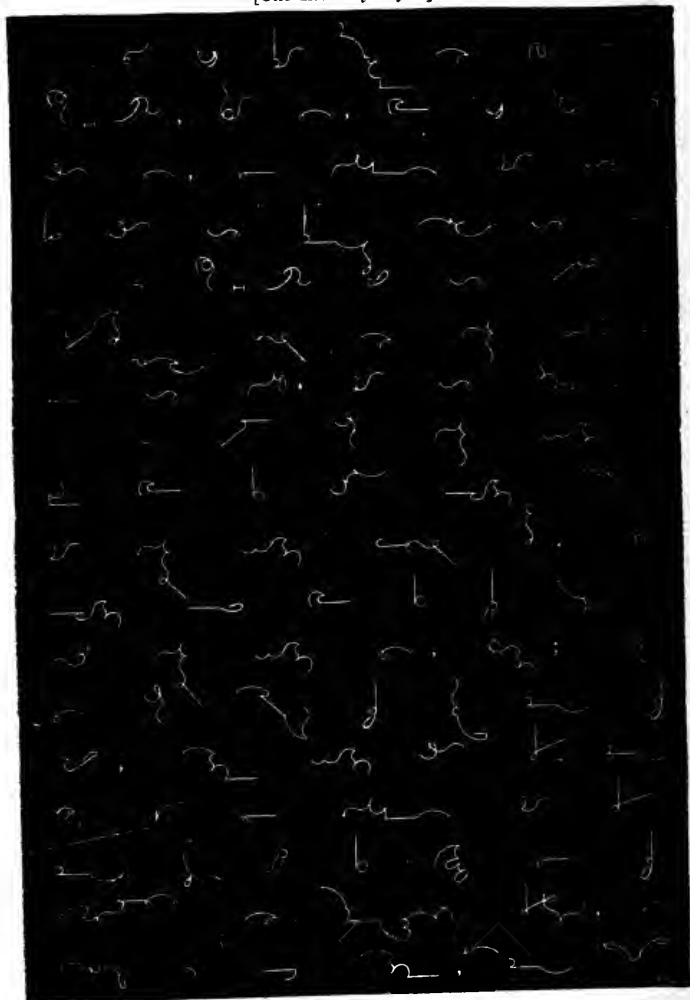
## THE MATHEMATICAL ALPHABET KEY.

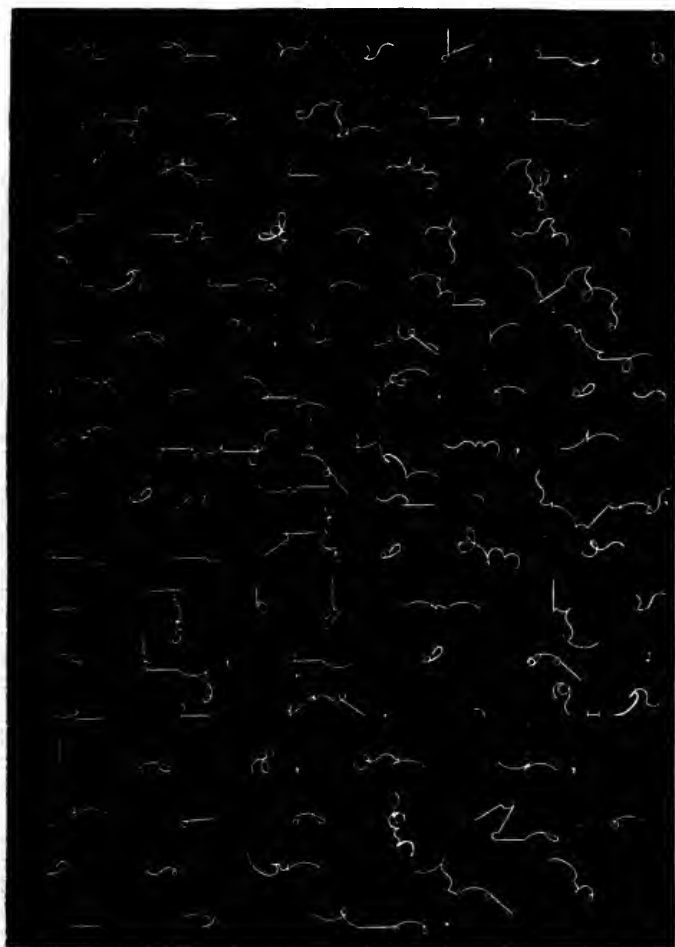
[The *Italic* letters are the English equivalents of the script and type signs and letters in the corresponding sections of The Mathematical Alphabet. A few sections have Roman accented letters instead of italic.]

|          | 1                  | 2               | 3            | 4            | 5                   | 6                   | 7           | 8            |          |
|----------|--------------------|-----------------|--------------|--------------|---------------------|---------------------|-------------|--------------|----------|
| <i>a</i> | heel               | hill            | hail         | hair         | hel                 | hal                 | her         | hull         | <i>a</i> |
| <i>b</i> | î                  | Sw.<br><i>e</i> | ê            | F.<br>père   | G.<br>Väter         | F<br>été            | G.<br>König | G.<br>Böcke  | <i>b</i> |
| <i>c</i> | are                | ask             | haul         | holly        | hole                | obey                | pool        | pull         | <i>c</i> |
| <i>d</i> | F.<br>pate         | F.<br>patte     |              |              | F.<br>deux          | F.<br>jeune         | F.<br>rue   | G.<br>Sünde  | <i>d</i> |
| <i>e</i> | high               | Hoyle           | howl         | unite        | mute                |                     | F.<br>möi   |              | <i>e</i> |
| <i>f</i> |                    | F.<br>an        | Pr.<br>Alem  | F.<br>on     |                     |                     |             | F.<br>un     | <i>f</i> |
| <i>g</i> | wit                | whit            | vivid        | fife         | babe                | peep                | maim        | limp         | <i>g</i> |
| <i>h</i> |                    |                 | G.<br>wind   | L.<br>ph     | San.<br>b'h         | San.<br>p'h         | San.<br>d'  | San.<br>t'   | <i>h</i> |
| <i>i</i> | yes.               | G.<br>china     | ooze         | see          | then                | thin                | did         | tight        | <i>i</i> |
| <i>k</i> | Paren.             |                 |              | San.<br>s'   | W.<br>Ll            | W.<br>Llan          | Ar.<br>d,   | Boh.<br>t    | <i>k</i> |
| <i>l</i> | nine               | hint            | azure        | she          | ill                 | law                 | judge       | each         | <i>l</i> |
| <i>m</i> | cañon              | Hyphen          | Ellipsis     | San.<br>Sh   | Trill.<br>l         | Trill.<br>l         | San.<br>j'h | San.<br>ch'h | <i>m</i> |
| <i>n</i> | 'and               | hand            | Af.<br>click | Af.<br>click | San.<br>g'h         | San.<br>k'h         | San.<br>d'h | San.<br>t'h  | <i>n</i> |
| <i>p</i> | air                | rich            | G.<br>Tage   | S.<br>loch   | gig                 | kick                | Sing        | sink         | <i>p</i> |
| <i>r</i> | Trill.<br><i>r</i> | Ar.<br>grhain   | Ar.<br>Ain   | Ar.<br>Hha   | L. Sax.<br><i>r</i> | L. Sax.<br><i>r</i> | Trill       | Trill        | <i>r</i> |
| <i>s</i> | Gut.               | Gut.            | Pal.         | Pal.         | Dent.               | Dent.               | Lab.        | Lab.         | <i>s</i> |
|          | 1                  | 2               | 3            | 4            | 5                   | 6                   | 7           | 8            |          |

*Bailey.*

[The Literary Style.]





Bailey.

[In New Type Letters.]

The first part of the book is a history of the wheelbarrow, from its origin in China to its present use in the West. It is a very interesting and well-written work, and is highly recommended to all who are interested in the history of the wheelbarrow.

The second part of the book is a description of the various kinds of wheelbarrows, and the different uses to which they are put. It is a very practical and useful work, and is highly recommended to all who are interested in the wheelbarrow.

The third part of the book is a collection of recipes for the various kinds of wheelbarrow, and the different uses to which they are put. It is a very practical and useful work, and is highly recommended to all who are interested in the wheelbarrow.

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## THE INTRICACIES OF A WHEELBARROW.

*Bailey.*

If you have occasion to use a wheelbarrow, leave it, when you are through with it, in front of the house with the handles toward the door.

A wheelbarrow is the most complicated thing to fall over, on the face of the earth. A man will fall over one when he would never think of falling over anything else. He never knows when he has got through falling over it, either; for it will tangle his legs and his arms, turn over him and rear up in front of him, and just as he pauses in his profanity to congratulate himself, it takes a new turn, and scoops more skin off of him, and he commences to evolute anew, and bump himself on fresh places. A man never ceases to fall over a wheelbarrow until it turns completely on its back, or brings up against something it cannot upset. It is the most inoffensive looking object there, but it is more dangerous than a locomotive, and no man is secure with one unless he has tight hold of its handles, and is sitting down on something.

A wheelbarrow has its uses, without doubt, but in its leisure moments it is the great blighting curse on true dignity.

## SOUNDS IN FOREIGN LANGUAGES.

1. The diphthong *ö* or *æ* is found in several European languages. This sound is somewhat like the *Eu* in *her*, yet different in organic formation. It is found long in German *König*, or short in *Bücke*. They have new signs as in the Mathematical Alphabet *7 b* and *8 b*.
2. The French *eû* is closely allied to the German *ö*, and is found long in French *deûx*, or short in *jeûne*. They have new signs in *5d* and *6d*:
3. The French *ue* or *û* and German *ü* are nearly similar to *Eu* in *fur*, but more prolonged. They are intermediate between *u* in *up* and German *ö*, and combine the sounds of *uu* and *ee*. They are found long in French *dû*, *rue*, German *über*, or short in French *hûtte*, German *Sûnde*, *lûcke*. They have new signs as in *7d* and *8d*.

2. The general principle governing in the assignment of signs to sounds in Foreign languages, is to provide a uniform alphabet of signs and letters for the same or similar sounds. This is accomplished by modifying the signs or letters as used for English sounds. In the actual practice of penmanship in Foreign languages all these nearly related sounds should be written with the script sign used for the nearest related or modified sound in English, but modified signs for type should always be used in printing. But in transcribing words from Foreign languages into English the modified signs should be used where accurate pronunciation is required. This accommodating practical arrangement will prevent unnecessary confusion. The abrupt or stopped short vowels in *met*, *mit*, *mat*, *mut* are taken as the extreme of short-vowel sounds and are written without modifiers.

3. The sounds of Foreign languages can be designated, near enough for all ordinary literary purposes, by adding modifiers to them to indicate either a *lengthened* or *shortened* sound. A *glide* added to a sound can be designated in this manner when necessary. The following principles govern in the assignment of modifiers to signs, viz: 1, A short tick added to any sign or letter, when struck at right angles, indicates that the sound is similar but more or less prolonged than in English: Example, German *ä* in *Väter*, which is similar to a lengthened English *e* in *men*, as shown by its sign in 5 *b*: 2, A short tick added to any sign or letter, when struck at acute angles, indicates that the sound is similar but more or less shortened than in English: Example, French *è* in *père*, which is similar to a shortened English *ai* in *air*, as shown by its sign in 4 *b*. The *î* in 1 *b*, *ê* in 3 *b*, Swedish *e* in 2 *b* and French *é* in 6 *b* are examples of shortened vowel sounds found in Foreign languages, as shown by their respective signs.

4. Nasalization of vowel sounds are common in French, Portuguese and some other languages. The nasal vowel sounds as represented by *un*, *on*, *an*, *in*, *en* or *em* never have the consonant sounded. They are produced by having a portion of the sounding breath escape through the nasal passage-way in sounding the vowel. Nasalization is indicated by attaching a *dot* to any sign as shown in 2 *f*.

5. The trilled *r* is found in European languages, perhaps the



sound in English *terror* may give an idea of it; or better the Arabic *grhain* or Northumberland *burgrh*. The trilled *r* is represented as in 1 *r* and 2 *r*: and the trilled *l* as in 5 *m* and 6 *m*. The sign and letter for Trills is given in 7 *r* and 8 *r*.

6. The hard or surd aspirates *k'h*, *t'h*, *p'h*, etc., occur in Greek and Sanskrit in connection with the consonants *k*, *t*, *p*. They are represented by joining the *Hi* sign to the other consonant signs as shown in 6 *n*: 2. The soft aspirates are of frequent occurrence in Sanskrit. They are found also in French, Italian, Spanish and Portuguese so strongly aspirated that the English ear does not easily recognize them. They occur in connection with the voiced consonants *g'h*, *d'h*, *b'h*, etc., and are represented with the '*h* or *hie* sign as shown in 5 *n*.

7. The Dutch *sch* is similar to English *sk*, but harsher and more guttural, the German *sch* sounds like *sh*. but the Italian *sch* sounds like *k*: 2. The sound represented by the sigh *Och* in 3 *p*, is found in Scotch *loch*, Irish *Och!* and German *dach*. Its short cognate is found in German *Tage*. This sound formerly belonged to such words as *through*, *though*, etc., in English; and it is still extant in Gaelic: 3. The cognate of *y* is found in German *China* or *ich* and is a harder sound than *y* in *year*. Its sign is shown in 2 *i*: 4. The German and Swedish *z* has the sound of English *ts*; the Italian *z* sounds like English *dz* and *zz* like *ts*. The Hungarian *cz* sounds like English *ts*. All these sounds are represented by using the signs for their English equivalents.

8. All mouillé or softened Palatal Consonants, as in Spanish *año*, French *famille* familye, and English *cañon* are represented by adding a *y* or *iu* sign to them as in 1 *m*: 2. The *n* in *link* represents nearly a sound found in many European languages and is represented by a halved *ny* sign as in 8 *p*.

#### FOREIGN DOUBLE VOWELS.

9. Double vowels are of very frequent occurrence in some foreign languages, and in English there are several of them. They are always represented by joining together the signs for their simple elementary sounds, viz: 1, *Oo-ah* is found in *Zouave*. The French diphthong *öi* is similar and is sounded like *w-ah* or *oo-ah* as in *Möi*. They are represented as in 7 *e*: 2. Short *i* in *it* is joined with its

small circle sign as *ee-i* in being, *ay-i* in clayey, *au-i* in Caughey, *oh-i* in owing, *oo-i* in Louis, long *ie-i* in eyeing, *oy-i* in coying, *ou-i* in bowing, *iu-i* spewing, *i-u* in plenteous: 3, Other combinations of double vowels are found as long *ie-u* in pious, *oh-e* in owed, *ay-eu* in player, long *ie-eu* in dyer, *ou-eu* in shower, *oh-eu* in sower: 3, Another numerous class are represented in some languages by joining short *uu* in *put* to other signs, thus: *Ee-uu*, *i-uu*, *ay-uu*, *ai-uu*, *e-uu*, *a-uu*, *u-uu*, *ah-uu*, *aa-uu*, *au-uu*, *o-uu*, *oh-uu*, *oo-uu*, *uu-uu*, etc. This scale is extended by joining the *uu* before all other simple vowels in some languages: 4, A diphthong represented in some European languages by *ei* or *ey* is equivalent to *ay-ee*. All possible diphthongs are represented by joining together the signs for their simple elements.

10. The *w* in German and some other languages, is nearly like English *v* uttered by the lips alone or without the aid of the teeth, as in *Quelle*. The Spanish *b* is also nearly like our *v* and is formed by bringing the lips loosely in contact with each other. It is often interchanged, as in *Cordoba* for *Cordova*, etc. The cognate of this sound is found in Greek, and in Latin *ph*. These sounds are written with *v* and *f* as in 3 *h* and 4 *h*.

#### DIAMOND POINT SIGNS.

11. The Diamond point signs are added to other signs, to indicate, Gutturization, Palatalization, Dentalization or Labialization of sounds, viz: 1, In Sanskrit we find, besides the ordinary dentals *t*, *th*, *d*, etc., the linguals or cacuminals (cerebrals,) represented by *t'*, *th'*, *d'*, etc. They may properly be represented by adding Palatal Diamond point 3 *s* or 4 *s* to them as in 7 *h* and 8 *h*: 2, In Arabic we find, besides the ordinary dentals, another set of linguals called the "Semitic" or Arabic Gutturizations, which are represented by the Diamond point in 1 *r* or 2 *r*. The Arabic voiced *Ain* in 3 *r* and its cognate *Hha* in 4 *r* are examples of this class of sounds. According to Max Müller they are between the *Och* and *Ich* and the deep guttural *r* of the Low Saxons and the French Provencal trilled *r*. 3, The dental *t* found in Spanish and some other languages, and the dorsal *t* of Bohemia, may both be represented by the Diamond point in 5 *s* and 6 *s*, as shown in 8 *k*: 4, The Diamond point in 7 *s* and 8 *s*, may be used to express Labialization of sounds when necessary.

12. The peculiar African or Zulu Kafir clicks are represented as in 3 *n* and 4 *n*.

13. All modifiers for Trills, Clicks, Aspirations, Nasalizations, Guturalizations, Palatalizations, Dentalizations, and Labializations of sounds, are joined after signs in *script*; but in *print*, these letters are kept independent, and are inserted after the sign to which they belong. It has not been thought necessary to give illustrations of these print letters as used—the script sigus have only been given as in 5 *n*, etc.

14. The Typographical punctuation marks, used in the ordinary print, are also used with the Mathematical Alphabet with the following exceptions, viz: Hyphen or Dash as in 2 *m*: Ellipsis as in 3 *m*: Parenthesis as in 1 *k*.

NOTE.—We have consulted the writings of the following persons in the preparation of this work, viz: Max Müller, Prof. Whitney, Prof. March, Prof. Philbrick, Prof. Bell, Isaac Pitman, Ben. Pitman, S. P. Andrews, James E. Munson, D. P. Lindsley, E. C. Hoyt, Noah Webster, L. L. D., and others. The Engravings in Lesson X were executed by E. B. Parke of Chicago, Ill.

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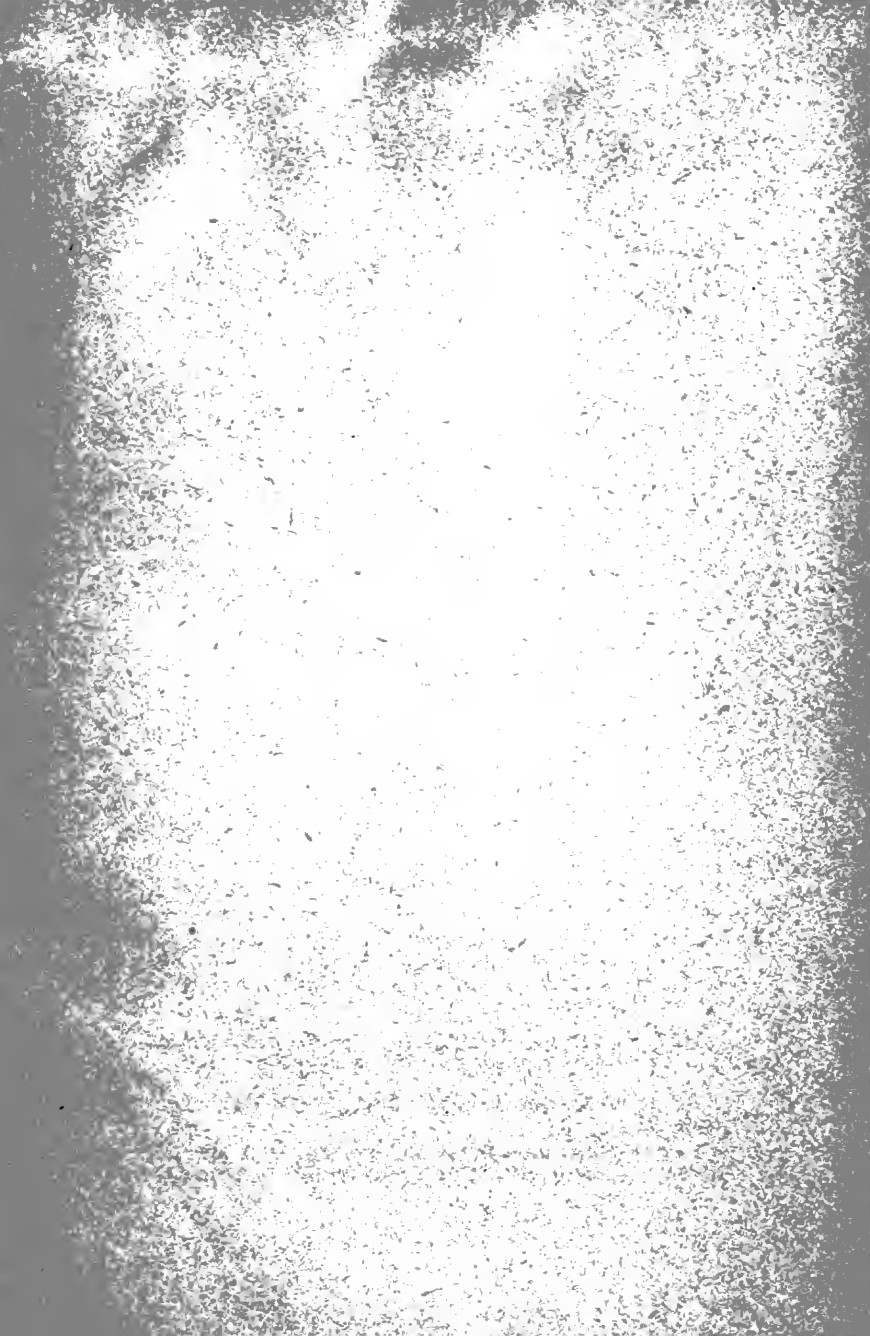
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