

## ASSIMILATIVE MEMORY.

### FUNDAMENTAL PRINCIPLES.

WHAT is the basic principle of my system? It is, *Learn by Thinking*. What is *Attention*? It is the will directing the activity of the *intellect* into some particular channel *and keeping it there*. It is the opposite of mind-wandering. What is thinking? It consists in *finding relations* between the objects of thought with an *immediate awareness* of those relations.

What is the Sensuous memory? It is association through the eye or ear of a *succession* of sights or sounds without any reflection or consideration of the units of the succession, or what they stand for, or represent. It is learning by *rote*—mere repetition—mere brainless or thoughtless repetition—a mode of learning that is not lasting—and always causes or promotes mind-wandering.

What is Assimilative memory? It is the *habit* of so *receiving* and *absorbing* impressions or ideas that they or their representatives shall be *ready for revival or recall whenever wanted*. It is learning through relations—by thinking—from grasping the ideas or thoughts—the meaning and the comprehension of the subject matter. This mode of learning promotes attention and prevents mind-wandering.

What are the two stages of the Memory? Let me illustrate: Last week, month, or year you saw a military procession pass along the streets. Note how your mind was affected. Into your eyes went impressions as to the



number composing the procession, their style of costume or dress, the orderliness or otherwise of their march, the shape and form of the musical instruments in the hands of the band, and the appearance of the officer in charge on horseback. Into your ears went impressions of the sound of the tramp and tread of the soldiers, the tune played by the band, and any commands uttered by the officer. These impressions commingling in your brain made up your experience of the passing of the procession—your first and only experience of it at *that* time. I call this the First Stage of the Memory—the stage of the *First Impression*, which is always the precursor of the Second Stage.

What is the Second Stage of the Memory? This moment you recall what? Not the procession itself; for it is no longer in existence. You saw and heard it then, but you do not see or hear it now. You only recall the impression left upon your mind by the procession. A ray of Consciousness is passed over that impression and you re-read it, you re-awaken the record. This is the Second Stage of the Memory—the *revival* of the previous experience—the recall to consciousness of the First Impression. The First Impression with no power to revive it afterward, gives no memory. However great the power of Revival, there is no memory unless there was a First Impression. There are three conditions of memory—(1) Impression. (2) Its Preservation. (3) Its Revival. We are mainly concerned here with the Impression and its Revival.

There are (*five*) kinds of memories rising from the natural aptitudes of different individuals—(1) First Impressions are apt to be feeble and the power to revive them weak—a poor memory. (2) First Impressions are usually weak but the power to revive them is strong—still a poor memory. (3) First Impressions are usually vivid but the power to revive them is weak—a poor memory. (4) First Impressions on all subjects are strong and the power to revive them is strong—a first-class memory. (5) First Impressions in some particulars are very strong and the reviving power in regard to them is very strong—a good memory for these particulars, or a memory good for mathe-

matics, or music, or faces, or reciting, or languages, &c., but usually weak in most other respects.

SINCE WE ARE TO LEARN BY THINKING WE MUST AT THE OUTSET LEARN THE DEFINITION OF THE THREE LAWS OF THINKING.

### THREE LAWS OF MEMORY OR OF THINKING.

*The first and principal thing the pupil requires to do in this lesson after learning the definition of the following Three Laws—is to be able to clearly understand the examples under each Law, and whether they verify or illustrate that Law.*

- I. INCLUSION indicates that there is an *overlapping* of *meaning* between two words, or that there is a *prominent idea* or *sound* that belongs to both alike, or that a similar fact or property belongs to two events or things as, to enumerate a few classes:—
- WHOLE AND PART.—(Earth, Poles.) (Ship, Rudder.) (Forest, Trees.) (Air, Oxygen.) (House, Parlor.) (Clock, Pendulum.) (Knife, Blade.) (India, Punjab.) (14, 7.) (24, 12.)
- GENUS AND SPECIES.—(Animal, Man.) (Plant, Thyme.) (Fish, Salmon.) (Tree, Oak.) (Game, Pheasant.) (Dog, Retriever.) (Universal Evolution, Natural Selection.) (Silver Lining, Relief of Lucknow.) (Empress Queen, Victoria.) (Money, Cash.)
- ABSTRACT AND CONCRETE.—[The same Quality appears both in the Adjective and in the Substantive.]—(Dough, Soft.) (Empty, Drum.) (Lion, Strong.) (Eagle, Swift.) (Courage, Hero.) (Glass, Smoothness.) (Gold, Ductility.) (Sunshine, Light.) (Fire, Warmth.)
- SIMILARITY OF SOUND.—(Emperor, Empty.) (Salvation, Salamander.) (Hallelujah, Hallucination.) (Cat, Catastrophe.) (Top, Topsy.) [Inclusion by sound is not punning.]
- SIMPLE INCLUSION embraces cases not found in either of the foregoing classes, but where there is *something in common* between the pairs, as (Church, Temple.) (Pocket, Black Hole.)



II. **EXCLUSION** means *Antithesis*. One word excludes the other, or both words relate to one and the same thing, but occupy opposite positions in regard to it, as (Riches, Poverty.) (Hot, Cold.) (Old, Young.) (Damp, Dry.) (Life, Death.) (Love, Hate.) (Joy, Sorrow.) (Courage, Cowardice.) (Health, Sickness.) (Righteous, Wicked.) (Beauty, Ugliness.) (Peace, War.)

III. **CONCURRENCE** is the sequence or co-existence of impressions or ideas that have been either accidentally or causally together.—It is either the accidental conjunction of experiences or the operation of cause and effect; since even in the latter case, it is merely the sensuous facts of immediate succession that we know about, as (Gravitation, Newton, Apple.) (Dives, Lazarus, Abraham, Bosom.) (Pipe, Tobacco.) (Michaelmas, Goose.) (Columbus, America.) (Bartholomew Diaz, Cape of Good Hope.) (Grandmother, Knitting.) (Socrates, Hemlock.) (Bruce, Spider.) (Nelson, Trafalgar.) (Demosthenes, Seashore, Stammering, Pebbles.) (Job, Patience.) (Wedding, Slippers, Cake.) (Wellington, Bonaparte, Waterloo.) (Depression, Fall of Silver.) (Lightning, Thunder.)

[In the case of the following pairs, one word has been so often appropriated to the other, that there seems to be something in common in the meaning of the terms—but it is not so, they are mere cases of Concurrence, but of almost indissoluble Concurrence. For instance, a man might examine a "spade" in all its parts and might even make one after a model, and not even know what "dig" means. The mention of "dig" is as likely to make us think of pickaxe as of spade. "Spade" does not mean "dig," nor does "dig" mean spade. "Dig" merely means the *action* of the "spade," or the *use* to which it is put. Hence this pair of words does not furnish an example of Inclusion. But as "dig" is frequently appropriated to "spade"—as we have often thought of those words together—this is a case of strong Concurrence. The term "swoop" is almost

exclusively applied to "eagle." A certain action or movement of the eagle is termed swooping. But "eagle" does not mean "swoop," nor does "swoop" mean "eagle." We always think of "eagle" when we think of "swoop," but we do not often think of "swoop" when we think of "eagle." It is not In, but Con.

(Spade, Dig.) (Razor, Shaving.) (Coffin, Burial.) (Chair, Sitting.) (Scythe, Cut.) (Sword, Wound.) (Pen, Write.) (Ears, Hearing.) (Road, Travel.) (Food, Eating.) (Paper, Write.) (Wine, Drink.) (Worm, Crawl.) (Bird, Fly.) (Eagle, Swoop.) (Hawk, Hover.) (Ram, Butt.) (Teeth, Gnash.) (Wheel, Turn.)



## THE BRAIN TONIC EFFECT OF THE LAWS OF MEMORY RIGHTLY APPLIED.

### FIRST LAW OF MEMORY.

**Building.** } In. by G. & S. If we examine the *meaning*  
**Dwelling.** } of these **two** words—Build-  
ing and Dwelling, we find  
that both indicate *structures made by man*. This idea is  
*common* to both. Now when we find that two words  
express the same thought, either completely or partially,  
we say that it is a case of Inclusion, because the pair of  
words contains or includes the same idea. Inclusion is the  
first law of memory.

There are several kinds of Inclusion. What variety  
have we here? Let us see. Building applies to many  
kinds of structures; *house, stable, church, depot, store*, etc.  
It is applicable to all of these in a general way, but it  
designates none of them. But dwelling means a *special*  
kind of structure—a *building occupied by man*—a place to  
live in. This pair of words therefore illustrates Inclusion  
by Genus and Species, indicated by the abridgement, In.  
G. & S. or simply by In. Other examples: "Planet,  
Mars;" "Mountain, Vesuvius;" "River, Mississippi;"  
"Building Material, Potsdam Sandstone;" "Fruit,  
Peaches."

We may for convenience include in this class, cases of  
the Genus and the *Individual* as "Man and George Wash-  
ington;" "Judge, Hon. John Gibson;" "New Yorker,  
Hon. W. W. Astor;" and cases of Species and the Indi-  
vidual, as, "Frenchman and Guizot;" "American, Abra-  
ham Lincoln." And also Co-equal Species under a  
common Genus, as under "Receiver" we may include "Can"

and "Bin"—under carnivorous birds we may include the  
Eagle and the Hawk. "Head-Covering, Hat, Cap;"  
"Hand-covering, Gloves, Mittens;" "Foot-covering,  
Boot, Shoe."

**Dwelling.** } *Inhabitability by man* is  
**House.** } Synonymous In. the thought common to  
both of these words. Be-  
ing *nearly alike* in meaning, we call them a case of  
Synonymous Inclusion, indicated by "Syn. In." Other  
cases: "Near, Close to;" "Likeness, Resemblance;"  
"Lift, Raise;" "Meaning, Signification;" "John, Jack;"  
"James, Jim;" "Elizabeth, Bessy;" "Margaret, Maggy;"  
"Gertrude, Gertie;" "Ellen, Nellie."

**House.** } Another case of In-  
**Parlor.** } In. by Whole & Part. clusion. House is the  
whole containing as it  
does the *parlor, dining-room, kitchen, bedroom*, etc. Parlor  
is a *part* of the whole house. Hence this pair of words  
illustrates Inclusion by Whole & Part designated by In.  
W. & P., or merely by In. We may include in this class  
for convenience *the material and the product* as "Bureau,  
Oak;" "Tower, Brick;" "Harness, Leather." Other  
cases: "Wagon, Wheel;" "Razor, Blade;" "Table,  
Legs;" "United States of North America, New York."  
"State, County;" "City, Street;" "Bird, Feathers;"  
"Year, Month;" "Week, Sunday;" "Engine, Boiler;"  
"100, 50;" "10, 5," &c.

**PARlor.** } Here we see that there is  
**PARtridge.** } In. by S. & s. nothing in common in the  
*meaning* of the words, but  
there is the syllable "Par" belonging to both alike. It is  
the same in *spelling* in both words, and virtually the same  
in *pronunciation*, the same by Sight and by sound, repre-  
sented by In. by capital S for In. by sight, and In. by small  
s for In. by sound, or merely by In. Examples: "Nice,  
Gneiss;" "Pole, Polarity;" "Popular, Popgun;" "Jef-  
ferson, Madison."

**Partridge.** } Partridge is the name of  
**Feathers.** } In. by W. & P. the bird and feathers con-  
stitute *part* of the Par-  
tridge. Other cases: "Coat, Buttons;" "Elephant,



Trunk ; " Bottle, Neck ; " " Pen, Nib ; " " South Africa, Cape Colony."

Feathers. } Feathers are *things* per-  
Light. } ceived by touch and sight.  
They imply the quality of  
*lightness*, but say nothing about that quality. Light has  
several meanings. Here taken in connection with feathers,  
it means nearly destitute of weight, or the quality of light-  
ness. It is an abstract term that describes an attribute,  
but feathers are things and therefore concrete. Hence the  
pair of words illustrate Inclusion by Abstract and Concrete,  
and is indicated by In. by A. and C., or merely by In.  
Other examples : " Sour, Vinegar ; " " Sweet, Sugar ; "  
" Coward, Fear ; " " Swift, Express train," &c.

LIGHT. } As before remarked,  
LIGHTerman. } In. by S. & s. " Light " has several  
meanings. Here it  
means that which *enables us to see*. " Lighterman " is the  
man who works upon a boat called a " Lighter." There is  
nothing in common in the meaning of this pair of words,  
but the word or syllable " Light " belongs to both alike.  
It is In. by Sight and sound. Other cases : " Dark, Dark-  
ness ; " " Starch, March ; " " Rage, Forage ; " " Barber,  
Barbarism," &c.

LighterMAN. } Here the word or syl-  
Lord MANSfield. } In by S. lable " man " appears in  
both cases. In the for-  
mer it signifies the man that manages a Lighter, and in the  
latter it was primitively connected with Field, as " A Man's  
Field." After a time it became Mansfield. It is a perfect  
case of In. by S. and s. Other cases : " Tempest, Tem-  
perature ; " " Antepenult, Antediluvians."

Lord MansFIELD. } As " Field " be-  
FIELDhand. } In by S. & s. longs to both  
words, it is a case  
of perfect In. by S. and s. Other cases : " Regiment,  
Compliment ; " " Sell, Selfish ; " " Miniature, Mint," &c.

Now let the pupil read over very thoughtfully the ten  
words just examined, and *recall* the *relation* which we  
found to exist between every pair of them.

Building.  
Dwelling.  
House.  
Parlor.  
Partridge.  
Feathers.  
Light.  
Lighterman.  
Lord Mansfield.  
Fieldhand.

Having finished the reading, let the pupil close the les-  
son, or put it out of sight and endeavour to recall the ten  
words from Building to Fieldhand from memory. He will  
find no difficulty in doing so. He learned the series by  
heart without any suspicion that he was committing it to  
memory.

Now let him realise how he did this. It was because he  
made use of the cementing Laws of the Memory. He  
sought out and found the relations between the words.  
By *thinking* of those relations, he *exercised* his intellect on  
those words in a double way—the *meaning* and the *sound*  
of the words were considered and then the *similarities* of  
meaning and of sound were noticed. A vivid *First Impres-  
sion* was thus received from the words themselves and  
from the relations between them and an easy and certain  
recall thereby assured.

Now *recall* the series in an inverse order, beginning with  
" Fieldhand," and going back to " Building." You do it  
easily, because each word was cemented to its predecessor  
and its successor, and hence it makes no difference whether  
you go forward or backward. When, however, you learn  
by *rote* you know the task as you learned it, and not in the  
reverse way. Before proceeding, repeat the ten words  
from memory, from " Building " to " Fieldhand," and the  
reverse way, at least five times; each time, if possible,  
more rapidly than before. These repetitions are not to  
*learn* the series; for this has been done already, but it is  
to consolidate the effect of learning it in the right way.



## SECOND LAW OF MEMORY.

**Fieldhand.** } Ex. A fieldhand is a labourer who  
**Millionnaire.** } lives by the sweat of his brow, and  
 eats not what he does not earn. A  
 Millionnaire is at the opposite pole, and can have a super-  
 abundance of all things. It is a case of opposition.  
*Where two ideas pertain to one and the same idea, but occupy  
 opposite relations in regard to it, it is a case of Exclusion.*  
 The means of subsistence is the common idea and Field-  
 hand and Millionnaire occupy opposite positions in respect  
 to that idea. Other examples: "Upper, Under;"  
 "Above, Beneath;" "Before, After;" "Entrance, Exit;"  
 "Appear, Vanish;" "Cheap, Dear;" "Empty, Full;"  
 "Col. Ingersoll, Talmage;" "Washington, Arnold;"  
 "Minnehaha, Minneboohoo."

**Millionnaire.** } Here is opposition between mil-  
**Pauper.** } lionnaire and pauper. It is a case  
 of Ex. Other examples: "Super-  
 fluity, Scarcity;" "Fertile, Barren;" "Sorrow, Happi-  
 ness;" "Straight, Crooked;" "Irregular, Circle;"  
 "Prompt, Tardy;" "Liberal, Stingy;" "Wide, Narrow;"  
 "Open, Shut;" "Inclusion, Exclusion;" "Beginning,  
 End;" "Industry, Idleness;" "Addition, Subtraction;"  
 "Infernal, Celestial;" "Cellar, Garret;" "Miser, Spend-  
 thrift;" "Assimilation, Learning by rote," &c.

**Pauper.** } Here is the extreme of opposition.  
**Wealth.** } Ex. The state or condition of destitution of  
 the pauper is contrasted with the state or  
 condition of being over supplied. Other examples:  
 "Insufficient, Enough;" "Work, Play;" "Crying,  
 Laughing;" "Awkward, Graceful;" "In, Out;" "East,  
 West;" "North, South;" "Saint, Sinner;" "Fast,  
 Slow," &c.

**WEALTH.** } If "Wealth"  
**CommonWEALTH.** } In. by S. & s. is taken as  
 "Private" or in-  
 dividual, and "Commonwealth" be taken in its derivative  
 sense, as "wealth in common," or, the "public wealth,"

then this would be a case of Exclusion. If "Wealth" is  
 taken as the condition of great abundance, and "Common-  
 wealth" as the political body, known as a State, then this  
 is a case of Inclusion by sight, or by sound, the word  
 "wealth" belonging to both alike.

**COMMONwealth.** } Considering "Common"  
**UNcommon.** } Ex. in relation with "Uncom-  
 mon" we have Exclusion.

In the previous pair, we used wealth of commonwealth to  
 make a relation with the simple word wealth. Here we  
 use the first two syllables of the word to contrast with  
*uncommon.*

**Uncommon.** } These words are nearly  
**Rare.** } Syn. Inclusion. *alike in meaning.* Other  
 examples: "Choice,  
 Preference;" "Resolute, Determined;" "Economical,  
 Frugal;" "Ugly, Ill-looking;" "Insane, Mad;" "Lie,  
 Untruth;" "Reliable, Trustworthy;" "Air, Atmosphere;"  
 "Resident, Dweller," etc.

**Rare.** } This pair requires careful notice.  
**Well done.** } Ex. "Rare" with reference to "Uncom-  
 mon" means *unusual, seldom met, or  
 unfrequent*; but considered in reference to "well done," it  
 means *partially cooked or underdone*. This, then, is a clear  
 case of Exclusion. Other examples: "Men whose heads  
 do grow beneath their shoulders, and men whose shoulders  
 do grow beneath their heads;" "Cushion, Mule's Hoof;"  
 "Ungoverned, Henpecked;" "Bed of Ease, Hornet's  
 Nest;" "Waltz, Breakdown."

**Well done.** } A clear case of Exclusion. They  
**Badly done.** } Ex. are both "done," but one is done  
 "well," and the other "badly done,"  
 or the opposite of well.

**Badly done.** } A relation is sometimes found  
**Good.** } Ex. between one word and a part of an-  
 other word or phrase. Here "Bad"  
 is the opposite of "Good."

**Good.** } "Good" covers all  
**Good Princess.** } In. by G. & S. cases, whatsoever, of  
 its kind, but "Good  
 Princess" is a particular kind of species of good things or



persons. Examples : "Snake, Copperhead ;" "Spider, Tarantula ;" "Horse, Dray horse," etc.

Now carefully read over the eleven words, and *recall* or ascertain the relations between them :

Fieldhand.  
Millionnaire.  
Pauper.  
Wealth.  
Commonwealth.  
Uncommon.  
Rare.  
Well done.  
Badly done.  
Good.  
Good Princess.

When you have *carefully realised the relations* between these words, lay aside the lesson and recall the entire series from memory, proceeding from Fieldhand to Good Princess, and back from Good Princess to Fieldhand. Do this five times—*each time from memory and more rapidly than before.*

Again, repeat from memory, at least five times, the series from Building to Good Princess, and back from Good Princess to Building, reciting as fast as possible each time.

### THIRD AND LAST LAW OF MEMORY.

**Good Princess.** } In. & Con. has little meaning. It is  
**Pocahontas.** } usually a mere *sound* to which the person that bears it answers as the dog responds to the name "Carlo." It is a sound which we call a name, and which we apply to one person to distinguish that person from all others, as in this case Pocahontas is used to distinguish the daughter of Powhattan from all other Indian women. She knew who was meant when that name was applied to her. But the name Pocahontas does not indicate that she was wise or unwise, learned or unlearned, tall or short, old or young. In saving the life of Capt. John Smith she became entitled to be called a "*Good Princess.*"

In this case it would be In. by G. & S. We have heard of all this, and now when we think of Pocahontas, we are apt to remember that she was a good Princess for saving Smith's life. The connection between these words I call Concurrence. We have thought of these words together, and the mind by its own operation has cemented them together, so that when we think of one it is apt to make us remember the other. *Concurrence means that which has been accidentally, or as cause and effect, conjoined in our experience.* Between the words or ideas thus conjoined, there is, strictly speaking, neither Inclusion or Exclusion. Whenever there are unrelated things which the mind holds together simply because it has occupied itself with them, then we have a case of concurrence to be represented by Con. Other examples : "Harrison, Tippecanoe ;" "Columbus, America ;" "Washington, Cherry Tree ;" "Andrew Jackson, To the Victors belong the Spoils ;" "Newton, Gravitation ;" "Garfield, Guiteau ;" "Gladstone, Home Rule," &c.

**Pocahontas.** } We have read the story of  
**Capt. John Smith.** } Con. the rescue of Smith by Pocahontas. We have *thought of these names together* and they have united in our memories by the Law of Concurrence. When we recall the name of Pocahontas, we are apt to revive also the name of Capt. John Smith and *vice versa.* Another case :—A gentleman was present at Ford's Theatre in Washington when John Wilkes Booth shot Abraham Lincoln. Just a moment before, he recognised the odour of a hyacinth held by a lady in front of him. The next moment he heard the fatal shot, and turning whence the report came, he saw the murderous result. After the lapse of a quarter of a century, he could not smell, see, or think of hyacinth without at once thinking of that scene, nor could Lincoln's assassination be mentioned in his presence without his instantly thinking of hyacinth. Nothing could have been more purely *accidental* than the quick succession of the sensation of the odour and the murder of the President. But they were *experienced together* or nearly together. They became cemented together, so that the revival of one is apt to call up the other, and this is concurrence.



**Capt. John Smith.** } Con. A proper name may be also  
**Anvil.** } used in other relations. The  
 word, sound, or name Smith  
 may also be a general term applicable to many classes of  
 persons, as *coppersmith, goldsmith, silversmith, &c.* When  
 we think of *Capt. John Smith* we use the word as a proper  
 name. But when we think of Smith and Anvil we use the  
 word Smith in its general sense. In either case it is an  
 act of Concurrence. Smiths use anvils. We have thought  
 of these words together, and that mental act has had a  
 tendency to unite them together.

**Anvil.** } In. by A. & C. Anvil is a *concrete thing* that  
**Heavy.** } possesses the attribute heaviness ; and heavy is an abstract  
 term that applies to heavy things, but does not state what  
 they are. The idea or thought of heaviness is *common* to  
 both words, and therefore it is a case of In., and as one  
 term is concrete and the other abstract, it is a case of In.  
 by A. & C.

**Heavy.** } Things are heavy that press  
**Gravitation.** } Con. toward the earth, in consequence of  
 the action of gravity in their case.  
 Gravitation, whatever that is, is what makes them tend  
 toward the earth. We may say it is a Cause, and as we  
 think of Cause producing Effect, and Effect as produced  
 by Cause, such cases are *thought of together*, or almost  
 simultaneously, and hence we have a case of Concurrence.

**Gravitation.** } There is no In. or Ex.  
**Sir Isaac Newton.** } Con. here, but Con. We have  
 read or heard that Newton  
 discovered the Law of Gravitation. We have exercised  
 our minds in regard to these two words, in thinking of  
 them together, and that is concurrence.

**Sir Isaac Newton.** } Newton went out of his  
**"Diamond."** } Con. library on one occasion, leav-  
 ing his pet dog "Diamond"  
 in the room. The dog jumped up on to the table, over-  
 turned the light, which set fire to most valuable manuscripts.  
 They burned up. When Newton returned and discovered  
 what his pet had done, he exclaimed, "O ! Diamond,  
 Diamond, thou little knowest what thou hast done." The

name Diamond becomes thus vividly associated in our  
 minds with the forbearance of the great Newton. We  
 cannot forget it. We hold them together hereafter by Con.

**Diamond.** } In. by s. A plain case of Inclusion by  
**Dying.** } sound.

**Dying.** } We know that cholera *causes* numer-  
**Cholera.** } Con. ous deaths ; that people die in great  
 numbers wherever it prevails.

**Cholera.** } Concurrence includes all cases of  
**Terror.** } Con. Cause and Effect, Instrument or Means  
 to End, Person by whom or Thing by  
 which, &c. Cholera causes terror. Terror is the *effect* of  
 the existence of the cholera. Now carefully read over the  
 eleven words just considered, and think out the relations  
 between them.

Good Princess.  
 Pocahontas.  
 Capt. John Smith.  
 Anvil.  
 Heavy.  
 Gravitation.  
 Sir Isaac Newton.  
 "Diamond."  
 Dying.  
 Cholera.  
 Terror.

Now recite them from memory at least five times forward  
 and backward, and then recite the entire thirty words from  
 Building to Terror, and from Terror to Building, the same  
 number of times.

For further training, let each pupil recite the foregoing  
 series of thirty words forward and backward two or three  
 times per day for an entire month. He need not stop fur-  
 ther study, but whatever else he learns let him at least  
 practise this daily recital for one month.

#### REMARKS ON THE THREE LAWS.

1. Since words have different meanings, we may some-  
 times find that a pair of words exemplify all three Laws, as  
 plough and sword. The relation between them may be In.,