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THE MAINE NORMAL.

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JANUARY, 1868.

NO. 1.

NEW YEAR'S CAROL.

BY M. S. S.

Whisper, whisper, creeping breeze ;
Listen, listen, forest trees,
There is music in the air,
Hark! how it swells :
Floating soft and low and fair—
Ring, bonny bells!

Glitter, star-lights, to and fro ;
Catch the sparkle, crystal snow !
There is beauty on the earth,
Look! how it lies.
Gleams of glory, notes of mirth
Joyously rise.

Christmas garlands strew the way,
Laurel, pine and holly gay ;
Glad hosannas sweep along,
Still far and wide.
Add another wreath and song,
Joined side by side.

Glimmer, glimmer, hearth-fires bright ;
Household hearts beat warm and light ;
So let sun or storm prevail,
Peace will be near ;
And the old wish cannot fail—
Happy New Year !

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is the great trouble. If the teacher takes special charge of them, and maintains the same order and decorum as in the day school, much good may be derived from them, but if they are made only a resort for the scholars and young people of the district for amusement and a "place to go to," as the saying is, then the effect upon the scholars, will be for evil.

There is much more to be said upon this question of evening schools, but my sheet is full. I would like very much to hear from some of you upon this and other points to which I have referred in these letters. Your experience already must be fruitful of much that would be interesting and profitable.

Yours truly,

GEO. E. BRACKETT.

WRITERS OF TEXT-BOOKS FOR OUR COMMON SCHOOLS.

It may be a craze of mine, but I am firmly of the opinion that nearly all of the text-books now used in the common schools of Maine merit the blazing fagot. Though there is not enough of the Promethean spark about them to kindle a fire, yet they are so wooden and dry I imagine they would readily burn when once thrown into the flames. No better fire could be kindled in the wide Sunrise State, than a fire which should utterly consume these text-books with their seven-fold abominations. They are annually costing our people millions of money in the squandered time, energy and lives of the young; while they stand, like giants of despair, in the way of unmeasurable happiness which the young might otherwise enjoy during their common-school days.

The truth of this broad declaration I am sure will be acknowledged by very many without debate. They have seen enough, they have meditated enough at once to recognize its truth. For the purpose of convincing those of opposite mind I will not now enter into an argument, but will proceed briefly to consider a few general qualifications which every writer of text-books for common schools should possess.

1st. The writer of such text-books should have a clear comprehension of the natural order in which the human mind unfolds through childhood and youth to maturity. No darkness, no doubt can be, for a moment, tolerated here. To this natural order of intellectual development every

text-book should scrupulously conform. Does the mind at one time prefer facts to reasons; then give it the facts. At another time does it prefer reasons to facts; then give it the reasons. Does the mind at one time prefer the concrete to the abstract; then give it the concrete,—but the abstract only when you must, or when it is demanded in the order of nature. In the department of the imagination does the mind, at one time, prefer the broad and grotesque; then give it the broad and grotesque. At another time does it prefer the subtle and delicate; then follow nature and give it the subtle and delicate. By this I do not mean that the mind can be divided into clear-cut chronological divisions, for this is quite impossible; but I do mean that there are distinctive seasons of intellectual growth, running gradually into each other like the seasons of the year. To these seasons text-books should be carefully, wisely adapted. He who is ignorant of these distinctive seasons, with their requirements, in the growth and activity of the imagination, of the memory and of the reason, lacks one fundamental qualification of a writer of text-books for common schools.

2nd. The writer of text-books for common schools should have a clear comprehension of what studies ought to be pursued and how much of each reasonably attempted in those schools—especially below the high school, since the school-days of very few extend so far as to include that grade. His standard should not be simply ideal, but a practical standard, as near the ideal as the times will admit. With such a guide, which may be readily found in the lives led by the great body of citizens—in their everyday wants—the writer of text-books will be kept from cumbersome results. He will avoid all unimportant facts; he will shun all multiplicity of trivial reasons; he will devote himself to those things of absolute necessity and greatest worth. In a word, his chief endeavor will be to make the text-books, for any given department, few and small as possible, that all other needful things may find a place in the common-school curriculum. But the very opposite course now appears to be pursued by most writers of text-books. Hence we have a voluminosity of books, and a multiplicity of details, which are truly horrible to contemplate. With all the additional time and effort devoted to common-school education, there is gained no place for new studies below the high school. Only the old studies have been rendered more complex, without profit, and run into worthless, disgusting details. For this the writers of text-books are not indeed altogether responsible; yet it is evident very few of them have had in view any just and rational standard of common school education.

3d. The writer of text-books for our common-schools should be an accomplished writer of the English language. He should know the force

and clear-cut meaning of words; for him the graces of style should be something more than mere rhetorical definitions. His books should not only be right in principle and method, but in language they should be things of beauty. We cannot afford to omit anything which will better fit our text-books for their great work in the common schools. Yet in point of style, a very large portion of our present books are shockingly defective—are semi-barbaric! If we have not practical teachers who can write with suitable clearness of statement and a commendable degree of grace, let us call upon Holmes or Longfellow, upon an Everett or a Story. The writing of text-books for our common schools should not be beneath the dignity of any man. How much of grace, no less than clearness of statement, may be put even into a text-book for geometry, has been shown by President Hill, of Harvard University. In his algebras, Prof. Smythe, of Bowdoin College, has given us an example of crystal statement worthy of imitation. There is, indeed, such a thing as high art in the composition of text-books for common schools, though one would hardly suspect it, seeing we have had so much of low art during the last twenty years. Nor is this high art of trivial, but of vital importance.

I have now enumerated three fundamental qualifications which should be possessed by every writer of text-books for our common schools. Whoever lacks these qualifications is not fit for this responsible duty. But how shall we secure text-books from the right men? This I will endeavor to answer in another article.

C. B. STETSON.

Auburn, Dec. 13, 1867.

SCHOOLS AND SCHOOL MASTERS OF THE OLDEN TIME.

PART II.

MR. EDITOR: A letter from Hon. William Thomas of Plymouth, Mass., in reply to my inquiry on the subject of early schools in the Old Colony, encloses an extract from a journal, kept by Mr. Josiah Cotton who taught a school in Plymouth, soon after the commencement of the last century; and although it relates to a period, a hundred years earlier than that to which my article specially refers, yet as an item of historical information, it may not be an uninteresting relic to the antiquarian reader.

My informant thinks that this account of school keeping, is probably a fair sample of that department, in the New England colonies. Mr Cotton in his journal, says, "The first business I entered upon, after taking my degree, was keeping school at Marblehead, to which I had an invitation, Oct. 17, 1698. I settled at fifteen pounds, per annum, salary from the town, and six pence and a groat (in the whole not far from 16 cents) a week, according to their learning, for each scholar. I had in the space of a year, about 73 scholars, and my income was near fifty pounds per annum, in silver money, a considerable sum in those times for keeping school. After coming from Marblehead, I was invited to teach in Portsmouth on the Piscataqua river, the chief place in the government of New Hampshire, towards which I steered my course, but calling at Marblehead, and they remaining still destitute of a schoolmaster, I agreed with them again upon some advancement of my salary from the town, under the former regulation for particular scholar, for they would not make it a free school, and tarried half a year longer in the school, and desire to acknowledge it as a favor, that my service therein, as before, was acceptable and successful—the people there being generally, if not universally inclined to give their children common learning, though scholars rise but thin among them. There was but one indeed, that went from thence to college, whilst I kept school, and that was the minister's son, Mr. Amos Cheever, now minister of Manchester.

Having laid aside the ministry, I accepted an invitation to keep school in Plymouth, where I drew my first breath, and probably may my last. I began to keep school in Plymouth Nov. 1, 1705, at 40 pounds per annum, in the house where I was born, the town not having any schoolhouse built, till the second year after my keeping school. I had commonly some scholars from other places. In this place, first and last, I kept school eight years and a half."

This Reverend and *Master* Cotton, (the last named title having in those days nearly as much reverence attached to it, as the former,) was a descendant, probably, of the Rev. John Cotton, one of the earliest, and most famous of the ministers of Boston. Josiah Cotton, probably the son of the schoolmaster, I well remember, and the house where he lived, which might have been the place of his father's residence. I had some curiosity to learn whether the schoolhouse of the Plymouth grammar school in my day, was the first one built in New England. Mr. Thomas's opinion is, that it is not probably so, but that the schoolhouse of "our days," was on the site of the first one built in that town. Mr. Thomas's remarks also help to confirm what I have before advanced, respecting several eminent

characters, of that date, as having received their education, preparatory for college, at this Institution.

Men of considerable learning were among the first settlers of the Colony, and means, the best in their power, were doubtless employed for the educational benefit of their children. In 1838, Harvard College was founded. By the direction of the general court of Massachusetts, Academies were incorporated and aided by grants of public lands, in the forests of the District of Maine. Compared with that period, how enviable is our position. Our school, though equal to the demands of advanced scholars, was intended to accommodate the families in town, with means of education for all who had arrived at the prescribed age for admission. The scholars were well drilled. Truants found no favor. We had no vacations of several weeks at a time, as is now the case. The school consisted of but one term; that was all the year round, only on the sabbath, a few holidays, election, independent, general muster, forefathers, and a short Saturday afternoon. No Wednesday afternoon, as now, came along for the weary teacher and his sympathizing pupils. I now find the old school-house gone—and very stylish and convenient accommodations in another locality, with all things pertaining thereunto, in modern style. But I am before my story.

OUR SCHOOL BOOKS.

For reading, *The Columbian Orator* stood highest. It was compiled by Caleb Bingham, Esq., bookseller, Boston. It was bound handsomely in leather,—price one dollar. *The American Preceptor*, a smaller sized volume, bound in boards, selling at 37 1-2 cents, was for the second class. It abounded in selections of prose and poetry.

Rev. Jedediah Morse, D. D., a celebrated geographer of his time, published a large work on this subject, and an abridgement, a dollar volume, for the use of schools. This was placed in the hands of select scholars for reading. Boston newspapers, twice a week, were read in school. The Bible or Testament was introduced as a reading book for beginners; although the practice is not without objection. As a religious exercise in school, for morning and evening, a portion of the scriptures should be read. I have seen such an irreverent use made of them by boys, in reading and in the handling of them, that although no Catholic, I doubt the expediency of their use as a school-book, if it can conveniently be avoided. Noah Webster prepared a work called his "Third part," containing choice selections. It was about the size of the *Preceptor*, and came into general use. *The English Reader*, compiled by Lindley Murray, contained selections in prose and poetry, from Addison, Johnson, Goldsmith, and the best

English authors, and remained for many years universally popular. Scott's Lessons, designed more particularly for school declamations, answered an excellent purpose. Rev. Asa Lyman of Portland, in 1810, issued a book called the "American Reader," consisting wholly of American authors. It never gained much circulation. Since then, numerous school-readers, have flooded the land, very good ones too; all and each in its turn, recommended to be (like our cooking stoves,) "*the best yet.*"

NOAH WEBSTER'S SPELLING BOOK.

The earliest spelling-book of my recollection, in general use, was that of Noah Webster, called his First Part. The labors of a critical and diligent man are seen in the compilation of it. Even Daniel Webster having been referred to in England as the author of Webster's Dictionary, replied that he was not equal to have produced his *Spelling book*. Noah Webster was born to rule in this department of literature. Having finished the dictionary, his grand life-work, he died,—whether of grief, that an additional word in the language could not be found for his vocabulary, or for joy, that he had lived to accomplish so benevolent a deed for mankind, I know not.

ENGLISH GRAMMAR.

I came to the study of it myself, very young, and always found it an interesting subject, although many complain of its being the reverse. Many attempts have been made since my day, to improve upon Murray, whose first appearance was in 1795. Probably, there was a measure of success attending those efforts, although as far as my acquaintance with the newer treatises extends, I should not place the original "Murray" very far behind his successors, in point of simplification and thoroughness. There may have been more of the philosophy of the science attending the latter, but I doubt whether greater proficiency was secured by the scholar, for the general purposes for which grammar is studied. A first book of grammar, was Bingham's "Young Ladies' Accidence." It was beautifully simple in its character, laying the subject open so clear to the youngest capacity, it looked good enough to study, at first sight. The scholar was furnished with just the amount of knowledge he needed from beginning, all through; without an over-burdening of the memory, and, by a natural and easy process, came to the desired result. Outline and general principles obtained, he was prepared to dip into deeper waters. Rev. J. L. Parkhurst, many years after, furnished a similar work for beginners; possessed of the same excellences.

Noah Webster's "*Second part*," as it was called, consisted of a system of grammar, which I remember to have gained some acquaintance

with, but am inclined to the opinion that it did not equal his other works. Our teacher adopted the practice both in geography and spelling, of "choosing sides," twice a week, granting to the successful party, the privilege of being dismissed half an hour before the usual time. This took admirably with us, and made us study with vigor and delight. The name of many a river and mountain boundary and capital town has stuck to our memories the faster thereby; and good spelling, that ground work, and indispensable accomplishment of scholarship, was greatly promoted.

ARITHMETIC.

The principal text-book in Arithmetic, was then Pike's; Master Nicholas Pike of Newburyport. Mental arithmetic was not taught in school. The use of slate and pencil, and the manuscript for setting down the sums, when proved, was the universal method of ciphering. For many years, that practice has been abandoned, although there are arguments in favor of a clear and neat manuscript, to be preserved by the pupil. The main concern in arithmetic, is to understand well, first principles. They never change. Four times four are sixteen; nine times nine, eighty-one, and so on. The four cardinal rules remain always the same, and the Rule of Three, the golden rule forever. Arithmetics in great variety and abundance, have had their leave to reign and retire. The use of black-boards, the practice of mental arithmetic, very likely may facilitate a knowledge of the mathematics. The study is more extended now than then. Then, the boys, when their school term expired, went each his way,—each to his own pursuit. Some made blacksmiths, some manufactured barrels, others took to the sea, and gradually perhaps rose to some high position. All knew about enough of arithmetic to answer their various purposes in life. The practical use they made of their knowledge of figures, was to come, and how they succeeded therein, was to be seen.

PENMANSHIP.

Elegant penmen, the age in which I lived, furnished. Those who excelled in penmanship, were native-born such. There were many very poor writers,—no means could make them handsome writers. This art has been undervalued by the present generation. Less time and attention have been devoted to the acquisition of it, than formerly. Strange that it should be so, seeing that the present age is in possession of facilities for learning the art, which the past, had not enjoyed.

The quill should not lose its immortality of praise. The saving of time and money in substituting metallic pens, for schools and for other purposes, must be immense. For a copy and recording hand, they are

superior to any other. For pleasure, give me a good goose-quill, and a sharp penknife, and spectacles or no spectacles, a good pen shall be forth-coming. "The pen is mightier than the sword." I love to descant upon its excellences, and the wonders it performs.

See that man at his desk engaged in writing. It is a noble art. Men do not see it as they should. See from his brain, his eyes, mouth, his every feature, the rational soul flowing out. See his hand move, the ink flow,—they know nothing of it. The letters are formed, and in what quick succession,—*they* know nothing of it. The sheet is spread over with thought, all fresh from the inward springs, while more and more is gushing, all ready to succeed their fellows, to subserve some noble purpose; to bless some mourning heart; to reclaim some wayward wanderer, or to minister in some way, to the convenience or comfort of man. If we were among idolatrous nations, we should hear them saying that such a wonderful art came down from the gods! But has not our own Heavenly Father granted us the gift, and it is to deny his Providence, to counteract his will, and repudiate one of our most precious blessings, not to employ the art so sacred, and useful, to the greatest extent in our power. Think of it ye youth, when ready to refuse to prepare your "composition." Think of it ye older, when a letter from a dear friend lies long unanswered. Think of it, ye who may employ your pen for the public good.

ROUTINE.

A few years ago it was the fashion for those who talked and wrote for the edification of teachers, to cry out about the "dull monotony and the endless routine of the schoolroom." We were told about those "dreadful ruts," into which teachers were liable to fall, unless they should exert themselves to keep clear of such fatal snares.

One would sometimes think from the talk of these would-be wise ones, that the more unlike each succeeding day should be to its predecessors the better; that change should follow change, that variety should succeed

variety, that custom and habit ought *almost* to give way before confusion and disorder, lest "dull routine" should stifle mind and weary body.

A LESSON FROM NATURE.

Do these people know, that plan and method and system, are indelibly stamped upon everything we observe in nature? Does not the sun appear to rise and set in regular routine? Is there any objection to the farmer's having regularly, first the tiny blade, then the growing grain and always last of all, the "full corn in the ear?" Would not it be a little inconvenient, if Winter should so far get out of his accustomed "ruts," as to attempt to follow gentle Spring in the order of his coming? Should our philosophy square with nature, or run counter to her teachings? Is it philosophical for me to have a recitation in arithmetic at 10 o'clock in the morning? Shall I do wrong, if I conduct a writing exercise at exactly 2 o'clock P. M.? Is the mechanic who goes to his daily task at 7 A. M., who leaves it to dine at 12 M., and closes his labors at 5 P. M., and reads his newspaper an hour after supper, kisses his youngest boy at his 7 o'clock bedtime, and reads some useful or entertaining book until his own hour of retiring, in any danger of falling into any *lamentable* routine of habits?

NECESSITY OF PLAN AND METHOD.

The truth is, that plan and method and *system* if you please, are just as necessary in the management of a school, as in the management of any of the concerns of life. Some people speak of singing and gymnastic exercises, as if they were instruments to be held in reserve, to be used to arouse the school when it gets dull, tired, or sleepy. Now I have listened to as sleepy singing, and have seen as intolerably dull gymnastics, as one need aspire to, arising from want of method more than anything else.

Let there be a plan; let there be a stated time for each exercise; let the reading, spelling, singing, geography, history and gymnastics have their regular time. Let the child know what he is expected to do to-morrow, and let him be prepared to do it at the proper hour. Then let the teacher plan all his exercises so that one shall relieve the other, mingling those exercises that are recreative with those that are more laborious; prolong none to weariness or exhaustion,—and let the child anticipate every one at its exact time, and thus let recreation come as a restful change and not as a premium for laziness or dullness.

When the plan is made and the "routine" is established, let the teacher bring to each exercise all the knowledge of which he is master, all the energy that he can command and all the enthusiasm he can arouse,—and then let him say in as few plain words as can be, just what needs to be said and *no more.*

HEARING RECITATIONS.

"A mere machine,"—"A hearer of recitations," are expressions sometimes derisively uttered, and they are frequently applied to patient, honest, thorough workers. I doubt if there are many such machines employed in the schools of the present day. The teacher who does nothing but ask the printed questions of the book, *is* a machine truly, and he deserves no mercy. But when we are told, that too much time is spent in recitations, and that a great part of the recitations should be done away with, and the time employed in lectures or talks to the children, we must consider the matter a little before we assent. I think it will be universally conceded, that no one can tell fully, whether he knows a subject, until he attempts to impart his knowledge of it to another,—until he recites it. Then he finds out how much he knows and how well he knows it. So with a child, he may be taught by the words of a text-book or by the words of his teacher, but until he attempts to recite, it is not known—whether he has learned anything or not. A lecture or a talk to him may make an impression on his mind or not, it is the recitation that tests him. Therefore, I do not think that time spent in recitation, is ill-spent, provided the recitation is rightly conducted.

THREE FORMS OF HEARING RECITATIONS.

The lowest form of recitation, (I cannot believe the most common,) is the repetition, verbatim, of the words of the text-book without comment. A little better form is the answering of prepared questions which are intended to bring out the main ideas of the text.

And a third form is, for the pupil to obtain all the knowledge he can of the lesson, from whatever source he may, and come to the recitation to tell the teacher what he knows about it. Then may the teacher, by question or illustration or explanation, show him how to select and arrange his knowledge, may suggest ideas and trains of thought which had before been unnoted by the pupil. By question and answer and familiar conversation, the pupil may be drawn out and induced to think for himself, which is one great end of education.

Does some one say that such a course is only adapted to the most advanced pupils in our schools? I answer that it is the method adopted in a Primary school of which I know, composed of children of average ability, and the results are *very* satisfactory.

Let the object of the recitation be to see if the pupil is becoming possessed of correct ideas of the subject treated,—if he really knows what he thinks he knows, and he will be vastly more the gainer, than if he recited most perfectly any number of the pages of the text-book. L. P. F.

TEMPERANCE IN SCHOOLS.

In our common schools, and so far as we know in our private schools and seminaries, no special means are taken to secure the temperance education of our young men and women. We do not wish to be misunderstood; we are aware that principles of temperance and sobriety are inculcated and intemperance in all its forms is frowned upon and banished as it should be. Some may say this is all that is required and that no special means are necessary to secure thorough temperance principles. But this is doubted by many practical teachers and true friends of education.

A QUESTION ASKED AND ANSWERED.

At our late temperance convention at Lewiston, one of our leading educators and principal of a popular and successful seminary in our State, in the course of some remarks upon the subject of temperance, asked this question:—What method shall I adopt in my school to secure a more deep and permanent temperance education and to fix temperance principles more firmly in the minds of my scholars? He states that it was his custom to keep a book containing the pledge in which every pupil was invited to write his name, and that through a period of many years but few cases of intemperance had been known among those under his charge. Still he considered something more as necessary,—some special means should be employed. In answer to the gentleman, it was suggested that occasional temperance lectures would produce a good effect, and it was recommended to form temperance associations, among the pupils, such as Lodges of Good Templars, as a powerful means of interesting and enlisting them in the cause. I think well of this latter suggestion, and I am not aware that it has ever been tried in connection with any of our higher schools. One objection which some have to the Good Templars, that they are a secret society, would have no weight, as every principal seminary has one or more of such secret associations, and the beauties and advanced moral lessons contained in the workings of this noble order, would commend themselves to every true friend of temperance and morality. Faith in the Infinite, charity for our fellows, and a fixed and firm determination to be true to our pledge of total abstinence from intoxicating beverages, are the fundamental principles of the order. I would like to see Lodges formed in all

our higher seminaries and particularly in connection with our Normal schools, voluntarily of course, and that such action would receive the fullest sanction of our authorities and the moral portion of the community, there is no doubt, while the influence that might flow from, and be exerted from such a center, would be manifest throughout the State and bear harvest many fold.

G. E. B.

THE WONDERS OF GEOLOGY.

No. 1.

BY N. T. TRUE, M. D.

It has been a favorite opinion among astronomers, like Herschel and La Place, that not only this earth but all the stellar spaces of the Universe, were originally filled with gaseous matter, and that the elements which are now compounded with each other, were generally in a simple state. Instead of finding potash as it now exists, fixed in the rocks, it was free and separated into its elements, oxygen and the metal potassium. The most powerful telescopes fail to resolve all the nebulous patches that now exist in the starry vault; and the numberless comets which are still of a gaseous nature, lend strength to this view.

Carrying out this idea, we may suppose that Almighty Power could set immense masses of this matter to revolving upon an axis, and thus becoming detached from a common central mass, it would constitute a planet like that of the earth, but filling an immense space in the heavens in this gaseous condition. As time rolled on, this mass of matter radiated its heat into the regions of space, and it gradually consolidated into a mass of molten matter. Such is the opinion of astronomers.

Now the geologist cannot by any means, other than by hypothesis, attempt to prove this to have been the original condition of the earth. It does not violate the known laws of geological science. Therefore, we can lay down the proposition, that whether the earth was original-

ly in a gaseous condition or not, it does not affect the science of geology, as astronomy and geology should harmonize. We may then assert with much probability, *that this earth was originally in a gaseous state.*

But there is a condition in the history of the earth, to which the geologist can look back with much assurance, and that is, to it as a mass of melted materials,—a globe of liquid fire. Startling as this, at first, may seem to most minds, it is not certain but that we witness the same phenomenon every fair day, as we look at the glowing sun, radiating from its immense surface an amount of heat, of which man can form no conception. Be this as it may, we will assume the position that the geologist has sufficient evidence to prove that the earth was once in a molten condition.

But what are the conditions of the globe at the present day which lead to such a conclusion? In the first place, the earth is flattened at the poles. If you take a ball of soft putty and run a stick through it, and revolve it rapidly by machinery, the putty will bulge out at that portion of it which has the greatest centrifugal force, and flatten at the points where the stick enters and leaves the mass. Just so it is with the earth; and it must have been done when the earth was in a fluid condition. What is a remarkable confirmation of this, is the fact that mathematicians have estimated the extent to which a liquid body like the earth would become flattened at its poles; and that the mathematical solution and the actual condition of the earth agree.

As a further evidence, it has been found from actual experiment, that as we bore towards the centre of the earth, the thermometer will rise one degree for every sixty feet of descent. At this rate a little more than eight thousand feet in depth would reach boiling water. The deep artesian wells generally furnish warm water in proportion to their depth. There are some exceptions to this rule, attributable to local causes. No man has yet penetrated a mile beneath the surface of the earth. The deepest mine ever dug is but about two-thirds of a mile in depth, and there the heat was insupportable, and the mine was from necessity abandoned. At the ratio on which we started, at a depth of less than fifty miles from the surface of the earth, every substance known to the chemist would be in a melted condition.

It will be borne in mind, that there are hot springs in great numbers on the surface of the earth, which bubble up from the depths below, giving evidence of its interior condition.

But what shall we say of the volcanoes on its surface, those great chimneys which let off the accumulated gas and steam and molten mat-

ter from the interior of the earth? Glance for a moment at the map of North America. Look at the north west portion of the great Rocky Mountain system, and trace its whole length, and there you will find a constant succession of volcanoes,—not all in active operation now. Some of them are extinct. Go down to Mexico and still farther south, the whole extent of the Andes, and there you will find the terrific volcanoes belching forth their internal fires and causing earthquakes that shake the whole continent. If you please, go back to our starting point, and diverge in a westerly course the whole length of the Pacific Ocean, and you will there find a thousand volcanoes, which have burnt up from the bottom of the ocean and formed the islands on its surface. The great Pacific is literally slumbering on a bed of volcanoes. Or, if you please, go into the broad Atlantic, and there you may see the smoking summit of the Tenariffe, whose roots extend far away beneath the deep bed of the ocean. Or to the north, and there are the volcanic Azores and Canary Islands, or still farther north to the Arctic Circle, and there is the terrible Mt. Hecla in Iceland, whose angry mood during the last century caused an overflow of lava that well nigh desolated the island. Pass to the basin of the Mediterranean Sea, and you will find it resting on a volcanic bed. Or if this be not enough, go to the great islands of the Indian Ocean, and there, on the opposite side of the globe, are to be seen these huge vents from the earth's interior. Go farther south to Australia, and the volcano is there. Coasting along the Atlantic continent, with his telescope, the mariner can see the smoking summits of mountains farther south than man has ever yet trod.

If we can comprehend the description of an outburst of lava from the volcano of Keluæa in the Pacific where the Rev. Mr. Coan describes a column of lava at a white heat one hundred feet in diameter, and rising from one hundred to a thousand feet in height, then turning to a glowing red as it flowed out and then to the appearance of clotted blood, we may imagine what must be the probable condition of the interior of our earth. In our homes all is quiet. A slight shock of an earthquake may occasionally be felt as the work of some distant volcano. It is only as we look upon the globe as a whole, that we are impressed with the idea, that this earth is still a mass of molten matter with but a thin crust upon its surface.

We are aware of the opinion of such men as Dana and Hunt, who conceive that this volcanic action is confined to the sedimentary rocks of the globe, and that its core may be solid. Whether the terrible action of earthquakes which sometimes shake the earth half round its

circumference could be accounted for in this way, may be a matter of doubt.

This volcanic action which we have described, evidently existed to a vastly greater extent in the early history of our globe. Rents made through the rocks are everywhere filled with the lava of a former period in regions where volcanoes do not now exist. We may therefore assume as a distinct law of geological science, that *this earth is still a globe of molten matter, covered externally with a comparatively thin coat of cooled materials.*

ON THE HILL.

AN ANSWER TO "THE LEDGE" IN MAY NUMBER OF THE NORMAL.

I remember the rock by the river, Bell,
 With many a warm heart thrill,
 I see its shadow every day
 From my home upon the hill.
 I remember our childhood's wanderings,
 Our fond romantic dreams,
 Our tireless pains, in carving names,
 Vanished so soon it seems.

I know my name has vanished, Bell.
 The one you call me still,
 But then I took another name.
 When I came upon the hill;
 A strong true hand that name has carved,
 Just by my cottage door,
 And at its side, in letters wide,
 One precious as of yore.

I remember the graveyard too, Bell.
 I pass it every week,
 Its stories in solemn accents
 Of buried dear ones speak.
 But they speak of them in Heaven, love.
 On earth they lived and died;
 Drying my tears, I hush the fears
 Of a prattler by my side.

And thank the one who gave, Bell,
 My little ones to me,
 Asking that he will give me grace
 Their counsellor to be.
 For oft upon their tender minds,
 I carve from day to day,
 Letters misplaced, but not effaced,
 Like those in childhood's May.

Within our cottage Bible, Bell,
 Beneath the first two names
 Three others have been added since,
 A nameless one remains,
 Perhaps I'll write it Bell, love,
 In memory of you,
 That in this book, yourself may look
 With joy and pleasure too.

And shall I now confess it, Bell,
 These four most childish names,
 Have far more meaning to my heart
 Than all the ledge contains.
 They're in my mind by day, love,
 I think of them at night,
 And in my dreams, each letter seems
 Written in lines of light.

Yet I'll not forget the past, Bell,
 So to-morrow, if you will,
 I'll tend my willing steps away
 From my home upon the hill;
 And you and I will walk, love,
 Down by the river's edge;
 And see the names, if one remains
 Upon the dear old ledge.

But to night I must drop my pen, Bell,
 While the olden memories thrill,
 For present duties are for me
 In my house upon the hill;
 And I trust, when life is over,
 Its battles fought and won,
 I may rejoice to hear God's voice
 Say—"Child thou hast well done." C.

The world is craving for unity; this is the distinct conscious longing of our age. It may be that centuries shall pass before this unity comes. Still, it is something to be on the right track; it is something to know *what* we are to cultivate in order to make it come, and *what* we are to avoid.

THE BETTER HALF.

BY EDWARD P. WESTON.

Every well regulated school furnishes at the same time instruction and discipline. In the popular estimation, instruction is the more important of the two, and discipline valuable mainly as it contributes to the successful acquisition of knowledge. No matter, say some teachers and many parents, how little the discipline, how great the disorder in school, provided only that the requisite knowledge be gained.

My object in this paper is to show, that the discipline of a well conducted school is the *better half*; more valuable and important in itself, than mere instruction.

And by discipline, in this connection, I intend the whole regimen of the school; its rules of study and deportment; order, punctuality and attention; its methods of reciting; its movements and positions; the whole physical and intellectual machinery put in operation in a school of the highest order, together with its restraints and penalties. The word may be understood to include, further, the *results*, in the mind and character of the pupils; the discipline as a system of methods, passing by its influences to be incorporated in permanent intellectual attainments, and general character.

Discipline, thus considered, as methods or results, is better than knowledge. Take, for illustration, the item of punctuality. Good discipline requires every pupil to be in his place promptly at the opening of school, and at every recitation. Punctuality is not reckoned a trait of undisciplined human nature. Individuals and society have always suffered from the want of it. Men are behind time in meeting their appointments or payments. The mechanic fails to deliver his work at the time agreed upon, or the farmer to pay his little dues at the grocer's. The man who appointed a meeting with you at nine o'clock this morning, does not arrive until ten.

The discipline of the schoolroom is adapted to cure this evil. If a pupil has been trained to punctuality through a series of years, say between the ages of five and fifteen, he will hardly fail to have formed a habit of prompt-

ness and punctuality, which will remain ever afterward, a perpetual blessing to himself and others.

Take any other items, as order and neatness. In many families these qualities are sadly deficient; and if the child is ever to acquire them, it must be in the schoolroom. Many a child owes his salvation from utter slovenliness and disorder to the rescuing influences of the schoolroom. A neat and tasteful schoolmistress, by her example and requirements, infuses a spirit of order and a love of neatness into the little boys and girls of her school, and makes untidy mothers at home blush through their dirt, and join in an effort toward reform.

Who will not say that the habits resulting from these items of school discipline are not more valuable in the economy of life, than any mere knowledge of the R's?

A still higher discipline secures habits of kindly speaking and gentle bearing. Who does not reckon these more valuable than any technical *parving*? What grammar so valuable as the rarely attained art of speaking with moral purity and propriety?

Among the intellectual faculties, a well trained attention, or memory, is more valuable in itself than whole masses of facts noticed, and knowledge acquired. A well disciplined school is trained to close attention; attention at the proper moment; attention continued, until the point under investigation is mastered. A mind with this faculty and its fellow faculties, well trained by the exercises of the schoolroom, is measurably prepared for the intellectual work of life. Without this discipline, it is wholly unfitted for valuable service. It would be quite like a carpenter with some ill arranged materials on hand, but with neither well sharpened tools nor skill to use them.

But perhaps the most important element in school discipline is the establishment of rightful authority, or the securing of ready obedience. The democratic spirit prevails in the State and in the family; and with whatever is wholesome and desirable in this, there is somewhat that tends to anarchy. The school, when conducted aright, establishes for itself, as the only basis of success, the fundamental principle of obedience to its government. Every pupil is a subject in the monarchy, absolute or constitutional, of which the master is the head. Trained to this subjection, through years of boyhood, he comes to his citizenship with the notion and habit of obedience so thoroughly wrought into him, that he ought to be a law-abiding and worthy member of community. These illustrations might be extended much further. Let these suffice to establish my position, that the discipline of the schoolroom, when made broad and thorough, is better than mere

knowledge. Parents and pupils should understand this more thoroughly, and co-operate cheerfully with the teacher in securing this higher object of the school; and no teacher should feel that he has discharged his highest duties until he has secured this discipline, not mainly as a means to better instruction, but as in itself an object of greatest importance.

A PRACTICAL ILLUSTRATION OF OUR PRESENT SYSTEM OF TOWN SCHOOL SUPERVISION.

A teacher who had been secured to teach the town school at——— this winter, presented himself to the Chairman of the Committee for examination. A certificate was given him with instructions to "keep a strict and orderly school, as the previous terms had been useless owing to disorderly schools." Accordingly he entered the schoolroom and was somewhat surprised to find nearly every boy with his cap on, and the girls all with heads uncovered,—matters of etiquette were somewhat reversed.

When the bell rang, the pupils took their seats, and the boys removed their hats. The surprise afterward was not so great to witness the boys, and indeed some of the girls, spitting at all parts of the room. By that time the teacher was prepared for any indecent behavior.

However, a change must be made. The question was,—how best to prevent such conduct. First, at recess, a small boy was asked to remove his hat, then others were requested, in as pleasant a manner as possible, to do the same. At the end of four days, the teacher congratulated himself that in one particular, he had improved his school. He had seen the habit of spitting become less frequent and many of the smaller boys had ceased altogether. By his wish lounging had been done away with, and he had begun to anticipate a pleasant school.

On Friday afternoon of the first week, about half of the boys remained out several minutes after the bell had rung. As a reminder the instructor told them to forfeit their recess. But they all went out, either from forgetfulness or for some other reason. The only remedy was to ring the bell at once, calling back all and reminding the tardy ones. All came in but the largest boy. He wished to argue the case. He had done nothing,

and he wished to know what he should come in for. Of course the teacher did not stop to argue, but ordered him into the house at once. He coolly answered, that he "did not feel disposed to come in." "Very well, now or not at all," said the teacher. "Then not at all," was the reply.

In the mean time the rabble—which exists in every town, but unfortunately rules in this one, had heard of the unreasonable demands of the master, and had told the larger boys, that he was imposing on them, that his authority extended only from nine until eleven, and that they were very foolish indeed to yield to such requests. The result was soon manifest.

The next day a second large boy insisted on keeping his hat on against the teacher's expressed wish that he should remove it. He answered, that he was accustomed to sit with his hat on, that the teacher had no right to order otherwise, and muttered something about the room being cold. After kindly telling him, that his example would be bad if he persisted in such folly, the teacher again ordered him to remove his hat. But he was most stubborn and refused to comply. He was then ordered to leave the room until the committee could decide the matter. The teacher's authority was still disputed.

In the afternoon, both boys came to school. Their lessons were not heard, and after school they were told that an apology from each only could place them again in the position of obedient scholars—that until Monday morning they could consider, and if they concluded to be honorable and acknowledge their errors, with a promise of strict obedience in future, they would be received and treated in the kindest manner. If they concluded otherwise, it would be better for the school and for them to remain away, until the Committee should decide the case.

Monday morning both appeared, and any inquiry was unnecessary, as their heads were covered. But before the school opened, the teacher asked them, separately, their decision. Their replies were similar, that they had no apology. He told them to leave the house immediately, they again questioned his power, and proved his inability to remove them by physical force.

The Committee were sent for at once. The Chairman a young, *very* young lawyer, after hearing the particulars, thought that he could do nothing as he was but one. The remaining members lived at different parts of the town, one six miles away. What was to be done? He had no authority, the teacher had none, and so the boys remained.

In the afternoon another member appeared with the first. He had come from home merely to visit the school, not having heard of any trouble. The teacher demanded of the two, that they should expel the boys,—they

were of the opinion that they could do nothing, as there were *but two* of them. And indeed, under the circumstances, they were not sure that the boys deserved expulsion,—it was a first offence, and perhaps the rules were a little new. “In fact,” said the first, “the schools round here were never so taught. The boys have always kept their hats on and spit on the floor, and would it not be better on your part to do away with such unusual requirements?” The second was “a learned doctor.” “Doctor,” said the teacher, “is spitting a healthy habit?” “No,” said he at once. “Is it healthy to wear a hat in the house?” “No.” “Is it polite?” “It is round here,” says First triumphantly. “Well,” argued the master, “the fact that they are unhealthy practices is sufficient reason to prevent them.” “But it is necessary to spit” says one. “Yes,” answered the teacher, “when a pupil has tobacco in his mouth, for instance.” “That is one case” says the doctor, levelling a mouthful of tobacco juice at the stove. “Is it customary for scholars to chew tobacco round here?” “No, but in some cases the habit has been formed, and it is hard to prevent such.” “Well, do you admit gum in the school?” “Oh no, there is a great difference,—the jaws are not kept going with tobacco as with gum.” “Condemn the gum, but encourage the tobacco? really I should sooner reverse,” said the teacher. “Now,” says the first, “can’t we fix up this matter? I hope the committee will not be obliged to investigate it. Let’s see if we can’t make concession. Now, if the boys will promise to obey all reasonable rules in future, will you not drop it where it is?”

“Who is to be judge of the reasonableness of the rules?” asked the teacher.

“Oh! you, of course, but you probably won’t insist upon these unusual rules,” said he.

“Well, supposing I agree to make concessions and receive them back, entirely overlooking their continued and obstinate disobedience, just ask them if they will obey in future?” “Perry” says the first, (we call him Perry, for that was his name,) “won’t you hereafter obey the master?” “Certainly, I always did intend to behave in school.” “There, that is fine” said First, “John, will you obey in future?”

“I don’t want to go to school where I can’t wear my hat and spit upon the floor,” replied the young hopeful.

“There, that is *excellent*,” said the teacher.

“Well, I don’t see but that we must investigate this,” said the doctor, “when we are notified.”

“I notify you as chairman, that I wish this matter investigated at once,” said the teacher, addressing the First. All day Tuesday the

boys were permitted to attend school, and the committee failed to appear Wednesday. At night the teacher called, and found, that First didn't want to attend to it. He said that he did not want to make any more trouble than already existed, and that many, in fact, *all* of the town were of the opinion, that the school would no longer be profitable, and as a friend he advised the teacher to resign then and there. The teacher, thoroughly surprised at such baseness, said, "Didn't you tell me to keep a strict school? Didn't you say that the committee would sustain me? And now do you uphold two unruly boys, and afford them the satisfaction of breaking up the school? It can evidently be nothing else than the wish to be popular, and the fear of losing business, (which by the way he needn't have feared,) that prompts you to such a step. I don't believe you are *quite* so ignorant as to think such a proceeding for the best."

It was soon evident, that the whole committee lacked the principle to stand and sustain the school, and were all desirous of popularity, so the teacher, anxious to leave the place, though against his better judgment, gave up the control to the two boys whom the committee and town sustained. I have not heard how they succeeded with their charge.

W.

There are gifts which draw admiration to a man's self, others which solace and soothe him personally, and a third class which benefit others. The World and the Bible are at issue on the comparative worth of these. A gifted singer soon makes a fortune, and men give their guinea and their ten guineas ungrudgingly for a morning's enjoyment. An humble teacher in a school, or a missionary, can often but only just live. Gifts that are showy, and gifts that please—before these the world yields her homage, while the lowly teachers of the poor and the ignorant are forgotten and unnoticed. Only remember that, in the sight of the Everlasting Eye, the one is creating sounds which perish with the hour that gave them birth, the other is doing a Work that is For Ever—building and forming for the Eternal World an immortal human spirit.

On parent knees, a naked, new-born child,
Weeping thou sat'st, while all around thee smiled;
So live, that sinking in thy last, long sleep,
Calm thou mayst smile, while all around thee weep.

THE DEPARTMENT OF PRACTICE.

MORE ABOUT THE VERB TO BE.

The able and interesting communication which we print herewith, not being received until we are making our preparations to go to press, and, as we desire to do justice to Dr. Barrows in respect to the positions which he assumes, and, at the same time, to get the Normal to its readers in good season, as well as the fact that we wish to give place to more interesting matter than the expression of our views on the subject in question might be, make it seem best for us to reserve a little further explanation of our own faith and the citation of a few authorities, which we shall ask the indulgence of our readers to make, until our next number. Our friends will read with pleasure the following

LETTER OF DR. BARROWS. NO. II.

MR. GAGE, My Dear Sir: I hope you and your readers will forgive me, if I ask a little more space, and prove a little more tedious than in my former communication, as I have both to reply to the comments on my remarks, and wish still further to explain my position, when I will leave these views to the candid consideration of every reader, and not trouble you again.

(1) It is quite evident that my first sentence was not understood. In it, I intended to state a truism. The word *for* was not used in the sense of *instead of*, but in the sense of *as*. Thus, in the sentence, *To steal is wrong*, we call the infinitive *to steal* a substantive, because it is there *used for* a substantive. With this explanation, I presume the position will not be denied, and it is still my "corner-stone."

(2) In answer to the first question in comment (3), I reply that it is not *being happy* that is predicated in the sentence in question, but simply *happy*, and, secondly, that it is not the *verb*, but the *copula is*, which predicates. A sentence which does not convey the thought intended is a failure. I have an inquiry to make about a friend. The *existence*, the "*being*," of that friend is taken for granted. I wish simply to know his condition. I am told, "*He is happy*." "Verbs in Latin, as in English, express existence, condition, or action." [Harkness' Lat. Gram. §192.] What is the verb here? If *is* is a verb, the sentence is a failure; for I did not inquire about my friend's existence, but his condition. It seems to me perfectly plain that *happy* is the only thing predicated. But we are told, "Not so, *being happy* is the thing predicated," or, in other words, that it is not in the power of the English language to predicate condition separately from existence. I can not so view it. When a child two years old says, "This ball is mine," he understands just as perfectly what he is saying, as a man of forty. But he can certainly have no abstract idea of "*being*," of *existence*. The *mine* is what he is after, and *mine* is what he intends to predicate, and nothing more; and I think he succeeds in doing it.

Again, we are told (5) that *runs* and *is running* are not equivalent expressions.—Equivalent means, equal in power, force, value. In one expression the two verb

elements are united, in the other separated. There is just this difference in form, but what is the difference in their force?

Finally, the inquiry is made, "is *is happy* a verb?" It will be borne in mind, that the statement was not made, that wherever we have both copula and attribute we have a verb. There are two views. Recalling the definition of a verb given above, which is, I believe, substantially the usual one, compare the two sentences, "*He is happy*," and "*He is running*." Running is a participle. Happy is an adjective. All grammarians class participles and adjectives together. In the one sentence condition is predicated; in the other action. If *is running* is a verb, why not also *is happy*?—

Certainly it is a verbal expression, if not a verb. Take the sentence *He is well*, put it into Latin and you have *valet*. There is no part of *valet* which means existence.—The *is well* is correctly translated by a pure verb. Again, *runs* and *is running* are each correctly translated into Latin by *currit*. Are they not, then, equivalent?

One thing more, and I have done. I wish to compare notes with some of those authors who are acknowledged to stand at the head of the scholars of the present day in their knowledge of the *philosophy of grammar*.

"A verb either expresses an action or state; or it connects an attribute with a subject. All verbs belong to the former of these classes except *sum*, *I am*; the most common use of which is to connect an attribute with a subject. When so used it is called the copula. [A. & S. Lat. Gram., rev. ed., §140.

Leverett's definition of copula is, "*a tie, a band, a fetter*." Can a word be a tie, and at the same time a verb?

Hadley says, "*eimi, to be*, is a verb of incomplete predication." Remarking on the sentence, "*The man is good*," he says, "*The verb to be*, when thus used, is called the copula, since it does little more than couple the subject and predicate noun."

[Hadley's Gr. Gram., §490, a.

Greene says, "*The abstract or substantive verb be* represents no attribute of the subject whatever, but serves as a *copula* or *link* to bind the attribute to the subject.

[Greene, Eng. Gram., §82, 4.

Why, then, call a word a verb after it has lost every characteristic of a verb, and is simply, a *link*, a *tie*, a *chain*, a *hook*, a *band*, a *fetter*? Why call that poor, patient, useful, inoffensive, copula a "a bothersome controversial element?" My word for it, it will continue to bother us, like the negroes at the South, till we are ready to acknowledge its just claims, and then we shall get along very lovingly together.

South Berwick, Dec. 18, 1867.

N. BARROWS.

CORRESPONDENCE.

We insert another letter:

KINGFIELD, Dec. 14, 1867.

Mr. Editor: I am much pleased with the December number of the Normal. I think the Department of Practice adds much to its value. And, as I propose to do something towards making that department interesting, I will comply at once with your invitation to furnish something for it, and will give you my analysis of the mental questions proposed for solution.

To multiply two numbers together whose difference is ten, twenty, thirty, forty, fifty, &c. Rule: Square the intermediate number, and from the product subtract the square of the difference between the numbers and the intermediate number. Thus,

to multiply 275 by 325, we square the intermediate number, 300, and have 90,000, from which we subtract the square of 25,—the difference between each of the numbers and 300,—which is 625, and have for the answer 89,375.

Question 9. If the three half barrels (1 1-2 equals 3-2,) had cost twenty-one dollars, then each half-barrel would have cost seven dollars, but, as the three half-barrels did not cost twenty-one dollars, lacking half a dollar, one half-barrel would cost seven dollars lacking one *third* of one half, or one sixth of a dollar; then five half-barrels (2 1-2 equal 5-2,) would cost five times seven lacking one-sixth, dollars, or thirty-five dollars, lacking five-sixths, which is thirty-four and one sixth dollars. Therefore, if a barrel and a half of flour costs twenty dollars and a half, two and a half barrels would cost thirty-four and one-sixth dollars, (\$34.16 2-3.)

Question 11. Correct Elocution.

Question 14. I think that North America and are Asia both *south* of the "North Pole." Am I right? [You are. Ed.]

I propose the following questions which you may insert if you think proper; if not, will you please write me privately your decision, as there is a difference of opinion where I am teaching. I have decided, and wish to know if I am correct. Suppose there were several young ladies by the name of "Brush," if you please, all sisters, and I saw two of them on the street. Should I say, I saw two of the Misses Brush, or, two Miss Brushes? Which is correct? Would the same rule apply if the name ends in *s*?

Another. Shall I say, I sowed two bushels of *pease* and oats, or, *peas* and oats? Would you spell *pease* the same if you said, I sowed two *acres* of pease and oats?

C. A. B.

And here is another:

BIDDEFORD, Dec, 17th, 1867.

MR. GAGE: Having differed somewhat from the most of your correspondents, in my analysis of the last question, I am quite curious to see how our ideas will agree this time.

1st. To multiply 275 by 325, I should annex two ciphers to the multiplicand, and divide it by four, (equivalent to multiplying by twenty-five,) and add the quotient thus obtained, 6875, to the product of three times the multiplicand, with ciphers annexed, 82,500, giving as a result, 89,375.

9th. If a barrel and a half, or three half barrels of flour cost twenty and a half dollars, one half barrel would cost one-third as much; six and five-sixths, and two and a half, or five half barrels would cost five times that; thirty-four and one-sixth, equal to \$34.16 2-3.

If a boy had a certain number of apples, and, after dividing the second time and selling one-half apple, had three left; the three and a half must be the other half of what he had remaining after the first sale, seven. Then if he had seven remaining, after selling half and one-half apple, the seven and a half must be the other half of what he first had, 15.

11th. There may be many *essentials* to good reading, but it seems to me that first in importance is a proper attention to Punctuation.

I regret exceedingly, that I was unavoidably detained from the Convention, and can solace myself only by a careful perusal of its report. R. A. H.

A lady engaged in teaching, sends us the following to be answered by the readers of the *Normal*.

"A very simple question was brought to my notice a few days ago, which I send you. Simple as it is, nine-tenths of persons hearing it, will give an incorrect answer.

' A, a trader. B bought a pencil of A, worth seven dollars. A, having no money in his drawer, asked C, who was standing near, to give him change for a ten-dollar bill, which B handed him for the pencil. C did so, and A gave three dollars of the money to B, who went away satisfied with his pencil and the three dollars. The ten-dollar bill proved counterfeit, and C returned it to A to be redeemed, which he did, taking the ten dollars from his drawer. How much did A lose by the transaction? "

" This question," says our correspondent, " was given to about forty scholars, including several teachers and men engaged in business." None of them at first gave the correct result.

Another correspondent, writing from one of our most thriving towns, and who wishes to take the *nom de plume*, ZERO, though we are sure she is a creature of positive value, furnishes answers, and correct ones, to all the questions given to be answered, in the December *Normal*. We are sorry that we have not space for their insertion. In sending the answers, " ZERO" writes as follows: We leave her question to be answered by other correspondents, as we have done in respect to other queries the present month.

" *To the Editor of The Normal*:—I enclose solutions of the questions in Mental Arithmetic, in No. 13, of the *Normal*. I doubt whether my solution of the apple question, is given as clearly and concisely as it should be; if not, I hope to see a perfectly satisfactory analysis of the problem in the next No. of your *Magazine*. The question was entirely new to me, but some of my pupils had heard it, and knew the number of apples to be *fifteen* and the number given away each time, but had no idea of the analysis by which the result was obtained.

Permit me to ask *you* or the correspondents of the *Normal*, why the period is *sometimes used* after the word *Miss*, when it precedes the name of an unmarried woman, and sometimes omitted? I have noticed for some time the use of the period after the title mentioned, by some scholarly persons, and the *omission* of it, by persons equally scholarly. Also in No. 12, of the *Normal* I find the period placed after the title prefixed to the names of your Assistants in the *Normal School*, and in No. 13, I find in the account of the Educational Convention, the name of Miss Lockwood, and the period omitted. Which is right, the *use* or the *omission* of it?

With a word in praise of the *Normal* I close. I find in it just the advice, just the suggestions, which teachers need. It supplies me with hints in regard to the management of a school which I can no where else obtain. No earnest teacher, having once seen it, will consent to be deprived of the very valuable aid, such a work can give."

The Department of Practice is filled, and our correspondents have done the talking. This is as it should be.

— Will not our friends, in sending us items for the Department of Practice, also have the kindness to forward such items of educational intelligence as they deem of interest? They may thus do much to aid us, as well as to render the *Normal* entertaining and useful.

Our department of miscellany, which we conceive should be one of the best features of this periodical, has not been as well attended to of late, as we hope that it may be hereafter. We have not had the time which is needed for "pen and scissors," but we contemplate an arrangement which will give its proper value to this department.

EDITORIAL DEPARTMENT.

VOLUME TWO.

We hope it will be a good one. And when we reflect upon the talent and experience, which are promised for its make-up, we are not inclined to doubt that it will be all which our readers can reasonably demand. The "*neo*" is suggestive. We have fairly counted *one*. The *Normal* is more than a year old. We recall the Saturday P. M. of November '66, on which we prepared and carried to the printer the MS. for the prospectus. It was soon in type, and, in a few days, it went its way. It was a promise. We can say, that as far as it has been in our power, our original pledges have been fulfilled.

The *Normal* has not been all that it was, and is, designed to be. We *want* it to be the *best* magazine for home and school, which is put within the reach of those who desire such a periodical. Rome was not built in a day. A "mushroom growth" does not attach to an enterprise like that in which the *Normal* has enlisted.

"Did we count the cost before we began?" Not fully. Perhaps, if we had, we should not have ventured forth. But what of that? It is extremely doubtful, we think, whether our fathers would have entered upon some of the best labors in which they engaged, and which they carried successfully to completion, had they fully counted the cost.

No, we did not wholly count the cost. We entered into the work. It has been agreeable labor for us. We have enjoyed it. It has seemed to us that we were really accomplishing something, and something worthy our best efforts. The *Normal* has been constantly making friends. It received, at the first, the cordial welcome of those qualified to appreciate its design, and although its imperfections have been altogether too many, yet it has been gradually making its way steadily onward in, or into the line which its projector intended that it should pursue.

Some one has said, that whatever is designed to benefit mankind, is mendicant. This is partly true, and partly false. Men love the light, provided they are once led to see light. The way of the reformer is often hedged about. But the hedge is not unfrequently, one which the reformer himself has cast up. Let the tempests roar about you, let the dark clouds hover close above your devoted head, hark! there is an angel by your side, he will tell you of a wisdom which is light in darkness, of a sunshine which smiles forever through the tempests.

We believe no less firmly to-day, than when we wrote "Volume 1, Number 1," that the *Normal* has a high and worthy mission, and that if it rises and expands, roots downward and outward, to accomplish the growth which is but natural for it, it will eventuate creditably to all who have in any way assisted to give it position and circulation.

In addition to those who have already been announced as regular monthly contributors for the year 1868, our readers may expect an article every month from Dr. N.

T. True, so well known as a scientific lecturer, a teacher, and an editor, throughout New England, and from Hon. E. P. Weston, whose scholarship and literary ability, as well as varied experience, fit him to add much to the interest and value of the *Normal*.

We shall make such other arrangements to render these pages attractive and useful to those who may peruse them, as circumstances may permit. We desire to "make haste slowly," but by all means to move perceptibly forward.

Friends, we present you with this number, in which is much of interest and sterling worth, and this is our pledge, that we have yet many things to tell you, and things which will minister in some measure to development and growth in you, and through you, in others. Accept our New Year's Greetings, and allow us to suggest, that your neighbor ought to take the *Normal*. "Let it go into every family," is the true doctrine. *A Happy New Year.*

THE NEW INTEREST IN EDUCATION.

In the course of the sessions of the recent State Educational Convention at Lewiston, a resolution requesting the newspaper press of the State to call attention more directly than they have been accustomed to do heretofore, to the importance of common-school education to the people of Maine, was unanimously adopted. We had this resolution in type for insertion in our report last month, but unfortunately, in the bustle of change during the past month, both copy and item have "gone up."

Perhaps not entirely on account of the passage of this resolution, but more probably because it is the business of the journalist to watch, and make a true and fair record of, the signs of the times and the spirit of the people, at any rate, from some cause or other, the newspaper press of the State have spoken quite generally and pointedly on the subject of common-school education during the past month. We are glad to be able to group together some of these utterances, and we believe them to be so sound and discriminating as to challenge the attention of all who wish well to the cause of education, whether teachers or not.

FROM THE PORTLAND PRESS.

"For a year or two past colleges have been the recipients of unprecedented favors. There has been a perfect hail-storm of donations, endowments, scholarships, professorships and bequests. Diffidence about asking—an infrequent weakness of academic corporations—has alone prevented their all becoming rich. Harvard and Yale, well-to-do magnates in the commonwealth of learning, are treading close upon the heels of their older sisters of Cambridge and Oxford; and Bowdoin, Colby and Bates, in our own State, are all making excellent progress both in obtaining an increase of their funds and in devoting their resources to good purposes.

The prosperity of the higher class of educational institutions must be a source of the liveliest satisfaction to all who have witnessed it. But it is a singular fact that, so far as Maine is concerned, at least, the prosperity of common schools has been in inverse proportion to that of universities and colleges. While the latter have been enlarging the sphere of their usefulness and approaching more and more nearly to the standard of ideal excellence, the former have fallen into that species of decay that comes of standing still. Within a few years the amount of money which each

town is required to raise for each scholar within its limits has been increased to correspond with the advance in the salaries of teachers. This single legislative act measures the whole progress of common schools for a series of years. We have the old methods of State and local supervision, the old lack of uniformity with respect to text-books and methods of instruction, the old negligence on the part of teachers, school-agents and municipal officers in making their proper returns. Everything about common schools is at a stand-still, though they constitute the distinctive feature of our American educational system. England and other foreign countries, where the wealth is concentrated in the hands of a few, will probably continue for a long time to keep a little in advance of us in securing university culture in the greatest perfection. But in common-schools America has always led, and with respect to them it ought still to justify the coarse but emphatic old American boast, "We knock the world, Sir!" The foreign systems produce splendid specimens of special culture and a highly educated "upper class," but for an educated *people*, for culture reaching down through all classes and permeating all parts of the social organization, our own system is immeasurably superior. Its necessary connection with the perpetuity of democratic institutions should make it the object of the ever-vigilant care of our legislators. It is the firm basis upon which the Republic rests. Its perfection would be a specific against rebellion, caste, corruption, extravagance and all the evils which now afflict us. Whatever is second, let the interests of education ever be first.

The State Educational Convention, held at Lewiston, was almost up to the revival point in the earnestness and vigor displayed in its deliberations. Antiquated humbugs and time-honored errors were attacked with a chivalrous courage that indicates the beginning of a new era of progress. We propose in a few words to call attention to one or two of the movements inaugurated at this Convention, which were barely alluded to in those parts of our report which reached us in season for publication. One is the formation of the "Maine Educational Association," a permanent organization of which any person may become a member upon payment of an annual fee of one dollar; ladies are admitted to membership without payment of the fee. It is to be hoped that not only teachers, but all gentlemen throughout the State who have the cause of education at heart, will join the association and thus add to its funds. This is the only way the association has for raising funds, and funds it ought to have—certainly enough to pay for the publication, in pamphlet form, and gratuitous circulation of the various addresses delivered at the annual meetings and of the views otherwise presented. Only in this way can the matured views, the combined experience of the best educators, be made available for the whole State. As it is now, only the few who are able to attend these conventions are profited. Nearly every teacher is now obliged to learn his art, *de novo*, for himself. He cannot avail himself of the experience of others. The same is true of nearly all who have the supervision of schools. Certainly this should not be so; the experience of our best educators should not be so nearly all lost as now.

The Convention also appointed a committee to present to the Legislature a plan for the supervision of schools. Rev. Dr. Ballard the present State Superintendent, in his address before the Convention, expressed his dissatisfaction with the manner in which this matter is now arranged. He favored the division of the State into three Districts, eastern, western and central, with one State Superintendent, three District Superintendents and County Superintendents.

Another Committee was appointed to memorialize the Legislature to make an appropriation for paying the expenses of the Association and enabling it to publish its proceedings for general distribution. No considerations of economy ought to stand in the way of this appropriation. The amount will at most, be inconsiderable, and

there are no investments which insure returns so prompt, sure and valuable, as those which either directly or indirectly are for the advancement of common-school education."

FROM THE KENNEBEC REPORTER.

"The common-school interests of Maine are just now experiencing a healthy revival. During the war, national questions absorbed the whole public attention to a degree which, although necessary, was yet very detrimental to the cause of education, and, at the same time, a great many of the young men who attended the public schools enlisted in the service of their country, depleting the number of scholars to a large extent, while the establishment of the national banking system took from each town and city its portion of the State bank tax. Our schools have from these causes suffered severely, and from their effects they have not yet fully recovered.

It is gratifying, in view of these facts, to witness the new interest now being devolved in aid of the cause of public education, and the efforts now being put forth, to improve the common school — that which has made New England the model section of our country in all that pertains to the diffusion of knowledge among the people, without regard to wealth or station.

We have been led to write of this by reading the reports of the highly successful Teachers' Convention held during the present week at Lewiston, at which a large number of teachers from different parts of the State were present. The time was occupied by discussions upon questions connected with teaching, and in listening to able addresses from prominent friends of education, all of whom, we are glad to observe, dealt with the subject in a most practical manner, and visionary theories were the exception rather than the rule in the remarks made during the session.

This increasing interest is largely due to the influence of the Normal School at Farmington, which was so wisely put in operation by our State, and which is now in successful operation, and whose power for good is almost incalculable. The publication of the *Maine Normal*, by the worthy Principal of that school, was a consequent of the founding of this institution; it has done much to create this interest, and is deservedly receiving a good support.

We trust the feeling thus excited will be kept up until all our people will be made to see the importance of maintaining good schools, and aiding, instead of retarding, the efforts put forth to give their children all the benefits of a practical education.

FROM THE FARMINGTON CHRONICLE.

Perhaps at no period in the history of our State has there been manifested a more general and deeper interest in respect to the improvement of our common schools than now. The attention of our people has been directed to a consideration of the importance of better schools, with better methods of instruction and better conveniences in respect to schoolhouses, more persistently and forcibly during the past year than for years before. The fact is, that common school education had come to be at a very low ebb, to say the least, in our country towns, and those who came necessarily in contact with our schools were at last made to feel that the time had come when a new onward impetus must, in some way, be given to a cause of so much importance as that of educating the children and youth of our State.

We have been led to speak of this matter at this time, perhaps especially because this is the season when our winter schools in the rural districts are in session, or are about to commence. Rightly conducted, these schools are the repositories of immense power. But another, and probably a principal, reason which has led us to call the attention of our people to this subject now, is that we have been cheered and encouraged by what we have read and heard about the recent very successful

educational convention held at Lewiston. That convention had the true ring in it. It gave forth no uncertain sound. Fossilism found no place there, and its results were such as might have been expected. The people will rejoice to do more for the cause of education, if they can see such plans in respect to instruction carried out, as were there advocated. And we shall see yet better fruits growing out of that convention. The formation of a "State Educational Association" of which any one may become a member who is interested in advancing the cause of education, on the payment of one dollar, ladies becoming members without this charge, the choice of a committee to present to our State Legislature the subject of School Supervision, the choice of another committee who should take measures to secure funds to enable the association to publish the proceedings of its annual meetings for general circulation, these are among the present fruits of the State Educational Convention. But we look for still richer fruitage in years to come. The common school is the cornerstone of our free government. Let the attention of our people be turned to the promotion of its interests yet more and more. Let no stinted measures prevail in respect to it, for they are measures of false economy."

FROM THE PORTLAND EVENING STAR.

"Advantage should be taken of the present awakened interest in common-school education, to secure substantial results. Unless this is done that which we have already witnessed, however gratifying in itself, will be of little permanent value. It will only serve to show us more clearly than has been realized heretofore, that we as a people are falling far below our duty in caring for the interest of our children and youth. Probably the Convention at Lewiston was the most successful, in point of numbers and enthusiasm, of any ever held in Maine in behalf of common schools. The men who controlled it seemed in earnest, and they are men who have had that experience and observation, which are calculated to give weight to their views and to inspire confidence in such plans as they propose. We have space and time at present to set forth only a few hints.

The formation of "The State Educational Association," an association designed to include not only those actually engaged in the business of teaching, but also all persons interested in the advancement of education, thus taking as a basis a platform as broad as the interest it is intended to subserve, the formation of such an association gives evidence in itself that the men who led in the Convention at Lewiston, were men with breadth of views sufficient to entitle them to consideration.

The tone of the lectures and the character of the lecturers were such as we have not been accustomed to see in similar conventions at previous times. Visionary theories we judge there were none; of theories which might, and which should be reduced to practice for the benefit of our common schools, there were enough. Of the true theory of education, there is no danger that we shall have too much.

But we cannot help feeling that the most practical thing which the Convention accomplished, the one best adapted to secure permanent beneficial results, was the choice of a Committee of five to present to the State Legislature the coming winter, the subject of school supervision. Here is a vital point. Without some efficient and well administered system of supervision, all other efforts will be comparatively fruitless. The better methods, the truer ideas in respect to culture, the broader views of what is best adapted to fit our youth for social happiness and usefulness, these must all be carried to the schools, or very little will be really accomplished in the way of educational advancement. The whole tendency of our State Legislation for several years past, has been backward in respect to the matter of school supervision. The powers of the State Superintendent have been one after another, taken away, until to abolish the office altogether has been deemed by many a wise measure. It has

been thought that the money expended in this direction was too much to be annually given for the results accomplished, and that it was, at the same time, too little to make any deep and wide-felt impression for good. That this is true we have no doubt. And we hope the committee to which was referred this subject, will endeavor, in a matter of such paramount importance as has been intrusted to them, to inform themselves so thoroughly and recommend so judiciously as that the views which they may present, will form the nucleus for wise and generous action in our State Legislature. Let them obtain from every accessible source, whether in or out of the State, such information as they need, then let them present it in concise and readable form. It cannot but do good.

There are other matters to which the attention of the Educational Convention might well have been directed, the rottenness of the district system, the need of larger appropriations for school purposes, the necessity of better school houses, etc., etc., but they, wisely as we think, undertook to look at the foundation first, and other matters will come in for their share of attention at future meetings."

In addition to the above, we have noticed articles in several other newspapers of our State. But we have not space for their insertion. And these are enough, perhaps, to show the general interest which is now felt in the subjects to which the Lewiston Convention called the attention of our people. There is work to be done, and we are encouraged to believe that many hands are ready to engage in it.

MISCELLANEOUS DEPARTMENT.

STATISTICS OF NORMAL SCHOOLS.

The Board of Regents of Normal Schools in Wisconsin, have located schools at Whitewater, Stoughton, Platteville, Oshkosh and Sheboygan. Two, we believe, have already been opened. The normal school fund of the State consists of over 400,000 acres of land, and about \$600,000 in 6 per cent. bonds of Wisconsin. The present income from the fund is \$40,000 per year, three-fourths of which (\$30,000) is appropriated to the support of normal schools.

In Indiana the annual appropriation for the current expenses of the State Normal School, is \$10,000. The city of Terre Haute donated \$50,000 to defray the cost of building, to which the State Legislature makes an addition of \$40,000. The institution is, or is to be, organized under three divisions, viz: Model Primary School: Normal School proper; and Model High School.

The annual expenditures for the State Normal University of Illinois, amount to about \$18,000. The building is intended to accommodate 300 normal, and 200 model pupils. The school building cost \$182,000; the estimated worth of it and the furniture and grounds, is \$250,000.

Pennsylvania has four Normal Schools. The estimated value of the buildings of the school located at Millersville, is \$78,000; at Edinboro, \$34,000; at Mansfield, \$43,000; at Rultztown, \$50,000. The State gives fifty cents per week to all students preparing to teach, or if disabled in the country's service, one dollar per week; and at graduation, each graduate receives fifty dollars from the State.

The State of New York has in operation two Normal Schools, one in the city of Albany, established by law in 1844, and one in Oswego, in 1863. The appropriation to the Albany school is about \$15,000 per year; that to the Oswego school, \$10,000. A law authorizing the establishment of four additional schools has passed the Legislature, the schools to be located in such places as should offer the greatest inducements in respect to gifts of land &c. Twenty applications have been made. The value of property offered in some cases exceeds \$100,000. It is the opinion of Mr. Rice, the State Superintendent of Public Instruction, that a normal school for every one thousand teachers is the least number which a State should have.

New Jersey combines a Normal and Model school in one. She erected her normal school building in 1855, her model school, in 1857, at a total cost for both of \$72,000. The buildings accommodate six hundred pupils. Their present estimated value is \$100,000. There are also boarding houses worth \$50,000. The cost of supporting the school is \$17,000 per year.

Massachusetts has five Normal Schools, four supported by the State, and one by the city of Boston. \$28,000 is appropriated annually to pay the current expenses of these schools, besides \$1,000 to assist needy pupils, and an income of \$20,000 of funds. The estimated value of buildings, grounds, &c., is as follows: For the school at Framingham, \$30,000; Salem, \$30,000; Westfield, 27,000; Bridgewater, \$26,000.

At Toronto, Upper Canada, are normal and model schools; the estimated value of the buildings, grounds, and other appurtenances, (including map apparatus, library depositories, an educational museum of models, statuary and painting, and a school of art and design,) is not less than \$250,000. The annual pay of the teachers alone in these schools amounts to \$14,000.

— Mr. C. D. Robinson, of Portland gave an entertainment consisting of readings and recitals, at Normal Hall under the auspices of the Normal Lyceum, Saturday evening, December 21st. Mr. R. possesses rare natural qualifications as an elocutionist, and adds to these evidence that he has studied the art which he practices. His programme is varied and interesting, and the entertainment which he gives, is of a kind which is eminently worthy of patronage.

— We learn that Prof. Wm. P. Atkinson, of Cambridge, Mass., has retired from the editorial charge of the *Massachusetts Teacher*, and that Mr. D. B. Hagar, Principal of the Salem Normal School, who had been appointed his successor, declines to accept the editorial charge of that venerable and worthy periodical.

— The annual meeting of New Hampshire State Teachers' Association was held in Concord, Dec. 12 and 13. It was attended by a larger number of teachers and friends of education than usual. Amos Hadley, Esq., State Superintendent of Public Instruction, presided. Among those who took part in the discussions, which were of a high order, and exceedingly interesting and profitable, were Professors Sanborn and Woodman of Dartmouth College, C. S. Richards of Meriden Academy, Professor M. T. Brown of Tufts College, and others.

— The charts illustrative of the Physical characteristics of the earth, which are designed to accompany Warren's geographical series, are the best of the kind which we have ever seen. We intend to notice them, as well as Warren's geographies, more fully in our next number.

— It is estimated that Dickens received clear of all of expenses, \$12,000 for four readings in Boston. Tickets for two more readings have already been sold. Perhaps he's making money.

— The following letter sufficiently explains itself, and shows commendable zeal in respect to progress, on the part of the teachers of Androscoggin Co. There is a County Teachers' Association of eight years standing in Somerset Co.

LEWISTON, Dec. 7, 1867.

MR. GAGE: Dear Sir: The Teachers of Androscoggin Co., formed an Association on the 26th of November, and elected the following officers: Pres. C. C. Rounds, Auburn; Vice Pres. Prof. Stanley, Lewiston; Sec. J. H. Barrell, Lewiston; Ex. Com. Mr. Lamb, Lewiston; Miss Anna W. Ham, Lewiston; Miss Julia E. Packard, West Auburn.

The first meeting will be held in Lewiston, January 1, 1868.

Can you inform me whether or not there is, or has been, a Co. Association in Me., previously to this? Yours Truly, J. H. Barrell.

BOOK DEPARTMENT.

(1) HARPER'S SCHOOL AND FAMILY SLATE. This is certainly one of the best of the modern contrivances for methodical instruction through the perceptive faculties, which we have seen. The slate carries twelve cards, on one face of each of which is a lesson in drawing, and on the other, lessons in writing and printing. These lessons, arranged to follow one another in an obvious order, stand at the head of the child's slate, and before him at the same time, on the slate self, are lines and checks corresponding to those which directed the inventor to the correct and careful formation of printed and written letters and words, and figures showing straight and curvilinear boundary lines. This little slate is an excellent educator. The publishers furnish specimen copies for examination with reference to use at very liberal rates.

(2) A TEXT-BOOK OF ETHICS. This little work has been prepared by Joseph Alden LL. D. President New York State Normal School, and author of two treatises on the Science of Government. It is designed for union schools and bible classes. The same directness and conciseness of statement which have marked the other works of Dr. Alden are distinguishable in this unpretending volume. In twenty-two chapters, covering only ninety-two pages, in the form of question and answer, the subject is brought to touch man in all the relations of life, and in a way most simple and unanswerable. The publishers have done their part of the work with the usual good taste of A. S. Barnes & Co.

(3) ELEMENTS OF NATURAL PHILOSOPHY. This treatise "for beginners," is 8 mo, and contains only 127 pages. Like the others of the Cambridge series, edited by Messrs. Rolfe & Gil-

(1) NEW YORK: HARPER & BROTHERS.

(2) NEW YORK: A. S. BARNES & Co.

(3) BOSTON; CROSBY & AINSWORTH.

lett, it presents in a most concise manner the principles of the science of which it treats. It avoids entirely and systematically the cumbersome details of larger and more pretentious works on the same subject, while it gives the general facts of natural phenomena, shows their relations, the effects which they produce, and the manner in which they become subservient to the will of man. We think this treatise worthy of commendation in respect to the following points: (1) The natural method has been pursued in the order of presentation of each subject, ideas first and their embodiment in clear-cut definitions afterwards; (2) conciseness and adaptation to the wants of the common, and especially the grammar schools; (3) the excellent summary of the facts of each subject, which follows the treatment of the same; (4) the questions for review; (5) the beautiful typographical execution of the book.

In the hands of a poor teacher, this book will do as well as any other, for our common-school children, and in the hands of a good one, who will be prepared to present considerable matter which this work does not contain, it is an excellent treatise for any school.

(4) AN ELEMENTARY GRAMMAR OF THE GERMAN LANGUAGE. This book (8 mo., 222 pages,) which is edited by James H. Worman, A. M., Librarian at Drew Theological Seminary, contains exercises, conversations, readings, paradigms, and a vocabulary, and has been prepared with special regard to the wants of beginners. It seems well adapted to do the work for which it was designed, and we cordially commend it to be used in the German classes of our academies and high schools.

(5) A FOURTEEN WEEKS COURSE IN CHEMISTRY. The title of this book struck us very favorably as we read it, for we believe that elementary text-books, should be brought into a smaller compass than has been wont to be the case heretofore. The book has been prepared by J. Dorman Steele, A. M., Principal of Elmira Free Academy, who says in his preface, "In the preparation of this little volume the author lays no claim to originality; his has been the far humbler task of endeavoring to express, in simple, interesting language, a few of the principles and practical applications of chemistry." In our academies there are many pupils who can pursue this branch only one term. We commend this book to the examination of teachers.

(6) FRENCH'S ELEMENTARY ARITHMETIC FOR THE SLATE. We have no exclusive commendation to bestow upon any book, but this little treatise has made so favorable an impression, as we have examined it, as to lead us to feel that it is a privilege, to ask that teachers and others interested in our schools, should give it an examination with reference to use in the schoolroom. It is a book of only five chapters, not a formidable and uninteresting looking volume, like the written arithmetics which have generally been put into the hands of the young students of arithmetic in our common schools. The first chapter treats of "Integers." Section first in it has to do with "Notation and Numeration." Page 1 contains nine illustrations, to convey objectively ideas of the nine digit figures &c. The derivation and signification of the word-numbers are brought out with sufficient distinctness on the next succeeding page. Of course we have not space to present an exhaustive analysis of this little work, which is literally *multum in parvo*.

(7) ASTRONOMY. BY ROLFE AND GILLET. The same order in respect to the presentation of each topic, which we have elsewhere commended, and which is a distinguishing feature of each book in the Cambridge Course of Physics, is worthy of remark in this work. It has seemed to us, that demonstrations of truths, and development of the laws of nature which obtain in the moving universe, might, (since this treatise will be used only by those who have attained to the years of maturity,) have been, in some cases, more fully discussed. We however consider the book a good one, and from what we know of it, judge that it has many more inferiors than superiors.

(4) NEW YORK: A. S. BARNES & CO.

(5) NEW YORK: A. S. BARNES & CO.

(6) NEW YORK: HARPER & BROTHERS.

(7) BOSTON: CROSBY & AINSWORTH.

THE MAINE NORMAL.

VOL. 2.

FEBRUARY, 1868.

NO. 2.

LETTERS TO A YOUNG TEACHER UPON QUESTIONS OF MODERN SCIENCE.

LETTER 3.

ELECTRO-TELEGRAPHY.

In employing the agency of electricity for telegraphic purposes, different properties of the electric current have been used, giving rise to several different telegraphic systems. The details of these several systems, and the arrangements by which they are carried into practical effect cannot, it is true, be made intelligible without illustrative apparatus, or engravings,—but your pupils may be easily made to comprehend the principles on which they are respectively founded.

CHARACTERISTICS OF THE ELECTRIC CURRENT ON WHICH ITS ADAPTABILITY TO TELEGRAPHIC PURPOSES DEPENDS.

There are however in the first place, some curious philosophical considerations which the more thoughtful of your pupils may perhaps be able to appreciate, relating to the reasons why the agency of electricity can be more advantageously employed than that of any other known force in nature, for telegraphic purposes. The three characteristics of electricity which adapt it to this service are these :

- 1st. It can be transmitted from place to place with great rapidity.
- 2nd. It can be sent to very great distances without any appreciable loss of force. And consequently,
- 3d. It can be made to produce a variety of powerful and very striking effects, at the end of its course, however remote from the point of transmission.

There are other powers of nature which possess some of these properties, but none known to man, or at least none under his control, which possess them all. *Light*, for example, can be transmitted with great rapidity, much greater than that which can be obtained for electricity along the conductors used in telegraphing, though the latter is for all practical purposes instantaneous. But then light, since it spreads itself equally in all directions from the radiant point, is diffused and weakened in proportion as *the surface of a sphere increases with the increase of the radius*, that is as the *square* of the radius. The diminution of the intensity of light, as its distance from the radiant point increases, is thus extremely rapid; and from this cause, together with the interference of vapors and other obstructions in the earth's atmosphere, and also from the curvature of the earth preventing the possibility of straight lines of transmission being carried to any considerable distance, it has been found impossible to make communications, in any way, by means of light, except over spaces of a very few miles in extent.

Difficulties similar in kind but still more serious in degree, attend the transmission of *sound* to any great distance. The pulsations may indeed be conveyed much farther by confining them within a tube, than when passing through the open air; but every thing like articulation or distinctness is, in such a case, soon lost from the influence of echoes and reverberations, which confuse the sounds and thus prevent any well defined effects from being produced at the end of the course.

These considerations in respect to the nature of the obstacles and difficulties attending the best means of making communications between distant points enjoyed in former times, if brought to the minds of your pupils, will enable them to appreciate more fully the immense superiority of the agency now employed, in the fact that it is an agency which may be transmitted with *inconceivable velocity*, to *immense distances*, by a path laid through the *earth*, the *air* or the *sea*, in *any direction*, *straight or crooked*, without *any appreciable loss by the way*, and with the power of producing a *great variety of the most distinct and sharply defined effects* either at the end of its course, or at any point intervening.

NATURE OF THE AGENCY TRANSMITTED.

It may perhaps be truly said that nothing whatever is known of the hidden and essential nature of the electric force, or of the mode of its transmission along the conducting wire. It is not at all necessary to suppose that any material substance passes along the line. Indeed it is the general opinion of speculative philosophers at the present day, that it is only some sort of *motion* that is transmitted. You can illustrate this idea to

your pupils by the waves which may be made to pass along a rope lying on the ground by means of a rapid upward and downward motion given to one end of it, by the hand. The waves run rapidly from the hand to the farther end of the rope, while yet every portion of the rope, notwithstanding the upward and downward motion that is imparted to it, remains all the time at the same distance from the hand. In other words it is a *species of motion* and not any *material substance* which passes along the line.

In the same way, when a stone is thrown into the middle of a pond, and undulations move from it in all directions toward the shore, the *water* does not move from the centre to the shore; it is only the *motion* of the water, so to speak, that moves. The illusion is so great in this case, that some of your pupils may find it hard to believe, that there is no progressive motion of the water toward the shore; but they may be convinced by showing them that any object floating on the surface remains always in the same place, the undulations only lifting it and letting it fall again, without carrying it forward with them at all.

INFINITE VARIETY OF POSSIBLE UNDULATORY MOTIONS.

Your pupils should be led to see that the number of undulatory or vibratory motions of different kinds, which we may conceive of as existing in nature, is infinite. To take the case of the rope lying on the ground for example, the hand which imparts the motion, instead of simply rising and falling in a vertical line, may describe a circle, in which case the undulations transmitted along the rope will assume a different character. The motions now transmitted, instead of a series of simple vertical waves, will take the form of spiral convolutions, like the turns of a corkscrew. If the hand describes an *oval* instead of a circle, and the rope is sufficiently flexible to transmit the motion just as it is given, the undulations will be different still. If the rope were *perfectly* flexible, then any motion whatever which the hand should give,—as for instance the form of the letter Z or that of any other letter of the alphabet, or of any other conceivable figure, would be transmitted,—each giving rise to its own peculiar series of motions along the whole line.

All these undulations belong moreover to one class, namely those formed by motions, as the mathematicians would express it, *at right angles to the axis of transmission*. There is besides this another class, consisting of motions *parallel to the axis of transmission*,—or vibrations of elasticity, formed by alternate condensations and expansions of an elastic medium. It would not be possible to go into this subject much in detail with your pupils. You can only give them the general idea that the possible forms which undulations and vibrations transmitted through elastic and other media, may

assume, are infinitely varied, and that in the opinion of men of science at the present day, there exist such media in nature wholly inappreciable by the senses of man, and that the phenomena of light, of magnetism, of activism, of heat, and of electricity, are probably to be referred to motions of this nature, transmitted through such media, and not to any progressive motion of specific substances.

We are not therefore to consider, in respect to a message transmitted along the telegraphic wire from Farmington to Boston, for example, that any material substance necessarily passes over or through the iron. It is thought more probable that it is some species of vibratory motion only, that is transmitted, but of what the nature of this motion is, or of the medium through which it is transmitted, absolutely nothing is known. All we know is something of the effects which it is capable of producing at the end of its journey. As I said at the commencement of my letter, there are several different classes of effects thus produced, giving rise to different methods of making and recording telegraphic communications. Some of these I shall explain in my next letter.

THE WONDERS OF GEOLOGY.

No. 2.

BY N. T. TRUE, M. D.

In our former article we assumed the proposition that the earth was once in a gaseous condition, and that it subsequently cooled down by the radiation of its heat into the regions of space, and became a globe of melted matter. The geologist sees everywhere abundant evidence of this last condition of the globe. The reader will bear in mind as he peruses these articles, that we see going on to-day in a limited manner the same processes on the surface of the globe that once existed on the grandest scale. The little rivulet washing along the sand, the shores of the sea, the upheaval of the earth in one place, and the sinking of another, and the out-

bursting of volcanoes are effects from the same causes as existed when, "In the beginning, God created the heaven and the earth."

Let us see if we can safely trace our steps back to this beginning, when everything material was in a chaotic state. The earth revolved on its axis as it does to-day. It whirled along in its orbit through the regions of space at a temperature, which, judging from that of the atmosphere near the north pole, must have been not less than one hundred degrees below zero, (-100° Fah.) In such a temperature its surface must have been cooled down so as to form a crust all over the globe.

It must be borne in mind that the elements which compose the earth were the same then as at the present time. This crust then must have been composed of those elements which would cool the soonest, and which were in the greatest abundance, and whose specific gravity was among the lightest of the elements. We might infer then, that rocks composed chiefly of silica, alumina and potash were among the first that were formed. Such rocks would be nearly allied to granite in composition and character. The old doctrine that granite, syenite and porphyry constitute the foundation rocks of our globe, and consequently form the base of all our mountains, is not now generally received. There are many of our largest mountains which exhibit no indications of granite, but are composed of sedimentary rocks to their very base. The oldest rocks known to geologists are sedimentary, or stratified. Still, we may well suppose that the early crust of the globe was granitic in character, or rather, that it was composed of materials which had slowly cooled and crystallized into rock. Such rocks are not stratified, and are called *igneous* or *Plutonic* rocks.

The geologist might well pause here, and revel in his imagination at the condition of the globe at this stage of its history. Nor is such a contemplation by any means valueless. We may well suppose that such a scene would not be one of repose. The seething, boiling mass beneath would not leave a smooth surface upon the globe. There were tides and currents then as now. This crust would be broken up into fragments and crowded together in places, just as we see the ice jammed together on the surface of a lake after a wind, or an arm of the sea frozen over and broken up by the tides. Steam and gases would belch forth from the depths below through the crevices of the rocks, and these would be followed by ejections of melted matter which would cover the crust in places. Portions of the crust would sink and be remelted. This process would go on till at last the materials would become in a measure fixed, subject to undulations over larger surfaces, and an occasional fracture and escape of gases and melted material from below.

Under this state of things we know not what electrical changes were going on. Thunders and lightnings may have been vastly more frequent and terrific than anything we can now picture to the imagination. Chemical changes were going on in every possible manner, and would be accompanied by electrical exhibitions on the grandest scale. The fiat that went forth, "Let there be light, and there was light," could be explained on scientific grounds. The earth was illuminated from the action of the elements on each other in that period of the earth's history when harmony was growing out of chaos. There was no need of the bright light of the sun, nor of the moon, and so they did not appear upon the face of the earth till a later day.

In these terrific storms among the elements, the denser materials would be mixed with those lighter, perhaps on the same principle that a denser gas will be diffused through a lighter one. Hence we find iron abundant among the oldest rocks.

We may imagine then the surface of the globe after its crust had become cooled to such an extent as to be tolerably well fixed, to have presented a rough, jagged appearance. Could the eye of a mortal have looked upon its surface, he would have found it more desolate and forbidding than we could dare to paint from the imagination. Not a plant or an animal on its surface. Nothing could be seen to relieve the eye. The mind of man would naturally have despaired of ever seeing such a globe fitted up to be the abode of plants, flowers and trees, and much less of animals, and man at the head of all this. But we shall soon see that there was a design; that a mighty architect was at work laying the broad foundations of the earth so as to become in due time the abode of a superior intelligence.

One of the greatest wonders of geology is the manifestation of the law that, in the beginning, all the elements constituted a unit. The original creation of the universe in a homogeneous gaseous state, is an example of this law. The high degree of heat which pervaded the elements that now constitute the earth served to keep them asunder. If we may be allowed to coin a word, the earth was in a *unified* condition. Some chemists have carried this idea so far as to suppose that what are now known as elements, were originally one simple substance,—a unit. As it changed from a gaseous to a liquid state, a portion of it was still left in its original form, constituting a dense atmosphere around its surface. Here is the first step towards individuality. Thus as we advance in the history of our globe, we shall find that it gradually lost its condition as a unit, until

when creation was completed, it assumed the utmost diversity in character.

We may then assume the proposition, that the first changes made in the structure of our globe were the combination of the elements into a gaseous, liquid and solid state, conditions essentially the same as exist at the present time.

It will be our object in subsequent articles to examine these three conditions, and ascertain the manner in which they have assumed their present definite character.

LETTERS TO A YOUNG TEACHER.

No 5.

BELFAST, January, 1868.

MY DEAR FRIENDS. When I invited you to contribute to the *Normal* from even your brief experience, I did not suppose I should receive such a ready response, for it seems that one of your number had already done so, and her letter was in print ere yet the ink in my invitation was dry. I am very much pleased to hear from your first representative, and hope that communication will be the first of many from you detailing your experience and offering your mite of knowledge toward sustaining the columns of your magazine and making it, as you can make it, the most interesting and best teacher's monthly in New England.

Allow me a few words in reply to the above-mentioned letter specially, and perhaps they may not be uninteresting to you all. I will acknowledge that I was somewhat surprised at its origin; I had expected to have heard from one of my own sex, as you will have noticed my remarks were particularly addressed to them, or the teachers of our winter schools in the country districts, who are principally *masters* and not *mistresses*, or if you like the term better, schoolmasters, and not schoolm'ams. However it is just as well, if not a little better, and I assure you I have no objection to your teaching winter schools in all cases where practicable; in fact I am pleased to know that so many lady teachers are thus engaged, but here you will allow me to say I am opposed to your teaching for such comparatively small wages. It is a pet belief of mine, that if one person performs a

piece of labor with the same skill and just as well in every particular as another, they are entitled to the same remuneration, without regard to sex. So far you may count on me as a woman's rights man.

But to your letter. Your location, "Up Country," is delightfully uncertain, but I can see good reasons why it should be so, and can readily forgive the omission. You say that when you gave your age, sixteen, to the committee they thought you "too young to teach the big boys." I agree with them, and if I had been one of that committee I fear I should have declined to furnish a "certificate," on that ground. The experience of two or three terms of summer school, and a few years more of age is a requisite for a female teacher of winter schools in the country. Do not misunderstand me; this is a general rule. There may be and are exceptions, and there are governing circumstances, as for instance, the location of the school, the number, character, age and degree of forwardness of the pupils &c. You may be entirely successful; I think you will, for you seem to have entered into the work with a determination to succeed.

Your account of the peculiarities and blunders of your examiner was interesting, and laughable, and I have no doubt but many others could furnish its counterpart. The fact is, the school committees in the country towns cannot be expected to be composed of very learned persons or erudite minds, neither are they quite up with the times in minor educational matters. But upon the whole they are generally an honest and common-sense class of men, and will not make a great many mistakes. A good teacher will never fail of receiving a recommendation and assistance, and the young teacher may rely on kind, considerate usage and sympathy, though it may be extended in a comparatively rough and unpolished manner.

You further say you "have not a model school." Don't let that trouble you, for the chances are nine to one you never will have. Model schools can only be found under peculiarly favorable circumstances, and those conditions cannot be found in a country school district. You are doing your best; continue to do so and you will approximate your model so far as is possible under existing circumstances. Your pupils still whisper some. Will I tell you how to prevent it? I cannot tell you, neither can any one. There is no royal rule for such use. You must depend upon your own resources. A course of action that would effectually cure one of your scholars of this habit, would have no effect upon another. They are not all constituted alike; if they were, teachers could govern by machinery. But you must be your own judge. I can only offer you one little bit of advice; keep them busy. Their active brains require labor and

if you can turn their attention in the direction of their studies, you have done much towards checking one of the greatest evils of the schoolroom.

I have often noticed the want of politeness to which you refer. You can only succeed in correcting it by steady persistent effort and labor in that direction. Children catch the color and copy the condition of their surroundings. Teach them that in and around the schoolroom, at least, proper language and due politeness is necessary. But my sheet is full. Let me hear from you often upon any matters connected with your profession, and pardon me, if in what I have said I have disagreed with what you have believed or have failed to meet your expectations.

Very truly yours.

GEO. E. BRACKETT.

WANT OF SYMPATHY BETWEEN THE COLLEGES AND THE SCHOOLS OF OUR STATE.

There is not much unity to our system of education in Maine. We have Colleges, High Schools, Normal Schools, Academies, Grammar Schools, Primaries, and Kinder-gartens; but with all this variety of grade they do not constitute a symmetrical whole. In the successive grades, from the Primary to the College, it is difficult to point out many leading features which indicate that those schools have any special reference to the next higher or next lower in grade; or that their main object is to do a *part* only of a great work. Each is anxious to do too much. The ambition of teachers and parents is fast bringing down into the Primary school the studies which really belong to pupils in their teens. Books are swarming from the press in which we are told that "the sciences and the higher branches are brought down to the level of the Grammar School," although the pupils therein are not up to the level of the studies, and may not be able even to write a decent English sentence, or to compute accurately the items of a butcher's bill for an ordinary dinner. Pupils go to the Normal School to learn the common English branches of study, instead of the principles of communicating instruction and of school management. The Colleges adhere with undying tenacity to their old curriculum, and growl out their dissatisfaction because entering students are no better prepared for admission; but take few or no measures to co-operate with preparatory schools to secure better qualifications.

Now we will not say that this state of things in our educational system amounts to a hodge-podge; but we may with truth say, that it makes that system a very awkward one, and greatly impairs the efficiency and utility of our schools, in their whole course from Primary to the College. As a necessary consequence, every teacher labors at a disadvantage; every pupil fails to receive the full benefits of his school; every man who pays a school tax, or a tuition bill, sees a portion of his money expended without full and adequate return. The adoption of a thoroughly judicious system of organization and management of our schools, would save twenty-five per cent of the money now expended; or, what would be far better, would make our present appropriations more efficient and productive of greater good. This state of things is not right. There should be harmony in the working of our educational machinery. From the Primary department upward, the different grades should supplement each other, and there should be in the working of each grade a special adaptation to a complete education. There is a natural order in which the faculties of the mind are unfolded and developed; and there is, also, a peculiar fitness in the several branches of study for promoting that development. It is, therefore, of the highest importance that all our educational agencies should be conducted in accordance with those laws of the mind and of mental culture. Such does not, however, seem to be the case to any considerable extent at present in the schools of Maine. In their course of study, and in their organization and management, there is too much of whim and caprice, and not enough of fixed and well digested plan.

What shall be the remedy? Without dwelling at present upon the importance of a more liberal appropriation by the State, to enable the State Superintendent to give more time and thought to the inauguration of a better system of instruction and administration, it seems to us that very much may be accomplished by the teachers and managers of our educational institutions, if they will co-operate in the work. With all due respect, we think the presidents and professors of our Colleges repose a little too much on their dignity. They are comparatively unknown to their fellow-laborers in the lower departments of educational work. Yet how immensely the success of their labors in the College depends upon the character of the schools below. If they would, by frequent correspondence and occasional meetings, confer with the teachers of High Schools, Academies, and other schools of like grade, there might be arranged a more uniform scale of requirements for admission to College than now exists; and the teachers of those schools would receive many valuable suggestions from College

officers in regard to the kind and methods of instruction best adapted to prepare students for College. That such an interchange of opinion upon kindred pursuits would be highly and mutually advantageous, there can be no reasonable question. We incline to the opinion that the legitimate results would be something like the following: The managers of the College would take more interest in the High School and the Academy. The teachers of the High School and the Academy would take greater interest in the College. Those fitting for College would enter with better preparation, and with more credit to themselves and to their instructors; their College work would be easier, and productive of greater good; the standard of scholarship in the school and in the College would be elevated; and better educated graduates would yearly leave the halls of learning for the business of life. And this higher influence of the College would be felt down through all the grades of schools; for it would become an efficient power for lifting up and improving the standard of culture in all those schools. Such results may with reason and certainty be expected. Are they not worth the trial?

The Normal School is also susceptible of a like improvement from the College; and the latter would be equally benefited in return; for the Normal Schools are destined to give tone and character to the instruction in all our schools; and it is the *character*, more than the amount, of instruction that determines the qualifications of students for admission to College. By a legitimate application of the same principle we could trace its influence into the Grammar and the Primary School; but such application will be anticipated and understood without further comment.

We have asked for a better acquaintance and a greater co-operation between the College and the schools. It will be evident to every one, that with equal propriety we may ask for the same for the schools themselves with respect to each other. The High School and the Academy should confer with the Grammar School, and the latter, with the Primary. They have a community of interest, and neither can do its highest work without the aid of the other. Teachers of all grades, therefore, must come more in contact with each other. If College officers have kept themselves too much aloof from the teachers of lower schools, those teachers have also kept too far in the background with respect to each other and the College. We need to know more of each other; to interchange opinions upon our common work, and to cultivate a higher interest in our calling, that shall lighten the drudgery of the schoolroom and prepare us for greater usefulness. A. P. S.

SCHOOLS AND SCHOOL MASTERS OF THE OLDEN TIME.

PART III.

We had our days of public examination in the different branches, when our schoolroom was ornamented with drawings, specimens of penmanship, &c. Nothing, exhibited on such occasions, seemed to afford more general interest to the visitors, than these products of juvenile competition of the pen and pencil.

Manuscripts, containing their arithmetical operations, added to the variety, and became, in fact, our only *diplomas*, though conferred by our own hands; and they answered a good purpose, for inspection and approbation afterwards. Here permit me to inquire, if the writing and ciphering MSS. must be abandoned, why not institute in their place, for each scholar, a blank book, to which he may transfer some portion of his daily studies, answering the purpose of a diary or journal, which, (besides the benefit, the exercise itself may be, at the time,) he may have to refer to, long afterwards, as something corroborative of what the teacher has said in his *diploma*, should he have one, and so giving *prima facie* evidence of what he has been doing in school, those three, four or five years, thus "showing his ability by his works?"

Declamation by the older scholars, was practiced, and occasionally, a special invitation extended to the citizens to attend, perhaps at the Court House, where an exhibition of our best was afforded. The last occasion of the kind which I attended, was quite a success. Some of us made our mark then; and so gratified were the aristocracy of the village, that they were moved to extend, to some of the leading speakers, an invitation to meet at one of their dwellings, the next evening, and repeat our performances, and we did,—proud enough of it, too. To be sure, that period, like the present, did not abound in "Readings" and dramatic performances; Sabbath School rehearsals &c., or we should have escaped such an honor.

There were but few in school, who attended to Algebra or the higher grades of Mathematics; only now and then one, whose peculiar genius led that way. Geometry and Trigonometry received a portion of my attention, during the latter part of my school-life.

I remember to have kept a journal of a voyage to Europe, without leaving "the chimney corner," as they say, performing the operations by way of triangles and logarithms, and entering them into my MS., which afford-

ed me high gratification, at the time, and was pleasant to look at afterwards. Although no sailor, I was surrounded by salt-water associates and influences, more or less, then and always afterwards. This was time, by no means lost, I now judge.

Our schoolhouse was warmed by the old-fashioned fire-place. It was a very wholesome heat, only there was too much cold in it; and of a severe cold day, with the time taken up in going to and from the fire; frozen ink, feet, almost ditto, and short days, it would seem that it hardly paid to have a school at all. But there was no help for it; there was no dismissal. and we did our best, and waited for a warmer day.

Stoves, as now, were not then known, either for churches or school-houses; and the winters of those times "when old Mr. Low made almanacs," were quite as cold as now; although thermometers we seldom saw, to tell exactly how cold it might be. Our ears and fingers were good substitutes.

Still there were six hours per day to be employed somehow; and we could *look* at our rousing fire, and then upon our cold slate, and read a little, so that all who were rightly disposed, could be picking up something; frozen thoughts and problems as they might be,—yet in a winter's drilling, even with all its disadvantages for study, each one had laid by something and stowed away the commodity in his little ship to trade with in the future, and I have lived long enough to see the wisdom of treasuring every iota of knowledge in our power, of whatever sort; be sure, it will come in play, at some other day. But the little ships, what became of them, I sometimes seriously inquire. "Life's voyage, what is it?" • Uncertainty, all! Some were lost, at first setting out; others, in mid-ocean; some stranded, and only here and there a successful voyager.

I visit the place from time to time, as years roll on, and I find I am getting to be a stranger among them. I inquire for my early companions: though I know but too well. "Where is John Russell now?" "He sleeps with his fathers." "And James Bartlett?" Answer. "Where the forest once stood, and in the new cemetery, under yon marble slab, there lieth he." and I read and saw it was so. Farewell, ye companions of my youth.

GOVERNMENT.

The government was after the ancient sort, as old as the bible at least, and was of a mixed character as it regards the *modus operandi*, consisting of the corporal and suasive, yet monarchical as it related to the grand principle. There was no consultation between master and scholar, neither out-doors, a snowballing, nor in-doors by way of consulting or compromising.

Our teachers at Plymouth Grammar School, being always of the first order of respectability, were not to be disobeyed with impunity. Besides, in those days, children at home, had been well broken in, and came into school, more or less under the influence of a wholesome, parental discipline.

Teachers made full indication of their intention to rule, where they made a display of their desk furniture; a broad rule, or ferule, &c. For scare-crows, they were useful, if for nothing else, and the master doubtless felt the stronger in physical position, for possessing these significant emblems of his authority. But no fear. They were generally called to a good and generous service, before the term closed.

And in most schools, as in most families, some accidents will happen and some outbreak of disloyalty, will occur, whereby the strength of the government is tested. To give a sample of the manner in which such a case was disposed of allow me to relate the following, to which I was an eye-witness. The transaction is vivid before me, although I do not remember all the boys' names. I rejoice that I was a spectator only. Some of the very largest of scholars were among the participants. The scene was enacted under the reign of Master Wood; Hon. Wilkes Wood, I may as well call him, as he was then a student at law, and afterwards filled an important office in that part of the Bay State; and was a teacher of equal match with Bradstreets and Shurtleff, once masters of the same school.

He was a graduate, somewhat advanced, and a gentleman in behavior, and well-dressed. He was of compact, masculine build, about middle height. His countenance denoted courage, and decision, and his whole appearance a match for any opposition that would be likely to manifest itself in school; and yet as far as I can remember, there were lines of unmistakable kindness and good nature on his face, that gave the well-disposed, every thing of clemency, to hope for from him. His eye, black and piercing when passive, but roused, it spoke lightning.

The master and the culprits,—I see them together now, face to face; the scared, sheepish, pale, mad, half a dozen or more of them, in presence of the governor of the school, whose wholesome restrictions they had set at nought, and he about to assert the authority of his office. It was a rebellion. These fellows had probably banded together out of school, not to regard the ringing of the bell, and to absent themselves for a time, to suit their own convenience, and then entered in a body, carefully watched, however, by the eagle-eyed Preceptor, and by him, stopped, as they came in, instead of going to their respective seats. There they stood, aghast, at what they saw was brewing. Mr. Wood had assumed the position, which the case demanded, viz. to as-

sert the dignity of the government, and his own authority. Unquestionably, law, reason and justice, were on the side of the master.

But few men could feel that they could meet the necessities of such an occasion, perhaps for the first time, unmoved. The master was becoming agitated, nervous. I relate from a long memory, but will give the substance. I seem to see the varied movements of his strongly-marked face, and to hear him, in a voice that made the whole school quail, at the sound,—“Bring me a good, stout switch.” The truants saw that they were coming into close quarters with retributive justice.

“*Take off your jackets, every one of you.*” Now, there was no playing, nor misgiving about Master Wood, we all saw what was coming. There was considerable squirming, and some crying. In presence of the whole school, and by him, who was its governor, was this penalty so justly due, to be enforced. There was no attempt at a compromise—as “please stop till after school, and I will have a talk with you about this misdemeanor;” or “I shall notify your parents of it, or send for some of the committee to come and settle the matter.” He knew, he *felt* that he was master of that school, bound to enforce the penalties of disobedience to its reasonable requisitions; that this duty belonged to *him* and no one else. If he were not competent, in every respect, to discharge the present important duty, he was not fit for his office. Other cases there might arise, when moral suasion would have done just as well, perhaps better. Not in this. An unwonted strength seems to come to that right arm of the administrator of justice, as the blood kindles in his face.

The delinquents receive the well laid on blows, and one by one, each sneaks to his seat. One principal ring-leader, (I will not call names; it is sufficiently out of order to “tell tales out of school;”) I remember, seeing an open window, sprang for it, and over the benches, almost with a single leap cleared, not to the regret of master or scholars. This flagellation, was probably one of the best “exercises,” for the school, and for the culprits, that had been enjoyed for a long time. Threats of revenge towards the master were said to have been made by some of the larger of the insurgents, but nothing came of it. Some of them became ship-masters, and doubtless, lived to see, when standing at the helm of their own ship, what a bitter essence is contained in *revolt* and how lawful and right it was, that the master in school, as well as the commander of a ship should govern in both cases, and perhaps calling to mind this scene of their school life, they have learned freely to forgive Master Wood, for their timely, faithful, well-deserved flogging.

Our school was divided into three classes. Beginners composed the third class; those who just got along to a middling degree of attainment in knowledge, and were satisfied with no further advancement, composed the second class. Is it reprehensible in the writer, to speak of his youthful aspirations, towards a higher grade, and his reaching it?

The schoolroom was finished with regard to its seats and desks, in the amphitheatrical style. The upper or back seat of all, was for the first class. I was sometimes at the head of it, and although I write of scenes more than sixty years ago, I think I remember my feelings, when I was at the head of the school, and the ideas I had, when I found I could get no further, which were, as though I wanted to push away the wall to make room for a still higher seat. I will not here repeat the Great Alexander's wish, but there must have been something analogous to it, occupying this little lump of clay. Such are my impressions; they may have been only as a dream of the night.

Ambitious! and was I so, and was it, is it right to be so? Call it emulation, or encouragement, which the teacher urges on his pupil by every winning way in his power to excel.

The most engaging, and perhaps successful Preceptor, I ever knew, perhaps the most beloved by his pupils; whose kindly pleasant tones of voice, (which are on my ear to day,) the appropriate incitements to win his scholars to good behavior, and to lead them gently along the path of knowledge, and who seemed to take an infinite satisfaction in his work, was the gentlemanly, the courteous Principal of Portland Academy, some half a century ago. So that in advocating the *fortiter in re*, we do not overlook the *suaviter in modo*. Combined, they form the perfect government of a school. Nor have we the disposition to call in question, the advance which has been made in many respects, in the science of school-keeping; we only say, make still further and still further advances. And yet I may claim for those, whose interests I now represent, even those of a bye-gone generation, much that was efficient and successful in the management of the schools and school-masters of the olden time. It is a question of Loss and Gain, after all.

“It is easier to gain credit for goodness by a glistening eye, while listening to some story of self-sacrifice, than by patient usefulness. It is easier to get credit for spirituality by thrilling at some impassioned speech on the platform, or some sermon from the pulpit, than by living a life of justice, mercy and truth.”

HOME FROM SCHOOL.

BY W. C.

A hurrying tread of little feet
Along the beaten way,
A merry sound of laughter sweet,
Of boys and girls, at play.

Home from school the children run
With bounding step, and fleet,
O'er the green earth, which, in the sun
With life doth throb and beat.

No more lessons to be learned,
'Through weary summer hours,
No more prizes to be earned,
No teacher, but the flowers.

The light winds cool with soft caress
The feet so bare and brown,
And warm and soft, as prayers that bless,
The sunshine falleth down.

The wild birds singing, from the skies
Carol an opening hymn ;
The book of nature open lies,
The children read therein.

Each simple line, with beauty fraught,
Hath power their hearts to reach.
The lessons learned by nature taught,
No weary books can teach.

And when, at last, by her tuition,
'The seeds implanted, spring
Into new life, with full fruition,
No humble offering,

May then be brought no unripe sheaves,
Laid at the Master's feet,
Mingled with tears and withered leaves,
But golden store of wheat.

And should they, in the coming years,
 With garments soiled and torn,
 From walking through the dust and tears
 With tired feet and worn.

Long for the peace that bringeth rest,
 Then will the children read,
 Life is a weary school at best,—
 May Christ their footsteps lead.

Children the same, to learn of Him.
 And he will teach them, when,
 To that life, shadowed by no sin,
 The angels welcome them.

HOW CAN WE OBTAIN SUITABLE TEXT-BOOKS FOR OUR COMMON SCHOOLS.

In my previous article I considered the three fundamental qualifications which should be possessed by writers of text-books for our common schools. 1st. A clear apprehension of what studies should be taught, and how far each, without trespassing upon the others, may be pursued. 2d. A clear apprehension of the natural order of intellectual development, to the different stages of which all studies and methods of teaching should scrupulously conform. 3d. Ability to write the English language in a clear and graceful manner. But how are we to obtain text-books from such men? That is the question I purpose briefly to consider.

It is manifest that the present open competition in the supply of common-school text-books must give way to something quite different, for under this system we have naturally gone on from bad to worse during the last fifteen or twenty years. It has been a competition, not of brains in writing text-books, but a competition of publishers in introducing them. Not the merit of books, but capital, enterprise of agents, "cheek," occasional bribery of teachers and committee-men have carried the day three times out of four. From the circumstances this was to be foreseen,—and I have it as the experience of at least one man who was, for several years, a very successful book agent.

But it may be said that, even if text-books do not now go into ou

common schools upon their relative merit, yet they must necessarily possess a considerable degree of absolute merit, since it must be for the interest of the publisher to secure the best books possible. Now, this is a grave mistake,—for the interests of the common schools and of the publisher are not the same, but antagonistic. It is the business of the one to make the most money possible; of the other to afford the largest amount of knowledge and intellectual discipline in a given time. For example, in the matter of arithmetic, the good of the common schools may, and I believe it does, require only two small text-books, costing \$1.50; but it is decidedly for the advantage of the publisher to print a series of six, costing \$6.00. By supplying a single pupil, in the first instance, the publisher would make 50 cents perhaps; but in the latter instance \$2.00. Thus it is always for the interest of the publisher to make text-books, whether for arithmetic, grammar, geography, or any other study, large and voluminous, while it is always for the interest of the common schools that the text-books should be small and few as possible. It is not therefore, a matter of surprise that a certain publisher should destroy the stereotype plates of an arithmetic which he had good reason to suppose was the best ever written in this country. There were only two books; and so this arithmetic was forced to give way for another with a series of six books and corresponding profits.

The reward of the writer of text-books also depends, like the profits of the publisher, upon the size and number of the books. So the writer works under the stimulus of money in addition to the zeal which he naturally feels for his special study. Usually the latter is enough to carry him beyond all reasonable limits; for he is apt to imagine that his special study, the one for which he is making text-books, is of more importance than all else, and should receive unlimited recognition in the common schools. Hence the text-books push and crowd each other. Such is the system under which text-books for our common schools have been produced during the last fifteen or twenty years. It could not well be worse, and I am not at all surprised at the semi-barbaric, abominable results which it has given. Nor will it be possible, under this system, ever to secure, in the future, suitable text-books. So I would without a moment's hesitation strike down this system, substituting for it another which should acknowledge proper restraint and give us a *competition of brains*, for that is the thing needed.

This whole matter of text-books for the common schools of the State I would place, therefore, in the hands of a few men, after the manner of France,—a Board of Education, if you please, made up of the best men

for the purpose in the State. They should be empowered, not alone to select from published text-books, but to procure, from men best qualified for the service, the writing of new ones in accordance with general outlines submitted by themselves after due consideration of the wants of the common schools throughout the State. Then the lists should be thrown open to all comers,—to all new writers of text-books. Having secured satisfactory manuscripts, they should then get the books printed at the cheapest rates. In five years the State would thus find itself supplied with text-books, each happily adapted to its proper work in the common schools. And I venture to say that not only would the text-books be vastly better than now, but we should secure uniformity,—an important thing of itself,—also an annual saving, in the cost of arithmetics, grammars, geographies, reading and writing books, of at least \$75,000; while each constant pupil in our larger towns would save certainly three years of time to the end of the grammar school course, obtaining, nevertheless, an education quite as efficient as now. I do not make these statements at random, but upon careful consideration. In a word, the use of no text-book should be permitted in our common schools, until it has been passed upon, and its merits determined in accordance with general principles, by a competent Board of Education.

Let us try this system but half as long as we have tried the present, and everybody will, I venture the prediction, be astonished at the good results.

C. B. STETSON.

Auburn, Jan. 20, 1868.

The philosopher, the mystic, the poet, the skeptic, the man of the world, the writer; these are the present moral categories, the *summa genera* of human greatness as Mr. Emerson arranges them. From every point of view an exceptionable catalogue. They are all thinkers to begin with, except one; and thought is but a poor business compared to action. Saints did not earn canonization by the number of their folios; and if the necessities of the times are now driving our best men out of action into philosophy and verse-making, so much the worse for them and so much the worse for the world. [*Froude.*]

SAY "YES."

BY EDWARD P. WESTON.

It is sometimes said, to a man's discredit, "He cannot say *no*," or "He says *yes, yes*, to everybody; as if to say *no* were always a remarkable virtue, or to say *yes* were a culpable weakness. I believe in *no*, when *no* is the word demanded by the circumstances. Parents and teachers are often compelled to utter it. But I am equally a believer in *yes*, perhaps a little more so! I have been led to the conviction that *yes* should be used by teachers in the schoolroom oftener than it is, by much experience in saying *no*—and *yes*—and by observing the effects of both.

When a pupil asks for something wholly unallowable, the teacher should not hesitate to make a decided but pleasant refusal. When the request is clearly proper he will of course grant it. It is in cases where there seems to be no special reason for granting, or for refusing, the request, that *yes* is better said than *no*.

No, often repeated, is discouraging to the pupil and seems unamiable in the teacher. *Yes*, on the other hand, is always a pleasant answer, and gives the impression of the teacher's spirit of accommodation. Even if it might appear slightly better, in itself considered, that the request should not be granted, the good influence of a kind permission might be sufficient to turn the scale from *no* to *yes*. If the pupil perceives that the teacher goes to the extent of his judgment in granting favors asked, he will submit the more cheerfully when a request is denied.

But when the constantly recurring *no*,—*no*,—*no*, is heard sounding through the schoolroom, the impression becomes, inevitably fixed in the mind of pupils, that the teacher is unreasonable and stern and unaccommodating, and they will less cheerfully regard either command or prohibition.

The teacher should always *appear* willing, if possible, and *be* willing, to gratify and accommodate and aid his pupils in all things reasonable, and a good-natured *yes* is the best exponent of such a disposition.

It should be added that the *manner* of saying "yes," is as important as the answer itself. A remark is reported from some student at college, that he would rather be refused a favor by Prof. A. than to have it grant-

ed by Prof. B. The manner of the former was urbane and pleasant, that of the latter harsh and repelling, even in granting a request. Let it appear that your consent is not given with a grudging reluctance.

Then say *yes* whenever you can. All those in favor of this proposition, will say *aye!* The ayes have it. It is a vote.

OUR COMMON SCHOOLS.

BY G. T. FLETCHER.

At this season of the year our common schools are in their most flourishing condition, and if they are not doing the noble work well in which they are engaged, where rests the blame? The important relation which general education bears to a free government is not fully realized by our rulers or people. What are some of the evidences of this fact? Our prisons and asylums must be models of architecture, though the inmates of the one have lost character, and of the other reason; this expenditure may be judicious, for possibly the beauty of the edifice may exert a salutary influence upon the corrupt heart or disordered brain of the occupants.

Had these elements of beauty in architecture met the gaze of the child, as a daily object lesson, when he spent so much of his youth in the district schoolhouse perhaps his character would have expanded into more symmetrical proportions, and the man might not have become a murderer or a maniac. But unfortunately our schoolhouses are in many instances, the poorest buildings that one sees in the State, and the most unpleasantly located. The house and the surroundings for good or evil help to educate the children. We rejoice to know that the people are beginning to realize the relation which a good house bears to a good school; this is a sign of improvement.

No great advance can be expected in the standard of our schools until the district system is abolished, but as the day of our deliverance from that may be distant, we must work, though at a disadvantage. The people must do their part of the noble work. The school fund should be a more popular investment than government bonds.

When the young men and women, who might make good teachers, can command high wages and constant employment in elegant stores or comfortable offices, we can hardly expect them to make the sacrifice required of the district school teachers who can obtain employment only three months in the year at low wages. If these are the existing circumstances, who are teaching our common schools this term? In most instances, they are young men, who would like other employment, could they obtain it. Many are college students who are earning a few dollars in vacation to defray the expenses of next term; few of them design to become teachers, or have given any special pains to preparatory work; teaching is a mere stepping-stone for something supposed to be higher.

Many of this class of temporary teachers take no interest in the work; their course of study has not fitted them to teach the branches pursued in the common schools, and having little desire to excel in an employment which is soon to be abandoned, the interests of the school are sacrificed. We know that some collegians make excellent teachers, they are thorough scholars and conscientious energetic men. Their record in the schoolroom proves that they should remain there. We wish they were the majority of their class. The larger number of our teachers have spent one or more terms at an academy. They are preparing for college, or are striving to obtain a better education than the district school affords, that they may become more useful and honorable members of society. A few are intending to make teaching a permanent employment. Most have given some attention to the work of preparation for teaching, an employment which is to be temporary.

We believe that the most of those who labor in our common schools belong to the latter class of teachers. They have perhaps done nearly as much for the cause of education as could be expected under the circumstances. They have been the standard bearers. Are the people satisfied with the progress that has been made? If not they must offer greater inducements and then demand better work. Young men and women, for your own honor and the good of the cause, do you desire to raise the standard of education? Choose teaching for a permanent employment then, prepare yourselves for the work as men prepare themselves for the professions and the trades. Do you need funds? Then teach, for experience in your chosen work will show to you your deficiencies, will beget a desire to be better prepared, and create a love for the noble calling. A life's study must be devoted to a life's work would you be successful, and on each day and every day make progress. Do teachers receive too small a compensation? Then they must do still better work; they must make

their influence felt upon the community, and appreciation and compensation will eventually be equal to what merit demands. Make teaching no stepping-stone for something higher, there is no employment above it. The position of an educator is one of the highest honor and responsibility.

COMMON SENSE.

BY W. WARREN.

Common sense acquaints us with common things. It is the sense that guides in the ordinary affairs and occurrences of life. It is a sort of instinct or intuition, that acts spontaneously, teaching us without study—giving us knowledge without conscious reasoning, and so leading to right results. We are all the time surrounded by circumstances and responsibilities that demand prompt attention and decision. We need a quick sense to guide us in these affairs. We have not time for the tardy steps of careful reasoning and calculation; we have need to judge instantly as to what is proper, and what is improper. God has given us just such a guide: It is common sense. It is a necessary endowment for human life. It tends to fit us for our sphere. It gives us quick discernment, ready apprehension, a just discrimination, and prompt adaptations. It has an open eye to every day affairs and duties and happenings. It gives us a knowledge of the world as it is. It makes us acquainted with things as they are, with circumstances as they rise, and exigencies as they come.

It is a convenient sense, a much needed endowment, to help us on well in life. It keeps us from mistakes, improprieties, incongruities and mortifying blunders. It acts as the hair-spring in the watch, to regulate life's ordinary movements and behavior. It puts us on our guard; it keeps us in our place; it prompts us to do proper things, to say proper things, and to be silent when silence is a grace. It is a kind of conscience in the intellectual man as is the moral sense in the spiritual. It acts quicker than reason, if this has to take the slow steps of logic. It acts surer than the understanding, in its tardier processes of investigation and calculation. It

sees by a sort of intuition, the relation of things; the fitness and propriety of things.

Common sense has no eccentricities, nor specialties, nor oddities. It does not attempt the winged flights of genius. It does not use the lead and line that fathom mysteries and measure the profounder problems. It doesn't use the glass of speculation and discovery. It has a humbler office—a more convenient and useful one. It is a home sense. Its service is in ordinary things—in every day affairs. It is an equalized, an averaged sense, beneficently distributed, for the convenience of man. God has kindly given us this facile endowment or light-armed equipment, to meet emergencies, and fit us for responsibilities, such as do not allow time for calculation, or the slow process of investigation. Its taper light shows the path to our *nearer* steps, the objects that come under the *immediate* touch, and reveals matters of our *closest* concern. Hence its great worth and use in the world.

There is what is called uncommon sense, that sees things remote and remarkable, that detects peculiarities and nice properties, such as escape the notice of common sense. Henry Ward Beecher sees things in the esthetic world that an ordinary eye could not see, till pointed out. Prescott saw things in the historic world, in relations and uses that almost no other one would notice. The imagination of Milton could create worlds of unearthly splendor and beauty. Kepler and Laplace were at home in the heavens, measuring their distances and revealing their laws. But these men made mistakes that would amuse us respecting this one little world. They were men of uncommon sense; they were marvels in the world of genius; but did not abound, perhaps, in the gift of common sense. They were not versed in ordinary affairs. Such fortunate, or unfortunate ones, ought not to attempt responsibilities for which they are not endowed. Such should not attempt to teach a common school. They might shine in a professor's chair possibly, to teach in the line of their peculiar gifts or genius, but not, perhaps, in a district school. I have almost doubted whether such persons ought to marry, save to put themselves under needed guardianship. A man ought not to take responsibilities that relate to the public, particularly the young, that has not a good share of common sense.

I ought to say here that some have what is called the power of mental abstraction, that enables them to fix their thoughts upon a given subject, and concentrate all their powers upon it, so as to forget other things, and be lost to the world about them.

This gift of mental concentration, though it may eclipse, or overpower the common sense for the moment, imparts great power and breadth of intellect. It aids one to reach conclusions and an eminence of intellectual attainment that are impossible to the ordinary mind.

Can the common sense be cultivated? Is it susceptible of improvement? It will not be assumed that this sense is totally wanting in any one: for education can't do the work of creation. Its province is development, merely. This sense is far more generally bestowed than what we call uncommon sense, or eccentric genius. It is well that it is so. We should suppose that it would be so. God gives endowments according to necessities. Not many geniuses are wanted in the world. *Uncommon* sense is not a staple or necessity of human life. If all possessed it, it would be cheap. Beauty consists half in its rarity. But *common sense*, like cold water and the staff of bread, is indispensable to the well-being of man. One that has it not, is saved from being a fool possibly by possessing extraordinary sense, which gives him, perhaps, distinction and world-wide renown.

But can either of these sorts of sense be cultivated. The susceptibility of cultivation presupposes the existence, in some degree, of the thing to be educated. We can't educate what is not. We are bound to suppose that all have a measure of common sense; so in all cases there is something to begin with, and build upon. This stunted germ of common sense is susceptible of improvement. It will be by slow processes; and never by assuming responsibilities beyond the strength of the slender sense to be cultivated. Let its exercise be quite up to the measure of its strength.

If the education of genius is a possibility, the education of its counterpart, common sense, is not a forlorn hope. If idiot powers can be educated partially, and usefully, why not common sense? Let neither be the subject of mirth or sport. Laugh as soon at the maimed, or the cripple. Let those who are well endowed, be thankful, and seek to make a wise use of their gifts; for to whom much is given, of them will much be required.

Among our daily or weekly confessions, which we are supposed to repeat as if we were all of us at all times in precisely the same moral condition, we are made to say that we have done those things which we ought not to have done, and have left undone those things which we ought to have done. An earthly father to whom his children were day after day to make this acknowledgment would be apt to inquire whether they were trying to do better—whether, at any rate, they were endeavoring to learn; and if he were told that although they had made some faint attempts to understand the negative part of their duty, yet that of the positive part, of those things which they ought to do, they had no notions at all, and had no idea that they were under obligation to form any, he would come to rather strange conclusions about them. [*Froude.*]

THE DEPARTMENT OF PRACTICE.

THE VERB TO BE.

We hope not to weary the patience of any, in our attempt to set forth what, with the light which we at present have, seems to be the true doctrine, or a small part thereof, in respect to the verb to be. It is not an easy task, especially since we do not feel inclined to occupy too much space in the promulgation of the perhaps somewhat peculiar ideas which we have received upon this important grammatical question. But the truth is of so much worth, and it is of so much interest to the live teacher that he find the same, that we have little fear that a discussion of this subject, which we think will be seen to have a deep significance in its connection with grammatical analysis, will not be welcome to the readers of the *Normal*.

We believe, that *the office of the word to be, is to predicate being*. We remember very well, that several years ago, when we read in a treatise on English grammar, that the expressions, "The horse runs," and "The horse is running," were equivalent, we wondered what the writer could mean by the term "equivalent," and that we, to say the least, doubted whether his doctrine was indeed true. We know, that further thought concerning the subject, did not tend to lead us to accept, but rather to reject this somewhat distinguished author's statement. Investigation and conversation with scholarly men finally led us to set aside entirely, and discard the idea that this is true, and to see, that the rejection of it, led to no inconsiderable difference in the analysis of the English language.

It may be comparatively rare, that the *sole thing* predicated in any sentence, is being. We are inclined, however, to think that it is not so rare as would probably at first be supposed. It was only a few days ago, that in conducting a recitation in Analysis and Parsing, we were struck with a form of predicating being, which is somewhat peculiar *in* our language if not *to* it. We quote the stanza referred to:

"There's not a flower that decks the vale,
There's not a beam that lights the mountain,
There's not a shrub that scents the gale,
There's not a wind that stirs the fountain,
There's not a hue that paints the rose,
There's not a leaf around us lying,
But in its use or beauty shows
God's love to us, and love undying."

It will be conceded, we presume, that the word *there*, has not, in the foregoing lines, its usual adverbial significance, of "in that place." It does little more than, to borrow the words of a recent writer on language, "make a convenient handle" to the clause which it introduces "in an elegant manner." The meaning of the first line is not changed, if the words, omitting "there," be arranged as follows: "Not a flower that decks the vale, is." And what is true of this line, is equally true of each

that follows beginning with "there." Now, that expressions similar to these are not uncommon in good conversation and with elegant writers, every one will be ready to allow. This being the case, we consider it fair to say, that few would probably be ready to allow how frequent is the use of the verb to be to predicate being alone.

But to return to the question whether "He runs" is equivalent to "He is running." Here it seems to us is a good point to turn upon. At any rate, we regard it as the point on which we turned,—away from a very generally received opinion, and into that which seems to be considered by many as grammatical heresy. Certainly we suppose, that if the expressions given above are equivalent, then the word "is" adds nothing to the meaning of the prior expression. What is asserted in the expression "He runs," if it be not the act *running*? And certainly if that is all that is predicated in the second expression, the word *is* does not add anything to the meaning of the sentence. Then indeed are the two expressions equivalent. But if there is a significance in the latter of these sentences not found in the former, and we insist that there is, then it seems obvious to us that that significant element is found in, and asserted by the word *is*. "The horse runs" may mean, that running is a characteristic of the creature; into the expression "The horse is running," has been introduced an element which makes it improper that it should ever be used for that purpose. "The horse runs" is often used to denote that running is a customary act of that animal; into the sentence "The horse is running" there has been introduced an element which makes it a truth limited to a certain time, to wit: that when the act of running is actually being performed by the horse; not so with the expression "The horse runs." In fact, we insist that the difference of meaning of these two expressions is essentially this: In the former *running* is predicated; in the latter *BEING running*.

But we are aware that it often seems as if *being, existence* were not asserted, when the verb to be is used. In the sentence, "John is happy," it is not of course the thing of paramount importance which the speaker or writer wishes to predicate, that John *is*. At the same time, it is impossible to predicate the attribute of the object, without predicating the existence of the same object. We quote:

"The verb *be*, then, when used affirmatively, to bind together a subject and an attribute, must be the *purest and greatest* or *fundamental* verb. If I say, 'God love,' 'The world beautiful,' the words are lifeless; but the moment *is* is inserted, it indicates at once the presence of an observing and rational being, animates the lifeless parts, and a thought, *judgment*, or *TRUTH*, is born! 'God *is* love.' 'The world *is* beautiful.' [Keri; Comprehensive Eng. gram. p. 197;]

It will be impossible for us to write more upon this subject the present month. It is one which perhaps has more interest to us than it will have to some of our readers. We dismiss the discussion as to whether *to be*, ever ceases to be a true verb, in cases where no other word can be said to effect predication, at least for the present.

LONG MULTIPLICATION.

[This was the old name. We do not know any serious objection to it. Our impressions are, that the process seemed a long one to us, in the days of our juvenile effort to master the operation. But simplified and systematized as given below, we

are inclined to believe that even we could have understood this subject in a short time. ED.]

MR. EDITOR: I have often noticed that those teachers and scholars who attempt any analysis of simple multiplication have much difficulty with the clumsy explanation usually given when the multiplier consists of several figures. I have adopted this method. When the pupil can multiply by 9 he is taught to factor it and then multiply by using the factors. Then he is taught to multiply by 10, 100, &c., his attention being called to the fact that this may be done by annexing one or more ciphers to the multiplicand and removing the decimal point to the right.

Every figure in the multiplier above the units should be reduced to units and then factored, one factor of which is some power of ten. The multiplicand is multiplied by this power of ten by annexing ciphers to it, and this product is multiplied by the other factor.

Advantages of this method. The pupil always multiplies by *units* and the *multiplicand* determines the denomination of the product.

Each partial product indicates its true value.

The pupil will readily and rapidly explain an example having several figures in the multiplier. If any teacher has found that pupils are troubled to multiply tens of millions by hundreds of thousands &c. I hope he will give this method a fair trial.

Example, multiply 625, by 432.	625,00
3 tens = 30 units = 10 units x 3 units.	432,
4 hundreds = 400 units = 100 units x 4 units.	270000,

1250,
18750,
250000,
270000,

The multiplicand is multiplied by 10 by annexing one 0 and removing the decimal point one place to the right; this product is multiplied by 3 units. Then the multiplicand is multiplied by 100 by annexing another 0, and removing the decimal point another place to the right and this product is multiplied by 4 units. G. T. F.

MISCELLANEOUS.

We hope the questions of our correspondent, whose letter we print below, will be answered by others who will call at the Department of Practice, during the coming month.

BROOKLYN, N. Y., Dec. 27, 1867.

MR. GAGE: Dear Sir: I see that you ask for questions. I wish some of your correspondents would suggest good definitions either original or selected for the following terms: What does the word *quantity*, as used in arithmetic, mean? What does the word unit arithmetically mean? In arithmetic have we fractions, or fractional numbers, or both? Very truly yours, W.

Another correspondent answers some questions, which were asked in the January *Normal*. The "problem" first alluded to below, may be found on pp. 30 and 31 of the preceding number of this magazine.

January 11, 1868.

DEAR MR. GAGE: I have been looking at that problem in the "Normal," and almost decided upon *two wrong* answers before I saw what I now think is the right one. I think A's loss was only the *ten dollars* which he took from his drawer to replace the counterfeit bill. Suppose the money not to have been counterfeit, the transaction would have been satisfactory. A, would have given C, the good ten dollar bill for which he would receive ten dollars in change, with no gain or loss to either A, or to C. B, would receive his pencil and his three dollars for his ten dollars, and A, would have the worth of his pencil. All satisfied so far. No loss to anybody apparent yet. Some time after this, C found that this ten dollar bill was good for nothing, so he took it to A, from whom he received it and A gave him ten dollars, and A is therefore *ten dollars* "out" unless he should some day get his eye on B.

The Department of Practice" in the Normal is just what I delight in. I don't expect to get the right answers to all the questions asked, but I will try every one. I think an easier way to do question ninth, in the December number, would be to reduce the twenty dollars to halves. $\$20 = \$40-2$, and the $\$1-2$ added would make the $\$40-2$, $\$41-2$. If three half barrels cost $\$41-2$, one-half barrel (1-2 being 1-3 of 3-2) would cost 1-3 of $\$41-2$, which is $\$41-6$; and 5 half barrels would cost 5 times $\$41-6 = \$205-6 = \$34.16\ 2-3$.

I hope "C. A. B." isn't interested in both of the Misses Brush; and I would give up Miss Brushes altogether, if I were he. M.

A gentleman who has had successful experience as a teacher, but who is not now engaged in the work of the schoolroom writes as follows:

Your *Easy Chair* exercises where correspondents can say a word on something which interests them, I think well of. When I was a teacher and took a School Journal, the question constantly came up, Can I learn how to teach from what it says, better than before its perusal? Hence I think that anything which seems to illustrate a study, or to present a truth in the clearest possible manner, should be encouraged. After thirty-four years' teaching I narrowed down my thoughts to this rule for my pupils. *When you have acquired a new idea strive to clothe it in the best possible language to be committed to memory,*

Do you know of an exception to this rule in grammar? When you pronounce the apostrophic *s* in the Possessive case, write it; otherwise, omit it. Example, John's hat, Righteousness' sake. If this rule hold good, why demand half a dozen sentences to express one idea, as is usually the case in grammar. An exception might be made to the use of proper names ending in *s*, but custom pronounces them correctly. Example. Jones's horse, Williams' Favorite. N.

Here is another letter, which is encouraging to us, and which we hope will be interesting to our readers.

HOPE, Dec. 29, 1867.

DEAR MR. GAGE: Allow me to congratulate you upon the very visible improvement you are making in "The Normal." Every number grows more and more interesting, and I could not think of being without it. Was pleased on opening the December number, to see that the first thing I cast my eye on, was something that I had put into practice during the week. It was in Brackett's letter in regard to making education of *practical* use. I have taken a new way of spelling in my school this winter, which I think very useful in small schools in the country. It is this:

We used Town's Progressive Speller, and I made use of the dictation exercises, having the class write on their slates as I read, and after they got their lesson written, pass their slates to me to be corrected. Had the first and second classes spell

in this way, and it took about three quarters of an hour. There were quite a number of large boys, who could not write when school began, and I had them learn to write on their slates, from engraved copies which I furnished them. I could hardly read what they wrote at first, but they wrote quite a decent hand at the close of the school. I did not confine them to the exercises in the speller, but gave out names of months, days &c. and such words as any, every, opportunity, often, &c. The scholars took a great interest in the exercise and said they learned more in spelling, than ever before. The week before I received the last Normal, one of the exercises in the spelling class was to direct a letter.

I am going into what is called a "hard" school, of about 50 scholars of all grades. If I have any experience worth telling, will perhaps drop you another line bye and bye.

N. M. H.

We hope the question of "C. D. C.," made below, will be heeded by some of our correspondents, and answered.

FARMINGTON FALLS, Jan. 18th, 1868.

MR. GAGE: I notice in the *Normal* a question for solution, and send you my analysis of it. By the first operation,—as A, receives the counterfeit bill and immediately exchanges it for ten dollars in good money, it is plain that he has lost nothing, but when C returns the bill to A for redemption—as A redeems it he must lose ten dollars. Or as A first receives ten dollars of C, and afterwards is called upon to return it, he loses nothing by the transaction,—and consequently can lose only the amount which he gives B, which is the pencil and three dollars.

Permit me to ask through the Normal, Has a teacher any *right* to make rules for the government of a school which shall make a scholar criminate himself, as, for example, a rule requiring the scholars to report at the close of the day whether they have whispered during the day or not?

C. D. C.

EDITORIAL DEPARTMENT.

THE GREAT DEFECT.

Before we shall have issued our next number, the joint Committee of the State Legislature on Education, will probably have made its final report for the Session for 1868. This committee is composed this year, of men who have, some of them, as we know, had considerable experience as legislators as well as in the supervision and actual conduct of schools. That they will weigh carefully the questions which may be brought before them, we have no doubt. They will see, we are sure, that it is not tinkering and patching which our school laws need, but thorough revision and recodification. The changes which are needed are not so much, that this act be

amended, and that one be annulled as that every act relating to our schools and their supervision be subjected to the most rigid and generous scrutiny, and that all the parts be brought into one harmonious whole.

These defects a committee such as has been formed to consider the wants of our common schools in respect to legislation, will see and will feel even more than many who are teaching in the schools. Instead of needing some important changes in our system of common schools, we need a common-school system. We have been informed, that a gentleman high in authority in the present administration of our State government, being applied to by an official in another State, for information in respect to our system of public schools, replied that we have no system at all. Whether this correspondence did occur or not we are unable to state, but if it did it certainly showed that it is not for the want of light in the quarter alluded to, that we do not have wrought out for us a system of education for the people, which is worthy the respect of the people of the sister States, and of the age in which we live.

We do not think that it would be just to say that we really have no system of public schools whatever, but we think that want of a healthy system, operating satisfactorily in all its parts is the one great radical defect to be overcome in some way and at some time, ere we shall see our towns and cities possessing well graded and appointed schools with comfortable schoolhouses and live, well-qualified teachers.

What are the powers of our State Superintendent? At what points and with what authority does he touch the town superintending school committee? What officers has he, stationed in the various parts of our State, who are bound to put in execution the plans which he may devise for the improvement of schools? What other man is there in our State, who is equally as well known and respected as our present Superintendent of Common Schools, who might not as well communicate with, and make recommendations to, the town school committees, as he? Is there not in many localities a feeling which would lead committee-men to respond even more promptly and with more endeavor to co-operate in the case of a call from some other person than to one made by the State Superintendent? What are his sources of information? What is the real value of such reports as he receives once a year; and does he receive reports at all from all the schools of the State? Is there a kind and amount of visitation and inspection in the towns, which make the reports received a satisfactory basis for recommendation, suppose recommendation would avail anything? How many of the teachers of our State can our Superintendent see in a twelve-month? What can he know of the actual condition of schools, except from hearsay and a necessarily quite limited observation? What can he hope to do by way of holding teachers' institutes? In a word, what way has he to make himself felt with any authoritative, vitalizing influence through the domain which he is set to superintend?

What are the powers and duties of our town school committees? They have the power and the duty to examine teachers and schools, to grant certificates authorizing persons to teach in certain districts, to do in fact a great many things, which make them a terror to young teachers, to make annually a report to the town, statistical, advisory, laudatory, condemnatory, hortatory, didactic. But what power have they in respect to the selection of teachers after all? What power to require that suitable conveniences shall be provided for the schools of the several districts? Mr. A is agent, and—"that's what's the matter."

Division of responsibility, such as exists in the towns, amounts in effect to want of responsibility. There is something needed for purposes of instruction, which the teacher in a certain district knows it would be for the advantage of his district to possess; or there is trouble in his school. He appeals to the district agent, but he throws the matter off his shoulders onto those of the town committee. These are three in number. They can do nothing alone, and will do nothing when together.

Time passes away in fruitless efforts, and nothing is accomplished, unless the iniquities of the parents and scholars are visited upon the teacher, and he is discharged and as far as possible disgraced.

No one will deny that the foregoing is substantially correct, and that these things argue want of system. What then shall be done? All cannot be done by the present Legislature which is desirable, and which must be done, before we can have good schools and well paid teachers; but cannot some steps be taken in the right direction? We shall see.

DR. BALLARD'S ANNUAL REPORT.

The synopsis of this document which follows, was found in the correspondence of that excellent New England journal, the Boston Advertiser, and it has evidently been made with so much care that we should despair of improving upon it if we had the time, which we have not. This report is very much more interesting than have been either of the preceding reports of Dr. B. Its valuable suggestions should be heeded by our people, and our Superintendent is deserving of much credit for his faithfulness to the interests committed to his charge. He has done a good work against great obstacles.

For fourteen years the common schools of this State have been under the supervision of a superintendent appointed by the Governor and Council, who has had a general oversight of all the schools and laid their wants and necessities annually before the members of the legislature. The present report is far more valuable and interesting than any that has preceded it. I propose to give a brief abstract of it.

The utility, prosperity and general results of the schools in the State are encouraging. The tone of education appears to be rising from year to year. But still there is not interest enough taken by the people in employing all the means provided by the legislature to the best advantage. The superintendent has visited all the counties in the State, and has received every needed facility for the accomplishment of the purposes of his visits. Many good teachers meet with but poor success on account of the number of school days being restricted. But there has been an improvement in this particular, the appropriations this year having been more than \$41,000 in excess of the amount raised by taxation for schools in the previous year. The State has long felt the need of a better grade of teachers. In the old mode of furnishing teachers, the methods of instruction, so far as there were any method in them, were scarcely more than the perpetuation of customs that had descended from the earliest days of our country. A high school or an academy cannot qualify teachers for their work. The normal schools of the country have widely diffused better ideas of education and awakened increased popular interest in the cause of education. The Maine legislature in its action relative to normal schools, has established one in the eastern and one in the western part of the State—at Castine and at Farmington. The opening of the eastern school was postponed until last September, when it was placed under the management of Prof. G. T. Fletcher of Augusta, whose attainments and experience were ample to secure confidence at the beginning. The number of stu-

dents in actual attendance has been but 13, but this is not discouraging, as the first school of this kind in this country opened with but *three* scholars. The normal school at Farmington was opened August 24, 1864, in the edifice prepared by the trustees of the Farmington academy. The building is now the property of the State, having been conveyed by the trustees at a recent session of the Governor's council, on the payment of a stipulated sum. This school has passed from the period of experiment, and become a permanency. The past year has been a prosperous one for the institution under the management of Mr. George M. Gage, as principal. The number of students in attendance for the three terms has been 331. The graduating class at the close of the last spring term numbered 32—21 ladies and 11 gentlemen.

"In the Madawaska township, commencing at St. Frances and making the connection eastward to the boundary line, the inhabitants are mostly of French origin. From this portion of the field we have rather a doleful report, on account of the inefficiency of teachers and want of schoolrooms and books. The legislature will be asked to make larger appropriations for this section, and to make a change in the location of the schools.

"The superintendent recommends the formation in each county of Teachers' Institutes, on the plan of the State Institute formed in November at Lewiston, and has discussed with plainness and ability, the subjects of school-examinations, moral training in schools, the waste of money by agents, physical education, &c. He has also gathered some very interesting extracts from the reports of town school committees, showing the actual work done, revealing the faults and excellencies of both teachers and pupils, and of the hindrances thrown in the way of teachers by the needless interference of parents. The teacher is often obliged to resort to corporal punishment, and this is made a pretext by the parent for withdrawing the child from school. There are many parents who would travel a mile to a circus or a horse-race, but who never enter the schoolroom where their children are being trained.

"There is a general demand for larger districts, as they would increase the amount of schooling, give vastly better schools, and enable agents to procure more competent and experienced teachers. Incompetency of teachers is a source of complaint. In Stoneham, a teacher presented himself for examination who, on being asked "What is physical geography?" replied, after much hesitation, "I believe it is the geography of the human system." The normal schools, it is hoped, will remedy the defects of teachers. Female teachers have been generally employed on account of the sparseness of competent male teachers. Vocal music has been introduced into many schools with good results, contributing greatly to the cheerfulness and refinement of the pupils.

"Many of the complaints about poor schoolhouses would be really amusing, were they not a shame to the State. One report reads: 'The school was visited but once, and then there were present but four scholars, — a newspaper on the desk, a smoking stove, and a blackboard without any chalk. There was but little room for display on the part of the scholars or teacher.' Another reads: 'There are five schoolhouses in town, and not one of them in good repair.' Another: 'Many of the schoolhouses in town are only fit dwelling places for bats and owls.' Another: 'Our schoolhouses are usually placed in the most barren localities, with no surroundings to make them attractive.' From Kennebuik, the committee write: 'Those old unpainted benches, set upon an inclined plane of twelve or fifteen degrees, those holes in the ceiling mended with rough boards, that unsightly corner where stood the old chimney, with its enormous fire-place, those high, prison-like windows, those blackened and dangling clapboards, and the long, weary hours spent therein in study, will be remembered through life.' But there is also an indication of progress in the matter of schoolhouses. Within the past year, there have been erected 79 new schoolhouses,

at a cost of \$323,581.13. This expenditure compares most favorably with the outlays in this direction in several previous years.

"The following summary will show at a glance the money expended for educational purposes by the citizens of the State, during the school year of 1866-7, in the directions here indicated:

Raised by taxation,	\$518,292.97
Cost of new schoolhouses,	323,581.13
Income of permanent school fund applied,	13,244.14
Bank tax applied,	4,475.00
From local funds,	14,179.25
Contributed to prolong public schools,	15,316.93
Amount paid to private schools and academies within the State.	40,614.33
Amount paid to private schools and academies out of the State,	6,428.00
	\$986,131.75

Aggregate of expenditure for school purposes,

From other statistics of general interest we gather the following:	
Number of children between 4 and 21 years,	212,300
Ratio of attendance at school to whole number of scholars,	.44
Number of school houses in the State,	3,782
Amount of permanent school fund Dec. 31,	\$244,121

The report is valuable for its suggestions, and will have great weight upon the action of the present legislature in relation to our educational interests."

***UNCONSCIOUS TUITION.** We remember to [have heard, a few years ago, a somewhat aged and eccentric old gentleman, who gave a conversation at the teachers' room in Boston,] set forth with considerable elaboration, his views in respect to who should and who should not enter the schoolroom to teach. Waiving the idea that the teacher should know how to teach, Mr. — proceeded to classify his audience and the teaching public generally, on the basis of temperament. And temperament should be indicated by the countenance. He described what would be the characteristics of the blonde, of the brunette, etc., etc., and many things which he said were worthy the remembrance of his hearers, as showing to them what would be likely to be their special defects, and what they should do to overcome them.

The Normal, through our contributor, Mr. William Warren, has written for the Normal, during the past year, have been calculated to awaken in the minds of our readers thoughts upon the unconscious tuition of the teacher's presence in the daily work of the schoolroom.

Dr. Huntington's treatment of this subject is too well known and has been too widely commended to require anything more than an introduction to our readers.

Any person sending us the name of one new subscriber to the Normal, with \$1.50. during the coming month, will receive a copy of "Unconscious Tuition" gratis. Try it, friend.

*A lecture by the Rev. F. D. Huntington, D. D., Boston,

MISCELLANEOUS DEPARTMENT.

MINNESOTA. We have before us the Eighth Annual Report of the Superintendent of Public Instruction for the State of Minnesota, Hon. Mark H. Dunnell, which is, as we should expect, full of valuable information. It makes a neat pamphlet of 182 pages, and is for the year ending Sept. 30th 1867. We glean from it a few items which will interest our readers, and wish we had room for many more.

"There were less than four months of school, on the average, to each district in the State. Out of the 114,421 scholars reported, 48,914 were not in attendance at any public school for a single day in the year. Perhaps 5,000 of the above receive private instruction.

A full remedy for this evil of absenteeism cannot be found in any legislative enactment, but mainly in a correct public sentiment. Correct notions concerning public education should be held by all classes. The public school should be constantly honored. Its support should be earnest; it should find so deep a place in the affections of the people that no child can escape its benefaction."

"The State department of public instruction is intended to be the general executive and supervisory agency of the common school system of the State. It was made a distinct department, by an act of the last Legislature." The salary of the Superintendent is \$2500 per annum, exclusive of \$500 for contingent expenses. He recommends that he be allowed a clerk with a salary of \$1200, and that a larger appropriation be made for contingent expenses.

He recommends also: (1) "That the sum of \$3000 be appropriated to be expended under the direction of the State Superintendent in organizing and holding institutes for the instruction of the teachers in the public schools of the State; (2) that it be made the duty of each county in the State to appoint a County Superintendent of schools and that the appointment be for the period of two years; (3) that the State Superintendent call one meeting of the County Superintendents each year; (4) that it be made the duty of the clerk in each school district in the State to subscribe and pay for one copy of the *Minnesota Teacher*, the subscription price of such journal to be paid the clerk out of the funds of the district; (5) that a commission be created, whose duty shall be to select a list of elementary text-books to be used in the public schools of the State."

— The article on Common Sense, by Mr. Warren, which may be found on preceding pages of the *Normal*, was prepared expressly for our magazine and by request of one of our subscribers. It appeared in the *Christian Mirror*, but is now printed after revision by its author. It will well repay perusal.

— Do not fail to read the article of Mr. Stetson. His statements are undoubtedly right, about our present mode of obtaining text-books, and we do not now see why the method which he would have substituted for the one now in vogue, is not entirely feasible. If so, it is a very weighty argument in favor of a Board of Education in Maine,

— We had intended to devote some space in this number of the *Normal*, to extracts from that part of the Governor's Message relating to our State Educational affairs, but the message has so general a circulation through the newspapers of our commonwealth, and the time when it would have been fresh reading for our subscribers, has so far passed by, that we have decided not to do this. We content ourself with saying, therefore, that the Governor appeared to have an interest in the subject of education as great as might reasonably be expected, when the fact is taken into the account, that he has spent many years in the business of instruction in the leading college of Maine.

— The committee on School Supervision for Town and State, acting as the representatives of our newly formed State Educational Association, are about to have (as we go to press, Jan. 25,) a hearing before the excellent Committee of Education of the present Legislature.

— The State Normal Schools at Farmington and Castine will begin their Spring Sessions on Wednesday, Feb. 26.

— Read our new advertisements. Some of them were received at so late a day, that we had no time to call more special attention to them in the Book Department.

— Correspondents will please take notice, that we now go to press some ten days earlier than formerly, and govern themselves accordingly.

BOOK DEPARTMENT.

OUR EDUCATIONAL EXCHANGES.

THE MASSACHUSETTS TEACHER. (*Boston.*) We noticed that our old friend, Granville B. Putnam, Principal of the Franklin School, Boston, "drove his quill" for the editorial department of this venerable monthly last month. He seemed quite at home, (though he said he felt out of place,) and gave the readers of the Teacher a very good number. Perhaps the Teacher did not greet the Normal, in its beginnings, with exactly that cordiality which might have been desired, but it has said nothing about us, or to us now for some time, and we presume our real worth, (sarcastic,) is now fully appreciated by the managers of that periodical. We think well of the Teacher, and "wish its readers much joy" with their new and able corps of editors.

THE RHODE ISLAND SCHOOLMASTER. (*Providence.*) It is acknowledged everywhere, and has been acknowledged for years, to be one of the most useful educational monthlies printed in our land. Its editor is Mr. Thomas W. Bicknell, its financial manager, N. W. De Munn.

THE AMERICAN EDUCATIONAL MONTHLY. (*New York.*) Many of the articles which appear in this magazine are of standard value. It gives a large amount of reading matter in the course of the year.

THE SUNDAY SCHOOL TEACHER. (*Chicago.*) It is published under the auspices of the Chicago Sunday School Union, gives thirty-two pages of excellent reading matter every month, has an able corps of contributors, and a list of 15,000 subscribers. We should be glad to see it have a patronage twice as extensive.

THE PENNSYLVANIA SCHOOL JOURNAL. (*Lancaster.*) This monthly has and deserves a large circulation. It is ably edited by Mr. Thos. H. Burrowes. It is strictly educational, generally contains considerable selected matter, and publishes the reports of the County Superintendents of Pennsylvania, which have an interest rather local than general.

THE OHIO EDUCATIONAL MONTHLY. (*Columbus.*) Very ably sustained under the editorial supervision of Hon. E. E. White, one of the ablest educational writers of the West, who has also gathered about him a corps of the very best writers on educational topics which our country affords. We are glad to know of the prosperity of this periodical.

THE MINNESOTA TEACHER. (*Mantorville.*) Young, like the Normal, it has been constantly improving from the commencement of its publication. It means to deserve the wide patronage which we have no doubt it will receive.

THE MICHIGAN TEACHER. (*Ypsilanti.*) It has just donned a new and most tasteful dress. Its monthly visits are most welcome, and its life and spirit of progress are a constant stimulus to its sister periodicals, saying to all, "Higher ground."

Time and space fail us to speak of other exchanges this month. We are obliged to reserve a pile to be commented upon in our next issue.

(1) **WARREN'S COMMON-SCHOOL GEOGRAPHY.** We have recently examined with considerable care and no inconsiderable degree of satisfaction the revised edition of this valuable treatise. We are of the opinion, that in geography as well as in arithmetic, we are verging upon the time when less of text-book and more of skillful instruction will be demanded by our people and therefore by their servants the school supervisors, and that teachers must prepare themselves to teach to a large extent without the book. But that time has not yet come, and the teachers are not, to speak unequivocally, ready for it. Now a school in order to be most eminently successful, leaving out of the account the question of government, requires among other things an adaptation of text-books to the customs and ideas, always provided those ideas be not grossly erroneous, of the teacher as well as the pupils. It is of no use to carry text-books into the schoolrooms for the use of which neither teachers, scholars nor parents are prepared, however correct in theory may be the ideas of the text-book writer. The single exception, as we conceive, to this principle, will be found when a text-book is so simple as to—teach itself.

It is our belief, then, that we are in a transition state in respect to the science of teaching in our common schools. We may be, we think we are, on the eve of changes which will be radical in their nature when consummated; but these changes can be effected safely only in the lapse and under the imperceptible influence of time. We must act wisely for the present good of the schools, and leave discussion and normal instruction to pave the way to those results for which those best versed in the science of education all unite to labor.

We have written the above in this connection, because we believe this to be a not improper place to introduce it. Warren's Geographies have done a splendid work to advance the cause of education. They supply a want now, which, to say the least, no other text-books on the same subject so well fill. Without going into that minutie of detail, which to many a scholar has been the source of unnecessary discouragement, if not of ineffable disgust in the pursuit of this most delightful branch of study, this treatise, the common-school Geography, revised edition, has a comprehensiveness of compass, a clearness of statement, a conformity to the true philosophy of teaching, and a correctness and beauty in the preparation of its maps, which if not in every respect perfect, are yet so satisfactory as to make it a pleasure to recommend it to the town school committees throughout our State.

We are informed that Warren's Series is making its way very rapidly and with much satisfaction into the schools of Maine. See advertisement of Mr. J. L. Hammett on another page

(2) GREENE'S INTRODUCTION. This little book, designed to make easy the passage of the young beginner in the study of grammar to that which involves considerable of the philosophy of language, is well adapted to the purpose for which it was intended. Some text-books which are used in our schools can not be said to have been written with any adequate idea of the necessity for methodical arrangement and correct underlying principles. They are a combination of what the author has compiled, (and perhaps failed to give credit for,) and of his own narrow crotchety ideas upon the subject which he discusses. Such books can not be said to have, in reality, any intrinsic merit. But no such charge can be made, as we believe, in respect to the grammatical text-books of Mr. Greene. This author has ideas of his own. He has without doubt made the English language as much a study as has any writer of text-books thereupon, now living in this country.

Whatever we may think, therefore, of the correctness of Mr. Greene's views, whether we agree with him or not, we must concede his ability and his knowledge, and unless we can bring authority which seems to us, upon careful consideration, to be entitled to our full credence, we may well hesitate, before we hazard an opinion which differs from his.

Greene's grammars in their present form, since revision, are a very different thing from the books of the same author, which we used in our schools a few years ago. They are certainly much improved. His "Introduction" is, we think, by far his best book. It proceeds upon the only sensible plan, to give the young a correct idea of how words are used in the construction of sentences, its design being to proceed with the learner strictly on the method of the object-teacher, to wit: "ideas first, then words," the uses of words, then their classification based upon use, in strict conformity thereto. The learner is taught to *use language correctly*, and this by constant practice in the construction of sentences. We know of nothing more neglected in our schools than the teaching of a correct use of our language, and we might also say, that we know of nothing which is of greater importance to those who are to be the thinkers, the speakers, and the writers, of a few years hence.

Let Greene's "Introduction" be tried with the classes in our schools, which are commencing the study of grammar. We are satisfied that it is well adapted to their wants.

(3) GREENE'S ENGLISH GRAMMAR. This is the revised and improved edition of the larger treatise, of which the "Introduction" is an abridgment. We are in favor of a more thorough mastery of elementary text-books, with such incidental instruction as the well qualified instructor will be able to impart, rather than to follow out the plan which is now so prevalent, of hastening on to take up the more abstruse parts of science before suitable preparation has been made therefor. Therefore we have given our fullest notice to the smaller of Mr. Greene's books, though we are well aware that where the one of these books is introduced, the other is sure to follow. And we think this is as it should be in this case.

(4) THE UNCOMMERCIAL TRAVELLER AND OTHER CHRISTMAS STORIES. Under this title the publishers issue the last of their popular Diamond Edition of Dickens's works. The volume contains several "Uncommercial Traveller" papers, not included in any other American edition; a number of Christmas tales—contributions to the annual Christmas stories—especially collected and revised for this edition by Mr. Dickens himself; a complete index of characters introduced in Mr. Dickens's novels, and a synopsis of the principal incidents, prepared for this edition. The compactness, clearness of typography, excellent illustrations, substantial and tasteful binding of this edition, together with the very low price at which it is afforded, make it in all respects the best popular edition of Mr. Dickens's writings which has ever appeared in this country, and we think the publishers are deserving the thanks of the people for whom especially this edition has been prepared. As a people we suppose that there can be no doubt that we should be benefited by the more frequent perusal of such standard novels as those of Mr. Dickens. Variety in reading is what is needed, and the reading of standard authors, on the part of the young, rather than to spend the time and vitiate the taste in the reading of the silly stories which float about in many of our weekly papers.

It should be stated, that the Diamond Edition, the Charles Dickens Edition, and the Illustrated Library Edition of Mr. Dickens's works published by Messrs. Ticknor & Fields, are the only American Editions published by authority.

(5) **CHILD PICTURES FROM DICKENS.** Contents: Little Nell; The Marchioness; Paul and Florence; The Fat Boy; Tiny Tim; Smike; and Oliver Twist. Illustrations, eight in number and engraved under the superintendence of A. V. S. Anthony. This collection, made by Mr. T. S. Higginson, is introduced by the following note:

"These chapters, as being especially associated with children, have been selected from my various books, for separate publication under the title appended to this volume. Although they necessarily lose interest and purpose when detached from their context and removed from their niches in the works of fiction to which they respectively belong, this compilation is made for American children with my free consent."

CHARLES DICKENS.

BOSTON, November, 1867.

The typography and illustrations of this little book are excellent, and the deep interest which the stories it contains, have for older readers, together with their adaptation to the tastes of children, ought to cause it to have a large sale.

(6) **WARREN'S GEOGRAPHICAL CHARTS.** These are (first series) fourteen in number, mounted upon card-board, making seven tablets, enclosed in a portfolio, and accompanied by a hand book for teachers, intended to illustrate especially Physical Geography. Aside from their value as illustrating the important truths of the contour and general features of the earth, they have an additional and peculiar worth as illustrating the method of map-drawing by triangulation, of which Hon. E. A. Apgar, Superintendent of Public Instruction for the State of New Jersey, is the author.

There are a great many schools scattered over our State, which would be greatly benefited by the introduction and use of these charts. In fact, something of the kind seems indispensable to that progress toward the simpler and more natural views of geographical science which it is of so much importance that our children should have, and we know of no better maps for the purpose than these. Teachers and school officers should correspond with J. L. Hammett, Boston, or with H. F. Howard, Dixfield, who is the general introducing agent for the works of Messrs. Cowperthwait & Co. in Maine.

(7) **FRANG'S CHROMO.** We have received the number for December, (1867,) which contains a letter from James Parton of so much interest as containing his estimate of the efforts of Messrs. Frang & Co. to popularize art, that we print it entire.

NEW YORK, Dec. 29, 1866.

GENTLEMEN: I have just received the exquisite specimens of your art which you have been so generous as to send me. The letter respecting them arrived last night. It has been a favorite dream with me for years, that the time would arrive when copies of paintings would be multiplied so cheaply, and reduced so correctly, as to enable the working-man to decorate his rooms with works equal in effect to the finest efforts of the brush. I could not see that there was any natural obstacle in the way of this, which science could not overcome. The works which are issued by your house, which have often and long detained me at the picture-shop windows in Broadway, show me that my dream is coming true.

I do not wonder at the enthusiasm with which you pursue your beautiful vocation. The business of this age is to make every honest person an equal sharer in the substantial blessings of civilization; and one of the many means by which this is to be effected is to make the products of civilization cheap. In prosecuting your business, therefore, you are aiding to bring about the essential equality of merit, opportunities, and circumstances. Besides, what a future is there for art where a great picture can adorn a hundred thousand homes, instead of nourishing the pride of one, and when an artist can draw a steady revenue from the copyright of his works instead of eating up one picture while he anxiously and hurriedly completes another! For the public sake and your own, gentlemen, I wish you success.

JAMES PARTON.

MESSRS. L. FRANG & Co.

(4, 5) TICKNOR & FIELDS, BOSTON.

(6) COWPERTHWAIT & Co., PHILADELPHIA.

(7) BOSTON: L. FRANG & Co.

THE MAINE NORMAL.

VOL. 2.

MARCH, 1868.

NO. 3.

LETTERS TO A YOUNG TEACHER UPON QUESTIONS OF MODERN SCIENCE.

LETTER IV.

ELECTRO-TELEGRAPHY.

MY DEAR FRIEND: You will recollect that I stated in my last letter that there were three different characteristics of the electric fluid, in relation to its transmissibility, on which the superiority of this agency for telegraphic purposes depended; namely, that it could be transmitted 1st. With great velocity. 2d. To any distance. And 3d. Without any appreciable loss of power. I also said that of the various effects which it could be made to produce at the end of its course there were several which had been employed for telegraphic purposes, giving rise to several distinct systems. Some of these I shall now describe.

THE ELECTRIC-MAGNETIC SYSTEM.

Many of your pupils may be already aware that the principle on which the telegraphic apparatus used in this country is based, is that of the magnetizing power of a current of electricity, when caused to encircle an iron rod, in any part of its course. There is a certain very singular and extremely mysterious relation between magnetic polarity, and circular currents of electricity revolving around the axis of it,—such that each of these phenomena will produce the other. Currents of electricity so moving around an iron rod, or ceasing to move, will produce changes in the magnetic state of the iron,—changes in the magnetic state of the iron, produced by other means, will put in motion currents of electricity in a wire passing around it. It is the former of these sequences that is employed in the

electric telegraph. A current of electricity sent from a distant station is made to flow many times around an iron rod at the station to which the communication is to be made. The rod becomes a powerful magnet while the current is flowing. It instantaneously ceases to be magnetic when the current ceases to flow.

The iron rod which is thus to be magnetized and demagnetized by the making and breaking of the electric current, is usually bent into the form of a horseshoe, so that both poles of the magnet may exert their force in combination with each other. This magnet is placed in the apparatus with the poles turned upward. Across these poles a short flat bar of iron called an *armature* is placed. This armature will of course be held down strongly upon the two poles while the electric current is passing; and on the other hand when the flow is interrupted the magnetism in the horseshoe will cease, and the armature will be instantaneously released.

TO BE ILLUSTRATED BY A DRAWING.

You can make this quite plain to your pupils by a little drawing,—no matter how rude,—upon the blackboard. You can draw a line coming in at one end of the blackboard, representing the wire bringing in the current of electricity. Then near the centre of the board draw a representation of the horseshoe, a round rod of iron bent in the shape of the letter U with the ends upward. The wire should be shown coming in near the top of one of the arms, then wound around it, in a spiral, covering the whole extent of it to near the top of the other arm, where it leaves it and passes down off the lower edge of the board to represent the passage of the electricity into the ground. Then over the poles of the magnet, and a little way above them, a short square flat bar should be drawn to represent the armature in the position it occupies when the current is *not* passing.

Let us now suppose that the armature is attached to one end of the beam of a balance, or pair of scales, the said beam being suspended or supported by its centre,—and that to the other end of it is attached a pencil or style, with the point directed upwards. You can easily draw a straight bar to represent this beam,—one end of it lying upon the armature, and having a pencil pointing upward at the other end, and with something like a pivot of suspension or support in the middle. With this arrangement it will be evident that when the poles of the horseshoe become magnetic the armature, and with it the end of the beam to which it is attached, will be drawn down, and the point of the pencil forced up. Then when the magnetism ceases the armature will be released, and the pencil will fall down again into its original position, provided that the arm of the beam to which it is attached has been made a little heavier than the other. To in-

dicate this to the eye, the outer arm of the beam or lever should be drawn so as to appear obviously heavier than the other, either by being made longer or thicker, or by having something to serve as a semblance or representative of a weight suspended from it.

NO SPECIAL PRACTICE OR SKILL IN DRAWING NECESSARY FOR SUCH
ILLUSTRATIONS.

You will find such a plan as this, of representing the leading features of the apparatus to the eye by a rude sketch upon the blackboard, of incalculable advantage in aiding your pupils to form clear conceptions of the principles on which the arrangement works, and in fixing these principles in the memory. Nor must you allow yourself to be deterred from attempting it by any supposed want of practice or skill in extemporaneous drawing. Any one who can hold a piece of chalk, and make a mark with it, has enough of skill in drawing for such illustrations as these. Indeed, paradoxical as it may seem, the ruder and more elementary the drawing, the better it is for communicating an idea of the *principles on which a machine acts*. To show the details of the construction, with a view of exhibiting the *mechanical means* by which these *principles are carried into effect*, requires elaborate and highly finished drawings; but to illustrate the *theoretic principles* which lie at the foundation of the working, a few simple touches are infinitely better. Thus a machinist's apprentice will mark out with a coal upon a fence, an outline of a steam engine, with a round O for the boiler, an upright oblong for the cylinder, with a mark across it in the middle for the piston, and a crooked line coming from the boiler and sending one branch above and another below the piston, into the cylinder, will give his playmate quite a correct idea of the *principle* of the steam engine; while an elaborate and finished engraving in an encyclopedia, which it cost a hundred dollars perhaps to draw and engrave, would only confuse and bewilder him.

Never be deterred therefore from representing to the eye the leading features and characteristics of any apparatus or machinery, when instructing your classes, from any supposed want of skill in drawing. However unpretending and even rude, your sketch may be, you will find the effect of it magical in interesting your class in the subject, in facilitating their comprehension of the principles on which the contrivance is founded, and in impressing these principles upon their memory.

MODE OF RECORDING THE SIGNALS TRANSMITTED THROUGH THE MACHINE.

Your drawing and the explanations accompanying it will thus far have shown how the making and breaking of the electric communication at the

distant station will operate, the one to push the pencil up, and the other to let it drop down. It remains to show them how by this means the letters of the alphabet, can be indicated and words and sentences spelled out. The pupils perhaps already understand that the different letters are represented by different combinations of dashes and dots, thus :

———— ———— ———— ———— — ————
 A B C D E F

To show how these markings are made you must explain that a cylinder covered with a sheet of white paper is placed above the pencil, and sustained there by proper supports, and made to revolve regularly upon an axis by means of clockwork, in such a manner that while the pencil is pressed *upward*, in consequence of the armature at the other end of the beam being drawn *down*, the point of it will trace a line upon the paper, and if the pressure is sustained for a very brief period only, this line will be so short as well to represent a dot. Thus any series of letters and of course words and sentences can be recorded on the paper, a proper arrangement being made for drawing off the strip as fast as the record is made upon it.

This is the principle of the system of telegraphing generally adopted in this country. It was invented by Prof. Morse and is generally known as Morse's system. There are some other systems in which different properties of the electric current or rather different classes of effects produced by it, are employed for telegraphic communications, that remain to be described. We have only space for a brief account of two of them.

THE NEEDLE SYSTEM.

Besides the power of the electric current to magnetize an iron bar *lying at right angles to its course*, it has another property mysteriously related to this, namely of *moving a bar already magnetized into that position*. If a magnetic needle be suspended or supported under a conducting wire, in a direction parallel to it, but free to move, it will be turned into a position more or less nearly at right angles to the wire while the current is passing,—the north pole of the needle moving toward the right or toward the left, according to the direction in which the electric current flows. Thus one or more needles, suitably arranged for conveniently observing them, may be deflected either way at will, by an operator hundreds of miles away,—simply by making and breaking certain connections at his battery.

Your pupils can easily see how by this method the letters of the alphabet, and any other symbols may be indicated. Thus, in the case of a single needle one deflection to the left, might mean *a*, two to the left *b* one to the right *c*, one to the left followed immediately by one to the right *d*, and so on,

THE ELECTRO CHEMICAL SYSTEM.

The electro chemical system, as it is called, is based upon a third, and quite distinct, property of the electric current,—namely its power to excite chemical action between certain substances, while the current is flowing,—the action being suddenly suspended when the current ceases. The arrangement of the machinery in this system is somewhat similar in principle with that employed in the electro-magnetic apparatus already described, that is, there is a sheet of paper, placed on a support which is made slowly to revolve, by means of clockwork, and a metallic point made to press upon it. The difference is that the paper is chemically prepared, being moistened with a certain chemical solution which the electric current will decompose; and the metallic point presses upon it continuously, instead of being alternately pressed against it and withdrawn, as in the other case. The effect in this case is produced by the action of the current, while it is passing in *decomposing the chemical solution* at the line which the metallic point is passing over, leaving a visible brown trace. As the chemical action ceases the moment that the current is intercepted, it is evident that a succession of long and short dashes, or dashes and dots, can be made in this way, and the letters of the Morse alphabet or any other similar signals may be easily recorded.

These two last described systems are very seldom used in this country. The only object in explaining them to your pupils is the interest they may take in seeing by what curious and very different methods the same mysterious agency may be made subservient to the purposes of man, in accomplishing the same end.

Be temperate with your children; punish them if they lie or steal but be just in what you do. It is a lighter sin to take pears and apples than to take money. I shudder when I think of what I went through myself. My mother beat me about some nuts once till the blood came. I had a terrible time of it but she meant well. Never be hard with children. Many a fine character has been ruined by the stupid brutality of pedagogues. The parts of speech are a boy's pillory. I was myself flogged fifteen times in one forenoon over the conjugation of a verb. Punish if you will; but be kind too, and let the sugar-plum go with the rod.

MARTIN LUTHER.

THE STATE SUPERINTENDENCY.

We sincerely hope that our legislators, at the State Capital, will not close their winter's work before they have amended and modified the law providing for and regulating the State superintendency of public schools, so as to make it a greater power in the land, and one more efficient for the improvement of our schools. As the office is at present constituted, the incumbent can accomplish but a very small portion of the work that ought to be done; and then he is but poorly paid for that. Under such circumstances it is impossible for the great body of schools to feel the contact of that animating power which should be felt, and which should reach from the head of the department down to the smallest primary school in the most remote town or plantation in the State. Nothing less than such a power will effectually overcome the existing apathy and torpor in regard to education, or remove the prejudice which too often stands in the way of healthy improvement. If Maine is to make the most of her schools; if her educational capabilities are to be developed; and especially if she expects to keep pace with her sister States in giving to her people the broadest system of culture; then there must be an entire remodelling of the supervision of this department.

Let us take a hasty glance at the work which existing circumstances seem to indicate as necessary to be done. There are, in the State, more than two hundred thousand children of a school-going age; that is, between the ages of four and twenty-one years; of whom about one hundred and thirty thousand were registered as actually in attendance in the winter schools of the last season. Back of these children there is an educational constituency, of the parents and others, of more than half a million of people. The children themselves are under the care of more than thirty-eight hundred teachers, in about the same number of school districts, and distributed throughout four hundred towns and cities, and half a hundred, more or less, of plantations. The amount of money raised by taxation, last year, for the tuition of these children, exceeds half a million of dollars. Add to this the income of State and local funds, and bank tax, appropriated to schools; the voluntary contributions for fuel and board of teachers; and the cost of school supervision, and of new schoolhouses built, and we have more than a million of dollars expended for educational purposes during the year. It will be conceded on all hands, we think,

that an interest of such vast importance as this, is one which requires for its management great wisdom and care. That it is now very poorly managed in many towns, and shamefully neglected in others, is too well known to need re-affirmation or to admit of denial.

Now the well tried experience of other States, for many years, has shown conclusively that an efficient State Superintendency, wisely managed, gives a great impetus to the cause of education. But it must be really and indeed efficient, a *working* department, in order to be felt in the schools. It certainly must not be managed on the penny-wise and pound-foolish principle, to cripple its usefulness and render it well nigh powerless for good. We imagine that the people of Maine have had about enough of that policy and its fruits. In looking over the field of our State, we should say that not only every county, but a considerable number of towns in each county, should be annually visited with especial view to awakening a greater interest in education. The people should be collected, in schoolhouses and halls, and addressed on the importance of greater effort and co-operation on their part for the improvement of their schools. They should be induced to build more and better schoolhouses. According to the last State Report, there were, last year, thirty-seven hundred and eighty-two schoolhouses in the State; of which two thousand and sixty-five were reported "in good condition." We are, then, to infer that seventeen hundred and seventeen, or more than forty-five per cent of the whole, are *not* in good condition. The schools should be visited, teachers conferred with, and county and town associations formed for improvement in methods of teaching and school management. Teacher's Institutes, too, most efficient agents in the improvement of the qualifications of teachers, should be held semi-annually in various parts of the State. It will not be sufficient to do a little of this work here and there, in localities distant from each other. It must be done so generally and so thoroughly, that the whole State will feel the effects of it. It is surely a great work. And for the performance of such a work, the State now furnishes one man, at a salary of only a thousand dollars a year, with no regular clerk hire, and an allowance for travelling expenses not more than sufficient for three months work. Furthermore. In addition to the labor above mentioned, the amount of office work connected with the position is no small task. Reports from every town, city, and plantation must be read and carefully examined, and the statistics of the schools collected and worked up. A large correspondence must be conducted with teachers, school committees, and others, in answer to numerous inquiries concerning school laws, teachers, school books, the best methods of teaching, and schoolhouses; all of which are questions

asked by the people, and should be answered. The incumbent of the office must also read extensively the reports of other States, as well as various works upon education, that he may give to the schools in the administration of his office, the benefit of the combined wisdom of the age in the pure wheat winnowed from the chaff. An annual report must also be prepared, which shall not only daguerreotype the state of the schools and of the cause of education in the State, but must present extended thought upon topics of engaging interest, that shall serve as a quickener to the people, and give a freshness of tone and a progressive impulse to the educational mind.

We cannot think otherwise, than that it is the duty of the State to affix to this office a salary which will allow a strong man to devote himself wholly to its duties. Even more. He should have assistance in making up the statistics, (more fully than they are now made up) and in the correspondence; and should have the aid of one or more assistants, whose duty it shall be to travel during a portion of the year, visit schools, collect information and arouse the people; and otherwise assist the Superintendent in his various work.

We confess that we do not regard with much favor the system of county, or district, superintendents. It has not, on the whole, been a successful system where it has had a fair trial. It has within itself the elements of in-efficiency, and is attended with much friction that prevents the harmonious working of the whole. We like better an advisory board,—a Board of Education, or Board of School Commissioners, by whatever name they may be called. Let us have such a Board, to be appointed by the Governor and Council, consisting of eight or sixteen persons, selected with reference to their fitness for the office, and fairly representing the different political parties and religious denominations; and to hold their office for eight years, at least, one or two only going out of office each year. A Board thus constituted would be entirely removed from the mischievous influence of the small arms of partizan and sectarian opposition and warfare. In this Board should be vested the appointment of the State Superintendent, the teachers of the Normal School, and the general management of those schools and of teachers' Institutes. By such an arrangement we prevent the placing of too much power in the hands of one man; give the people a representation upon the Board in the management of the department; and while we make the Superintendent the Executive officer, the exponent, of the Board, we give to him, in the performance of his duties, the benefits of the wisdom and counsel of some of the best minds in the State. Such a Board need not be expensive,—for there need be no com-

pensation for its members, except for actual travelling expenses; and in some States where efficient Boards now exist, the whole annual expenses do not exceed two hundred dollars. We have no hesitation in presuming, as above, that men enough can be found abundantly qualified to serve on such a Board, who would willingly do so without pay.

Public sentiment in the State seems to be ripe for a change. The teachers at the State meeting at Lewiston, a few months since, appointed a committee to memorialize the legislature for some action in this matter. What the committee have asked for, or what our law-makers propose to do, we know not; but we close, as we began, by expressing our earnest desire that SOMETHING MAY BE DONE.

A. P. S.

THE WONDERS OF GEOLOGY.

No. 3.

BY N. T. TRUE, M. D.

Having assumed the position that the earth was divided into a gaseous, liquid and solid condition, let us see what was the state of the atmosphere, and where was the ocean when the earth was first covered with a heated crust. The waters that now constitute the ocean must have been in the form of vapor, forming a dense envelope around the globe. The sulphur existing on its surface would fill the atmosphere with dense fumes of sulphurous acid gas; the carbon which afterwards assisted in forming the solid limestones, would be also in the form of carbonic acid gas. The chlorine which afterward served to form beds of common salt, would be in a gaseous state. Thus at least three irrespirable gases, sulphurous acid, likewise carbonic acid, and chlorine gas would permeate the dense atmosphere.

No vegetable or animal life could exist on the surface of the globe under such circumstances. No beds of sulphur would be found in the rocks of this period, nor of coal, nor common salt. A dense, murky atmosphere surrounded the earth, illuminated only by the glare of lightning, and from the outbursting of volcanic fires. We have no fear that by any description of ours we shall exaggerate the condition of the earth at this stage of its history.

But this state of things could not always exist. The earth is whirling

along through the cold regions of space. The atmosphere radiates its heat into the regions above. The elements composing water descend in the form of rain upon the heated crust. Again it starts off in the form of gas to the upper part of the atmosphere to lose its heat. The battle rages fiercely between the waters in the firmament, and the heated surface beneath. The gases act thus as conveyances of heat from the solid crust to the regions of space far from its surface. But at length the waters obtain the mastery. They settle down surcharged with the different gases into the hollows, and by their weight upon the thin crust, cause it to sink while the whole earth is covered with water.

But who can describe the condition of the earth whose thin crust rests on a liquid mass of molten matter and is itself covered with the waters of the ocean? How long can the pent up fires keep quiet? Here and there the internal heat expands the internal gases, and they swell up the crust in its thinnest portions and burst forth beneath the waters of the ocean. Here is another fiery contest between the internal fires, and the waters of the ocean. This is the beginning of volcanoes. The soda, lime, potash and magnesia with which the boiling waters are surcharged combine with the gases. The chlorine combines with sodium and forms common salt, which is dissolved in the waters of the ocean. The carbonic acid combines with the lime and forms a substance not readily soluble in water, which constitutes the solid beds of limestone. The sulphur combines with magnesia and forms sulphate of magnesia. Other combinations take place, until we have the waters of the ocean essentially the same as now. The rains have precipitated the gaseous substances and the atmosphere becomes gradually purer, though still filled with poisonous gases, in which no vegetable or animal life could exist. The contest for the mastery or for power is not yet among beings of an organic structure, in which the vital principle has been implanted, but solely among the elements that constitute rocks of the globe. We may then assume the additional position that *the foundation rocks of the globe were formed by the combined action of fire and water.*

The reader will bear in mind that there is an all-directing hand manifestly at work arranging these various elements which constitute the solid structure of the globe. It is not a self-constituted work. He will be delighted to see as he carefully investigates the whole theme, that the end was manifest in the very beginning. When the atmosphere began gradually to be purified, it was made so for all coming time, and to meet the necessities of the highest degree of organic life. When the ocean gave up the various substances in solution to form the solid rocks, it was to render it

fit for the kind of life that was ever after to subsist beneath its surface. Thus we may lay down the proposition, that *all the great changes that early took place on the surface of the globe, indicated design, stability and progress.*

THE TEACHER OUT OF SCHOOL.

BY W. WARREN.

While much has been said in your Monthly, of the teacher *in school*, as to what he should be, and what he should do; what he should know, and how much he should know,—very little has been said with reference to the teacher *out of school*, in his relations to the District. As with the clergyman, so with the school teacher; very much depends upon his general character and bearing. The preacher may be eminent in the pulpit, but sadly wanting in qualities that make him useful in the parish. The school teacher may shine in the schoolroom, but be darker than a shadow out of it. The writer has known too many cases of this kind.

I would, then, suggest, in the first place, that the teacher do not *fritter away his time and strength*, out of school. He has need to rest, and recuperate, and invigorate himself, for the tasks and the wear of the schoolroom. If possible, he should have a *room*, at his own control, where he can repair, when he pleases, and be by himself, and allow his powers of mind and body to relax and rest. He should be the master of his time, and his quarters, as well as of his school, and his profession. This will be of great advantage to himself, and the school. The writer has had a varied experience in this thing. He has *boarded round*, as the phrase is, and taken his chance in the smoke and turmoil, noise and fumes, bustle and confusion, of the family; and been entertained with the crying and playing of the children, with the scolding of the mothers, to his sorrow at the time, and his amusement in the remembrance of it. And when he had a fixed boarding house, having been put up, or *down*, to the lowest bidder, he has had his sanctuary assigned him at the corner of the kitchen fireplace, with the surround-

ings of ten in the family, of every age, the domestic animals not reckoned. There was music in the cradle, and music from those who had graduated from it, and vociferation, if not music, at the head of affairs. Now call these exceptions, or extravagances, if you please; yet, let me say, that the school teacher should be well housed and cared for. He should have a quiet home and room to repair to, at the close of his wearisome days. These should be sacred to relaxation and rest.

This suggests another thing. One of the modes of rest and recuperation is *suitable exercise*, in the open air. If the teacher rises late, breakfasts late, and steps into the schoolroom to spend the entire day without vigorous exercise out of doors, there will be a desideratum in his case: the oxygenation of the blood, the expansion of the chest, the vigorous using of the body in useful exercise. This puts cheerfulness and endurance into the teacher. It will give him self-possession and self-control; and the better use of his mental and moral powers. It will tend to give him better courage, better health, and better success. Change is rest; exercise is rest; labor is rest,—whenever the body or the mind is in need of these. Let the school teacher have the rest of physical repose, and that also which comes of physical exercise, and his usefulness in the school will be doubled.

I would say, next, that the teacher should find time out of school, to make himself *at home in the recitations*. It will do him good to run his eye over the lessons in anticipation; and so make himself certain as to every point. He can do this in his room alone and undisturbed, with great facility and satisfaction, and without much mental effort or fatigue. And it will facilitate his teaching greatly. The pleasure of it will be doubled, both to himself and the class. It will lessen the fatigue and perplexities of the schoolroom. If he is master of the ground, and is facile in his instructions and illustrations, the school will notice it, and will not get the chance to take advantage of his laborious confinement to the text-book, and the brown study, and ludicrous,—not to say hazardous abstraction of thought that come in consequence of want of familiarity with the lesson. And thus he will govern easier who is familiar with the ground. And he saves time in being ready and prompt himself; which always inspires interest and promptness and confidence in the class. The teacher gets more than due credit for readiness and facility. The preacher, with a good sermon before him, if he has to spell it as he goes on, gets but little credit. But with a lighter discourse, if he has readiness of utterance, and facility and sprightliness of expression, he gets praise, if not tears.

Let the teacher go from his room with bounding spirits,—from good rest and exercise, and so be able to master, without puzzling thought and perplexity, the recitations of the day, and he will be a free, joyous, useful man.

And, then, next, I would say, *be right in the District, and the family.* No one can ever afford not to be a gentleman. There are but few that have qualities that cancel clownishness or frivolousness. It takes a great deal of charity to cover great faults; and a good deal of the same to cover little faults. I would not say that the teacher should never join his pupils in their sports and plays. He may do whatever he encourages them to do, and it is useful for them to exercise out of doors in some sort of innocent game or play. But let him be manly in this, and honorable, and an example to others. Let him keep wholly within bounds, and his commingling with his pupils, be such as to inspire respect and confidence,—I think, perhaps, my excellent brother Weston, (Senior) who so seldom errs in precept or example, might shake his head here, though I rejoice that he keeps his *youth* and brilliancy under his crown of grey hairs. That I may not seem to differ from him, I would say, that I do not make it a *duty* for the teacher to mingle in the sports of the pupils in exercise out of school,—nor do I positively condemn it. I say, if he do it, let him do it right and well.

I know of but few things more detrimental to the usefulness of a school than *evening parties*, and the silly sports and plays that are too often connected with them. If the teacher and the larger scholars spend half of the night in this way, a state of mind and body is induced that will sadly injure the school. I have known District schools to be destroyed well nigh, by continuous party-going, and evening carousals. They take from the necessary hours of rest, and distract and dissipate the mind and morals. The teacher cannot afford to encourage these, nor to mingle in them to any extent.

I would not encourage much *private visiting* in the District. It seldom gives satisfaction. There would be possibly, favorite families, or pet individuals, that would engross the attention, if not the *affections* of the teacher, which would have the look of partiality. It is often the case that the out-door attentions of the teacher are drawn to one, two, or three families, to the neglect of the rest. This will work mischief in the school, and in the District. I would earnestly dissuade from all appearance of partiality and favoritism on the part of the teacher, both in the school, and in the District.

And, last, I would say, let the teacher seek to make *himself useful* in all things; but let him not be a leader in outside interests. If he

be a christian, let him show himself such in the school room, and in the district, and parish. Let him not clamor for sectarian points and manners. Let him not be forth-putting and pretentious and boisterous : but let him seek to be useful in every good way and word ; and strive to promote every good work. If he be not a christian ; as I do not act now the preacher, to exhort him to this, his first great duty,—yet, I would warn such not to throw their influence ostensibly and openly against religion. I counsel this for every reason,—its influence on themselves and their pupils, and their employers. I would say, “walk not in the counsel of the ungodly ; stand not in the way of sinners ; nor sit in the seat of the scornful.”

LETTERS TO A YOUNG TEACHER.

No 6.

MY YOUNG FRIEND. Your term of winter school has closed ere this, and your vacation has begun. Perhaps you will take another school during the spring, but the chances are that you are one of the very large class of common-school teachers in Maine, who only teach during the winter season, and engage in some other occupation during the other nine months of the year. A very large majority, perhaps three-fourths, of the young men who teach winter schools in our State are of this class,—those who do not intend to make teaching their profession, but who follow it because it pays the best at that particular time, and thus make it secondary to something else. They only follow it while they are waiting to do something better.

I consider this the great reason why our common-school teachers are not of a higher grade. The fact is they have not been, and are not specially fitted for the business, indeed do not pretend to be. They have made no special study towards that end, and consequently it is to be expected that they must often fail to give satisfaction to their employers and themselves. This, I conceive, is the great argument in favor of the Normal school system. By means of the Normal schools we may have a class of

young men and women specially fitted to perform special duties by special instructors. They serve apprenticeship, as it were, to a trade, and come forth finished workmen or journeymen as the case may be; at any rate that is the profession they have chosen, the one they have studied, and it looks reasonable that they should be better workmen than those who only use the tools of the craft now and then, with intervals so long and frequent that every time they take up the tools they handle them awkwardly.

Do not understand me as denying or even speaking disparagingly of our common-school teachers. By no means. They are worthy of praise, and there are many very fine teachers among them, but it does look reasonable that a teacher specially educated would be more successful than one who only tries his hand at the business until something better turns up.

You have, no doubt, during your last winter's experience, learned many new facts, and seen where you could improve in your business. He who learns nothing from experience lives but to little purpose. Every day in the schoolroom is pregnant with events which if understood and rightly applied make one so much the wiser.

There is one point suggested by late events, to which I wish to refer. You have no doubt heard certain teachers spoken of during the past winter as "having learning enough but no government." Several schools I can recall, have changed teachers from this cause. It is quite often the case that a young man or woman is thoroughly qualified to teach and take charge of a school, so far as mere book learning is concerned, but they are found upon trial to be sadly deficient in those qualities that are necessary to govern,—to create respect and maintain order. These qualities cannot be discovered or shown by any examination, by committees, no matter how thorough it may be; they are only brought out by experience. Now I consider that nearly every young teacher may possess those qualities in a certain degree, even if they are found to be wanting on the first trial. A thorough course of self-culture, and strict control over one's actions during occasions when these qualities are required to be called into play, will very soon result in much good, and go far towards strengthening what may have been naturally weak.

But my sheet is full, and as the period when these letters may have been applicable has passed; for the present we may perhaps as well adjourn, until the coming month, when you will have again entered upon your duties. Hoping to hear from many of you through these columns during the summer, I remain

Yours truly,

GEO. E. BRACKETT.

MY PRAYER.

BY M. S. S.

Where is it, the prayer I prayed last night?
 And the one I prayed to-day?
 And the one that many and many a time
 From my lips has flown away?
 O white-winged dove that soared above,
 Thou hast my heart with thee;
 Stay not so late; I watch and wait.
 Till thou come back to me.

Come back, and bring me tidings too
 If thou the goal dost gain.
 Or didst thou lose the way to Heaven,
 And wanderest now in pain?
 Here is thy nest, come back and rest
 Thy weary, weary wing;
 I will not chide thy roamings wide.
 I long to hear thee sing.

Ah! 'tis a pensive, songless bird,
 And noiseless in its flight.
 It flutters forth, and flutters back
 At morning, noon and night.
 I may not know where it doth go.
 It gives no word or sign;
 But yet I trust, and still I must,
 Its mission, Lord, is thine.

Feelings, convictions, emotions—love, duty, aspiration, devotion—in what sentences will you express to another what you feel and mean by these? God dwells in the thick darkness. Silence knows more of Him than speech. His name is Secret: therefore beware how you profane His stillnesses. To each of His servants He giveth “a white stone, and in the stone a new name written, which no man knoweth saving he that receiveth it.”

F. W. ROBERTSON.

THE TEXT-BOOK QUESTION.

With much that has been said in the *Normal* on the subject of text-books, and the importance of obtaining better ones, I most heartily agree. Yet on some points, my views do not coincide with those which have been presented. On a few of these points, with your leave, I will touch.

Are not publishers charged with more sins than really lie at their doors? I will admit that the publisher and the teacher look at the text-book question from different points of view, and yet I believe, that if their interests do not tend to the same end, it is quite as much the fault of the teacher and of the school authorities, as of the publisher. The publisher is a business man, and it is his object to make money in an honorable way. He very seldom decides upon the merits of a manuscript submitted to him, relying rather upon the judgment of some one who is "posted" upon the subject of which it treats. Of course he will not intentionally issue a book which will not sell.

We have no more right to expect the manufacture of books to be carried on, by private individuals, from purely philanthropic motives, than the manufacture of cloth. But it costs no more to publish a good book, than it does to publish a poor book of the same size. If the poor book sells, and the good one lies on the shelf, whose fault is it? If the school authorities know enough to choose the best books, is it not for the interest of the publishers to furnish them? It is much the same with the serial text-books. I think there are too many of them, but is it not quite as probable that the demand causes the supply, as that the supply causes the demand?

But the serial books need cause no special trouble. Boards of Education have the power to adopt and reject at their will. If we eat all the dishes, in order, on our bill of fare, and get the dyspepsia thereby, we ought not to throw all the blame on the cook.

Has there been no competition of brains in the production of text-books for the last fifteen or twenty years? It is certainly very difficult to determine what brains could have had to do with some of those which have appeared, and which have been adopted by City and State Boards; yet in many respects it seems to me there has been a decided improvement. There is certainly a great difference between the old Welch's Arithmetic, without one word of reason or explanation from beginning to end, and several Arithmetics of the present day. Was there a good Geography in the schools of Maine twenty years ago? Are there no good ones now? In many

places I think the schools are really poorer than they were some years since ; and yet I think that in these same schools the books are better than they were then. The books come from abroad ; the teacher is a home product.

There should certainly be some authoritative decision as to what books may or may not be used, and there should be as great a degree of uniformity as can well be secured ; yet there is some objection to the plans often proposed and tried for securing that uniformity. Suppose a Board of Education to-day adopt the text-books for all grades of schools in the State, the list to remain unchanged for five years. If, then, an Arithmetic be published such as many teachers are longing for, or a Grammar which shall really tell the truth about our mother tongue, must we retain the inferior book till the expiration of the term of years ?

There seems to be no sufficient reason why we should not at once have good text-books on the subjects usually taught in our common schools. The plan proposed by your correspondent might give us better ones, but it would not preclude still further improvement. Men of the ability required to write good text-books usually take their time for it, and would hardly be tempted by a prize. Nor would they be likely to succeed in making books according to specifications drawn up by other parties.

When we come to books of a higher grade, and especially to scientific books, increasing difficulties attend the selection for a whole State, and for a term of years. The teacher of physical science must change his books often, if he would have his teaching always fresh and true. Even now, with an open market and free competition, publishers do not keep up with the progress of discovery. I find myself forced to get a text-book from London for my next class in chemistry, because there is no American book, adapted to my school, which truthfully represents the present state of the science. A scientific book which does very well now, it may in five years be positively wrong to teach.

Really good books are so rare that they should be sure of immediate and honorable recognition. I would have a Commission, or Board of Education, make a careful selection of books which may be used in the public schools, forbidding the use of all others. To this list they should have power to add books of marked excellence whenever they should appear, and from the list they might strike off books whenever they judged them to be inferior to others. From this list local Boards might select such as were best adapted to their schools, and also make such changes as they should deem expedient from time to time, as superior books were added to the list. The statement of the method which I would propose for securing all desirable uniformity on this plan, I must defer.

C. C. R.

WRITTEN EXAMINATIONS.

Not for the teacher,—though some such test for him occasionally might be of no disadvantage to him,—but for the pupil. For the pupil,—not once a year, when some anxious candidate for the High School knocks tremulously for admission, or at some quarterly examination, when their worshipful wisdoms, the School Committee are present. But written examinations for the benefit of the scholar, for the purpose of testing his knowledge, as often as is consistent with the systematic working of the school.

Some of us, if we have never tried the experiment, will be surprised to see how the best of our scholars will fail when they are required to *write* the answers to questions which they give orally with a fair degree of exactness. School recitations when well conducted, require some knowledge of the lesson on the part of the pupil, but his answer though frequently showing a pretty good understanding of the subject is often very poorly expressed, and were it written down as it comes from his lips, would put his teacher and possibly the scholar himself to the blush. The teacher should always check this tendency to lack conciseness in statement and simplicity of expression; not by demanding the exact words of the text-book, but by encouraging the scholar to give his answer in his own language in the best possible form. Even then it will be found advantageous to give your classes frequent written examinations.

It is a practice with some good teachers, to require once every month a review of the work gone over, in the form of a written examination. The teacher prepares ten questions, such as are best calculated to test the scholar's knowledge and ability, in each study pursued, and the pupils are required to write out the answers in his presence with no opportunity to consult their books or each other. This, the scholars understand is a test of their knowledge and a proof of their faithfulness, and in some schools their rank depends upon the result.

If a scholar has three studies and writes a spelling paper of twenty words (which should never be omitted) it will make four papers to each scholar, and will make some work for the teacher. But any teacher who persistently follows such a course will find his scholars fast gaining in thoroughness and power of expression, and they will in

time come to know so much better *what they know* that he will think himself amply repaid for any extra labor he has performed in this direction.

Try it fellow teachers. Don't be discouraged by a partial or complete failure at first. Don't make the questions too difficult to begin with. Give them some questions of your own manufacture which you know they ought to be able to answer,—and then patiently examine their papers and correct their mistakes. I *think* you will find it work that *pays*.

L. P. F.

LETTER FROM A YOUNG TEACHER.

UP COUNTRY, Feb. 1, 1868.

DEAR FRIEND: I read your kind letter in the last "Normal," with much interest. I have tried to profit by it, but excuse me, if I say I am very glad that you were not my "committee-man," since I should thus have lost my pleasant school this winter. In spite of my sixteen years, everything goes on quite smoothly. I have found the "great boys" the most easily managed of all my pupils. I have some who are several years older than myself. Let me tell you something about them, which encouraged me very much. I have one trial, (I will not tell his name.) He does not openly rebel, but tries me in many ways.

I have talked with him, I have tried to interest him. I have punished him in various ways, (though not with the rod.) One day I "kept him in" at recess, and gave him a good dose of moral suasion, accompanied with promises of something stronger, if he did not change for the better. To my delight the change was immediately evident, and my wayward boy, has for weeks, been my most obedient and studious pupil.

At first, I felt quite elated at my success; but at my boarding place to-night, I was speaking of the pleasant change in my troublesome scholar, and how proud I felt that I had conquered him. "Now, school-ma'am," said my host, "don't feel too much set up about your victory over Tom. I'll tell you what I heard about it. I was going by the school'us a few weeks since, at noon. There I saw two or three of your big boys stand

ing around Tom, while he was pleading piteously. "What's to pay, boys," I asked, "Fighting, eh?" "No," said one, "This chap is a plague to our teacher all the time. It's too bad to plague a little lady like her, and make her give him a thrashing, so we are going to undertake the job for her; and we've been telling Tom, the first time he goes contrary to rules again we'll give it to him,—See if we don't!"

"Tom promised better fashions," continued my host, "and I hear he is doing well now, but you may thank your young men for that. It is a good thing though, to get the big boys on your side."

I agreed with my friend, and thought I would ask you to give other young teachers the good advice he gave me: "Get the big boys on your side." I get along quite nicely now. We have very little whispering, and the scholars are interested in their studies. I have no trouble with the scholars in school, but a little trouble *outside* of the school. This seems to be quite a belligerent district, and almost every day I have to make peace between two warlike parties.

I cannot always see the scholars on the road; and I cannot believe all they tell me about their quarrels by the way. Please tell me how far a teacher's authority extends. Is it from the time the pupils start from home, till they are at home again? or is it only when they are on the sacred soil of the school-yard? I find a variety of opinions upon this subject. For instance, when Mrs. B's. son was hurt going home one night, she came to me, bitterly complaining, and insisted that I should interfere and protect her Charlie, (a big boy of 13.) So I tried to set matters right. In a few days Mrs. C. complained that this same "dear Charlie" had abused her John, and I must attend to *him*. I *attended to him*, but the next day Mrs. B. sent me word I had no business to punish her boy for anything he did out of school. She advised me to let him alone, or "there would be a fuss." Between them both, I sometimes hardly know what to do. Oh, Sir, I find it easier "managing the big boys," and the little boys, and all the girls, than managing their loving mothers.

One day I get word, that Willie T. is so delicate I must not give him such hard lessons, (there is not a boy that plays harder.) The next day I hear that Tim must not study the multiplication table any more, for he got that last winter; (he can't recite beyond the threes.) "Mother says I need not study gography," says Robert S., "she wants me to get along in my '*Rethmetic*.'"

I have borne all this quite patiently, but last week I had several such requests, some of them rather impertinent, though not designedly so. I told the scholars who brought these messages, to tell their parents I meant

to do the very best I could, but that hereafter I should manage the school just as I saw fit. Did I do right? (I have not been troubled with any more such requests.)

It is, dear Sir, quite a problem with me, how to manage the parents; I should like some advice from you. There are many other matters I should like to ask you about, but I have not time to-day. I hope you will continue to write for young teachers. I have heard many express interest in your letters.

Thanking you for your good instruction, I remain, very respectfully yours.

YOUNG TEACHER.

P. S. Don't let the people in my "deestric" know that I have written about them.

WRONG NOTIONS ABOUT THOROUGH TEACHING.

Whatever instruction, it is universally held, lacks thoroughness also lacks a cardinal virtue; hence, "be thorough" is the frequent and emphatic injunction laid upon all teachers. Certainly, the force, the scope of any command regarded as thus vital should be clearly apprehended. Yet, I cannot help thinking that many teachers do not clearly apprehend what instruction is judiciously thorough, for only such can be approved. Very sure am I that a vast deal of mischief results from present effort to make teaching thorough.

What, then, constitutes judiciously thorough teaching for our common schools? Even when so limited in its application, I for one hold this to be a variable term; and, hence, the teacher should give it special consideration with reference to every pupil under his care. He should duly regard age, natural aptitude and whatever other modifying circumstances there may be. Yet, there are certain fixed, guiding principles which should always be observed.

Whenever the matter taught necessarily involves logical sequence, the last step taken always depending upon what has gone before, like geometrical and algebraic demonstrations, or other process of pure reasoning, there each step should be thoroughly mastered by the pupil, otherwise he will soon be unable to advance at all. Of so much we are sure beyond ques-

tion. Yet this universal principle has far from any universal bearing upon the instruction required in our common schools; if it had, then teaching would be of little avail until the reason, so weak in childhood, had become robust with the increasing age of the scholar.

In teaching children, then, there should be no forced, unnatural attempt to impress them with the reason of every step taken. Most children can be taught, for example, to repeat, from memory, the reasons of each step in arithmetic, while there is necessarily an utter lack of understanding. Thus, they will memorize the solutions of problems, oral and written, also the explanations of sundry rules. These they will glibly repeat totally ignorant of the essential spirit of the words, as the daughters of Milton knew not the meaning of the Latin which they read to their father in his blind old age. And this is regarded as an achievement worth struggling for. It is too often called thorough teaching; but whether thorough, or not, it is most vicious teaching, into which many, mistaking the intellectual development of children, are apt to fall, in their endeavor to be thorough, no matter what their department of instruction. All should beware of unseasonable and undue effort to teach those things which depend mainly upon the reasoning faculties. Men may acquire a vast deal of useful knowledge without the slightest apprehension of the underlying philosophy. With children it is essential that the acquisition of facts should, as a general rule, precede the exercise of reason, even though the teaching should lose the coveted appellation of thoroughness.

But how about this acquisition of facts? Does not this afford an opportunity for thorough teaching? Certainly: but the teacher, because he may here the most easily go astray in the simple process of cramming the memory, should be the more vigilantly on his guard, otherwise he will be quite certain to overpass the bounds of judiciously thorough instruction. Whatever study embraces facts, in the main, like geography, spelling, has little to do with logical sequence. Hence, there is no absolute necessity that each page of the text-book, or each division, should be completely mastered before going on. Two things, therefore, should be taken into consideration: 1. the relative importance of the facts; 2. the pleasure or disgust of the scholar.

Since there is no end of facts connected with any department of learning, they cannot all be learned, and a line of division must be drawn somewhere. An effort should be made to memorize only those which may with some reason, be regarded as essential, which will give a clear, full outline and enable the scholar to find whatever he shall afterwards need. He is not the better lawyer who has the most facts stored in his head, but he who

knows where to find what he wants and when he wants it. Avoid, therefore, that thoroughness of teaching which shows itself in stuffing the memory with useless and unretainable details. Herein is work for a discreet judgment. Again, no scholar should be kept so long at anything, which is not absolutely required further on, as to become disgusted, disheartened. Better skim the lake than to destroy the pleasure of the flight by too thoroughly wetting the wing and making the movement slow and heavy. The same degree of thoroughness must not be insisted upon in each pupil, but only that each should properly apply himself.

In the culture of the taste, of the imagination, which is now almost wholly overlooked in our common schools, there must be the same avoidance of dry, immaterial minutiae. This culture should be a supreme joy from beginning to end, following that path which will give the greatest delight, with the least effort, to the pupil.

That teaching, no matter what may be the superficial appearance of the occasional examinations, is entitled to be called the most judiciously thorough, which shows the best ultimate result. And this best result cannot be had by forced exercise of the reasoning faculties before their time, nor by stuffing the memory with endless details, soon forgotten. Without such work, there is quite enough of judicious work to engage all the hours of childhood and youth.

Auburn, Feb. 18, 1868.

C. B. STETSON.

Self-denial, for the sake of self-denial, does no good; self-sacrifice for its own sake is no religious act at all. If you give up a meal for the sake of showing power over self, or for the sake of self-discipline, it is the most miserable of all delusions. You are not more religious in doing this than before. This is mere self-culture being occupied forever about self, leaves you only in that circle of self from which religion is to free you; but to give up a meal that one you love may have it, is properly a religious act—no hard and dismal duty, because made easy by affection. To bear pain for the sake of bearing it, has in it no moral quality at all, but to bear it rather than surrender truth, or in order to save another, is positive enjoyment, as well as ennobling to the soul.

THE VILLAGE SPRING.

 BY JULIA H. MAY.

Down the hillside in a shady nook,
 Flows the cool unfalling village spring.
 Trickling down the bank into the brook.
 While low echoes back the twinkling music fling.
 Down and up the twinkling music fling.

Crystal spring! Long ages it has flowed.
 Flowed for ages from that rough old ledge,
 Long before the Indian's abode
 Cleft the drooping willows by the water's edge.
 Cleft the willows by the Sandy's edge.

Still it flowed, when fifty years ago,
 Saxon axe and hammer claimed the spot,
 And the mill-dam in the stream below,
 Answered back the softer drippings from the grot,
 Sent back louder echoes to the grot.

Fifty years! ah down that trodden way
 Many eager feet at morn have pressed,
 That at evening trembled to decay,
 And at night have feebly sunk to welcome rest.
 Feebly tottered to the graveyard rest.

Foot-prints! Still I see them on the ground.
 Feet that made them, whither have they passed?
 Have they cooler springs, and clearer, found,
 Do they thirstless walk the heavenward path at last?
 Walk the golden streets of Heaven at last?

Mimic waterfall! Your tuneful flow
 Bears me back to childhood's happy days.
 Here with "Em," and "Su," I used to go,
 When we wearied of our books or summer plays,
 Warm and weary with our summer plays.

On that moss-grown arch we used to stand.
 While we made a cup of maple leaves,
 Kneeling, then, upon the rocks and sand,
 Each, in turn, from leafy cup the draught receives.
 From green dripping cup the draught receives.

There we sang our last sweet schoolday song,
 Till the birds, from branches over-head,
 Looking down, like us, a thoughtless thing,
 "Chirped and twittered in perplexed reply," we said.
 "Plainly twittered a reply," we said.

Happy children! Pleased at last to go,
 Up the hill with nimble steps we went,
 Or one lingered laughingly to throw
 Sprinkling rain-drops from the crystal fountain sent.
 Playful rain-drops from the fountain sent.

Homeward then we hurried, (parting there,)
 One to that brick house upon the hill,
 Two for that elm-shaded cottage, where
 Old Mount Abram makes the shadows deeper still,
 House and cottage in the shadows still.

Shades and sunshine, merry days and sad,
 We have seen: to-night, alone we'll sing
 Of the happy days our childhood had,
 Drinking from the dear old village spring.

THE SUPERVISION OF OUR SCHOOLS SYSTEMATIZED.

[Speech of Hon. Nelson Dingley Jr. Delivered in the House of Representatives, Augusta, Feb. 12, 1868]

Bill an act to establish the State Board of Education being on its passage to be engrossed, Mr. Dingley of Lewiston, said:

MR. SPEAKER:—I desire the attention of the House this morning, not so much on account of anything I may have to say, as on account of the importance of the bill under consideration and the transcendent importance of the great interest which it is designed to advance. Thus far during this session we have been legislating either on subjects of transient or local importance, affecting in general, only the temporary, material interests of isolated communities or distinct classes. While I would in no manner counsel inattention to the minor and subordinate interests of the State, yet to-day, and from day to day, until the success of this measure or some other having in view the end sought to be reached by this bill, I may justly claim that you will give your first and most weighty consideration to a plan which proposes to give new life and increased efficiency to the public school system of Maine—an interest which lies at the foundation of all other interests, material and moral, and which affects every hamlet, every class in the community, and every man, woman and child in the State.

UNSATISFACTORY RESULTS OF THE PRESENT SYSTEM.

I need not spend any time in demonstrating to you—what you so well know from your personal observation—that, for some reason not difficult to ascertain, the public schools of Maine, on

the success of which depend the happiness and prosperity of those who are so soon to take our place, and even the perpetuity of our system of free government, with a few exceptions, mainly in the cities and villages, have not only failed to make that progress which we had the right to expect they would make, but have either stood still, or in too many cases retrograded from the positions they occupied a dozen years since, when they as a whole stood higher than they ever had stood before. While we have many good schools, schools which we are proud to claim as belonging to the Dirigo State, and while our people have in no manner had their faith shaken in the absolute necessity of free schools nor their disposition to extend material support in any manner changed, yet there comes up from a large proportion of our towns from Kittery to Calais, one common complaint, that the majority of our public schools are lamentably behind similar schools in many other states, and that our school system is not yielding returns in proportion to the expenditures.

It is incumbent on us as the Representatives of the people of this State, to consider this state of facts bearing upon our system of public schools, and having ascertained the causes, to set ourselves at work to correct them by all the means at our command. To refuse to do this, to shirk the responsibilities upon us, to postpone remedial legislation whether from an indisposition to grapple with so important a subject or from a mean narrow-minded spirit, which balances a ninence against the present and future welfare of those who are to come after us, would be utterly unworthy of any member to whom has been intrusted the public interests. We may postpone the construction of railroads, the erection of public edifices, and any legislative measures having reference to the convenience or mere material interests of the people, without serious disaster, but to postpone measures needed to give greater efficiency to our system of public instruction, is to do an irremediable wrong to two hundred thousand children who will be beyond our reach if we delay. It is now or never with them.

WHY ARE OUR PUBLIC SCHOOLS INFERIOR?

To ascertain the causes of the inferiority of the public schools of our State as a whole to those of some other States having no better surroundings than we have had, we have only to look to the latter and see what influences they have had and are having to increase the efficiency of their schools, that we have not had. Go to Massachusetts, whose public schools have until very recently stood in the front rank, and we observe at once that there is a greater personal interest among the people and consequently among the children, in the cause of education—an interest which shows itself in public educational meetings, in the appropriation of generous sums for the construction of schoolhouses and the maintenance of schools, and in such a thorough comprehension of the requisites of success in this direction that poor teachers and inefficient systems of instruction are not tolerated. Go to Pennsylvania, whose free-school system (of which Thaddeus Stevens is the father) is only fourteen years old, and there we find that in that brief period there has been a complete revolution which has even reached the Rip-Van-Winkle's prejudices of the Dutch and interested them in free-schools; and has already made the Pennsylvania common schools an honor to the State, a bright star of promise to the future and a perpetual memorial of the far-sightedness and statesmanship of their founder. When the many brilliant services of the great Commoner in the halls of Congress are forgotten, his agency in establishing the magnificent system of free-schools in the Key Stone State will preserve his memory and render it blessed. Go to the young, but great and growing West, already indeed the seat of Empire, and there you will find systems of schools which already surpass those of Massachusetts, and a people deeply interested in their welfare, and calling to their assistance the best teachers and educators of the East. The public schools of Cincinnati and Chicago already equal, if they do not surpass, the boasted schools of Boston.

The superiority of the public schools of these States, it will be observed, arises directly from the awakened interest in them among the people, and the creation of a public sentiment which demands and honors thorough and successful teachers, and provides them with incentives and means for successful labors. In all of these commonwealths this public sentiment has been cre-

ated by agencies provided by the State starting from a fountain head—the head of a Department of Public Instruction—from whom through various designated agencies generally County Superintendents, have been diffused influences that have reached every town and every school district within its borders, and thus have the first minds in the country—the men who have made themselves masters of the science of education and the most successful methods of conducting our public schools—made themselves felt in every community, and infused into parent, scholar and teacher a right appreciation of each other and a deeper interest in, and just comprehension of popular education.

ACTION OF THE STATE EDUCATIONAL CONVENTION.

Thoroughly understanding the short-comings of the public schools of Maine, and fully comprehending that the first thing needed here in order to awaken the required interest to bring them up to the proper standard, was an entire revision of our so-called system of State Supervision, a system which set one man alone to do what even a Horace Mann could not do,—the State Teachers' Association at a very largely attended and interesting session held at Lewiston in November last, appointed a committee consisting of Messrs. George M. Gage, the accomplished Principal of the Normal school at Farmington, Warren Johnson, Principal of a very successful Private School for Boys at Topsham, C. B. Stetson of Auburn, a teacher of experience and well versed in educational literature, J. H. Hanson, a successful veteran teacher and at present Principal of Waterville Classical Institute, and G. T. Fletcher, Principal of the Normal School at Castine, to digest a plan of State Supervision and present it to the Legislature. This committee corresponded with the heads of the Educational departments of other States, and obtained a mass of valuable information bearing upon this subject, showing conclusively that those States which are making the most progress in their public schools at the present time, are those which are reaching every town and school district through a Board of Education, where the Head of the Board can operate by means of Superintendents in each county. This plan was consequently laid before your Committee on Education, and commended itself at once to every member of the committee and to every friend of education with whom they have had the pleasure of consulting.

GENERAL FEATURES OF THE PROPOSED PLAN.

It is substantially this system, modified and adapted to our wants, Mr. Speaker and gentlemen of the House, that is before you in this bill, whose provisions I will briefly explain. The bill abolishes the office of Superintendent of Common Schools as now constituted, for the reason that it is impossible for any State supervision to succeed which leaves unbridged the immense gulf between that officer and the school officers of the various towns. Hence the system which we have had since 1860 has been necessarily a failure, and very naturally there was general dissatisfaction expressed with it. This bill establishes a State Board of Education consisting of a State superintendent and a superintendent for each county and the Principals of the State Normal Schools *ex officio*, and creates a State Department of Education, having an office at the Capitol, with the same prominence and honor as any other department of government, as should be the case, and puts the State Superintendent at the head. This officer is placed in general charge of the schools of the State, gathers information as to the workings of the school systems of other States, modes of instruction, schoolrooms and school furniture, and disseminates that information through the county superintendents by public addresses and by printed documents. He advises and directs the county superintendents, and in general reduces the school management of the State to a uniform system. He also holds annually a State Teachers' or Educational Association and a Teachers' Institute in each county, where will be gathered the leading teachers and friends of education, and from which will be diffused into every town the best ideas of the best minds on subjects relating to our public schools.

It is necessary that the man who occupies this position should be one of the best minds and most thorough practical educators in the State. To secure such a man, the committee thought

the salary should be placed at \$1800, with additional pay for travelling and other expenses not to exceed \$500. The position is one demanding peculiar qualifications—qualifications rarely found, and which cannot be obtained without a liberal compensation. Material for Justices of our Supreme Court can be much more easily found than the right man for the head of our educational interests. In many other States \$3000 is deemed necessary for the annual salary of such an officer. Some of our public schools pay their Principal more than that. If we are to have any one to fill this important position, by all means give us one whose services will be worth that amount, for a “cheap” man would in all human probability secure “cheap” results.

The bill before you, gentlemen, proposes to bridge over the wide gulf which separates the State Superintendent from the town committees—a gulf over which no one has thus far passed—by the appointment of a Superintendent in each county. This I regard as that feature in the plan which promises success, which in a modified and less efficient form than that now proposed, did, during the eight years previous to 1860, arouse the public interest in our public schools and increase their efficiency to a degree not known since. It is made the duty of the County Superintendents, acting under the direction of the State Superintendent—all of whom are appointed by the Governor for three years—to visit every school in their respective counties, so far as practicable, to make such suggestions to teachers, scholars and parents as will elevate the schools; to address the citizens of each town on educational matters; to advise with and stir up town committees; and to hold monthly, in various parts of the county, teachers’ meetings or institutes, for the purpose of consultation and explanation of new modes of instruction.

It seems to me that these visits to the various schools, these educational meetings in the several towns, this stirring up of town committees, and these institutes and teachers’ meetings cannot fail to arouse the interest of the people in our public schools, and to awaken the teachers and committees to a new sense of their responsibility, and to renewed efforts to prepare themselves more fully for their important duties. The source of the difficulties under which we labor now is the apathy among the people, and some agency must reach them. Stir them up, and their children will be stirred up with them, and they will give that honor to teachers which is their due, and lead them to prepare themselves more thoroughly for the work, and adopt as a profession what is now a temporary business. I cannot think of any agency so likely to do this work as that proposed by this bill, for the same plan has accomplished this in other States.

COUNTY SUPERINTENDENTS.

That provision of the bill which has been most scrutinized and which, with the material view that we Yankees are so liable to take, provokes the most criticism, is found in the sixth section, which regulates the pay of County Superintendents. The committee, instead of providing a fixed salary for each one of these officers, as is usual, considered it highly important that there should be in the compensation a sliding scale which might operate as a spur to provoke them to increased efforts. Accordingly, inasmuch as attendance on the schools is a good index of their efficiency and of the interest awakened in their behalf, it was thought best to make average pupil attendance for the year preceding, the basis of compensation of the County Superintendents. Thus each County Superintendent would reduce his pay by his inefficiency and increase it by his efficiency as shown by the increased attendance resulting from the new interest awakened in public schools. Ten cents for each pupil was the average amount hit upon as the compensation of the County Superintendents: but inasmuch as the county of Cumberland, which has the largest number of pupils of any county in the State, has within its limits the populous city of Portland, whose schools will need less time comparatively than country schools, and is more compact and densely populated than most of the other counties, it was thought just that the per capita compensation to the Superintendent should be reduced to eight cents; while in the counties of Piscataquis and Aroostook, which have a scattered population and a large territorial area, it was deemed wise to increase it to fifteen cents. On this basis the compensation of each County Superintendent will be as follows:

THE MAINE NORMAL.

	Scholars for 1867.	Av. Attendance for 1867.	Pay of County Super'dts.
Androscoggin,	9,721	4,174	\$417.40
Aroostook,	9,498	2,522	378.80
Cumberland,	29,106	about 12,500	about 1,000.00
Franklin,	6,820	8,226	826.60
Hancock,	14,277	6,977	697.90
Kennebec.	16,529	7,031	703.10
Knox,	8,266	4,224	422.40
Lincoln,	9,960	4,889	488.90
Oxford,	11,052	5,286	518.60
Penobscot,	24,934	12,052	1205.20
Piscataquis,	5,077	2,521	378.10
Sagadahoc,	7,571	3,115	311.20
Somerset,	12,166	6,289	628.90
Waldo,	12,612	6,582	358.20
Washington,	15,832	6,118	611.80
York,	18,929	8,454	845.40
	<u>212,809</u>	<u>94,429</u>	<u>\$9,592.00</u>

It will be seen by this table that the Penobscot Superintendent will have the largest compensation for the first year, because its average attendance was the largest. Cumberland has, however, the largest school population, and with the same ratio of attendance as Penobscot would have had an average attendance of more than two thousand larger. The work of the Superintendent in Penobscot will be much larger than in any other county, on account of the large area and large number of districts. A careful comparison of the duties required of the Superintendents in each county shows that it would be difficult to arrange salaries on a juster basis than that afforded by the plan proposed by the bill. Besides, there is ample room for each Superintendent to increase his compensation by securing a better attendance on the schools, and as each officer is appointed for three years, there is every inducement for him to put forth every means at his command to elevate the standard of the schools. In Aroostook it will undoubtedly be thought wise, in case this bill should become a law, to place the Madawaska schools under his charge, and in that event he would receive the compensation now given to a special agent, in addition to the salary provided by this bill.

The aggregate expense of this County Superintendent plan is a little under nine thousand five hundred dollars, and it is provided that this sum shall be taken from the interest on the State school fund—thus not adding a single dollar to the State expenses. The expense of the State Superintendent is to come from the State Treasury, as it does now, and adds only about \$800 to the amount heretofore paid by the State. It has been asked, why take the compensation of the County Superintendents from the school fund? The answer is two-fold,—first, to remove objection against adding to the charges on the State Treasury; second, because the County Superintendents are added to secure increased results from the money expended for schools, of which the interest on the school fund is a fraction. Nearly a million of dollars are annually expended to support our public schools. Now, if by taking the comparatively small amount of nine thousand five hundred dollars from this million of dollars we can secure a more economical and efficient expenditure of the remainder, we are not only justified in so doing, but a duty is imposed upon us in that direction. In short, the expenditure is one demanded by economical considerations.

What corporation or what individual would think of expending a million of dollars in any business without the most efficient supervision in every department? The manufacturing companies in my own city deem it not only wise, but necessary, to expend large sums of money for agents, superintendents, and overseers, and the owners of these establishments feel that by such an expenditure in securing men competent and efficient to supervise every part of their business, they increase their profits. How much more, then, ought the State, through its Legislature, to provide for the thorough supervision of a million of dollars on our public schools, on whose success hangs every material and moral interest! This is what other States are doing with most satisfactory results; and shall we allow ourselves to fall behind?

UNIFORMITY OF TEXT-BOOKS.

The concluding provisions of the bill, intended to secure an ultimate uniformity of text-books in the schools of the State, on more favorable terms than are now vouchsafed, is directly in the line of economy, and should commend this bill to the favorable consideration of gentlemen who are looking more particularly to expense. It is made the duty of the Board of Education, who are to meet at least annually at Augusta, and who are to have the authority of granting grade certificates to teachers, to be good throughout the State, to recommend a uniform system of text-books, not to be at once forced upon our schools, but to be introduced whenever any town may determine upon a change; and when introduced not to be changed for five years, and not then without the consent of the Board. Thus within two years there would probably be secured a uniformity of text-books in the public schools of the State.

The importance of such a consummation cannot be overestimated. To say nothing of the increased efficiency in having our schools all moving in one direction and using the same text-books, the saving in the cost of such books must be a very large item. As it is now, when a family moves from one town into another, the parents are in a large majority of cases called upon to purchase other text-books, often times at great expense. In my own experience in serving on the School Committee in the city which I in part represent, I have very frequently known of such cases where it seemed a hardship to parents to purchase new books when their scholars had good text-books used in other towns.

But this provision reaches further than that and seeks ultimately to reduce the price of text-books, by making special arrangements with publishers at the lowest wholesale rates (for a whole State would be entitled to better terms than a single firm), and by then providing for their distribution by retail dealers at a reasonable advance. This subject has received the special attention of the School Committee of Portland, and they think that a saving of 40 per cent, could be made in the cost of books. It is estimated that the annual cost of text-books used in this State in our public schools, is \$150,000. Now suppose we can save only 20 per cent., and then the saving from this source will be \$30,000 annually—more than three times as much as this system of county supervisors will cost.

But this is not all. The bill contemplates that the Board of Education shall go still further into the matter of text-books and seek the reduction of their number and size, as well as their uniformity. The system under which our schools are now furnished with books is vicious to the last extent. It is the interest of authors and publishers to make their books as large and numerous as possible—the former to increase his copyright, and the latter his profits. On the other hand it is the interest of the schools to have as few and as small books as may satisfy the reasonable requirements in each branch of study.

I have been informed that a publisher of a series of excellent Arithmetics now out of print, actually destroyed the stereotype plates and employed an author to write a more voluminous series for the reason that his profits were too small on the moderate series. These facts go to show that there is not only a grand opportunity for retrenchment in this direction, but also that there is a demand upon us for some such board as this in order to keep stumbling blocks in the shape of unnecessary text-books out of our schools.

The morning hour of the 18th, having expired, Mr. Dingley retained the floor, and on the morning of the 14th, resumed as follows:

MR. SPEAKER: When the house adjourned yesterday, I had nearly completed an analysis of the bill under consideration. Before proceeding with my remarks this morning, I may say that the only interest I feel in the measure before us, is that which every citizen should feel in a subject so vitally important. I have no especial devotion even to the plan recommended by the committee on Education except so far as it may promise to increase the efficiency of our public schools. It is not distinctively my plan; it is not the plan of the committee; it is not the plan of the gentlemen representing the State Teachers' Association. It is rather the plan which has secured so grand results in other States, and which in view of its success elsewhere has commended itself to the committee on Education and has been adopted and modified to meet the peculiar wants of

our State. I do not ask even that the plan proposed by this bill shall be adopted to the exclusion of all others. I only ask that gentlemen admitting the inefficiency of our present system of State supervision and confessing the necessity of remedial legislation, shall accept this plan or propose some better one; shall cease to find fault and quibble over details until they can suggest improvements. I have been gratified to receive suggestions intended in good faith to perfect the bill before us, and some of those suggestions I propose to submit to the House as amendments to the same.

[Mr. Dingley then submitted an amendment increasing the length of the session of the annual County Teachers' Institute to five days, and another leaving the pay of the County Superintendents as a charge upon the State Treasury instead of on the school fund—remarking that a future bill could determine this question in another direction if any one desired to raise it. Both amendments were adopted.]

Mr. Dingley continued: It seems to me it must be evident to every member of the House, that our public schools are not securing such results as ought to be secured by them, and that some action should be taken by the State with reference to securing a better supervision. That being admitted, for I do not understand any gentleman will deny it, it seems to me we should address ourselves to the correction of the evil. In the cities of the State we are able to take care of this matter ourselves, and having that advantage, we might say to the sparsely settled districts, so long as we can take care of ourselves we will let the rural portions of the State take care of themselves. But we cannot thus shake off these portions of the State and save ourselves from all evil consequences, even if we take the selfish ground that we have no interest in whatever concerns the highest welfare of our citizens. In the cities we are called upon to admit to our schools pupils from schools which have been sadly mismanaged, and we have found them often so poorly prepared to enter our classes and prosecute their studies, that our own schools have suffered in consequence. Those of us who represent the cities of the State have thus a direct interest in this measure.

ARGUMENTS SPECIALLY DIRECTED TO THE REPRESENTATIVES FROM THE RURAL DISTRICTS.

I desire to call the attention of gentlemen on this floor representing the rural portions of our State, to the importance of this bill as affecting your own interests. You can but be aware of the fact that you are constantly losing from your population, families that move to our villages and cities in order to give their children the advantages of good public schools. In my own experience I have known of numerous cases where gentlemen have become residents of the city which I have the honor in part to represent, with special reference to giving their children an education. They have frequently said to me that they preferred to have remained where they were, but the schools were so inefficient that they could not in justice to their children do so. It is particularly for the interest of the rural and agricultural portions of our State, that the efficiency of their schools should be increased. I ask your attention while I advert to some of the salient reasons which commend the plan proposed in the bill before the House, to your favorable consideration.

I. First it is an economical plan. Even if it cost ten times as much as it does it would be an economical plan, for the reason that any expenditure which increases the efficiency of our public schools materially, can but be judicious. There can be scarcely a question that in the expenditure of a million of dollars on our schools the greatest results can be attained by taking ten thousand dollars of that sum to secure the most efficient expenditure of the remainder. I have no doubt that with such an expenditure for thorough supervision, the efficiency of our schools can be increased at least twenty-five per cent. But there is another point in this plan which makes it peculiarly one of economy, and that is in the provision respecting text-books. It is very clear that at least \$30,000 can be saved to the people of the State by the reduction in the price of text-books, as I have already shown. In every point of view the plan is one which can but commend itself to those who look first and foremost to the question of dollars and cents.

II. Second, the plan is one which promises efficiency and consequently a correction of evils admitted to exist in our school system. Let me direct attention to some of the points which jus-

tify this conclusion. It is admitted on all sides that one of the great evils of our present school system is its want of unity. The schools of every town are run on a plan peculiarly their own, with little regard for and less knowledge of the organization, modes of instruction and experiences of other schools. Consequently whatever may be good and worthy of imitation rarely comes to the knowledge of teachers and friends of education generally. This bill proposes to remedy this evil by unitizing our school system on one general plan, and giving to each teacher not only the best ideas of the best educators, but also the best modes of instruction of every other teacher. Each teacher is thus obliged to compare his work with the work of other teachers, the standard is elevated and the school army drilled as thoroughly as any army. Why should we not manage our public schools with as much system as we do our material interests?

III. Again it is admitted that under our present system we have too voluminous text-books, and consequently spend altogether too much time on arithmetic, geography and grammar. I think that the best educators agree that half of the time now devoted to these studies—to the solution of knotty problems in arithmetic, to the memorizing of a multitude of unimportant facts in geography and to the committing of technical rules in grammar—is wasted. What our schools want is less of these studies, in order that our scholars may have time to devote to other and equally important branches, such as the use of language as attained only by writing it, physiology and the laws of health, the natural sciences, the first principles of geometry, drawing, and many other studies which have a bearing on the practical business of life. I was very much interested yesterday in the exhibition of deaf mutes in this Hall, and when I saw children of eight summers, deprived of the important faculties of hearing and speech, giving evidence of so great proficiency after less than two years and a half instruction, and putting to shame average scholars of that age in our public schools, I could but feel that there is something wrong in the old, routine methods of instruction so generally found prevailing. I could but feel that a Board of Education composed of our best educators, would not long rest content with systems of instruction that present to the child's view rules and definitions before it has comprehended general principles. The child sees objects and becomes acquainted with their qualities before it classifies and arranges them under rules. It seems to me that in this point of studies to be pursued and methods of instruction to be employed, we have a field of usefulness which ought not to be longer neglected, and which this plan occupies.

MORE GENERAL ARGUMENTS IN ITS FAVOR.

One of the strongest reasons which we have to lead us to believe that this plan will secure the ends sought, is the admitted fact that it has accomplished this in other States where it exists.—The experience of others is always found to be a safe guide for ourselves. Look at Pennsylvania, which, under such a system, has made so great strides in her free schools in fourteen years! The Superintendent of Schools of that State declares that this plan, particularly the County Superintendent feature, has been the right arm of their free schools. Look to young Iowa already indeed ahead of our own State in this matter. Now if this plan has succeeded so well elsewhere, is there not good reason to suppose that it may do as much for us? Is it wise to quibble over the details of a plan, and indulge in predictions of failure, when we have before us such evidences of its success? We complain that so many of our young men, the life-blood of our communities; that so many of our best teachers, are leaving our State, and lament that Maine should be so good a State to emigrate from; but should not our complaints give way to energetic efforts to make our State as attractive and in every respect as prosperous as other States?

The plan before us diffuses the influences that go out from the Board, and must reach the people in every county, every town, and every school district, increasing their interest in our public schools and arousing them to a deeper sense of the importance of a general diffusion of education. While there is now a very general sympathy with our free school system and a very general disposition to regard its interests, yet this sympathy is altogether too little concentrated, with exceptions here and there, to be felt in our schoolrooms. Parents rarely visit schools to encourage pupil and teacher, rarely converse on educational subjects, but in general are as oblivious to everything relating to the schoolroom as though it was located in another community.

Every other subject but our school system and our educational interests is debated at the cross roads, in the public assembly, and by the fire-side. Men become eloquent, as they should be, over the reconstruction of the South, but their lips are silent over the reconstruction of the immortal minds of the children of our State. Now the people will not be aroused to the importance of this subject, they will not make it their every-day talk until some agency is employed by the State to visit every town and hamlet and stir up the public mind on this subject by addresses, public meetings and personal appeal. This is one of the duties imposed upon State and County Superintendents by this bill.

By thus increasing the public interest in education, we also bring to the attention of the people the importance of the teacher's vocation. We show to them that there is no other class in the community upon whom are devolved so great interests, and in whose proper preparation for their work we all have so much at stake. When this result is reached, when the public thoroughly understand the requisites of a good instructor, and appreciate him as they ought, we shall find that incompetent teachers will discover their vocation gone. Every intelligent educator understands that ten weeks of school under a first class teacher, are better than twice as long a school under a very poor instructor. Then we shall find that teachers will come to have increased respect for their calling, and will feel under greater obligations to thoroughly fit themselves for their important work. Then we shall find increased honor and profit for the teacher, and consequently an incentive to make teaching a business—a profession for life. And why should it not? There seems to be a common impression that any one who is a tolerable scholar will do for a teacher without special preparation for his duties. A more fatal error cannot be conceived, for teaching is as much a science, as much a special profession requiring preparation and aptitude, as the law, medicine or any of the arts. What our schools particularly need is teachers who have made teaching a profession, and who have fitted themselves for their work; and such teachers will be found in sufficient number, when the public are educated to give due honor to the good teacher. Besides, this plan will set before teachers higher planes of thought, and better systems of instruction than many of them have been accustomed to, and will open to each the best way and plans of others. I shall hail with joy the day when teachers are everywhere recognized as the high character of their work demands.

This plan reaches the superintending school committees and stirs them up to increased efforts. The large proportion of these officers are desirous of discharging their duties efficiently, but too many of them have so little interest in the schools that they almost entirely neglect them. Many of these officers are entirely unfitted for their positions, being as a superintendent elegantly remarked in one of his reports, a few years since, "*a dead weight*" on the schools. Now all of these town committees should be reached by state supervision, in order that they may be urged to the most efficient discharge of their duties. Many of these officers need to learn that there has been great progress made in modes of instruction within the past twenty years.

RECIPROCAL DUTIES OF STATE AND CITIZEN IN RESPECT TO PUBLIC EDUCATION.

But I pass from considerations demonstrating the efficiency of the plan proposed by this bill, to a brief examination of the reciprocal duties of State and citizen in this matter of public education. Our system of free government is based on popular education, and the State binds itself to educate its children. It cannot even evade or postpone this duty. The two hundred thousand children within the limits of our State will soon be beyond our reach. If we neglect to give them the benefit of a school system as efficient as it can be made, they will go forth unprepared to discharge their duties as citizens. By our neglect some of them may become candidates for the prison, the jail and the poor house, thus largely increasing taxation for the punishment of crimes, or to aid poverty which might have been prevented. Let us remember that prevention is always cheaper than cure. I appeal to you, Mr. Speaker and gentlemen of the House, to consider well the responsibility thus imposed upon you in training these youth who will soon be beyond your reach. To-day they may be molded as we desire; to-morrow they will have settled down into the stern and strong and perhaps vicious habits of manhood. Let us reach them and meet the responsibilities imposed upon us while we can.

The safety of our institutions depends upon the general diffusion of education among the people by means of efficient public schools. The moment we become careless of their interests, the moment we come to regard a few dollars as of more consequence than good schools, that moment we are in danger. Indeed the only rock on which our government is liable to be shipwrecked is popular ignorance. Wise statesmen see this, and are straining every nerve to educate the ignorant whites and blacks of the Southern States. The strongest governments are necessarily those in which the people are the best educated. The world has hardly recovered from its astonishment at the gigantic victories of Prussia over Austria, year before last—victories which find no parallel in history, and which in five days prostrated the proudest monarchy in Europe, and raised Prussia from the position of a third rate power to the first place among continental nations. However much the needle gun may have had to do in securing so grand a result, yet its place was entirely subordinate to the intelligent man who stood behind it ; for Prussia has by common consent the best school system in the world.

An intelligent people are in themselves the best defence that any nation can have. Without a general diffusion of intelligence, standing armies become a necessity. I heard Gen. Grant say something over a year since, that so long as the public schools of this country maintained the standard of general intelligence, there could be no necessity of maintaining anything but the merest skeleton of a regular army, for the reason that in case of an emergency the intelligent, volunteer could in five weeks be made as efficient as the ignorant machine could be made in a year. Therefore in promoting popular education we are best protecting our national interests.

I remember of reading an anecdote not long since in which it appeared that a Southern traveler crossing a desolate part of New England, and laughing at its poverty, asked the young native who was driving, "What could be raised on such barren sands?" "Well," said the boy, "we couldn't do anything with rice and cotton, and we couldn't do much with corn and potatoes, so we only just plant schoolhouses and meeting-houses and raise men" This response of the Cape Cod youth suggests the distinguishing feature of Puritan civilization, the exaltation of individual manhood by means of our public schools and opportunities for religious culture. Let us, Mr. Speaker and gentlemen of the House, representing as we do the people of Maine, be true to this great idea which underlies all our interests. Let us remember that our public schools are the heritage of the children of the poor man, for when these fail he has no other resort. The rich may take care of their children, but the poor can only rely upon the free schools. But inasmuch as the rich are equally interested with the poor in having the children of the latter educated, inasmuch as the perpetuity of even our system of government is dependent upon a general diffusion of education, let us not shrink from any duty imposed upon us in devising ways and means to increase the efficiency of the public schools of Maine. Every consideration of personal material interest, of duty, of patriotism, and of morality and religion, demands that these schools should afford to every child the fullest opportunity to fit himself for the active duties of life.

In conclusion, Mr. Speaker and gentlemen, allow me to say that I have spoken at greater length than I intended when I arose ; but my apology must be the importance of the subject, the importance of this measure and the deep interest I feel in the welfare of our public schools. I leave the measure in your hands, with confidence that you will look upon it with that favor which it deserves.

THE DEPARTMENT OF PRACTICE.

METHOD OF BOUNDING FOR ADVANCED PUPILS.

KENTUCKY.

Commencing on the Mississippi River at the parallel $36^{\circ} 30'$, run due E. along this parallel to the Tennessee River; thence about 10 miles down the Tennessee River in a northerly direction; thence due E. along an artificial boundary to the Cumberland Gap, separating it from Tennessee on the South; thence by the Cumberland Mountains in a north-easterly direction to the Tug Fork of the Sandy River, separating it from Virginia on the South-east; thence down the Tug Fork of the Sandy River, and the Sandy River, in a general north-westerly direction to the Ohio, separating it from W. Virginia on the N. E.; thence down the Ohio in a general north-westerly direction to the mouth of the Great Miami, separating it from Ohio on the N. E.; thence continuing down the Ohio in a general south-westerly direction to the mouth of the Wabash, separating it from Indiana on the N. W.; thence still down the Ohio in the same general direction to its mouth, separating it from Illinois on the N. W.; thence down the Mississippi to the point of starting, separating it from Missouri.

LOWER PENINSULA OF THE STATE OF MICHIGAN.

Commencing on Lake Erie, at the mouth of the Ottawa River, run due W. by an artificial line to the continuation of the boundary between Ohio and Indiana, separating it from Ohio on the S.; thence a few miles N. along this boundary line; thence due W. by an artificial line to Lake Michigan, separating it from Indiana on the S.; thence along the shore of Lake Michigan in a general direction East of North to the Straits of Mackinaw; thence in a general direction East of South by the shore of Lake Huron to its outlet in the St. Clair River; thence down the St. Clair River to Lake St. Clair, along the shore of Lake St. Clair to its outlet in Detroit River, down Detroit River to Lake Erie, separating it from Canada West on the E.; thence along the shore of Lake Erie to the point of starting.

MAINE.

Commencing at the mouth of the Piscataqua River, run along the Atlantic Coast in a general N. E. direction to Quoddy Head; thence along the Atlantic a little W. of N. to the mouth of the St. Croix River; thence up this river in the same general direction to its source; thence N. by an artificial line to the River St. John; thence up the River St. John in a general direction a little N. of W. to the mouth of the St. Francis, separating it from New Brunswick; thence up the St. Francis to Lake Pohenagamook, separating it from New Brunswick and Canada East; thence S. W. by an artificial line to the west branch of the St. John; thence nearly S. by an artificial line to the S. W. branch of the River St. John; thence up the S. W. branch of this river to a monument near its source; thence in a general S. W. direction along a range of hills to an artificial line, separating it from Canada East on the N. W.; thence

south by this line to N. E. Pond ; thence by the Salmon Falls River to the Piscataqua ; thence down the Piscataqua a little E. of S. to the point of starting, separating it from New Hampshire.

After learning the great natural features of a country, I regard an accurate knowledge of the boundaries of its States, and as a consequence of the relative position of those States, as of the highest importance. The method of bounding, of which I have given three examples above, is one which excites great interest in the pupil, because it requires thorough investigation on his part, and because it teaches him things instead of words. How many persons, who think they have a pretty accurate knowledge of the Geography of the United States, are aware that the northern boundary of Tennessee has two breaks in it, one at the Tennessee River, and one at the Cumberland Gap. Certainly the old method of bounding never could teach this fact, for it required the pupil simply to say, "Tennessee is bounded on the north by Kentucky and Virginia."

Again, how many know, that on the Michigan side, Ohio extends farther north than Indiana ; that Mass. steals a town from Conn. ; that to cross the Niagara into Canada, one must go west, not north ; that Virginia dove-tails with Tennessee ; that the western boundary of Arkansas is interrupted by the Red River ; that Missouri steals two counties from Arkansas, and that Iowa in turn steals from Missouri ; &c., &c.

In practice, I allow the scholar to commence where he pleases, and turn either to the right or left. Blackboard drawing of the maps, in various colored crayons, helps amazingly to fix every peculiarity of outline in the pupil's memory.

It remains only to say, that I have found scholars intensely interested in this method, when they once get into it.

N. BARROWS.

SOUTH BERWICK, Feb. 18, 1868.

QUESTIONS FOR TEST EXAMINATION.

TEN QUESTIONS IN ARITHMETIC.

I. Express by the Arabic notation the following number: Eight hundred and four billion sixty million and two ten-thousandths.

II. Multiply 3-4 by 11-12, and explain the operation.

III. Divide 7-8 by 3-4, and explain.

IV. What is a fraction?

V. Why does not multiplying both terms of a fraction by the same number change its value?

VI. Find 2 3-8 per cent. of 86 4-7.

VII. Having \$50, I bought 8 4-9 tons of coal, at \$5 per ton ; how much had I left? Explain.

VIII. Which is the more advantageous, to borrow \$175 at 7 per cent. to pay house-rent in advance, or to pay \$200 at the end of the year? How much the more advantageous?

IX. A milkman sold milk for 10 cents a quart, and thereby made 25 per cent. When milk cost 4 cents more a quart, how much water must he put in it so that he can sell it for 13 cents, and make 30 per cent.?

X. The hour and minute hands of a clock are exactly together at 12 o'clock ; when will they be together again?

TEN QUESTIONS IN GRAMMAR.

- I. What changes of form do nouns undergo to denote case?
- II. Write an interrogative sentence containing one noun in the possessive and one in the objective case.
- III. When is a verb regular, and when transitive?
- IV. Write a sentence containing a relative pronoun, which is nominative case to a transitive verb, having a personal pronoun for its object.
- V. "I know that he is a man." In this sentence, what sort of a conjunction is *that*? Parse *man*.
- VI. (1) I know he is trustworthy; (2) I know him to be trustworthy. Why, in the first of the above sentences do we use *he*, while in the second we use *him*?
- VII. (1) Who do you think he is? (2) Whom do you think him to be? Why in the first case use *who*, and in the second, *whom*?
- VIII. Write the principal parts of the following verbs; Choose, shine, dare, build, hew.
- IX. Write a sentence containing an irregular transitive verb in the indicative mood, future tense, second person, singular number, passive voice.
- X. Analyze the following sentence: Charles ran away with his sister's blocks.

TEN QUESTIONS IN GEOGRAPHY.

- I. Name three proofs of the globular form of the earth.
- II. How many degrees in breadth is each of the Temperate Zones?
- III. Where is a degree of Longitude greatest? Why? Where the degree of Latitude, and why?
- IV. Name four river systems of the U. S.
- V. What motions has the earth, and to what do they give rise?
- VI. Name the three great mountain systems of the United States, and tell in what direction they extend.
- VII. Name the coast counties of Maine, beginning on the east.
- VIII. Name the counties and shire-towns of Maine.
- IX. Name the highest mountain peak in the Alleghany system.
- X. Which is farther north. London, Eng., or Quebec, B. A.?

FIVE QUESTIONS AND TWENTY WORDS IN SPELLING.

- I. In the words, allotted, impelled, and preferred, name the root word in each case, and give a rule for the formation of the derivative.
- II. In the words, stabling, immovable, improving, name the root words, as before, and give a rule for the formation of the derivative.
- III. Happy, difficulty, misery. Tell why, when you add *est* to the first of these words, and *es* to the other two, you exchange *y* for *i*.
- IV. Destroy, obey, array. Tell why, when *s* is added to each of these words *y* is not exchanged for *i*.
- V. Correct the following, and explain your corrections: Beding, wives, abhorent, fameous.

Spell the following words: Supersede, financier, receipt, lettuce, prejudice, prairie, changeable, irascible, privilege, expatiate, forfeit, intercede, separate, Wednesday, chandelier, February, indictment, inflammatory, harassed, tranquillity.

The above questions are such as might occasionally be given, to be answered in writing, (following out the excellent idea of our correspondent "L. P. F." on a preceding page,) with good effect at the close of a term of school. Others may be given hereafter, and we shall be glad to receive questions for insertion, from any source.

CORRESPONDENCE.

DEAR NORMAL: C. D. C. offers a little moral problem, which somebody ought to solve, if one can be found wise enough to do it.

Has a teacher any *right* to make rules, which shall cause a scholar to criminate himself, as for example a rule requiring him to report whether he has whispered?

Permit me with all humility and modesty to show how I have decided the question for my *own* purpose, and if the argument is false, I am open to conviction.

Honesty and truth depend upon acts, as well as words, and a pupil, who will criminate himself by a false report, would do so equally without the report by indulging in a stealthy trespass against the rules of school knowing he would not have to answer for the same. He has used deceit in this case, and been really guilty of untruth. When C. D. C. asked "has a teacher any *right*" &c., I wonder if he forgot that man is a responsible being, and that the Creator made him so, *even* at the risk of his rushing headlong to destruction, as he seems inclined to do. So then, I venture to say that a teacher *has* a right.

"All things are lawful, but all things are not expedient," and the feasibility of any such plan must always depend upon the special case in hand. A system of government which will prosper in one place will not in another, and a *teacher if anyone* needs to be, "all things to all men."
M. S. S.

Mr. GEO. M. GAGE, Sir: At our late State Educational Convention at Lewiston, one of the speakers upon the subject of Arithmetic, (Mr. Geo. A. Walton) remarked, that children can be thoroughly taught, in a few months, to compute numbers readily, so that they can give the sum of any two numbers in a column of figures, one after another, as fast as the eye can read them. My School numbers about fifty pupils, between the ages of seven and eleven years. I have endeavored to teach them to add numbers rapidly, and supposed my success was all that could be expected with children of that age, until I read Mr. Walton's remarks, when I began to fear that I had not succeeded as I ought.

A few indeed in the school, here and there one, will take the idea readily, and learn rapidly, but by far the greater number need a much longer period, to attain the proficiency which I desire. I would like to hear, through the columns of the Normal from some, who have had experience in teaching young children, of their methods of teaching Arithmetic, and the success that has attended their efforts.

I cannot close without adding my testimony to the many you have received in favor of the Normal. It is of inestimable value to me, supplying hints in regard to my work, which I have vainly endeavored to obtain elsewhere. I wish every teacher could be induced to subscribe for it, feeling confident that after once proving its value, not one would willingly relinquish it.
M. B. S.

— We have received, as yet, no reply to the queries of "W.," which were inserted in the last number of the *Normal*. Somebody must try to answer them, and we hope the silence will be broken ere the issue of our next number. *Can't* you do it, friend? Take the February number and look over the letter of our Brooklyn, N. Y. correspondent.

EDITORIAL DEPARTMENT.

— By an arrangement recently entered into, Prof. Win. F. Phelps, Principal of the State Normal School at Winona, Minn., will contribute one or more articles for the *Normal*. His articles will be looked for with much interest by our readers. Articles are also promised for future numbers, from the pen of Warren Johnson of Topsham, and Mr. G. T. Fletcher of the State Normal School at Castine, is expected to contribute for each ensuing number through the year. Now is a good time to subscribe.

SCHOOL LEGISLATION.

If the *Normal* is a fair transcript of the movements in Educational circles in Maine, for the past month, our present number will be of considerable interest to those who read it. It will be interesting at least, because it bears with it the evidence, that the number of those who are becoming aroused to the necessities and demands of Education in our Common Schools is increasing, and that results in the line of progress are being reached. It will be no less interesting also, to the thoughtful reader as indicating the great truth that every true friend of Education is bound not to weary in well-doing, but that when he sees, as he must see, that wisdom, and work, and patience, and time, are required in order to bring about things most to be desired, he should gladly pledge them all, as they may be his to pledge, learning "to labor and to wait."

The Educational Bill in the form in which it went from the Committee on Education, was defeated. Well, in the first place, it was nobody's pet child: in the second place, the arguments made in its favor were ten to one to those brought forward in opposition to it; in the third place, it is by no means certain because the House voted against it, that it was a measure of doubtful expediency; in the fourth place, it had decided imperfections; in the fifth place, it was an entering wedge, which so opened the eyes of those who possessed law making power, that they were led to pass a measure which was a step towards system, and which will, if those who have fought the battle thus far do not now desert the cause, be followed by something better.

It may not be out of place here to insert the circular letter, which was issued by the committee to whom was delegated the business of bringing the matter of School Supervision to the attention of the present Legislature. It is as follows:

CIRCULAR LETTER.

To the State School Superintendents and Boards of Education:

DEAR SIRS:—At the recent meeting of our State Educational Association it was voted.

That a Committee of five be raised for the purpose of presenting the subject of School Supervision for Town and State, to our State Legislature at its next Session.

The undersigned having been appointed that Committee, and desiring all the light which they can obtain upon the subject in question, take this opportunity to address you, requesting your co-operation in granting them what information you may be able, upon the points indicated below, and in any other way which your own judgment and experience may suggest, and your convenience may permit.

I. A copy of the School Laws of your State, with such facts in relation to the practical working of your Systems of Supervision as you may be able to give, will greatly aid us.

II. We desire to know, as nearly as you may be able to inform us, what is the expense to your State of your present System of Supervision, including printed reports, etc.

III. Will you inform us briefly, in what points you consider your own System of School Supervision, for Town or State, most defective.

We shall be glad to receive any suggestions upon the main question referred to us, which you may be pleased to bestow. As the time left to us, in which to prepare our report, is very brief, we shall esteem it an especial favor should you grant us a speedy reply.

It is hoped that you will give this letter, should you be able to do so, the consideration which the important matter to which it calls your attention deserves, and by so doing, confer a great favor upon the undersigned, and upon the State whose interests we desire to promote.

We are, Very Respectfully
and Truly, Yours,

GEO. M. GAGE,
C. B. STETSON,
WARREN JOHNSON,
J. H. HANSON,
G. T. FLETCHER.

Farmington, Me., December 10th, 1867.

In response to this letter, written replies, bearing upon the questions raised by the committee, were received from individuals representing the Departments of Education in several of the States possessing the best systems of public instruction, as follows: Connecticut, Rhode Island, New Jersey, Pennsylvania, Ohio, Indiana, Illinois, Iowa, Minnesota, and California.

These letters of eminent educators, copies of school laws, well considered arguments set forth in State school reports, &c., informing 1st, what the systems of supervision in the above named States are; 2nd, what are the expenses incurred for the support of the system in each case; and 3d, what are believed to be the defects in the practical workings of these systems, were deemed by the committee of great practical value. They gave us the best thoughts of some of the best educationists of the present time in our land, and they were, as might be said, their most recent expressions of opinion upon the subject in question.

The committee met at Augusta for the purpose of examining these documents, comparing views, conferring with members of the Legislature who were specially alive to the wants of the common schools, and assisting, if possible, in the preparation of a scheme which would better subserve the wants of our communities in respect to School Supervision for town and State, than the one under which we were living.

It is unnecessary for us to present the features of the plan, which was finally resolved upon and reported by the Educational Committee of the Legislature. This

plan was not believed by any body that we know of, to be perfect, and it could not be said to be the plan of any individual or set of individuals either in or out of our Legislative Body.

We refer our readers to the speech of Mr. Dingley, on preceding pages of the *Normal*, for the features of the Bill in detail. We hope his remarks will not fall fruitless, and we do not propose to abandon the consideration of school supervision at present. We shall ask for another "hearing." Exactly what legislation has been effected, affecting our schools, we are not advised at the present writing.

P. S. Since writing the above, we learn that the bill to provide for uniformity of text-books has been defeated in the Senate.

UNIFORMITY OF TEXT-BOOKS.

[Hear all the arguments, then judge what is for the best, and act according to your convictions of duty. In connection with the articles of Messrs. Stetson and Rounds, which appear in the *Normal*, it seems proper that we should present the following considerations, which appeared in the editorial columns of the *Portland Evening Star*, during the past month. They should be thoughtfully weighed. ED.]

The considerations presented below are such as have been brought to our mind, since the question of uniformity of text-books for the common schools has been agitated. The objections raised may not be all that will suggest themselves to others, but they are such as should be weighed by legislators before voting on the measure proposed.

1. In the common schools of Maine, there are now represented a great number of Publishing Houses, both of New York and Boston. No one of these will allow its revenue to be at once and for a long time, cut off without making a most earnest effort to prevent the catastrophe. Therefore the State will be immediately flooded with the agents of these Houses, presenting their rival claims, and arguing, with all the ingenuity which can be invented, in favor of the one, and in opposition to all the rest. The Publishing House which can succeed in establishing itself in indisputable sway for the term of years proposed by the Bill now before the Legislature, can well afford to pay \$3,000 or \$5,000. Now, suppose one House is willing to pay \$5,000 to place its series of Readers beyond the danger of displacement for five years; another is ready to pay a like sum to secure the adoption of its Arithmetics; another pays equally as large a sum to insure the use of its Geographies; and another as much for its Grammars; while a fifth and sixth come forward to be caught by this big bait which the Legislature proposes to throw out, will not the temptation be likely to prove too strong for somebody, and shall we be sure of securing a desirable uniformity of Text-books?

2. It is certain that no strategic movement will be left untried by the Publishing Houses. It may be, that the men who will be appointed by the Governor and Council will be incorruptible, that no pecuniary or other inducements which could be brought to bear upon them, would lead them to swerve from the path of duty. But they will be sure to be approached by other avenues. What men have we so wise who will be sure to detect the sinister pleadings which must come through as many and as diverse channels as the diabolical love of gain will invent?

3. But even suppose that money does not in any way reach this commission, to undermine and thwart the designs of the framers of this Bill, suppose the board are allowed to act their own will with undisturbed tranquillity, what then? On what basis should their judgment be made up? Are the teachers of the obscure and illiterate districts of our State ready to use with any degree of profit the same books which not only might, but should be introduced into

the well supported schools of Portland, where teachers must be so grounded in correct ideas of order in respect to mental development, that the best book theoretically is the best for them in practice? And between these classes we shall have all the possible grades. The larger towns and cities cannot be satisfied with a selection adapted to suit the condition and wants of the less populous districts, and a selection which would answer well the advanced sentiment of the best educators in our cities, would be as little suited to the wants of the rural districts, as would a skeleton gig for a family vehicle, or a silver tea service to the table of a lumberman in his winter's encampment. Then suppose the larger towns and the cities be excepted from the effects of the operations of this law, what then becomes of uniformity? And where in this case shall the dividing line be drawn? If many towns be excepted, of course uniformity for the rest is a sort of farce, the scheme is a dodge. It seems to do a great deal, but really amounts to nothing. If this chain of argument be valid, then any uniformity which should be reached, is less likely to secure beneficial results, than might at first be supposed, for what is said above does not apply to teachers in different localities alone, but to teachers with differing qualifications in the same locality.

4. Is it not likely that this whole question of text-books is best regulated by the general laws of trade? There is imposition, but is this imposition to be charged upon the trade? Is it not as much the fault of educators and committee-men, if the best books are not used in the schools, as of the publishers?

5. It is not probable that this law, if passed, will effect five years of uniformity. The whole thing will be tipped over, probably by the next Legislature. Let this matter of text-book production be open to fair competition, and let school committees be required to prepare themselves to judge in the premises. Any publishing house will be ready to bring before the public text-books of a philosophical kind, and if there is really a demand that text-books be made smaller and the series of arithmetics or geographies be less in number, as we believe there should be, then it will not be long ere some enterprising house will produce the supply. Science is advancing, ideas upon the philosophy of education are moving forward, but time is required for the desirable consummation of great revolutions, and the best educator is he who, though he sees the end, yet seeks to bring to the goal the great mass of society.

— Several communications have appeared in different newspapers of the State during the month, from the pen of Mr. E. P. Weston, so well known in Maine and elsewhere as recently our State Superintendent of Common Schools. Mr. W., of course, has much interest in the success of some measure which, under proper management, will secure improvement in our Common Schools. He advocates the creation of a State Department of Education, with officers corresponding to those named in the bill which has been before our Legislature its present session. He closes a series of articles printed in the *Lewiston Journal* with the following paragraph:

"I have written these communications in haste, and without minute detail, not so much to advocate or unfold a special favorite plan of my own, as to express my conviction, the result of my experience in the office, that something needs to be done to make our schools more profitable; to secure more system in their management, and to awaken a deeper interest in our educational affairs, through the length and breadth of the State. Our material and educational interests must flourish together. What are the best facilities for manufacturing and ship-building, and the amplest agricultural resources, without excellence in the means of training our young people to enter into these various departments of business, and manage them with success."

MISCELLANEOUS DEPARTMENT.

— We clip the following from a letter of the London correspondent of the *Boston Daily Advertiser*:

You must know that the dissatisfaction with the existing system of public school education in England has become widespread amongst the classes from which the schools are supplied. This feeling has in particular found expression in a volume containing the contributions of four gentlemen who have been senior classics at Cambridge, one of them a senior wrangler; and of others who are Fellows of their colleges at one or other of great English universities. Two of them have been university examiners, and, singularly enough those of them who most energetically condemn the existing system are men who have long been teachers at some of the most esteemed of the schools referred to. The arguments against the excessive predominance of classical studies in the prevalent educational system are stated with remarkable force. There never was a time when really liberal education was more urgently needed in England, yet the higher class education either ignores altogether or only contemptuously glances at various subjects of study which ought to be regarded as fundamental to the curriculum of a high class instruction. More time in particular is demanded by the physical and natural sciences, in which the intellect of the age is most progressive. Knowledge is valued at the universities only as a means to success in examinations, and success in examinations is valued as a means of obtaining fellowships. The apathy to knowledge among the undergraduates is astounding. Those young men who do not need knowledge as a means of making money, go to the university as a place of amusement which they can afford, and many young men who do need knowledge as a means of making money, keep away from the university as a place of amusement which they cannot afford. Prof. Seeley (the author of "Ecce Homo") contends that the means by which the present system is now galvanized into artificial activity are, for all purposes of solid and profound scholarship, positively mischievous; Lord Houghton points out the inadequacy of it as a preparation for active public life; and Mr. Hales vindicates for the English language and literature, the claim to a recognition in its curriculum. The mediæval system of instruction in the public schools is generally condemned and the contrast between the splendor of the revenues of the universities, and the penury of their learning, is fast becoming intolerable.

Some years ago, Charles Kingsley and a few others preached the beauties of athleticism, and a school sprung up who undertook to enforce the dogmas of a "muscular Christianity." Since then, there has been a rage for games and sports, and I begin to think there is some ground for the charge that the great public schools are being converted into training schools for cricketers and boat-racers, with a supplementary instruction in Latin and Greek. When athletic games and exercises cease to be merely recreations, and become serious objects of study, it is time to cry out. I incline to think that to this cause may be attributed no slight amount of that low animal estimate of power, that callous unreceptive condition of mind, that coarse moral fibre and semi-barbarous adulation of all that resembles physical force in man's dealings with his fellow creatures, which is seen in so many young Englishmen after they get into the great school of the world."

— We are indebted to Messrs. Boyden and Hagar, principals respectively of the State Normal Schools at Bridgewater, and Salem, Mass., for newspapers giving accounts of the recent semi-annual examination and graduation exercises, held in connection with their schools. We are glad to report to the public, that both these Normal Schools appear to be in a flourishing condition. The worthy and scholarly gentleman who have them in charge, are making a most enviable record as public educators. The State Normal School at Framingham, Mass., of which Miss Annie E. Johnson, is the Principal, also makes a favorable exhibit, as appears by its Catalogue received.

— A meeting in the interest of public education was held in the Representatives' Hall, Augusta, Thursday evening, Feb. 6. The meeting was called to order by Hon. Nelson Dingley jr., Chairman of the Committee on Education on the part of the House, and Hon. Mr. Patten of Piscataquis County, was made Chairman. The meeting was addressed by members of the Committee appointed by the State Educational Association to memorialize the State Legislature on the subject of State Supervision of Common Schools, as follows: Mr. Warren Johnson of Topsham; Mr. C. B. Stetson of Auburn; and Mr. Geo. M. Gage of Farmington. Addresses were also made by Mr. E. P. Weston of Farmington, and by Messrs. Bradbury, Walker, Herrick, and Dingley of the House. The meeting was counted a success and developed a decided feeling in favor of some improvement in our method of School Supervision.

EASTERN NORMAL SCHOOL. I have been "threatening" for some time to visit the eastern branch of the Normal School located just across the bay, at the fine old village of Castine, and hope before many months to do so. Report says the school is progressing finely under the care and superintendence of Bro. Fletcher. A course of lectures has been commenced, the first of which was delivered last week by Rev. G. P. Marden of Orland; Subject, "Unconscious Influence." Success to this school; its labors are needed, and the teachers graduating from its walls will find lucrative employment in this section of the State. **B.**

SCHOOLS IN BELFAST. The schools in our city are generally in very good condition, and prospering. The suburban portion of the municipality is divided into fifteen districts each of which have two terms a year—winter and summer—ranging from six to twelve weeks each. The teachers of the summer terms are invariably females and occasionally a winter term is governed by a schoolma'm, though male teachers are generally selected. The central or city district is graded and consists of a high school, grammar school, intermedlate school, and two primary schools. The high school is now in charge of Mr. Wiley, an able and experienced teacher, with a female assistant; the teachers of the other departments are all females. The schoolhouses in the whole city are of a very respectable kind, there being many very good ones among them, though there are yet one or two specimens of the mean 7x9 affairs, which are a disgrace to any community in this modern age. School supervision is intrusted to the hands of a committee of three persons, one being added annually. The chairman is T. Thorndike, esq. A movement is on foot in regard to a change in the method of supervision, but whether it will amount to anything remains to be seen. The wages of teachers in the country districts in winter, average about \$33.00 a month; females in the summer about \$3 per week including board in both cases. **B.**

— We make the following extracts from an Address delivered before the Indiana State Teachers' Association, Dec. 27, 1867.

"The educational system is entirely too limited. Even in our boarding schools, from misguided methods of tuition, boys and girls are sent forth half-fledged and untrained, unfit for the active duties of life. The world owes no man a living till he has earned it. We must teach our pupils to think for themselves—to be self-reliant—to act for themselves. They should be taught to be punctual. It is the duty of teachers to talk patriotism in the presence of their pupils. They should be told more of the history of our own country, and less of mythology—more of the exploits of Grant and the boys in blue before Vicksburg, and less of those recorded in the Iliad. Children are not born lazy, they are made so by careless education. Children should be taught that buying and selling are only a means to an end. God never designed that we should be slaves to business. The whole world, with its beauties and wonders is designed for our pleasure and instruction."

CALIFORNIA. We glean the following from the Report of the Superintendent of Public Instruction, in relation to the progress of the cause of education in this State.

"The school year ending June 30, 1867, marks the transition period of California from rate-bill common schools to the American free-school system. For the first time in the history of the State every public school was made entirely free for every child to enter. In the smaller districts, having less than 100 children, and less than \$200,000 of taxable property, free schools were maintained three months; in the large districts, having more than 100 children and \$200,000 of taxable property, free schools were kept open five months. More than 21,000 pupils attended free schools during the entire school year of ten months."

"A system of free schools supported by taxation is an accomplished fact." "It was clearly seen at the outset that, even after this revenue was provided, the schools would be to some extent a failure, unless protected from incompetent teachers by a thorough system of *State examination and certificate*. The schools cannot rise higher than the teachers."

"One-third of the teachers in the State hold State diplomas and certificates, and one-twelfth of the teachers are graduates of the California State Normal School."

"A State Board of Education, of Examination, of Normal School Trustees; a uniform series of text-books; a course of study, rules and regulations; an educational journal—all constitute a system of education in place of the irregular, unsystematized, half-public and half-rate-bill schools of five years ago."

— Prof. Goldwin Smith is about to take up his residence in this country for as long a period as may be necessary to complete a book on civilization in the United States, which he has now in contemplation.

— Mr. Joseph H. Allen, late Superintendent of the State Reform School at Westboro, Mass., has been appointed President of the Normal and Training School at Fredonia, N. Y. — Col. Homer B. Sprague, late Principal of the State Normal School at New Britain, Conn., has taken charge of the High School in Meriden. Col. Sprague is a fine scholar, a good speaker and writer, and a successful teacher.

— Henry Butler of Boston, has been appointed Principal of the High School at Danbury, Conn. — *The Massachusetts Teacher* alludes in a highly complimentary manner to Mr. James S. Barrell, who has within a few months taken charge of the principal Grammar School of Lewiston. From what we hear and have ourselves seen, we judge that its commendation is well deserved, and that Mr. Barrell is likely to prove as acceptable a teacher in Maine as he had been in Mass., previous to his coming among us. — We enjoyed reading the leading editorial article in the last number of the *Massachusetts Teacher*, because we believe it contained sound doctrine.

— *The Pennsylvania School Journal* and the *Ohio Educational Monthly* both account for the absorption of the *New York Teacher* by the *American Educational Monthly*, by stating it as their belief, that no educational periodical will be likely to succeed for any great length of time, which is made the organ of, and is managed by, a State Teachers' Association. The history of educational journalism in this country, so far as we are conversant with it, goes to corroborate their view of the matter, and common sense, aided by observation as to how the most successful business enterprises are conducted, points to the same conclusion. — A visit recently made to the establishment known as the Home School for Boys, owned and conducted by Mr Warren Johnson of Topsham, abundantly convinced us, that comfort, good discipline, and faithful instruction, will be found there by any parents wishing to send boys away from home to school. Mr. Johnson, after a short absence from Topsham, to recruit his health, has returned to his old charge, and we have no doubt his school will soon be filled with happy boys, as it has been heretofore, and always should be while under his direction.

BOOK DEPARTMENT.

(1) **A SUMMARY OF ENGLISH AND OF FRENCH HISTORY.** It would be well if all the students in our public schools and academies could read the extended works of history which have been prepared by the best historians of various countries, and then have their minds so trained in respect to association, generalization and memory, as would enable them to make and retain their own well arranged summary of leading events and prominent characters, so that they would always be able, at least to refer to those matters of history which they wish to revive for a special purpose, without recourse to the methodical arrangement of any other mind.

But such training, such culture, it is certain that very few minds reach in any of our seminaries of learning of whatever grade. But a comparative few of the more advanced pupils in our schools and the better scholars in our academies and colleges, carry out into life anything worthy to be called a knowledge of general history. There is want of method on the part of teachers in the presentation of historical topics, and there is consequently want of enthusiasm and well directed effort on the part of students.

Now a book like the one before us, and which we have just introduced into our school, is designed to be a topical guide to the study in school, and reading after school life is over, of the history of England and France, and if with good books for reference the student be rightly directed and aroused, we think it will prove a most valuable auxiliary. It is one of those school manuals of which we have so many, and so many that are truly valuable, in use in the school-room, which show the power of woman's mind to grasp and summarize in matters of science. We think the Rev. Dr. Todd ought to take some of these works into the account, ere he again takes the field to deprecate the mental capacities of females. This small, cheap book of thirty-three pp., in clear type, with cloth covers, is furnished at a very low price, and is worth vastly more than it costs to the student of history and literature.

(2) **THE READABLE DICTIONARY; OR TOPICAL AND SYNONYMIC LEXICON.** Mr. Williams, the author of this book, has done good service to the schools in its preparation. We write after having given the book considerable examination, and thoughtfully express the belief, that there are few books which have been compiled for the use of teachers and students, which can be more useful to the mass of them than this. 1st. It brings a great deal of accurate information into a small compass and in an entertaining form. 2nd. The topics which it discusses are so explained in respect to their related terms, as to present in all cases those etymologies and definitions which are fundamental at the first, while the less intimately related terms, in the order of their relation, follow. 3d. The topics treated are those generally, which are met with most commonly in school work and general readings. These three underlying principles of construction are obvious to the examiner. The author has evidently endeavored to guide himself by them, while preparing his treatise. As a manual for teachers and students, this book possesses decided merit, for it enables them to find, as they are reading, a summary of those relative terms which they wish to know about and to have fresh in mind as they study, teach or recite, and which they must often spend much time in searching out, were they obliged to make use of the dictionary with its usual alphabetical arrangement. We do not, however, mean to say that this dictionary will enable one to dispense with the "Unabridged." Nothing will do this. It will often lead to the more judicious use of that book. It is an excellent treatise for the purpose which it is designed to serve, and this is its sufficient praise. Every body who teaches or reads ought to have it.

(1) and (2) NEW YORK : A. S. BARNES & Co.

(3) **THE LECTURES DELIVERED BEFORE AMERICAN INSTITUTE OF INSTRUCTION, 1866.** Rather tardy in its appearance, but valuable in respect to its contents. We wish some arrangement might be effected by which the lectures, discussions, &c., of the Institute might be more generally circulated among the teachers and friends of Education of the country.

(4) **FELTER'S INTELLECTUAL ARITHMETIC.** "If our friends, the book publishers would be content with smaller books and fewer of them," say many of our friends, "we would be greatly obliged to them." Felter's series, as we see, is to consist of five books. That there is common sense in this demand of educational writers and teachers, we most readily admit. But then we do not know, that because a publishing house, has seen fit to present to the public a series which embraces a large number of books, it by any means follows, that any town, city, or private school is obliged to adopt the whole list. This is, it seems to us, in many cases, a perfectly absurd notion, a practice vastly more honored in the breach, than in the observance. Now here is a series of arithmetics, a somewhat new candidate for favor among the teachers who read the *Normal*. The fame of the house which issues them is sufficient to bespeak for them a careful consideration, and, with those wishing an exchange, a trial.

We have enjoyed our perusal of some of the pages of the little book before us. Constructed upon the plan known to educators as the natural method, presenting topics in a rational order, we judge that it possesses some peculiar recommendations to the careful examination of educators.

(5) **THE PROGRESSIVE SERIES OF READERS.** This series of reading books, so extensively used and so generally liked in the schools of Maine, we intend to notice next month.

(6) **THE ART OF ENGLISH COMPOSITION.**

(7) **THE ART OF DISCOURSE.**

(8) **THE ELEMENTS OF LOGIC.**

Of only one of these books, the Art of Composition, do we propose to write the present month. These are revised editions of the well known works of Prof. Day, and have been too thoroughly studied by many of the best scholars of our country, in fact, have had too much to do in forming modes of thinking, reasoning and writing, in our best schools, to demand an extended notice from us at this time.

One word concerning the relation of the work under consideration to the study of English grammar. It will be a great triumph in the pursuit of the study of our language in the schools when that study is made to conform more strictly to the common definition of English grammar: viz., that it is that branch which teaches to speak and write the English language correctly; and when it is felt to be more important all along, that the student be trained to ease, and fluency, and accuracy in speech, however he may fail sometimes in respect to the technical rules, than that he be very expert in parsing, the harnessing of words, or analysis, the picking to pieces of other men's discourse.

We are prepared to say, that after considerable study of our language, and not a very little practice in teaching the same to scholars of differing ages, we have come to the conclusion, that no branch of study begins to be so poorly and foolishly taught in our common schools, as that of English grammar.

Synthesis seems to be almost totally neglected by our teachers, in the early stages of school life. The result is, that students become mature many times, in mental constitution, and poorly prepared to be taught, without any well adapted instruction in the true methods of thinking, speaking and composing. No wonder that they dread composition. Let an elementary book in grammar, of which easy sentence-building forms a large portion, be followed up, under judicious guidance, by such a treatise as this of Prof. Day, and much better results in education must result than those at present attained. We promise ourself the pleasure of noticing the other works noted above, in our next number. Meanwhile we are testing the value of the "Composition" by actual use in the schoolroom.

(3) BOSTON: COMMITTEE OF PUBLICATION.

(4) NEW YORK: C. SCRIBNER & Co.

(5) BOSTON: O. ELLSWORTH.

(6) (7) and (8) NEW YORK: C. SCRIBNER & Co.

THE MAINE NORMAL.

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NO. 4.

LETTERS TO A YOUNG TEACHER UPON QUESTIONS OF MODERN SCIENCE.

LETTER V.

THE THREE INSOLUBLE PROBLEMS.

Almost all young men whose minds possess any special aptitude for scientific mathematical studies, become more or less interested, in some stage of their education, in one or another of the three great scientific puzzles, which have been subjects of speculation and perplexity for a certain class of minds in every successive generation, for hundreds, and I might perhaps say for thousands of years. The three problems are,

I. THE ART OF NAVIGATING THE AIR.

II. PERPETUAL MOTION.

III. THE SQUARING OF THE CIRCLE.

Nothing can be more useless than the spending of time or money in attempts to solve either of these problems; but then on the other hand, nothing can be more useful for young students, than to examine them *theoretically*, with a view to a correct understanding of the scientific and mathematical principles which they involve.

The three problems are all considered by every well informed man as absolutely insoluble; though each for a different reason. The obstacle in the case of the first is an *insurmountable mechanical difficulty*; in that of the second the opposition of an *immutable law of nature*; and in that of the third, a *simple mathematical impossibility*.

That is to say, the difficulty in the first case is the same as that of sinking a shaft through the center of the earth to the other side, by human

power, an impossibility, no doubt, but an impossibility resulting not from the nature of things, but simply from the limits that bound the mechanical power and ingenuity of man.

In the second case the difficulty is the same as that of finding some mode of withstanding the action of gravitation, so that heavy bodies left free should not fall to the earth. Here is another impossibility but it is an impossibility of a different kind from the first. This is not a question of mechanical power and will,—that is, a question of overcoming mechanical difficulties by mechanical means,—but of changing one of the fixed and universal laws of nature.

In the third case, that is, the question of expressing in numbers the length of the side of a square which shall be equal in area to the area of a given circle, is an impossibility of still another kind; that is, it is as an impossibility *in itself*, or in the *very nature of things*. It is like the impossibility of finding a triangle such that the length of any two sides shall be together less than the third side, or a square such that lines drawn from the centre to the corners, shall be equal to lines drawn from the centre to the middle of the sides. Any one who has any right conception of a triangle, or of a square, will see that these things are impossible *in their very nature*. The supposition involves a mathematical absurdity. It is not enough to say that we do not know how to make such a triangle or such a square; we know certainly that they *never can, by any possibility*, be made. So if we were capable of seeing into the hidden nature of a circle, so as to have as distinct a conception of the relation of the diameter to the circumference, and of the various relations of areas depending upon these, as we have of the lines drawn from the centre to the sides and to the corners of the square, we should see the impossibility of squaring the circle in the same light; namely as involving an utter mathematical absurdity.

The truth of this statement, may not be at first obvious even to those of your pupils who have made considerable progress in their mathematical studies,—but I trust to make it clear when I come to consider more particularly this branch of the subject.

Thus we have three essentially different kinds of impossibility.

1. An impossibility of accomplishing a mechanical end on account of the hopeless *inadequacy* of the mechanical means at our command.
2. An impossibility of accomplishing a *conceivable* end, from having no means at command that have *any tendency* to accomplish it.
3. An impossibility of accomplishing an end which is impossible *in itself*, that is, utterly absurd and inconceivable in its very nature.

It is curious that these three kinds of impossibility are distinguished from each other by certain relations which they sustain to our powers of conception.

In the first we can conceive of the *end* and *also of means* by which the end *might be* accomplished.

In the second we can conceive of the *end*, but *cannot conceive of any means* that have a tendency to accomplish it.

In the third we cannot conceive even of the *end*. The state of things which the end sought implies, cannot be represented to the imagination.

That is to say, we can conceive of a shaft being sent through the centre of the earth, and we can picture to our imagination a system of works of blasting and boring, and of pneumatic and hydraulic contrivances for moving water, and for supplying air to workmen, and for lightening the atmospheric pressure at great depths, though we know that the execution of such works would entirely transcend the power of man. Still we *can conceive* of their existing.

In the second case we can conceive of heavy bodies being divested of their gravitation, and so picture to our minds blocks of stone and iron balls floating like mists and vapors in the atmosphere, or rising into the upper regions, being bouyed up like corks in water; but we cannot conceive of *any means or agency of any kind*, by which we can imagine such a change to be effected,—or which could have any, the slightest, tendency to effect such a change in gravitating substances.

In the third case we are not only unable to conceive of any means of accomplishing the thing, but we cannot conceive of *the thing itself as being accomplished*. No mind can picture to itself a triangle having the united length of two sides less than the length of the third side. A mind in an extremely imperfect state of development might perhaps *think* it could conceive of it,—or rather might not perceive *that it could not*. You might show a triangle to a child perhaps, or to a savage, and tell him that though in that particular example two of the sides were together greater than the third side, it might be possible to draw a triangle where this would not be the case, and he might not see the impossibility of it. But if he did not, it would be because he had not yet attained to proper conceptions of the nature of straight lines and distances, and of the relations of the sides of a triangle to each other. In the same manner, as I hope to show by-and-by, if any one imagines it possible to express in figures the length both of the diameter and the circumference of a circle, a relation on which the squaring of the circle depends, it is only because of the vagueness and imperfections of the conceptions which he has yet attained, of the hidden

properties and characteristics of the circle. If he had as direct, and as clear and distinct an intuition of these properties as he has of the relation which the different points in the boundaries of a square have to the centre, he would *see* directly that it was as impossible to express in numbers the side of a square of equal area with a circle of given radius, as to make a square whose sides should be in every part equidistant from the centre.

I propose to take up these three problems. The Navigation of the Air, Perpetual Motion, and the Squaring of the Circle, in turn. The first and second will probably most interest those of your pupils who are of a mechanical turn of mind, while your mathematical geniuses will be more attracted by the third.

THE WONDERS OF GEOLOGY.

No. 4.

BY N. T. TRUE, M. D.

We have thus far traced the condition of our globe from its original gaseous form to that of a condensed liquid state, and then to that of a mass of melted matter, covered with a crust formed by the cooling of its surface. Before proceeding any further, it may be well for us to consider the time that would be necessary to effect these changes.

Among the wonders of Geology to the scientific mind, is the great length of time required to bring about certain results. In no other way has the mind of man been able to find certain time-boundaries on which it may rest. It is only by contemplating these changes, one by one, that we can form any conception of the immense length of time necessary to produce them.

If the earth was in a gaseous state, it must have extended in all directions from its present surface as far, at least, as the moon. It became gradually cooled to a liquid condition by radiating its heat into the regions of space as it whirled along through the cold vault around it. No multiplication of figures within our reach could in all probability give the requisite product of the years necessary to bring about such a result.

But let us look at its surface as a globe in its liquid form. How long would it take it to cool so far as to form a crust upon its surface? Here we may draw some comparisons. A mass of melted iron ore weighing twenty tons will require about two weeks to become cool, when imbedded in sand. A bed of melted lava flowing out of a volcano will cool but a few inches on its surface in a year. A stick may be thrust down the crevices of lava at that time and be set on fire. Now these are results on a very small scale, but they are within the scope of our observation; and yet they demand a marked appreciable period of time to bring them about. If such be the length of time necessary to cool a body on so small a scale, what shall we say of this vast globe, eight thousand miles in diameter, heated to such a degree as to melt the rocks on its surface?

A serious obstacle to the rapid cooling of the surface of the globe, is the fact that the rocks are generally slow conductors of heat, and as soon as the surface begins to form a crust, it prevents the escape of the internal heat to a great extent, except by rents through which volcanic matter still forces its way to the surface. This explanation will answer an inquiry that naturally arises, whether the earth still radiates its internal heat from the surface of the earth. From experiments carefully instituted during the present century it is pretty evident that the internal heat does not penetrate the solid crust so as to be felt upon its surface, and that we are now left solely to the rays of the sun for heat as well as light. Were this not the case we might suppose the internal heat would melt the snow and ice now capping the poles. Keeping the ideas prominently in mind which we have just advanced, we shall find ourselves lost in the contemplation and in the measurement of time necessary to cool down the surface of our globe sufficient to sustain the waters of the ocean. We have no fears that our language, our imagination, or our reason will go beyond the reality.— While we firmly believe in a Great First Cause, and that there was a beginning of the material creation of the Universe, yet, so far as we can comprehend it, that time is equivalent to eternity. Geology is utterly at fault when she attempts to grasp the question. It is an attempt of a finite mind to grasp the infinite. We may then safely assume the proposition, that *man cannot, by any estimate, comprehend the length of time since the earth was first brought into existence.*

Another interesting inquiry, somewhat in the form of an objection, arises, whether, from the view we have just presented, the sublime conceptions we have been accustomed to form of the creation as derived from the **Mosaic** account, would not be lost. When the fiat went forth, "Be light, light was," for this is the literal translation from the Hebrew,—it attracted

the attention of even the Greek critic Longinus, as one of the sublimest passages of writing on record.

Let us see if our emotions of sublimity will be diminished, if we look upon it in the light of science. It is difficult for us to experience an emotion of sublimity from what we have never seen. The man of science in the winter of 1836 looked upon the magnificent display of the Aurora Borealis, when it spanned the heavens with its bloody bands, and experienced that feeling. To the ignorant and superstitious it was an object of terror; and it would be difficult for any writer so to describe that scene as to excite similar feelings in those who never witnessed it. That master-stroke of the inspired penman, which in the briefest possible language described the ushering in of light upon this earth, was one that defies all criticism. It was not the act of creation that has caused this state of mind, so much as the brief manner in which it was written as the language of Supreme authority.

We doubt not that the creation of light was in accordance with the same laws that are now in operation. It was not created then independent of matter any more than it is at the present day. Chemical changes which were then going on, on the grandest scale, were accompanied with flashes of light which were cosmical. The earth must have been illuminated with light over its entire surface. It must have been a sublime sight, in comparison with which the Aurora of 1836 was insignificant, and loses none of its force because we understand it in accordance with the laws of physical science.

In the generally accepted opinion of this scene, it was a creative act independent of matter. To the scientific mind it was a distinct creation in connection with well known chemical changes which were then and are still going on. In all the great changes which accompanied the condensation of the materials which now constitute our globe from a gaseous to a liquid, and then to a solid state, we shall utterly fail to portray in language the splendid display of light developed at that time. There was no need of the light of the sun or of the moon, and they did not make a visible appearance till a later period.

Could a mortal have looked upon the scenes exhibited at the creation, he would have staggered at the sight. If the volcano belching forth its fires can defy the powers of the most gifted minds to describe in adequate language, what must have been the condition of the earth when it was one mass of volcanic fire! No more wonderful theme can be chosen for the reasoning of the man of science, or the sublimest conceptions of the poet. But few among mortals have been able to grasp the subject and leave

their thoughts on record for the admiration of others. Milton, than whom a greater poet never wrote on Creation, but dimly shadows forth the great scene when he describes it :

“A globe far off

It seemed, now seems a boundless continent.
 Dark, waste, and wild, under the frown of night,
 Starless, exposed, and ever threatening storms
 Of chaos, blustering round, inclement sky ;
 Save on that side, which from the wall of heaven,
 Though distant far, some small reflection gains
 Of glimmering air.”

In our next article we shall be prepared to show under what circumstances the different rocks were formed preparatory to the introduction of vegetable and animal life upon the globe.

ON STYLE: BE YOURSELF.

PART I.

BY ISAAC WESTON.

Extraordinary cases excepted, it is not only allowable, but it is to be insisted on, in the right of every one, that he act himself; viz. that in all rightful things he fulfil his destiny, so far as human agency and responsibility are concerned, in his own way,—nothing more, nothing less. The organism of the human mind, almost boundless in its variety, and consequently in its mode of operation, seeks its own peculiar manifestations. Reason and philosophy teach us this. We observe how every created thing, from man down to the worm, has its own way of doing things. They were born or made, *with* that way, and in nine cases out of ten, to thwart these biases is useless, although for man's convenience, it is often done.

The domestic fowl shows evidence clear enough to be understood, that she would like to enjoy the pleasures of incubation, after she has been preparing for it. The fish laden with the eggs which nature has

provided, through instinct searches for the place where it may deposit its spawn. The God of nature creates the animal, to abide in its peculiar element. What should you think of removing a fish from the *water*; a bird from the *air*. Nature puts on her *veto*, and says *stop*!

So in literary composition, there is a naturalness belonging to the style of each individual, which is his own, and in which he should be left undisturbed, or nearly so. "Style," remarks Buffon, "is the man himself. So we say we let him appear in his own *impropria persona* as much as possible. Let every one be indulged, in saying things after his own fashion. It may be very peculiar; it may be homely, yet will he do better, to be let alone to his natural preferences. My own preferences, I shall think to be best—they probably are, for *me*. Genius springs up early, and instinctively takes this or that direction, according to its peculiar nature, as the *hop vine*, and the *bean* do. Planted together, at the foot of the pole upon which they are to climb, each takes its own, but it is in opposition to each other, invariably; one *with* the sun, the other *against* it. Any attempt to change these natural biasses, would be fruitless. They will have their own way, in spite of all man's power to prevent it. Mysterious instinct!

The great diversity in the choices and tastes of mankind, which arises from this difference in original constitution, is much to be admired. The peace and comfort of the world are, in no small degree indebted to this contrariety of each other, in natural disposition and consequent development of idiosyncracies. In choosing companions for life, (for aught we know to the contrary,) this peculiarity of choice obtains, from the first human pair, (except the *first*, for their *Maker* chose for *them*,) down to the robin red-breast who sings at my window. This great variety in the human constitution, is intended to subserve some special design.

Rev. Andrew Fuller of England, who became an author of much celebrity, remarks, that when a young man, he was in the habit of ploughing by *another's furrow*, and that he did not succeed well; he afterwards adopted his own method, and did better. To drive a son to college, when his tendencies are all another way, is absurd; equally so is it, to chain him to the plough, when he is always whistling to the tune of the old ballad,

"'Twas in the good ship Rover,
I sailed the world around."

Or,—

"Cease rude Boreas, boisterous raller,
List ye landmen all to me," &c.

The ocean roar which was on his infant ear, is there still, the sweetest of all music to him. His heart is on the deep. Send him to *sea*, and not to *college*. And as the features of our face are our own, and no one's else; and as our powers of mind, are our own, so we should be left to think and feel and act in unison with several powers, which constitute our natural mode of expression.

How well, that all are not constituted alike physically! Should the features of the human face, the voice, the hand-writing, and their different tastes and predilections be similar; or very nearly so, as we sometimes notice in *twins*, a most undesirable confusion would be the result. Nothing in Providence, scarcely, seems more wise and wonderful, than this provision. In discussing the subject of individuality of style, it is conceded, that there are certain elements of composition, that cannot be dispensed with, in any age; and so among all the vast varieties that obtain, *fashion* will very much predominate, in forming a standard in literature or in the prevailing style of music, and architecture, in the cut of our garments.

Eminent authorities, contemporary with their several periods, have had their day, and have disappeared, although there is no questioning the fact, that *succeeding* times are indebted to the *preceding*, for much of that which is excellent in the latter. The reign of every age, is more or less arbitrary in its spirit, that establishes its peculiar standard, and it is but an evidence of affectation or eccentricity, to dissent from the popular judgment. With respect to those we call ancient writers, or some way behind our own age, such as Baxter, and Bunyan, Racon and others, they should by all means, be "let alone in their glory." What an outrage would the altering of the style of "Pilgrim's Progress" be, or of "Paradise Lost;" or Shakespeare's plays. The days of Johnson, Addison and Goldsmith afforded standards of great purity and perfectness of style, and however it may be gainsayed by the critics, the Rev. J. Hervey even, though possessing a strongly imaginative and florid style, so much so as to be publicly noticed, was exceedingly popular in his day, and long afterwards.

I remember how well pleased I was, when a mere child, to receive from my grandmother those popular volumes of Mr. *Harvey* as he was called, his "Descent upon a Flower Garden;" "Contemplations of the Starry Heavens," and "Walks among the Tombs." His religious Works partake much of this characteristic element, and now are as winning upon my ear, at more than three-score years and ten, as the other volumes were, upon that of my childhood. An over-nice fastidiousness, will sometimes pronounce unjustly upon works of real taste and genius. For example: The

Rev. Robt. Hall, of England, once being asked his opinion of the "Works of Dr. Owen," an eminent divine, replied, "They are a *continent of mud*, Sir." A more slanderous report, could hardly be imagined. It shows, however, how potent is taste. Of course, the subject in hand, has much to do in forming the style, yet there is a powerful under-current in nature itself, which shows its peculiar character, in every individual; and these strong tides, are to be left, generally, to work out their special destinies. The winds of circumstance may blow high or low, but the man of *yesterday*, is the man of *to-day*. Nature works *in* him, and *out* of him, and all over him. We love to see it. Let him work, untrammelled, and let him be willing that others should do the same.

A young lady has acquired her own way of walking, sitting, or talking. If a little prudish, or coquettish, or loquacious, it is of no use to attempt to unmake her; let habit prevail, unless she outrageously violates the laws of decorum and common sense. Would you undertake to teach some boy to imitate the *gait* of another? *There*; walk *so*; hold your head *so*; make your manners *so* and *so*. How absurd,—would I attempt to teach fish how to swim, or different kinds of birds how to fly or sing, or how to build their different nests! Will not the robin and the sparrow have, each *its* own way, in all these things? With respect to the human family, education is expected to do much, yet the native bent of the mind has its peculiar and indispensable claims. Concede not this point, for in many cases, this bias is their capital,—their all. A young lady, however plain in features, is *handsomer*, if left alone, in the possession of her natural looks, than she will be for any artificial means which can be bestowed, because she is then, *herself*.

Dr. Franklin had his own way of dressing, when he would appear as an ambassador in his national costume, at a foreign court, and in making his own address and bow! *Henry Clay* would have had *his*, and any attempt of these two different men to imitate each other, in these particulars, would have been simply ridiculous. Gen. Jackson and the polite *belles-lettres* scholar James Madison, would always have been two different characters, and their manners would be unlike under all circumstances; not that they would not both be true gentlemen, but each in his own way. And who would expect to succeed in attempting to compete with "Major Jack Downing, the *sui generis* in his style of writing, of all the world, Seba Smith.

These special traits of character are inherited, and as we say, "What is bred in the bone, will not rot in the flesh." A man finds this germ of his excelling power, in native genius, strongly marked. The germ will

come to something, if left mainly to its own native impulses. The individual may be good for that particular liking, (which was born with him) and, as it often turns out, for almost nothing else. Let such be apprised of this fact, and learn to appreciate and apply it.

The "sweet-briar," is a modest unpretending shrub, which is rarely found. It seldom blossoms. Now and then, may be seen upon it, some small apology for a rose; but its chief dependence for character, is its deliciously-scented leaves. Its fragrance, is its peculiar quality; its *all*, and that which it cannot afford to lose; and left to its own natural way it needs no flowers to recommend it; it is all rose. It need not attempt to be anything else. And even the garden rose, beautiful as it is, is robbed of much of its native loveliness, if shorn of its leaves, the robe which nature has given it; and, thus bereft, it would stand a naked skeleton, blushing, not in pride for its beauty, but with mortification at the deformity, wantonly effected by some ruthless hand. Let it be itself, leaves and flowers, and thorns, and all. Thorns and briars, as well as leaves and roses, have their place and use. They look best and do best as God has made and placed them. Every apple-blossom, pink or peony, tulip, or tall sun-flower, seems to say, "I'll be myself," and nothing else; and in all their infinite variety of fragrance or beauty; and whether it be flower or humble plant, or wanting any thing that is desirable, say, we will grow on, fragile or sturdy, creeping or aspiring, for ornament or more valuable uses. So let every mind be content with its own complexion; managing all its peculiar biasses so as to secure the greatest amount of successful culture, in its own line. Find out, what you are born to do, or to be, "stick to your last."

The common treatises on grammar in the English language are rather sciences than arts, having as their governing end knowledge or science rather than skill, and are analytic rather than constructive in their methods.

Grammar should be studied as an art rather than as a science, since the more important object, by far, to be attained by the study, especially if the grammar be that of one's vernacular tongue, is skill in speaking and writing the language, not skill in interpreting discourse. The study, therefore, should proceed by distinct stages, giving opportunity for thorough exercises on each successive element or principle, for acquiring a perfect practical mastery of the whole art of sentence-construction. [PROF. DAY.

LETTERS TO A YOUNG TEACHER.

No. 7.

BELFAST, March, 1868.

MY YOUNG FRIENDS. I hardly expected to write to you again until after vacation, but a letter from one of your number in the last Normal requires just a word or two in answer.

I am much pleased to learn that my fair "Up Country" correspondent has been so successful in managing her first school. Such a result is certainly strong proof that she has found a profession in the pursuit of which she is peculiarly fitted to engage. It is to be hoped that she may continue in the vocation, until more years shall have been added to her stature, and age and experience shall have yielded their aids. But she must pardon me if I confess my doubts as to her being quite so young as sixteen, and still the writer of those letters and the schoolma'm represented therein.

You say, "I have found the great boys the most easily managed." That is, I believe, usually the experience of young lady teachers, and you should not plume yourself very much therefor. You probably governed them wholly by moral suasion, which was entirely proper and preferable and exactly what they liked.

You ask, "How far does a teacher's authority extend?" It is a hard question to answer. The line of demarcation is not easily pointed out. As a general rule a teacher's powers are confined to the school-house and yard, I should say, though it is easy to conceive of cases where their authority would extend outside, so that after all so much is left to the discretion and good sense of the teacher that rules are of no avail.

Again you say, "I should like some advice from you as to how to manage the parents." My advice is. don't try to manage in that direction at all, if you do you will soon find out that you have got a good-sized elephant on your hands, as the saying is.—Let the parents entirely alone, especially the mothers, for you know every mother is apt to consider her child as angelic and as near perfection as possible, and where there are so many "darling cherubs" who is to decide? No, whatever else you may do, don't mix in the private family wrangles in the district or attempt to manage the parents, if you do, disaster surely awaits. Go straight on with your labors and your duties, following

what you consider to be the true path, and swerving neither to the right nor left. Be true to justice, firm for the right, strictly impartial, and having thus satisfied your own conscience, leave the rest to the good sense of your patrons and the community.

Your P. S. was entirely unnecessary, considering the "Up Country" heading of your letter, but I suppose it comes so natural for your sex to add P. S.'s to their epistles that you are excusable. "Up Country" is quite romantic and decidedly uncertain, for the old Pine-Tree State can boast of a vast amount of such territory, and whether you are located under the shadows of Katahdin, at the base of the Oxford Hills, or on the Madawaskian frontier is a question which can only be answered by the people of your "deestriect."

Excuse the brevity of this letter, and accept the good wishes and respects of

Yours truly,

GEO. E. B.

HIGH SCHOOLS.

BY G. T. FLETCHER.

"In union there is strength." This is as true in education as in politics. The lack of unity in our common school system has been realized for years, but little progress has been made towards a better state of things. The want of sympathy between Colleges and Schools was clearly shown in the Normal for February. If our Colleges persist in adhering to the ancient curriculum, in ignoring the demand of the age for practical education, let them suffer the consequences, but we protest against the sacrifice of our High Schools to the insatiate demand of the Colleges for Greek and Latin.

The High School should be the grand temple of the common-school system, not the *vestibule* of a College. The fact that the highest school in the grade has not met the popular want, has prevented, in some cases, its establishment in places where the wealth and population are sufficient to sustain it.

Any person not familiar with the facts, will be surprised in visiting most of our High Schools to find there so small a per cent. of the students who have finished the Grammar-school studies. The fact that so few young men are found in our High Schools, and that in most instances the very much smaller number who complete the course of study is composed of those who are to enter College, is a matter demanding investigation. The vast majority of our young men do not desire to enter College, but they need a better education than can be obtained at a Grammar-school.

A vast sum of money is expended yearly to support private schools, in which students may study those branches which will give them practical knowledge. Our public schools should give the desired advantages and receive the money not otherwise expended. In some of our High Schools there are two courses of study, one Classical, the other English and Scientific, but in most schools Greek and Latin are dominant, determining the character of the school and the scholars. The greatest good for the greatest number, is democratic doctrine, and we would have the High School take a position in which it will receive the support and patronage of the people. We need many more High Schools and many more scholars than we now find in each one. We desire to have them recognized as the crowning glory of the common-school system and we hope to see one established and sustained in every town in the State. From the system of union schools in some of the Western States we may gain some practical hints. The grade of each school is regulated by that of the others, and the Principal of the High School has a general supervision of all. He visits each school frequently and meets all the teachers weekly, for a discussion of principles, and a consideration of the best methods of teaching, which all can adopt so that there may be harmony of plan and action. The High Schools there are for the people, not for the Colleges.

USE OF THE WORD IT. The word "it" is frequently very serviceable in enabling us to alter the arrangement; thus, the sentence, "Cicero praised Caesar," which admits of at least two modifications of sense, may be altered so as to express either of them, by thus varying the order: "It was Cicero that praised Caesar," or, "It was Caesar that Cicero praised." "It" is, in this mode of using it, the *representative* of the Subject, which it thus enables us to place, if we will, after the Predicate. Of whatever *gender* or *number* the Subject referred to may be, "it" may, with equal propriety, be employed to represent that Subject.

[WHATELY.]

TACTICS OF THE SCHOOLROOM.

NUMBER 1.

Every teacher of successful experience, is fully aware of the truthfulness of the old adage, that whatever is worth doing at all is worth doing well, when applied to the schoolroom. There are many things connected with the instruction and management of a school, that seem very small of themselves, and yet their influence in aiding, or in preventing, the success of the school, is very considerable. These minutiae of school work, may, with propriety, as well as for the sake of convenience, be denominated the *Tactics* of the Schoolroom. In employing a term, however, whose meaning derives its principle character from its military use, we would not have the reader anticipate that we are about to advocate the management of schools after the code of Scott or Hardee. We like military schools *for military purposes*, but have no special fondness for those schools which attempt to do in a military manner, what is better done otherwise. But more upon this point hereafter.

There are two propositions in regard to School management, which it is highly important the teacher should fully recognize, and bear constantly in mind. First, That a school which has not good government, system, and method, is quite sure to be a failure; and Second, That that school wherein much time is spent in government, and in securing system, will be quite as likely to prove a failure. In other words, while it is absolutely necessary that a school shall be efficiently governed; it is equally necessary that it shall be done without much expenditure of time, or apparent effort. Herein consists the great importance of giving attention to the tactics of the schoolroom; in order that everything, coming under that head, may be done in the very best manner possible.

The *manœuvring* of a school demands some show of attention. By this term we mean the movements of pupils in entering and leaving the schoolroom, and in passing to and from recitation rooms, &c. &c. There is a great variety of methods adopted by different teachers in giving the signal for such movements. Some regulate everything by the clock alone. The session of the school, the recitation, and the recess, all commence and close when the pupils see that the clock indicates the time for such a

movement. There are objections to such a method. In large schools where there are several rooms, and where the movement of classes should be simultaneous, it would be very difficult to have all the rooms supplied with clocks sufficiently reliable to accomplish that object; for it is notorious, that, of all time-keepers, school clocks receive the least care and attention, and are most prone to run *ad libitum*. But a more serious objection is, that there is necessarily a considerable waste of time; for the whole school will be watching the clock, so as to be sure to be in readiness for the next movement; and, of course, their attention is more or less diverted from study. If, as is sometimes done, a single pupil is appointed to take the lead in the movements of the school, or of each class, then the pupils will be obliged to watch the leader—a method which has no advantage over that of being guided by the clock. Pupils should be free from all such care, while engaged in study, that they may give their undivided attention to the preparation of their lessons. Precision of movement cannot be secured by following the clock, for there will always be some heedless pupils who will “forget” to look at the clock; and others, especially when the school is coming to order, will be anxious to use the last moment of time, and will, of course, be tardy in their movements, whether taking their seats, or going to recitation.

We have seen teachers give signals to their classes by placing a pencil vertically upon the desk, or by some such gesture. The objections to the method mentioned above, will apply equally well to this and to all such methods.

There can be no better signal than a small bell. If the pupils understand the order of the different exercises, there will be no necessity for the teacher to announce what the next exercise is to be, whether it is “recitation,” “recess,” or other exercise. But this, like all the regulations of school, should be simplified as much as possible; otherwise much time will be wasted, the ears of pupils and teachers will become heartily tired of the continual jingle of bells, and, what is greatly to be deprecated, the machinery of school management will become altogether too prominent. A few years since, we visited, in a neighboring State, a large High School under the care of a teacher of considerable experience and reputation in his profession. That reputation, however, was founded upon his skill in imparting instruction, and in arousing an inquiring spirit among his pupils, more than upon his success in managing the movements and discipline of his school. When the time for recess arrived, the principal gave his table bell—not a very small one—a vigorous shake, which was the signal for pupils to prepare for recess, that is, to lay aside their books and to be in readiness for

the next signal. Another bell was then given as a signal for one-half of the pupils in a row of double desks, extending from the teacher's platform to the back side of the room, to turn a quarter way round facing the aisles. A third bell brought them to their feet; and the fourth, was the signal to march out of the room. Thus far, about a dozen or fifteen pupils, more or less, were disposed of. The same number of bells were necessary for the other half of the pupils occupying the same range of desks; and so on, until the whole school, numbering about one hundred and seventy-five pupils, had left the room. Twenty bells, at least, and perhaps more, were given for this single recess.— We must confess that their "tintinnabulation" did not "musically swell" upon our ears. How much time all these movements occupied, we cannot say, but it was considerable. After the pupils had returned and were conversing in different parts of the room, the signal to call them to order was given by a prolonged ringing of the bell, which must have told upon the muscles of the arm that held it. Now we have no hesitation in saying, that the teacher who cannot call a school of one hundred and seventy-five pupils to order by a single tap of the bell, or who cannot quietly dismiss the same number from the room by not more than six bells, and within two minutes of time, has not learned the best and easiest way of performing such duties. Such teachers are justly chargeable with a want of skill in their calling. We verily believe that one of the principal reasons why so many teachers break down in health, and have their dispositions injured or spoiled, is that many of their seemingly unimportant duties are performed so unhandily, and at so great a disadvantage, that they become a source of constant and intolerable wear and tear of soul and body. Now no rule can be given for this part of the teacher's work; but what the teacher should strive for, and *accomplish* too, is this,—to have all the movements performed quietly and in order, with the use of very little time, and with an absence of everything like those complicated methods, which soon become so wearing to teacher and pupil. The teacher's time and strength must be reserved, mainly, for the instruction of the school.

The *military step* does not seem to us desirable in the schoolroom. On the contrary, it is, in many respects, quite undesirable. The reasons usually assigned in its favor, that it secures order in movement, and is, of itself, a good drill exercise, are not very forcible or pertinent to the object to be accomplished. Physical exercise and military drill, are very well in their proper place, and at suitable times; but when pupils are entering or leaving a schoolroom, or are going to or from a

recitation, there seems no propriety in making such movements *drill* exercises. And as to the habit of walking in order, and without confusion, there is no more difficulty in teaching pupils to walk in a line, or to "file," as it is generally termed, without keeping step, than there is in keeping their attention closely to the simultaneous military "tramp." A very serious objection to the military step is, that it always creates a diversion in the schoolroom. Let twenty-five pupils move across a room, "keeping step," and they will make more noise, cause a greater vibration of the building, and attract the attention of the school more, than when each one walks independently, and with an effort to go as quietly as possible. If a congregation were to enter and leave the house of worship with the military step, would they cause any less disturbance than by the usual method? Or would they any better heed the apostolic injunction, to "let all things be done decently and in order?"

But we have the impression that, in order to be acceptable to the readers of the *Normal*, articles should not be too long. We must, therefore, reserve the further consideration of this subject for a future paper.

A. P. S.

TEACHERS' ASSOCIATIONS.

The benefit of union in any useful purpose scarcely needs more than a suggestion to secure consent to the proposition. If all the persons united are equal in their power to contribute to the general good, then each will receive encouragement from the energy of the others: but if, as will usually be the case, some are inferior, then they will be improved by the knowledge and influence that is superior to their own. Teachers need the assistance imparted by mutual aid, where the more experienced can easily unfold their thoughts derived from study and practice, as well as awakened by reflection, for the instruction of the younger and less qualified co-laborers in the common field.

One of the benefits of these associations will be found in the acquaintance with various methods of teaching. The isolated teacher is prone to fall into a routine, which may be no better than the scarcely improved antiquated forms learned in his school-days, and which may have descended

from the several teachers of many generations. Besides, in his seclusion he meets with no examples with which to compare his own. He does not clearly see where he might improve. He may think that he has reached as near perfection as is desirable for him to attain. But if he comes where comparisons can be made, and different methods are brought into view, and specially where the results, as gathered into the practice of our best schools, are presented, then the teacher, whose path has been at a distance from the more favored places, can learn how others have gained the success which makes labor pleasant. The earnest worker, will here find that he has not yet reached the highest point to be attained. He may perceive his want of something better. He will not cease to increase his own stores of knowledge, because he may find that others know more. It will never be well for the teacher to imagine that he has learned enough, though the tendency may be in that direction.

When he comes into the midst of the associated members, and listens to discussions, takes part in them, and hears essays on topics connected with the cause, he will gain new thoughts, as well as correct and brighten the old ones, and draw materials from the general fund of knowledge to aid him in the illustration of his own pursuits. From such an incitement to his good intention, he will return to his work with the consciousness that he is not alone in his toils; that if he have no sympathizing friend in the district, where he toils, and after all his best endeavors, may be censured, he has the sympathy of all his fellow teachers, to help him bear up as he goes onward, and to which he extends the like token of silent interest,—silent, until he can meet them again, when the cheering words of a few moments will throw brightness over the receding clouds of the past.

One of the most influential educators of the past was Pestalozzi. At a time when the modes of instruction were encumbered with the dust and darkness of previous ages, he started out with new views and was successful in gaining a hearing. He urged that the laws of nature as connected with mind should be heeded. The pupil must be helped to develop the action of these laws, so far as to place him in an attitude of a self-thinker. The mental powers must be educated in harmony, and instruction adapted to the peculiarities of the individual scholar's minds. But with all the good properties of this great teacher, he wanted the tact to secure prosperity to his plans. How much might have been added to his power, if he could have had the benefit of association with teachers of kindred spirit, and with their aid could have carried forward his principles into common use in his own day. He perceived and lamented his want of this practical talent. Yet he opened a new path. He threw light upon it, and

though his own prosperity was not equal to his merits, yet his influence has pervaded, in greater or less portions, every community where schools have been taught.

So all earnest thoughtful scholars can do great good. But the power in this direction will be increased by the suggestions arising in mutual conference. The teachers of this state have found the benefits of associated effort; and when they can be organized as has been done, and as has been proposed anew, a fresh impulse will be given to the work of the school-room, and the teacher be more happy in directing his efforts in better ways; and thus find the more rapid improvement of his charge to be the proof of his success. B.

ON STYLE: BE YOURSELF.

PART II.

BY ISAAC WESTON.

[By request of the author, we present Parts first and second of this excellent article in the same number of the Normal, thus giving the whole "cherry" at once; and we have no doubt that our friends will be glad to read all which our venerable contributor may have brought together upon this interesting topic, especially, considering the original and attractive "Style" in which its composer has dressed it.]
ED.

Some one remarks that "a man is nothing, who has *no* peculiarity or eccentricity." Some truth may be contained in this saying, yet it is to be admitted with caution, lest any one disposed to be erratic should greatly err by a silly, ruinous affectation. It is sometimes said of a person very unique in character and disposition, that there cannot be another *like* him, for that when he was created, the *mould* was broken.—Gail Hamilton says that *every* human being is a prodigy, each having its own peculiar mould.

The more I study human development in its endless variety of individual instincts, the more clearly I am convinced of the truth of her remark. Each is *himself* and nobody else; a character, which he has been growing up to and forming, day by day. So we notice that all sensitive objects have something peculiar belonging to them by nature, whether for defense, preservation or enjoyment. Some idiosyncrasy will appear, that works its ideality, and which is usually developed in early life.

The parent notices this distinguishing gift of nature in the child, and speaks of it as its peculiar disposition or temper. It is a seed dropped into its soul by its creator. It becomes the root of all that arises in the future life of the man or woman. Here is life's history of different shades of physical and mental forms, whereby is constituted the warp and woof of the individual life, presenting, as time unfolds it, all that is marked and beautiful which we see in that life; of color and complexion, in endless variety, like the flowers of the forest and garden.

Similar affinities will doubtless be found in different individuals, so that when they are developed, and opportunity occurs, they naturally perceive the similarity and are eager to unite with each other. Here, probably, is the source of friendship and love in the great human family, and it becomes a physical necessity, as well as a commanded duty respecting such, that "these twain be one flesh," i. e., when no other moral command is violated thereby.

I have digressed. We will come nearer to our point to be established and illustrated in the matter of style.

That ease and naturalness in style are to be sought after and practiced, is unquestionable, yet I have seen the following, by some writer:

"There is a certain want of ease about the old writers, (Baron and Montague) which has an irresistible charm."

Although I should demur in endorsing the following, I will give it. The same writer, speaking of the great power and value of style in the writer or speaker, proceeds: "Style after all, rather than thought, is the immortal thing in literature. In literature the charm is indefinable yet all-subduing, just as fine manners are, in social life. In reality, it is not of so much consequence what you say, as how you say it. Memorable sentences are memorable on account of some single, irradiating word, and it is in Montague's style, in the strange freaks and turnings of his thoughts, his constant surprises, his curious alternations, humor and melancholy, his careless, familiar tone of address, and the grace with which every thing is done, that his charm lies, and which makes the hundredth perusal of him as pleasant as the first."

Eccentricity, if not too glaring, often pleases, in style and in manners.

Walking from church on-e, with a young lady who was a fellow listener with me to a minister rather eccentric but very popular, and believing her to be well pleased with his discourse, I inquired of her what it was in the speaker that afforded so much gratification.

I don't know, she replied, unless it is that he does not preach like any one else,

It is obvious, that as a general criterion by which to judge of preaching, this would be an unsafe standard, and yet in this particular instance, it might not be wise to put him on your track, or on a different track. It is best to let him go, he will probably fetch up right, somewhere, except he reprobate.

Scourgers of the times are good in their place, but let them use a good degree of caution; their weapons are "edge tools."

The bee stings, but we have her honey. The wasp also stings; she is another thing; we will just stand out of her way, nor needlessly provoke her sting.

In recommending a large acquaintance with authors, let it not be supposed that I am losing sight of the necessity of originality or individuality of style. We are bound to strengthen, elevate, and simplify our own style, by whatever legitimate aid the writings of others will furnish. Our style may be sadly deficient in some material elements, a remedy for which should be correctly sought.

The physician tells his patient, that his blood needs more iron, and he administers it.

To obtain this important element, or any other in which we may be deficient, let us read much, and such books as are calculated to furnish the desired material,—books that are suggestive. With such a one in your hands, when in a reading mood, you are struck with thoughts which require a re-perusal, and all the essence of the passage flows into your brain—they are a floweret of delicious fragrance and unwonted beauty, or of material make, like steel, with strength and elasticity. Such thoughts come sometimes without the book. Given to the moments of an observant mood, how rapidly will capital increase. At dead of night, sometimes, I have had the nocturnal messenger busy at my ear, or my brain, which like some bird of paradise, is ready to enchant my mind with such thoughts of beauty and wisdom that I had no rest, until I arose and with pencil and paper, by moonlight, marked the midnight visitants so securely, as to find them all safe in the morning, and though emanating from however feeble a brain, still they might be thoughts worth more than gold. It was "a penny well saved."

We are all more or less dependent upon others for many of our thoughts, after all is said and done. But obtain them by an easy and natural digestion, avoiding as a gross robbery and a vile imposition upon others, (practised more than the public are aware of,) : that of the plagiarist, who would borrow and shine at another's expense. If you can be only a moon, let it be known that you are such, and seek to possess the honest

simplicity of that satellite. Desire to pass for only what you are worth. If but a little star of inferior magnitude, be willing to pass for that, if it be a fore-gone conclusion that you can never ascend on the scale of the magnitudes. An intimate and enlarged acquaintance with books will serve to assimilate your character to greatness and goodness, and improvement of the mind and style, as the mingling with what we call good society will help fashion our manners, and improve us in good breeding.

There is nothing gained, ultimately, when the want of originality is virtually confessed by the pilfering of others' writings for a show. The deception is usually detected by the clear-sighted of the audience. Like the silk-worm; rather, let every one who instructs others, spin out from himself. These, his own self-gushings, from his own heart and brain, every body will feel and acknowledge where they came from. It is the voice of nature speaking to nature, in those who listen.

As much as lieth in us, let us strive that our thoughts and utterances be our own; and, handsome or homely, they will pass for what they are worth. An attempt at display of a "spread eagle" character, with dressed up language and a borrowed style, disgusts all persons of good judgment and taste, and is sure to defeat its object.

Some author whose style is of a masculine, and elevated character, thoroughly read and digested, will answer the purpose. For example, John Foster's Essays. The wealth of thought they contain will make one rich in possessing, aside from the strength of muscle, the mind acquires in following his eccentric paths. Here is much clear gain.

A labyrinthian style it is, and for common purposes, undesirable, yet good to sharpen and strengthen the intellect, and thus supplying the deficiency confessed.

Again: A style rigid prosaic and dry, should tempt an occasional stroll among the floral beauties of an ornamental literature. Whatever may have been a persons dislike towards flowers, yet he may get to love them for their own sake; and, to cultivate them to his garden, even, may become a pleasant work, and it will prove an advantage, not to be wantonly undervalued, even by him who walks proudly among his *forest* oaks, or counts his fields of grass and corn, by the hundred acres. It is the grace and magic contained in *little things*, that so often captivates—in everything; in men and women, beasts and birds, conversation and style. Are you suspicious of being verbose, and rambling? Learn as you would value the satisfaction of having your composition read, to remedy the infelicity, by studying *conciseness* in style as a cardinal element. Be willing to be taught it, by an *Indian*, if in no other way. Visit his camp; study his character; be kind

to him; hearken to his upright, laconic language. His very countenance speaks. It is in the grammar of his native forests, but he tells you his business, or answers your questions in the fewest and directest words possible. I would not be all Indian, yet aside from his abrupt and snappish nature, you will get your pay. If "you can never teach Indian." Indian may teach you.

His very countenance speaks. I am not sure that a minister could spend some half hours more profitably for his hearers or himself, anywhere else, than in listening to this sample of the genuine laconic.

Who has not read "Logan's speech," and perhaps others, where this Indian characteristic appears to great advantage. And yet there is a "Scylla and a Charybdis" to be avoided here. A style, enigmatical or ambiguous, can make no amends for the loss of perspicuity and simplicity.

But give a man time and words enough to tell his story in his own way. A long *story* or a long *sermon* is not undesirable, when the *matter* and *manner* are both good.

We judge and we pronounce, without hesitation, upon the ability of the writer, according to the wording and construction of his sentences. The twenty-six letters of the alphabet only are there, but the dexterity of that *brain-moved* hand, is to decide whether his readers are to be wrapt in ecstasy at the beauty and majesty of his thoughts, or are inwardly saying, "Oh, that my enemy would write a book,"—such as this!

My argument is good for *books*, and good for *preaching*. Less than ten minutes is sufficient, on opening an author, to decide upon his tact for writing; hearers, fast asleep by scores, tell the story of a sermon, that has nothing in it to keep them awake, or nothing but leaves.

And in conclusion, I say, let *him be himself, especially*, who furnishes articles for the *press*.

I once sent a paper to the printer, containing an appeal to the public, in behalf of a community whose principal church had just been burned.—Among several *ordinary* reasons why help should be afforded this particular people, was *one*, of a *special bearing*, which should in *no wise* be omitted. But the printer for some cause, perhaps to shorten the article somewhat, did omit that specific reason, and thus *cut out the very tongue* of the plea I had made.

The editor's is often an ungracious handling at best, and a hypercritical pruning may destroy the gist of the article, the rhythm, or the natural vivacity or simplicity of the author's style, which is all his own. He has been flched, outrageously; when all the disappointed, nervous author can do, is to writhe over his mutilated MS., and say,

"Why could ye not have left me, to be myself!"

THE DEPARTMENT OF PRACTICE.

NOTATION.

No 1.

Derivation of the Term. This term is derived from the Latin, *noto*, &c., meaning *to mark*. It means, literally, the act of marking; and is used to designate that part of arithmetic, involved in the representation of numbers.

Remark. It is probable, that arithmetical computations were of more early date, considerably, than written language. In testimony of the truth of this assertion, we call attention to some words used in arithmetical treatises and explanations, which undoubtedly embody, in themselves, the record of customs that could not long have existed, where written language was made the medium of communication. Such are the words *calculate* and *calculation*, from *calculus*, a pebble, which carry us back to a time when little stones were heaped up to convey ideas of number. Such, also, is the word *digit*, which tells unmistakably, that the *fingers* once assisted in the work of counting, for older folks, as well as for little ones. And this word *notation* speaks of a time which antedates the use of parchments, and when the "brave old Romans" did their arithmetical work by marking in the sand and elsewhere, as opportunity offered itself. Out of these two last mentioned methods of representation, it is not unreasonable to suppose, may have grown, when the Roman letters came to be generally used, the Roman method of notation. At any rate, the relationship of the use of the fingers in representing numbers, is so natural and apparently so easily traceable, that we think this supposable relationship may be made the means of making interesting to children one of the methods of arithmetical notation.

THE ROMAN METHOD.

In this system of representation, use is made of seven capital letters, to wit: I, V, X, L, C, D, M.

It seems natural, that from the holding up of one finger, or making one straight mark in the sand, to represent the number *one*, the letter, I, should have come to represent that number in after times; then, of course, II would represent two, III, *three*, IIII, *four*, and so on. But this making of straight marks would become tedious after a time.

The whole hand, we suppose, would have been held up to represent *five*, the fingers all being extended. Right lines joining the extremity of the thumb and of the little finger, with the wrist at its centre, (the whole hand being spread open,) would not be unlike a rude representation of the letter V, which is used to denote the number *five*.

We should, then, naturally represent *ten* by two V's, and the letter X, is not unlike the letter V used twice, with the vertices placed opposite and in contact.

It was natural enough, that V and I, thus VI should denote one more than five, or *six*, and then VII would denote *seven*, and so on. But if V with I placed at the right

denoted six, why might not V with I placed at the left, denote one less than five, or *four*? Then a principle would have been established, and XI must denote *eleven*, IX, nine, and, in general, a letter denoting a certain number being placed at the right of one denoting a larger number, must increase the number represented, and if placed at the left, must diminish the value of the representation, in each case by as many units as are denoted by itself.

CORRESPONDENCE.

BELGRADE, Mar. 14, 1868.

MR. GAGE:—I have several questions which I would like to have answered through the pages of the *Normal*. In the sentence "Let him go," how will the readers of the *Normal* parse the word "him." Grammarians are not explicit on this point, so far as I have observed, whether they regard it simply as the object of the verb "let," or some other way. I have a theory of my own, but wish to hear from some one through the *Normal*. In the following sentence, and others similar, "Nature, attend; join, every living soul," would nature be regarded as the subject of the verb attend, or independent, and thou, understood, the subject? Also in the phrase "Ye vocal gales," what shall "ye" be called?

I would also like to ask C. C. R., if he is sure the word "posted" is used correctly in his article in the March number. I have carefully *examined* my dictionary, and do not find the word to be defined "informed," in which sense we so often hear it used. C. C. R. placed the word in quotation marks; therefore he will not be held responsible. I do not ask this to criticise, but to learn what authority there is for the so common use of the word.

I am glad to see the question of whispering brought to the notice of the readers of the *Normal*. That is one of the problems of school discipline, that I have been unable to solve satisfactorily. I think M. S. S., in her reply to C. D. C., came very near the point when he said, "The teacher, *if any one*, needs to be all things to all men." But, ah! the wisdom that is necessary! Last winter term, I did not require my scholars to *report* whether they had whispered or not, but reprov'd them whenever I saw them whispering. This method was *not* successful, because they would watch every opportunity to whisper without being observed. This spring I have adopted another method. I have them report, and rank them accordingly. This method I find gives me less trouble than the other, but is not perfect, for but few get through the day without whispering, but they seem to report honestly. If any one has a *perfect* system in regard to this troublesome question, I hope they will give the readers of the *Normal* the benefit of it. But be honest with yourself, and be sure you are right.

The only fault I find with most of the theories and systems of education of which so much is said, is, that they are *fancy* sketches, they will not reach or apply to everyday teaching. The *ideal* is vastly different from the *real*.

I have already made my letter too long, but allow me to say I am much interested in the success of the *Normal*, and get many hints from it which are of practical use to me in school: a school of about fifty scholars calling upon me for instruction in

Geometry, Rhetoric, Natural Philosophy, Algebra, French, Latin and Greek, alone prevents me from occasionally contributing my mite to the Department of Practice.
Very Truly,
E. C. B.

BATH, Mar. 14th, 1868.

DEAR NORMAL:—I have for some time been thinking of contributing *my* mite towards the support of our excellent magazine, and chosen for a subject on which to offer a few suggestions, "Written Examinations." but was pleased on opening my March number, to find that "L. P. F." had called the attention of the readers of the *Normal* to this subject.

However, as he closes by exhorting us to try it, and tells us that we shall find it work that pays, and as I *have* tried it, and found that it *did* pay, perhaps a few words from my experience will not be uninteresting.

THE EXPERIMENT TRIED.

At the beginning of my last term, I told the pupils in the first class in grammar and geography, (arithmetic and other studies may also be included,) that once in two weeks, they would take a test on what they had gone over during that time, by *writing* the answers to ten questions which I should ask them, after which, they would fold the papers, and pass them to me to be examined and marked in the following manner, viz: If each question was answered correctly, the number 100 would be written over the answers, at the head of the sheet; but for each question incorrectly answered, or not answered at all, ten would be subtracted from that number. Thus they could see, at a glance, how many they had answered correctly. I did *not* correct these papers, but marked the answers which were incorrect, leaving them to make the corrections, which I think helps to fix the facts in the memory.

At first I gave them such questions as the most of them could answer, and thus they soon became interested in this exercise. After they had taken one or two of these tests, I told them that I should keep an account of the numbers on their papers, and at the end of the term we would see who stood highest. (This can easily be done by adding the figures on the papers, and dividing by the number of tests taken.)

THE RESULT.

At first their answers lacked conciseness, and were poorly expressed in many instances; but soon they were able to give answers in the fewest possible words. At first, they made many mistakes in spelling, especially in geography. Their attention was called to such words by placing an interrogation point over the word. They soon took more notice, while studying their lessons, how each word was spelled, and ere the close of the term made but few mistakes in spelling.

As "L. P. F." says, I was much surprised at first, to see how the best scholars would fall when required to write their answers to questions.

I never have found anything that would awaken so much interest in classes when it can be applied, as did this. I agree with "L. P. F." and "N. M. H.," in respect to writing the spelling lesson. And allow me to suggest to the latter, that she (or he,) would find it more convenient, perhaps, to have the scholars provide themselves with a blank book in which to write their spelling lessons, instead of writing on their slates. These books can be purchased at any stationery store, for from five to ten cents apiece. I have purchased those that were suitable for this purpose for 60 cts. per dozen. Then let them write twenty words from the lesson (if there are twenty lines on a page of this book,) and if all are spelled correctly write the number twenty over this column, and subtract one for every word misspelled by such scholar, each week or month, which may be read before the school.

I consider this an excellent way of spelling, for pupils who can write a legible hand. But my sheet is full.
Respectfully yours,
C. A. B.

EDITORIAL DEPARTMENT.

AN ELEMENT OF DANGER.

A feeling prevails more or less extensively in the minds of our people, and by this term we mean not only the inhabitants of Maine, but also those of other States of the Union, that the design of the common school does not include the imparting of instruction much if any beyond reading, writing and the commoner rules of arithmetic. That is to say, that the children of a commonwealth have not the right to ask that the legislators of the same commonwealth, shall make provision for their education much if any beyond the limits named above. How widespread this idea may reach, we know not; we have no certain means of knowing; but that it exists, we are certain, and also that it has its influence in promoting opposition to progressive legislation in the interests of our common-schools.

It becomes necessary, in order successfully to combat an idea like this, to educate the people themselves. The people of America love liberty. All people love it. The people who are the descendants of those who fought at Lexington, Bunker Hill, Saratoga, Trenton; the people who have had the virtue to fight for the maintenance of liberty protected by law; these people are perhaps justly supposed to love liberty as intelligently and ardently as any of past ages, or who now live upon the face of the earth. This love of liberty, (and we hope we shall not be considered as entering in this connection upon anything like the political arena,) this love of liberty, and the general feeling that liberty unprotected by law must run into unrestrained license, is a lever with which the philanthropist and the wise statesman and patriot may work, educating the people to broader views of political economy, and thus breathing a higher life and a better spirit of union into the nation.

It is not difficult to show, that education gives men power. History is full of examples to prove and illustrate this. The people of America would resent as an insult the idea, should any politician broach it, that the masses have their rights when they are taught to read, to write, and to cipher a very little. And yet the poison lurks much nearer their own hearthstones, than are the halls of our National Congress, or even the capitols of our States. You must go among the people to hear it; you must hear it from their own lips. Ignorance is the mother of it; ignorance fosters it; ignorance alone will perpetuate it. The light of knowledge will eradicate such notions, the elevating power of education will lift States and Nations finally out of and above these low and narrow views of policy and of human rights, if such a result is ever attained.

The person who makes a study of the lessons of history, and gives any heed to them, realizes the danger to future generations which lurks in the prevailing erroneous notions that are current among the people of his time. Such a person knows, that history deals with periods of greater length, than are the lives of the men of any single generation. He knows that its philosophy is the science of the ages. He knows, that what is to-day whispered in the ear in closets, will be the cry upon the

housetop of some perhaps not far off generation. Therefore he seeks to weigh well the tendency of prevailing opinions, and, if he be a lover of his race, to inspire the people of his time with principles which have within them the germs of life and power.

Now what is the plain tendency of such an idea as the one which we have said prevails to an extent unknown to us; namely, that to know how to read, write and cipher a little, is enough of education for the State to provide for its "common people"? Perhaps to ask the question after what we have written, is sufficient to suggest what our answer to it would be. We believe, that to give currency to such an idea, is to a certain extent, (how great the extent depends upon how great is the influence of the individual,) to endanger the final triumph of free principles upon this continent. It is a seed-sowing out of which can by no possibility spring a harvest containing one element of progressive, well-regulated liberty.

We wish that this one question might reach and penetrate the mind of every citizen of our country, viz: What do you believe to be your personal duty to the common schools? The life of the nation depends upon the answers which might be obtained, or at any rate no other one question more vitally affects the perpetuity of free, christian, law-regulated liberty, than does this.

Only about eighty years of our free institutions, and yet our country is to-day racked and shaken from the center to the outer rim, by an attempt among other things to ignore the proper education of the people. And we say unhesitatingly, that, in our opinion, there is sufficient apathy on the part of the citizens of many portions of our country, where free schools are now supported, to constitute cause for alarm on the part of those who believe that a general diffusion of knowledge is a *sine qua non* to insure the perpetuity of self-government. *Progress, PROGRESS, PROGRESS* is the only law of safety in respect to common-school education. "The mills of the gods grind slowly, but they grind exceeding fine." They grind nations and individuals to powder, who will not learn the lessons of history.

AN ELEMENT OF PROGRESS.

It is simply true, and we do not know why it may not as well be said, that the opportunities that offer themselves, which are sufficiently remunerative pecuniarily, to encourage young men and women to make teaching anything like permanent professional work, are so "few and far between" as to be a source of no inconsiderable anxiety on the part of those who desire to see teaching professionalized in our own State and elsewhere, and who would themselves work to lead others to adopt it, and to fit them to be useful in it.

It is a source of encouragement, that our State Legislature has been led to adopt a measure which looks toward the holding again of the county teachers' institutes. We do not well see how our schools can maintain anything like a pretence to good work without the revival and hearty support of some such plan as this. But this alone, however well it may be carried into effect, will fail to accomplish much, unless some arrangement is effected to bring the teachers to receive its influence.

Some one writing to the *Portland Transcript* during the past month, very pertinently alludes to the impracticability of these institutes and conventions without some increase of pay or some State appropriation, which will enable poorly paid teachers to avail themselves of the advantages which these afford. Undoubtedly, in the counties where these meetings will be held, there are those who would gladly derive the benefit which attendance would afford, but who will either feel that they are not paid enough to warrant them in making the necessary expenditure, or that their means are really insufficient to admit of their being present.

Such persons will do well to remember, that their pay is quite sure to be increased, if with awakened zeal and better ideas about teaching, they return from the institute to do better work for education in and out of the schoolroom. We are confident that it is beginning at the wrong end, to complain that the Legislature and the people are stingy in appropriating money for educational purposes. Show good work first, then if the community in which you are laboring will not pay you well, there will be found some other that will.

This principle, if we mistake not, runs through the whole question of educational reform. The burden of proof lies with the advocates of progress, and unless they can prove that their theories work well in practice, it is of very little avail to complain of the apathy of the people. The people are apathetic. There is no room for question here. But to denounce them because they do not see what the reformer thinks he sees, will not generally arouse them, unless it does so to defeat the ends of true progress.

The schools will never be much better, while the people remain so delinquent in the adoption of measures to promote their advancement. This is true. The people will not be willing to do much really to advance the interests of their schools, until they see better results in the schools themselves. This is equally true. The teacher must love his work. He must make it his profoundest study. He must be unselfish, full of tact and wisdom, and full of faith. He will then be quite likely to see his efforts crowned with success, not so full and satisfying as his enthusiasm would hope for, but yet success; and his humble work is the heavenliest of earth.

LETTER FROM CASTINE.

[The following communication gives us just the kind of information to lay before our readers, which it seems to us they must be pleased to have. We are glad our correspondent is able to give so cheering an account from his field of labor. May the Eastern Normal School continue to prosper. ED.]

CASTINE, ME., March 23, 1868.

MR. EDITOR: The winter term of the Eastern State Normal School closed the last week in February. A large number of visitors were in attendance during both days of the examination. The students acquitted themselves creditably in the recitations, and the compositions read were pronounced by the visitors to be of more than ordinary merit.

The Normal Music class, under the direction of its excellent teacher, J. W. Dresser, Esq., enlivened the exercises with fine music. The students have taken a remarkable interest in vocal music, and the progress of all has been marked.

A class of sixteen has entered this Spring term, and more are expected. The citizens of Castine manifest a deep and increasing interest in the school and the students, and much is done to make the pupils feel that they have found a pleasant home.

It was my privilege to attend the examination of the public schools of Castine. Under the direction of the efficient and faithful Agent, the course of instruction throughout is systematic and thorough. The teachers have been well trained, and by diligent work, they have brought the schools to a high position.

Mr. T. W. Lambert, Principal of the High School, is a thorough and energetic teacher. At the close of the term he received from his pupils a valuable token of their appreciation of his character and services, and from the citizens of the place, words of commendation for his faithful work.

It is fortunate for the Normal School, that it is located in a town where the cause of education is so well sustained. The privileges offered by the State, the beautiful location of Castine, and the intelligence and kindness of the people render it a desirable place for students. The school has been constantly increasing in interest and numbers, and a large class will doubtless enter next term.

G. T. F.

MISCELLANEOUS DEPARTMENT.

— The following letter explains itself, and is the best possible notice of the meetings which it advertises :

STATE NORMAL SCHOOL,
SALEM, MASS., MARCH 6, 1868.

FRIEND GAGE: I have just learned that the Legislature of Tennessee has unani-
mously invited the National Educational Associations to hold their next meetings in
Nashville. This invitation has been accepted. The meetings of the National Teach-
ers' Association, the American Normal Association, and the National Association of
Superintendents, will accordingly be held in Nashville, during some week of August,
the precise time to be yet determined. New Englanders going to Nashville will have
a fine opportunity to see Niagara and the Mammoth Cave. I have seen both, and
hardly know which to esteem the greater wonder.

Yours truly,

D. B. HAGAR.

— We call the special attention of our readers to the new advertisements of G.
& C. Merriam, Oliver Ellsworth and A. S. Barnes & Co., also to the notices of books
published by these houses, in the Book Department.—Our readers may expect in our
next issue, an explanation of a new method of teaching history, which has been re-
cently brought out, and which is commended in the highest terms by teachers who
have used it.

— Mistakes are sometimes unavoidable. They are a source of discomfort to editors, authors, compositors, and—the d—l. On page 143 “principle character,” should be *principal*, and “some show” of &c., should be some *share*, &c.

— Several communications intended for the present number of the *Normal*, came to hand too late for insertion. They will appear next month.—Mr. L. Dunton, formerly of the Bath High School, more recently occupying a subordinate position in the Lawrence School, Boston, has been promoted to the Mastership of the same School.

— We make the following extract from the Inaugural Address of Hon. A. D. Manson, the Mayor of Bangor. It will give our readers some idea of the BANGOR SCHOOLS.

“Our schools continue to maintain their high reputation, and are, it is believed, in as good a condition, to say the least, as at any former period. They deserve, and no doubt will receive, your fostering care. There has been some discussion in the newspapers as to whether the High School was doing all the good it was capable of. It was alleged that while the expenses of the schools have been largely increased, there has been a marked decrease in the number of scholars attending it. How this is to be remedied I am not prepared to say. I commend the question to your earnest attention. The High School, so long the pride and boast of the city, must not be allowed to decline, either in numbers or influence. The Superintending School Committee report the successful introduction of light gymnastics into some of the Grammar Schools, and give it as their opinion that it is very desirable that they should be introduced in some form into all the schools.”

They report some modifications of the course of study in the primary school have been made with advantage, and that other changes in the course of study in certain grades may hereafter prove desirable.

Reviewing in a general way the condition and progress of the schools, the Committee are satisfied that the standard of scholarship and discipline has been well maintained by the teachers.

The Committee compliment the Superintendent, Mr. Roberts, for his efficient supervision and watchful care of the interests of the schools. The able and elaborate report of Mr. Roberts, the Superintendent of the schools, will soon be placed before you in a printed form, and will with the report of the Superintending Committee supply all needed information in regard to the condition of this all important department.”

—The Nation for March 5th, contains the following:

“One of the many curious customs that obtain in the great schools of England is chronicled in the latest English papers. Eton has a new head master, the Reverend Mr. Hornby; so, in accordance with a long established usage, a large birch adorned with blue ribbons was the other day presented to him with much ceremony at the beginning of eleven o'clock school. Mr. Hornby replied in what may be called a few “very appropriate words”—that is, he said he hoped he should very seldom have occasion to use the implement, and referred to the system of mutual confidence which had always existed between the late head master, Doctor Balston, and the school. It is noticeable that, whatever the reason may be, nothing of this kind ever takes place in democratic America. We have abundance of college customs, many of them puerile, almost painfully silly, and some of them commendably sensible in spirit and productive of good results. For example, we have the “mock parts” morning of Harvard, when the more or less fierce democracy of that university devotes itself to giving and taking criticism of undergraduate character and manners as sharp and salutary as that with which members of the Oneida Community are in the habit of sweetening existence for each other. But among all our college usages of the non-serious sort there is none, we believe, in which any part is borne by the teachers. The American school or college is less than the English a community of which the instructor is a part, and in the total life of which, the play life as well as the business life,

he has his share. Among us the master always "means business," and jokes are not tolerated except where both parties to them are in pupilage."

—The *Christian Mirror*, in its issue for the week ending March 17, has the following timely, and, in most respects, well considered words, upon educational affairs in Maine. With Mr. Walter Wells we have had a pleasant acquaintance during the past twelve years, and we cordially endorse what the *Mirror* says of his scholarly fitness for the position of State Superintendent of Common Schools:

"The Educational bill as reported by the committee, was improved by the changes made in its passage through the legislature. The sections for a revision and uniformity of school-books were negatived. It is an old habit to charge the short-comings of schools on the books used. No man would accept as a sufficient apology for an imperfect job the quality of the tools—no good workman, who understands his profession will make such an apology. With a properly qualified teacher text-books are comparatively of secondary importance. The great fault is in incompetent men, and such only, can be procured for the meagre compensation afforded. If practice can make perfect, our educational system ought to have attained perfection before this. We have had nothing but experiments for fifteen or twenty years. One plan has been put into operation, and before it was well tested another series of measures has been adopted—so the State has gone on, something like Jack with his bean—planting one day and pulling it up the next—to see if it had sprouted. We understand that the office of Superintendent now waits an appointee. Having never seen any reports of the present incumbent, we are ignorant of the manner in which he has discharged his duties. But if a change is to be made, the government has already in its service a gentleman with rare gifts for the place—and one of the rarest is, that he is not an applicant for the office. It is of our own suggestion that we mention the name of Walter Wells—as one, who for general culture, practical experience in schools, and literary reputation, would honor the State as Superintendent of its Common Schools."

EDUCATIONAL INTELLIGENCE.

NATIONAL. From Commissioner Barnard we have received the following Memoranda as to work completed within the first year of the establishment of the U. S. Department of Education.

I. Report on the system of Public Schools of the District of Columbia—together with an account of the System and Statistics of Public Instruction in the principal cities of the United States. A document of 400 pages.

II. Report on the School Codes of the United States, embracing the first School Act of each State, with all the subsequent modifications of the same, and the law as it stood on the 1st of January, 1868, with the provisions which have been introduced into the successive Constitutions of each State on the subject of schools and education.

III. Report on the National Land Grants to the several States for educational purposes:—
Part 1. Grants for Colleges of Agriculture and the Mechanic Arts, with an account of the Institutions which have been established on the basis, or with the aid of these grants.

IV. Report on Institutions and Agencies for the professional education of teachers in the several States, including the State Normal Schools, City Training Schools, Teachers' Institutes, and State Teachers' Associations in each State.

V. Report on the Principles of School Architecture, and Plans for the internal arrangement, ventilation and warming of buildings designed for educational uses.

Part 2. Plans for graded Schools, with 250 wood cuts of buildings recently erected.

VI. Report on National Education in Europe:— Part 1. Germany. Part 2. Switzerland.

The following, which we find in the excellent summary of foreign news, given in the Boston Advertiser, is interesting as showing what is thought of our American System of Free Schools, across the water :

The education commission by whom Mr. Fraser was appointed to visit the United States and who engaged several other gentlemen to pursue similar investigations in England and on the European continent, have at last returned their report, and the English journals discuss at considerable length the important recommendations it contains. Summing up their review of Mr. Fraser's interesting statements, this central body of commissioners give the following as their estimate of the American system:—

“ On the whole, it appears to us that the great merit of these schools is their precise adaptation to the American people and the American political life. Without the American energy to inspire them, and the American political life to follow them, we think it may be doubted whether they would attain any real success. There appears to be nothing in them to lift the people above their own level. There is no arrangement in the system by which the fittest and most cultivated have a powerful voice in controlling the education of the whole. They fall far short of Prussia in completeness and in culture. But they seem to have succeeded in supplying every citizen with as much education as is indispensable for the ordinary duties of life, and in opening to him the door for more if he desire it. They show what may be done by calling on the people to educate themselves and putting all the machinery for the purpose into their own hands. ”

MAINE. The following is the new school law, approved by the Governor, March 7, 1868 :

An Act to increase the efficiency of the State Supervision of Common Schools.

Be it enacted by the Senate and House of Representatives in Legislature assembled, as follows :

SECTION 1. The Governor and Council shall appoint a State Superintendent of Common Schools, who shall be duly sworn and continue in office three years, or during the pleasure of the Executive; and when a vacancy occurs, a new appointment shall be made for a like term.

SEC. 2. An office shall be provided for the State Superintendent at the seat of Government, where he shall preserve all School Reports of this State, and of other States which may be sent to his office, the returns of the Superintending School Committees of the various towns, and such books, apparatus, maps, charts works on education, plans for school buildings, models, and other articles of interest to school officers and teachers as may be procured without expense to the State.

SEC. 3. The duties of the State Superintendent shall be as follows :

First—To exercise a general supervision of all the public schools of the State, and to advise and direct the town Committees in the discharge of their duties, by circular letters and personal conference, devoting all his time to the duties of his office.

Second—To obtain information as to the school systems of other States and countries, and the condition and progress of common-school education throughout the world; to disseminate this information, together with such practical hints upon the conduct of schools and the true theory of education as observation and investigation shall convince him to be important, by public addresses, circulars, and articles prepared for the press; and to do all in his power to awaken and sustain an interest in education among the people of the State, and to stimulate teachers to well directed efforts in their work.

Third—To take such measures as he may deem necessary to secure the holding of a state educational convention once each year, with a view of bringing together the teachers, school committees and friends of education generally for the purposes of consultation with reference to the interests of common schools and the most approved method of instruction.

Fourth—In case sufficient encouragement is afforded by the citizens, to hold in each county once during each year a public meeting or institute for teachers and educators.

Fifth—To prepare and cause to be printed and distributed such portions of the proceedings of county and state institutes or teachers' conventions as he may deem important in the furtherance of the interests of education.

Sixth—To prescribe the studies that shall be taught in the common schools of this state, reserving to town committees the right to prescribe additional studies.

Seventh—To act as superintendent of the state normal schools, and perform the duties imposed upon the superintendent of common schools by the ninth section of the act establishing normal schools.

Eighth—Annually, prior to the session of the legislature, to make a report to the governor and council of the result of his inquiries and investigations, and the facts obtained from the school returns, with such suggestions and recommendations as in his judgment will best promote the improvement of common schools.

SEC. 4. The annual salary of the state superintendent shall be eighteen hundred dollars exclusive of travelling and other necessary expenses incurred in the discharge of his duties, for which he shall receive such sums as he may actually expend, to be approved by the governor and council, not however exceeding five hundred dollars, to be paid quarterly on the first days of April, July, October and January.

SEC. 5. Sections sixty-two to sections sixty-nine, inclusive, of chapter eleven of the revised statutes, providing for the appointment of a superintendent of common schools, and all acts and parts of acts inconsistent with this act are hereby repealed.

SEC. 6. This act shall take effect when approved by the governor.

MASSACHUSETTS. The report of Hon. John D. Philbrick, Superintendent of the public schools of Boston, has been issued, and we have been favored with a copy. Whole number of children in the city between the ages of five and fifteen, 86,030; whole number of schools, 288; high schools, 3; grammar schools, 21; primary schools, 259; teachers, 630; pupils belonging to the schools, 28,136; Amount of salaries, \$492,796.66; total expenditures for the schools during the year, \$781,280.60.

The report recommends evening schools; considers the standard of attainment in different grades of schools too low; believes there may be improvement in teaching arithmetic; speaks of the evil of being confined to text-books, and advocates teaching exercises; would have but one text-book in grammar; thinks there is need of but one book in geography, where two are now in use. Other suggestions of a practical nature make this report a document of standard value.

The thirty-first annual report of the Board of Education has been presented to the legislature, together with the report of the secretary of the board. In the first twelve pages of the report the board endeavor to point out some of the defects in our school system. They say that the want of system in the selection of text-books is every year growing to be a more serious evil, and they deem it desirable that a judicious board, or commission, wholly independent of authors and publishers, should publish a list of the best books, describing them and pointing out their best characteristics. The board have given considerable attention to the subject of the proper length of time to be spent by children in study, and have voted to instruct the principals of the normal schools to fix eight hours per day as the outside amount of confinement and brainwork, including what is done in school and out of it. The proper cure for the system of "cramming" is stated to be the preparation of text-books by men of good sense and thorough culture, and the constant keeping in view by teachers this question; What do these children need to know, and of what use will it be for them to learn this? In view of the increasing difficulty of finding suitable men willing to act on school committees, the board earnestly recommend the passage of a law authorizing any town in the Commonwealth to put on its school committee a certain proportion of women. The board regard the opinions of the people as rapidly tending to the conviction that it would be wise to discontinue corporal punishment in schools.

The report of the secretary states that all the cities and towns have made the annual returns required by law. The number of public schools is now 4888, an increase of 79 during the

year. The number of persons in the State between 5 and 15 years of age on the first of May last was 461,498. The number of scholars of all ages in the public schools was 235,241 in summer, and 247,364 in winter, showing an increase of about 6000. The number of teachers in winter was 936 males and 4871 females. The average wages of male teachers was \$66.92 per month; of females, \$26.44. The amount raised by taxes for the support of these schools was \$6,355,505.96. This is an increase of \$362,328.57, which the secretary says is quite unexampled in the history of the State. Berkshire County makes an increase of 30 per cent. in this respect, and Suffolk County an increase of 27 per cent. The amount raised by voluntary contributions was \$32,370.20. There are in the State 148 high schools, 116 incorporated academies, and 553 private schools and academies.

RHODE ISLAND. We quote the following from the Nation :

"The total population of Rhode Island is, in round numbers, about 180,000, of whom the number under fifteen years of age is given as 57,110, and those between six and fifteen may be estimated at 45,610. By good rights all these last should be at school, but, in fact, in the winter of the year ending April 30, 1867, the public schools showed an attendance, of boys and girls together, of only 28,280, and the average attendance during the whole year was only 19,972. It appears, therefore, that 17,330, or more than a third of the children of proper age, were entirely lost to the educational influences of the State. In Prussia, with a total population of 19,226,270 (in 1864,) and an infant population (from five to fourteen years of age) of 3,457,301, only 16,000 were unaccounted for in the official returns of that year. Make a liberal allowance in the Rhode Island deficit for children put to private schools—probably not more than 1,000—and this little State, with a population inferior to that of the city of Boston, has a bad advantage over Prussia in the actual number of children who do not learn the alphabet. There are, however, 2,500 pupils in Rhode Island who are past fifteen, but they are *only* 2,500, while there are 15,000 persons also past fifteen who cannot write their own names—nor ten thousand of them read at all—and 15,000 others but little better off. We gather these statistics partly from the "Twenty-third Annual Report of Public Schools in Rhode Island," delivered to the Legislature last month, and partly from "An Appeal to Rhode Islanders" in the Rhode Island Schoolmaster for February. This appeal, in view of the alarming facts just stated, proposes a remedy in the shape of evening schools, free libraries, reading rooms, lectures, and other enlightening instrumentalities. There is nothing novel in this, but it appears to be taken in hand by persons who are brought in contact with the ignorance which they seek to dispel—that is to say, the manufacturers whose mills have attracted to Rhode Island and concentrated in a few of its thirty-four towns a large and increasing foreign population, under whose incubus it is no wonder the State shows badly. The new organization is to be known as the "Rhode Island Educational Union," and Mr. Samuel Austin is to be to it what Dr. Barnes Sears is to the Peabody fund for Educating the South."

CONNECTICUT. The city of Hartford has voted to build a new High School House, to cost \$80,000. Trouble has recently arisen in the same city relative to the attendance of colored children at the public schools. One school is appropriated to their use; but owing to distance and alleged inferior facilities afforded there, some have chosen to send their children to other schools. One party among the school directors forbids the children to come to these schools; or if they come, will not allow the teachers to instruct them. A suit will be brought by the colored people against the school committee.

WEST VIRGINIA. It has been decided by the Board of Regents, to put the State Normal School, for the support of which the State Legislature has recently made provision, in operation as soon as possible. A very good building is now ready for this purpose, the grounds of which embrace an area of 11 1/4th acres of land well situated for grading, ornamenting, &c. A new building is to be erected the coming summer. A recent enactment of the Legislature provides, that pupils admitted to the Normal department of this school shall be admitted to all the privileges thereof, free from all charges for tuition or for the use of books or apparatus; also

that the Board of Regents may establish a pay department in the school whenever the accommodations thereof will admit the same, and admit students from any State, whether they wish to become teachers or not. The school is to be known by the name of Marshall College. The Superintendent of Free Schools, Hon. W. R. White, informs us, that the State will give employment and good wages to worthy teachers, to take charge of public schools.

WISCONSIN. State Teachers' Association held executive session at Madison, 26th and 27th of December. Committee on Compulsory Attendance made a report, declaring that the State should see that every child receives a good common-school education. Report adopted. Reports followed on School Supervision, Normal Schools, Teachers' Institutes, &c. Prof. Arey, formerly Principal of Normal School in Albany, takes charge of Whitewater Normal School. Salary, \$2,500.

ILLINOIS. Annual meeting of teachers at Galesburg, December 24th, *et seq.* Lectures and papers on "The Schoolhouse," "The Educational Needs of the Times," "Coral," "Physical Geography," "Zoology," "Moral Instruction," "Compulsory Attendance," &c. Over 600 teachers in attendance. In the public schools of Chicago are 27 male, and 292 female teachers; 26,851 children. School expenses for last year, \$247,852.79.

INDIANA. Fourteenth annual meeting of State Teachers' Association at New Albany, beginning December 29th. Inaugural Address by the President. Important topics seem to have been discussed by able educators. Number of school children in the State, 577,000; not in attendance, 166,000; teachers, 10,000.

KANSAS. Normal School has 75 ladies and 55 gentlemen in Normal Department; 15 girls and 12 boys in Model School.

SOUTH CAROLINA. Children between the ages of six and sixteen years must attend school 24 months. Reform School and Agricultural College soon to be established. Schools and colleges open to all, of whatever race or color. The above are provisions of the new constitution.

BOOK DEPARTMENT.

(1) **THE SABBATH-SCHOOL INDEX.** This book brings into the small compass of two hundred and fifty pages a large amount of well considered and arranged matter relating to the education of children in the Sunday School. Some of the topics discussed are as follows: History and Progress of Sabbath Schools; Conventions; Institutes; The Superintendent; The Library and Librarian; The Teacher; The Teacher Teaching; Illustrative Teaching; Pictorial Teaching; Object Teaching; The Blackboard; Young Men and Women's Bible-classes; The Art of Securing Attention; The Art of Questioning,—&c., &c.

Mr. Pardee, the author of this work, is well known as a faithful, zealous laborer in the field concerning which he has written. His extensive and favorable opportunities for observation, his experience as a worker, his skill in arranging and presenting concisely, clearly and forcibly,

the subjects which are of vital importance to those engaged in Sunday-school work, his directness and absence of attempt at display, are so obvious to the examiner of his book, that we feel sure that what he has here done will commend itself to the christian people of our land. Every Sunday-school officer, teacher and pastor would be benefited by the perusal of this work.

(2) **WEBB'S WORD-METHOD AND DISSECTED CARDS.** The whole machinery of this arrangement, which is designed to facilitate the teaching of reading and spelling to beginners, is now before us. It combines a little book, a set of dissected cards with a box to hold them, and a card-board with a word-chart on one side of it. In order that our readers who may not have examined this system, may have an idea of what it is, and how it is to be used, we will endeavor to give a brief explanation of it. First, *The Box.* It reminds one of a printer's case. It has thirteen apartments, to contain the dissected cards. The first two are filled with cards, severally two, three and four inches long, on which are printed eighty short words in common use. A third contains twenty-four pictures, suitable to use in making stories with the words. Ten other apartments contain the letters of the alphabet, capitals and lower case, about one half-dozen of each, the marks of punctuation, and the commoner signs used in arithmetic, together with the numeral symbols for Arabic notation. This little box is the storehouse for the teacher and the pupil; here is the fund of good things, to stimulate curiosity and direct the seeker after knowledge.

Second, *The Card-Board and Chart.* It is about two feet in length by one and a half in width. On one side is the chart, on which are printed in type uniform with that used upon the dissected cards, the words which are to be found in the first mentioned apartments of the box. This is a hunting ground, where the child may prove his ability to discover what the teacher has previously endeavored to teach him. On the opposite side of this board, we have at regular intervals, grooved parallel bars, arranged for the purpose of holding, on the upper, at the head of the board, a picture or pictures, and on the successive bars below, the words, letters, &c., which constitute the story. Here is the opportunity to systematize and make accurate the pupil's knowledge, and to stimulate his powers of invention and imagination.

Third, *The Book.* It is small and cheap, and explains and illustrates how the author would have the teacher use his machinery to bring about the ends it seeks to reach.

Of course a description of this sort, can only give a faint idea of a system, which although very simple in its conception and scope, is yet calculated under the inspiration of the living teacher, to stimulate and minister to, the natural longings after knowledge, in the same way which the Divine Teacher takes in the material universe, to teach his children.

The conclusions to which we have come, by our examination, and by witnessing some exercises given in accordance with this method, are that it is well worthy of commendation, and that every primary school would be greatly benefited by its introduction therein.

THE AENEID OF VIRGIL. We remember, that some dozen years ago, when we were a student at Gould's Academy, (Bethel,) and when, with several whose names we forbear to give in this connection, we were reciting in the preparatory Latin course, our teacher being none other than the now well known and honored geological lecturer and contributor for the *Normal*, Dr. N. T. True, there was a young man, a member of the class, the son of a somewhat distinguished politician of our State, who, relying, we suppose, as many young men are apt to do, upon the wealth, position, and indulgence of his father, to give him rank and station in the busy world, was prone to neglect hard study, the only "royal road" to learning, and depend upon the help of student friends, printed translations, and the patience and forbearance of his instructor. One morning, after our friend had been absent from school several days, and had lost the run of things more "essentially" than was his wont, he brought his "pony" into the schoolroom and class, determined to ride through at all hazards on that occasion. He was a little fellow, this pony, and very pretty. He occupied but little room, and was placed so that he could be observed by nobody but the "faithful." "——, you may translate," said the Doctor. —— began. That pony was a smooth roadster; there were no breaks, no hitches. After a little, Dr. T., looked up; he seemed to be affected by a slight tickling sensation in his throat. He gave two or three rather sudden convulsive twitches; he coughed. "——, where are you reading?" —— told him where he was reading, or rather *where he began to read.* "——, you may stop; I can

(2) DETROIT: E. B. SMITH & Co.

(3) PHILADELPHIA: ELDREDGE & BROTHER.

find nothing of the kind here!" What became of that pony we never knew; we never knew — to bring him into the recitation again.

The edition of the works of Virgil, which we here desire our friends to notice, is edited by Thomas Chase, A. M., Professor of Haverford College. We especially commend the following named characteristics in it: (1) its compactness of compass; (2) its tasteful and attractive, as well as substantial style of binding; (3) its clear and correct typography; (4) its adaptation to be used by the student who is acquainted with either of the more popular grammars of the Latin language now in common use; (5) its cheapness; (6) most of all, its judicious notes, wherein that is not done for the student which he should do for himself, but he is referred to those sources of knowledge with which he should be entirely familiar before entering upon his college course.

(4) **THE PRIMARY UNION SPEAKER.** Mr. Philbrick's long-time experience as a practical teacher and school superintendent, together with his having given special attention to reading and elocution, combine to make it seem fit that he should edit such a work as is this. Mr. P. has also given his attention considerably to the question of methods in primary instruction, and the little book which we have before us, filled with choice selections, having a high moral tone, and adapted to the likings of the children in the primary schools, indicates that he has thought carefully what are the wants of the child-mind.

- (5) **DAVIES' UNIVERSITY ARITHMETIC.**
DAVIES' NEW ELEMENTARY ALGEBRA.
DAVIES' UNIVERSITY ALGEBRA.

The scholarly accuracy, conciseness and arrangement, which mark the mathematical works of Prof. Chas. Davies of Columbia College, have long been their sufficient recommendation among the mathematical teachers in many of the higher Seminaries of learning in our land. In fact, the adoption of his treatises as authority at West Point Academy, has well nigh made good their claim to be the American National Standard. "A mathematical definition," some one has said "should include everything necessary, and exclude everything which is unnecessary." Every mathematical treatise should be complete in its way in itself. The numerous lappings and counter-lappings, by which books of the same series run into each other, and so make it necessary that a large number of books should be used in order to get the principles and boundaries of a science, are faults in almost every series of mathematics, which demand attention and correction. But whoever has read Prof. Davies' treatise entitled "The Logic of Mathematics," has not failed to see, that he sees the boundary lines of differing fields of mathematical inquiry, and has the philosophy of mathematics in its principles and their applications, so well and thoroughly, that one would be much disappointed should he find him in his mathematical reasoning in detail, following any but the fixed laws of the science, and the natural methods in their presentation. Whatever any one may think to say of other mathematical series, one must fly in the face of reason and facts, who does not acknowledge the superior merit of Prof. Davies as a mathematician. He is not a compiler; he is an original mathematician and ripe scholar.

(6) **THE REPUBLIC OF LIBERIA.** We have not had the time as yet, to give this neatly bound and published book more than a cursory examination. The subject which it treats, is one of intrinsic importance to educators and philanthropists everywhere. A nation was born on the coasts of Africa in a day. It has a written constitution indicating that its basis is to be planted on the immutable principles of truth and justice. It has a college founded in 1858, which has a president and professors well qualified for the discharge of their duties. The volume of Mr. Stockwell, which we have received from the publishers, is just what one needs in order to be well informed of this new nationality.

(7) **THE PROGRESSIVE SERIES OF READERS.** For about four years we have had the revised edition of the fourth and fifth books in this series, with the books adapted to the use of adult students of other series, in the Normal School. A book which is to be used to teach reading in our schools, especially for the higher classes, needs quite frequent revision, in order that it may

- (4) BOSTON: TAGGARD & THOMPSON.
 (5) NEW YORK: A. S. BARNES & Co.
 (6) NEW YORK: A. S. BARNES & Co.
 (7) BOSTON: OLIVER ELLSWORTH.

contain fresh matter. On this account we have sometimes thought, that frequent changes of reading books are not open to the same objections to which are such changes in other school books. The characteristics of a good reading book, are differently summarized by different persons, and of course the same is true in respect to other text-books. But certainly all good educators will agree, that one essential feature should be a freedom from any matter familiarity with which might by any possibility lead to pernicious results as an educational influence. The reading book has more to do as a moral educator, than any other text-book of the common schools. The Bible is not a text-book of the schools. The teacher, in many instances, does very little as a direct moral educator. His own heart, oftentimes, is not in such work; or he has not requisite qualifications which adapt him for it. The series of reading books, then, which contains moral lessons, or hints at them, adapted to pupils of the different ages, comes in, not infrequently, to supply an almost utter deficiency in respect to moral instruction, and is always fitted to assist the teacher in the judicious inculcation of good morals. And common schools in which no direct influence is at work to secure the building of sound, symmetrical, moral character, will not prove a blessing to the nation. We well know, that in urging the importance of considerations of this kind, we verge upon ground which many educators seem to have well nigh relinquished. We do not doubt, that somebody, as he reads, may be led to ask, "I wonder what are his religious views." Well, we have never advanced them in this magazine, and we do not propose to do so now. We will not, however, whatever we may believe to be orthodox in respect to religious belief, whatever our character as a man may be, we can not, as long as we retain any connection with school work, neglect to urge upon the consideration of those who teach, or supervise schools, the paramount and essential importance, that we put into the schools what we shall wish to perpetuate in our national life.

If the "Progressive Series of Readers" had no other qualities to recommend them, their high moral tone, and at the same time, freedom from anything like sectarian teachings, would be a feature worthy the encomium of every good educator.

To enter into anything like an analysis, or a view in detail, of these books, which have so long been used in our schools, would be a work of supererogation, and would require more space than we can devote, and more-time than we have to give to examination. They have stood the test of time, have passed through several revisions, are almost universally used in the schools of our State, have, we doubt not, (to use a word which Dr. Towne, one of the originators of the series once used on a memorable occasion,) "switched" many a young man onto the track of virtue, and whether perfect or not, must be deserving of high praise and wide circulation.

(8) GEOMETRY AND TRIGONOMETRY.
THE HIGHER ALGEBRA.

We have been using the latter of these works in the Normal School for some time, with much satisfaction, and have just introduced the former. We intend to notice both next month. Our readers should not fail to read the notice of the publishers of the Greenleaf mathematical series, on the third page of the cover this month. Some important changes have been made in it.

(9) THE NATION. This paper, independent in politics, critical in its literary reviews, containing very carefully prepared foreign correspondence, gotten up in a style at once attractive and convenient, whose articles are seldom heavy, though they almost always touch the bottom of the subject discussed, thoroughly and safely progressive in spirit, containing an incomparable summary of the events concerning which it is essential that every man, who would lay any just claim to being well informed, should read, certainly,—as long as it shall maintain its present high standard, is a weekly visitor which can not well be dispensed with. We are about making arrangements to furnish it to our subscribers at reduced rates.

The Atlantic Monthly, Our Young Folks, Every Saturday, The American Naturalist, Hours at Home, and other current publications of national importance, are to be found upon our reading table, as usual. We welcome them all, and are glad to see in them evidences of life and health. The *Normal* is this month sent to some publications not now on its exchange list. Will such do us the favor to exchange?

(8) BOSTON: R. S. DAVIS & Co.

(9) NEW YORK: E. L. GODKIN & Co.

THE MAINE NORMAL.

VOL. 2.

MAY, 1868.

NO. 5.

GARDEN AND ALLEY.

A mellow morn, all fresh aglow
With warmth and sunshine, fair and free;
And basking in it for a little while.
I bow my tired head, and feel the light
Of other days, sweet *long ago*,
Come stealing back again on me;
Its halo shed above my head,
And seeming like a loving angel's smile,
Subdued and soft, yet kindly warm and bright,
A little while.

Again I 'm looking from the door,
Whose step my childish feet have trod,
When all the hours had golden, airy wings,
Like careless butterflies with spirits gay,
That fain to light, but wanton soár;
I see again the tall grass nod,
As if to miss the sly wind's kiss,
And in the brown-trunk tree the bluebird sings,
The household garden's all alive to-day,
On airy wings.

Dear gray, old garden door-step, thou
Hast been a staunch and trusty friend
To me in childhood's happy, helpless days,
And all the lessons I have learned from thee—
For worlds I'd not forget them now—
Have led where truth and virtue blend.
Thy lap shall hold me as of old,
I'll keep my love for thy rough fondling ways,
Till I've grown old and gray-moss-bearded too.
In helpless days.

THE MAINE NORMAL.

Blest beauties of the hallowed scene,
 I cannot count you, if I try :
 The leafy shadows dancing at my feet.
 The silken rustle of the tasseled corn,
 And out beyond the curtain green,
 Beneath the mellow, hazy sky,
 A blushing bed of clover red,
 Lit up with daylight's daisy-stars so sweet,
 While through it all a path to heaven this morn
 Is at my feet.

Now breaks my dream, I see — and sigh—
 The rainbow vision fade in air.
 The doorway, where I sit and muse to-day,
 Is but a meager, narrow window-sill.
 A sill three dreary stories high,
 And looks out on no garden fair ;
 But buildings thick, grim stone and brick,
 And far below, where mouldering shadows lay,
 A craven alley all the space doth fill
 In gloom to-day.

Down there no red-top clovers grow ;
 I cannot see a spear of grass,
 Where all those rueful children at their play
 Are picking now with dismal joy, I ween,
 The only flowers their fingers know,
 Poor scraps and bits of shining glass ;—
 Our God is love, who dwells above :
 I bless him for my sweet home-dream, and pray
 His pity on those hapless children seen
 At their sad play.

O Light of Heaven! thou art our all ;
 Spurn not one darkened soul away.
 May we but reach unto thy pathway pure,
 And of thy trailing mantle touch the hem,
 We will not falter more, nor fall,
 Our woes are healed, we cannot stray,
 But safely bide, whate'er betide ;
 And eyes that erst were blind, with vision sure
 Shall gladly beam, when thou dost show to them
 Thy pathway pure.

M. S. S.

EVAPORATION:

This process, to which we owe the regular succession of the quickening seed-time and the rich harvest, is one of the grandest in nature. The copious shower, the small rain, the silently distilling and refreshing dew, are *all* its products. And while it thus ministers to the necessities of man, it does so in a way to call out his admiration and train his spirit to a love of the beautiful.

The psalmist sang the *circuit of the waters*, as "they go up by the mountains and down into the valleys;" and no true poet since, has described the sterner features of his country as habitually uncapped with clouds, or its rising and setting suns as unaccompanied by those golden locks that were wont to hang upon the gates of morn and eve, and charm the dwellers, in ancient Palestine.

From the remotest epoch, the phenomena connected with this process had drawn the eyes of all men; so that the "Bow in the Cloud" became the most befitting emblem to remind man of the pledge of his Creator no more to bring over the earth a destructive deluge. But the human mind is so constituted as to find a higher zest the more it can penetrate into the minutiae of any process in nature; and step by step approach its cause. To know how the "light is parted" in the cloud and decks it with these gorgeous colors, heightens our impression of the author's "skill in optics," and leads to the wish to know how he has prepared this cloud-screen of waters in the sky, upon which to *set* his bow of promise.

Every one knows, as a *matter of fact*, that water, in a very comminuted state, rises in the atmosphere, though its specific gravity is about eight hundred times greater than that of air at the surface of the earth. On high mountains it is known to do this more rapidly than at the level of the ocean; even at a lower temperature and in a region of the atmosphere less dense. If this ascent be imputed to upward currents in the atmosphere, they would be competent to produce it, on condition they increased their velocity at greater heights. But the ascent takes place at times when the air is still, and not unfrequently when it has a slight current downward, caused by the descent of a heavy shower.

If it be asserted that air acts upon vapor as a sponge upon water, *absorbing* and raising it on high, and that *this* is the process of supply

for the clouds, it may be stated that careful observation and experiment directed to this object, do, by no means, allow us to consider the enormous *amount* of water raised into the atmosphere in a given time, to be due to this process of absorption alone. Other agencies, and much more powerful, must be at work to the same end; and they must be such as to account for certain phenomena connected with evaporation, to the production of which, this principle of absorption is wholly inadequate, and in certain cases obviously antagonistic.

In the late balloon ascensions of Mr. Glaisher, he rose through extensive tracts of the atmosphere much less loaded with vapor than tracts higher up, and directly above. To maintain the idea therefore that vapor in that situation is sustained by the elastic force of vapor below, extending through the whole distance from the earth, is to insist on the effect of a cause which only *partially* exists.

Dalton's experiments on evaporation, confirmed by those of Desarmes, Gay, Lussac, Daniell, DeLuc, and many others, have brought out precious knowledge in regard to the relation of the *temperature*, the *amount* and *force* of vapor, and led to important practical results; but they show the *rationale* of only a *part* of the phenomena connected with the process.

Let us seek to catch some further glimpses of this whole matter.

The experiments of modern chemists have established the fact that between the atoms of matter of one and the same kind, there exists a mutually repellent force; and a mutually attractive force, between those of matter of different kinds; and that these interactive forces are exceedingly different between the atoms of different bodies. And the researches of modern physicists, especially those of Arago and Fresnel, in relation to optical phenomena, lead to the conviction that they are due to the existence of an elastic fluid, pervading all space, and permeating the pores of all ponderable bodies; that the sensation of light is produced by the *vibrations* of this fluid, as that of sound is by those of the air; and that the planets in their revolution must meet with a certain degree of resistance in moving always in such a medium. But if it be of extreme tenuity, it might not for ages produce sufficient resistance to bodies so dense as the planets, as to become appreciable; and so might well remain undetected during the brief period in which we have had accurate and recorded observations upon them. But in respect to the comets, which are bodies of slight density and vast extent, it is quite rational to believe that the effect of this resistance would, in certain cases, become quite appreciable in this time.

Encke, the celebrated astronomer, found, by examining the records in the observatory of Berlin, that the period of the comet now bearing his name must be about 3 1-4 years. But determining to obtain the *accurate* elements of a comet of so short period, he made careful observations upon it; and taking them into his computations as data, along with all the effects of planetary perturbation, he ascertained, on several epochs of its return, that the actual time of its revolution differed about 2 1-2 hours from that had by his calculations; and, in each case, indicating the operation of a like cause; as the resistance of an exceedingly rare medium, such as that I have just named, whose vibrations are believed to produce the sensation of light.

These, and especially most of the phenomena connected with photography, find their simplest explanation in the action of the fluid in question; and it is therefore in accordance with one of the soundest principles of philosophy, to *infer its real existence*. In doing this, let us next consider what must be the *state* of this fluid, in its connection with ponderable matter; for no effects assigned to it, show it to have any appreciable weight itself.

We can only conceive it to consist of atoms indefinitely smaller than those of any ponderable matter; between which all chemical researches—as before remarked—require us to regard the existence of a mutually repellant force; but, between *them* and the atoms of any *other* substance, a mutually attractive force. And a most rational conclusion it is, that this attractive force must be exceedingly different in different substances, but always stronger on the nearer approach of the atoms. Between the sun and planets, and between the planets themselves, Newton found the attractive force to vary inversely as the square of the distance. And Coulomb found the same law to manifest itself between the *smallest particles* of matter with which he could experiment. Following out this law, Mosotti conceived every atom of ponderable matter to have condensed around itself a little atmosphere, or investing spherule, of this elastic fluid; attracting the atoms of it more strongly than those of any other substance; so that as two atoms of ponderable matter are brought into actual contact; that, in the case of solids, atoms of the same kind, though mutually repellant, are bound together by the attraction of each for the investing spherule of the other; and those of different kinds of matter, though mutually attractive, cannot come into actual contact, because of the greater attraction of each for the atoms of its own spherule.

In case the atoms of ponderable matter, by any means become separated beyond a certain distance, their investing spherules become so

mutually repellant as to bear them farther apart ; always exhibiting an apparently repellant force between the atoms *themselves*, whether they be of matter of the *same*, or of *different*, kinds. Such we may conceive to be the condition of all matter in a gaseous state.

In regard to matter in a liquid state, we are to conceive its constituent atoms at a distance from each other *between* what is requisite for the solid and gaseous states.

These conceptions afford us a glimpse into the cause of that activity we witness, on mixing certain liquids of very different constituents ; as, for instance, water and sulphuric acid. The violent agitation, it is evident, must be owing to the changes which take place in the relative distance and position of their atoms ; thus producing a series of vibrations in the mixture, the elastic fluid and the air, which, transmitted to the body, cause the sensation of heat.

That heat is an effect of corpuscular action was the opinion of Newton, and the most sagacious minds of his time ; and that this action is, *somehow*, dependent on that of an elastic fluid, ether, or ethereal medium, such as herein considered, was also an opinion of that profound philosopher. To the action of this ether or elastic fluid, he conjectured we owed the phenomena of light and gravitation. Indeed, this idea of an ethereal medium or fluid, has come down from antiquity ; but it is only in more recent times that its real existence, and something of its *modus operandi* in nature, have been satisfactorily made out.

The idea of the existence of a certain kind of *matter of heat*, called *caloric*, of which the world contains a certain amount at all times, is of *recent* birth. The conception seemed to offer an easy explanation to certain phenomena brought out under the eye of the more modern chemists ; and it was adopted by them as the basis of a theory which has greatly prevailed. But the experiments of Rumford, Davy, Joule, and Melloni, have come to explode this hypothesis, and establish the truth of corpuscular action as the cause of heat.

We are all familiar with the musical note given forth in the heating of water in a kettle over a common fire. And rods of metal alone, when their temperature is considerably raised and they are nicely balanced over a proper support, are found to give forth a sound, indicative of a certain degree of velocity of vibration. These sounds are evidently due to molecular motion ; which more widely separates the atoms and increases the size of the body, or causes its expansion.

To the chemical operations evidently going on in the body of the sun, we impute the tremulous motion of this all-surrounding elastic fluid or ether ; and to this motion, the sensation of light. To the lar-

ger waves of this ether, beating upon, and setting in tremulous motion the atoms of ponderable matter, we impute the sensation of heat.

The atoms on the surface of the ocean, and all waters, being thus agitated and separated under this heating effect of the sun, as now set forth, free their investing spherules from intermingling, and ascend by their aid into the super-incumbent atmosphere ; the spherule here acting as a float of wood attached to a pebble in deep water.

We may not conceive this ascent to take place always, or perhaps usually, in single atoms, but in small clusters of them ; such as happen to be set free by the greater or less force of this agitation, and are not too heavy to be thrown up by the aid of their commingling spherules. Thus are raised the water-screens and curtains of the sky.

As there is a constant radiation of heat to a certain degree from all bodies, the atoms upon their surfaces must be in constant agitation, and produce that constant, though variable, degree of evaporation observed to be so general in nature.

Under the heading of this article, I proposed to open and pursue the subject only so far as relates to *aqueous* evaporation, or that great cloud-rising process by which the earth is made fruitful. I have endeavored to present the latest views on the subject, in such connection and order as, I hope, will enable the teacher to throw a new interest about it in the minds of his pupils. In that case, I design to furnish something further upon it.

Washington, D. C., April 11, 1868.

C.

THE MUTUAL OR REFLEX INFLUENCE OF INSTITUTIONS AND SYSTEMS OF EDUCATION.

BY W. WARREN.

The district school kindles a desire for knowledge ; and the more perfect the primary school is, the more this desire for knowledge will be intensified. The tendency of this fact is, to promote the interests of education in the higher forms, and on the broader scale of the College and University.

I do not think that these premises will be questioned. It is natural for seeds, whether of plants or of knowledge, to germinate, and grow, and ripen, when all the circumstances and conditions are favorable. The district schools and primary knowledge are the seeds of things.

It may be assumed that our first impressions or ideas with respect to the things that belong to a complete education, are formed in the primary school. I do not stop now to take into the account the slight mental training the child may have received at home, before he enters the school. I do not stop either to make exceptions with regard to the *failure* of many of our district schools, to do even the first work of education, whether from want of qualifications in the teacher, or other circumstances.

I assume that the district schools are adequate to give first impressions, and correct impressions, with reference to the rudiments of education. If not, they do not deserve to be called schools, and should not be tolerated.

The thirst for knowledge awakened in the common school is a something that will not ordinarily be satisfied with the standard and attainments reached in these schools. Knowledge is pleasant to the mind, a healthy and vigorous intellect craves it; and will seldom be satisfied with the amount furnished in the primary school. When the ultimatum of the common school is reached, or the things taught there are mastered, the privileges of the High School and Academy will be sought. These usually place the learner in a position, or put him upon a vantage-ground, where he can do much for himself in the work of education; can pursue a course of reading, and of scientific investigation, to advantage; can put thoughts into a fair style of composition, and so render himself capable of usefulness and of position in the world.

But these educational forces, coupled with a quickened thirst for knowledge and culture, will naturally lead the aspirant to seek for the higher advantages of collegiate education. At just this point the rill reaches the river, with its associations and accumulations. And who will doubt here the influence and value of the primary schools, that stand upon a thousand hill-sides as living springs and fountains, upon the broader institutions of learning and culture.

I do not affirm here, that if these fountains, that feed the larger streams of knowledge, were cut off absolutely; or the system of common-school education were annihilated, there would necessarily be no colleges and universities. Such a conclusion would be a violent one, and is contradicted by the facts of history. In half the nations of Europe, there is nothing like the common-school system of this country; yet those countries have their colleges and universities. It was so in the ancient civilization, of Egypt;

Greece, and Rome. The common people were not educated; yet institutions of learning and science abounded.

The fact just named is accounted for on the ground of distinctions in society, that are unjust and artificial, and conflict with the nature and perpetuity of republican institutions. The state of things above named could not exist a single century were it not for feudal or aristocratic forms of society, which provide in a measure within their own limits, for the teaching and culture withheld from the masses. Their public institutions are sustained by this class, so far as patronage is concerned. Very few, if any, can enjoy their privileges that do not belong to these more favored classes.

Leaving these exceptions, which do not belong to *our* civilization; nor therefore, to our argument, we say that our system of primary education is the source of strength and prosperity to our system of public and liberal education. The latter could not be sustained in its glory without the former. I refer to our own country, and civilization. Our civilization would perish without it; our government and country would perish without it. The common-school system is the basis of our higher educational institutions; the pillars upon which these rest! The district schools are the ten thousand hands that hold up the higher institutions and universities. A civilization that rests upon the feudal theory, or aristocratic ideas, is unnatural, and must pass away. God will allow nothing to stand permanently that overlooks the interests of the masses, and does not respect his own image, in universal man.

* This is all I care to say with respect to the influence of common-school education on the higher institutions of learning, and a republican civilization.

But what, on the other hand, is the relation of the higher institutions of learning to primary education? In what sense, and to what degree, if any, do they benefit the lesser schools, or the rudimental culture. It is easy to see, that it is for the *interests* of the college and university to favor popular education, in the primary school. I do not see the necessity of arguing this point. It follows conclusively from what has been said in the previous paragraphs. The deontology of the case, as Lord Brougham would style it, is clear. It could not be clearer. The ontology of the case, to use another of his classic words, is somewhat in doubt. I mean this: the *obligations* of the higher institutions to foster the lower, is clear. Their interests and prosperity lie in this direction. But whether, as a matter of fact, *there is* much practical sympathy on the part of the conductors of our universities and colleges, for the lower and primary forms of education, has been called in question in your able *Monthly*.

There are some things to be noticed here. The Professors and Presidents of these public institutions are lifted by their very position, out of these lesser movements, and circles of common education; and this gives the appearance of indifference and want of sympathy. And, then, these men have their moods, and tastes, and tasks; their pursuits, and ambitions. They are buried in their libraries, or in scientific and metaphysical investigations; are elaborating systems, or treatises, in their line; and so they think they can't do much in these other ways. They bid a sort of apologetic *God speed* to these movements; and say, I pray you have me excused from any farther responsibility. This is natural, and is the fact in certain cases.

I am bound to state, also, another fact, which is a disgrace to our public institutions; I speak of those that are richly endowed. Here half of the Faculty hold sinecures; have almost no function; and become literary drones and drivellers. The colleges that have the largest show of Professors, and endowments, and emoluments, have usually the largest numbers of tutors and substitutes, to do the work. This is bad every way. A person that does not do his *own* business, will not do another's. These drowsy incumbents of college patronage cannot be expected to wake up to the great interest of *general* education. If they had not force and breath enough to take care of their *own* college duties, they would make a sad panting, if put to the public service, or drudgery, of common education.

I am glad to say, that this state of things does not apply to the colleges of Maine; or Northern New England. The Faculties of these Institutions are hard working men. If I were to make a possible exception to this statement for Northern New England, it would not refer to our *own* State of Maine. Now, it would be expected that such hard working Presidents and Professors at college, as ours, intelligent, high-minded, and philanthropic; knowing well how closely the interests of their institutions are interwoven with the lower and minor systems of education; and how fundamental the lesser are to the greater, would show a good measure of interest in the common-school system. This, I say, we might reasonably expect.

Now what are the facts with respect to Bowdoin College? Have not those Professors, the older and the younger, taken a deep interest in primary education? Have not these men lectured before Conventions and Associations for the promotion of common-schools? Have they not shown themselves ready in their own village, and vicinity, and circles of influence, to promote this one great interest of man. I take it that the same is true with respect to the other colleges of Maine. If it be not so, those who

conduct them, stand in their own light, in despising the very sources of their own prosperity.

I have one word more. I said, the springs and rills supply the rivers, that fill the ocean. But it must not be forgotten that the ocean, in its vast circumference and exhalations, supplies in turn, the springs and rills that are born of the showers that wash the mountain sides.

So, too, in turn, do the universities and colleges, by the general elevation they give to society, to scientific and literary culture, help to cherish and invigorate the common-schools.

Hence, the district school cannot say to the college or the academy, 'I have no need of thee; much less can these say to the common-school, I have no need of thee.

I hope Mr. Editor, that some of the writers for your Journal, will take up the pen, and show the importance of the Normal School system; which aims to make these thousand rills, or feeders to the higher institutions of learning, what they ought to be. I know of no one better qualified to do this than the Hon. E. P. Weston. If he will but consent to be a candidate for the next Congress; perhaps such an article, done in his best style, would be tantamount to a nomination. At any rate, if men can *earn* a place in our national councils, by useful forms of the public service, I know of no service more worthy to give one the public favor and confidence, than to have done well, and deserved well in the way of public education.

TACTICS OF THE SCHOOLROOM.

No. 2.

Roll-calling is not much in vogue at present, as one of the means for ascertaining and marking the attendance and absence of pupils. There are some, however, who still retain the practice; but it is one which is, in many respects, objectionable. In schools of any considerable size, it involves an unnecessary waste of time, even when performed with the rapidity of an expert. Such little fragments of time, expended on useless exercises, would better be employed in prolonging more important duties. It is by such economy, that teachers, of good judgment and discretion, always have

time sufficient for all those exercises which cannot well be hurried, and for which a few moments of time are often of the utmost importance. Roll-calling is also a distracting exercise. The calling of the names of all the pupils in an audible tone, and the responses of "present," or "absent," will unavoidably occasion more noise and diversion, than there ought to be in a school at the commencement of the day's work. The early hours of the session are, or should be, the hard working hours; and pupils should be free to enter at once upon their duties without distraction.

In a small school of not more than a score or two of pupils, the record of absences can be taken by the teacher silently, and in a very brief period of time. By casting the eye over the room the absent ones are very readily detected, and can be as readily marked upon a list of the pupils' names kept for the purpose, or upon a diagram of the room. But in larger schools, a little more system is required, although in reality no more time is necessary. Different teachers will have different methods, accordingly as their ingenuity may suggest. If they resolve to have system in their manner of doing it, and to accomplish it in the least possible amount of time, there will be no difficulty in fixing upon a plan by which those objects will be secured. We do not believe in having stereotyped methods for all teachers to follow. While they all attempt to accomplish the same object upon substantially the same principles, it is best that they should sometimes rely upon their own ingenuity for the minutiae of their plans. Nevertheless it is well for teachers to know each other's methods. It may not be advisable to copy those methods exactly, but by observing how others perform the work which they themselves are doing, valuable hints will be received, and new light thrown upon the subject. Our own present method of keeping a record of attendance, in a school of about three hundred and twenty pupils, is as follows: Each range of seats, extending from the teacher's platform to the backside of the room, is called a *Division*, and is known by its appropriate number. The pupil at the remote end of each Division is called an Attendance Monitor, and is furnished with a paper, about the size of a page of commercial note paper, containing the names of all the pupils in that range, and ruled with vertical lines so as to make columns to correspond to the days of the week, for two weeks. At the opening of school, all the monitors with their paper and pencil, in hand, pass down the aisles towards the teacher's platform, and check the names of the absentees, and then lay the papers upon the teacher's table. This does not occupy more than half a minute of time, or a minute at the most, and the pupils meantime are all engaged in their studies, having nothing to do with the taking of the account of absences, and not at all disturbed by the

monitors who perform their duties quietly, and then return to their seats. For the sake of convenience, the names of the absent pupils are immediately written in a book kept for the purpose (a large quarto Diary,) by a teacher. This enables the principal, and others, to see at a glance who are absent, and also serves as a ready guide in checking off their names, as excuses are rendered upon their return to school. At the end of two weeks, the period for which the attendance papers are ruled, as mentioned above, the marks for absence are copied in the permanent School Register; after which the monitor's marks, made in pencil, are erased from the papers, which can then be used again for a like period, and indeed for a whole term, unless there is considerable change in the occupants of the seats. The merits of this method are, that from the manner in which the record is taken it is reliable in point of accuracy; and is, when compared with Roll-Calling, a time saving operation, occupying, as before mentioned, merely a minute a day; and the copying of the two weeks record into the Register, seldom exceeds ten or fifteen minutes for the fortnight.

The use of slippers in school is not to be wholly commended. That the practice saves a large portion of the noise, made by pupils in their movements about the schoolroom, admits of no denial; and this is a consideration of no small moment, whether we take into account the desirableness of stillness in the school, or the solace it affords to the jaded nerves of the teacher. But there are some remedies which are quite as objectionable as the ill they are intended to remove, or correct. So it seems to us is the practice of wearing slippers in the schoolroom. It is a fruitful source of colds, and of the headaches, too frequent in school, and which are often charged to difficult lessons, and to overwork in the way of study. Mechanics and merchants could not generally wear slippers in their shops without suffering in consequence. But they have more exercise in their business than students, and therefore would be less likely to be injuriously affected by the practice. Upon the supposition that these remarks apply more particularly to boys, it may be said that girls habitually wear thinner shoes than the other sex; and why, therefore, should they not be sufferers as well as boys? In reply to this question, it is sufficient to say, that the unanimous opinion of physicians ascribes no small share of the sickness, especially lung diseases and nervous derangement, of females, to the insufficient protection of their feet against cold, moisture, and the sudden changes of the weather. We believe it is also true that during the past twelve years there has been an improvement in this respect. Ladies, both old and young, do wear thicker shoes than were worn a few years since. Every teacher of experience knows that the thick

soled and high-heeled boots of school girls of this day, are not so noiseless as were the thin, paper-like slippers once so common in the school-room. But there is room for still further improvement. In school-houses insufficiently warmed, and there are many such, and where from the frequent opening of the doors cold air is admitted and circulates freely near the floor, no person can wear slippers without danger of contracting cold, and laying the foundations of other forms of disease. All these remarks apply as well to teachers as to pupils. Many a teacher is indebted, often unconsciously, to this practice for the cough and the headache which are carried from school, and which sometimes lead to a premature grave. We therefore preach a general crusade against the use of slippers in school. Let substantial shoes or boots be worn upon the feet for the sake of health, without which life falls far short of its full measure of enjoyment and usefulness. Teach pupils to use all proper care in moving about the room with reasonable stillness, and consider what little noise may still be made by heavy feet as necessary, and therefore tolerable.

Should pupils be allowed to *choose their own seats* in school? We think not. In the higher grades of school, where the pupils are of sufficient years and of such character as to justify it, this privilege may, perhaps, be allowed, but always with the reserved right on the part of the teacher, to make any changes which in his judgment his system of discipline and the good of the school may require. The order and success of the school are often interfered with by little offences and disturbances, which grow out of the intimacies of pupils who ought not to occupy the same or contiguous seats. In graded schools, and to teachers who have seen much service in the business, remarks upon this topic are hardly necessary. But it may be of service to the young teacher, especially in what are commonly known as District Schools, and schools of a mixed character, to be told that the comfort of the teacher and, quite likely, the success of the school require that the assignment of seats belongs to the instructor of the school, and should be kept under his undisputed control. There are some localities where this would be considered an innovation, and where pupils, and perhaps parents, would rebel. Should any reader of these lines chance to be located in such a school and community, we advise him, or her, to stand up for the teacher's right, and to "fight it out on that line."

Some teachers seat their pupils according to rank in scholarship, or deportment, or both. Where both sexes occupy the same room, this of course literally mixes the sexes, a plan, on the whole, rather unde

sirable. It is also questionable whether it is not unwise to make pupils too conspicuous as being the best, or the poorest scholars. The former class may be injured by being unduly exalted; while the latter will most likely become discouraged by what seems to them, and what really is, a species of degradation.

A. P. S.

LINES ON THE DEATH OF MRS. R. W.

[Died in Farmington, April 18, 1868., Mrs. Nellie M., wife of Roliston Woodbury, and daughter of Dea. J. H. Lovejoy, of Albany, Me., aged 27 years.]

Mrs. Woodbury had been personally known to us only a few months, and lived to sustain the relation of wife only eight months. She had been a teacher, and was an excellent scholar. Her kind and affectionate disposition, and her decided christian character, won the esteem and love of those who became acquainted with her, and one of the students of the school in which her husband is a teacher, has permitted us to make public the following lines, intended as a tribute to her memory.

ED.

Another heart has ceased to beat,
 Another voice is hushed:
 Another form is laid away
 In earth's cold arms of dust.

Again has the Destroyer claimed
 Another's sacred trust;
 Another life is desolate,
 Another spirit crushed.

Frail flower wast thou, O fair young wite!
 And when the rough blast came
 It plucked thee from the stalk of life,
 It left but one of twain.

Loved sleeper: o'er thy lowly home
 April's sad tears will fall,
 The summer moonlight softly gaze,
 Autumn to winter call;

But spring and autumn differ not
 To those beneath the ground;
 And vain the summer zephyrs creep,
 The winter's strong blasts bound.

Singing the songs the angels sing,
 Itself an angel bright,
 The soul its earth-companion leaves
 To bear alone death's blight.

Clasp to thy heart, O stricken one,
 This thought, that *she* is blest;
 Remember in thy weariness
 That she's at rest—at rest.

O sweetest thought the heart can think,
 Memories of anguish hide!
 Thought that when life below is o'er
 "Our home's beyond the tide."

M. D. C.

IMMORTALITY—We live, it is true, in a world filled with wondrous transformations, which suggest to us the likelihood of our immortality. The caterpillar passes into the butterfly, the snowdrop dies to rise again, Spring leaps to life from the arms of Winter, and the world rejoices in its resurrection. God gives us all this merciful assistance to our faith. But it is not on these grounds that our belief rests. These are not our proofs; they are only corroborations and illustrations, for it does not follow with certainty that the body of man shall be restored because the chrysalis, an apparent corpse, still lives. No: we fetch our proofs from the Word of God, and the nature of the human soul: and we fetch our probabilities and illustrations from the suggestive world of types which lies all around us.

* * * * *

No man, in a high mood, ever felt that this life was really all. No man ever looked on life and was satisfied. No man ever looked at the world, without hoping that a time is coming when that creation, which is now groaning and travailing in bondage, shall be brought into the glorious liberty of the Son of God. No man ever looked upon our life, and felt that it was to remain always what it now is: he could not, and would not, believe that we are left here till our mortality predominates, and then that the grave is all. And this feeling, felt in a much greater and higher degree, becomes prophecy. Isaiah says, "Death shall be swallowed up in victory." We find a yearning in our own hearts after immortality, and that not in our lowest, but in our highest moods; and when we look around, instead of finding something which damps our aspirations, we find the external world corroborating them.

[F. W. ROBERTSON.]

LETTERS TO A YOUNG TEACHER.

No. 8.

MY YOUNG FRIENDS: I put my pen to this sheet of paper with a feeling which you have, no doubt, experienced, at some period of your life—a feeling that you really had nothing to say, and could think of nothing of interest to write. Now I should never advise persons to compose under such circumstances, unless they have their mental powers in such complete subjection that they will bring forth by the calling. There is a fit and appropriate time for everything and all things, and the time for labor of this sort is when the 'fit is on', or in other words when the mental and perceptive faculties are in unison with the material world, and taking substantial forms, as ideas, flow out readily through the physical channel at the command of the will. This advice is entirely fit and appropriate for those who write when they choose and need write only when they wish, but we who make the pen our tool and whose profession is blotting clear paper, have no such election. We write not only when we would, but too often when we would not. We must furnish the measure full whether the granery be empty or not, and is it any wonder, then, that oftentimes there is a great amount of chaff and but very little grain. So if you find just one or two grains in this measure, I shall be content; will you?

A long preface to a short letter, isn't it. It reminds me of the 'remarks' of the chairman of that honorable and august body, the S. S. Committee, just before leaving some country district schoolhouse where they had been sitting in solemn conclave, a terror to the little urchins and a source of discomfort to the teacher. Their 'speeches' on such occasions are generally perfect models of 'how' not to do it, and in their bushel of chaff it is hard finding a pint of grain suitable for seeding on such soil—ideas applicable to the occasion. But I do not mean to be unjust or hypercritical, for I may yet arrive to that dignified position, and it would not be pleasant to 'go back on my record.' The district school-meetings have all or nearly all been held since I wrote you last. At these meetings the educational interests of the district are attended to, or if I may be allowed the expression, disposed of to the lowest bidder. I will not be so sweeping as that: let me modify that assertion, but, really, there is in nine cases out of ten, too little interest manifested in these meetings, and too little care exercised in the matter of selecting persons to whom to intrust the educational interests of the commu-

ity, and the expenditure of the school money belonging to the district. The man who has the time to spare is apt to be chosen agent, and the agent is too often apt to be an interested party. He has a friend or a relative who must have the school if it is possible, without regard to his qualifications or the wishes and needs of the district.

By the way, I attended a district school meeting a few days ago. It was not a very good or imposing affair. Only some dozen of the voters of the district, were sufficiently interested in the matter to attend, and the proceedings were simple enough to please the most radical opponent of parliamentary forms and red tapism. The warrant for the meeting, which had been posted one week, specified the following order of business: 1st. To choose a moderator. 2nd. To choose a clerk. 3d. To choose an agent. 4th. To transact any other business that may legally come before the meeting. This order was gone through with, and a person finally prevailed upon, to accept the position of district school agent. The report of the last year's agent was accepted, the wood for the year, 'bid off', measures taken to lengthen the winter term of school, at the expense of summer term, the time for beginning the terms agreed upon; and then the meeting adjourned, *sine die*.

You are aware, that our last legislature made some essential changes in matters relating to our State Board of Education. I see it rumored that a new Superintendent has been appointed, and that new energy and life, will be infused into the concern. Among the probable aids or new operations in connexion with it, will be the formation and holding of County Teachers' Associations next fall. I have not room now to speak in regard to these organizations, but will endeavor to do so in a future letter.

If after glancing over this letter, you fail to discover even one grain among all the chaff, remember it was as much as I promised you.

Very Resp'y, Yours,

BELFAST, ME., April 3, 1868.

Geo. E. B.

Every true normal student when appointed to a school does something more (as, indeed, every true teacher does) than the mere teaching of that particular school. He becomes the centre of a healthful educational influence, that extends to all the teachers in his vicinity. And this not by loud professions of superiority, and a demand that he shall be recognized as a leader; but by a thorough, faithful and enlightened performance of his duties; by a quiet exhibition, in teaching and governing, of whatever excellence he has attained by the special instruction he has received.

THE WONDERS OF GEOLOGY.

No. 5.

BY N. T. TRUE, M. D.

Thus far we have traced the history of our globe to the time when its cooled surface formed a crust, to which we give the name of granite and rocks closely allied to it. They are highly crystalline in character, and exhibit but little of a stratified condition. Upon this rock now precipitates the dense mists from the atmosphere, and we have a globe covered throughout its extent with the waters of the ocean.

Let us conceive what would be the action of the various elements at this stage of its history. The waters of the ocean would be affected by the attraction of the sun and moon, the same as at the present day, and would cause an ebb and flow of the tide. Of course currents would be formed, which would sweep over the rocks beneath its surface and wear down their rough edges and fill the water with sediment. It must be kept in mind that the waters are still hot, and that wherever the rocks contained lime, potash, magnesia, or soda, they would easily be decomposed, while their alkaline substances would aid in dissolving the silica or sand. Among the mineral substances in granite which are easily decomposed is that of feldspar, whose common variety contains a notable portion of potash. But there is another mighty force at work. The revolution of the earth round the sun would cause a powerful equatorial current to pass around the earth from east to west, which at this time was uninterrupted by continents stretching north and south as at the present day to intercept its course. This had no doubt a powerful effect in working over the materials that formed the newer rocks beneath the waters of the ocean.

With these earthy materials set loose in the waters of the ocean, we can easily see that they would be swept away and form beds of different materials just as the waters of the ocean at the present day form banks of different substances beneath its surface. Sand with a mixture of the other elements would form in layers at the bottom of the ocean, where it would become hardened into stone by the tremendous pressure of the waters above it, and by the internal heat of the earth beneath. These rocks are called mica, schist, and gneiss. Here we have a sedimentary rock, and this is the way in which all sedimentary rocks are formed. These

same currents of water would sift out the clay and form immense beds of that substance, which on being subjected to heat and pressure would form argillaceous slate, familiar to every one as roofing, or writing slate. If you take a piece of slate, and pound it fine in a mortar and wet it with water, you will have a soft clay. So too, magnesia will sometimes be found mixed with the other elements as they settle down, and you have *talcosé*, or magnesian slate. If lime settles down in a body it forms limestone or marble. Thus wherever you see a rock having a slaty structure or *rift*, you may be quite sure that it was originally formed in the way just described. The better to remember this important point we will write it in the form of a proposition, that *rocks having a slaty structure were formed from sediments on the bottom of the ocean, and hardened by the pressure of the waters above, and by heat from the interior of the earth.* The tyro in geology will be glad to know that aside from volcanic matter, nearly all the rocks on the surface of the globe were formed in this manner.

What then are the oldest rocks known on the surface of the globe? They may be called in a general way granites, schists, and limestones. They are all extremely hard as might well be supposed, because they have been subjected as we have already seen, to great pressure and heat which served to crystallize and consolidate them.

But did we leave this subject at this point, we should feel that it was altogether to tame a description of the oldest sedimentary rocks. We must be reminded that the crust of the earth is thin, and that there are pent up fires beneath, which must have vent, and they burst forth through this crust and carry with them melted matter which fills up the crevices of the rocks and by the aid of steam and boiling water inject them with veins of trap, quartz, lime and magnesia, where they rot and frequently crystallize. The original rock becomes completely changed in its character. It is folded up like the crumpled leaves of a book, and portions of it are forced above the surface of the water, and for the first time form dry land. Abundant evidence of volcanic fires is manifest wherever these old rocks make their appearance. It is wonderful to see how rocks have thus been changed from their original structure by the subsequent action of heat and pressure. Clay slate is changed into jasper; chalk can be changed to limestone. Beds of fossil shells can also be changed to a crystalline marble, coal may be transformed into coke, or plumbago, and in general, *whenever a rock is excessively hard, it is quite certain that it has been subjected to intense heat and pressure.*

In our next article, we shall show you where these rocks first make their appearance above the surface of the waters,

A CHAPTER ABOUT THE EARLY FRENCH ADVENTURERS IN AMERICA.

BY A MASSACHUSETTS TEACHER.

There is a very interesting chapter in the New World History, of which we are seldom reminded. I refer to early French adventure, exploration, and settlement in North America.

French dominion in the New World is a thing of the past. But few of its results are apparent at the present time. The names of Port Royal in the South, St Croix, Montreal, Champlain, Port Royal and many others in the North, we trace back to those early adventures. But the names of the explorers themselves rouse only dim memories, half historic, and half romantic, which we vaguely connect with the New World. The story of these early attempts to conquer a wild continent for France and civilization is told by Mr Francis Parkman, in a book* of thrilling interest and much historic value. From this book a few facts and extracts are given below. It is well to remember that the two attempts to claim the wild continent for France, drew their life from widely different sources of enthusiasm. The second, which resulted in the colonization of Canada, grew as we well know, out of a zeal to make achievement for the Church of Rome as well as France: an enterprise begun some twenty years before the landing of the Pilgrims. But let us glance at the first, which is of nearly sixty years earlier date than the second.

In the middle of the sixteenth century, priest-ridden France was stirred to its utmost bounds by the leaven of reform. The Huguenots, fugitive from torture and death, were seeking an asylum beyond her borders. The New World, the mysterious land across the sea, might offer them asylum, and gratify their ambition for adventure, fame, and gold. It was in the year 1562 that a Huguenot expedition set sail from France, commanded by Jean Ribant, an excellent seaman and staunch protestant. Reaching the North American coast, they landed on the first day of May at the mouth of a broad river, which they named River of May,—now the St. Johns, then sailing northward along the coast they came to a commodious harbor which they named Port Royal. On the 27th of May, they crossed the bar where the war-ships of Dupont crossed, three hundred years later. Here thirty of the party decided to remain and hold the country for their

*Pioneers of France in The New World.

king. About six miles from the site of Beaufort they built a fort and named it Charlesfort in honor of Charles the Ninth, the future hero of St. Bartholomew. Leaving this little company alone on the broad continent, Ribant sailed for France. But the little colony at Charlesfort were soon pinched with hunger and longing for their home across the sea. Ribant had left them a forge, and all set vigorously to work to construct a vessel for their return. They felled trees; the pines supplied them with pitch; and with the long moss they calked the seams, till at length a brigantine worthy of Robinson Crusoe was floated on the waters. In this they embarked for home. In a state of famine, when in sight of their native shores, an English bark bore down upon them and took them prisoners to queen Elizabeth. So failed the first attempt at North American colonization. Two years later, in 1564, another company of French Huguenots arrived at the mouth of the River of May. It was composed of volunteers from the young Huguenot noblesse, hired artisans and soldiers; but there were no tillers of the soil. Such indeed were rare among the Huguenots, for the dull peasants who guided the plough clung with blind tenacity to the ancient faith.

Rene Laudonniere held command of the expedition. They landed where Ribant had landed before—then passing five miles up the river, on the southern bank they reached a hill some forty feet high, boldly thrusting itself into the broad lazy waters. It is now called St John's Bluff. Here they built Fort Caroline. But with no agricultural interest the colony was building without a foundation. Another year found them reduced to starvation, and anxiously looking for succor from home. On the 3d of August of the year 1595, as Laudonniere was looking eagerly seaward, he descried four vessels approaching. The foremost was a stately ship of seven hundred tons burthen. She was named the Jesus, and with her were three smaller vessels, the Solomon, the Tiger, and Swallow. Who were the strangers? Were they the friends so long hoped for in vain? or were they Spaniards their dread enemies? They were neither. They were the pioneers of that detested traffic, destined to inoculate with its infection nations yet unborn, the parent of discord and death, filling half a continent with the tramp of armies and the clash of fratricidal swords. Their chief was Sir John Hawkins father of the English slave trade. On the coast of Guinea he had bought and kidnapped a cargo of slaves, which he had sold to the Spaniards of Hispaniola, and distressed for water had put into the River of May for a supply. One of his ships he sold to the discontented colonists that they might return home. A few days later, while busy with their preparations, the long looked-for aid arrived—seven vessels commanded by Jean Ribant, and to him, by order of the French Admiral, Laudonniere resigned his com-

mand. But scarcely a week had passed when at night the crew of Ribant's flag-ship saw a huge hulk grim with the throat of cannon drifting towards them, and at its stem the portentous banner of Spain. Its commander Pedro Menendeys, one of the ablest and most distinguished generals of the Spanish Marine, was commissioned, by Philip the Second, to conquer and hold North America from Labrador to Mexico—for this was the Florida of the old Spanish geographies. It was a crusade against heresy. Menendeys was instructed by his king to hang and behead all Lutherans whom he should find by land or by sea. His force consisted of 2646 persons in 34 small vessels. Hesitating to risk an engagement by sea, he sailed south and landed on the shores of an inlet, which he named St. Augustine. Here they intrenched themselves, and thus began the settlement of the old Spanish town. Ribant sailed out from the River of May to attack them by sea, but a storm separated his vessels, and drove them one by one on the shore below St. Augustine. During this storm, Menendeys marched on St. Caroline and massacred the garrison. Then turning southward his march, he came upon the shipwrecked Frenchmen and induced them by promises of friendship, to surrender. But instead of receiving the promised protection, they were all at once bound, and put to the sword by command of the cruel Menendeys. So was French Protestantism crushed in America. Yet it became the mission of France to conquer the wilds of the North for civilization. But it was for France, and for Rome, that her indomitable soldiers and devoted priests planted the fleur-de-lis and the cross in the wilds of the Northwest.

“THOROUGHNESS” IN TEACHING.

Any one, with one grain of common-sense, would say that it would be the height of folly to plane the under side of a barn floor; yet it does seem as if some of us, in our methods of teaching, daily attempt it. What constitutes thoroughness in teaching? The answer depends upon *what* you teach, *whom* you teach, and *how long* you have to do it in.

A great deal that is taught is utterly useless,—of no practical value to the pupil in after life. In spelling, for instance, why require words that are rarely met with, when there are hundreds of household words that are neglected? “Ah, but such are in the book, and the Committee require all the

words to be learned." True, 'tis very true. When will Committees wake up to the importance of having taught only those things that are of practical value.

In private schools we can break away from the restraints of such narrow mindedness. In public schools we must for the present submit, until a new Era comes; say some. But when will a new Era come unless we ourselves begin it?

Let teachers claim their rights,—let them take a firm stand in respect to this, and if necessary resign. Such an action would soon set the ball in motion and bring about a reform. Our text-books, if we are to be obliged to teach *all* contained therein, should be supervised by a competent board of men, men familiar with the wants of the present generation, and not by fossilized deposits of the past.

To such a committee we would suggest a generous clipping of the *fine print*. A little physic now and then may be good for the system, but an over dose is nauseating, to say nothing of its subsequent debilitating effects. Of what practical value is it to the pupil studying Latin to be crammed with lists of exceptions? Some teachers suppose that each pupil is to become a lexicographer. Some go into details to such an extent that, if a fly-spec were found upon a page of Greek text, they would require the student to hunt for its correlative!

Give the pupil enough to set him upon his own legs. Give him enough so that he may pursue the study, whatever it is, alone. Show the way, but don't think it necessary to be the walking stick of the youthful traveller in the path of knowledge. Why, in geography, require the pupil to explore the wilds and deserts of Africa, when by taking a Shipping List from almost any daily newspaper, you can teach something that will be of use in after life? Why weary the brain of the pupil with Gr**n*** puzzles, when by giving him a pail and requiring him to put a quart only in it, you can give a healthy activity to that brain?

Man is not omniscient! Never will be. Why undertake, then, to teach the embryotic man, what will be of no practical avail when he has passed through that stage of existence? Remember that life is short. Teach the boy *how* to sail the ship, then place him at the helm, and let him go it alone.

G. F. R.

THE TEACHER AS A GENTLEMAN.

BY EDWARD P. WESTON.

The old expression, "He is a gentleman and a scholar," is often applied to a person, as a high compliment. Of no one ought this to be said more truthfully, than of him who assumes the responsibilities of the teacher's vocation. Older or younger, in the district school or the college, the "instructor of youth" should possess those qualifications which entitle him to be regarded as a *gentleman and a scholar*.

The ordinary means of training, employed in fitting young teachers for their profession, have principal reference to their becoming *scholarly* teachers. To acquire a correct knowledge of the branches to be taught in their schools, to learn the best methods of communicating that knowledge, and the art of governing well, are regarded as the objects of chief concern, by those who are about to enter the schoolroom as teachers. There is no danger of over-estimating the importance of this class of qualifications. But there are others of scarcely less value to the young teacher. Chief among these qualifications, I will not call them secondary, is whatever contributes to make the teacher a gentleman.

Our lady readers, claiming of course an "equal right" to be considered in this discussion, will please reckon themselves included in the number addressed.

No apology is needed, I trust, for presuming that such a discussion as this, is not uncalled for. The fact that good manners is not one of the Statute qualifications, and that committee-men do not often examine teachers in this respect, is only a stronger reason why it should receive attention somewhere. What the law neglects to require, for this very reason demands the more earnest attention.

A coarse and clownish young man may teach our children arithmetic and geography; but if he must, at the same time, leave the impress of his coarseness and want of culture upon their susceptible minds and forming characters, we may well feel that the balance, in the loss and gain account, is against the children.

If to many children, home itself is not a school of good manners, then is there even more need of their finding an example worthy of imitation in the person of the teacher.

Allow me then to say, more definitely, that the teacher should be a gentleman in his language, in his manners, and in his feelings; in the school-room, in the families of the neighborhood, and everywhere.

First, in his language. The definition makes English grammar the art of speaking and writing the English language with propriety. There are some teachers who pride themselves on their grammatical skill, who if judged by the *propriety* of their own language, would be found but pitiable grammarians. I have known scores of young men to go into the school-room as teachers, who could not stand before their classes a half hour, without most uncivil treatment of their own *mother tongue*. But mere grammatical blunders are the smallest improprieties of language, as considered from our present stand-point. There are coarse expressions, unseemly vulgarisms, which escape the criticism of ordinary grammar, but which are wholly unpardonable in the language of the teacher. They may be, to be sure, the language of common life, and have come to the teacher, along with other defects of early education. Hence the greater necessity to be ever on the alert, lest they escape his lips in unguarded moments.

I remember some of these peculiar, semi-vulgar expressions, as uttered by some teachers of my boyhood. But instead of quoting them I will leave the reader to recall his own illustrations from a like experience. Let me here make a distinction between vulgarisms and mere colloquial expressions. There are certain conversational forms in every language, not used with propriety in written discourse, but allowed in speaking. Some of the common contractions, as *don't* and *can't*, are in point. I would not introduce the stateliness of the pulpit and platform into conversational discourse, nor fashion the speech of the parlor and schoolroom upon classical models.

Let us use with freedom our good Saxon tongue, with all its pliancy and power, with its peculiar structures and idiomatic forms. But let us use them as not abusing them; carefully discriminating between the legitimate and the vulgar.

There is a still grosser departure from propriety of speech, sometimes noticed in those who assume the office of teacher; language which ought not once to be named as becoming the instructor of the young.

I have known teachers to be grossly obscene and shamefully profane; coming to their duties with certificates of good moral character in their pockets, and words of ribaldry or profanity on their tongues, ready to escape on the slightest provocation; if not in the schoolroom, at least in places of low gathering,—the store, the street, the loafer's corner,—in the neighborhood of their daily labors.

Few readers of the *Normal* are likely to be found in this number, but many of them might be summoned as witnesses to the correctness of this charge.

There is another fault of language into which the teacher is prone to fall. There is danger that his position, his official superiority to those under his charge, may beget in him a habit of addressing them, and others perhaps, by a natural transition, in a manner not merely expressive of just authority, but often transgressing the bounds of politeness. The teacher has no more liberty than any other gentleman, to be harsh and abrupt in his style of address, or severe and sharp in his replies. The well-behaved child, however young, or dull, has a claim upon the teacher, for mild, courteous and gentlemanly language, in all the intercourse of the schoolroom, as well as at the fireside and on the street.

The language of proper authority the teacher may use in the schoolroom of course; but let him remember, that when he has passed into the *society* of town or village, and left the schoolroom behind, he is among his peers. Like the shipmaster on shore, he must remember that he has left the quarter-deck, and avoid the language and bearing of the commander.

• So much, at least, in the matter of language, is required of the teacher who aims to be courteous. The consideration of other points must be reserved for another article.

RELIGION IN THE SCHOOLS OF GERMANY. A writer in Lippincott's new monthly magazine states the following in respect to German schools:

"In the German schools the religious difficulty is solved, and education rendered systematic and effectual, by the simple admission of the religious sects to educational equality. There have been no attempts to neutralize religious sectarianism, nor to secularize school education. The spirit of sect is in Germany, as with us, too bitter to be left out of reckoning; and the spirit of religion is too deep-seated in the nature of the German people to allow of either a neutral or a colorless religion being taught. or of Christianity being omitted from the schools."

THE DEPARTMENT OF PRACTICE.

CORRESPONDENCE.

DIXFIELD, ME., Apr. 11, 1868.

DEAR NORMAL: I became highly interested in the department of practice some time since, and determined to contribute something for it. Although but a novice in the art and science of Grammar, I have formed an opinion on some of the questions proposed by E. C. B., in the April number. In the sentence "Let him go," I think "him" should be passed as the object of let, and subject of the verb go which is here used as an infinitive without the sign.

In the sentence, "Nature, attend &c.," I think "nature," would be regarded as independent according to a principle of Rhetoric which prohibits the use of the comma after the grammatical subject when it is immediately followed by its predicate. If "Nature" was not separated from attend by a comma, it might then be passed as its subject.

In conclusion I have a question on which there has been some difference of opinion. I will submit it to the readers of the Normal; The question is, how shall we dispose of the word "what," in the following and similar sentences? "The grave of one we love, what a place for meditation."

Wishing the Normal much success,

I remain Yours &c., J. J.

MR. GAGE: Dear Sir: I send an answer to the interesting questions proposed by your correspondent E. C. B.

"In the sentence *Let him go*, how will the readers of the Normal parse the word *him*?"

The sentence in question may have two different meanings, which I will try to illustrate.

"What shall I do with this mouse"? "Let him go." Here the meaning is, permit (thou) him (to) go. *Let* is a principal verb in the imperative. The infinitive clause *him (to)go* is used substantively as the object of *let*. *Him* is in the objective case, and is the subject of the infinitive (*to*) *go*. I should say, it was not right to parse *him* as the object of *let*; for it is not *the mouse*, but *the going of the mouse*, that is to be permitted.

Again:

"The year is dying in the night,
And let him die."

Here *let* is an auxiliary, *let die* is in the third person imperative, and *him* in the objective case is its subject.

In this case, it would be absurd to regard *let* as a principal verb; for no one to whom it could be supposed the poet addressed these words, could have power either to hasten or prevent the departure of the year. The words must be taken simply as an expression of the willingness of the poet that it should be so.

For better illustrations both of the first and third persons imperative, take the sentences:

"Let us make man in our image," and "Let there be light." Here Jehovah expresses his own will, and no *thou understood* is possible. In each sentence, the subject of the imperative is in the objective case. Truly, Yours, N. B.

SOUTH BERWICK, April 7, 1868.

BRUNSWICK, ME., April, 2, 1868.

DEAR NORMAL:—E. C. B., is following up the whispering question, and invites any one, who has a *perfect* system in regard to the same, to bring it forward. There is a very formidable *if* in the way, but let us do what we can, and arrive at our best conclusions, *aiming* in the right direction at least.

In my own experience, I have found it better to have no *regular form* for taking report of conduct at school. If it is settled in any *one* way, I have noticed that pupils soon become accustomed to the monotonous role, and grow careless accordingly. Have it understood that a record is *made* every day, and that misdemeanors are to be corrected, whether reported by the pupils, or merely noticed by the teacher. Then the teacher at discretion may call the role, or require those who have *not* whispered to rise, or sometimes merely read the names of offenders.

This plan works well with me, but I do not claim authority in the case, and with E. C. B. would like to have *perfection* come to my aid. However, I fear we must wait a bit, for the millenium can not be, till all things are accomplished; and the world is not ripe, but as Oliver Holmes says, "it is very green yet, if I am not mistaken." Men and brethren, what shall we do? Yours in suspense, M. S. S.

HOPE, Apr. 6, 1868.

DEAR MR. GAGE: I find so many interesting things in each No. of the *Normal* that I think, at the time, "I must surely answer that," but delay, until I find the month to have passed away.

Beginning with the first letter in this No., I will answer, giving my opinion, which I don't pretend to say is correct. I should parse him, in the sentence, "Let him go," the object of the verb let. The sentence has the force of "Allow him to go." Some might contend, that *him* is the subject of the verb *to go* under the rule for the subject of the infinitive. I use that rule only when the verb can be rendered in the finite form, preceded by the conjunction that, which in this sentence would make clumsy work. In the next sentence I have been taught to parse "Nature" independent, and "thou" understood, the subject. "Ye," in the phrase "Ye vocal gales," I do not consider really a part of speech, but merely an expletive.

In regard to the whispering question I will say, that I should be sorry to be convinced that it is wrong to require scholars to report, for I fear I should be obliged to give up teaching. It will be found to be more or less successful according to the standard of honor among the pupils. Some scholars will maunage every way to evade such rules, but I hardly ever find that anything more is needed than to talk with them, and show them the evils of evasion. In talking to them, I do not treat them like hardened criminals, but tell them that young persons do not consider the evils of evading the truth, &c.

I took a school last summer, which had the name of being a hard school to govern. One of the scholars said to me the day before I entered it, "The scholars will whisper, and they *will* throw paper bullets. You can't catch them at it, for they will do it when your back is turned."

I told him I did not think there would be any trouble, and I did not find any. The second or third day of school, one of the scholars said to me, "Two of the boys brag-

ged last night going home, that they whispered and then told you they did not." After school had commenced, I spoke of it and asked them if it was possible that I had a scholar who would deceive me; then asked them how many wished to make noble honorable men. Of course every hand went up, and I went on to show what steps were necessary to that end, and by what means they might become just the opposite. After talking a few minutes I found the younger of the two was crying, and felt pretty sure he would give me no more trouble.

Sometimes punishment is necessary. I find that setting the offender by himself on a lower seat is as good a one as I can use. E. C. B., says, "If any one has a *perfect system*" &c. I do not pretend that my system in regard to this or anything else about teaching is perfect, for I am often tempted to weep over my *imperfections*.

C. A. B.'s method of spelling I became familiar with at the Normal School, where I mistrust I saw C. A. B. It is an excellent way of spelling in a school where there are plenty of exercises, such as preparing test papers, abstracts &c., but in a common country school, where big boys get only nine or ten weeks schooling in a year, I prefer the Dictation Exercises.

One illustration of the beauties of the School Agent system, and I close. I engaged a school this winter where I had taught seven terms. A day or two before the school was to begin, the Agent came with a doleful story of dissatisfaction in the district. &c. Of course I gave up the school, and found afterwards, that the story was made by the Agent in order to get the school for his brother.

Yours truly,

N. M. H.

A correspondent, who shall be nameless, writes as follows:

I am so much interested in the "Department of Practice," that I am willing to add my mite, but am apt to be lazy about doing it. Some one asked in one of the back No's, what methods were used by teachers in teaching Interest. I use GREENLEAF'S COMMON-SCHOOL ARITHMETIC in my schools, and have the scholars commit to memory the first rule, "Reckon 6 cts for a year, &c. Then I have them practice on their slates, examples as I give them verbally, without any reference to books. I find that they will learn in much less time, and will work much more rapidly, than when they depend on books."

HALIFAX, N. S., April 8, 1868.

DEAR NORMAL: I will try to answer some, or all of the questions given by W. in the February number.

I was taught, that *quantity* is anything that can be increased, diminished, or measured." But we cannot have quantity in Arithmetic. We can only have characters given, by which to represent it.

It seems, therefore, to be only an expression by which, in arithmetic, the idea of substance is conveyed to the mind.

The word *unit* means anything which is considered as a whole, whether *one* or *thousands*.

If fractions be parts of whole *numbers* then we have fractions in arithmetic; but if fractions be parts of *quantities* then have we only fractional numbers, i.e., expressions of parts of quantities.

I can not close this without adding my mite to the praise of the "Normal." I have had it for nearly a year, and if I liked it at first, I love it now. It is to me a messenger of comfort, every number bringing with it better cheer than the last.

To it I owe more than I can tell, of improvement in school management.

Beyond all this, it comes from home, from dear old Maine.

Yours truly,

E. W. P.

EDITORIAL DEPARTMENT.

THE MASSACHUSETTS TEACHER for the month of April, devotes twelve pages to the discussion of questions which have been raised by some Boston and Cambridge philanthropies, who have advocated even up to the point of hearings before legislative committees and proclamations through election sermons and oracular utterances in gubernatorial messages, to say nothing of discussions in boards of school committee and an indication of "caving" on the part of the State Board of Education, the prohibition—not of rumselling—but of the use of the rod for the fool's back. We wish the *Teacher* and Mr. Lincoln, and all the good teachers and sound educationists, much success in their efforts to reclaim the lost, but our own impression is, that the "brutal" teachers have simply to go on doing right, and that the disease which they are seeking to cure, having worked itself out onto the surface, will pass off in the currents of the atmosphere, and perhaps carry with it some other bad humors, which have been for sometime lurking in the system.

A CASE for the advocates of an entire disuse of the rod, or of corporal punishment in school, has recently been told in our hearing, and we present it to the readers of the *Normal*, who will perhaps have something to say about it in the "*Department of Practice*." The scholar's name was John. He was of the Hibernian persuasion. The case arose in the early part of the recent civil war in our country. John had been out a short time in the capacity of captain's waiter. He returned, bringing with him, as was said, several hundred dollars plundered from the bodies of soldiers wounded and helpless, or dead on the field of battle. He was of the school-going age, and had "drawn money" as a pupil in the district in which his parents resided. One morning soon after his return from the "Army of the Potomac," then *preparing* to fight, under McLellan, he presented himself at the schoolroom. He took a seat, but very soon began to make considerable and varied disturbances. He was spoken to pleasantly by the the teacher, who asked him if he had come to enter school as a pupil. He didn't know but he should come. Some other questions were asked, and answers of an evasive character given, with an apparent design to provoke controversy. The teacher tried to avoid a collision. At last, finding that his parley with John was not likely to prove profitable, and remembering that other students were present, to whose wants he was bound to attend, the teacher, having ascertained as nearly as possible what books the boy must have, told him that he might go to his house, which was but a short distance away, obtain such books as were there, then return and he would give him something to do, and inform him what books, if any, he would need to go on in the school. John arose, made a good deal of unnecessary noise in approaching the door, and when about to go out, spoke some insulting and profane words to the teacher. The schoolroom was on the second floor. In the hall which John entered as he passed out, the hats, overcoats &c., of the members of the school were hung up. John remained in this place. The teacher knew it would not do to allow him to do so. He, therefore, went out, and told him that he disturbed the school, and such other things as were natural and proper under the circumstanc-

es, using no threats and no angry words. John stood at the head of the stairs. He did not move to go away, and did not seem to entertain a design of doing so. The teacher noticed a little shaking of the right arm, looked down, and saw getting placed in position along the wrist and the palm of the hand, a most savage-looking dirk-knife. What would you have done? Would you, could you, in the existing relations, have resorted to physical force? Prof. Agassiz has taught *forty years*, and not been obliged to whip any body.

THE APPOINTMENT of Mr. Warren Johnson, of Topsham, as State Superintendent of Common schools, by the Governor and Council, acting under the new school law, is received with unanimous approval by the press and by those people of our State who know the qualifications, which the new incumbent brings to his office. Mr. Johnson is a ripe scholar, an easy and effective speaker, a successful teacher, acquainted with common-school work, thoroughly in earnest in the work of educational reform, young and vigorous; and we think the people have reason to hope, that much good may result from his appointment, which we understand that he accepts.

THE DEATH OF PROF. WM. G. SMYTH, at his residence in Brunswick, which occurred during the past month, was sudden and unlooked-for. He had been hard at work for considerable time, raising funds among the alumni of Bowdoin College for the erection of a memorial hall, which should be a worthy recognition of the patriotic devotion of the sons of Bowdoin in the War of the Rebellion. While engaged in this work, he had also continued his labors as Mathematical Professor in the institution for whose interests he had toiled during the almost unparalleled period of forty years. He fell at the "Front," and contending manfully for the cause to which his noble heart and cultivated intellect had through life been consecrated. We are hoping, that some one of the men who have been intimately associated with Prof. Smyth in the work of education, will think it proper to bring a tribute to his memory to grace the pages of this periodical. The interest of the deceased in the work of improving the common schools, and his general desire to honor and promote whatever was truly progressive, together with his frequently expressed wish that the experiment in which the editor of the *Normal* is engaged, might prove a complete success, has prompted this reference to him and to his life and death, and we are convinced that it should be claimed as a labor of affection for the departed, and of desire to do well for the cause which he strove always to advance, the opportunity which we offer to present an outline of his labors in this educational monthly, to which he had been a subscriber from its commencement.

THE VERY INTERESTING and instructive article on "Evaporation," which our readers will find on preceding pages of the *Normal*, is only the first of a series from the pen of a scholar and teacher, who formerly labored with the late Horace Mann, to establish normal schools in Massachusetts and who was himself for several years at the head of one of the normal schools of the Bay State. His name will be judged by many of our readers, from the initial letter over which he writes, and his scientific discussions valued accordingly. People are not satisfied at the present day, with merely ascertaining what are the facts in respect to natural phenomena. In fact to know *why* certain conditions are found to exist is the only thing that will appease the spirit of inquiry abroad among the philosophers in any of the fields of knowledge. The essence of mind and the essence of matter, so far as we are at present informed, that is, what makes these things what they are, is yet mystery. But how soon man's cu-

rious and almost audacious mind and hand will have removed the veil from these two secrets of the Almighty we know not. In a private letter our esteemed contributor expresses himself as follows :

"You know, in general, how the whole aspect of Natural Philosophy is changing. Instead of insisting only on the study of phenomena, *registering* observations and discoveries, the age is forth in research of *causes*, or, more properly speaking perhaps, in pushing the phenomena of *masses* down to the action going on between *particles* and *atoms* of matter. The tendency though looking more *theoretical*. I dare say will give the whole matter a more *facile forma* to work out the great problems awaiting a successful solution; and the result will be *practical application* of principles now in the dark, or but *dimly outlined* in the twilight of the present.

Regard the article on Evaporation, if you please, as only one, of some three or four I would like to bring out, looking somewhat in the same direction."

THE ARTICLE OF MR. WARREN, which appears in this number of the Normal, was prepared by him at the solicitation of the Editor. In our opinion, it presents concisely and clearly the great subject discussed. The normal relations of institutions of learning of every grade, are not too often considered by workers in the field of intellectual and moral culture. Instead of their being, properly considered, a clashing of interests, or a glory belonging to one grade, while to another belongeth "shame and confusion of face," glory belongeth alike unto all. That the three colleges of our own State, and the colleges of New England, are doing much to advance the general culture of the people, we do not doubt. But the fact, that the Professors therein, have in times past lectured before associations of public school teachers, is not perfectly satisfactory. We rather think it will soon be time for them to do so again, and we doubt not they will be ready to accept an invitation to do so. We must shake hands *together*, brethren, as often as possible, and we shall then come to understand and appreciate better our mutual relations and responsibilities. Let no subscriber to the Normal fail to read Mr. Warren's article.

RECENT EVENTS are indicative of increased and increasing interest on the part of our people, in the common schools of the State. Of course this is attributable to some cause, and we feel sure that the fidelity to the best interests of education as related to the people, which has characterized the official term of Rev. Dr. Ballard, entitles him to receive the thanks of those for whom he has labored with very meager pecuniary compensation.

The resolution printed below, was adopted as the sentiment of the teachers and students in the State Normal School at Farmington, Wednesday, April 1, 1868. We give it to the public, as an expression in which many others should sympathize, beside those with whom it originated. It is as follows :

Resolved, That Rev. Edward Ballard, D. D., who for the past three years has been our State Superintendent of Common Schools, and *ex officio* Superintendent of the Western State Normal School at Farmington, for the faithfulness which has characterized his discharge of duty in his relation to us, and for the consistent and unwavering efforts which he has put forth to increase the interest of the people of Maine in normal instruction, is deserving of, and hereby receives, our hearty thanks, and that we congratulate him upon what we believe to be a very obvious and material advancement of interest in common-school education, which has been witnessed on the part of many people in our State, especially during the last year of his official term."

THE ATTENTION of the readers of this periodical is called to the following matters :

(1) Teachers and friends of education are respectfully notified, that the annual exercises of graduation in connection with the State Normal School at Farmington, will take place on Tuesday, June 2d; and as many as can make it convenient to be present, are invited to do so.

(2) Contributors to the Normal are requested to send in "copy" as early in the month preceding the one in which they desire that it shall appear, as possible. Some excellent articles lie over for next month; we had not room for them in this number; but still our cry is, "more copy."

(3) A large number of subscribers will find on examination, that their term of subscription expires with this, or succeeding numbers. We do not wish to part company with any, but rather to increase our list of readers, and with such increase, to continue to improve our monthly; but if those who owe us or soon will do so, do not wish to pay for the Normal longer, they will confer a great favor by informing us to that effect and paying arrearages.

EDUCATIONAL INTELLIGENCE.

NATIONAL.

We have, from the Bureau of Freedmen and Refugees, at Washington, the Report of Hon. T. D. Elliott, Chairman of the Committee on Freedmen's Affairs, made to the House of Representatives, March 10, 1868. The act establishing the Bureau, and the act amendatory of the same expire by limitation July 16, 1868. The report of the the Committee of which Mr. Elliott is chairman, is designed to show what reasons, if any, exist why the Bureau should be continued beyond the time of limitation. It gives a succinct history of the operations of the Bureau from the time of its establishment. The whole expenditure from appropriations by Congress for the use of the bureau, has been \$3,847,854.00. The sum expended by the bureau in addition to the appropriations by Congress, has been \$1,561,602.62 of which \$392,526.98 was expended for educational purposes. The Committee discuss at considerable length the questions connected with the elevation of the Freedmen, as they have developed themselves through the operations of the bureau, and the results at which they arrive seem to indicate most conclusively the necessity of the continuance of an agency for the educational improvement of the Freedmen.

MAINE.

The amount appropriated for educational purposes by the city council of Portland, for 1867-68, was \$57,000; in 1858-59, the amount was only \$27,450. The cost of the new schoolhouse for the North Grammar School, is estimated at \$125,000. The committee have during the past year redistricted the entire city. The most important fact that we have noticed in respect to the Portland schools, and it is one certainly which demands attention, is, that by the returns of the city census there are in the city 11,452 children of the school-going age, while only 3826 are in attendance on an average. Eight hundred girls have been transferred to the catholic schools. Whole number of teachers employed in the public schools of the city, 96. — The East Maine Conference Seminary, at Bucksport, has, in its various departments 140 students. — The summer term of Rev. Mr. Perkins's school for Boys, at Gorham, will begin Wednesday, May 27.

Read his advertisement. —“The Superintending School Committee of Bethel,” says the *Oxford Democrat*, “have resolved to impress upon teachers the necessity of giving instruction in writing at last four times a week.” We heard Gov. Cony say, in war times, that he was constantly having opportunities to help soldiers, who were needy, and that he should be able to do so much oftener, if they had obtained the art of good writing in the schools. —Albro E. Chase has been appointed Second Assistant Master, in the Portland High School. —Clarence C. Buok, late Principal of the Centre Street Grammar School, Portland, has been appointed Usher, in the Lawrence School, Boston. —Our agent writes, “I find the Normal School at Castine, in a prosperous condition. Buildings convenient, and teachers interested and energetic, and the students appear well.”

NEW YORK.

The present endowment of Elmira Female College reaches \$175,000. In the Cornell University, which will begin operations at Ithaca next fall, workshops, under the oversight of practical mechanics, will give practical instruction in manufacturing. The Citizen's Association, headed by Peter Cooper, have issued a protest against the increasing expense of maintaining the public schools. With an increase in average attendance since 1862, of about 22 per cent., there has been an increase in expenditure, of over 100 per cent. The Association desire Mr. Rice, the State Superintendent of Public Instruction to recommend the Governor to appoint commissioners to investigate the matter.

PENNSYLVANIA.

An interesting pamphlet has reached us, emanating from the State Department of Public Instruction, and embodying the results of certain inquiries which Hon. J. P. Wickersham, the State Superintendent, had requested Hon. C. R. Coburn, his Deputy, to institute in regard to the Normal Schools of the State.

Investigations were required in respect to, (1) The Condition of the Normal School grounds and buildings; (2) the condition of libraries and apparatus; (3) the management of pecuniary interests; (4) the professional work done; (5) the efficiency of the model schools; (6) the effect of the law making appropriations to these schools; (7) the improvements needed to enable the schools fully to accomplish the end designed by the State.

The report of Mr. Coburn, resulting from his thorough researches in accordance with this plan, is full and instructive, and the entire scheme of the Superintendent indicates wisdom in the adaptation of means to ends. We hope to allude to this report again, when we shall have found time to examine it more thoroughly.

NORTH CAROLINA.

Wilmington is likely to be the first southern city to complete arrangements for the education of all its children under a free school system, offering equal privileges to all. Those privileges, too, it is supposed, will be of the best order. Fourteen hundred children have been trained, under Mr. Ashley, the energetic superintendent of education, for several years past, in schools which will compare favorably with the best of New England. The poor whites have been provided for, under the tuition of Miss Bradley, a lady known for energetic work in the Sanitary Commission. Last month, (March) Dr. Sears, agent of the Peabody fund, made a tour of inspection in Wilmington. After careful examination, he made a proffer of assistance. With this offer, it is believed, that it will be possible to set on foot a movement for the education of every child of the city. An additional building is to be erected, and other necessary rooms will be secured. A board of trustees will be made responsible for the carrying out of the plan. To them Dr. Sears, will pay out the money from the Peabody fund, and thus, it is anticipated that Wilmington, will have advanced in the substantial work of reconstruction so far before another winter, as to have a complete free school system.

OHIO.

From the Report of Hon. Jas. A. Norris, Commissioner of Common Schools, a copy of which is received, we learn that good progress has been made in public school work during the year which the report covers. This is evidenced, says the Commissioner, in the number of costly and commodious schoolhouses erected; in the number of teachers' institutes held; and in the readiness of tax-payers to provide for the erection of suitable buildings. Whole number of youths of the school-going age, 952,597; expenditures for school purposes \$4,768,463.95; schoolhouses erected 549; volumes in school libraries, 310,328; value of school apparatus \$151,717; teachers employed, 21,568; average wages, males, \$38.52, females, \$23.80; whole number of schools, 11,739; average number of weeks schools were in session, 27.33; scholars enrolled in the schools, 704,767; average in daily attendance, 397,486; percentum of average daily attendance on number enumerated, 40, on number enrolled 56.4. Mr. Morris's report discusses carefully and judiciously, as we judge, the welfare of the great interests committed to his charge, and contains much which is of interest to the general educational reader.

MINNESOTA.

By an act of the Legislature, the *Teacher* is to be circulated in every school district of the State, and the subscription price therefor paid out of the permanent school fund. This will greatly increase the circulation of a valuable school journal. Another act provides for securing uniformity of school text-books. Still another provides that the State Superintendent shall have power to give certificates to teachers. Another act appropriates two thousand dollars to defray the expenses of holding county teachers' institutes. We learn that the Department of Public Instruction is frequently addressed by teachers in the East desiring to migrate to Minnesota to pursue their calling.

IOWA.

A committee acting in behalf of the State Teachers' Association, have addressed a memorial to the State Legislature, praying for the establishment of one Normal School for each Congressional District of the State. They argue in favor of granting their petition, (1) from "the necessity of well qualified teachers;" (2) because "there is a manifest lack of good teachers;" (3) "there is a great lack of Institutions to prepare the young for the special work of teaching;" (4) "Iowa alone of all the Northwestern States, has no school devoted exclusively to training teachers at public expense;" (5) "sound principles of economy would teach that more money is wasted annually in the employment of poor teachers, than would be the cost of establishing and maintaining Normal Schools." We have not received the *Iowa School Journal* recently.

INDIANA.

The number of school-children is 577,000; excess of males 20,000; number not in attendance at school, 160,000; number of teachers, 10,000; average compensation of male teachers in high schools, per diem, \$3.57; of female teachers, \$1.87; of male teachers in primary schools, \$1.84; of female, \$1.45; number of schoolhouses in the state, 8,360; value of houses and furniture, \$5,088,346; number licensed as teachers in 1867, 7,565; number rejected, 596; licenses revoked, 36; total amount of school-fund held by the state. January 14, 1868, \$8,194,961.25; productive school-fund, \$7,070,477.90. Of the productive school-fund one-half bears 7 per cent., and the rest 6 per cent.

ENGLAND.

It would seem from what we can learn, that the schemes proposed by the English government for primary and secondary education, and which arose from the report of the Education Commission, are quite unsatisfactory to the reformers. Little, it would appear, is proposed, beyond a very slight modification of the existing system. The commissioners report, that the cause of the

present chaotic condition of the schools, is total absence of organization. In the statutes of the old grammar schools are still to be found regulations for paying the master potation money and cockpennies. Some of these schools have fallen into utter decay. In one, two masters with good salaries and a house, are employed in teaching one boy. The commissioners declare, that unless the endowed schools are reformed, they will do more harm than good. There is an absence of any efficient system of inspection. A somewhat complex piece of machinery is proposed in order to remedy these defects. It is to be hoped, however, that much good will come to the middle classes, who have, it is said, been more poorly taught thus far, than any inhabitants of the realm.

PERSONAL. Mr. W. H. Seavey, who had been for several years the Principal of the Girl's High and Normal School, Boston, and who is well known as the author of the revised edition of Goodrich's United States History, died at his residence during the last month. Mr. Seavey was a native of Maine. He was an accomplished scholar and teacher, and his death is a loss to the teaching fraternity.

Mr. J. W. R. Marsh, contributing editor for the *Rhode Island Schoolmaster*, died April 10th. He had been principal of Newport High School for many years, and was an educator of high character.

BOOK DEPARTMENT.

ANNOUNCEMENTS.

Eldredge & Brother, of Philadelphia, have in press a new work, by Professor Hart, of the New Jersey State Normal School, entitled, "In the Schoolroom; or, Chapters on the Philosophy of Education."

Messrs. J. B. Lippincott & Co., respectfully announce that they will shortly issue "The Autobiography of Benjamin Franklin," edited by the Hon. John Bigelow, from the original manuscript, now for the first time published in full, and just as it came from the hand of its illustrious author.

J. M. Bradstreet & Son, 18 Beekman St., N. Y., announce, (1) "We are publishers of books. In a strictly business point of view, we wish to publish such books only as will be likely to pay; but in selecting, we prefer those that will be of public benefit. In view of the enlightened sentiment in regard to education in this country, and of the continuous growth of our school system, we believe that the demand for text-books will be greater than for any other kind of publication; and hence, we would gladly undertake to publish any school-book, that has the double merit of commending itself to popular favor and of being a benefit to the cause of education." (2) "From the various works presented to us, we have selected those of Prof. Cruttenden." (3) "The works now in the course of preparation consist of a First Course of Arithmetic, Second Course of Arithmetic, First Course of Language, Second Course of Language."

The First Course of Arithmetic is now ready, and the others are in press, and will be issued in a short time. Beside these, we shall soon issue Cruttenden's "Young Pupil's Arithmetic," a small work containing Objective Exercises and tables, to be used in connection with Oral and Object teaching in Primary Schools.

The Second Course will contain the whole science of Arithmetic, subjectively presented, and exhaustively treated, as far as principles are concerned. The arrangement is such, that each topic is logically suggested by the one preceding; and the whole work is fully supplied with practical examples in nearly every variety of the scientific and business uses of numbers.

The Courses of Language, upon the same general plan, will be issued in due season. The details of their construction will be given to the public in the circular which the Author is about to issue. We have also in contemplation the publication of a full series of text-books upon the scientific basis of Prof. Cruttenden's Works."

(1) WEBSTER'S NATIONAL PICTORIAL DICTIONARY. A copy of this new work has been placed upon our table for examination, during the past month. It is of such a size as makes it exceedingly convenient for frequent reference, and we have been much pleased, in looking it over, to note the care and good taste, as well as scholarly research which Mr. W. A. Wheeler, its editor, has shown in its preparation. It seems to us, that one needs the "National Pictorial" as much as the "quarto unabridged" of either Dr. Webster, or Dr. Worcester, though he needs both the latter works for final reference upon the nicer questions of appeal. This "National" is large enough and full enough to make it unnecessary to refer so often to the somewhat heavy quarto, and on that account, we shall prize it, and shall undoubtedly refer to it much oftener, than we should do to the "unabridged." Another advantage which we think it possesses, consists in its being brought within a compass and price such that a class of students needing other books and needing a good dictionary, can feel able to buy it. For these reasons and others, which will readily suggest themselves to persons examining with design to purchase, we recommend the "New National Pictorial," and refer our readers to the advertisement of its publishers in our advertising pages, for further explanation.

(2) THE NATIONAL FIFTH READER. This is the book, in the series edited by Messrs. Richard Greene Parker and J. Madison Watson, intended for the use of the most advanced class of learners. It is a volume of about the usual size of works designed to subserve a similar purpose. It has its elocutionary treatise, containing the more important rules of elocution with the examples selected to illustrate the application of the same; and its selections more extended, for the further practice and instruction of the student. Its general make-up, therefore, is not specially different from its cotemporaries and rivals in the same line of work.

What, then, are its peculiarities? What, if any, special features calculated to attract and make useful, does it possess, to distinguish it and give it superior merit? "Is its elocutionary department better than that of any similar book of which you know?" We are not prepared to say that it is; and we certainly consider it good; therefore we decline to answer this question in unqualified terms. We should wish to test the books in the schoolroom, before doing so, and we have never, thus far, had opportunity. The rules seem to be concisely and plainly stated, and the illustrative examples, to the point; we have not noticed any thing in this department with which we could not in the main agree.

"In the department, which is designed to afford the more ample field for elocutionary drill, where the teacher may show, untrammelled by rules, his own aptness as a teacher of reading, where, too, we have a right to look for a good evidence of editorial skill and literary taste, where the choicest passages of poetry, the loftiest flights of eloquence, the best-trained powers of description, narration, imagination and personation, are expected to be exhibited,—have we here any excellence, to which a fair review bids us call attention?" There are some things which we have found here, which seem to us worthy of special commendation. *Those explanatory footnotes.* Meet your pupils difficulty, if it is one that he can not, by the aid of the reasoning faculties, himself solve,—meet such a difficulty by the shortest cut, so that he may proceed intelligently, and as rapidly as circumstances will allow. Classical *allusions*, words with recondite meanings, and

(1) SPRINGFIELD: G. & C. MERRIAM & Co.

(2) NEW YORK: A. S. BARNES & Co. BOSTON: H. M. CABLE.

other similar enigmas, these footnotes explain, and we think this feature in "Part II" worthy of remark. There is also an order of sequence and connection, about this part, which is not to be found in similar works. We do not know that the selections, on the whole, are better than can be found in other readers of the same class. Persons designing to introduce new reading books into schools, should examine this and the companion books of the series, before making choice.

(3) A FOURTEEN WEEKS' COURSE IN CHEMISTRY. We take the liberty to call the attention of our readers a second time to the merits of this little book. It seems to us remarkably adapted to serve the purpose for which its author designed it. The book is intended to be used for recitation by the topical method, and this, we presume, most of our readers will agree is the true method of recitation in this branch. The "Fourteen Weeks' Course," has recently been adopted by Mr. Hagar, we are informed, in his school for teachers, at Salem, Mass., and he likes it much. This is recommendation from a high source.

(4) THE HIGHER ALGEBRA. The merit of a text-book for advanced classes in Algebra, depends very much, if not, indeed, almost entirely, upon the success which its author has met with in discussing the *higher truths* of this abstract science. Frequent failures in this direction would be sufficient reason for condemning a treatise, and successes here are enough to challenge commendatory criticism. We have used the book we are now noticing, and have found that in the discussions of the Progressions, the Binomial Theorem and the derivation of Napierian and Briggsian logarithms, the author is sufficiently lucid to be worthy of high praise. No doubt, other topics are discussed with equal clearness, but we speak of what we have tested only. We know of no treatise which we like so well for the purposes for which it was designed.

The Geometry and Trigonometry of the same author (Mr. Greenleaf,) we shall notice next month.

(5) LIPPINCOTT'S MAGAZINE. The fifth number of the first volume, of this monthly, being the number for May, is before us. It contains the fifth instalment of an interesting American story, entitled Dallas Galbraith; Passing Beyond, a poem; John Neagle, the artist; Valdeman the Happy, a poem; A village school in Germany; An American Fishing Port; "Loyalen Tout." The Talmud; Court of Taileries; Communication with the Pacific; Willie's Wife; Boston Wit and Humor; From the Woods; Our Monthly Gossip; Literature of the day. "Lippincott" has an able corps of writers, is ably edited, and its typographical appearance is such as to commend it. We expect to see its circulation and influence equal to that of any monthly this side the Atlantic.

(6) THE NURSERY. This magazine for youngest readers, has come to us regularly now for sometime, and we have not noticed it. We owe its editor and publisher an apology. We should feel very sorry to part company with it, and we know of two little happy "things of beauty," who would feel such a parting more keenly than would their *pater*. This is truly, a nice little monthly, containing winsome stories and winsome illustrations, and costing only \$1 50 a year. Any one who will secure a club of 25, will receive as a reward the thanks of the little folks, and Macaulay's History of England, worth \$18.

(7) PHONIC CHARTS. Mr. N. A. Calkins, who has now for some years been quite extensively known for his progressive and sound views of the philosophy of education, has recently given to the public, through his publishers, a set of charts "for self-training in the sounds of language." The charts are eleven in number. Nos. 1 and 11 are explanatory, intended to give the teacher

(3) NEW YORK: A. S. BARNES & CO. BOSTON: H. M. CABLE.

(4) BOSTON: R. S. DAVIS & CO.

(5) PHILADELPHIA: J. B. LIPPINCOTT & CO.

(6) BOSTON: JOHN L. SHOREY.

(7) NEW YORK: HARPER & BROS.

and student the underlying principles of the author's work, and to instruct him in their right application. Written language addresses itself to the eye in word-forms; spoken language, to the ear in articulate sounds. Word-forms combine letters, the elements of which being apprehended, written language becomes intelligible. Spoken words combine sounds, which being correctly given, heard and interpreted, are normal channels of communication. The Phonic charts are designed only to teach spoken language, that is, to perfect utterance. They proceed upon the idea, that the child should learn, 1st "to distinguish the sounds," 2d "to utter the sounds." Nos. 2, 3 and 4, of the charts treat of the vowel sounds and the way to teach them; 5, 6, 7 and 8, of the consonants; 9 and 10, of digraphs. An ingenious method of mounting enables the charts to be sent by mail, and we judge their circulation will be quite extensive. Progressive teachers will want them, and can easily, and cheaply obtain them of the publishers.

(8) A TREATISE ON METEOROLOGY. With a Collection of Meteorological Tables. Dr. Loomis, Professor of Natural Philosophy in Yale College, has, in the work before us, brought out, in the strictly analytical and logical order for which his scientific treatises so far as we are acquainted with them, are remarkable, the accepted truths of the most recent investigators in relation to that branch of Natural Philosophy, which treats "of the constitution and weight of the atmosphere; of its temperature and moisture, of the movements of the atmosphere; of the precipitation of vapor in the form of dew, hoar-frost, fog, clouds, rain, snow, and hail; of the laws of storms, including tornadoes and water-spouts; with various electrical phenomena, including atmospheric electricity, thunder-storms, and the Polar Aurora; as also various optical phenomena, including the rainbow, twilight, mirage, coronæ, and halos; to which are added aerolites and shooting stars." We shall refer to this work again, and can only say at this time, that the brief examination which we have been able to make has been sufficient to convince us, that it is a book that every-body would be interested in reading. The name of the author is a sufficient guaranty of its high scholastic merit, and the subject of which it treats, such that all readers will wish to peruse it. The size of its page, and its general typographical execution, are like the treatises on Astronomy of the same author, and in respect to its merits in these matters, we need say nothing more.

THE ATLANTIC MONTHLY FOR MAY, contains, The Turf and the Trotting Horse in America; On a Pair of Spectacles; The Clear Vision; A Gentleman of an Old School; Our Roman Catholic Brethren; Lagos Bar, II; The European Sparrow; A Modern Lettre de Cachet; Did he take the Prince to ride? &c.

Published by Ticknor & Fields, Boston.

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(8) NEW YORK: HARPER & BROS.

THE MAINE NORMAL.

VOL. 2.

JUNE, 1868.

NO. 6.

LETTERS TO A YOUNG TEACHER UPON QUESTIONS OF MODERN SCIENCE.

LETTER VI.

THE THREE INSOLUBLE PROBLEMS.

I. THE NAVIGATION OF THE AIR.

This problem you will remember belongs to the class of those in which the human mind can conceive of the *end* being accomplished, and can also conceive of *means* adapted for, and in their nature tending to, the accomplishment of it, while the providing of those means transcends at present the limits of human power.

By means of balloons enclosing large masses of some gas of less specific gravity than the atmosphere, man can raise himself and other heavy bodies far up above the surface of the earth, there to be driven by the wind, sometimes with great velocity, in the direction, whatever it may be, in which the wind happens to blow; and the popular impression is, that all which remains to be done, in order to solve the problem of aerial navigation, is to devise some means of *steering* the balloon so floated. But this is a mistake, unless a great latitude is given to the word steering. It is a *force of propulsion*, not a mode of steering that is required. Steering a ship, strictly speaking, denotes only the turning of her head in a given direction. When this is done, by means of the action of the rudder, the question whether she will *go* in that direction, depends upon the forces of propulsion,—resulting from the combined action of the wind upon the sails

and of the water upon the keel,—which are brought to bear upon her. To put her head right will do no good unless there is a *force* at hand, which can be called into action, to drive her forward.

This is precisely the condition of things in the case of the balloon. There is no serious difficulty in steering it, that is in finding the means of turning the balloon itself, if it has an ellipsoidal form, in any required direction; the difficulty is in *driving it forward* in that direction, through the air, without respect to the movement which the air itself is making. And this difficulty is one which, so far as we now see, is hopelessly unsurmountable by human power.

The state of the case is substantially the same in respect to the *art of flying*, to accomplish which so many vain and futile attempts have been made. People often imagine that the difficulty here is in *constructing the wings*. But that is no difficulty at all. It would be easy enough to make the wings. The trouble is in finding a *force for working them* when they are made.

Nature finds means to surmount this difficulty, though man cannot. The real apparatus by means of which birds are enabled to fly, and the true object of the wonder and admiration of man in respect to this mode of locomotion, is contained in those massive muscles which form the breasts of birds, for it is in these that the enormous power is developed, through the consumption of food, by which the wings are worked with such prodigious force and rapidity.

There is perhaps no more really wonderful spectacle or process in nature, than that of a martin or swallow impelling himself with such velocity in all directions through the air, by a force generated by means of a most complicated and wonderful chemical system within him, which he sustains in continuous action by supplies of fuel furnished by the bodies of the flies, gnats and mosquitoes which he busies himself incessantly in gathering as he flies. It is as if a locomotive were endowed with the power of selecting, gathering and preparing its own fuel, from the trees of the forest traversed by its tracks, and of feeding, automatically, its own fires, without at any time relaxing the speed of its flight.

The *wings* of the bird are the least wonderful portions of the mechanism on which its power of flight depends. They are merely simple instruments by which the power is *applied*. The wonder is in the machinery by which the power is *produced*.

These considerations show very clearly what the real difficulty is in the question of aerial navigation. It is the difficulty of constructing a *force-developing* mechanism, sufficiently powerful in relation to its weight, to *lift*

itself from the ground and then propel itself through the air. If the force could be provided, there could be no serious difficulty in contriving the wings, or sails, or other necessary instrumentality, for applying it.

In the case of aquatic navigation the force of the wind is modified by the action of the water on the hull of the vessel, and especially upon the keel. By means of this modification the vessel may be made to move in directions more or less diverse from the direction of the wind impelling it. But such a modification is impossible in the air; for the connection of the balloon with the earth must be wholly sundered. A steering apparatus might easily be devised which would turn the head of the flying-machine in any desired direction, but when so turned, unless it was provided with some *propelling force within itself*, it would be borne away bodily wherever the general current in the atmosphere tended to carry it. It would drift helplessly, like a steamboat afloat upon a river, without any engine on board. Put the head of the boat where you will by means of any steering apparatus, she would drift helplessly in the direction towards which the flux or reflux of tides, currents, or eddies might tend.

Schemers have sometimes imagined that there might possibly be a mode contrived of retaining a certain hold upon the earth by means of some portion of the aerial machine, so as to modify the action of the wind upon it, on some such principle as that by which, at sea, its action is changed by the resistance of the water to the keel. A little reflection will show however, that all such ideas are futile, inasmuch as if a load is to be borne by any vehicle running so near the surface of the earth as to allow of its bearing in any way upon it, it would be infinitely better to let it rest upon it altogether, and be propelled by steam. Even at sea, the world is rapidly falling into the practice of giving up the wind as a propelling power, and substituting for it the use of steam.

It would seem as if the only possible mode by which a propelling power capable of making its way through the air can ever be obtained, would be by improvements in the construction of steam engines, or other engines developing power by the combustion of fuel, so that their *power in relation to their weight* shall be unmeasurably increased. One method by which this end might be sought, is the use of lighter materials than iron and steel, in the fabrication of such engines. Some notices have appeared in the papers lately, of attempts made by a French mechanic, to construct a machine on a small scale, of the new and very light metal aluminum, with a view to obtaining one so light in relation to its power, that it may be able to lift itself, by the impulsion of wings upon the air. It is conceivable, though not at all probable, that he may succeed in this way in pro-

ducing a very ingenious and curious philosophical toy, but it would seem to be utterly impossible that efforts made in this direction can ever result in any system for the safe and economical conveyance of merchandise or men.

TEXT-BOOKS FOR THE STUDY OF THE ANCIENT CLASSICS. We are disposed to call attention here to what has long seemed to us a mistake in the principle upon which our American text-books are generally prepared. Our text-books are of an elementary character; they presuppose not merely a want of information in the student with regard to the subject, but an incapacity to acquire with profit at that period of his progress the *methods* by which the results reached by the editor are attained. In the case of a doubtful construction or interpretation, for example, the editor has reached his conclusion by a comparison of similar instances in the same or different authors. In a regular edition the most important passages of this kind are generally cited, and the student is enabled to make the comparison for himself. We believe that by the application of this system early in the course, the pupil might gain much useful discipline which would be of infinitely greater value than mere facts committed to memory. Discussion of the text and of the more recondite philological questions might be avoided, except that, where no recognized text is followed, the variations should be noted. In any other respect, we do not see why a school edition of an author should differ materially from those prepared for more advanced students, except in greater fulness of detail, especially in questions of syntax. Such a system, while evincing a respect for the intelligence of American boys, far more just than is shown by the present one, would do much to foster from the outset habits of exact scholarship, in which our American boys are generally deficient. [*Nation*.

THE TEACHER'S POSITION.

BY G. T. FLETCHER.

Every profession in life has its attendant influences and responsibilities. No man is so humble in his circumstances that he has not power for good or evil which he must exert consciously or unconsciously.

Position, high or low, in society is not the true exponent of a man's opportunity to work. Too many attempt to excuse themselves from active service upon the plea of want of time, talent or position.

God has given to every man ability to do his life-work well. No one has a right to complain that his sphere of action is too limited, until he has filled it.

Like the horizon which bounds our vision, the horizon which limits the sphere of duty expands as we rise in our position.

Every man should strive to find his appropriate work, and then try to do it faithfully. When this is done, no one will find time to expatiate upon the wonderful opportunities which others have for doing good, each one will feel that his field is larger than his labors.

The teacher's duties demand the best qualities, of head and heart, a clear understanding of the principles of knowledge which he is to teach, a sound judgment to regulate matters of school discipline and class recitation, that true dignity of deportment and kindness of manner which secures respect and love.

American travellers who have visited and examined the Prussian schools, are surprised to notice the kindly feelings existing between teachers and pupils. Not only is the deep interest of the teacher in the intellectual progress of his pupils, reciprocated by corresponding exertion by the pupil, but the teacher's love for his scholars is met by a sincere affection in return. There is no antagonism between the teacher and the student, no spirit of rebellion is generated, no annoying devices are originated to try the patience of the teacher.

How different is the case in this country, judging from the complaints of teachers. Why is the teacher so often regarded by the pupil as an enemy rather than a friend? Public opinion is in a measure at fault; when parents refuse to sustain school discipline as a necessary element in our sys-

tem of education, children will, as a natural result, resist any exercise of authority by the teacher. The unfortunate title of *Master* is not synonymous with *friend* to the child, it savors to him of apprenticeship or slavery. The unnecessary show of authority by the Master tends to make the child feel himself to be a subject, rather than a pupil.

Not every man who teaches a school, has the natural ability to govern the same. Men, deficient in executive ability, resort to various expedients to control their school. An assumed dignity of bearing is painfully sustained in school, and all familiar conversation with the students is avoided, lest authority which stands upon such a frail foundation fall. Out of school our unfortunate master never speaks to his pupils, when conversation can politely be avoided.

The dignity which is "put on" for the schoolroom must at all times be retained, lest the pupils discover that it is a sham. Such teachers often succeed in the schoolroom, but they fail to exert their proper influence, and teacher and scholars are uncomfortable. Such persons may direct in the path of knowledge, but they cannot draw children by heart-felt sympathy, with their struggles and aspirations, for they dare not act themselves.

Fortunate is the man, who, acting a natural part at all times, finds himself in the schoolroom "master of the situation." True dignity is a noble quality, it readily adapts itself to all circumstances. The dignified teacher is self-possessed, firm, and mild. He has the respect, confidence and love of his pupils. The reserve that repels, and the "familiarity which breeds contempt" are extremes to be avoided. Let the teacher be a true man, honest in principle, and practice. In all that pertains to the welfare of society, religion, education, and politics, the teacher has the same rights and duties as other men. He should be independent in character, that he may teach by example, as well as precept, the nobility of true manhood. He needs to cultivate the social faculties, and to take an interest in the questions of the age, that he may not take on professional narrowness.

"It is a curious fact in the history of the Public Schools of Boston, that, while the Grammar Schools were instituted nearly two hundred years ago, the Primary Schools were not established for a century and a half later; and, until a recent period, they were kept so wholly separate as to be under the control of an entirely distinct committee; and only within the last ten years have these Primary Schools been directly under the care of the School Board."

LETTERS TO A YOUNG TEACHER.

No. 9.

BELFAST, ME., May 7, 1868.

MY DEAR FRIENDS: I have just been looking over the May number of the *Normal*, and I pronounce it "pretty good." How is it with you? I see notes and letters from several of you, especially in the

"DEPARTMENT OF PRACTICE,"

which seems to be a very popular department, as it should be. I would like, myself, to have the *entree* to that department, but as I am now unluckily—or luckily—out of practice, I cannot present properly attested credentials. However, I shall find no fault, and perhaps after all I can get in on the general "dead-head" system and privilege which is usually accorded to members of my profession. But really, that "Department" is one of the most interesting and really valuable portions of the *Normal*. It can be made the medium through which can be given and obtained a great amount of instruction—facts, truths, practical and applicable. It is your duty to see that it is maintained and made what it may be. Fill it up every month with questions, answers, facts, notes, items, &c., in regard to your vocation and bearing upon your every-day practice. You can easily do it; all that remains is for you to put pen to paper occasionally and talk in written words. Will you do it?

By the way, did you find those grains among the chaff of my last letter, to which I referred? Or did you give up the search in despair. Well, well, perhaps there was a grain somewhere, and it may germinate and produce many-fold. Who knows?

Some editorial remarks and references in regard to

CORPORAL PUNISHMENT IN SCHOOLS,

have come before my eye, and I must say just a word on that subject. I may as well "commit" myself in the beginning. I do not believe in governing all pupils and schools by moral suasion, simply because it can't be done. I do believe in administering a good flogging to a pupil who merits and needs it. Now please don't set me down as hard-hearted, brutal, &c., but just notice the last clause—the saving clause in that last sentence. *Those who need it.* That's the point, and really I must say the number who need it are not all grown up yet. I know "this is the 19th century"; an age of

progress; "mind should triumph over brute force," and all that, and I say *amen* to it all—but I still believe in a light dose of the oil of birch for specific cases. Now I have no doubt but many of you, and perhaps some of the contributors to the *Normal*, will be "down" on me, as the saying is, for taking this position. Very well; I almost hope to be convicted, but facts are stubborn things and my experience, so far, satisfies me that the use of the rod cannot be entirely done away with, without detriment to the morals and well-being of Young America in the schoolroom. "Prof. Agassiz has taught forty years, and not been obliged to whip any body." Well, what does that prove? Perhaps he never had a pupil who merited or needed chastisement, and then again, perhaps it would have been better for some of them if he had whipped somebody. Who can tell?

Pardon the brevity of this letter. This is a very busy month. With May we have the promise; when next we meet we shall see the beginning of the fulfilment. Sow your seed; you labor on a prolific and susceptible soil. May your harvests be full and the the tares few.

Very truly yours,

GEO. E. BRACKETT.

ADVANTAGES OF CLASSICAL EDUCATION. Expel Greek and Latin from your schools, and you confine the views of the existing generation to themselves and their immediate predecessors; you will cut off so many centuries of the worlds experience, and place us in the same state as if the human race had first come into existence in the year 1500. For it is nothing to say that a few learned individuals would still study classical literature; the effect produced on the public mind would be no greater than that which has resulted from the labors of our oriental scholars; it would not spread beyond themselves; and men in general, after a few generations, would know as little of Greece and Rome, as they do actually of China and Hindostan. [*Dr. Thomas Arnold.*]

THE MINSTREL'S CURSE.

[TRANSLATED FROM THE GERMAN OF UHLAND.]

BY M. L. F.

In olden times a castle so high and lofty stood,
 E'en to the sea it glistened, far over plain and wood;
 Bright wreaths of fragrant gardens encircled it around;
 Therein played sparkling fountains with rainbow-glory crowned.

There dwelt a haughty king, rich in triumphs and in land.
 And stern and gloomy reigned he within that castle grand.
 His every thought was terror, his every look was rage,
 His every word, a scourge,—and he wrote with blood each page.

Once journeyed to this castle a noble minstrel-pair,
 The one had hoary locks, and the other golden hair.
 The old man with the harp on a gallant steed did ride;
 His youthful, fair companion walked briskly by his side.

Up spoke the aged harper: "Be ready, now, my son!
 To-day 'tis ours to soften the king's hard heart of stone.
 Recall our sweetest songs, and begin the fullest strain;
 Unite thy noblest powers to wake delight and pain.

Within the lofty castle now stand the minstrel pair.
 The king sits on his throne with his bride so young and fair;
 The king in fearful splendor, like blood-red Northern Light.
 The queen in loveliness, like the full-moon, mildly bright.

The old man strikes the harp-strings, and strikes so wondrous well,
 That richer, ever richer the sweet sound seems to swell;
 And blends his feeble voice with the youth's so heavenly clear,
 Like distant spirit-chorus, soft-trembling on the ear.

They sing of love and spring-time, of blissful, golden youth,
 Of valor and of liberty, of holiness and truth;
 They sing of all sweet things that the human heart control,
 They sing of all things lofty that elevate the soul.

The scorn of haughty courtiers is all forgotten now;
 The king's stern-visaged warriors before God lowly bow;
 The queen, dissolved in sadness and pleasure, from her breast
 Throws down a blooming rose to the fair-haired minstrel guest.

"Ye have misled my people; mislead ye now my wife?"
 Loud cries the monarch, trembling with passion roused to life;
 He hurls his glittering sword,—from the youth's breast, where it gleams,
 Instead of songs all golden, outgush dark, crimson streams.

As scattered by the storm-wind, the listening throng have fled.
 For, in his master's arms, lo! the gentle youth is dead;
 He wraps him in his mantle,—he binds him on his horse,
 And quickly leaves the castle—the minstrel and the corpse!

But at the lofty gateway, there stops the gray-haired man;
 With trembling hand he seizes that prize of harps again;
 Against a marble column he dashes it, and calls—
 With fearful voice resounding far through those lofty halls:—

"Wo, wo to thee, proud castle! may never more be found.
 Within thee, joy and gladness, and music's festive sound.
 No! only sighs and groanings and timid tread of slave,
 'Till the Avenging Spirit 'mid ruins makes thy grave.

"Wo, wo to you, ye gardens, bright with the light of May!
 Behold the ghastly face of this murdered youth to-day,
 That, seeing, ye may wither!—each sparkling fount be dry!
 That ye, in future ages, all desolate may lie!

"Wo, wo to thee, foul murderer! thou curse of minstrelsy!
 In vain thy bloody strivings for wreaths of glory be!
 And plunged in endless night be the name that thou dost bear,—
 E'en like a dying groan, be it lost in empty air!"

The old man thus cried out.—The heavens heard his cry.
 The lofty walls have fallen, the halls in ruins lie.
 One marble column tells of past splendor, vanished all;
 This, too, already broken, to-night, perchance, will fall.

Instead of fragrant gardens, behold a barren heath!
 There is no tree's dark shadow, no fountain's rainbow-wreath.
 No legend tells the king's name, no poet's golden verse;
 Forever lost! forgotten! This is the minstrel's curse.

TACTICS OF THE SCHOOLROOM.

No. 3.

Classification of the school. Without method in the management of the schoolroom, the greater part of the teacher's labor is wasted, and productive of little good. Such labor is very unsatisfactory to the teacher, and equally so to the pupils and patrons of the school. There should be an orderly arrangement in all the duties and exercises of the school, and this arrangement should be duly observed and not departed from, except in extraordinary cases. But woe to the teacher whose method becomes mechanical. When dull routine succeeds to reasonable method, there can be no life, no enjoyment, and no real success. We shall allude to this subject again.

In the formation of classes in a school, and in the allotment of time to each class, the teacher must be guided by a sense of justice to all concerned. If the number of classes is so large, that when the whole time of the session is divided equally, or proportionally, among them, the time for any or each class becomes so small as to render it impossible for the teacher to do justice to the class, and to every member of the class, then there is but one course to be taken—the number of classes must be reduced. It is in such cases that very many teachers fail to do what justice to the school demands. They flatter themselves that if they divide their time fairly among their classes, no matter how large the number of classes may be, that no more can be asked of them. In a county convention of teachers in a neighboring State, several years since, we heard a teacher state that he had a school of forty-five pupils, in which he was obliged to hear thirty-four recitations, or exercises, daily! Whereupon another teacher declared that he had precisely the same number of recitations, but only thirty-three pupils. A third, a teacher of an academy, congratulated himself that while his pupils outnumbered both of those schools, he, in addition to his assistants' work, was obliged to hear *only* twenty-six recitations. Now such work is a most shameful waste of time and strength. It is the merest farce possible, to call out a class of a dozen or twenty pupils and devote ten minutes time to them, and then call it a recitation; and it is not

much less so to allow a school to be divided into small classes of one or two pupils each, so as to reduce the teachers' time for each class to so small an amount that he is constantly hurrying from one exercise to another, without having time to make any definite impression, or to be thorough and exhaustive in his teaching. It is hearing recitations, but it is not teaching. Now an inquiry into the cases mentioned above, would probably have revealed facts something like the following: The School Committee did not require uniformity in text-books. Consequently there were among the pupils several different kinds of books in each of the several branches of study; the result of which was, the teacher was obliged to have three or four classes, more or less, out of a dozen or so of pupils of the same grade, all of whom ought to have been in the same class; an arrangement which would have been far better for the pupils themselves, as they would have had the benefit of class drill, and of that sympathetic interest which is not easily aroused in very small classes; and, what is of far greater importance, especially in elementary work, the teacher could have given to the pupils four times the amount of time for explanation and instruction. Furthermore, it is quite probable that there were pupils in the same branches of study, but separated from each other by a few pages, or chapters, who ought to have been brought together into the same class; but were, perhaps, permitted to go on individually, or in very small classes. In such cases the blame attaches to both Committee and teacher. The Committee are blamable for not requiring a uniformity of text-books. The fact that pupils happen to have different text-books and are unwilling to provide themselves with new ones, does not justify a committee in allowing the continuance of a state of things that very plainly stands in the way of the progress of the school. It is a kind of weakness quite too common, in some localities, among committees, who seem to be afraid of giving offence to the parents or patrons of the school. In public schools where committees who have the power to remedy this state of things fail to do it, it can hardly be expected that teachers, who have no power in this respect, will be able to do much to remove the evil. But in the case of private schools, the responsibility changes to the teacher, who is, in such schools, generally a law unto himself. But we believe that such teachers are generally about as inefficient as committees are generally found to be, in compelling pupils and parents to sacrifice their whims to the welfare of the school. In regard to the second evil, that of allowing pupils of nearly the same proficiency to be kept apart, and to form separate classes, teachers are in the highest degree censurable. We have known two classes in Arithmetic, of about half a dozen pupils each, and apparently of about the same age,

pursue the study a whole term, when the difference in the proficiency of the classes did not amount to twenty pages, and that, too, in a school where the teacher had such a multiplicity of duties that almost every exercise was slighted for the want of time. Now it is very true that it would have required a little sacrifice at the outset on the part of some of those pupils, had they been all placed in one class. But such sacrifice would have been more seeming than real, and would have been temporary at that. A little extra work on the part of one division of the class, and a review of a few pages by the other division, would have soon brought the whole class to the same degree of proficiency; thus enabling the teacher to give his time and strength to one good class, with ample time for the recitation, instead of dividing his time between two classes, neither of whom could have justice done them. Teachers are too often inclined to take a short-sighted view of such cases and look only at the *temporary inconvenience* of the pupils, instead of the *real gain* which is sure to follow in a few weeks. It is of but little consequence that at the end of a few days, or a week, there may be a loss on the part of a few pupils, if at the expiration of a month, or more, there will be a decided gain for a greater number, or for the whole school. It is greatly to be regretted that schools so often suffer from a want of firmness on the part of the teacher, which shall lead him to do his whole duty, however unpleasant it may be to him or to others.

What we have written above is intended for those teachers in ungraded schools who are obliged, for the most part, to fritter away their time on such a multiplicity of exercises that nothing can be done well, or with any degree of satisfaction. We beseech such teachers to adopt boldly a policy that shall give them only so many classes and exercises as can be well attended to without hurry or over-pressure. If books or the number of classes must be sacrificed, let it be done for the public good. Let there be no hesitation because it is not apparent *how* it can be done; but *do* it and take the consequences. They will justify the step if it is taken with prudence and good judgment. If the Gordian knot cannot be untied, cut it.

A. P. S.

ADVANTAGES OF A TEACHERS' LIFE.

- (1) He (the teacher) can arrange fixed hours for work.
- (2) He need invest no capital.
- (3) He is largely free from the dangers and temptations incident to other kinds of business.
- (4) He has good opportunities for gaining knowledge.
- (5) He has great privileges of doing good.

THE LATE PROF. WILLIAM G. SMYTH.

The late Professor Smyth of Bowdoin College, was a Maine man. Born in Pittston, he spent his childhood and youth in Wiscasset, (where, as soon as he was old enough, he taught a private school); was for two years an Assistant with the late Rev. Reuben Nason, in the Academy at Gorham; graduated at Bowdoin in 1822, and, after an interval of a year, returned to the college, where he did his life-work of forty five years.

Special reasons make it fitting for the "Normal" to record its tribute to his memory. In the first place his own experience had taught him to sympathize with any young person, who had a struggle before him in life. For many years, he knew what it was to contend with extreme narrowness of circumstances; and his was a spirit which could not brook dependence in any form. The writer doubts whether he would have received aid from any charitable association, or if he had, he is sure that he would have regarded it strictly as a loan, and refunded to the last farthing. The long work of fitting for Junior standing in college (he entered two years in advance) he achieved without a regular teacher. While at Gorham, indeed, he had the counsel and aid, when necessary, of a superior scholar, Rev. Mr. Nason; but he was, in a great degree, his own teacher. This is generally a serious disadvantage; but, it should be remarked, that, such were the qualities of Mr. Smyth's mind, he was not one to be contented with superficial attainments. Whatever he took hold of, he mastered. Moreover, through his whole course of those several years of preparation, he was employed as a Teacher, and of the branches which he was studying himself; thus, all the while, experiencing the truth of the old maxim: "In teaching we learn." The writer is persuaded, that examples of such self-denial and patient, tried, and persistent energy as he exhibited, are exceedingly rare.

And then he was highly successful as an Instructor. His success in teaching Algebra when he became College Tutor in that branch, first revealed to others, and even to himself, his mathematical genius. His decided preference had been for Greek; and when he was invited to a Tutorship in the College, it was a tutorship of Greek, and nothing could have been more to his mind. That success in his Algebra class is almost a tradition in the history of the college. It made him profes-

sor of Mathematics; gave him a life-work which he had not dreamed of, and opened the way for his becoming one of the most successful cultivators of that field of science which our country has produced. His mathematical works, took form from the recitation room. None but a practical teacher could have adapted them so skillfully to the wants of the pupil.

But that which entitles Prof. Smyth to a conspicuous place in the record of the "Normal," is his constant and efficient interest in the cause of popular education. Though he gave his energies to the Institution with which he was connected and which had the first claim upon him, he rendered a service to the system of common schools of Maine which deserves grateful remembrance. It came to be seen by some of the most enlightened and active friends of education in Brunswick, that a thorough change was demanded in the common district school system in a large village, and that the graded system, as it is termed, applied to the village schools, would add immeasurably to their efficiency and value. It is due to Bowdoin College to say, that Professors in that Institution were active in the movements to secure this important measure. As is to be expected in such matters, the measure was vigorously opposed. Prof. Smyth threw his energies into the project not only so far as related to Brunswick, but advocated the system in lectures delivered in several of the principal towns of the State. He became, in truth, a pioneer in establishing the public policy regarding that system, at least he deserves the credit of hastening, perhaps by several years, its general adoption in the State. He saw clearly the importance of the system, and prosecuted measures for its establishment with great zeal and resolution. Legislation was required to secure the end sought by the movement in Brunswick, viz: an act authorizing a village to unite its several districts under a general organization and to effect a classification of the schools. He appeared before a committee of the legislature, and advocated the measure in an argument, which a gentleman of high standing in the State, who was present at the hearing, assures the writer was one of the best pieces of reasoning and eloquence he ever heard. Prof. S., thus took the first step, and no more important one has been taken, in furtherance of a prominent idea of the popular education in the State, for an act was passed which made what was primarily designed for Brunswick alone, of general use and application for all towns in the State.

But this was not all. After the act of the legislature became a law of the State, opposers of the system in Brunswick resisted the principle of taxation involved in the law, in order to make a case for the Supreme

Judicial Court, to decide the question involved of the constitutionality of the act. Prof. Smyth was the most active and laborious instrument in forwarding this case, hunting up legal authorities, conferring with counsel, and even drawing up a paper containing his own argument, and setting forth the point at issue. The cause, Titcomb, vs. Smyth, was argued at Belfast, Hon. Phineas Barnes, being counsel for the School Agents, and the result was a triumphant vindication of the constitutionality of the act.

Prof. Smyth was a member of the Board of Agents of the Village District in Brunswick, seventeen years, watched the working of the system with great assiduity, often encountering reproach and formidable opposition; but resolute, persistent, and often showing great tact in managing the cause of the schools. All this was done through so many years without any other remuneration than a sense of a good done to others. He had genuine love for children, and repeatedly declared, that he could ask for no other inscription on his tomb-stone than the words: "Friend of the Children." P.

THE TEACHER'S REWARDS.—The approbation of one thoughtful man is worth more than all the senseless plaudits of a crowd; and to such, and to posterity, the teacher may look confidently for a full appreciation of his deserts. The names of such teachers as Pythagoras, Socrates, Seneca, Pestalozzi, Francke, Dr. Fellenberg, Arnold, Hamilton, Fenelon, Page, and Mann, will not *perish*, but be preserved among the choicest treasures of history. And, to-day, in France, in Germany, in England, in America, the most profound thinking is done by teachers, and nearly all the great works in science and philosophy are written by them. They now occupy the vanguard in the march of human thought, and the laurel waits to deck the brow of the noble and the brave. [*Wickersham*.

THE TEACHER AS A GENTLEMAN.

BY EDWARD P. WESTON.

In continuing the discussion commenced in the last issue of the Normal, I remark again, that the teacher should be a gentleman in his manners. To the minds of some persons, "the manners make the man." We have already seen that the *language* has much to do with the making up of the gentleman. Mere manners, certainly, cannot make such a gentleman as every teacher ought to be. And yet, the personal bearing, and whatever goes to constitute "good manners," must hold an important place, in our estimate of the true gentleman. Without such "manners" he will fail to secure the regards of well-bred society. It is true that the manners of gentlemen in different spheres of life may not be of the same precise type. The gentleman farmer may be a different outward expression of humanity from the gentleman clerk, or the gentleman teacher; but the manners of neither should offend against the well-understood proprieties of life.

The teacher, if he would be regarded as a gentleman in his manners, must avoid whatever is clownish. He who, from his excessive awkwardness, often excites the smiles of his pupils or others, is exceedingly unfortunate, both on his own account and theirs. I would not for a moment cast unjust reflection upon that rustic simplicity of manners, which is sometimes noticed in even our best young men, while pursuing their preparations for active life, and which not unfrequently goes with them into the schoolroom. That rough exterior, like the geode of the mineralogist, often conceals within it the rarest crystals. And yet those crystals, removed from their native roughness and set in polished gold, have a market value far higher than before.

Young teachers, then, will do well not to despise the world's requirement that they "mind their manners." And they will certainly not find it difficult to learn and apply the common principles of exterior politeness. It does not require a lofty reach of attainment, to learn when he should sit in the company of others, and when he should stand; when he should keep his feet upon the floor, and when he should place them—if ever—upon a chair, the stove, or the table; when he should lift his hat, or wear it, or carry it in his hand; when he should keep

his hands in his pockets, or spit upon the floor !

But if good manners in the teacher require him to avoid clownishness on the one hand, they equally require him to guard against foppery on the other. It is no part of a true gentleman to display his excellence of dress, or of person, with the design of attracting attention. Detestable as foppery is everywhere, there is no place, save perhaps the pulpit, where it is so absolutely unendurable as in the schoolroom. Let the man of fashion, who has no higher sources of amusement, devote his time to the adornment of his person, and the display of his comeliness. But let the New England schoolmaster, in the worthier spirit of his profession, content himself with unostentatious neatness and propriety, in dress and manner. The public commonly make a very fair estimate of what is suitable and proper in all these matters. It is very easy for a young man to disgust the sober sense of propriety, prevalent in the country, by the unguarded exhibition of even a spice of foppery. It was reckoned a very good hit at this vanity, when, a few years since, a school agent advertised for a teacher, "who wore neither spectacles, nor shawl, nor carried a cane." His district had evidently been disgusted, by some incautious young man from city or college, who was perhaps inflated with the consciousness of his newly assumed dignity, and had put on—with his spectacles and cane—some unwarrantable airs. The agent's proscription of shawl and spectacles may have been a little severe; but the hint, after all, need not be lost upon our young candidates for schoolmaster's honors.

Guarding, then, against these extremes of clownishness and foppery, the teacher should endeavor in his whole bearing to be *a man*; a man of becoming modesty, urbanity, and dignity; modest, as estimating properly his own imperfect attainments; urbane, as having a just regard for the rights and feelings of others, and the proprieties of life; and dignified, as impressed with the importance of his work, and the responsibilities of his position. The dignity of the teacher, however, should not find its outward expression, in any unwonted display. We have known young men, clothed with a little brief authority, to assume so lofty a bearing, so stern and grave a look, such a swell and strut, as to put true dignity to the blush. Let the corporal in the ranks, "play such fantastic tricks," but let the teacher be content with the true dignity which a simple sense of propriety, and a consciousness of just authority will naturally impart. More than this is not consistent with the manners of a gentlemanly teacher.

EVAPORATION.

II.

In a former communication upon this subject, it was stated that modern research has come to establish the fact that *corpuseular vibration* is the true cause of *heat*; and instead of the real existence in nature of a certain kind of *matter of heat* called *caloric*, we are now to regard heat as only a *sensation*, or phenomenon dependent upon a certain condition of ponderable matter.

What we popularly call the sun's *rays* are undoubtedly to be considered as a real succession of very minute vibrations, propagated by the sun and extending thence through the intervening ether and the atmosphere to the earth. Till these vibrations reach and enter the atmosphere, they are powerless to generate *heat*; their effect being only the production of *light*. And since the distance to the sun is about 95 millions of miles, and the height of the atmosphere but about 50 miles, we may regard this as only a vestment enwrapping the earth; beyond which and in all the vast interplanetary spaces there reigns an intense degree of cold.

The lower portions of the atmosphere, pressed by the weight of the superincumbent portions, have a greatly superior density; so that the vibrations generated in the higher strata by those of the ether, rapidly increase in force toward the earth; and there, meeting with matter of a vastly more resistant form, they attain their maximum,—cumulating and generating a reflective series of vibrations, like what we witness (upon a large scale) in the waves of the ocean when rolling in upon an abrupt coast.

To this class of vibrations is due the phenomenon of the radiation of heat from the earth. They cause the separation of the particles of the air near the earth, in its lower strata, and thus expand there its volume; so that in certain spaces in these strata it becomes specifically lighter than in equal spaces in the strata above. Hence, these lower portions rise, whilst the higher and more dense portions sink. But not alone by these upward and downward currents, thus produced, does nature operate to maintain an equilibrium in the atmosphere. For the rays of the sun, falling more or less obliquely on the different parts of any considerable ex-

tent of the earth's surface at any one and the same hour of the day, and the character of the surface on these different parts being very diverse in regard to producing the reflective series of vibrations before spoken of, or the radiation of heat from them,—there arise horizontal and lateral currents in this process; and mostly near the earth, and toward the localities of partial vacuum caused by the upward currents.

It is well known that we have these currents in all states of the atmosphere in respect to the amount of vapor it contains; and that for the same degree of temperature, they are more rapid according as this amount of vapor is greater. Accurate experiments acquaint us with the fact that a cubic foot of water at the surface of the earth, heated only just to the degree to turn it into vapor, displaces not less than 1300 cubic feet of air. And air at the surface of the earth being ordinarily about one-eight hundredth part the specific gravity of water, and vapor only about one-thirteen hundredth part, it is quite manifest how a large amount of vapor in the atmosphere when heated up near the earth in the manner before stated, must help to generate and quicken these aerial currents. But in ascending, the vapor generated at the surface of the earth encounters less external pressure from the atmosphere, and so expands, till its elastic force only equals that of the atmospheric pressure at the same height; consequently, the *force* with which it ascends is nearly *constant*; and a *constant force* generates a *constantly accelerated* velocity. Here then is the source of those lateral currents we often observe in the atmosphere at different distances *above* the earth, exhibiting themselves on the near approach of storms in the hottest weather; and which, combined with these greatly quickened currents of ascent and sometimes with currents of descent, produce some of the more extraordinary phenomena of the summer months.

The air is never found to be wholly destitute of vapor. The process of evaporation is always going on, from the surfaces of all bodies having the least degree of moisture; even when the temperature is *at* or *below* the freezing point. But the vapor rising at 32° F. is very different from that produced at 212° F. Experiment proves this latter to be 109 times more dense than the former, at the surface of the earth. And though this fact seems to have been a puzzle to physicists hitherto, I think we may gain a glimpse of its true cause by considering that the feeble vibrations corresponding to 32° temperature can detach but the slightest portions at once from the moist surfaces of bodies, while the stronger vibrations detach larger and larger portions, according to their degree of violence; so that those portions detached by the force of the vibrations corresponding to 212°, are mostly, no doubt, in certain *clusters* of the atoms forming that

surface; and those detached by vibrations corresponding to lower degrees of temperature, are in less clusters; and so on, down to the very smallest ones, composed, perhaps, of only those atoms of oxygen and hydrogen chemically combined to form water, and detached by vibrations corresponding to temperatures much below that of freezing.

The smaller these portions are, that are thus separated and set free, the greater in proportion will be the size of their investing spherules of the ethereal fluid; so that the vapor generated at the lower degrees of temperature will be more buoyant than that generated at the higher; and the reverse; that is, vapor generated at the higher degrees of temperature will be the more dense. Reflecting on the operations now briefly described, the reader will encounter no difficulty in concluding that there *must be, nearly, if not accurately,* a certain ratio between the density of vapor and the degree of temperature at which it is generated; and he will be ready to accept the reported result of the experiment last named as a most *rational finding.*

He will readily perceive, too, the high degree of improbability that quantities of vapor generated under any of the higher degrees of temperature, can be *wholly* composed of clusters of atoms of *one* and the *same size and degree of buoyancy*; and the fact will be specially apparent that a quantity of vapor, soon after rising from the place of its generation, must break up in its ascent and mix and mingle with the atmosphere; that the larger clusters, though having less buoyancy, yet greater momenta to overcome the resistance of the atmosphere, tend to rise more rapidly, perhaps, at first, while the height to which they can be borne must be less. On reaching the limit of their ascent, viz: the height at which the atmosphere is only equally dense with these vapor clusters, they experience much less external pressure than far below and near the earth; the consequence is, their *expansion* by the action of the elastic spherules of the atoms of which they are composed. This process throws off the very *external* parts of these clusters; which, in this act of separation, *increase* their own investing spherules and *diminish* those of the remaining portions of the clusters till the atoms therein attain that degree of proximity they must have to form water; this then falls to the earth, while the external portions of the clusters rise to higher altitudes repeating this process.

Here we catch a glimpse of the manner in which vapor is condensed in rising from the earth into a rarer atmosphere; and easily understand why vapor generated at a low temperature should, on ascending into the higher regions of the atmosphere, be so liable to float, long sustained there, while that generated at a high temperature should largely condense there. And

the foregoing considerations show why vapor of very slight density can never be wanting in the air; also, why *more* is usually found in those tracts over portions of country abounding in water, and *less* and *least* in those over comparatively dry and sandy soils.

It is said, according to the old nomenclature, that vapor, in the act of condensation, always gives out heat. How is that; when heat is really found to be only a sensation, or phenomenon caused by corpuscular vibration? We have seen how a series of vibrations of this kind operates to render water into vapor, and thus give it ascent into the atmosphere; and how this vapor is mainly condensed into water again in the higher regions of the air, and returns to the earth at about the same temperature with that from which it was evaporated. In the act of condensing, the amount of vibration in these vapor clusters is, by the action of the elastic spherules of their component atoms, communicated to the surrounding air, and the attenuated vapor still remaining suspended in it; thus causing the heat in question, and expanding the air.

Vapor rising from valleys and borne near high hills and mountains, we observe, usually condenses at a lower altitude than that rising over level tracts; and the reason of it is quite obvious. The series of vibrations generated under a less pressure of the atmosphere in those high places, is of much less force than that in the lower situations, where the vapor is generated; so that as the vapor rises up to, and near, these places and these two series of waves of vibration meet, that from the vapor clusters overmatches the other, allowing these clusters to expand and go through a process of separation and condensation as before explained in the case of their expansion from less external pressure due to their elevation alone. Hence, the mist, clouds and rain, in mountainous tracts more than in the regions of champaign country.

All substances that propagate a series of vibrations of *less force* than others, are, for that reason, *cooler* than they; so that the operations now described may suggest to the student some new ideas in regard to the manner in which vapor is condensed on coming in contact with, or in proximity to, not only cool mountain heights, but the cool atmosphere also; or cool and cold bodies of any kind. I think he will not find it difficult to understand the precise operation which deposits the *dew* upon a vessel of *cold water* on a hot summer's day; nor that by which hot steam issuing into the cold air of winter, so quickly disappears. But I am confident he will find it much to his advantage to throw upon the Black Board a representation of these operations, and by that aid endeavor to describe them clearly to others.

THE WONDERS OF GEOLOGY.

No. 6.

BY N. T. TRUE, M. D.

“The Father spake! In grand reverberations
Through space rolled on the mighty music tide;
While to its low, majestic modulations
The clouds of chaos slowly swept aside.”

The original crust of the earth forming its comparatively stable foundations has been covered with the waters of the ocean, which, by its tides and currents and advent power, have worked over and over the surface rocks beneath its waters and formed a series of sedimentary rocks that now constitute the floor of the ocean. But these rocks must contract on working, and be wrinkled up like the surface of a withered apple, and portions of them must appear for the first time above the waters of the ocean. When do these rocks first present themselves? Here now you commence the study of the *Geography* of Geology. Take your map of North America, and see where the St. Lawrence valley lies. Commence at its mouth on the coast of Labrador, and you will see these old rocks folded up, hard, crystalline, and forbidding in appearance. You can trace them up this valley on the north side of the present river St. Lawrence to Lake Huron, forming a belt of rocks about 200 miles wide and running in a So. West direction to that point. Now trace it from L. Huron, in a No. Westerly direction to the Arctic circle, and you have the backbone of this continent, and the oldest continent on the globe, in shape resembling the letter V, with the left branch the longer.

At this time the waters of the Atlantic and Pacific swept over nearly all of what is now the United States. Look at your map again, and you will find the Adirondac mountains, in the State of New York. These mountains were of the same age as the Canada-belt, and constituted an island around whose base worked the waters of the ocean. South of L. Superior is another similar portion, as also the Ozark Mountains in Arkansas. If you now trace out the line of the great Pacific railroad, you will find that it has reached the base of the Rocky Mountains. These mountains were all under water, except the Black Hills in Dacotah, and the Laramie Hills in Nebraska. The road runs between these two hills. This fact will

help you to remember them. They were in this age islands at whose base the waters of the Pacific flowed. This then constituted nearly all the rocks above the waters of the ocean, in what is now the American continent. They were composed of gneiss, argillaceous, and chloritic schists, with immense beds of limestone and quartz rock alternating with each other, showing that they were sedimentary rocks. The *original* crust of the globe is probably no where to be seen on its surface at the present time. It is covered by these sedimentary rocks.

After these were folded up, rents were formed through them from the interior of the earth, and melted matter was injected into them, where it cooled, and formed what are now called *trap* rocks. They had the effect to harden the adjacent rocks and frequently to change their character.

What name shall we give to these rocks? You perceive that vegetable and animal life could not exist here, and therefore they have been called the AZOIC rocks, a word signifying *without life*. This, then, is the first period in the history of our globe—the Azoic.

But geology is a progressive science. A few years since, the Canadian geologists found a fossil in the beds of limestone in the upper part of this formation. It is one of the simplest forms of animal life, being composed of single cells. This is the oldest fossil now known on the globe. It is called therefore *Eozoon Canadense*. Hence it was necessary to change the name of Azoic as heretofore applied to this formation, and now it is called the LAURENTIAN system. These rocks are found in the north of Scotland, in Sweden, Norway and Bohemia. Europe then consisted only of a few islands in its northern portion. In South America, a small portion of land appeared in Guiana. Thus on three continents the land made its first appearance on its northern portions.

These rocks are estimated by Logan to be forty thousand feet in thickness. What is remarkable, none of the precious metals have been discovered in this formation; but iron is found in the greatest abundance. The immense beds of iron ore around the Adirondac mountains, were formed like other sediments during this period. The Iron mountain, in Missouri, has been explored four hundred feet below its surface. Pilot Knob, in that State, is 581 feet high composed wholly of iron, and capable of supplying the world for centuries with this metal. The celebrated Swedish iron comes from this ore. The general prevalence of iron during this period, is manifest in the prevailing rocks. The granites are colored with it. The quartz is generally of a smoky color, and the feldspar, of a flesh color, forming what is known as red granite. Those minerals requiring a large per cent. of iron are abundant, such as garnet, hornblende and chlorite.

This universal character of the rocks leads us to notice another fact, that, both in America and Europe, this class of rocks was folded up from the same direction, which makes a strike from North East to the So. West, showing that there was some influence in operation on a grand scale, which served to fold up the rocks in this direction. It is beyond our comprehension, in all probability, to ascertain the primary cause of this direction, it is sufficient for our present purpose to know the fact.

This outline of the American Continent shadowed forth its final triangular form, as the mountains on the east side of the continent are parallel with the east limb of the Azoic belt, while the Rocky Mountains are parallel with the western belt. The Canary and Azores have also the same trend in the Atlantic, while the Sandwich Islands correspond in direction with that of the west. We may then assume the proposition, that *there was a manifest plan in laying the foundations of the earth.*

Let the reader imagine himself thrown back to the time when these rocks were first raised above the waters of the ocean. They were black, jagged and rough in the extreme. There were no plants, flowers or trees, on the land, no fishes in the waters, no humming of insects; no reptile, no singing of birds, nor noise of quadrupeds; no man upon its surface. Lifeless nature alone wails forth her music in the lashing of the waves upon the shore; in the rain and storm, and in the snapping of lightning and roar of thunders. Nevertheless, there was progress. The dry land has appeared, and although it may demand countless ages to bring it into a condition suitable for the abode of intelligence, yet the work is manifestly tending to that end, and we shall now be prepared to witness the next important event in the history of the earth, in the introduction of vegetable and animal life, beneath the waters of the ocean, and upon the dry land.

“Where man exists, there Athletic Games have or at least ought to have a place. They are the property of mankind; not confined to any nation or country. They will, of course, assume a different form in different climates and different states of civilization, etc., but the essence remains the same—culture of the human body.”

LETTER TO TEACHERS.

NUMBER 1.

OFFICE OF SUPERINTENDENT OF COMMON SCHOOLS,

AUGUSTA, May 1, 1868.

MY DEAR TEACHER: As the personal representative of the State in her educational interests, it becomes my duty and pleasure to address a few earnest, hearty words to such of you as are about entering upon your summer-school sessions. The State desires me to confer with you personally in the schoolroom. To visit nearly four thousand schools in one session, or one year, is a plain impossibility. I therefore "drop you a few lines" of suggestion and cheer.

1. Let me assure you that you have an arduous summer work before you. Make up your mind to that, and determine to labor *cheerfully* with all your *mind, heart and strength*. The boy and girl element, heretofore restless in the general national and society confusion, is now in a condition for steady mental effort. Under your hands this element demands guidance, and while the nation is addressing all its recuperative powers to a new life, it is especially important that the teacher fully realize the mighty duty assigned to him, and awaken every energy to the noble task of giving to the State worthy citizens, to the Republic true men and women, to the world a splendid humanity. This is your *work*, teacher, to be entered upon this season, to continue through life.

2. *Prepare* yourself for the great work indicated. For the full discharge of your high duties, a broad, deep, thorough culture is an essential pre-requisite. Physically, intellectually, morally, you must be rounded out to true manhood and womanhood, a perfect exemplar. The rivulet cannot rise higher than the fountain. You are that fountain, children committed to your care, streams of influence flowing out into every nook and corner of society. That fountain must be deep with learning, not shallow with smattering; clear with skill, not turbid with awkwardness; cool and refreshing with judgment and self-possession, not warm and unsatisfying with passion and impulse. Prepare yourself, then, by a course of study at one of the Normal Schools so generously provided for you by the State—or if you cannot do that, read

the best books bearing on your profession. Communicate with and receive communications from educators through the "Maine Normal," or some other educational periodical. Read to your pupils, read to their parents. Twenty-two years ago I kept my first town school. My success in that school was due in a measure to the fact that I spent my evenings, while "boarding around," in reading "Page's Theory and Practice of Teaching" to parents and pupils. I fitted both myself and them for an interesting, successful school. Teacher, prepare yourself for your work. If the surgeon, dealing with the coarser mechanism of the body, needs "the eagle's eye, the lion's heart, the lady's finger," what keener, intuitive glance, what stouter moral courage, what nicer sensibilities and perceptions must characterize him who, extracting ignorance and sin from individual existence, shall, by transfusion, inspire with noble aspirations and a true life.

3. Knowing your duty, and having prepared yourself for it, enter upon your work with *enthusiasm*. Love your business, love yourself for engaging in it, love your pupil with an intelligence which perceives his wants and capabilities, love him with a heart so full as to establish confidence between him and you, and to draw him close to you. *Then* he is yours—*then* you have him to mould to your highest artistic taste. Labor with *earnestness, energy, enthusiasm*.

4. Remember that the State is steadily watching you as one of the servants in her vineyard. She has set you to the great task of training her children. Her solemn injunction upon you by legal enactment, is as follows: "*The presidents, professors, and tutors of colleges, the preceptors and teachers of academies, and all other instructors of youth in public or private institutions, shall use their best endeavors to impress on the minds of the children and youth committed to their care and instruction, the principles of morality and justice, and a sacred regard for truth; love of country, humanity and a universal benevolence; sobriety, industry, and frugality; chastity, moderation, and temperance; and all other virtues which are the ornaments of human society; and to lead those under their care, as their ages and capabilities admit, into a particular understanding of the tendency of such virtues to preserve and perfect a republican constitution and secure the blessings of liberty and promote their future happiness; and the tendency of the opposite vices to slavery, degradation and ruin.*"—(SCHOOL LAWS, SECT. 57.) With such earnest, pleading, imperative words, does the State send you into her schoolrooms, with watchful eye and thoughtful mind does she go in and out with you before her precious sons and daughters, with anxious heart does she watch the growth and development of the generation.

soon to care for her interests and legislate for her welfare. † Morality, justice, truth, love of country, humanity, universal benevolence, sobriety, industry, frugality, chastity, moderation, temperance—what a mighty responsibility rests upon you, teacher, to instil, to *fix* these virtues in the hearts and characters of our youth.

Finally. Seek wisdom of God. Surely the Almighty thought that conceived the universe, the Omnipotence that spoke into existence and with sudden impulse flung each orb into its sphere, the Almighty Wisdom that still guides, forbidding chaos, the Almighty Heart that throbs and yearns in large love towards all His creation, have not left this "His image" lonely, cold, joyless, groping. No. Put your hand in the Almighty Father's hand confidently, it is ever extended to you; enlarge your love at His mighty heart, it ever beats for you; ask wisdom at His ear, it is ever bowed down to you; listen to His voice, clear and still its utterances are heard through a pure life and a clear conscience.

Petty annoyances, trials, anxieties, sad failures may befall you. Myself fresh from the schoolroom, with its care and sweat still on my brow, I sympathize with you under the burden. Nevertheless we *must* keep good courage. "Never give up the ship." Rouse yourself to renewed and better directed effort. An army of teachers, five thousand strong, you *must* stand shoulder to shoulder in the severe conflict with ignorance and vice. Do not fall out by the way. Confer with and cheer one another. Unite your energies and efforts in town and county associations, as teachers have done in Somerset and Androscoggin counties. Do not neglect the annual festival of the "Maine Teachers' Association." Exhibit a lively interest in every educational movement.

Any communication from yourself to me will be most acceptable, and will meet with a cheerful response. Please consider the Superintendent's Office at Augusta as "Educational Headquarters," not inaccessible through sentries, but bidding welcome to its hospitality all interested in the educational welfare of our beloved State.

With most earnest wishes for your complete success in this and all your future schools,

I am, most assuredly yours,

WARREN JOHNSON.

JUNE.

June, June! O glorious June!
 Break on our vision and gladden us soon
 With censers of perfume and garlands of flowers,
 To fill all the daylight and wreath all the hours;
 Till the morning, the night, and the sunshiny noon
 Shall tell of thy presence, O beautiful June!

June, June! O long coming June!
 Our hearts are in waiting, our nerves are in tune.
 We feel in each pulse of the life-giving blood,
 We see in the leaves and the slow-bursting bud
 A herald that tells us we're granted the boon,
 Then hasten thy coming, O beautiful June!

June, June! O blossoming June!
 Your air is all zephyr, your birds all in tune;
 You shimmer your beauties like rose petals down,
 Till they glint your fair tresses like gems in a crown.
 Thy glories so transient may fade all too soon,
 But they leave a sweet memory, O rose tinted June!

BELFAST, 1868.

GEO. E. B.

CHILDREN'S QUESTIONS.—Education is erroneously supposed only to be had at schools. The most ignorant children often have been constant in their attendance there, and there have been very intelligent ones who never saw the inside of a schoolroom. The child who always asks an explanation of terms or phrases it cannot understand, who is never willing to repeat parrot-like, that which is incomprehensible, will far outstrip in "education" the ordinary routine scholar. Education goes on with children at the fireside—in the street—at church—at play—everywhere. Do not refuse to answer their proper questions, then. Do not check this natural intelligence, for which books can never compensate, though you bestow whole libraries. [*Massachusetts Teacher.*]

THE DEPARTMENT OF PRACTICE.

CORRESPONDENCE.

EACH OTHER—ONE ANOTHER.

DOVER, ME., May 12, 1868.

MR. GAGE: Dear Sir: I observe that the use of the reciprocal expressions, "each other" and "one another," is by no means uniform.

Brown states, (Institutes of English Grammar, page 156, note III,) that "one another" should not be applied to two objects, nor each other, or one the other, to more than two."

Kerl says, (Common School Grammar, page 80, paragraph 210,) "Either, neither, and each other, should be used in speaking of two only; one another, in speaking of more."

I am well aware that both Webster and Worcester, by their definitions, allow a wider latitude in the use of these terms; is it best to use them indiscriminately?

The points I wish to raise are these: 1st. Should there be *any* discrimination in the use of the two expressions? 2d. Can a better distinction be made than that authorized by Brown and Kerl?

There *are* speakers and writers who have the reputation of using the English language with care and accuracy, who never violate the principle to which reference has been made.

The Progressive Fifth Reader, (Town & Holbrook's) Improved edition, has evidently been revised with special reference to this point; and wherever in the old edition "each other" was used in referring to more than two, "one another" has been substituted, and appears in the new edition.

I simply wish to call the attention of the readers of the *Normal*, to this point, in order that, if desirable, it be discussed until uniformity in the use of the expressions is secured.

Yours very truly,

M. C. F.

BANGOR, May 6, 1868.

MR. GAGE:—As a reader of the *Normal* I may venture to contribute a little towards the general information contained in its pages.

E. C. B., wishes to know how to parse the word "him" in the sentence, "Let him go."

According to the best authority I can find on the subject, it is used simply as the object of the verb "let." "Let" is an auxiliary verb serving to express the Imperative mood, but it is unlike other auxiliaries, in being transitive; and it prevents the substantive intervening, from becoming the subject, by governing it in the objective case.

In the sentence, "Hear him speak," "him" is obviously the object of *hear*; hear whom? hear him. Hear him what? Hear him to speak! It is the object, and only the object.

I would like to propose a question to the readers of the *Normal*, which has been discussed a great deal in this vicinity; viz: In that part of Thomson's Seasons beginning with the words, "Ye Chief, for whom the whole creation smiles, at once the head," &c., please inform us how to parse the two words, "Ye Chief," and oblige,

Yours truly,

VERNER.

"VERNER" will please remember that it is necessary that he give his name to the Editor, if he wishes other communications inserted.

We have heretofore put into the Department of Practice only such questions as come up in the ordinary work of the common school. The one which we give below and which involves some of the principles of the higher mathematics, may give better satisfaction to some of our readers, than would a simpler example.

From a point D, three objects, A, B, and C, known to be in a right line with one another, may be seen. With a quadrant the angle A D B is measured and found to be 43 deg. 21 m., also the angle B D C, and it is found to be 42 deg. 34 m.; on a line in the direction B D, the distance of 200 yds., is measured, to a point E. Then the angle A E B is found to be 36 deg. 24 m. and the angle C E B, 34 deg. 26 m. Required the distance of each of the points, A and C, from D; also of the points, A and C, A and B, and B and C, from one another.

TO SQUARE CERTAIN NUMBERS.

- (1) A NUMBER CONSISTING OF AN INTEGRAL PART AND THE FRACTION ONE-HALF.
 - (a) If the Integer is below 13: To the Product of the given Integer by the next higher Integer, add one-fourth.
 - (b) If the Integer is above 13: To the square of the Integer, add the Integer and one fourth.
- (2) A NUMBER CONSISTING OF AN INTEGRAL PART AND THE FRACTION ONE-FOURTH.
 - (a) If the Integral Part is an even number: To the square of the Integral Part, add one-half the Integral Part, and add one-sixteenth.
 - (b) If the Integral Part is an odd number: To the square of the Integral Part, add one-half the next lower Integral number, and add nine-sixteenths.
- (3) A NUMBER CONSISTING OF AN INTEGRAL PART AND THREE-FOURTHS.
 - (a) If the Integral Part is even: To the Product of the Integer by the next higher Integer, add one-half the Integer, and add nine-sixteenths.
 - (b) If the Integral Part is odd: To the Product of the Integer by the next higher Integer, add one-half the next higher integer, and add one-sixteenth.

Some illustrations of the manner in which these principles may be applied, may be expected at a future time.

EDITORIAL DEPARTMENT.

THE UNION AND JOURNAL, published at Biddeford, notices the *Maine Normal* for May, in the language which we print below. What it says of the relations of Biddeford and York Co., to the Normal School at Farmington, is so applicable to the other counties of our State in their several relations to our State Normal Schools, the one at Castine as well as the one at Farmington, that we desire to place it upon these pages, hoping that it may reach some who would not otherwise read it. There has never been a time, in the history of our State, when more judicious efforts were being put forth to advance our educational interests, than to-day. It is needful that every teacher and every community make the best use of the facilities afforded, and that thus all labor to promote the good work.

“THE MAINE NORMAL” is the title of a monthly magazine edited and published by George M. Gage of Farmington. Mr. Gage is the principal of the Normal School established by the State, for the purpose of educating and qualifying young men and young ladies for teachers. The School is pleasantly located in a healthy and pleasant village. If there is a lack of efficient teachers, it must be the fault of the people. We do not know as York county contributed any scholars, or as York county is to derive any benefit from the establishment of the school, but she bears her part of the expense, and if she derives no benefit from it, her citizens will have the consolation of knowing that they have helped other portions of the State to secure good and efficient teachers. But in this cause she is doing injustice to herself. The system of teaching teachers, as practiced in the Normal Schools of New England, has proved itself the best system ever inaugurated, and there is not a shadow of doubt that the graduates from the Maine Normal School will command higher salaries than those from any other institution. It is, to be sure, in its infancy, but it is the duty, as it will be to the profit, of all young persons who intend to devote their time to teaching, to enter a course of study and training which shall fit them for their vocation. Our schools and our children have suffered sadly for want of proper teachers. “Anybody can keep school” has been the motto of school committees and parents for too many years, and a critical examination of many, perhaps we might say truly, *most* of our schools might be summed up by saying, “nobody has taught them.”

But the day is fast going by, when “anybody can teach school.” The people of our villages and farming towns are beginning to realize that the school teacher needs a knowledge of his business as well as the lawyer, doctor, minister or mechanic. There are few men who would trust their children, when ill, in the hands of a physician who had had neither study or practice in his profession; yet those same people trust the education which, in these days, is of as much importance as the health, to persons who have very little, if any, knowledge of their business, and look upon the results as something they “can’t help.”

As the Maine Normal School is devoted entirely to the instruction and qualification of persons for school teachers, we hope the people of York County will become interested in it, and that from every town in the county one or more will be educated within its walls. It is an Institution worthy of the State.—It is *free to all* who are

deemed worthy of becoming teachers, yet because it is *free* it is none the less efficient. It may be said that Farmington is a long distance.—True, it is a half-day's ride, and we may regret it was not located in York or Cumberland; but all who have visited it agree that the place was well chosen for the benefit of the whole State, and because we are not located at the centre, it is no reason we should not take advantage of these things we pay for, and to which we are by right entitled. The school is intended as much for the education of our teachers, as for those living nearer its location, and its Principal and teachers are selected with a view to giving instruction to one part of the State as much as to another. It will not be long before a graduate of a Normal School will be as much sought after in Maine as in Massachusetts, and we shall see prefixed to advertisements for teachers in this State, as we do now in Massachusetts, "a Normal School graduate preferred."

We advise all our school teachers, and those who intend to become teachers, to send to Mr. Gage for his "Normal" from which we make the following extract: "Every true normal student when appointed to a school, does something more (as, indeed, every true teacher does) than the mere teaching of that particular school. He becomes the centre of a healthful educational influence, that extends to all the teachers in his vicinity. And this not by loud professions of superiority, and a demand that he shall be recognized as a leader, but by a thorough, faithful and enlightened performance of his duties; by a quiet exhibition, in teaching and governing, of whatever excellence he has attained by the special instruction he has received."

THE ARTICLES ON QUESTIONS OF MODERN SCIENCE, which have appeared in the *Normal*, from the pen of Mr. Jacob Abbott, have all been of extraordinary interest, but those which he is now furnishing, a series of four, the first of which appeared in the *Normal* for April, on "The Three Insoluble Problems," and the second to be found in the present number, discussing the first of these, the "Navigation of the Air," will be even more attractive to our readers, than have been any of the articles which Mr. Abbott has heretofore contributed; and when we say this, we say a great deal, for all the writings of Mr. Abbott are peculiarly fitted to interest those engaged in school work, whether teachers or students. Indeed, one who was born a teacher, and has been engaged for so many years in the work of instruction, either as a schoolroom instructor, or an instructive writer, could hardly fall to invest with interest, topics connected with education and science, such as Mr. Abbott has discussed upon the pages of the *Normal*. As an indication of the esteem in which these writings are held by one well qualified to judge, and who speaks impartially, we insert the following letter:

BOSTON, Apr. 17, 1868.

G. M. GAGE Esq.,—My Dear Sir: I rec'd some time since the January, February, and March numbers of the "*Maine Normal*," for the current year, for which I presume I am indebted to you.

I have looked them over, and read several articles in them with much interest, and am greatly gratified that it gives such promising evidence of taking a prominent rank among the leading educational periodicals of the day. You have some excellent contributors, and I hope an increasing list of subscribers. By the by, is the "Jacob Abbott" who heads the list of contributors, the author of "The Teacher," and the first *elected* Principal of our first Massachusetts Normal School, (though not accepting the appointment,) or another of the same name?

Wishing abundant success to the "*Maine Normal*," as well as to its worthy editor, whom I hear so well spoken of in his relation to the *other Normal* with which he is

connected,—I am, my dear sir,

Very truly yours,

Abner J. Phipps, Agent of the Mass., B'd of Education.

Mr. Phipps will please accept our thanks for this polite and encouraging note, and will permit us to assure him that the "Jacob Abbott" who contributes to the *Normal* is the gentleman of whose works he speaks, and the first-elected principal of the first State Normal School established on American soil.

IT IS THE INTENTION OF THE EDITOR OF THE *NORMAL*, to spend a large part of the summer in visiting the common schools of our State. He will begin his tour of visitation in the early part of June. It is now about fifteen years, since he began his work as a teacher, in the district schools. During two years from that time he taught in the towns of Bridgton, (Cumberland Co.) Robbinston, Perry and Charlotte, (Washington Co.), Clinton, (Kennebec Co.), and Sweden, (Oxford Co.) He thinks he has a right, therefore, to feel at home in these little schoolhouses along the roadsides of Maine, and he is certain, that he knows how to sympathize with those who are laboring to promote their interests, committee-men as well as teachers. He will be happy, wherever occasion will permit, and the people so desire, to speak to the friends of education, in these same schoolrooms, upon some topics connected with the work in which he is engaged.

It ought to be said, however, that we intend to be present, if possible, at the great gatherings of teachers and school officers, which are to be held at Nashville, Tenn., in the month of August, and at the meeting of the American Institute of Instruction. From all these sources we hope to gather material to increase the usefulness and interest of the pages of this magazine, while we are happy to say that Prof. G. T. Fletcher, Principal of the Normal School, at Castine, who is to spend some time in visiting the Normal, and other, schools of Massachusetts, will contribute notes of his tour for the benefit and entertainment of the readers of the *Normal*.

TO SUBSCRIBERS. It becomes necessary for us to say a single word to our friends who wish to avail themselves of the offers which we make in respect to furnishing certain publications,—the Atlantic, Our Young Folks, the Nation, and Our Boys and Girls,—to them at reduced rates. This offer is made solely as a matter of accommodation, and all persons wishing to avail themselves of it, must forward the money with their order for the publications. It is no profit to us to furnish this reading matter at the rates we advertise, but it is done simply as a favor to our subscribers, and usually costs us a postage stamp, envelope, and ten cents for a money order. We can not, in addition to this, advance the money for a magazine or newspaper, from our own pocket, especially when this is requested by one who already owes us for the *Normal*. Under the conditions named, the orders of our friends will be promptly attended to, and that with pleasure on our part.

THE QUESTION whether it is desirable to have some method of indicating the actual and comparative standing of pupils in school, has long ago been decided in the affirmative. Very few educational writers would now take ground against it, and very few would consider it a point to be argued. True, it is especially necessary in towns and cities where a system of graded schools has been established. In such cases, the teachers in the intermediate and grammar grades, find it necessary to have some way of ascertaining the progress of their pupils, in order to decide, for the pupil and his parents, whether he is making that progress which will warrant the expectation,

that he may be advanced, in due time, to the grade next above. But, in reality, there would seem to be no less need of some system for the determining of rank, in schools which are ungraded as far as town or official action is concerned. In every good school there must, and will be, some method of organization, and that method of organization, will constitute each individual school, in some sense, a graded school. There may be no other school in the municipality, to which the pupils are taught to look forward as a probable place to which they shall, if qualified, be promoted, but within the domain of the teacher's own kingdom, there will be established that kind of gradation, which will be, as much as possible, a spur to the intellectual ambition of the student. And to perfect this internal gradation, some well considered and adapted method of ascertaining, recording and reporting the standing of pupils, is essential.

Undoubtedly the standing of pupils should be determined by reference to both deportment, including attendance as a part of school-ethics, and class recitation; but to the latter of these we wish now to make special reference. The ranking of scholars, from day to day, in a book provided for that purpose, and at the time when a recitation is made, is open to some objections. In the first place, there is necessary for this purpose considerable time; and time is a precious element in our generally crowded schools. Six hours, sometimes less, per day, (and we would not have it more,) devoted to the operations of the schoolroom, and out of this must come considerable time for exercises in physical culture, vocal culture, recesses etc., against none of which things we inveigh, and there certainly is not any too much time for the teacher to devote to the work of instruction. In the second place, by ranking on recitations at the time they are made, we sometimes do much injustice. Not unfrequently, pupils amongst the most faithful, and having the most retentive memories, who will be able to do well on the "home stretch," with intellects really superior to those of their classmates, which "give forth a hasty spark, and straight are cold again," will, by this method, appear in an unfavorable light. On the whole, however, if the teacher can find some very expeditious method of ranking his pupils every day, we would not oppose the adoption of it; we would, nevertheless, insist upon supplementing this method with written test examinations, on the standing in which the final verdict in respect to scholarship should be based. We doubt whether anything can supply the place of written test examinations, made at intervals during the term of a school. But we do not wish to dilate upon their merits in this connection. At another time we may do so. Now, we desire to maintain the desirability—nay the necessity, in schools of every grade, and in the ungraded schools of the remoter districts as well, that some well considered plan be adopted to record the standing of each pupil.

The ends of a scheme of this kind may be reached in various ways. The teacher may invent and manufacture from common note paper a book for the purpose, which he can rule vertically and horizontally as he pleases, or he may buy one of the many contrivances which others have found useful in their own experience, and which are wisely and ingeniously adapted to the object to be attained. We have recently seen a book, published by Eldredge & Brother, of Philadelphia, which seems to us well calculated to do the work of recording the class standing of pupils. It is small enough to carry in the pocket, as its name * would indicate, and the explanation of how it may be used, is simple and sufficient. But in some way, we say again, this work of keeping a thorough school record should be done, and this is the point we wish to emphasize.

* TEACHERS' MODEL POCKET-REGISTER AND GRADE-BOOK.

EDUCATIONAL INTELLIGENCE.

MAINE.

A census of scholars has been recently taken in Lewiston, by Mr. T. D. Thorne. The whole number of scholars is found to be 4159; American 2600, Irish 1258, French 178, English 101, German 5, Scotch 5, Swedes 2, Colored 10. Increase during the past year 15 per cent. Whole number between the ages of 4 and 10 years, 1754; 10 and 15, 1293; 15 and 21, 1069. 2400 pupils must be accommodated in the Primary and Intermediate Schools. 16 primary rooms, however, should accommodate only 800; and 6 intermediate, not more than 800. Into the primary rooms are crowded 1200, and many are obliged to stay away from school. The *Journal* from which we glean the above statistics, says that from 600 to 800 children in the city under 15 years, have not attended school a day during the year. Had they been compelled to attend, the committee would have been obliged to start schools in the street.—Rockland will erect a new high-school building this season.—The number of students in the State Normal School at Castine, has increased from 13 to upwards of 40, during the past (first) year of its existence.

—Miss Sarah A. Libbey, for several years a successful teacher in Portland, and for the last two years Assistant in the High School, in that city, has resigned her position. She was made the recipient of a handsome present by the pupils. —From the *Maine Democrat*, published at Biddeford, we extract the following: "The S. S. Committee of this city have been quite busily engaged during the past week in the examination of the schools, and particularly those of district No. 4. The term of all the schools in the district closed properly on Friday last, and to give even a casual examination to each of them, it was found necessary to commence with some of them, at least ten days before the day of closing. The Primary and Intermediate schools were divided up, about an equal number of each assigned to each member of the committee, and were most of them visited the week before the close, thus reserving the last week of the term for the examination of the Grammar schools and the High school.

A majority of the committee visited each of the Grammar schools. The committee were very much assisted at the examination of these schools, and of the High school, by the several clergymen who kindly responded to an invitation given them, and were present and took part in the examination. The schools bear testimony to the faithfulness of the several teachers, and give evidence of improvement during the term. Next term closes up the school year, when scholars pass from one class to another, and from the lower to the higher schools. The committee promise that the examination at the close of the school year shall be strict, and that scholars who step up must be fully prepared." —In compliance with a resolve of the last Legislature, Mr. Johnson, State Superintendent of Common schools, has issued blanks to be sent to school committees throughout the State, requiring information on the following points: (1) name of city, town, or plantation; (2) number of districts; (3) number of schools; (4) number of pupils; (5) readers used; (6) cost of each to the pupil; (7) numbers of the series adopted most in use; (8) is a reduction of the number desirable? (9) if so, what numbers should be retained? (10) number of times readers have been changed during the last ten years; within the last five years; from what to what; what reader preferred; (11) arithmetics used; similar questions to those asked respecting readers, are asked concerning arithmetics, grammars, and geographies; (12) spelling book used; (13) writing book used; (14) history used; (15) is uniformity of text-books desirable? (16) is county supervision? (17) can a suitable supervisor be obtained in the county on a salary of ten cents per capita average pupil attendance? (18) what money would command an efficient man for the purpose?" These questions which are made for

the purpose of making recommendations based upon a knowledge of facts, should be responded to promptly and fully by the proper officers.

MASSACHUSETTS.

The bill to make it illegal for a teacher in the commonwealth to resort to corporal punishment under any circumstances whatever, seems unlikely, at the present writing, (May 23,) to pass the Legislature, notwithstanding its advocates, led off in the House by Dr. John P. Ordway, a man inexperienced, we believe, in the management of schools, but quite successful in some other walks of life in which he has figured, have made considerable efforts in its favor. We see that the Boston correspondent of the *Liberal Christian*, feels disposed to lament its defeat. On Thursday, May 7, Mr. Goddard, of Worcester introduced a bill concerning the employment of children in manufacturing establishments; providing that no child under the age of twelve years shall be employed in any manufacturing or mechanical establishment, and no child between the ages of twelve and fifteen years, unless furnished with a certificate by the school committee of the city or town in which the child may apply for employment, that he has certain educational qualifications; that a commissioner shall be appointed, at a salary of \$2500 per annum, to carry out the provisions of the bill; and that each offence against the bill shall be punishable by a fine of \$50. The same gentleman also introduced a resolve that there be paid to the Museum of Comparative Zoology the sum of \$75,000, to be expended under the direction of the trustees of that institution, provided that the money shall be payable in annual instalments of \$25,000, and provided, also, that the instalments shall be paid as soon as and not before a like amount has been raised by private subscription.

NEW JERSEY.

The first annual report of the Board of Education and the State Superintendent of Public Instruction, has been received, and is a document of considerable interest. The State is now beginning to feel the effects of the entire revision of her school laws which was effected by the passage of the legislative act of March 21, 1867. The new law provides for a State Board with a State Superintendent, for county superintendents, for competitive examinations of teachers for graded certificates, and the other features of improvement which have proved effective in the States in which they have been tried, and under its influence the State seems to be making good progress in the work of educational reform. The State Normal School under the efficient direction of Dr. Hart, is in a flourishing condition, and New Jersey is moving forward.

PENNSYLVANIA.

It is pleasing to see how the work of school visitation and inspection is systematized in this State. In the May number of the *School Journal* the State Superintendent, Prof. Wickersham, announces his plan for the examination of the State Normal Schools, (these are four in number,) giving the names of the officers who will constitute the Boards of Examiners, and the days on which examinations will take place. The Superintendent announces that he intends himself to be present at all the examinations, and, very properly, that he shall insist that the examination in the science and art of teaching bear a prominent place. These examinations at the State Normal Schools always afford opportunities for practical teachers, not regular students, to apply for State Certificates which shall be full evidence of qualification to teach the branches therein named, in any part of the State, without further examination. — The Legislature recently adjourned, made an increase in the appropriation to common schools, the amount given being half a million of dollars, the largest appropriation ever given to the common schools of the State except that for the year 1867, when the same amount was appropriated. When it is considered however, that this is only about one-twelfth the amount actually expended annually for school purposes, it is seen not to be very large. The Superintendent says, "it will allow to the children of the commonwealth only about fifty or sixty cents apiece, not more than sufficient to buy each of them a new Grammar Book."

OHIO.

The Educational Monthly speaks of county supervision as one of the great needs of the school system of this State. It suggests some ways in which township schools may be improved. These agencies are, (1) acting managers of schools; (2) school visitors; (3) township school examinations and reviews; (4) teachers' meetings and institutes. In respect to the third of these agencies,—township school examinations,—we copy as follows: "The plan is simple. The board," in this State it would be school committee, "appoints a day, and classes in reading, spelling, writing, or any other branch in which improvement is most desired, are brought together from the several schools. The exercises are conducted by some person appointed for the purpose, or the teachers are permitted to exhibit the results of their instruction and the methods employed. This must, of course, be done without fostering a spirit of jealous rivalry."

ILLINOIS.

A correspondent of the *Lewiston Evening Journal*, writing from Yorkville, says:

"It has been well said that her public schools are the pride and glory of Illinois, and why? I will not attempt to answer this question in full, but will give some of the more prominent reasons why the public schools of this State are so excellent. The people realize that good schools cost money, and pay liberally for them. The teachers, receiving wages upon which they can live put their whole energies into the work, and become as enthusiastic in their calling as other professional men. When shall we learn that we are cheating ourselves by engaging cheap teachers, at cheap rates? Then by means of State Institutes held at stated intervals, and County Institutes held in most counties twice a year, the teachers are continually being taught the newer and better methods of teaching. They learn to work zealously, enthusiastically, honestly.

I had the pleasure of attending one of these Institutes held recently at Peru, La Salle county. One hundred and seventy live, earnest, energetic teachers, inspired with a holy zeal, fully impressed with the responsibilities of their high calling, were assembled there in training for their work. I wish I had space to speak of this training; suffice it to say that the Institute is a live institution, a working power, a moral force in the State.

It was my good fortune to meet at this Institute, Prof. I. A. Shurtleff, formerly connected with Bates College, now principal of the High School department, Cook Co. Normal School, a very popular and highly successful teacher; Prof. Frank H. Hall, principal of the Earlville public schools, also formerly of Bates College, and Prof. O. M. Tucker, principal of the Hennepin public schools, a graduate of Maine State Seminary.

I also had the pleasure of meeting Capt. J. H. Freeman, so well and favorably known in your city, at his home in Leland. Prof. Freeman is a live teacher and is very justly popular in the first circles of society, as is also his very amiable wife, who is a graduate of Maine State Seminary. Maine, and especially the institution of learning in your city, may well be proud of her noble sons whom she has sent out into the world so well prepared to sow the seeds of immortal truth, and of sound and just principles in the fertile soil of the western youthful mind. All honor to them, and to the noble State which has so nobly reared them! —Chicago is to have a Public-School Library. —Mr. Pickard, the city superintendent, (Chicago,) says, "At the rate of growth of the city for the past five or six years, it will require yearly, six buildings large enough to accommodate 1000 pupils each, to meet the demands of the increase of attendance on the city public-schools." The increase for the past four years has been about 65 per cent. —The county institutes which are held at various points throughout the State, are evidently an immense advantage to the teachers, the schools, and the cause of education generally.

IOWA.

The Report of the Superintendent of Public Instruction, Mr. D. Franklin Wells, is before us. It indicates, that the progress made in the official years 1866-7, was encouraging. Increase in

the number of persons of the school-going age, seven per cent.; increase in the number of schools, five and one-half per cent.; in school attendance, six and one-third per cent.; in average attendance, nine per cent.; in number of teachers, ten per cent. The increase of male teachers has been 997; female teachers, 8. The amount paid to teachers has increased fifteen per cent.; the amount paid for building and repairing schoolhouses, twenty-two per cent. It appears, that the total amount annually expended for the support of Free Schools, has increased five-fold in the last ten years. "According to the wealth of the two States, Iowa contributes for the support of common schools, nearly five times as much as Massachusetts." To crown the efforts hitherto made for securing a supply of well qualified teachers, it is earnestly recommended that there be immediately established, a Normal and Training School, under the auspices of the State. We alluded to the memorial of the State Association in the Normal for May. Mr. Wells argues forcibly in favor of the same object. The University of Iowa, consisted until January 1, 1868, of three Departments, viz. Preparatory, Normal, and Collegiate. We see, however, that the Preparatory Department has been abolished (?) being continued only one year on trial. Some of the reports from County Superintendents are of much interest, and we should judge that the county-superintendent element works well in Iowa.

CALIFORNIA.

The Second Biennial Report of the Superintendent of Public Instruction, has been received, and affords some valuable information. The progress of the schools within the few years past, while Mr. Sweet, has been Superintendent, will be seen by the following statistics. It appeared by the school census taken in June last, that there had been an increase of 16,820 children in attendance on the public schools, over the number reported in attendance the year before, and a decrease of attendance upon private schools, of 1,645. In 1862, 50 per cent., of the children were enrolled on the public school registers; in 1867, 66 per cent. In 1863, the average public school attendance was 20,000; in 1867, 46,000. In 1862, the amount of State school fund apportioned, was \$75,000; in 1867, \$269,000. Amount raised by county tax in 1862, \$146,000; 1867, \$303,000. Total receipts from all sources of school revenue, in 1862, \$497,000; in 1867, \$1,287,000. Amount paid for teacher's salaries, 1862, \$330,000; 1867, \$696,000. California has a State Board of Education consisting of nine members. This Board has authority by law, to adopt rules and regulations and a course of study for the public schools; to adopt a uniform series of text-books; to issue State certificates on State or County examinations; to issue State diplomas good for six years; to recognize the Normal School diplomas of other States. It appears, that the whole number of schools in the State, is 1248.

We see that a bill has been introduced in the California Assembly, projecting a university system on a more symmetrical and comprehensive scale than that of any of the older States of the Union. It had been proposed to disincorporate the College of California in favor of the Agricultural College, when the latter should fairly come into existence. The bill provides for a State College of Agriculture, which shall be established first in order, a State College of Mechanic Arts, a State College of Mines, a State College of Civil Engineering, and perhaps others of a kindred nature; also a State College of Letters, Colleges of Medicine, Law, etc., all under the head of a State University. It is also arranged that other colleges may be affiliated with the University, the President of which will be *ex officio* a member of their faculties. Students may be received from these, examined, and awarded degrees for proficiency in either general or special branches of learning. A Board of Regents, twenty-two in number, will constitute the government of the University, embracing the Governor of the State, the Lieutenant-Governor, Speaker of the Assembly, State Superintendent of Public Instruction, President of the State Agricultural Society, President of the San Francisco Mechanics' Institute, eight members to be nominated by the Governor, and eight chosen by the fore-going fourteen. The endowments in land and money are already very large.

ENGLAND.

The London Student, edited by a committee of the professors and students in London, and having an able staff of writers, persons connected with educational work, from all parts of the kingdom, will soon be put in circulation. It is intended to rank all the other educational magazines of the world.

ITALY.

In 1865 Signor Natoli published the first volume of statistics of public and private instruction, for the scholastic years of 1862 and 1863. It presented the astonishing and humiliating intelligence, that out of a population 22,000,000, 17,000,000 were totally illiterate, had not even a knowledge of the alphabet. The Minister of Finance then proposed that three millions should be at once handed over to the Minister of Public Instruction. It was found, however, that the figures of the Minister of Instruction were exaggerated, that the 17,000,000 above-named, contained 4,000,000 of children below the age of four years, thus reducing the number of persons without a knowledge of the alphabet to 13,000,000. The war against Austria, for the liberation of Venice, diverted the attention of the ministers and the people from the subject of education; and the three millions went into the coffers of the Minister of War. It would seem, however, that Italy learned, in the war, that the Prussian was intellectually superior to the Austrian, that hence he fought better, and better understood the necessary manœuvres.

The second volume of statistics, Signor Bertie, Minister of Instruction, shows improvement. The law of 1859 divides elementary training into two grades, inferior and superior, the former comprising religious teaching, reading, writing, arithmetic, and the Italian language: the latter, these branches, and also composition, book-keeping, elementary geography, elements of natural history, and of the natural sciences, each course to occupy two years, no child under six to be inscribed as a regular pupil. Schools for these courses are to be established gratuitously in every commune. Parents or guardians are bound to send their children to these schools, or to prove that they are otherwise educated. If they fail, they are first reproved by the scholastic commission, and being refractory still, their names are affixed on the parish registers, and read aloud by the parish priest on the first Sunday of every month. The law of 1865 confirms all these particulars, and renders it obligatory for the communes to provide funds for the schools. But this plan for compulsory education is so far in advance of public appreciation, that it does not accomplish its design. There are 31,804 schools, one-fourth of which are private. 376 communes have no schools; 461, none for males; 1884, none for females. Out of 4,898,373 children, only 1,307,217, or 27 per cent. attend the school. Only one school is established over an area of eight kilometers, throughout the realm. It is evident that more progress is for the present exhibited in the thickly settled districts, especially the cities, than in the smaller communes. City schools show an increase since 1863 of 27 per cent; rural schools, 3 per cent. There are infant schools for children between the ages of 2 and 5 years. But the children are sent to these, to be got out of the way, and instruction is not expected. In some of the schools established by the Working-men's Associations, the eagerness of the pupils, and the patience and intelligence of the teachers, who instruct gratuitously, is surprising. But it is said that the routine of the elementary schools is extremely dreary. We gather the above statistics, from the correspondence of the *Nation*.

THE MAINE NORMAL.

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Letters to a Young Teacher on Questions of Modern Science.

LETTER VII.

THE THREE INSOLUBLE PROBLEMS.

II.—PERPETUAL MOTION.

Next to the question of the philosopher's stone, perhaps no one object has occupied more of the attention of schemers and inventors in all ages, than the discovery of some mode of constructing a self-moving machine.

The term *perpetual motion* is, however, not strictly a proper one to denote the thing intended by it. There is no difficulty in finding perpetual motion, anywhere. On the contrary, it is doubtful whether there can exist in the universe *any possible rest*. Throughout all nature everything is in a state of incessant movement or change, not only of worlds in their revolutions, and of masses of matter as wholes, but of atoms and molecules among each other. The solid strata which compose the crust of the earth, are found to be slowly rising in some regions, and subsiding in others: the rocks and the soil everywhere expand and contract continually, as they are affected by the varying action of the sun, giving rise to fractures, fissures, and crevices innumerable. Thus Bunker Hill Monument was found, by accurate observations, some years ago, to lean over toward the west in the morning, from the expansion of the eastern

side under the rising sun, and toward the north at noon, and toward the east at night. The sea and the air are the very emblems of incessant restlessness. The free water that exists around us is incessantly changing its place and form. It ascends in an invisible vapor, it condenses itself in fogs and clouds, it descends in rain, hail, and snow, it runs in brooks, it percolates through sand and stone, it seizes other substances by its power of solution, and then gives them up again in deposition or crystallization ; in a word, it is never anywhere, or for a single instant, at rest. If after setting a portion of it away in the most quiet place that could be found, and waiting till we might imagine that it had assumed a condition of absolute repose, we could then examine it with microscopic eyes, we should find it all in constant commotion through the girations of millions of volifers and vibrios, and other named and nameless animalculæ, never at rest.

Old wood, old paint, old plastering in a wall, is found to be different from new, showing clearly that during the long lapse of years, while it has remained undisturbed, a slow change, which implies a motion among its constituent particles, must have been all this time going on. Even old ice and old snow are found to be different in structure and constitution from new.

Thus perpetual motion, properly speaking, instead of being something wanting and unattainable, is a universal condition of nature, from which there is in no part of the universe any possible escape. It is the *origination* of motion, the *self-development* of it and of the accompanying force that is really intended by the phrase in question.

Now if there is any principle completely established as a universal law of nature, it is this, that the amount of motion or force in nature, either in action or in reserve, is fixed and unchangeable, none can be originated, none can be destroyed. None that exists can be either increased or diminished.

In the case of a mill driven by water impinging upon the paddles of a revolving wheel, the motion imparted to the machinery of the mill is the exact equivalent of that extinguished in the water, and so in all other cases.

A force or tendency to motion may be held in reserve ; that is, the tendency may be held suspended for a time, but it can in no way be increased, except by the expenditure of additional force, to be combined with it, nor diminished, except by imparting a portion of itself to some other body.

Thus the force which we expend in raising the weights of a clock, or in coiling the main-spring of a watch, in the act of winding up, is held in reserve, as it were, only a small portion, namely, that necessary for moving the hands a certain distance, being released at a time by the action of the escapement. The thing to be particularly observed is, that the precise amount of muscular force expended in the winding, deducting that converted into heat by the friction of the mechanism, is represented by the height to which the weight has been raised, in the one case, and by the tension of the spring, in the other; and that precisely these amounts, neither more nor less, are given out again, as the weight descends, or the spring uncoils itself.

I speak of a portion of the force being converted into heat, and this is no exception to the universal law that no force can be diminished or destroyed. It has been abundantly established within a few years; that heat is a *species of force*, in other words that all the phenomena of it are the results of a species of motion in the ultimate molecules of matter. It results from this that changing mechanical power into heat, or the reverse, is only changing one form of motion into another, and it has been shown most conclusively by a great variety of tests devised by different and independent observers, that in all such changes the force imparted is the precise equivalent of that which was expended in imparting it.

The process of vegetation is the great agency of nature for *laying up force in reserve*, to be afterward called into action and made useful by man. The force comes in the first instance from the sun, and is employed in deoxidizing carbon and hydrogen, and in some other somewhat analogous processes. The sun's rays exercise a great force in separating these elements thus from their usual combinations, and the strong tendency that they have to return to these combinations constitutes the force held in the wood of the forests, and in the coal of the mines, which, when liberated in the process of combustion, becomes so efficient an agent in the hands of man.

The point in all this which is important for our present purpose, is as follows, namely: that there is abundant reason for believing that the precise amount of heat or other force which is expended by the sun in forming a pound of any kind of wood, is the precise equivalent of the force laid up in store, and held suspended in the wood; and it is precisely that amount, neither more nor less, which the carbon and hydrogen contained in the wood will render up, either in the form of heat, or of mechanical power, when they return to their original combinations in burning.

Thus in every pound of wood or of coal there is a certain amount of force stored, derived originally from the force radiated by the sun. This force precisely,—no more and no less,—may be educed from it, either in the form of heat or of mechanical power. That is, when the wood or the coal is placed under such conditions that the carbon and hydrogen can again combine with oxygen, they will, in such re-combination, exercise the precise amount of force which was expended in separating them,—rendering it, either in heat or in mechanical power, or partly in one form and partly in the other. No possible agency of man can make the amount either less or greater.

The same principle runs through all the operations of nature, and governs the action of all existing and all possible forces. We cannot create a force, we cannot increase one already existing; we can only *receive* it, either in action, from some process in nature still going on, or from a store, held in suspense and reserve, the result of some process completed. And in employing any force to serve our purposes, whatever they may be, we cannot extinguish or destroy it, or diminish its amount in any, the slightest degree. We can only receive it in one form, or from one direction, and then finally dismiss it, unchanged in amount, to pass off in some other direction, or in some other form.

The opinion of all thinking men who have made the constitution of nature the subject of intelligent study is absolutely unanimous on this subject; so that the inventor who imagines that he can construct a mechanical combination which shall create or originate force, should consider before he spends time and money in the attempt, that he is undertaking something that is universally believed by all well informed men to be, in the very nature of things, utterly impossible.

If some mode could be found of suspending the action of gravitation, or rather, if some substance could be found or fashioned that would intercept it, the most important, and apparently the most valuable results would be attained. For example, the floor of a platform-car might be made of such a substance, and then the heaviest merchandize placed upon the car would have no weight, and could be transported with the greatest facility. Now the possibility of an inventor producing or discovering such a substance is just the same as that of his constructing a force-creating machine. A great, universal, and inviolable law of nature stands as directly and squarely in the way of one of these attempts, as of the other.

EVAPORATION.—III.

On the very evening after sending away the copy for the second article under this general heading, occurred one of the most striking examples I have ever witnessed in which Nature displays the processes whereby she brings forth her grand results.

The day had been sultry and without wind. But about an hour before sun-set, arose a slight, cool breeze, coming in from the east. It scarcely moved the leaves on the lower branches, while those upon the uppermost, showed a much stronger current. A general haze soon spread itself over the sky; but over the Potomac, as far as the eye could reach, up and down the stream, there formed a distinct line of cloud, above and below which not even a mistiness intercepted the view.

In less than thirty minutes the upper surface of this continuous line of cloud had become very jagged. Irregular portions were leaving the denser mass, appearing as a rich ground below, and shooting up into a fantastic kind of forest; with trees of every sort, throwing out from their constantly changing trunks, branches with foliage leaping forth, waving, then lifting itself and disappearing above. In the mean time the whole volume of the cloud was becoming broader and broader; reaching nearly to the river surface below, and swelling upwards bearing its forest-like top nearly to the region of the general haze before mentioned. And all these motions were constantly accelerated. As this line of cloud rose, the strengthening breeze from the east did not bear it westward over the Virginia coast, for a western breeze also pressed upon it; and came to mingle with the eastern over the river valley, and participate with it in filling the partial vacuum caused by the ascent therefrom of the warm air and vapor.

Having attained a certain height, the cloud spread eastward and westward; and amidst lightnings and thunderings poured down a long and copious shower, over a space far wider than the valley of the river, and to a great extent up and down the stream.

The following morning was fair; and a cool breeze from the Blue Ridge was proof that the cloud had been slowly borne eastward in its fall to the earth.

These general phenomena are familiar to all. But let us pass *within*

the great laboratory, and study the processes of production, in the light of those principles we have already discussed in the two previous articles under this general heading.

The strong heat, during many hours of that day, had caused a rapid evaporation from over a large extent of country around; but especially from the river, and the valley through which it flows. On the descent of the sun and the consequent general cooling of the atmosphere, or decrease of its vibratory motion, the tract of it over the river, more loaded with vapor than the lateral tracts over the Maryland and Virginia shores, could not with this decrease of vibration hold so far asunder the parts of the invisible vapor-clusters it contained; consequently, their central portions began to condense and become visible, while they still rose and their external portions broke away and rose more rapidly with their increased inverting spherules of ether. Still ascending to greater heights and receiving less external pressure from a rarer atmosphere, and (because it was colder) less forceful vibrations from it than what were requisite to meet and *balance* those propagated from these vapor clusters,—they more rapidly went on throwing off their external portions and condensing their internal, which at length fell down in the copious showers before mentioned. The rising of the wind, both from the east and the west, according to the increased rapidity of ascent of the vapor or cloud, and the spreading of the cloud eastward and westward at a certain height, thus extending the fall of the rain on each side of the river, are most obvious results of well-known principles. The prevailing breeze I have mentioned as coming in from the west on the morning *after* this storm, was evidently due to the fact that the air coming from the elevated and cool region of the Blue Ridge was *heavier* and had a *greater momentum* than that coming in from over the Chesapeake; so that, on their meeting over the Potomac as before described, this became the ruling force, gradually pushing the cloud against its antagonist, clearing the sky and becoming the main ærial current of the morning in question.

But during the storm, the swift ascent of the upper section of this line of cloud brought in lateral currents of the atmosphere *above* those coming in toward the river *near* the earth; and to these, mainly, were due the breaking up of that section into the jagged appearance, and the production of that fantastic and changeful, forest-like aspect before mentioned.

From the preceeding article on this general subject, the student will have understood that, in the process of the condensation of vapor, the vibratory motion propagated from the parts of the clusters in the *act of condensing* is transferred mainly or wholly to the *external parts uncondensed*; which then rapidly ascend and augment the corpuscular vibrations in the air and vapor around, and thus *expand* it, or, in other words, *warm* it. The tendency of this is manifestly to *arrest*, to a certain degree, the process of condensation of the vapor, especially in the higher section of the cloud, and to dissolve and disperse it. And in almost every summer shower we accordingly witness something of this kind.

In case of a continuous rain, the amount of vapor rising, substantially balances that precipitated by condensation; and this latter process has therefore no marked accompaniments. But in the case of copious showers after great heat, the sudden condensation of vapor to a large amount above its supply, *must*, according to the foregoing considerations, be attended with occasional violent concussions, in the ethereal fluid and the atmosphere, which, by a series of undulatory motions, rapidly extend in all directions from the condensing cloud.

Along these tracts of the atmosphere nearly devoid of vapor, and those saturated with it, this series of undulatory motions spreads *evenly*, though more *rapidly* through the latter. But along those tracts in which there is a very unequal distribution of vapor, or *patches* of vapor and intervening spaces of comparatively dry air, this *even* spreading is interrupted and broken up; the patches of vapor, by their superior attractive force of the ethereal fluid, *quicker taking* and *longer holding* the swells of undulation in it, thus causing it in appearance to go, by a series of *leaps*, from one to another of these better conductors; exhibiting a bright light on its passage, and producing more or less violent concussions in the atmosphere. Hence the lightning and thunder, the usual concomitants of these copious showers. But is not lightning the swift passage of *electricity* through the air? Nay, but what *is* electricity but a *name* for a certain phenomenon?

No one pretends to conceive *how* the very slight tremulous motion of the ethereal fluid produces the sensation of *light*, nor *how* its larger and stronger waves of vibration in connection with ponderable matter, produce the sensation of *heat*; but the *facts* are among the data of human recognition. And the light and heat in the phenomenon we call light-

ning, are, consequently, by the soundest principles of philosophy, to be referred to the co-operation of these two motions, produced in manner as herein described.

As to the idea that lightning is a subtile fluid, actually shot through the air from one place to another, nothing could be farther from the truth. The waves of the sea, though *appearing* to be a *forward motion of the water*, yet scarcely effect a lateral or progressive motion of any floating object. Sound is rapidly propagated through the air by a series of undulations that produce no *sensible* wind-currents. So lightning is but the *appearance* of a rapid transmission of a subtile fluid; when, in reality, it is only the effect of a series of undulatory motions in that fluid, rapidly spreading and falling in with what produce partial obstructions thereto. The more or less violent these motions, so the lightning. And it cannot be difficult to understand why it sometimes appears to flash with more or less intensity through a large extent of cloud, certain portions of which are condensing more rapidly than others; nor why at times it confines itself to a narrow, zig-zag track, and dashes through it with great speed.

The character of the thunder,—the dull rolling, the deep booming, the artillery crash,—will of course be in accord with the aerial commotion we have now considered. Just here the student will call to mind the fact that water, in the state of vapor, occupies about 1300 times the space it does in the liquid state; and remembering this cause of commotion always attending a rapidly condensing cloud, he will not fail to recognize the consequent rush and whirl of the atmosphere, (pressing in to occupy the partial vacuum this process is making therein,) as among the powers of nature that swell the deep diapason of the fierce tempest.

The principles evolved in this discussion make it quite evident why we are to look for hail as a frequent accompaniment of our violent thunder storms. The rapid ascent of vapor in these instances carries it to an elevation where, by unusual expansion in a light and cold atmosphere, the central portions of the vapor-clusters pass *immediately* from the aeriform to the solid state, and exhibit all those forms of crystalization observed in the snow flake. And here we have *proof* that vapor really ascends in *columns*, constituted as hitherto stated.

The fact that this kind of crystalization, if found in the hail-stone, uniformly occupies its *center*, is to be explained from the circumstance that in its fall it passes through the warmer strata of the atmosphere, in

which the condensation of vapor upon its surface is effected at a higher temperature; in which case ice always has that solid and vitreous appearance that characterizes the shell of the hail-stone.

Under what circumstances the condensation of vapor will fall wholly in the form of snow, or in that of hail without the nucleus just described, must now be sufficiently obvious.

My purpose in this communication has been simply to draw the attention of the student to the study of those principles which find their natural expression in the meteorological phenomena ever before him; and I have deemed a single example sufficient for my purpose.

Carefully noting the great variety of these phenomena, he will find himself never wanting a subject for investigation whose importance can scarcely be overrated.

WASHINGTON, D. C., June 12, 1868.

c.

THE WONDERS OF GEOLOGY.

NUMBER FIVE.

BY N. T. TRUE, M. D.

Thus far we have traced the formation of our globe to the time when the sediment in the ocean had settled down and become consolidated into stratified rocks, which were subsequently raised, in North America, into a V shaped belt across the continent. The United States were nearly all covered with the waters of the ocean. The waters of the Atlantic and Pacific unitedly swept along the shores of this Laurentian belt, and worked over the loose rocks and sands and mud, until a sandy shore was formed, stretching across what is now the northern portion of the United States, to the mouth of the river St. Lawrence. These materials, thus acted upon, were finally consolidated into sandstone, and sometimes into limestone and shales.

It was in these sands that we first find any indications of vegetable and animal life on this continent. The waters of the ocean have become sufficiently cooled to form tropical seas, and sea-weeds abound in the shallow waters along the shores.

But before we proceed farther, it will be necessary to notice the different types of animal life as they first appeared, and as they still appear, in a living state. A clear and comprehensive view of these types will render the subsequent chapters the more interesting. Cuvier first recognized four distinct and independent types of animal life. The first and lowest in the scale, is the *RADIATA*, of which you have a familiar example in the Star-fish, popularly called on the coast the "*five-fingers*." The sea-urchin and the jelly-fish are also examples. The same organs radiate from a common center, hence their name. The second class is called the *MOLLUSCA*, or soft-shelled animals. Of these you have familiar examples in the clam and the oyster. The third class is called the *ARTICULATA*, or those animals whose joints are formed by an external attachment of the skin, instead of an internal bony skeleton. Such are worms, lobsters, crabs, and insects. The fourth type is called the *VERTEBRATA*, or those animals having a bony internal framework, of which the most prominent part is the backbone.

Now these four types of animal life were brought into existence nearly at the same time, and were independent creatures, and have always remained so. You never see an animal partaking in part of the structure of one type and part of another. This is a wonderful fact in the history of animal life.

In the shallow waters of this period, the Radiata, Mollusca, and Articulata lived in the greatest profusion. No vertebrata have been discovered in this early period.

Among the lowest forms, were probably sponges. Among the Radiates, no less than forty different species of the Graptolite have been found in the United States. Among the Mollusks, all the grand divisions are developed. It was the age of shell-fish. Among the Mollusks, was one most prominent, called the *Lingula Antiqua*, which is remarkable from the fact that amid all the changes that have taken place on our globe, this genus of shells, with a single exception, has alone survived to the present time.

All the bivalve shells of this period had their valves of unequal size, like the oyster of the present day. They have a symmetrical shell on either side of a vertical line let fall from the hinge to the opposite side. This is not generally the case with shells at the present day. They had openings opposite the hinge, through which they could thrust their arms in search of food. They were therefore called Brachiopods. They were the most abundant forms of shell-fish known in this period.

Among the Articulatés was one of the most remarkable forms, called the Trilobite. They were monarchs of the sea during this period. Five hundred different species have been discovered in the rocks of the globe, but not one is living at the present day. They have been found from one-fourth of an inch to nearly two feet in length. They could swim in the water and crawl on the bottom of the shallow waters of the ocean. Such, in a few words, are some of the characteristic forms of animal life in the waters of the ocean. There are as yet no land plants. No form of vegetable or animal life is known to have existed above the surface of the waters. No fishes, no insects, no reptiles, no birds, no quadrupeds, no man.

What name shall we give to the rocks of this period? They are called in this country the Potsdam sandstone, or, in more general terms, the Potsdam period. It is the lowest of what is now called the Silurian system. These sandstones accumulated to the depth, in some places, of six or seven hundred feet. This is especially the case along the Appalachian chain of mountains. The rocks of this period probably covered a large portion of the United States, but in many places are now covered by later formations. Large trilobites are found in Braintree, in Massachusetts, showing that the rocks there belong to this period. Newfoundland is covered with it. They formed around the base of the Adirondac Mountains, in New York; the Black Hills of Dacotah, and the Laramie Range, south of these.

As these sands accumulated, they gradually subsided, and additional accumulations were made upon them until they acquired a great degree of thickness. Subsequently they were elevated as hardened rocks, and the shore of the ocean gradually retreated southwardly.

Near the close of this period there was an elevation of this formation on the east side of Lake Champlain, forming what is called a break, or *fault*, in the strata. This fault extends from this point to the St. Lawrence, as far east as Quebec. Thus the same rocks are at a much higher level on the east side of Lake Champlain than on the west side. This had an important influence in the future structure of the rocks in New England. In Maine, we probably have the rocks of the Potsdam period, in the slates on the Kennebec river, and in Portland. The limestones of Thomaston and vicinity probably belong to this, or an earlier period. At this time this State was beneath the waters of the ocean. The sediments were accumulating which served to form the older rocks.

The same formation constitutes the slates in the western part of Great Britain, the Highlands of Scotland, and it is found in Bohemia, as well as in the northern portions of Europe. The same forms of animal life were universal at this period. The same general agencies were everywhere at work, but exhibiting a gradual and manifest progress. We learn, from what we have thus stated, the following interesting proposition. That *the great plan of Creation was manifest in the introduction of vegetable and animal life on the globe.* That the end was declared from the beginning, is as evident as anything else in the range of scientific study.

But the crust of the earth was much thinner then than at the present day; consequently there were more frequent changes of level than now. Rents were formed through the rocks from the interior of the earth, and melted matter was forced up through these openings. The rocks were injected with veins of the metals, and it is in the lower Silurian where we find the precious metals,—the lead and silver ore of Piscataquis county, the gold ore of Vermont, New Hampshire and Georgia, and the copper oars of Lake Superior, and Canada, belong to this formation. The same is true of the gold bearing rocks of Nova Scotia and Australia.

TACTICS OF THE SCHOOL ROOM.

NUMBER FOUR.

Assignment of Lessons. Many teachers show a singular lack of good judgment in assigning lessons to their classes. One of the most important duties of the instructor, is that of laying out work for his pupils. Now common sense would seem to decide, that work should be apportioned according to the nature of that work which is to be performed, and the ability of those who are to perform it. If, therefore, the question is asked, as is frequently the case with young and inexperienced teachers, "how many pages should be assigned for a lesson," in a given study, the answer must of course be, "*that depends upon circumstances.*"

It is safe and proper to assert, in the first place, that teachers oftener err in giving lessons of too great length, than otherwise. The ambition of teachers, as well as of pupils, to make rapid progress in a text book, or to accomplish a certain amount of work before the close of the term,

often makes the amount of study to be done, rather than its thoroughness, the leading object to be aimed at. Hence such teachers often do injustice to their pupils, in overworking them and making them superficial; while, on the other hand, those pupils are never able to do justice to themselves, or to their studies.

It would be as useless to attempt to lay down a rule as to the number of pages to be given out for a lesson, as it would be to say how large a piece of bread and butter will satisfy a boy's hunger. Very many circumstances must be taken into account in determining the length of the lesson. The age of pupils, and the number of studies pursued at the same time, will, of course, have an important bearing; and the teachers' duty to take these two facts into consideration is so plain, and the exercise of his judgment accordingly, so clearly called for, that we deem it sufficient to make this allusion to them without any further remark. Especial care is necessary not to over-estimate the ability of pupils in the preparation of lessons. Those pupils who acquire slowly and with great effort, must not be expected to accomplish as much, in amount, as those of more ready and brilliant minds, who often prepare their lessons by the slightest effort and with astonishing rapidity. Pupils of advanced culture, or of considerable proficiency in their education, may be assigned to a greater task than those whose powers have been less exercised, and who cannot yet be expected to have the advantage of well formed habits of successful study. Considerable allowance should also be made for those whose early training has been superficial, and noticeably wanting in thoroughness. Such pupils in the higher grades of school, and in college, always labor under a great disadvantage, and their work will require more time and study than those who were more fortunate in having thorough training to begin with. The character of the text book must be duly considered. Some authors have the happy faculty of presenting a subject so clearly and natural in their books, that much less effort is necessary to comprehend and acquire the general scope of the lesson, than in the case of others where the text book may, in every sense, be said to be unnatural, difficult, and poorly adapted to aid the pupil in his labors. Elementary work at the commencement of a new study, always requires more time than subsequent progress in the same branch. Teachers will do well to give special heed to this fact.

In every branch of study there are some portions of the subject which are more difficult than others. Short lessons must therefore be assigned

in all such cases. In other portions, less difficult, it may be allowable to attempt a greater amount. It is also highly important to remember that some subjects in the text book, or features of the subject, are vastly more important than others; consequently the attention they should receive will make it the duty of the teacher to apportion his lessons accordingly. At times a page, or even a half page, in many of our common English branches, will be amply sufficient for the time of the recitation, or for the powers of the class. In other cases half a dozen or more pages may be mastered with equal ease. Sometimes we must dwell long and minutely upon the lesson; and then, again, we may advance with considerable rapidity. The relative importance of the subject matter of the lesson, must largely determine the time to be spent upon any given portion of the text book.

If the teacher will give the above considerations their due weight, they will aid him, we think, in the exercise of his judgment in the assignment of his lessons. But the most important thing to be remembered is, that lessons should *not be too long*.

Next after the assignment of lessons, a very important question arises: How much assistance may the teacher give the pupil in the *preparation* of his lesson? We propose to give some thoughts upon that subject next month.

A. P. S.

THE SACRED COMMISSION.

A Class Poem read at Farmington, June 2d, 1868, by G. K. Dike.

Near the city famed and holy,
 Stood disciples long ago,
 Weeping for their Lord the lowly
 Fallen by a treacherous foe.

With affection he had led them,
 O'er the land, and o'er the sea,
 And with wisdom he had taught them
 What the way to heaven should be.

Taught them of the life eternal,
 This the prize which they should win,
 Taught by works and words supernal,
 Love of truth and hate of sin.

Taught, in accents sweet and simple,
Taught by works none else could do,
Taught by precept and example,
Taught by death for me and you.

Therefore in the lonely garden,
Stood the followers of their Lord;
Weeping sought they in the garden,
Him they trusted and adored.

Sorely 'reft, and dumb with sorrow,
Little thought they in their pain,
Ere the coming of the morrow,
Risen He'd comfort them again.

Earth had shook, and heaven had trembled,
Conscious of their monarch's fate;
Stood aghast the crowd assembled,
As they were inanimate.

Dead men from their graves ascended,
Heaven was clothed in robes of night;
But the sting of death was ended,
Followed everlasting light.

Far beyond the light of mortals,
Is that risen Saviour gone;
Far beyond the "shining portals,"
He the "Exalted," the "First born."

Waits he there for those who love him,
Works he there a work his own.
Teaches there,—all understand him,—
Bids the weary welcome home.

But he leaves to us the duty,
That we bear his banner high,—
That our spirit's grace and beauty,
His indwelling testify.

That we send his truth celestial,
Where the realms in darkness lie;
Where to superstitions bestial,
Men in spirit bondage die.

Thus lived He, our Lord and Saviour,
Thus he taught, and wrought, and died;
Thus he rose, and liveth ever,
Thus the law is satisfied.

THE MAINE NORMAL.

Still, in earth-bound darkness lying,
Fallen and grovelling by the way,
As by night an infant crying,
Cries the world for light to-day.

Through the centuries since the Master
Rose triumphant o'er the grave,
Powerful over all disaster,
Onward rolls the gospel wave.

Beareth many a war-worn pilgrim,
Far beyond the place of strife;
Lifteth many a faithful victim,
From the tempter into life.

What a miracle of glory,
Was the advent of our Lord;
How exhaustless is the story,
Which his teachings shall record!

Onward moves the tide forever,
Onward to the heavenly land;
Forward always, backward never,
Bringing home the ransomed band.

Upward, from his low condition,
Helping every one to rise;
Giving treasures of salvation,
Giving strength that never dies.

And the ranks of starry glory,
Far beyond the shining skies;
Tell of Jesus and the story,
How from sin he helps us rise.

Many a weary pilgrim stranger,
Seeking help from him alone,
Tells the story of the manger,
Of the Father and his Son.

Here they seek to teach and practice,
As he taught while here, on earth;
Words of simple loving kindness,
Deeds that are of priceless worth.

Now they fain would guide the lowly
In the pathway he doth lead;
Showing if they would be holy,
That of knowledge they have need.

Yes, the vanguard of salvation,
Of this lowly band is formed; .
And the onward march of nations,
With their trophies is adorned.

Ah! the seed our Saviour planted
In the hearts of those he led,
Has been sown by souls undaunted,
By the sacred martyred dead.

As our Lord had many a learner,
So have teachers of to-day;
'Tis to fit them for His garner,
These must strive, and watch, and pray.

Though the shadows darken round us,
He will light the lamp divine;
O'er the river dark He'll bear us,
Upward to the hights sublime.

LETTERS TO A YOUNG TEACHER.

BELFAST, ME., June, 1868.

MY YOUNG FRIEND:—As I take up my pen this beautiful summer day, to commence this letter to you, my thoughts immediately go out to you and your surroundings, and I imagine myself with you in one of those little red school-houses of which there are so many scattered over this goodly State of Maine. Your summer term has been in operation now several weeks, and you have fairly got the harness on for the campaign. With the first Monday in June, thousands of urchins wended their way to the wide open doors of the district school-houses in the State, and on that day hundreds of teachers, young girls themselves, went through with that never to be forgotten experience in a teacher's history, the first day in the school-room. It is now of the past, and no doubt but you look back to that period, be it this year or last, with a smile of wonder at your feelings at that time, and of satisfaction that you got through with your labors so well. Many of you taught last year, some of you are veterans in the service and need no words of advice from me, but a goodly number are new to the business. To all of you I send greeting and kind wishes for your welfare and success as hereto-

fore, but for the latter I could wish to do more, however far I may come from it.

Some of you have clean, airy, roomy houses in which to perform your daily tasks, but a majority of the school-rooms in the country districts are small and inconvenient. You can do something towards making even these look pleasant and inviting. A clean swept floor, scoured desks and orderly arrangement of the room will help effect this, and should always be regarded. Then there is that never failing source of beauty and adornment—flowers. Leaves and vines for wreaths and festoons, and plenty of flowers—field flowers if you must—for decoration. They are common, plenty, cheap and beautiful. Let no school-room be without them in their season.

You will not have so much trouble to teach your little flock, as you will to govern them—to keep them still. They are restless, and it being their nature and a necessity, we must accept the fact, and do the best to meet the conditions. Those little feet and limbs must not be kept in confinement for so long. They need and must have frequent exercise. Give them frequent and long intermissions, and send the very youngest home before the final hour of four is marked upon the watch dial. If they become sleepy, don't scold them, and if they are noisy, be as pleasant with them as possible. Many parents are so thoughtless that they send their little ones of four years of age and less to the school-house just to get rid of them, not thinking that they are doing the child an injury, as well as discommoding the teacher and the school.

Excuse the brevity of this letter. I think these beautiful days are not favorable to the disease known as *cacoethes scribendi*. Leaves and birds and flowers, tempt to open air reveries or labors. Success to you. When you are lonesome, or tired and disconsolate, remember the object, and also that a few weeks are soon passed.

Yours truly,

G. E. B.

MR. MATTHEW VASSAR died suddenly in Poughkeepsie, N. Y., on Tuesday morning, June 23. He was born in the county of Norfolk, England, in 1792, but came to this country when only four years old. He gave \$400,000 to found the Vassar Female College. He died while reading his annual address at commencement exercises.

THE CRUCIBLE AND THE REFINED GOLD.

The Valedictory Address of Miss EMMA MORRILL BROWN, read at Farmington, June 2d, 1868.

Far back through the annals of the past, ere the rudimental condition of common knowledge had been developed, had assumed a scientific form, strange phenomena were observed in certain places, which the superstitious people of that day could account for in no other way, than by supposing it to be the work of invisible spirits. In the operations of alchemy the vessels were often broken into many pieces by sudden explosions, dangerous to all around. The devoted alchemist supposing this to be the work of the imprisoned spirit, roused to deeds of vengeance, commenced his experiments with devout prayers; and had stamped upon his vessels the holy cross as a charm against these evil tormentors: hence the name crucible was given to those vessels, from a word meaning a cross. In these crucibles the rude materials underwent numerous and various changes; each step bringing them nearer and nearer the pure element. Gold seemed to be the chief aim and purpose of the alchemist: to obtain this, the seed of gold—the philosopher's stone—was desired and sought for. Experiment followed experiment; year after year came and went; still the work went on: when lo! the refined gold appeared. Not from the philosopher's stone, not as a metal; but by untiring efforts, the great golden truths of science were obtained.

Life is a crucible, wherein the virtues imbedded in the cold, hard soil of ignorance and earthly dross, are purified, refined. Within every heart there is implanted the pure essence, which life's privileges, duties, sorrows, and trials, are destined to rectify from the grosser matter. As, in the language of old chemistry, "the metals were tortured by fire to yield up their virtues," so life's numberless compounds of the material and spiritual pass through the great refiner: tortured they may be by the melting, burning flames of His Holy Spirit, until the soul, purified, casts off its final weight of earthly dust, and passes with the golden beams of day beyond the sunset land.

Among the many opportunities which are adapted to greatly facilitate the attainment of this great end, is the school. In its intellectual development, and by the influence of its pleasant associations, it is aptly fitted to aid in this great purifying work. Each progressive step, from the first information of the uncultivated, to the mountain tops of science,

serves to lighten the weight of nature's grosser material—casts it away, and the intellect purified, refined, rises to higher and higher objects. In our school associations, as a united family band, we realize its powerful effect, exemplified in the daily life, by deeds of unselfishness, and noble acts of love and heroism.

Hand in hand we enter the green, fertile field of education, all glowing with silvery dewdrops, sparkling in the rosy light of morn. Walks by the murmuring, pacing brooks, up the winding mountain paths, under the drooping boughs, "Whereon slumber birds and blossoms, many numbered," whose green veil shields from the noon-day sun; rests by the cooling crystal springs, from whose depths we drink deep draughts; these are daily associations. And this unconscious teaching, silently carries away the husks of human life, and the golden grain—the glowing virtues—shine from out the windows of the heart. Their radiant beauty, glimmering forth upon the trackless waste, catches, perchance, the weary eye of some lone wanderer; and upon the calm, still air floats one joyous strain of praise and adoration for the saving beacon light. These angel visits enter the inner precincts of the soul; and purified in thought, we listen to the still small voice calling us up higher and higher, on and on to the perfect hereafter.

Entering upon life's sterner duties, the demand for the support of the material, and the desire for comfort and renown, not unfrequently bury the pure elements deep within the sands of worldly gain, and blind ambition. The foam-crested waves of sorrow and affliction, borne along upon the mighty sea of events, dashes upon this earthly mound, carrying with them in their backward flow, millions of tiny grains of sand: and purified, the golden virtues again glitter in the sunshine of faith and hope.

Of the many situations in life, that of a teacher needs especially the purifying influence of all that is high and holy. To him is intrusted the cultivation of that which is imperishable, where "every chord that is struck in the tender mind vibrates at the throne of God." His should be the highest motives which actuate human conduct. His example may have such magnet force, that it will be said of him, "all were swift to follow whom all loved." All cannot shine with equal intensity. "When the moon shone, we did not see the candle;" and yet how true it is that there are situations in life where the moon-beams never enter! There the feeble candle light becomes a God-sent star. Thus the purifying work of life progresses.

As we step from life's crucible, all that is material perishes, but the pearls that glorified the sacred springs of life, return to their casket, and are placed at the feet of Him, who said, "The pure in heart shall see God." The effect of intellectual advancement, and the elevating influence of a Christian atmosphere, wafted around us by the pure breathings of faithful, Christian instructors, have been ours to enjoy for the past two years. To-day we must say farewell to all connected with this institution. The result of its purifying influence, time only can tell. May it be all that the State could desire. Kind welcomes have already greeted you, farewells quickly follow.

First, to HIS EXCELLENCY THE GOVERNOR, we would extend our thanks: thanks for your presence, which we interpret as an honor to us, and an encouragement to the cause of education in this our pine-tree State. Gladly would we have welcomed you to witness our every day labors, but knowing the many duties demanding your time and attention, we inferred that necessity, and not want of interest in the Normal cause, detained you. Feeling assured that this institution rests in the hands of those who are able not only to regulate the executive affairs of the State in regard to her pecuniary matters, but also her educational interests, we look forward to the day as not far distant, when Maine shall take her stand among her literary sisters, exemplifying indeed her motto, "Dirigo."

TO OUR HONORED SUPERINTENDENT—*Stranger and friend*: We regret that circumstances have been so unfavorable, as to cause us at this time to address you personally as a stranger. But knowing your past occupation, and the position which you now occupy in the educational arena, we feel confident of your kind wishes and friendly words of encouragement, as we take our places among the laborers of the day.

With the wise counsel and words of instruction received from the lips of our worthy Ex-Superintendent, to whom we desire to express our gratitude, still fresh in our minds, we step from this institution better fitted and prepared for our chosen duties. Thankful that the mantle of our past faithful Superintendent has fallen upon the shoulders of one so worthy of its honors, we pass from the field to the vineyard. If in future time our paths should chance to meet, may you find *ours* the work of *faithful stewards*.

TO OUR KIND AND FAITHFUL PRINCIPAL, we must say farewell. We stand by the open portal; our eyes look out upon the broad unknown;

daty demands of us work ; armed with a fixed purpose, and guided by the firm, unerring hand of God, we have no desire to shrink. Yet for a moment we linger ; linger for one more word of counsel and advice, one last prayer, one last farewell. In future years, if our wandering feet should lead us to the brink of some high, fearful precipice, methinks memory of *thee*, thy words and precepts, like piercing rays of sunlight, would disperse the surrounding darkness, and as a beacon-light, lead us back into the green and verdant pastures by the side of the still, pure waters. The song of redemption wafted to the angel band above, will greet you at the entrance gate, as a part of your reward. Our grateful hearts can do no less than express the *earnest wish* that the same Christian spirit which has sowed the seed of truth and purity in our hearts, may ever guide you. When the harvest time comes, *then you* will receive your reward.

TO OUR DEAR TEACHERS.—Standing by the side of, and co-workers with our worthy Principal, no less do we realize the deep debt of gratitude due you. An association of two years has coiled around our hearts a golden chain, which, though about to be severed, can never be uncoiled. Though the heart may become dusty and covered with the cob-webs of earthly cares and tumults, yet *ever there* will remain the precious links formed by your unceasing toil for our advancement and eternal good. May the earnestness with which we enter upon our work, and its final result, encourage you on, and add one ornament to your triumphs, when you take your places among the victors in the kingdom of God.

DEAR SCHOOLMATES :—From you also we must part ; though gladly would we linger, and add to our gleanings more sheaves, richer, riper grain. But we have received our allotted portion, and must go out from under the parental roof. Beautiful is the picture that we have here painted. Our present lovely landscape may ere long be changed to one of desolation and waste, and the mild and gentle sunlight shrouded in darkness and gloom ; yet ever green and verdant, with the bright sunlight above, will remain our school-day pencillings. With the fond anticipation of soon welcoming you, better prepared we trust, as co-workers in the field of education, we bid you good-bye for a season.

DEAR CLASSMATES :—Strong are the links, mighty the chain that binds our hearts together. But I trust that we have taught ourselves to look upon this separation, as only the separation of laborers for a day, to different parts of the vineyard, who are to meet again at night and recount

their toils. We have frequently been warned that earthly links must be broken. Sadly did we realize this fact, when but a few months ago, one of our members was summoned by the cold and shadowy boatman to cross the dark waters. His last words, "*I see Jesus,*" rest like balm upon the wounded heart. Our loss, and the loss which we felt the cause of education had sustained, caused our hearts to question the justice of the blow, but faith whispered :

"When you reach that world of light,
And view these works of God aright,
What now seem random strokes, will there
All order and design appear."

To-day our association as a class is to be broken up. We have paid our last farewell tribute to the several departments of our educational field, and now stand where many pathways diverge. Stern duty silently points out our destined way ; and carrying with us, indelibly stamped upon the tablets of the heart, the many valuable truths, inculcated by faithful instructors, we enter the narrow path for active, earnest work. Ours may not be the hands to rear the mighty oak, but we may beautify, and make pleasant the common walks of life, by planting the lily and the daisy. Though we may not render our names immortal to the world, we may to the hearts of a few chosen ones, whose influence cast abroad may do much to raise education, society, *mankind* to that state of perfection destined by the great Father of the Universe. Our paths, though they now diverge, will, if we are faithful, converge as we near our journey's end, and at night we shall meet again at the river-side, our life-work finished, ready for the coming of the boatman to land us upon the farther shore, the land of the *infinite hereafter*.

DESERVING THE NAME.—There are said to be several universities in this country, and probably are some ; but I personally know only one seminary deserving to be so characterized, and that makes no pretension to the title. It is the Deaf and Dumb Assylum, in the city of New York. Each child admitted there as a pupil is taught letters, arts and industry, science, and its uses, principles and their application. He graduates master of some good trade or handicraft, as well as of all that is usually taught in school. There is scarcely a chance in a million that a youth thus educated, and in full possession of his senses, should utterly fail.—*Greeley*.

Editorial Department.

The MAINE NORMAL will hereafter be issued from Portland instead of Farmington, and all exchanges should be directed to

The Maine Normal, Portland, Me.

CHANGES, ACTUAL AND CONTEMPLATED.

THE CHANGE in our place of publication and in our individual manner of life, brings us into new relations, by the severing of some links which had grown strong by the power of association, to which we shall ever look with unmingled pleasure and satisfaction, which we shall keep bright by the power of memory and contemplation, and to which our readers must permit us to refer at some coming time. We feel that we have not left the schoolroom, but that our sphere of action has been enlarged, to inclose within its grasp, not a few to whom we impart orally the ordinary instruction of that place to which is given the name school, but we are henceforth to labor, as best we may, to promote the interests of education, by sending forth a publication bearing with it the best thoughts of the wisest and most experienced men and women whose services we can enlist, to assist all parties connected with all schools, from the primary grade to the most advanced.

In the first place, in the larger town from which the "*Normal*" is from this time to be issued, there are the advantages which must always come from attrition, from coming in contact with more minds strengthened and enriched by discipline, and polished by culture. Into every considerable center of trade and population are constantly flowing the streams of the current life of the nation. Commercial enterprise has its channel; so have all the departments of trade and material prosperity; so has that less observed and less cared for source of power and safety, universal general education. To gather from this stream all that is pure, in order to send it out again to bless humanity, is a task well worth the talent of a gifted and cultivated mind.

In the second place, the facilities for intercommunication, which our new abode will afford, are certainly of decided advantage. We can now reach out more frequently to take by the hand those who are serving in the same work in which we are engaged, can gain from them some warmth, some of the sunshine which it is their constant endeavor to reflect, as the grand fructifying element for the blessed field which they cultivate, and at the same time, we humbly hope, bear with us a small share of the love and enthusiasm without which our presence could be of no benefit.

We can only allude to a third advantage, to result from our new home. No country office can afford all the facilities which a city office affords for the presentation in pleasing and tasteful form of the thoughts of those who are willing to contribute to swell the channel to which it is intended that this periodical shall minister. We have full confidence that the printing and press work of the "*Normal*" will give satisfaction to all into whose hands it may fall.

But there is another matter to which we wish to call attention at this time, with special emphasis. Detached, as we now are, from the ordinary details of school work, we hope, through the avenue into which our footsteps will now be turned solely and with complete devotedness, still to continue our labor for the students in the schools. We love school work, because we are most heartily in sympathy with those whose characters are in process of formation, and with whom, as a class, we have been so long associated. We shall attempt, then, for the future, to make this magazine more useful to students, than heretofore. The "Department of Practice," which has already been commended by many who have been readers of the "*Normal*," will, we are confident, be, from this time forth, a more useful vehicle to all parties to the School, than heretofore. Students and teachers may hope to find in it that which is well adapted to add interest and usefulness to school-day life. We invite contributions which will be of interest to those attending the different grades of schools, and shall develop more fully in the August number our plans in respect to this field, which we purpose to occupy and cultivate with whatever force we may be able to command.

THE STATE NORMAL SCHOOL AT FARMINGTON.

EXERCISES OF EXAMINATION AND GRADUATION.

The Western State Normal School at Farmington, Maine, closed the fourth year of its existence, with appropriate examination and graduation exercises, on Monday and Tuesday, June 1st and 2d. Notwithstanding the great amount of rainy weather which has been a constant element thus far for the year 1868, both days were fine, and a large number of people from various parts of Maine, availed themselves of the opportunity afforded, to inspect the school for teachers now regarded, we trust, as a fixture among the institutions of Maine.

The new State Superintendent, Mr. Warren Johnson, was on hand in good season and excellent order, arriving in Farmington by Saturday evening's train. Exercises on Monday were principally of Examination. They began at Normal Hall, Monday morning at nine o'clock, with concert reading in the New Testament, Singing, and Prayer. The Fourth Class in Algebra, conducted by Mr. Roliston Woodbury, was first examined. Mr. Woodbury, although he has been a teacher in the Normal School but one year, being a member of its second graduating class, exhibited much ease in the management of his recitation, and, we may add, has been very successful in his efforts in the school during the past three terms. His class acquitted themselves with much credit. An exhibition of Calisthenics in which the whole school was led by Mr. Woodbury, Miss Jennie Brett, of Farmington, presiding at the piano, then followed.

The Third Class was next examined in Arithmetic. The principal examination of this class, was in Interest and Discount, and some other matters connected with

the general subject of Percentage. Some questions which were put by the State Superintendent during this period, elicited answers evidencing that the teacher, Miss S. R. Earle, had not failed to fortify her pupils against attacks by causing them to understand thoroughly and in detail the subjects upon which they were examined. Miss Earle has been a teacher in the Normal School now for more than two years, and we deem this a fitting place to bear our testimony to her worth as a teacher. With christian dignity, skill, and high intellectual and professional qualifications, she has so borne herself in all her relations to the school, as to be highly esteemed by *all* with whom she has been associated.

After a short exercise in mental arithmetic, and a brief recess, the Second and Third Classes, taught in the branch of study in which they were examined, by Miss Helen B. Coffin, were called, for a test in Physiology. The class was examined by topics, none of them, nor the teacher herself, knowing the topics which should fall to individuals. This method threw each pupil upon the actual knowledge which he might possess, without time for much thought, and it showed that there had been no lack of thorough instruction on the part of the teacher, and that the students had applied themselves with more than usual fidelity. Miss Coffin entered the school with Miss Earle. We can do no less than commend her faithfulness, and we cannot say how much we have prized her as an assistant in our labors. Through the whole domain of school work, her influence has been felt and felt only for good.

Afternoon exercises which began at half-past one o'clock, were opened by an examination conducted by Miss Julia A. Sears, in Geometry, and in which the whole school below the Senior Class was combined. Miss Sears possesses peculiar ability and tact for the management of large classes, and here she had one of about sixty in number. The Superintendent's questions to this class met a prompt response, and the promptness and accuracy with which the demonstrations covering much of the ground in Plane Geometry were gone through, gave evidence of logical mathematical training on the part of the assistant teachers under whose direction these classes had been. Miss Sears' connection with the Normal School has been for just two years. She entered with the class which graduated June 2nd. She has been loved and respected, and esteem for her has increased with every succeeding term while she has been an assistant in the school. She is a very energetic and conscientiously thorough teacher.

After a recess, came an exercise in reading, by members elected from each of the lower classes, 2nd, 3rd, 4th, and 5th, which was in charge of the Principal. Selections were read by Miss Pennell of Gray, and Mr. St. Clair of Rockland, of the 2nd class; by Miss Case of Alfred and Miss Butterfield of Springfield, of the 3rd; by Mr. Hayes of Farmington, of the 4th; and by Misses Harlow and Kimball, of the 5th. A committee of judgment, consisting of the State Superintendent, Rev. Messrs. Howard and Reed of Farmington, and Prof. Burnham and Hon. Edward P. Weston, also of Farmington, pronounced upon these exercises, and out of the seven readings adjudged Mr. St. Clair's best, and Miss Kimball's second.

Exercises of Declamation and Map Drawing added interest to the day, which should hereafter occur on Tuesday rather than Monday, so that more persons from abroad may be present, though the school-room was filled with guests on this occasion.

TUESDAY.—A considerable number of the friends of education arrived in Farmington by the train Monday evening, to witness the closing exercises in connection with the graduation of the third class of graduates, which outnumbered any in the previous history of the Normal School, and was a large class to be graduated from any institution of the kind, especially at so early a period in its history. Among those who thus came was His Excellency Joshua L. Chamberlain, the Governor, Hon. Messrs. Flint, Holland and Reed of the Executive Council, Mr. Barrell of Lewiston, and Mr. Tenney of the *Brunswick Telegraph*, who brought with him his *better half*, formerly Miss M. S. Packard and an assistant teacher with us in the Normal School. It was a crowded day. Every available place in the room where recitations were conducted, was taken up, and many could not obtain access. Our space will not allow us to report in detail the morning exercises. We give the day's programme without comment, and insert also the class parts which contain matter of general interest.

FORENOON.

Devotional Exercises.	- - - - -	Examination.
Astronomy,	- - - - -	Miss Sears.
English Literature,	- - - - -	Miss Earle.
Botany,	- - - - -	Miss Coffin.
School Economy and English History,	- - - - -	Principal.
Calisthenics,	- - - - -	Mr. Woodbury.
Singing,	- - - - -	Mr. Allen.
Mental Arithmetic,	- - - - -	Principal.

AFTERNOON.

Exercises in Orthodox Church.

SONG OF WELCOME.

WRITTEN BY A MEMBER OF THE CLASS.

Beneath fair Summer's sky we meet,
 Where flowers their fragrance fling;
 Green grasses spring beneath our feet,
 The woods with anthems ring;
 And we would raise *our* greeting song,
 To bid you welcome be,
 While singing birds their lays prolong,
 In tuneful harmony.

The patriot loves his native land,—
 The wand'rer loves to roam;
 With muscles firm, and hardened hand,
 The farmer turns the loam.
 And thus has each, in life's great field,
 Some chosen path to tread,
 Some work that shall rich harvests yield,
 Ere life's short day has fled.

As we from youth to manhood pass,
 Our hearts beat warm and free;
 There 's work to do among the mass,
 And faithful would we be.
 Say not the sun oft hides his face,—
 That darkness often lowers;
 So Love's pure taper burneth bright,
 There 's cheer in gloomiest hours.

A work of love, a work of faith,
 Lies just before our eyes;
 It summons us to noblest deeds,
 It biddeth us be wise.
 Outward our boats in faith we steer,
 The stronger tide to feel;
 The breaking waves we need not fear,—
 "Our father 's at the wheel."

Salutatory,

Milton L. Merrill.

Again, at the end of a school year, we have the privilege of meeting you, and welcoming you to these closing exercises, with which, as a class, our connection with the Normal School ceases.

We are happy to welcome here, to-day, His Excellency the Governor of our Commonwealth, whose reputation as a soldier and statesman is only equalled by his reputation as a scholar. Believing that he who has shown such unwavering patriotism and unselfish devotion to those free institutions which are the glory of our country, will do every thing in his power to perfect and improve the common school system, so often and aptly termed the foundation of those institutions, we entertain high hopes that Maine will soon occupy a position in the educational world, of which her children may well be proud.

We welcome you who as members of the Board of Trust and Oversight, are so directly connected with this school, and may your labors in its behalf be rewarded by its uninterrupted success and usefulness.

We welcome you, sir, who have so lately entered upon the duties of Superintendent of Schools. Though personally a stranger, we have long known you by reputation, as one of the most successful teachers in our State. We have been encouraged by the words of advice and greeting which you have so lately addressed to the teachers of the State; may they prove the harbinger of a brighter day for the common schools of Maine.

We welcome you, who have been drawn here by the interest which you feel in the cause of education. Representing as you do the different avocations of life, your presence shows, that though the friends of education may differ on questions of expediency, their purposes are the same.

We welcome you, among whom we have resided for so large a portion of the time during our course of study. We appreciate the favors which we have received at your hands, and thank you for the interest which you have shown in our welfare. Wherever the paths of life may lead us, of you and of your beautiful and quiet village, so peculiarly adapted to the wants of the student, we shall ever retain many pleasing recollections.

We welcome you, who as our personal friends and relatives, feel an especial interest in the exercises of to-day. Often have our hearts been cheered and our purposes strengthened by your words of encouragement and advice.

We welcome you, with whom we have formerly been associated in the school, and who have gone forth in advance of us, to disseminate those principles which you here investigated and acquired. You have a right to be proud of the success which has thus far attended your labors, for it is of such a character as will reflect credit not only upon yourselves, but upon your *Alma Mater*.

It is generally accepted as one of the elements of our political economy, that it is the duty of the State to provide for the education and general instruction of its children, and thus, by purifying and elevating the public mind, prevent corrupt feelings and opinions from gaining the ascendancy, and turn the strong current of public sentiment against crime in all its forms. The common schools have been, and must continue to be, the chief instrument by which this educating and elevating influence is exerted. Reaching down, as they do, through every class of our people, and offering equal opportunities to all, they exhibit one of the most striking characteristics of American principles.

Many of the States, believing that, "as is the teacher so is the school," have established schools for the professional training of the teachers. Such is the purpose for which this school was founded. Its object is to furnish the young teacher an opportunity to acquire a knowledge of those principles which underlie successful teaching, where we can acquire from experienced teachers a knowledge which would otherwise cost years of weary labor, accompanied by many failures and disappointments. Nor are normal schools to be regarded as mere experiments, for during the past thirty years they have been doing a work in some of our sister States, the results of which are visible in the higher qualifications of their teachers, and the consequent improvement of their common schools.

Are not schools of this character as necessary in Maine as in other States? Surely, no where is it more necessary for the teacher to have perfect control over all his powers, to work with untiring energy.

May the teachers of Maine be so educated, that, as they go forth to battle in the domain of ignorance, they may achieve such triumphs as will advance civilization, elevate humanity, promote our future prosperity, and reflect honor upon the State.

ESSAYS AND DISSERTATIONS.

Class Chronicles,
Class Declamation,

Florence A. Church.
Fred. E. Whitney.

CLASS SONG.

WRITTEN BY A MEMBER OF THE CLASSES.

Bright the warm sun shineth o'er us,
June's soft breezes round us play;
Chant we here in gladsome chorus,
Welcome to our friends to-day.

But the hours are swiftly fleeting:
Classmates, oft we've met before,
Never thought we at our meeting,
We together meet no more.

THE MAINE NORMAL.

Aims, and cares, and duties sharing,
 We have gathered day by day,
 For our noble work preparing,
 Gleaning sheaves to bear away.

Happy days of hard endeavor,
 That we've spent together here,
 Ye have quickly passed, and never
 Will return, our hearts to cheer.

But, though now our school days ended,
 Yet the future brightly burns;
 Fields are broad, the rich grain, bended,
 "White unto the harvest" seems.

Saviour, guide us in our calling,
 So when life on earth is past,
 Death's cold shadow round us falling,
 We may reach our home at last.

Lo! the Star of Hope ascending
 O'er the mountains fair and dim,
 Tells that, toil and duty ending,
 We shall ever live with him.

Class Poem,

Geo. K. Dike.

[See Poem on preceding pages.]

ESSAYS AND DISSERTATIONS.

Class Recitation,
Valedictory,Miss M. A. Ferguson.
Miss Emma M. Brown.

[See Valedictory on preceding pages.]

PARTING SONG.

WRITTEN BY A MEMBER OF THE CLASS.

Schoolmates, good bye; our tasks are o'er,
 We part to-night, to meet no more.
 The falling tear,—the heartfelt sigh,—
 Bespeak our sorrow. Good bye! good bye!

Teachers, good bye! Your watchful care
 Forever in our hearts we'll bear.
 May He, who guards with sleepless eye,
 Protect you ever! Good bye! good bye!

Classmates, good bye! The tie is riven;
 We part on Earth, to meet in Heaven;
 And hope still brightens the tearful eye,
 So, dearest classmates, a long good bye!

Good bye to all; friends, teachers dear,
 Schoolmates and classmates!—We linger here.
 Our duty calls, and a mission high
 Awaits the future. Good bye! good bye!

REPORT OF PRINCIPAL.

Gentlemen of the Board of Trust and Oversight.

This day closes the fourth year of my connection with this Institution, and the third of my occupancy of the position which I now have the honor to fill. It gives me great pleasure, that the Executive Department of our State Government is to-day so fully and, permit me to add, so fitly represented, in these exercises of examination and graduation. Incident to the infantile life of institutions as well as individuals, are some dangers, and, on the part of those who watch over their interests, generally some doubts and fears. Oftentimes adverse currents and storms threaten destruction, and often some unthought-of internal and insidious enemy of life menaces death. If through its period of experiment and doubtful expediency the institution passes to the solid ground of established reputation and character, it has thenceforth a career before it, which, under proper direction and watchful care, challenges respect and deserves the co-operative influence of the good.

It is not necessary, and perhaps it would be hardly proper, for me to dwell, at this hour, upon the history, the present condition and, under favorable influences, the prospective usefulness of this school, with which I have been connected from its inauguration. Its past is a part of the official educational record of the State of Maine, and as such is secure. Any who will take the trouble to read, can know, for themselves. The brief period of the past term hardly needs to be recounted on this occasion, as it, too, will appear in due time; in the report of our newly appointed and energetic State Superintendent. Established, as stated in the provisions of the legislative enactment of March 23d, 1863, to "be thoroughly devoted to the work of training teachers for their professional labors," to have a course of study in which "the art of school management, including the best methods of government and instruction, should have a prominent place," it must be determined by reference to its operations thus far, by inspection of its present curriculum and methods of work, by its fruits in the common schools of the State, whether our Normal School at Farmington is answering the ends for which it was put into operation, and has been, and is supported by the people of Maine. This certainly it must be made to do, or it will deserve to fail.

Here an inquiry suggests itself. Supposing that this institution has, up to this time, considering all the obstacles with which one may reasonably believe it to have met, done all that the State has had right to expect, what are the conditions to its future increased and permanent usefulness? An answer to this question would give more practical value to this occasion, than any other event of this day, not excepting, (and I trust I do not undervalue that,) the giving back to the State for its use and benefit, these young ladies and gentlemen, who go forth to teach in her schools. An answer in detail, would require more time than the brevity of this hour will admit. It will be given, no doubt, by one better able to give it, than myself. To consider this point briefly, however, in this report, seems proper.

American Normal Schools have now attained a character, which enables one to note in them certain constant and distinguishing features. Most concisely, we may say, they are Model Schools. As ours shall approach the established standard, we have a right to feel that it is worthy the name it bears. If it fails to do this, it is, as a Normal School, a failure, and will be, probably, in time, as an institution

bearing that appellation. What then, should be its appointments? What is our ideal of a Model Normal School?

There must be suitable Grounds, Buildings, Furniture and other apparatus, Library, and Cabinets. Without these, there can not be a Model School. Whether we have them or not, those who are here to-day can judge. The time has gone by, when any of these conditions can be dispensed with in a Model School.

There must be sufficient endowment and generous annual appropriations. A comparison with other Normal Schools, which has been made in a previous report, will show whether our own are supported in such a way as to warrant the expectation that they will take, and maintain rank with those which are best carrying out their design. It will be useless to think that anybody's enthusiasm, love of educational progress, or love of man, can supply permanently, a deficiency in this direction.

There must be a well conceived and adapted plan for the conduct of an institution designed for the professional training of teachers. Happily, here we are not obliged to feel our way to the light. Whether we can take any other Normal School in our country as an exact pattern, is not the question. We can, at any rate, by inspecting the workings of them all, and then by judicious consideration of the peculiar wants of our own common-school system, lay a foundation and arrange the details of a structure, which will be adapted to our wants, and therefore likely to take its place permanently and with suitable dignity, among the educational institutions of our commonwealth.

There must be suitable supervision. Whether our own plan is model in respect to this, is a question which ought, certainly, to be considered, and no delicacy of feeling in respect to the disturbance of existing relations and past enactments, which were intended to be only temporary, should deter any person interested from doing it. What plan has proved most effective in other States, and with what changes may it be adapted to our wants? The question is not very complex. The things desirable to be secured in a plan of supervision are so obvious, and the methods of reaching them have been so thoroughly discussed and so systematically arranged, as to enable one to decide with a good degree of assurance, whether any change in respect to the method now operative in connection with our Normal Schools, is desirable. Probably it will be decided that a change is needed here.

There must be good internal management. If what has already been mentioned may be said to be sufficient to constitute the body, this is the animating spirit. It is not for me to say, whether this condition is filled in the institution which holds its third anniversary here to-day, and for whose interests we are met, in some sense to confer. That there are defects, I know. Remedies must be sought out and applied, in order to secure the success so much to be desired.

There must be some definite plan, in which differences of scholarship and differences of aptitude for teaching shall be recognized, and rigidly and exactly noted, in the granting of diplomas. It may do for institutions of a "higher" and more popular grade, to confer diplomas on a different basis, though I hope this is not always to continue; but in this institution, which is to fit persons for a "humbler" walk, where more criticism is exercised, no such looseness is allowable.

There must be a lively and intelligent interest on the part of the people, in the support and improvement of the common schools. This is an indispensable condition of success, for an institution such as this, since it is not reasonable to sup-

pose, that many students will, for a long time, be inclined to take the pledge to teach in the schools of Maine, with the design to fulfil that pledge, unless among the people there is a sentiment, which is favorable to the introduction of improved methods, and a will to pay suitably for the introduction of skilled labor. How far this condition is at present supplied, those to whom this thought is presented, know as well as they could know, if I were to discuss it at length. It lies very near the foundation of the superstructure which the State, in its Legislative capacity, has signified its intention to erect.

There must be a disposition to unite, waiving all differences on other points, in order that the education of the youth of our State may be assured, and that the best methods of teaching the best things may prevail. In this work every man and woman has a part to act.

It may be, that I fail to comprehend all that is necessary to insure the success of our Normal Schools, in the above hurried analysis, but I feel quite certain that I have named nothing which is not essential. I may add, that I feel equally sure that these conditions being filled, the cause of education will have entered upon a career of progress grander and more beautiful, than has been known hitherto in the history of our people.

It is not necessary for me to say, that I most ardently desire the success of this and kindred institutions. It ought not to be necessary for me to remark further, that unless these conditions, the essentials of success already spoken of, can be in a measure provided for by the next Legislature, when the policy of continuing this school beyond the experimental period will properly come up for consideration. then I shall feel that however the institution may have seemed to prosper, in attracting to itself as good talent as our State affords, in retaining large classes of vigorous-minded students until they had completed its course of study, in sending forth those to teach in the common schools whose excellences have been commended by those among whom they have labored, in doing something, in various ways, to arouse an interest in the improvement of all our institutions of learning, yet it is not altogether unlikely, that its doom is written, and that sooner or later it will topple, and fall to rise no more. I cherish no such anticipations as this, however. I rather look to see the State, while seeking wisely to develop its physical resources, by a judicious adaptation of means to ends, manifest no niggardly policy in respect to the keystone of her permanent prosperity, the education of the masses. With this, other conditions of prosperity follow as corollaries; without it their continuance would, in many instances, prove only a curse. I feel sure, that the forward movement which has been begun, and which will only need to be pushed forward a little longer and further, in order to run itself, will not be abandoned, but that under our tried and competent generals we shall enter as a State upon a career of material and intellectual development, such as will make Maine what she ought to be, the leading State of New England, if not of the Atlantic seaboard.

My only remaining duty on this occasion, will have been discharged, when I shall have delivered into the hands of the proper authority this class of young ladies and gentlemen, who are to receive the diploma of the State Normal School, which recommends them as qualified to teach in the schools of Maine. This is our third class of graduates, and numbers 35, making in addition to those who have already been graduated here, 77, who have taken the diploma of the school, and gone out to teach. I trust, gentlemen, that many more will in future years go out from this

and similar institutions in our State, as well qualified as I believe these to be for the teacher's work.

You go forth, young ladies and gentlemen, as I believe, with the high purpose to devote your energies to that work for which your training, while with us, has been conducted to prepare you. You go with the testimony of those under whose guidance you have been, in your favor. You return to your homes to rejoin the loved ones, from whom you have, for a season, been separated. You sever the ties which have held you bound together in school and class relations, while in the Normal School, and you sever them forever. You go, in devious ways, to fight the battle of life, which is, in an important sense, a single-handed combat. "Alone, and yet not alone!" for the Father is with you. The prayers of your teachers and of the good will be ever for your welfare and success. Around you and above you, in your chosen work, is an innumerable company of angels. One of your number,* who got his victory a little sooner than any of us, saw the lifting of the veil, as you stood around the place of his transfiguration. In the busy rattle of your coming years of labor, forget not the Saviour who came to bear him to the mansions of light; and when, weary and worn with the labors of the day, the long night seems shutting down around you, He will say once more, "Come unto me, all ye that labor and are heavy laden, and I will give you rest."

The report of the Principal was followed by remarks by Mr. Weston of Farmington, Mr. Barrell of Lewiston, Mr. Tenney of Brunswick, Mr. Howard of Farmington, Mr. Johnson, the State Superintendent, and Gov. Chamberlain, who conferred the Diplomas with appropriate remarks. Prayer was offered by Rev. Mr. Emerson, and Rev. Mr. Allen pronounced the Benediction.

The Levee at Normal Hall in the evening, formed a pleasing close to the day's educational significance, bringing the play after the work, and thus ended the fourth year of the Normal School at Farmington.

We call the special attention of our readers to the new advertisements of this month. One of our readers said to us the other day, "I am always interested in your advertisements." It should also be noted, that we now page the "Normal Advertiser," and that we present a table of its contents. This is an advantage to our advertising patrons, and adds interest to our magazine, for the general reader.

The Biennial Convention of the graduates of Bridgewater State Normal School, takes place during the present month. We intend to be there, and will give a report for the next "Normal." Graduates of this institution, residing in Maine, should endeavor to attend, as the exercises will be of extraordinary interest.

We desire to thank most cordially the members of the press in Portland, for the kindly greeting which they have extended to us, as we have met them personally, since we came to this city.

Several articles which we hoped to find room for in our present number, must lie over for the August issue.

*Charles O. French, Gilead, Me.

Our readers will please take notice of the time and place of meeting of the American Institute of Instruction. The programme is one that promises an occasion of much profit to those interested in education. We wish that more of our teachers might be present at the meetings in Pittsfield, than have customarily attended these gatherings. They have generally been the best professional meetings which teachers could find, and they certainly ought to increase in usefulness, as the years of American history increase in number.

We hope no teacher in our State, will be found unwilling to aid our agents in the plans, which they will explain to them, for putting the Normal into every school district of every town in Maine.

EDUCATIONAL INTELLIGENCE.

MASSACHUSETTS.

Notes from Normal Schools.—I spent my first day at the "Hub" in visiting the Girl's High and Normal School, and Miss Stickney's Training School. Since the death of Mr. Seavey, the Normal School has been without a Principal, but at present it is under the care of Dr. Burrows, as member of the Board. The young ladies of this School have had excellent opportunities to acquire knowledge in the different grades of the city schools, so that the training received here may be reasonably expected to make efficient teachers. I listened with much pleasure to the class in reading. The sentiment of the text was carefully examined, that the rendering of the sentence in emphasis and inflection might clearly and truly reflect the author's meaning. The vocal training of the class had evidently been patient and thorough. The young ladies were not afraid to open the mouth, and for this reason the tone was orotund and rich, not flat and strained as one often hears it. Though the reading was remarkably good, there were some errors in pronunciation which would hardly escape the notice of a class, the members of which are taught to criticise one another. In the teaching there was manifested much energy and enthusiasm. Classes in Trigonometry and Ancient History made creditable recitations. The course of study and methods of teaching are calculated to prepare the students for successful work in the school-room.

Miss Stickney's school is *practically* a training school. Young ladies from the Normal, and others who intend to teach, spend a year here in practical work under the direction and criticism of the teacher. I witnessed the methods of teaching in several classes composed of small scholars. Much enthusiasm was manifested by the young ladies, and they secured a close and lively attention from the scholars. A primary class in reading by the phonetic method, exhibited a good degree of proficiency. One lady conducted a recitation in object teaching, which was subjected to the criticism of the class. The subject matter, the manner of presentation, and the interest and order of the class were freely discussed by all. This is an interesting and profitable exercise, which is highly beneficial to young teachers. From a hasty visit we can make but a brief report. In a few days we hope to see more of this school, and others, and shall make notes accordingly.

G. T. F.

A County Teachers' Convention.—Did you ever set out to attend a Teachers' Association on a very rainy morning? If so, you can imagine how a score or two of us looked as we assembled with water-proofs, overcoats, umbrellas, &c., on the cold and rainy morning of June 12th, to take the cars from Worcester to the thriving town of Milford. But once in the cars, we were merry enough, I assure you, and in two hours we were warmly welcomed by our friends at Milford, and shared their generous hospitality during our stay. Despite the weather there was a good attendance of teachers, and our meetings were highly interesting. Friday morning, after the usual organization, the forenoon was spent in discussing the question, "How to make scholars think?" The discussion was opened by a finely written essay by Mr. Frank A. Hill, a native of Biddeford, Maine, and graduate of Bowdoin College, who is now acquiring a fine reputation as Principal of the Milford High School. Maine cannot well afford to spare him, but she must not complain, as she has some of our best teaching talent. In the afternoon Rev. B. F. Bowles of Worcester, favored us with a most excellent lecture on the "Compensation of teachers," treating the subject in a manner to show teachers that dollars and cents are not all their reward. The lecture was followed by a teaching exercise by Miss D. A. Lathrop of the Worcester Training School. This exercise, together with another given by the same lady the next forenoon, was highly instructive and suggestive, and can but result in good. Lazy teachers will be slow to adopt her method of training. On Friday evening the editor of the *Normal* gave us a well prepared lecture on "Some of the difficulties attending educational reforms." At the close of the lecture, Prof. L. W. Russell gave us some fine readings from Longfellow, Saxe and other poets. On Saturday morning Prof. Russell gave us a fine paper on "Composition writing," which was followed by a profitable discussion on "The best method of teaching History," and the teaching exercises before referred to, making an excellent morning's session. In the afternoon a large delegation of the teachers visited the beautiful village of Hopedale, and shared the hospitality of one of its citizens.

Every county in the United States should have its "Teachers' Association," liberally supported by live teachers.

c.

BOOK TABLE.

(1) *IN THE SCHOOL ROOM.* Price \$1.25. The doctrine, that when once out of the school room, one should drop all thoughts of school, is a favorite with very many quite successful teachers. We have never been partial to it, however. If one loves school, why not devote oneself to it, so as to find it the pleasant thought-companion of out-of-school as well as in-school hours. It is the worry of the school, which ought to be out of the school room altogether, to which teachers generally refer, when they advocate the theory above set forth. But since Worry is a pestilent fellow in all places, it is not best to have him in the school room, and we fail to see the force of the old saying in any application. We took "In the School Room" along with us the other day, when we went "out of the school room" for a trip to

(1) PHILADELPHIA: ELBRIDGE & BROTHER.

Massachusetts to attend the meeting of a County Teachers' Association, and we found it a most agreeable companion. Dr. Hart is, and has been for several years, the Principal of the State Normal School of New Jersey, and is well known as a writer on topics connected with education. His style is terse, compact, vigorous; his mind thoroughly disciplined and well stored with the riches of experience, observation and research, and he is thus rendered, altogether, one of the persons most fit to write upon the themes of which he treats. The chapters of "In the School Room" are short, and none of them seem like random shots. The reader finds them full of interest, as well as rich in instruction. The topics of which Dr. Hart has written, a list of which may be found by reference to the advertisement of his publishers, will be seen to cover a wide range. Why should not a book like this have an extensive sale among friends of educational progress of all classes and in all parts of our land?

(2) A NEW MANUAL OF THE ELEMENTS OF ASTRONOMY. We quote from the author's preface, and promise a notice of this recent publication next month.

"The *plan* is as far as possible *objective*, in a proper sense; that is, it is based upon the conceptions of the pupil acquired by an actual observation of the phenomena of the heavens, to which his attention is constantly directed; the relation between these phenomena and the facts inferred from them being clearly shown at every step. Great pains have been taken to divest that part of the subject which treats of the *Sphere*, of its usual arbitrary and complex character by developing the requisite ideas before presenting formal definitions.

"Simplified methods of computing the numerical elements, such as periods, distances, and magnitudes, are given throughout the work; in most cases the calculations being made for the pupil, but without recourse to any other than elementary arithmetic and the most rudimental principles of geometry. These calculations are based on the recent determination of the solar parallax, and other elements as established by the latest observations and researches of distinguished astronomers: and it is believed that, presented in this way, they will prove valuable as arithmetical exercises, as well as an important aid in imparting clear, correct, and permanent conceptions of astronomical truths.

"Brief historical sketches of the various discoveries—a most fascinating part of the subject—are given in connection with the facts to which they relate. These, with all other matter designed to elucidate or exemplify the text, are printed in smaller type, and in distinct paragraphs, which have been distinguished by letters, so as to be readily referred to, and conveniently indicated by the teacher in assigning lessons."

THE WINE SHOPS OF FRANCE.—The wine shops are the colleges and chapels of the poor in France. History, morals, politics, jurisprudence, and literature, in iniquitous forms, are all taught in those colleges and chapels, where professors of evil continually deliver those lessons, and where hymns are sung nightly to the demons of demoralization. In these haunts of the poor, theft is taught as the mortality of property, falsehood as speech, and assassination as the justice of the people. It is in the wine shop the cabman is taught to think it heroic to shoot the middle-class man who disputes his fare.—*Charles Dickens*.

THE STUDENTS' NORMAL.

Portland, July, 1868.

We shall devote, from this time forward, several pages of this periodical to matter of interest to students. We have been unable to obtain suitable material, in sufficient amount for this number, but we desire to thank "One of the Boys" for his excellent letter, and refer our young friends to it, and the poem entitled *The Bright Side*, as "specimen pages." We shall hope to hear from "One of the Boys" again, and from other boys, and girls as well. Who contributes for the "Students' Normal"?

Talks about Mental Arithmetic. I.

TO SQUARE CERTAIN NUMBERS.

The *Students' Normal* will contain such matter as will be both entertaining and useful to those attending school, if the editor is able to obtain contributions for that purpose. It ought to be a sort of representation of school-room life, and that so pleasing and at the same time so instructive as to win its way to the hearts of all who peruse it. But I shall tell more of plans for securing this end, next month. At this time I will try to introduce you to something which is useful, and which may be made very entertaining.

I will state a principle of numbers, and then illustrate how it may be applied. The principle was stated in the June number of the *Normal*, page 239, but I will now reinsert it, so that some illus-

trations which follow may be better understood.

PROBLEM I. To square a number consisting of an integral part and the fraction one-half.

RULE. If the integer is below 13: To the product of the integer by the next higher integer, add one-fourth.

If the integer is above 12: To the square of the integer add the integer and one-fourth.

I will now illustrate the manner in which this principle may be applied. Suppose the number to be squared to be $7\frac{1}{2}$, and our operation stands thus:

$$7 \times 8 + \frac{1}{4} = 56\frac{1}{4},$$

which is the square of $7\frac{1}{2}$.

Again,

$$(8\frac{1}{2})^2 = 8 \times 9 + \frac{1}{4} = 72\frac{1}{4}.$$

Now suppose that the number were $15\frac{1}{2}$, then the work might be represented in the following way:

$$15 \times 15 + 15 + \frac{1}{4} = 240\frac{1}{4},$$

which is the square of $15\frac{1}{2}$.

And again,

$$(24\frac{1}{2})^2 = 24 \times 24 + 24 + \frac{1}{4} = 600\frac{1}{4}.$$

Again,

$$(23\frac{1}{2})^2 = (23)^2 + 23 + \frac{1}{4} = 552\frac{1}{4}.$$

I will show how this principle may be applied to the squaring of some larger numbers, next month. In order to square any numbers from $1\frac{1}{2}$ to $25\frac{1}{2}$ inclusive, the above illustrations are sufficiently explanatory. All that is necessary on your part, in order that you shall be able to perform operations of this kind with great rapidity and with perfect accuracy, is that you first become perfectly familiar with the squares of all numbers from 1 to 25 inclusive, and that you practice so much as to acquire love for, and interest in, the exercise. You

can assist one another in a drill exercise of this kind, and you will very soon find with surprise, that all operations similar to it may be performed mentally with much pleasure and profit.

THE EDITOR.

The Golden Rule.

A LETTER FROM ONE OF THE BOYS.

DEAR NORMAL: I know your magazine is for teachers, but I thought perhaps you would let me speak a little piece, and one reason I would like to put it in the Normal is, I want our school teacher to see it, and she takes the Normal. I wanted to tell her what I am going to say, but did not dare to do it. One reason was, I did not think it would be just the thing, and then I feared just a little, (I'll confess it to you,) the weight of her big ruler.

I want to ask you if you believe in the golden rule? I expect you do, of course, and practice it, too. Well, *our teacher believes* in it, but I can't say any more. She don't practice it according to my way of thinking. We have to say it over every morning, and she generally adds, "Try to do just as you think you would want your scholars to do if you were a teacher." Now, of course, I should want my scholars to do just right, but I always want to remind her, that the golden rule has two sides, and that her side of it seems to be iron. I wanted to tell her, yesterday, to try and do as she would wish her teacher to do if she were a scholar. I know I ought not to tell tales out of school, but I will only tell *you*, and you must not tell unless you want to. Why dear Mr. Normal, little Tom White, who isn't bigger than "Tom Thumb," (the boys call him so sometimes,) had to get a whole page in punctuation. Well, he couldn't pronounce half of the words, and didn't understand the other half. He told Miss A. so, and asked her to explain it as our old teacher used to, but she would n't, and told him she should punish him if he missed. Of course he missed, for all he studied hard, and then she made him

hold a big book out straight for an hour. Was that the golden rule?

I'm not so green as to think boys don't need punishing sometimes, but I thought that was too bad. Poor Tommie White almost fainted away. I should think that was the iron rule.

Then to-day the teacher *made* us all write compositions. (I hate them.) Mary Blake is a very bashful little girl, and a poor scholar, because she has been sick. She wrote her composition as well as she could, and the teacher read it aloud. She made all manner of fun of the writing and spelling, and told Mary she ought to be ashamed. Mary *was* ashamed and cried herself sick. She said she never would write another composition, *never*. I wanted to repeat the golden rule then. I don't believe Miss A. would want her teachers to use her so. Do you? I could tell you a good many more things. How the *hard rule* comes down upon our heads; how our ears and hair are pulled, but you will not want to hear any more. I wish if you see my teacher, (but you don't know her, for she is not a Normal scholar,) you would tell her there is a *teacher's* as well as well as a *scholar's* side to the *golden rule*.

ONE OF THE BOYS.

The Bright Side.

"Do you remember the time, Molly,"

Old William feebly said,

"When you and I, with childish glee,
Went coasting on my sled?"

When down the hill we gayly went,

Or upward bravely climbed,—

The hill so steep, the wind so bleak,

Our young hearts did not mind?

Don't you remember, and all in vain

Wish for those dear old days again?

"I remember those happy days, Willy,"

The good wife smiling said,

"But sorrows by the side of joys,

Then even as now were led.

Don't you know that bitter morning,

When we were late at school,

When frosted fingers brought my tears,

And yours the master's rule?

Yes, I remember, but never, in vain,

Wish for my childhood days again."

"Do you ken the hillside orchard,"
 The old man asked once more,
 "Where we picked the mellow apples,
 And first our love told o'er?
 I can see your blushing cheek, love,
 It was fairer then than now,
 But its pink was like the peaches
 I brought you from the bough.
 Don't you remember and wish in vain
 Your happy spring-time back again?"

"I remember those days in the orchard,
 Dear Willy, passing well;
 Their memory cheers me at morning,
 And casts over evening a spell.
 For even that time had its troubles,
 Don't you know how we quarreled one day,
 And doubted our love for each other?
 Do you doubt me now, love, pray?
 Oh, how can I wish for my spring-time days,
 While your dear love my spirit stays?"

"Do you remember the house, love,
 Where we spent our honey-moon,
 And rocked the little ones to sleep,
 Singing some sweet old tune?
 It seems to me but yesterday
 I watched that little fold.
 Though Susan's hair is turning gray,
 And James is growing old.
 Don't you remember and wish in vain
 Your babes were in your arms again?"

"I remember the dear old house, love,
 'T was made of logs, you know,
 I almost see those gaping chinks
 And feel the cold winds blow.
 My sweet ones, bless them, all are there;
 They were my joy and pride,
 And yet I can't forget my cares,
 And tears for those who died.
 No, call not up the hopes and fears
 Buried beneath the vanished years."

"Ah mother, dear mother, 't was ever just so,"
 The old man said and smiled,
 "You always looked forward for sunshine, I
 know,
 I always looked back, from a child.
 Your way is the best, and I wish it were mine,
 But I fear 'tis too late to amend;
 Yet I'll daily ask aid of the Father divine,
 His brightening influence to lend,
 To teach me that when this cold winter is o'er
 A bright, blessed spring-time is ours evermore."
Strong, Maine. J. H. M.

If you rightly interpret the following,
 you will find it to be a sentence. What
 is that sentence?

The CC
 SI

You have perhaps seen the following
 If not, can you explain its meaning?

B^od

CRAMMING.—Quickness of memory is that quality which is most easily developed, especially in young persons. It is also its most showy quality, and the temptation to give it an inordinate development is strong. The habit of getting things by rote, is easily acquired by practice. It is astonishing what masses of Scripture texts young children will get by heart, when under some stimulus of reward or display. I have often refused to publish marvellous feats of this kind, not because I thought the accounts incredible, (unfortunately they were true,) but because I thought they were a species of mental excess, and they should no more be encouraged, than bodily excess. A little girl in my own Sabbath School, once actually committed to memory the whole of the Westminster Assembly's Catechism in three days! Six months afterwards she hardly knew a word of it. It had been a regular mental debauch. A few more such atrocities would have made her an idiot. College records tell us of what are called "crammed men," that is, men who literally stuff themselves with knowledge in order to pass a particular examination, or to gain a particular honor, and who afterwards forget their knowledge, as fast as they have acquired it. There is a well authenticated instance of a student who actually learned the six books of Euclid by heart, though he could not tell the difference between an angle and a triangle. The memory of such men is, quickened like that of the parrot. They learn purely by rote. Real mental attention, the true digester of knowledge, is never roused. The knowledge which they gorge, is never truly assimilated and made their own.—*John S. Hart in "In the school-room."*

LIFE A BATTLE.—Life is a battle which the brave must win; a struggle in which truth and worth are sure of ultimate triumph. This is the moral of all history, all allegory—the substance of all faith; and yet the multitude have, in all ages, lived and acted as if this were the wildest fanaticism, the dreamiest poetry, the most irrational self-immolation.—*Greeley.*

THE MAINE NORMAL.

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• NO. 8.

WHAT IS THE OFFICE OF EDUCATION?

It does these two things. I name them in the inverse order of their value and importance. It furnishes the mind with knowledge; it gives the mind the power to use itself. I will dwell briefly on these two things.

Education gives the mind knowledge; furnishes it with facts; sets up a light in the intellect, that it may see things near and remote, definitely and in right relations. We have need to learn languages, in order to get hold of the facts and truths treasured up there. We must needs learn the laws and facts of science in order to lay up their treasures for the mind to use, and elaborate, and turn to a valuable account. Education puts into the hand the keys of truth; it opens to the learner worlds of thought; it introduces him to data, to principles and materials, on which the mind and skill can work. It brings thus to the mind's view and grasp treasures of truth and useful knowledge. It interprets the scriptures of science, mysteries long hidden in the archives of the universe; explains the mystic fields of astronomy, the unexplored kingdoms of nature, and the silent laws and forces that move all things. Education opens the facts of history also; it takes us back into dark antiquity. It lays bare the foundations. It shows us the rudiments and elements of things. It turns the leaves of time past. It takes us to the fountains, leads us beside all streams, through all windings and mazes. It shows all sources, and riches, and reservoirs of truth. It reveals principles such as relate to numbers, magnitudes, morals. It gives us a truer consciousness, lays bare the deep springs of thought,

and gives us to see the vast machinery of the universe. Thus it is, that education gives to us knowledge, furniture, facts, truth. It puts us in possession of things, of right things, and so gives the mind material to work upon, and to work with, in solving life's great problems, and in accomplishing its great work.

But this is only a part of the work of education. This may be called its primary work, the common-school business of education. We then graduate to a higher work.

And this is, secondly, the power given by education to use our own faculties. The skill thus given to use ourselves, our powers and gifts, is the crowning work of the schools. It is not enough to know what others have thought out, and pocket the treasures others have coined, to record discoveries that others have made, to reap harvests other hands have sown! No, we have need to gain the powers to do such sort of work ourselves. We must not be mere gleaners, not reapers simply, but must needs have power to turn the furrow of thought, and scatter seeds of knowledge which still others shall harvest. A mind is not educated till it can use well its own faculties. It must have something of originality, or the power to create, and construct, and complete. We must not only have knowledge of what others have discovered, but be able to turn some new leaves of learning ourselves, and spring some mines of thought and truth that had long awaited our hand, or voice, or eye. We must not despise what others have done; nay, rather we must use well what others have thought and known, in order that we may think and know and find out new truths. We are thus set free, in a sense, from the bondage of other men's thoughts, and the shackles of capricious and artificial rules. We have need to rise to where we can be a rule unto ourselves, and a law unto ourselves, and a world unto ourselves, in a subordinate sense.

These, then, are the two grand purposes, as well as instruments, of education; *first*, to give the mind material. The *next* is the power to turn this material into good uses, in strengthening the faculties, in developing them into instruments or tools to do all this work with. So it, is that skill is created, ingenuity set at work, and the faculties are quickened into a new life. So it is, that the mental powers are made sharp, quick, elastic, versatile, many eyed and edged, and vigorous in their grasp, and comprehensive in their reach. So are they fit to be brought out into the ten thousand uses of life.

We indicate two ways of doing this work of education. We assume that these embrace all other right ways.

1. Attention, concentration of mind. One mischief in education, is the seeming want of power to fix the thoughts, or bring the scattered rays of intellect to a point, and hold them there till some result is reached. Not much mental work can ever be done without this power of attention, or mental concentration. The house-fly represents the volatile intellect, that hops here and there and gets nothing, or garners nothing. The honey-bee, on the other hand, the mind that can concentrate itself upon a point, and stick and stay there, till it gets something valuable, and loads itself down with the treasures of knowledge. We have had pupils that possessed this power of mental abstraction to such a degree that they would not know when recess was commenced, or the school was done. The confusion and carousal consequent would not suffice to break their spell of thought. Such ones have always been distinguished in after life. This power to go quite out of one world, into another, is of great worth, and is certainly one of the triumphs, as well as chief instruments of education. This local power in thought, this abstracted, concentrated working of the mind, that shuts out irrelevant things, and distracting circumstances and influences, may almost be said to insure success, if not greatness, in scholarship. And what though there may be inconveniences in this, in some things, and one may perchance be laughed at by the simple, and merely outside observers of things. One can well afford to be laughed at for some little matter of forgetfulness, or slight oddity, who has power to strike out more light and fire by a single stroke of thought or genius, that has come of this habit of mental abstraction, than would suffice to warm and dazzle a thousand of these shallow, senseless, giggling ones.

We do not intend now, to name the ways, or forms of training, by which education produces this result. We simply say now, that it is a *cause*, not less than an *effect*; that education will never accomplish its highest end till it has reached this attainment, in a degree, at least, and has felt something of its inspiration to bear the mind up to loftier attainments in knowledge.

2. Aim high, seek to do well, to do more than well, to do the very best that can be done. Have a lofty standard, high and noble ideals. Cherish those inspirations that reach out and up toward the perfect.

Doing one's best always enables him to do better the next time. We

write the copy of life well, only when each line is an improvement on the last one. But this will never be without effort to do one's best, his very best. The great secret of perfection, as of improvement, lies here, in striving always to do our best. Our best to-day is better than our best yesterday, and our best to-morrow will be superior to our best to-day, and so on, till the absolute is reached. Here lies another secret of improvement. This is the royal road, or highway to perfection. Carelessness never improves; indifference never gets a step toward perfection. We know of nothing more hopeless than self-complacency. We have heard persons fail in a speech or a discourse, from sheer embarrassment, from conscious inability to reach the standard or ideal aimed at. But we have seen, in this very failure, the germs of future success. We have far higher hopes of one who has to sit down half way along his speech or sermon, because he can't reach the just perception of his subject, than of him who swims fluently and gracefully, or dashingly over the surface, and sits down at the close, in conscious triumph. There is more hope of a fool, than of such a one.

We would emphasize this matter in the business of education. We would call it this thing,—the philosopher's stone, that gradually but certainly turns everything into gold. We venture to say, that the pupil that has force enough to gain the habit of strict attention, and of mental abstraction, or concentration of thought; and then has ambition of the right sort to give him high ideals and aspirations, will need only good health and good moral habits, to carry him up to eminence. w. w.

TACTICS OF THE SCHOOL-ROOM.

NUMBER FIVE.

Assisting Pupils.—Every teacher is at times perplexed to know when, and to what extent, assistance may with propriety be given to pupils in the preparation of their lessons, and also at the recitation in the solution of difficulties which the pupil thus far has not mastered.

It is quite easy to lay down general rules; but such directions are not satisfactory to the young and conscientious teacher. If more minute hints are given, there is great danger that they will not be taken as hints and suggestions, but rather as fixed rules, sufficient for all cases of the

kind for which they may be needed. Those who teach school by rule alone, generally fail; for there is no ritual which the teacher can adopt for his guidance in the construction and management of a school.

Assistance should be given to pupils, but great discretion is needed that it may be given at such a time, and in such a way, as will actually aid and benefit the pupil, and not injure him. Assistance that amounts to performing work for the pupil which he ought to perform himself, is injudicious, and will eventually do more harm than good. If the object of study were simply to have a certain amount of work done, then it would matter but little by whom such work is accomplished, provided it is done well. But the object of study, on the part of the pupil, is the attainment of mental discipline and the acquisition of knowledge; and those objects are to be accomplished only by severe labor by the pupil himself. Others can perform his work, but he will derive no benefit from it. His powers are to be strengthened by exercise and drill.

Knowledge, to be of service to him, must be not only acquired, that is received, but it must be digested and assimilated and made his own. Taking these well known principles into consideration, the teacher must see that he should adopt and carry out the rule, never to do work for a pupil, when he can put the pupil in the way of doing it for himself; never to give a direct answer to a question, when the inquirer can be made to seek out the answer by his own exertions and ingenuity. Objection will, of course, be made here that such a course often involves the necessity of taking altogether more time than the teacher can spare from his other duties.

The teacher has few duties more important than the one we are now discussing; and it is for this very duty that a portion of his time every day is to be devoted. One of his highest offices is to point out the way in which the learner should go, in order to reach the goal of his labors. If, to save time, he takes the burden from the pupil and carries it for him, he takes from that pupil the great advantage which he would derive from the exercise of his own muscles. There is some work which we must do for ourselves, or it should not be done at all; for the reason that the mere accomplishment of the work is not the end in view, and is not, of itself, at all desirable; but the good to be derived from the act of performing the work is rather the object for which we are striving. This is pre-eminently true of most of the work in the school-room, so far as the pupil is concerned. He must work to obtain mental growth, power and skill.

When we set down to a meal, the object to be attained is the sustenance of our bodies. Pabulum is needed to keep the system in a state of growth, and for maintaining its normal condition. For this purpose we must eat our own food. It would do us no good for others to eat it for us. The object of gathering around the family board is not at all to dispose of the food. If this were all, it could be done by others whenever we felt disinclined to make the exertion for ourselves. But we feel the need of bodily nourishment, and of course act accordingly.

Just so it is with the pupil's mind. It must have nourishment. Exercise and judicious use furnish that nourishment. The teacher who does not keep this principle constantly in view, will be in great danger of giving too much assistance, or giving it injudiciously. The inclination of every conscientious, kind and earnest teacher is to aid his pupils when they encounter difficulties. Such inclination must not be too freely followed.

Now the work of the teacher in the assistance to be given to pupils resolves itself into this: He should ascertain when the pupil needs aid, and give it to him, if possible, before the recitation, that the learner may have the benefit of it in the preparation of his lesson. There are many pupils who do not know how to surmount difficulties. Their habits of thought are not such that they can look at an obstacle in their way, examine its nature, and then go to work rationally to remove it, or to get over it. They need to be taught *how to get a difficult lesson*. Pupils who need help most are not those who are wanting in natural powers, but rather those who need to be shown how to use the powers they possess. Feeble minded pupils need encouragement rather than what we denominate assistance in the preparation of their lessons. But those pupils who seem to do everything unhandily and without method, need to be taught *how to work*. They can work, but not to good advantage. Furthermore, when the difficulty is really too great for the pupil's powers, as he understands the use of them, it is not the duty of the instructor to do that work for him. Let us take an illustration that will be pertinent in cases of this kind. A boy is trundling a wheel-barrow heavily laden, and in crossing a street arrives at the curb-stone (or any other obstacle if you please,) which is too much for him to surmount. He may be what we call a smart lad, and does not give up without several attempts to roll his load over the obstacle. But it is of no use, and he looks about him for help. A passer by approaches, and the lad,

with a "please sir," solicits aid. The kindness of the stranger's heart goes out to the boy in trouble, and he seizes the wheel and lifts it quickly over the obstacle, and passes on well pleased, no doubt, at the thought of having done a kind act, and leaving the boy equally happy in having found a friend in time of need. So far very well. But a person more careful of the boy's future good, might have done somewhat differently. Instead of lifting the boy's load for him he would have said: "My lad, take out one of the side boards of your wheel-barrow, (or get another board, as the case might be,) place one end of it upon the stone which blocks your path, and the other end upon the ground, and you will have a sloping surface or plane, up which you can easily roll your load." This would not only relieve the boy in his present trouble, but would teach him a lesson which he could use in all future emergencies of a similar kind. It would require more time and patience than the other method, but it would be far better for the boy.

So it should be in school. We should give assistance in that suggestive way that will enable the pupil to do his own work for the time, and give him a power to use in the future. By ingenious questionings, pupils may be made to understand wherein their difficulties consist, and then oftentimes they will need no further assistance.

We have more to say on this subject next month.

A. P. S.

EVAPORATION.—IV.

In the autumn of 1840, the writer was in charge of an academical institution in Hillsborough, Montgomery Co., Illinois. The location was on the border of an extensive prairie, abounding in vegetation; and at that season, receiving by night, most copious deposits of dew. The latitude being about 39° north, the heat usually became great as the unclouded sun approached and passed the meridian. The evaporation was excessive; and, as a consequence, violent thunder storms were frequent. Several of these are remembered with great distinctness; both for their severity and their singular accompaniments. Compared with what is usual in New England, the thunder, in many cases, was like the rapid serving of an immense battery of fifteen-inch peacemakers, belching forth and drowning all the puppy-barkings of the old field artillery.

No sulphurous *smoke* followed; but, on several occasions, a strong sulphurous *odor* and *taste*.

In the autumn, the decay of the great burden of vegetable matter upon the prairie, sets free, large volumes of the two inflammable gases, *carburetted* and *sulphuretted hydrogen*; the former of which, being much lighter than the air, rises in it like the vapor of water. And when mixed with a certain quantity of the air, it readily inflames, by the least spark from an electric machine, and explodes with great violence; as is witnessed in the gas pistol. *Sulphuretted hydrogen* is slightly heavier than air, but is easily borne aloft in the ascending currents generated by heat and evaporation. Like *carburetted hydrogen*, it is highly inflammable; burning with a blue flame and generating a large amount of sulphurous acid. As the spark from the electric machine, the flash of the lightning was the enkindling power to consume large tracts of these gases in the region of the condensing clouds. And as the explosion of both these gases is known to be accompanied with very little light, it is quite manifest why the lightning in these storms seemed, by no increase of brilliancy, to give warning of the tremendous thunder that followed. Why a strong *odor* of *sulphur* soon followed these heavy peals, and, in a few instances, the peculiar, pungent *taste* of the *sulphurous acid*, is sufficiently obvious from the foregoing.

Late in the autumn of that year, (1840,) there fell under the eye of the writer the following, from an English paper:—

“About a fortnight since, the engineer-man at a stationary steam engine on a railway in the neighborhood of Newcastle, happening to have one hand in a copious jet of steam which escaped from an accidental aperture in the boiler, whilst he applied his other hand to the lever of the safety-valve, experienced an electric shock. This led to the discovery that electricity was given out by the steam with great rapidity, and might be collected as from a powerful electric machine. It has been ascertained, moreover, that the phenomenon does not arise from any circumstances peculiar to the boiler in which it was first observed; for in many other boilers which have since been tried, the steam has been found to develop electricity very copiously. The subject is being followed up here up experiments, and has been brought under the notice of some of the most eminent scientific men of the day. It is not unlikely that the newly discovered phenomenon may lead to important results, in advancing our knowledge of the nature of this subtle and mysterious fluid, and form an era in the history of electrical science.”—*Gatehead Observer*.

The *fact* that what we call electricity is developed on the condensation of vapor, was by no means *new* at that time. But a steam saw-mill

being in proximity to the institution before mentioned, the writer speedily fitted up a slight apparatus for conveniently making a series of experiments *suggested* by the foregoing notice.

It being inconvenient to obtain a jet of steam from an aperture in the boiler, he availed himself of one thrown out perpendicularly from a small hole near one end of the cylinder, — through which the piston was usually oiled; — a jet *not* constant, but *irregular*, according to the movements of the piston.

At five feet above this aperture, the jet of steam was mainly condensed, and gave out electricity there very copiously. Gathered upon a prime conductor, it was tested by a range of experiments which could leave no doubt of its identity with that generated by an electric machine. As to its identity with *lightning*, no one could entertain the *shadow* of a doubt; since the *mode of development of the two* was substantially the same.

Then, stronger than ever, came up the question—What *is* electricity? Is it *caloric* set free, (as in this case,) from water, or as developed by friction in the electric machine, by chemical action in the Voltaic battery? And what is *caloric*?

In the preceding articles under this head, the student will find what it is believed will enable him, with little difficulty, to come to some more correct conceptions in regard to the *simplicity* and *beauty* in the operations of nature, than fell to the lot of many of his predecessors. And if he is inclined to go forward with the writer, he will proceed to the consideration, and classification of other phenomena.

Every body knows that on looking steadily up into any part of the sky on a clear night, in the absence of the moon, *shooting stars* are occasionally seen; and careful observation has established the fact that greater numbers of these appear late in the autumn, after the decomposition of the vegetable world below.

After what has been said of the burning of inflammable gases in the thunder storms before mentioned, the student will readily come to refer the production of these meteors to its true source. The carburetted hydrogen, set free in the process of decomposition of vegetable matter upon the earth, being lighter than air, must always rise in it and float in the higher regions of the atmosphere. There, by the various motions of the atmosphere, it must be constantly forming, in greater or less quantities, those mixtures with it, known to be most inflammable; and these are in-

flamed by the very slight flashes of lightning, or sparks of electricity, developed by the aerial motions in the same region. When there is rather a brief but unsteady, puffy breeze, the more plentiful, generally, are these shooting stars; and viewed from the rich prairies of the west, they are much more numerous than in a New England sky.

In the third communication under this head, the writer endeavored to explain how, in the rapid condensation of vapor, lightning is produced; that the light and heat in that phenomenon are to be attributed to the vibratory motion of the ethereal medium and the air, generated in the process of the condensation of the vapor floating in the atmosphere. And the student will have conceived, from the principles there discussed, that *any* very brisk motion of the air — which is never destitute of vapor — may so *condense* certain parts, and *rarefy* others, as to produce in a small space that rate of vibration of its corpuscles, and, through them, of the ethereal medium, which suffice to evolve the amount of light and heat required for the electric spark, or a very slight flash of lightning. And hence he will find a natural cause for the greater number of the meteors in question, on those evenings distinguished for brisk and inconstant breezes. The combustion of carburetted hydrogen, produces a very little water, and a large amount of carbonic acid gas, whose expansive force gives *motion* to these meteors.

Of these *fire balls*, or larger meteors, sometimes rushing with loud report through the sky, leaving visible for a short time a train of light in the tract of the atmosphere they have traversed, it is not the intention of the writer now to speak; nor of those *showers* of falling stars ascertained to be *periodical* in their occurrence; but only of the *ordinary* phenomena occurring almost every night.

At about 9 o'clock in the evening, after the deposit of those copious autumnal dews before mentioned, there usually appeared in the west and north-west an *aurora*.

In case of a thunder storm it has been shown how the lightning is generated, or the ethereal medium is disturbed and thrown into violent agitation, together with the vaporized air in the region of the storm. And after the same manner, only not with violence, the condensation of the vapor on the deposit of these great dews, excites an agitation of this medium; which, communicated to and propagated through the very attenuated vaporized air above the region of this deposit, exhibits itself, not under the aspect of the rapid lightning, but under that of the peculiar *auroral phenomena*.

And through the summer, the clear, still evenings in that locality were remarkable for the prevalence of what is called *heat lightning*. The grassy surface of the prairie favored the rapid cooling of the lower strata of the atmosphere, which process generated a slight agitation in the ethereal medium and the vaporized air above, thus producing the phenomenon in question.

The auroral phenomena in the west and north-west in the locality and under the circumstances referred to, were confirmatory of the truth of the hypothesis which ascribes the *aurora borealis* to a like cause; viz., the condensation of vapor in the lower strata of the atmosphere; the consequent agitation of the ethereal medium and the air in those strata; and the propagation of that agitation by a series of vibratory motions through the higher strata of the atmosphere, greatly rarefied, and containing vapor in its most attenuated form. It is well known that this meteor never occurs except when the temperature is changing from a higher to a lower degree. The apparently dusky bases of cloud from which flash up the beams of the aurora, are undoubtedly the result of this condensation; and that these are seen at different heights, not unfrequently, in the same aurora is a necessity depending on the principles of Spherics. For, of the different tracts of condensed vapor to the north of us and extending to the east and west at the same height above the earth, the most northern must appear the lowest, and the most southern the highest. And if these tracts are of great extent east and west, they must necessarily appear *curvilinear*, and highest on the meridian. And as the cooling down of the temperature and the consequent condensation of the vapor naturally take place first in the more northerly tracts, and gradually proceed southward, it must be quite evident why this meteor usually appears to move in the same direction; and why it occasionally takes the form of an arch, rising from the north, approaching and sometimes passing the zenith.

The unequal distribution of the vapor in the lower and higher regions of the atmosphere—the difference of its amount—the different degrees of rapidity and amount of the reduction of the temperature at different times on the occurrence of an aurora, are deemed sufficient to account for all the variety of aspects under which the meteor is seen. c.

WASHINGTON, D. C., July 15, 1868.

THE WONDERS OF GEOLOGY.

NUMBER EIGHT.

In my last article I spoke of the introduction of animal life along the shores of the Laurentian belt which stretches across the continent, and to this was given the name of the Potsdam Period, whose rocks were composed chiefly of sandstone, limestone and shale. As the materials that formed these rocks became gradually hardened they subsided to a lower depth in the ocean and nearly all living organizations perished.

We now come to a wonderful period in the history of our globe. It is the period when the great limestone beds were formed over a large portion of the continent. The waters over the present site of the United States were shallow. They were warm, and in just the condition for the introduction of new forms of animal life. But how was the limestone formed? There were brought into existence, by the fiat of the Almighty, a large number of genera and species of radiate, molluscous and articulate animals in these shallow waters which had the power of extracting the lime from the waters of the ocean and making houses for themselves, just the same as a clam or an oyster does at the present day. Among these, peculiar kinds of corals, not now existing, abounded in the greatest profusion. These lived their appointed time, died, and their shells were acted upon by the waters of the ocean, and they became consolidated into limestone. Successive generations of these animals appeared through countless ages which served to form those accumulations of limestone so common all over the middle and western states.

Among the corals,—for there were true coral reefs in New York, the same as now abound in the tropical regions—was one genus called the Favosite whose cells resembled a honey comb, hence in the western states, they are popularly known as petrified hornets' nests; but they were created long before hornets were, and were formed by a little insect that could build a house, and when he died, his offspring could build a floor over the house of the parent, and construct his new home above it. Another animal occupied a long straight tube with transverse partitions. These were called Orthoceratites. They are found in the western limestones, from ten to fifteen feet in length, and a foot in diameter. If they had a mouth at one extremity and tentacles around it, they must have presented a formidable appearance in those days. Un-

doubtedly they were the giants of the animal kingdom at this time. They are popularly called in the west, petrified rattlesnakes; but snakes did not exist at that time. And as all the animal remains found at this time were marine, it is evident that they grew in the shallow waters of the ocean. These limestones are frequently found literally composed of the fragments of these shells. I have before me a specimen of black marble, from Vermont. On sawing through it a large shell made its appearance. It is changed to a white marble so that the outline of the shell is perfectly distinct, of a white color set in a black groundwork. Corals are frequently found in this same marble from Vermont. Trilobites also abounded in great numbers during this period. Among them was the *Isotelus Megistos*, which was nearly two feet long. This was discovered somewhere near Cincinnati, by Prof. John Locke, formerly of Bethel, Me. He once informed the writer that the announcement of this huge specimen brought upon him the ridicule of American and European Geologists, so much larger was this than any species previously discovered.

These limestones constitute what is known as the Trenton and Hudson Periods which, with the Potsdam Period, comprise the Lower Silurian Era. At its close there was almost a total destruction of animal life on the globe. This was probably effected by changes of level, by which portions of the newly formed limestones sank to a lower depth in the ocean, while other portions were raised above its surface. Either condition would destroy everything existing in these shallow waters. More than twelve hundred species perished at this time in North America.

The profusion of animal life at this period, and the manner in which the continent was built up, have presented a rich theme for the Geologists of this and other countries. The only plants yet known, were seaweeds. As yet, every living thing whether plant or animal was beneath the surface of the waters.

● It was probable that at the close of the Trenton Period, what now constitutes the Green Mountain range in Vermont, was a barrier reef of rocks which separated New England from the west. Another reef was formed on the east side of the Alleghany range which shadowed forth the future mountain ranges. Maine had its shallow waters in some places, and very deep waters in others. But few, if any, fossils indicate the positive existence of the Trenton or Hudson Periods in this state. Fossils have been found in Maine indicating a Potsdam formation, and also those of a later period have been found.

These limestones are about 300 feet thick in New York, 600 feet near Montreal, while in the Appalachian region they are more than 2000 feet in thickness. The lead mines in Wisconsin and vicinity belong to this formation. The ore abounds in irregular beds or masses rather than in proper mineral veins.

Among the shales of this period in New York, there is frequently a large quantity of bituminous, the result of the decomposition of vegetable matter. This once gave rise to the idea that coal abounded in this formation, and enormous sums of money were expended in search of it, but all in vain, as the New York geologists have long since shown that these rocks are far below the true coal formation. The time may come when they will be distilled for petroleum. The marine substances found in these rocks are what have given origin to the celebrated Saratoga, and Ballston Springs, in New York. These issue from the Hudson river shales, impregnated with various salts.

Thus one more step has been added to the progressive history of our globe in the separation of lime and magnesia from the waters of the ocean, to form limestone for the future wants of man, and to purify the ocean for the introduction of the highest type of animal life, the *Vertebrata*.

N. T. TRUE, M. D.

THE VOICES OF CHILDHOOD.

"Child-like though the voices be,
And untunable the parts,
Thou wilt own the minstrelsy
If it flow from child-like hearts."

Every child is a mystery. Every new life-bark launched upon the ocean of time is full of interest, though it is only one of thousands that have been born since Cain gladdened the heart of Eve.

We cannot deny that much original sin is bound up in the heart of each mother's child, which early shows itself by the little one's setting up its own will in opposition to papa or mamma, and when more fully developed, is manifest in selfishness or combativeness with its little play-mates. Yet with all this the child seems far nearer Heaven than the man. The impress of the Creator seems *fresh* upon it, and God and the angels seem often whispering in its ear of Heaven.

Sometimes I have listened to the little questioners with mingled wonder and reverence, almost feeling that God bade them ask for light.

Often their questions have been too hard for me, and I have been compelled to say "I cannot tell."

Little Charlie came running to me one day, his eyes big with wonder, and said, "Who made God?" "No one, Charlie, I answered. He always was." "Oh, that couldn't be. Somebody must have made him." As I tried to make the little fellow understand the Eternity of God, I felt how little, after all, older people really know of the wonderful mysteries of revelation.

Still he questioned. "Can God see everything?" "Yes." "Can God see everywhere?" "Yes." "If I should get into your closet, could he see me there?" "He could see you there." "Well, if I should get into your trunk and you should shut the cover down tight, could he see me then?" "Yes, he could see you then." "Oh, goodness, mustn't he have some eyes then." Thus the little fellow expressed his wonder at the *omniscience* of God, more clearly than many older people could have done.

Little ones are never infidels. Young hearts reach out naturally for the hand of their heavenly Father, and little fingers are clasped lovingly in his, while older ones grope darkly and will not heed the Great Father's voice, and even doubt if they have any Father, they have wandered so far from him. How many can say, in the words of the poet,

"It was a childish ignorance,
But now 'tis little joy,
To know I'm farther off from Heaven
Than when I was a boy."

Though children take so many things on trust, their little brains sometimes seem to be looking into the deep mysteries of nature.

Did you ever watch a child as he looked for the first time upon a dead body? I went with Charlie to see the body of his little friend, William. He had never seen death before. As he looked upon the pale face he clung to my hand and hid his head under my shawl, saying, "Please take me out. That is not Willie. He's gone to God. I don't want to see *that*." How quickly he saw that the body was not his friend.

As we walked home, Charlie seemed lost in deep thought, and was evidently troubled. Some birds were flying before us, and he asked, "Has Willie wings like the black-birds? Can he fly and sing?" "He can sing, I answered, very sweetly." "What songs do they sing?" he commenced, then stopping suddenly said, "but I forgot that you don't know because you have never been there. I suppose God will teach Willie to sing every day. Well, I love God better than any one else on

the place, better than pa or ma or sister or Johnny, but I tell you I don't want to go to Heaven that way, to see him."

Thus early does the soul shrink from leaving the body. And are not Charlie's words the echo of all hearts, till they see the bridge across the dread unknown river of death? Even then, how often "we stand shivering on the brink, and fear to launch away." S. R. M.

THE CHILD'S GIFT.

Thirsty I stood, and asked a child
 For drink before a way-side cottage door,—
 A little maid whose sunny head
 Nine merry summers, golden bright,
 Or Winters, looming chill and white,
 Had scarce with noiseless spirit wings flown o'er.

Why do I tell so dull a tale?
 I know there's nought about it strange or new,—
 Cold water and a cottage child!
 But new and strange the charm it wrought,
 And filled me with so sweet a thought,
 I cannot help but show the thought to you.

"A little orphan girl," she said,
 And told it me with such an accent fair,
 And gave her name with voice so sweet,
 Her soft eyes like the sky above
 So blue, and asking all for love;
 My heart bowed quickly down, and blessed her there.

"Will you remember me?" I asked,
 "My name? and I will sure remember yours;"
 She promised, and we said *good bye*;
 Mine full with tender wishes teemed,
 But hers a benediction seemed,
 And follows me through later, weary hours.

Now go I dauntless on my way,
 Though rough the world and harsh, or kind;
 For when my soul is sore athirst,
 I'll dream a little hand to see,
 Hold out a cooling draught to me,
 And in it e'er refreshing comfort find.

May angels lead the helpless hand,
 In peaceful paths, where dwelleth mercy mild;
 Those eyes find out the way to Heaven;
 Where I would follow doubly blest,
 If there I lose not my bequest,
 To be remembered by that little child.

LETTER FROM THOMAS ARNOLD JONES.

JONESVILLE, June 1st, 1868.

DEAR NORMAL:—I am a teacher in a small academy at Jonesville. I have taught here for the last twenty years. Absorbed in the duties of my profession, I confess I have paid far too little attention to general literature.

Yesterday, at the house of one of my patrons, I saw for the first time, "Timothy Titcomb's letters to the Joneses." In this book I found, with surprise, a letter directed especially to me. This letter, while containing much truth, does great injustice in many respects, to me and the calling I pursue, and I beg the use of your columns to make this late defense. I would address the author privately, but wish the defense to be as wide-spread as the accusation.

And first, I must confess that I have a very pleasant remembrance of the author as he was when he taught our school at Jonesville Center, some thirty years ago. It was, indeed, his teaching that first waked up my dormant faculties, and incited me to earnest work.

If, as he acknowledges, he only taught "as a stepping-stone to something better," he certainly made a very good start. And since he has asked the question, I cannot help saying that he was the teacher who did me the most good, and whom I shall ever remember with grateful pleasure. He was an excellent *stepping-stone*.

But to my defense.

The first accusation which I wish to deny is this:—"The character of a school-master is notoriously a dry one. There is something in the business which makes the character *dry*."

Now, Sir, do you not think with me, that there is very little truth in this assertion? Perhaps I am wrong, but I do not agree with him, even in what he says about "this everlasting handling of facts that have lost their interest."

Is it not necessary, to know anything before we can teach it? Can we know it *too well*? How long will it *do* for one man to "dole out facts"? Is it better, then, to have an itinerary of teachers everywhere? Should not the teacher, before the season of dryness comes on, hasten to become a preacher, a doctor, or a lawyer? Is this the secret of so many leaving the profession for "something better"?

My observation, on the contrary, has taught me that teachers, good teachers, are very far from being "*notoriously dry*."

Where do you find more genial, more cultivated, more affable, more lovable men, than in the noble army of teachers? Why, the very element of real success in teaching, more than in any other calling, is directly opposed to dryness.

Must a fact be newly discovered, or newly known, to awaken interest in imparting it to others? Does not, rather, the very act of presenting the truth, however old, to eager, earnest, though "small minds," give a new inspiration?

The second accusation which I would deny, is this:—

"Prolonged association with immature minds, has a tendency to weaken the character."

Now, however true this *might be*, if the teacher were confined to such intercourse wholly, it seems to me, with all deference, that, in the application of the principle to the real state of the case, it is not true.

I am of the opinion, that association with fresh, young, untrammelled minds, six hours in every day, has a tendency to develop, instead of degenerating the character.

Where do you find a better place for studying human nature, than the school-room? Where is self-control better learned? Where are the affections more warmly enlisted? Where are the faculties strengthened by more constant exercise? Where is the desire for knowledge more deeply awakened? Where is a sense of responsibility for precept and example, more surely developed?

If the tendency of school teaching, Mr. Editor, is to degenerate the character of the teacher, to cultivate self-esteem, to make a dry, uninteresting, unlovable man, how then can he become what "Timothy Titcomb" says he ought to be, "the strongest and most angelic man that breathes"?

Respectfully,

THOMAS ARNOLD JONES.

WE ARE ALWAYS AT SCHOOL.

An Essay read at the Exercises of Graduation at the State Normal School, at Farmington, June 2, 1868.

Life is a school, and the world is a school-house; and from him to whom God first imparted the breath of life, to him from whom the breath of life shall last depart, all are scholars.

In the school of life, our first study is our school-house; our text book is the "Book of Nature," and the first lesson that we learn is the fact that our school-house is a school-house, and our school a school, and its scholars dull scholars.

When compared with the circling worlds around it, the earth, as a world, sinks to insignificance; but when considered as our school-house, it takes its place among the sons (suns) and daughters of the great star family; as one of the fairest of the fair, a model creation from the hand of the Divine Architect.

Yes, our school-house is just such a school-house as is just fitted for just such scholars as we.

True, some of its apartments are apparently useless; some of them it is exceedingly hard work to use; and many of them are terribly crowded.

Still it is a first-class school-house, and its natural teachers are competent to instruct in all the branches God intended for us to study while we are of the "earth, earthy."

We are always at school. Not necessarily because we are always in the world, and the world is always a school-house, but because, either by conscious, or unconscious tuition, we are always learning and always being taught.

Life-lessons begin when life begins, nor do they close when life closes. Our "fallen comrade," Adam, learned the first life-lesson. It was easily committed, but neither he nor we have ever been able to recite it, for it is impossible to do impossibilities. The great recitation still goes on, and is as incomplete to-day as on the morning when the sun first rose upon Eden-less Eve.

The popular idea of education is not the correct idea of the subject. Ask sixteen-seventeenths of the people to define education, and they will tell you that it is the book-knowledge obtained in schools, and if silence gives consent, the other seventeenth of us do not widely differ with them.

School education is no more education than our Mount Blue is Mount Everest. It is among the most essential branches of education, but it is one of the smallest, notwithstanding. Let us illustrate. Charles wishes to be a great man; he crams Latin grammar into his head, and goes to college. For four years he sails over educational waters, and then drops anchor at the college door, from which he steps proudly forth upon "terra firma," a pale, healthless, "educated" young man.

John stays at home, goes to the district school in winter, drives the mowing-machine in summer, reads his Bible in the morning, the newspaper in the evening, and studies in the Book of Nature, "year in and year out."

Charles settles in life, and spends his time in making geological researches in the first chapter of Genesis.

John, also, settles in life, and spends his time in doing "with his might, whatsoever his hands find to do."

Now, in the sight of the Teacher who taught as never man taught, who is the educated young man, Charles or John?

Don't misunderstand us here. We believe in school education; if we didn't, we shouldn't be standing here. But we believe also that we are always educating, and that the fast people of this fast age, are neglecting to study the studies that best discipline and improve, home, heart, and soul-life.

Wisdom does not always speak in Greek and Latin, "and a handful of common sense is worth a bushel of learning."

We are always at school. The time has come, dear schoolmates, when our golden class-chain must be broken, and its links scattered far and wide.

For two long years our footsteps have echoed and re-echoed along the "Normal halls of learning." "In season and out of season," we have studied and recited, and recited and studied. We have laughed when there has been anything at which to laugh, and cried when there has been anything at which to cry; and sometimes when there hasn't. (Apply this last observation to our first remark, if you please.) We have sown "wild oats," and gathered tame wheat. In short, we have done everything that we could do, and tried to do a great many things that we couldn't.

Now, if we don't look out, we shall find ourselves congratulating ourselves, something in this style, Well, I am a "Normal graduate." Those two words are certainly weighty enough to uphold my "name and fame," without any great effort on my part. My diploma cannot fail to serve me as a *ticket* to admit me to almost any position which I may care to occupy. At all events, my education is completed, and I am free to do what I please, without breaking anybody's rules.

Not so, classmates! not so, let us reason; but remembering that as long as we live in the world, we are in a school-house,—let us be found "always at school."

P. K. B.

Good reading is an art so difficult, so rare, that not one in a hundred educated persons is found to possess it to the satisfaction of others, although ninety-nine in a hundred would be offended were they told that they knew not how to read.

Editorial Department.

The MAINE NORMAL will hereafter be issued from Portland instead of Farmington, and all exchanges should be directed to

The Maine Normal, Portland, Me.

A TOUR FOR BUSINESS PURPOSES.

On the 14th of July, we took the steamer from its wharf in this city, for Boston. The breeze blowing seaward, rendered the ocean calm, and although the day had been very hot, we were cool enough to enjoy the evening sail, both on account of its variety to us, and because we were glad to feel that we were to go among new scenes, and view strange faces.

Nothing can supply the place to one whose life is somewhat monotonous, of a tour abroad among busy scenes, into the marts of trade, where men "buy and sell and get gain." Nothing, we say, can supply its place. Out of the school-room goes many a weary teacher, during the long, hard month of long hot days, the month that is sure in this climate, to be the hottest, dullest, most soporific of the year; and as he shuts the door of his dusty school-building behind him, he unconsciously, aye, consciously, heaves a sigh of relief. Into the country goes the denizen of the crowded town, to breathe the fresh air of the quiet mountain region, to climb the steep hill-sides, to walk, or sit by the still waters, and to gather freshness of countenance, and vigor of muscle, for another year of toil, of "wear and tear."

But it is equally good for a man, that he go occasionally with the crowd; that he see the artificial life of the great metropolis. If he touches the man of business, who has learned to trust and to distrust, who has, by slow degrees, or perhaps intuitively, become possessed of the power to read the business world, without the intervention or assistance of any ordinary auxiliaries, who looks through the slowly uttered words of the uninitiated, into the very secrets of his condition, divines his wants and the use which may be made of him, and at once, as by magic, manipulates him, at the same time bidding him "go in peace," believing himself "clothed and fed," if he touches this man, he does it not (alone) to be contaminated, but to be taught as well.

Therefore, O denizens of the quiet country land! we are not supremely blessed. We have much to learn, and though it may cost us much to learn it, we shall learn it, not at too much sacrifice, provided, only, we keep our consciences clear, ourselves unspotted from the world.

We had occasion to make a tour to Boston, New York and Philadelphia. We had a hot time of it, and for a pleasure trip we could have chosen a season which would have been more attractive, but "business is business," and waits for no man.

We will give our readers a peep at what we saw. But we must be brief.

At Boston we met our old friends, Messrs. Bowler and Wilde, in new quarters. They have taken up their abode for business purposes, at No. 1 Cornhill, and have passed from being the representatives of publishers, to be publishers themselves. Their line of books, to the advertisement of which upon another page, the attention of our readers is called, is too well known to need comment here. We found them trying to keep cool. We called at the bookstore of Crosby & Ainsworth, but then we may as well say, that there is no such firm now in Boston. Woolworth & Ainsworth, but there was Ainsworth, so we felt somewhat at home. He didn't mean to remain in the city much longer in the dust and heat, and we didn't blame him. At the house of Messrs. Brewer & Tileston we found Mr. Smith. Mr. Tileston had been in the country for some weeks. So we went on, walking among the books, and our readers may look in our next month's issue, for changes in our Monthly Advertiser, indicative of the object of our visit, a visit of which we cannot speak in detail and which we hope will result in bringing before our teachers and town school committees a greater variety of school books of standard worth, than they have heretofore seen. Frequent changes of school books may be, and is, bad; but it is also unnecessary, and an ill-advised uniformity or monopoly, would be infinitely worse. But we are not obliged to discuss this question here, and at this time.

We visited Messrs. D. Appleton & Co., New York. What larger publishing house is there in the United States? We were struck with the magnitude of the business done by Appleton & Co., when we saw printed in bold type, "A reward of \$4,800," (we give round numbers,) and read in the finer type below, that this was the amount paid as the weekly wages of the hands employed in the bindery establishment of this house. The reward was offered for the detection of some one who had undertaken to rob the foreman of the bindery department in going to his home on Saturday evening with this amount of money to pay the employees.

Mr. J. W. Schermerhorn, the gentlemanly editor of the "New York Teacher and American Educational Monthly," we found complaining a little, because the carpenters, who were making his apartments more beautiful and commodious, found it necessary to subject him, for a few days, to the "sound of the hammer," which showed us that he is not yet thoroughly philosophical, though the heat which refused to keep within due bounds, was enough to ruffle the spirits of a stoic. Mr. Schermerhorn makes a good teachers' journal, and we were glad to meet with him.

In Philadelphia we visited Eldredge & Brother, J. B. Lippincott & Co., and one or two other publishing houses. We admired the Quaker City. Market, Arch, Race and Vine, and then running parallel, Chestnut, Oak (?) Spruce and Pine; this was the order of the streets extending from the Delaware to the Schuylkill; crossing these at right angles, thus dividing the city into squares numbering 100 doors each way, are the streets named First, Second, Third, and so on. In this manner the founder of the metropolis of the Key Stone State, laid the plan for a city which should be a "fair green country town," and his design is unmarred even now, although many streets have been added, as a motley population, representing all the nations of the world, has come to find love and brotherhood in the home of Penn in America. Eight miles out, in Germantown, and yet within the limits of Philadelphia; and there, surrounded by all the bustle and business of a crowded city, we spent as quietly the Lord's Day, (and we might have spent as quietly a week day,) as any we ever knew in our native country home. Here we found Dr. Theodore S. Will-

ams, a native of Maine, who has amassed a fortune in the practice of his profession, and by virtue of Yankee enterprise, and thrift. Long may he live to enjoy his beautiful and retired home, in one of the most enchanting cities of America!

WE commend the subject which is touched upon by our correspondent, to the consideration of our readers. It is shamefully cruel to leave teachers without the moral support which the school committee is able to give, and, which, when given judiciously, is calculated to enable the teacher to secure the ends of school discipline, without resort to the measures which are now often found necessary:

"I have been looking around for a few days in search of a winter school, and most always met the remark, 'It takes a good deal of backbone to keep this school.' Now it seems to me that this ought not to be, or at least, that a teacher should have the requisite training. In towns where the committee do their duty, there is not apt to be much trouble, but where they will not, the teacher has to stand for himself. I am in favor of a constabulary act, giving teachers powers as special constables, or of having a Fisiological Department created in our Normal, and other training schools for teachers, and employing such professors as John Morrissey and John C. Heenan."

E. L.

A note received from Mr. Warren Johnson, State Supt. of Common Schools, dated Augusta, July 16, informs us, that he has secured the services of Mr. C. C. Rounds for the State Normal School at Farmington, that Mr. Rounds and Mr. Fletcher have been spending some time in the Superintendent's office, conferring relative to a course of study and the next year's campaign, and that he, Mr. Johnson, thinks that he has "two splendid, faithful lieutenants." We have no doubt that both Mr. Fletcher and Mr. Rounds, the latter of whom is an old townsman and schoolmate of ours, will do all in their power to carry forward the enterprise, to which they have pledged their efforts, in which some of the good people of Maine feel a deep interest, and for which one of them has already done service so worthy of commendation. Our interest in the Normal School at F., will not cease, or be in the least abated, because we are not henceforth to be personally connected with it. We shall rather claim, with all due modesty we hope, a certain special right to speak, sometimes, from knowledge derived from experience and observation in relation to its affairs and in behalf of its prosperity. This is all we have space to say the present month.

Let the friends of education in Eastern Maine, not forget that the Normal School at Castine looks to them for moral support, and let them be assured that its present Principal is using every endeavor in his power to make the institution of which he has charge, worthy of their generous patronage and an efficient agent to advance the interests of common-school education in every district east of the Penobscot, and west of it, too, for that matter. It will be seen by a communication from Mr. Fletcher, which appears on another page, that he has spent his vacation in visiting schools, and has brought home with him a first-rate assistant teacher. We hope it will be our privilege, ere long, to visit the Eastern State Normal School, when we shall be able to report its condition from actual observation. It is noticeable, however, that those who visit Castine, are unanimous in its praise. The people and teachers work unitedly, and we are glad, that the indications of Bro. Fletcher's success are so abundant.

The attention of persons interested in general education is due, to the fact, that during the present month, (beginning Aug. 18,) are to be held in Nashville, Tenn., the meetings of the three national bodies which assemble annually to consider the interests of education through the length and breadth of our land. They are as follows: The National Normal Association; The National Teachers' Association; and the National Association of School Superintendents. Arrangements have been made for reaching Nashville by the following route and at the following low rates:

Boston to New York by Steamer, fare \$1.00. New York to Cincinnati by the way of Erie, Atlantic and Great Western Railway; from Cincinnati to Louisville by Steamer; from Louisville to Nashville by rail. Fare from New York to Nashville and return, \$34.90. It will be permitted to those going to Nashville, to hold a ticket good from August 1st to September 1st, inclusive, and to stop anywhere on the way between Nashville and New York. The tickets should be obtained of John S. Dunlap, Esq., 15 State Street, Boston, or at the "Office of Erie R. R.," 24 Broadway, New York. Let Maine be represented at Nashville.

We advertised the meetings of the American Institute of Instruction, which are to be held at Pittsfield, Mass., Aug. 5th, 6th, and 7th, in the last number of the *Normal*. Permit us to remind our readers of them once more, that they may not pass by forgotten, but may be attended by as many as can possibly devote the time and money necessary for the purpose. And let us remember, friends, that we long ago received and adopted the principle, that it pays to expend money and devote time to that which has a tendency to elevate the teachers' profession in the public estimation, and that nothing is surer to dwarf our manhood, and oblige us, sooner or later, to take back seats in the work of education, than niggardliness in respect to expenditures for self-improvement, and the raising of the standard of general education.

It pays, to attend such meetings as those of the American Institute of Instruction; it pays, to take an educational periodical; it pays, to form local educational associations, and to sustain all these organizations and other aids, by voice, pen, and purse. And the reverse *does not pay*.

It was fifteen years ago that we performed, (faithfully we believe,) the duties of a brakeman upon the Portland and Rochester, (then called York and Cumberland,) R. R. We worked at the business one year, when we left to pursue *another track*. Returning now, to old scenes, we find considerable changes. Many of the faces which used to greet us daily then, have passed away from the land of the living, and many more have sought other fields of labor. We find, however, the same conductor as of yore, and meet more frequently than in those days, the countenance of one, at least, of the former directors. This road is the only one running into the city, which is run strictly in the interests of Portland, and under its present management, Hon. N. L. Woodbury Superintendent, is increasing daily in business, prosperity and public favor.

An article on "Pestalozzi," by Mr. John P. Gross of the Brunswick High School, and one on "The Cambridge Observatory," by Prof. D. H. Sherman, are necessarily delayed until next month. They will then appear, as will some other articles which we have on hand.

EDUCATIONAL INTELLIGENCE.

MAINE.

The Portland Schools.—On account of being out of town, we were unable to be present at many of the exercises of examination and graduation at the close of the school year in this city, which occurred during the past month. We attended, as long a time as was possible, upon the examination of the North Grammar School, of which Dr. Geo. C. Webber is the principal, and were also present at the graduation exercises of the City High School, of which Mr. A. P. Stone is the head, and which occurred in the New City Hall. It was actually impossible for us to be in attendance upon other examinations, and we much regret that it was so.

It is well known, we suppose, that the North Grammar School in Portland, is one of the largest public schools, if not the largest, in New England. We had never visited the school-building until the examination day, July 23d, since its completion. It is a mammoth school-house, and is well worth visiting as an educator itself. For one cannot help feeling impressed with the vast responsibility of the teacher's life, when he sees so many rooms filled with children intrusted to the protection and guidance of the authorities of the school system.

But we are unable to say more of this school, than that what we saw, and we visited six school-rooms, gave us much pleasure, and led us to feel confident that the great work which is being done in this building, is progressing thoroughly, safely, and well. That Portland High School is in good hands, we need not inform the public. So long has Mr. Stone been battling with the legions of error and ignorance, and so successful has he been in establishing truth, and promoting education, that he now stands, as he deserves to stand, in the front rank of our country's educators. Of its examination for this year, we cannot speak from observation, but with much assurance we can say, that thorough, honest work has been done there, and that as few leaks will be allowed, while the school continues to be controlled as at present, as the complicated machinery of such an institution will allow.

Of the annual exhibition, held this year in New City Hall for the first time, and drawing an audience sufficiently large to fill that spacious apartment, we would speak in detail, but we hardly deem it desirable to do so here. We think the exercises were creditable. We would not bestow over-praise. Fortunately no extraneous means are needed, to sustain the reputation of Portland High School. It has its representatives everywhere, filling the various walks of life, and they are its witnesses. Let it be guarded, and its means of usefulness amplified to the utmost extent which Portland can afford, and it will continue to be a proud monument exhibiting the intelligence and virtue of our beautiful Eastern City.

We can only say of other examinations in this City, we have heard them well spoken of, and we judge from what we have read in the City papers, that they passed off very satisfactorily. It is our hope, that we shall be able to see the schools of Portland in their every-day working, and give a more detailed report concerning them, at some future time.

Oxford County.—A writer in the *Oxford Democrat*, a country paper which we used to read in our younger days, and which represents the sentiment of the people of our native county, advocates the holding of a Teachers' Convention at some convenient time and place, to advance the standard of the common schools of Old

Oxford. We sincerely hope his views may meet with a hearty response, and that we may have the pleasure of meeting with our old friends, to consult as to the best means to be taken for the improvement of the schools.

Gardner.—We are glad to notice, as an indication of the thoroughness of the work done in the schools of this City, that the three young men, who this year enter upon the College course, and who were prepared in its public schools, passed a most creditable entrance examination, doing better in this respect, than any boys entering Bowdoin College at the commencement of this year.

MASSACHUSETTS.

Notes from Normal Schools.—The Framingham Normal School is designed for young ladies, and it has been for some time under the excellent management of Miss Johnson, a Maine lady.

The building is a fine one, and the situation beautiful. We spent nearly a day in the school, and were much pleased to witness the executive, and teaching ability of the Principal.

The Assistants are young ladies of good scholarship, who have become, by training and experience, superior teachers. We were much pleased with the teaching and reciting in most of the classes. This Institution has sent out a large number of graduates, who are meeting with success as teachers.

It was with peculiar feelings of pleasure, that I found myself walking, one day, the quiet streets of Old Bridgewater. Bro. Gage, you well know by experience whither the footsteps of an old Normal student turns, when he visits this cherished spot. The Normal building stands in the same beautiful place as of old; but how changed, since we bade a sorrowful adieu to its halls. The house has been enlarged and much improved.

There are now six teachers in the school, but I saw only one familiar face. Mr. Boyden, the able, industrious, and enthusiastic Principal, under whose administration the school and the house have grown to such goodly proportions, gave us a cordial reception.

Unfortunately for us, it was a day of miscellaneous work in school, so that we were able to hear but few classes, yet the general exercises were interesting, and they gave us some opportunity to judge of the workmen and the work. The true Normal idea of training teachers by requiring them, while students, to instruct classes under the supervision of their teachers, is here quite fully developed. We heard an interesting recitation in Botany, conducted by members of the class.

Mr. Boyden is a faithful teacher; his face bears the impress of constant study, and hard work in the school-room, for the advancement of his pupils.

The Bridgewater school has ever been unpretentious in its work, but its record stands second to none in the state. Few, if any schools in Massachusetts have so many graduates who are successfully filling high positions as teachers.

"The world moves," for though we saw in old Salem the house in which witches were tried in 1692, we also found a Normal School of 160 young ladies, under the charge of Mr. Hagar.

The students of this school have had an excellent preparation for a Normal Course, most of them having been graduated from high schools.

The Senior class, in their recitations, evinced good scholarship and commendable earnestness.

The classes were large, and in some we were disappointed in the recitations, because the teachers occupied so much of the time in reciting the lesson, while so few of the students took any part.

Young teachers, who are enthusiastic and "full of the lesson," are liable to fall into the error of doing the work which belongs to the class.

In many of the schools which we visited, there was not the life in the recitations, which can only be developed by individual responsibility and class criticism.

In this school, we listened to a general exercise conducted by one of the students, which was well presented. Mr. Hagar sustains his high reputation as a teacher and this school is doing a good work.

In due season, we reached Boston again, having gained much knowledge, as the fruit of our wanderings, and secured the services of an excellent assistant teacher, for the Castine Normal School.

Meeting a friend from Castine, in Boston, we inquired where we might pleasantly and profitably spend a few hours. We were directed to a popular Grammar School, in which we were informed, "one Boston Master has the courage to be original in his teaching."

We found the place and the man; but the latter, not very pleasantly, informed us, that "it is too late in the season to visit Boston Schools," although his would not close for nearly three weeks. Finding that we were not wanted in the Master's room, we took the liberty to "look around." Classes were reciting in different rooms; and receiving an invitation from an assistant teacher, to hear her class in reading, we ventured to tarry, in spite of a warning from the Master, that we were disagreeably "making ourselves at home." Judging from our reception, and *that reading lesson*, this was not one of the *show days*, in which Boston teachers bring out favorite classes to edify strangers.

That my friend might not bear away too unfavorable report, we visited the Girls' Normal School. Dr. Burrows treated us with much politeness, and offered every facility for seeing his school, in which we spent a pleasant hour.

G. T. F.

BOOK TABLE.

(1) HARVEY'S ENGLISH GRAMMAR. This book, which, we have noticed, has been very extensively advertised as forth-coming, in the school journals of the Western States, has made its appearance. It is brought out as the grammar of the "Eclectic Series of Text-Books," and is designed, so far as we are able to know, to supply all the needs of a text-book in grammar, in schools which adopt that series, or not adopting the series, adopt Harvey in grammar. We have looked this treatise over, as carefully and thoroughly as our time would permit. We are looking for a book, which is, in our opinion, well adapted, in all respects, to the wants of schools where beginners are taught the science of language. We are looking for a book, which will help to teach language by the natural method. We are glad to know, that some steps in this direction have been taken by modern authors; perhaps Mr. Harvey will prove to be the bearer of this better light, in some future effort. Meanwhile,

(1) CINCINNATI: WILSON, HENKLE & Co.

we confess, that we have been unable to discover any very marked excellences, which would make it desirable to introduce this book into our schools. We would like to see them, but we have not found them.

(2) THE NATIONAL SERIES OF READERS. It has been our intention to notice the primary books of this series, but we have been unable hitherto to find time for that purpose. It will be received as an oft repeated truism, that primary instruction is important. It is also accepted, that hardly any branch of study is more important to the beginner, than to know how to read. How is this knowledge to be acquired? We do not know by what method we learned to read. Do you, reader? That wilderness of letters covering the pages of a book, how did we conquer it? If you can tell, we can not. It must have been "unconscious tuition," as far as methods were concerned, to us both. But your teacher, and ours, probably, resorted to some plan, and perhaps more than one, to teach us to read. Happily, in a great measure we have become masters of the art, at least so far as to obtain, in a good degree, the correct idea of the author. But out of the many plans to which teachers have hitherto resorted, it is reasonable to suppose, that some one must combine in a higher degree than any of the others, that which is most rational, and which has proved itself most efficacious and helpful to the learner. We have never taught in a primary school, but we have studied a little, into what is likely to prove most instructive and useful to beginners, and we have come into the society, to a considerable extent, of those whose field of labor is primary instruction. We were not long in being converted to the "Word-Method," in teaching reading to little folks, although we do not consider it alone, sufficient to teach any child. That art cannot be laid down in rules and methods as printed in the books. All along the teacher's pathway, tact is needed; but at no stage more, than when teaching the little child to read. A detailed description of the "word-building method," as exemplified in the NATIONAL SERIES OF READERS, is not necessary here, for our readers can examine it for themselves, if they will. But we recommend, that they *do* it; that they do *not* allow any indiscriminate puffing on the part of editors, or any recommendations from any source, to prejudice their minds, but that they look thoughtfully into the question of the merits of this system, and if they see something good in it, in some way make a good use of it.

GOLD PENS.—We received a call the other day from Mr. M. Coon, agent for the sale of the celebrated pens, manufactured by D. W. Dexter, of Bridgeport, Conn. Mr. Coon is travelling in our State, and we bespeak for him the confidence and patronage of the friends of education. His pens are warranted, and his employer runs no risk of any returned goods.

KIDDLE'S ASTRONOMY.—We are unable to write a notice of this work, as we intended, for this month. Let the Principals of Academies and High Schools, in our State, send to the Publishers, Messrs. Wilde and Bowler, 1 Cornhill, Boston, and they will have an opportunity to examine what we consider a very good book.

E. H. BUTLER & Co.—We call the attention of school committee-men to the varied and excellent list of school books, advertised by this Philadelphia publishing house. We intend to notice some of these publications next month.

(2) H. M. CABLE, 117 WASHINGTON STREET, BOSTON.

THE STUDENTS' NORMAL.

Portland, August, 1868.

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To Contributors.

Articles should reach us before the tenth of the month preceding the one for which their insertion is desired. It is hoped, that all interested will take due notice of this, and govern themselves accordingly. Sharp, pointed articles are what we want, for all the departments of our magazine, and we shall be glad to welcome contributions from new sources.

To Subscribers.

You can help us very much in increasing the circulation of the *Normal* in its present form, if you will. Address us, and we will tell you how. Meanwhile, you can each send in at least one new name the present month, by simply placing this number in the hands of some young friend who will attend school this fall, and who will like to have the *Students' Normal* as a friendly assistant and interesting companion in his studies. Let us take hold together, and sustain the best educational monthly published in our country.

EDITORIAL.

Talks about Mental Arithmetic. II.

TO SQUARE CERTAIN NUMBERS.

I will now show how the principle, of the application of which some illustrations were exhibited last month, may be used to square numbers larger than those taken at that time. First, allow me to express the hope, that you have now made yourself perfectly familiar with the squares of all the integral numbers, from 1 to 25 inclusive, and that you have practiced a great deal in performing mentally such operations as were shown in the last *Normal*.

In squaring the number 15, we can apply our principle; for 15 may be considered as $1\frac{1}{2}$ tens. To square $1\frac{1}{2}$ we have the following operation:

$$(1\frac{1}{2})^2 = 1 \times 2 + \frac{1}{4} = 2\frac{1}{4}.$$

But notice, that the square of tens produces hundreds, [(10)²=100], therefore the $2\frac{1}{4}$ shown above, is $2\frac{1}{4}$ hundreds, or 225, which is the square of 15.

In like manner,
 $(25)^2 = (2\frac{1}{2} \text{ tens})^2 = (2 \times 3 + \frac{1}{4} \text{ hunds.}) = (6\frac{1}{4} \text{ hunds.}) = 625.$

Again,

$$(85)^2 = (8 \times 9 + \frac{1}{4} \text{ hunds.}) = 7225.$$

$$(125)^2 = [(12 \times 13 + \frac{1}{4} \text{ hunds.}) = 15,625.$$

And again,

$$(155)^2 = [(15)^2 + 15 + \frac{1}{4} \text{ hunds.}] = 24,025.$$

To square 1250.

The square of 125 found as above, is 15625; of course the square of a number 10 times as large, or of the number 1250 is 1,562,500.

I insert now a few examples, which you will be able readily to perform.

I.

What is the square of

- | | | | |
|---------------------|----------------------|---------------------|----------------------|
| 1. $3\frac{1}{2}$? | 3. $7\frac{1}{2}$? | 5. $4\frac{1}{2}$? | 7. $11\frac{1}{2}$? |
| 2. $5\frac{1}{2}$? | 4. $10\frac{1}{2}$? | 6. $2\frac{1}{2}$? | 8. $12\frac{1}{2}$? |

II.

What is the square of

- | | | | |
|--------|--------|---------|---------|
| 1. 15? | 3. 45? | 5. 135? | 7. 175? |
| 2. 35? | 4. 75? | 6. 165? | 8. 225? |

III.

What is the square of

- | | | |
|---------|----------|----------|
| 1. 650? | 3. 2350? | 5. 2150? |
| 2. 850? | 4. 1850? | 6. 2550? |

I advise you now to take your pencils and paper, and *write* in the same manner as in the above illustrations, the operations necessary for the solution of the above examples. You should not, in any case, allow yourselves to resort to the ordinary processes of multiplication. If you follow the directions which I have given, you will certainly find yourselves masters of our first principle in all its details, and as a school concert exercise, I know you will enjoy it. Do not neglect to practice. Next time I will unfold the application of another principle.

Talks about English Grammar. I.

THE THOUGHT IN THREE PARTS.

Will you consent, my readers, to be as little children, and be led along, step by step, upon this ground, which I am to suppose entirely new to you? If so, some of the simple things which I shall say, will seem less simple, because only adapted to your capacities and conditions. To be willing to begin at the beginning, is a prime qualification for the successful scholar. I suppose, then, that you can talk, else you certainly are hardly prepared to study, in detail, that which we call language. I presume that you can read, else you will hardly be fitted to examine the language as we find it in the printed books. But as you began to speak before you knew how to read, and as you could both speak and read before you could do much at writing, I will try to follow a similar order, and will talk about the subject we purpose to study together.

Will you accept of my conditions, and are you ready to begin to-day? Then follow my directions, and answer my questions.

My scholars are seated before me.

When I ask you a question without calling on any particular one for an answer, all may answer, unless I ask as many as can answer, to raise the hand,—but if I call on any scholar by name, then I want him to reply, and all others to be silent.

You are all giving excellent attention, and I thank you for it. It will be much easier for me to teach, and you will be much more likely to enjoy your lesson, and get correct impressions, if you are always attentive.

You see me standing before you. Now when I pronounce the word *observe*, I want you to watch very closely what I do.

Observe.—What do you observe?

Ans. You moved the book.

You are right. Now will you notice a few things to which I call your attention? In the first place, *you observed*. In the second, *I did something*. In the third, *you all told me what that something was, which I had done*. The words which you used, enabled me to know that you had observed, and had observed correctly; also that you all observed the same thing, and that you would use the same words, to tell me what had been done. Now, notice, that there are three parts to your act in this transaction. First, *observation*; second, *thought*; and third, *speech*. A great teacher once said, "Observation is the beginning of all knowledge," and it was certainly the beginning of our lesson of to-day.

Now observe again, in respect to the thought you have expressed.

You——moved——the book. Of how many parts does this thought consist?

Ans. Of three parts.

You are right again, but I prefer to have you make your answers more complete. You might have said, it consists of three parts. What is the first part?

Ans. "You" is the first part.

The second?

Ans. "Moved."

The third?

Ans. "The book."

Very well. Now you have learned that some thoughts are in three parts. You can practice with one another in giving thoughts which tell that some action is performed, and which are in three parts, like the one we have had in this lesson, and next time I will ask you to give me some examples. You may bring some in, written on your slates.

Leaves from Dora Dean's Journal:
OR STEPS TOWARD THE TEACHER'S LIFE.

Number One.

BROOKSIDE, Nov. 10, 18—.

Just got home from school. Had a real good time to-day. Got above the biggest boy in the spelling class. Mr. French said, "You'll make a school teacher one of these days, Dora." Tried not to feel proud, but couldn't help it altogether. I do mean to be a school teacher. How nice to have so many scholars do just as I say, and look up to me as we do to Mr. French. Let me see, I'm twelve years old. Four years more, and I shall be old enough to wear long dresses, and do up my hair, and keep school. Four years. How long it seems.

Dec. 10. Mr. French told us to write compositions to-day. He gave me "Spring" for a subject. Couldn't think of anything except "Spring is the most delightful season of the year," so wrote that, and gave it to him. Don't think he liked it very well. Mary Wood and I made some poetry at noon. She made one line, and I the next. Here it is:

THE BIRDS.

The Bird, how beautiful are her wings,
And how delightfully she sings,
She worketh hard most all the time,
Or only when the sun doth shine.

She worketh hard, to make a nest,
A place for her little ones to rest.
For fear they'll fall, and break their bones,
Upon the ground, or on the great hard flat stones.

Bob True got hold of the verses some way, and made all manner of fun of them.

Said he should advise us to send them to "Merry's Museum." I don't believe he can do much better, and I told him so. Said he would read us his last, and we might see. It was on the seasons. I got it away from him afterwards, and I will copy it here in my Journal. "Some like spring best, and some like summer best, and some like fall best, and some like winter best; but as for me, give me liberty or give me death."

Jan. 2. It is the last day of school to-morrow, and the committee are coming in. I have been reviewing all my studies. Think I shall do pretty well, if I don't get frightened. I must look over those rules in Smith's Arithmetic, before I go to bed.

Jan. 3.] School closed yesterday. Committee there in the forenoon. Scholars did well. Wish committees wouldn't all make such long speeches. Get tired of hearing them; all their talk just about the same, about our not putting away our books, &c. Wanted to tell them mother said I must put mine away.

Mr. French talked so good in the afternoon, I couldn't keep back the tears. He gave us for a motto, "Aim High." I am working it on a book-mark to-day. Mother says, next week I must go to work, that to aim high is to do right in little things as well as large ones, house-work as well as books. Well, I mean to aim high in every thing. I'll write it in large letters here, so I shall remember every time I open my journal, *Aim High*.

D. D.

Bald-Head Cliffs, Maine.

One August, while spending a few days with friends near Wells Beach, I had the pleasure of visiting what well deserves to be a famous place, Bald-Head Cliffs. The name is so suggestive of a wild, rocky, romantic place, that I felt quite a desire to see it, as soon as I heard it mentioned, and my friends' glowing description of its grandeur really made me long to visit it. They had done so much, however, to render my stay with them pleasant, I hesitated about putting

them to this additional trouble, particularly as Mrs. G. could not accompany us. But they silenced all objections, and three o'clock one Saturday afternoon found Mr. G. and I *en route* for the Cliffs.

As the river road is to some of the towns along the upper Androscoggin, so is the shore road to Wells. For seven or eight miles the road is perfectly straight, and aside from just hills enough to save it from being monotonous, level. On both sides of the way, at very nearly equal distances from each other, are large white houses with green blinds. Then to the east, only a mile distant, and full in view, stretches the "broad Atlantic."

Take a pleasant morning, or moonlight evening, a fast horse, easy carriage, pleasant company, and any one that would not enjoy a drive on this road, must be destitute of at least one of the essential elements of humanity.

For a number of miles, our way to the cliffs lay along this road. Then we passed into the hilliest, rockiest, roughest region it was ever my lot to behold, I believe, and I've been as far north as Mt. Katahdin, south as far as the Delaware, and live on what is very appropriately called Rock Hill. Up and down long hills, and short hills, straight hills, and crooked hills, around sharp corners, and corners that were not sharp, jolt, jolt, shake, shake,—shake, shake, jolt, jolt, we went over that rocky road, till at length, to the relief of the wagon, to say nothing of other parties concerned, we came to the end of the carriage route.

When one thinks of all the pleasant and fertile places there are on this "round world of ours," it seems strange that so rough a region as this, should be inhabited; yet it is sprinkled with houses, some of them quite mansion-like in appearance. Quite unexpectedly, too, we came upon a very neat little meeting-house. Nestled in there among the hills, its clean green and white, stand out in peculiarly pleasing relief, reminding one of an oasis in a desert, according to my idea of such things, although I shall not insist on the resemblance, as the nearest

I ever came to seeing a desert, was the camel I saw in Central Park last summer. The last half mile of our journey lay through a very poor apology for a pasture; so leaving the horse, we made our way along, and soon came to the worthy object we were seeking.

Even before we took the foot path, the ocean was in sight, but the first view we obtained of the rocky place called the Cliffs, was as we found ourselves nearing the edge of a precipice. This precipice is on a level with the edge of the pasture; sixty feet below lies the ocean, and what seemed to me as I gazed, the mighty ruins of some vast cathedral. For about an eighth of a mile, there is a foundation of solid rock, and over these, rocks of every conceivable size and shape are piled around. In one place stands a savage-looking boulder, whose huge sides are covered with sea-weed and shells, treasures which the tide has brought it. In another are yawning chasms, from one of which, as "the story goes," Satan launched his ship. I don't believe any one ever looked into the place without saying "Oh!" and becoming fully convinced of the truth of the legend. In another place are broad stone steps, and many parts of the ruins have been so molded by the tide as to look precisely like mason work. Never have I seen a place that will admit of comparison with this for grandeur and majesty. "Our very hearts were hushed within us" as we stood and gazed.

Bye and bye we went nearer the edge, and I ventured to look down the dizzy height at the ragged rocks below. It was only a glance, for the feeling that thrilled through me, made me appreciate the words of Hamlet's ghost. Going round to the side, slowly and carefully, for it was dangerous work, we clambered down over the slippery rocks, and came round underneath the cliff.

The first thing one does after getting safely down, is to look at that rock, some twenty-five feet wide, towering up sixty feet. It looks so grand and strong, that you lean against it with a feeling of rest and confidence, and before you are aware

of it, your lips softly repeat those words spoken so many centuries ago: "The shadow of a great rock in a weary land."

You feel, down here, that you are entirely out of the world. I am not particularly timid, nor very superstitious; I like to go out into the woods all alone, when high winds go sweeping through the pines with a sound like the roaring of the sea before a storm,—but I should shrink from being here alone, even in the daytime. Few, I judge, would care to be *there* alone, for there is something awful in the lonesomeness.

Moore's description of the rocky retreat where Hafed led his brave men, would apply very well to this place; and I imagine the poet must have conceived some of his ideas in some such spot, alone, at midnight.

If you have any imagination, it will come in play here. All kinds of fancies come to you, without the least effort. Even the water seems almost human, and the waves appear to lift up their arms with tender entreaty, as though they longed to take you into their cold embrace. I should not care to stand still here, too long.

The tide was nearly out, so we had a fine chance to collect shells. I do not know the names of the different classes, but two of them interested me very much. One kind is found only on perfectly smooth rocks, and from their shape, cling so closely to the rock, that one feels a peculiar satisfaction in securing them. The other class is found in the deep crevices of the rocks. These crevices are full of water, and as you feel around in their slimy depths, you can't help having a little shiver go over you once in a while, for fear some vicious crab, or other disagreeable animal will get hold of you, instead of your getting hold of a—doughnut, the children call them.

While we were thus employed, the sky as far as our limited view extended, was perfectly clear; what then was our surprise to hear the sound of thunder. Mr. G. at once started for the upper regions, on a "reconnoitering expedition," and

reported that the shower was just upon us. On many accounts the idea of being in this place during a thunder-storm, was anything but pleasant. There was no alternative, however; so getting close to the cliff, where we were pretty well protected from the rain, we improved the opportunity of seeing the ocean in a storm. It rained hard; the lightning was sharp; the thunder heavy, and very near. It seemed to roll along on the top of the cliff, and two or three times I looked up, almost-expecting it would come down over, in some visible shape. Added to this, we heard the deep roar of "old ocean," and saw the waves as they came marching grandly up, and breaking, dashed against the rocks, sending the white spray far around. Truly it was a soul-stirring scene. We could neither think nor speak, only *feel*. Soon the rain partially ceased; the thunder slowly retreated; and a rainbow gave promise of fair weather. A few moments more, and the brief storm was over. And when the sun came out and looked down so calm and bright on some of those huge rocks, while others lay in the shadow; and, on the ocean, part of the ships, with their white sails, were lighted up by its rays; part of the water sparkled in the sunlight; and over all stretched the "bow of promise," one end seeming to rest on the water, the other far out on the land, and just beneath a smaller one,—it seemed—oh, I cannot *tell how* it seemed! I can say it was beautiful, but so are a great many other things not half so pleasing. More than beautiful; it was this, before the shower.

The rapidly approaching tide warned us that we must leave; but, as we started, we came on a large rock whose top promised a good parting view. It was ugly work to climb it, but the view thus obtained more than repaid the effort. Fitting background for place like this, towered up that adamantine cliff. All around lay the rocky ruins. Far out on the ocean we could see the vessels as they sailed along. Five miles away lay Brown Island with its light-house.—Overhead a remnant of the rainbow still

lingered. At our feet, "break, break, break," came the waves against the rocks. One long, last, silent look, and then we clambered back over the rocks into the pasture.

Our walk, the homeward ride, the examination and distribution of our trophies, the shells, our account of the afternoon's proceedings to Mrs. G. and the baby, the sore hands and stiff limbs, which for days were constant reminders of our journey, must remain unnoticed.

Embrace your first opportunity, my readers, of going to Bald-Head Cliffs. If there is any "enjoy to you," it will be experienced here.

You will be wiser and better for going; you will go back to life's duties with stronger, braver hearts; and memories of the time and place, shall sweetly shine down upon you through all coming years.

M. D. C.

One Day's Experience in the Life of John Smith, the Absent-minded Man.

WRITTEN BY HIMSELF.

My name is Smith, *John Smith*, not the one you know, but a young student who has just left his dear paternal home, for the purpose of climbing the Hill of Science.

When I left home, my good mother, with much other excellent advice, gave me this: "John, do try and keep your wits about you. Don't be absent-minded, or I'm afraid the college folks will think you are not smart, like the rest of the Smiths."

Now this is my one great failure, "absence of mind." I promised my mother that I would always be *present-minded*. Well, this is my second week in college, and I have done pretty well for me, but not as well as I intended.

This morning I was going up the street, thinking I would be very proper and mind my P's and Q's. I got to thinking about my coming recitation. So with my head down and thoughts on the Greek verb, ere I knew it, I stumbled as I thought upon a nice young lady. I recovered myself in time to say, I beg your pardon, Miss. Just then a shout,

a laugh, and a "well done Freshy," made me look up, and lo! I had been using all my politeness on an old cow, peaceably feeding on the college grounds! All day I had the boys ringing in my ears with derisive tones those hateful words, "Excuse me, Miss Woolley."

Then I remembered my mother's advice, and thought, *I will be careful*. This eve we all went to a reception at Professor B—s. As I was ushered into the room where the ladies were, I said to myself, "Now, Smith, do your prettiest, hold up your head." And so I did, as I advanced to address Miss Jones, but I held it so high that I did not see the cricket at my feet, and as I stretched out my hand to greet the lady, I fell a humble supplicant at her feet. I hardly know how I arose and reached a corner, but I did, and there I remained till supper time, when our hostess asked me to escort a young lady to the dining-room.

I was enjoying the supper very well, and flattered myself that I was interesting my companion, when the lady upon my left said, "Please, sir, do not pour all your oysters into my lap." I looked in consternation, and there on her beautiful brocade silk, was the greater part of my oysters. I apologized as well as I could, and promised to make amends. (My chum tells me the dress in question cost several hundred dollars. I have but \$5.00, so I am in a dilemma.)

I passed the rest of the evening as well as could be expected under all these trying circumstances. At length the hour of departure came, and I was not sorry.

In the hall were lads and lasses bidding good night to the hostess, and donning their hats.

I made a rush for mine, a new straw with a wide rim, which I had left on the hat tree. I grabbed it desperately, thinking I would soon be out of the evening's misery, when a lady's voice cried out, "Sir, what do you mean? You are tearing my new hat." Sure enough, I had mistaken a tall lady for a hat tree, and her new straw for mine, and I was vigorously trying to pull it from her head.

I know not how I apologized or got

my own hat—but here I am at my room, hat and all. I have almost vowed never to go into society again, at least until I can keep "my wits about me."

Yours truly,

JAMES (I mean John) SMITH.

The Queen of the Flowers.

A DIALOGUE. SCENE I.

(Enter John.)

JOHN, (alone.)

The flowers of the valley have gathered to-day,
To choose from their number a queen,—
The roses of June, and the violets of May,
The pink and the sweet eglantine.
They are coming, are coming,
I hear their sweet song;
The zephyrs of summer
Bear it along.

(He listens.)

(A song heard in the distance—humming.)

JOHN.

O yes, they are coming,
Are coming along.
I hear your sweet humming,
Oh beautiful throng!

(Exit John.)

(Enter flowers singing.)

(Air, "Tyrolese Evening Hymn.")

Come, come, come!
Here we come, a happy throng,
Come with dance and cheerful song,
Saying, as we trip along,
Who shall be our queen?
She must be both sweet and fair,
Fragrant, beautiful, and rare,—
Who will for the flowers care?
Who will be our queen?
Tra-la-la-la-la-la-la, &c.

(Flowers pass out after singing, or the curtain may be dropped.)

SCENE II.

(Several flowers return, claiming each the crown.)

(Sing to air, "Haste thee, Winter.")

HOLLY-HOCK.

I come to claim the floral crown;—
My rights what flower can trample down?
My head towers high o'er violets' beds;

The pansies by me hang their heads
Yes, I should be the floral queen;
Crown me now upon the green.

DAHLIA.

Common flowers should never try
To seek a crown for which I sigh.
My brilliant hues all flowers must own,
Would well adorn a queenly throne.
Your queen, sweet flowers, I then must be—
Swear allegiance now to me.

PINK.

The Holly-hock would never do:
Her reign, bright flowers, you all would rue.
The Dahlia may be bright and fair,
But gives no fragrance to the air.
Lovely, modest worth, I think,
Would be crowned in me, the Pink.

HONEY-SUCKLE.

Honey-suckle, sweet and pure,
Wishes not the scepter to secure.
No, take the crown, I ask it not;
Be humble diligence my lot.
The honors I would wish to wear,
Can not with floral crowns compare.

SUN-FLOWER.

The Sun-flower, looking toward the day,
Sees all the flowers beneath her sway;
And I, the tallest of the band,
Look down on all the flowery land.
Ah, who can place the crown on me,
Though the rightful queen I be?
Shall I place it on my brow?
Gentle flowers, pray tell me now.

ALL.

Take it not, take it not;
In our own bowers,
We will vote, we will vote.
For the Queen of the Flowers.

CLOVER.

The little White Clover,
In meadows a rover,
No longer will roam.
But linger at home,
If chosen a queen
Of the flowery green.

POPPY.

The Poppy far better
Your kingdom would keep:
She would hush your pains,
And put you to sleep.
The land of Morpheus is my own,
And now I ask a floral throne.

ALL.

Say where is our favorite Lily,
The child of the peaceful vale,—
The Lily that bows so sweetly
Her head to the laughing gale?
Doth the dark-eyed Violet linger'
Where cooling streams repose?
And where is the fairest and sweetest,—
Our beautiful, blushing Rose?

(*Violet, Lily, and Rose come in, singing.*)

Sister Flowerets, we are here,—
At your call we now appear;
Not to tell of beauties rare,
Or a sparkling crown to wear.
To the bowers of Beauty let us repair,
And choose a floral monarch there.

(*All go out.*)

SCENE III.

(*All the flowers present. The Rose wears a crown.*)

LILY.

The Flowers of the valley, in Beauty's own bow-
ers,
Have crowned the bright Rose the queen of the
flowers.
Let us gather around now, with dutiful mien,
And hear the sweet words of our beautiful queen.

ROSE.

Sweet flowers, I with blushes your praises have
heard;
I will venture, trembling, to offer a word.
Let us, each in his place, strive some duty to do,
Thus teaching a lesson to all who may view.
Let us learn, like the Violet, humble content,

(*All say quickly.*)

In the Rose all beauties and graces are blent.

(*Rose continues.*)

Let us learn that our beauties and graces are
naught,
If with pride and with scorn of our fellows
they're fraught.
Let us think, that the dew falleth gently on all;
On each the kind showers of heaven may fall.
Each flower gentle Summer doth warm with her
breath;
Each blossom cold Winter may stiffen in death.
Then we'll talk not of beauty, that fades while
we view,
But seek, as we part, for something to do.

(*Rose goes out; others say, as they follow slowly.*)

We will follow the Rose,
Wherever she goes,
Wherever she goes,
Our modest, our fragrant, our beautiful Rose.

A Talk with Old Foggy.

OLD FOGGY. I tell you what it is, I wouldn't give any \$40 for all the ology lectures in creation. It's humbug, the whole of it. A lot the lecturer knows about the inside of this arth. Better be at home minding his business, and not trying to cheat honest people out of their hard-earned money. He's a shirk and a humbug; that's what he is, and I shan't encourage no sich stuff. Needn't ask me.

MR. P. *Why neighbor Foggy, what's the matter? you seem to be in trouble.*

OLD FOGGY. I'm out of all patience with these new-fangled notions and ideas. Why not let the arth jog on, in the good old-fashioned way, insted of fillin it full of liquid, bilin fire, as your lecturer does? A pretty mess twould be, I guess, if his saying was true. The world would have burnt up long ago. Like to know how he knows so much. Guess he never went down fifty miles to see.

MR. P. Hold neighbor; the professor gave you the proofs. He said—

OLD FOGGY. He said fiddle sticks. I didn't hear any proof. I guess if twas so, somebody would have found it out before him.

MR. P. Somebody did find it out. It has long been conceded that the interior of the earth is a mass of fire. How else do you account for the volcanoes?

OLD FOGGY. Don't believe anything about your volcaners either; they're a consarned humbug.

MR. P. Well, Mr. Foggy, what do you believe in?

OLD FOGGY. I believe in raising corn and potatoes, and minding your own business, by not trying to tempt Providence, prying into things he's hid fifty miles away.

MR. P. You believe the earth turns round every day, don't you?

OLD FOGGY. Turns round! No indeed! Guess your head would be worse turned than 'tis, if it did. And I'd like to know how a bird would find it's nest at night, which it left in the morn-
ing, and the earth whizzing so fast the other way. How could a boy *ketch* a ball, which he tost up in the air?

There's no reason in it. Besides, don't the scripter say the world stands still?

MR. P. Why neighbor Fogy; your own boys could enlighten you on these questions. You must be a regular Rip Van Winkle, and just now waked from your nap of a hundred years. But really, this course of lectures on Geology will, I think, be useful, as well as interesting to you. Geology shows the wisdom and goodness of God, more than any other science. It does not contradict the Bible, but confirms and helps us rightly to understand its truths.

It tells us of the appropriate place of each rock; where gold hides itself; where silver, lead and coal may be found.

OLD FOGY. Really, neighbor Progress, your speech sounds well. Do you really think that professor can tell where gold and silver is? I thought they was all *hilter-skilter* in the earth.

MR. P. Not so *hilter-skilter* as your ideas. The metals have each their appointed place in different formations of rock. Didn't you hear the professor say he could tell you where to "*strike ile*"?

OLD FOGY. Wall, wall, that looks a little more reasonable. Looks as if something might be *made out of it*. Do you suppose he could find anything on *my farm*?

MR. P. No doubt of it, if there's anything there. *Very likely* there might be a slate quarry there.

OLD FOGY. Wall, I do declare. Perhaps I was too hasty after all. Tell your committee-man to call round *agin*, and I'll sign. Perhaps we can make something out of it. I'll go home now, and tell the old woman about it. It's time I was getting up the cows. Good day to you.

MR. P. Well, this is an age of progress. We've got old Fogy waked up. Some hope of the country if it will only spread through the family, (especially if neighbor Fogy or his relations can make any money by it.)

The most common things are the most useful; which shows both the wisdom and goodness of Providence.—*William Penn.*

Second Letter from one of the Boys.
Politeness.

[One of the Boys must be deceiving the Editor, we fear, when he seems to ask in so imploring a way, for light upon matters which he certainly has a way of putting in a very clear light himself. As long as he speaks in so gentlemanly a manner as he has observed thus far, we can but think that he ought to be heard, for the sake of the general cause. We are glad that he is pleased with the *Students' Normal*, and we hope his letters may do other teachers besides his own, a great deal of good. We confess that observation (in respect to ourself at least,) and experience, have taught us that the faults of which he in a very proper manner complains, do many times overcome and lead captive the teacher, but we hope that all teachers who read his letters will be found as ready to profit by them as was his own "lady of the desk." We have still to say to our young friend, that you shall be heard through the *Normal*, if you have any other complaints to make, about teachers, committee-men, or any other parties to the school.—ED.]

Dear *Normal*:—I am very glad you liked my letter last month. I enjoyed seeing it in print, very much. I think our "school-marm" didn't enjoy it as well. I asked her to read the piece aloud to us, and she looked at me pretty sharp for a minute, to see if I meant anything, (she never suspected I wrote it,) then she said, "Oh! it isn't much—it wouldn't interest you." But, for all that, I am going to do as you asked me, write "another letter." (Oh! I forgot to tell you that after we repeated the golden rule this morning, the teacher said, "Now we will *all* try and practice it." I thought, that comes of reading my piece, if "*it isn't much*.")

Well, there's *another thing* I want to ask you about, 'because I have no one else to ask, for father and mother will not listen to me, when I "find fault with the school teacher." I want to know if *politeness* ought to be all on one side of the school house. Of course, we boys

ought to lift our hats and say good morning when we meet the teacher, but instead of a pleasant good, morning, she generally says: "Boys, now come right straight to school."

If I want to borrow her knife or pencil, I say, "Please, Miss," but if she wants to borrow of me, it is, "Henry, let me have your pencil," or "give me your knife." If I want a favor done, I say (as I ought to), "Will you have the kindness?" but if *somebody* wants a favor of me, I only hear, "Henry, *shut that door*, Go get some wood," &c.

When anybody does any thing for me, my mother has taught me to say, thank you; but that never comes from our lady of the desk. It is more likely to be, "Why didn't you do it quicker?"

Perhaps it is all right, and we boys and girls (I mean girls and boys,) especially the boys, have no rights which teachers are bound to respect, but I tell you, Sir, if teachers did but know it, they could get ever so much more out of the boys, if they would say "please," and "thank you," a little oftener, and not be afraid to give a fellow a pleasant word.

I'd do most any thing for a teacher who says please, with a smile, but it goes right against the grain to have one say, "Henry, go and get some water, and be quick about it." Of course I do it all the same, but I *don't feel the same*? Do you think it is fair?

Ought not a teacher to be just as polite as the scholars? Would'nt that be *setting a good example*?

Please answer some of my questions, in the next *Normal*, and if you print this, correct all mistakes.

I think it will be real nice to have a students' part to the *Normal Magazine*, especially if you will let me write once in a while.

I do hope my teacher won't find out that I wrote this, for she would think I am a very saucy boy, and I am sure I don't mean to be. I only write because I want to know some things. I think you can tell me better than any one else, and then, I "*feel it my duty*," (as our teacher said this morning when she

whipped Ed. Jones,) I feel it my duty to take the boys' part.

Dear me, Mr. Normal, I have been trying to close my letter for much as a dozen lines, but I can't. Guess I shall have to stop *ker whack*, (I'm afraid that isn't polite.)

ONE OF THE BOYS.

Wattie.

FOR THE LITTLE FOLKS.

Wattie is a little friend of mine. He is not much bigger than Tom Thumb, but is as bright and wide awake as any big boy you ever saw. His black eyes snap when you tell him a story, and they almost start out of his head if he has anything new to tell you. Did I tell you how old he was? Let me see, I asked him the other day. He looked very wise, and tried to look very old, as he said, "I am going to be five soon. I was four last week and father gave me a pair of boots for my birthday." Wattie had never been to school then, and he did not want to go, because his brother Harry had told him the teacher punished roguish boys, and he knew his father and brother called him "little mischief," every day. Then he did not love to stay in one place more than a minute; and he could not take Rollo to school with him, and he "knowed Roll would be lonesome all to home by himself." But one day his father said, "My little Wattie, I want you to go to school next session, if you live." Wattie looked very sober for a while, and then shook his head gravely, saying, "I shan't live."

But Wattie did live for all that, and went to school with brother Harry. He was rather shy of his teacher, at first, but she spoke pleasantly to him, and stroked his curly head, and asked about Rollo and the kittens; so, very soon he began to feel more acquainted, for Wattie was not a very bashful boy.

His first lesson was in the A—B—C's, where all little boys have to begin. The teacher wanted him to remember H; so she said, "H stands for your two brothers, Harry and Herbert." "Oh," said Wattie, "that can't be; it ain't big enough, that little thing, to stand for both of them."

The teacher told him R stood for Rollo, and then he wanted to stop and tell all about Rollo's funny tricks, and how he wanted to come to school and learn his letters too.

In a few days Wattie had learned almost all the letters. He used to ask what would A be, if I should cut a piece off of him." "What would V be if I should turn him up?" "I don't like X," he said "because it is a cross letter, and I hate cross things." The teacher taught him to make X with his fingers. One day, as he was going home from school, she said, "Wattie, I don't believe you can make Y for me on your fingers." Then he put up his two fat hands, and crossed his fore fingers, and cried out triumphantly, "There she am." The scholars laughed, and the teacher said, "Now you may go home."

He soon learned to spell a great many little words. When he had learned to spell Cat, the teacher said, "Now spell Kitty." "Let me see," he said, "a kitten is littler than a cat, it must be a littler word." Then he tried to spell it with two letters. "It must be C-a," he said, "the t is left off, because it ain't so big as a cat and don't have so long a tail." One day, Wattie's father visited the school, and after the older classes had recited, the teacher called Wattie and said, "Now show your father how much you have learned; spell Wat, (that was his nickname at home.) Then he held up his head and spoke very boldly, "R-a-t, Wat." Oh, how the scholars laughed, and the teacher laughed, and his father laughed and said, "I think he has improved *wonderfully*." Poor Wattie was rather ashamed of this blunder, for he had really learned very much: Before the session was over, he could read very well in the "First Reader," and spell squirrel, and rogue, and lots of hard words.

The last day of school, the scholars had what they called an "Exhibition," and Wattie had a little speech. Here is the last verse:

"If I was only big enough,
As sure as I'm a man,
I'd go into the army
And fight for uncle Sam."

The people clapped when he sat down, and Wattie felt very wise. One little fellow was bashful and did not dare to say his piece, so some one told him, "Harry, I will give you a quarter if you will speak." Wattie sat close by, and he said, "I'll make another speech for a quarter. Let me go."

"Well Wattie," said his father, when he went home, "do you *want to live* and go to school next session?" Yes indeed, he said, "I hope God will let me live a thousand years, and go to school. It's real fun."
S. R. M.

Running on the Fence.

I looked out of the window this morning;

The sun peeped over the hill,
The birds chirped a song for the dawning,
I can hear the music still.

The dew dropped down from the flower buds,
Brilliant without pretence,
But I turned to another picture,
A child upon the fence.

His face wore a healthful crimson,
The roses of recent sleep;
His hands made frequent gestures,
His balance thus to keep.
His bare white toes turned inward,
I ran to his defence;
But speeding on, he cried, "'tis nice
To run upon the fence."

When breathless at last I reached him,
My garments wet with the dew,
When safe in my arms I clasped him,
He sang, and the birds sang too.
Then looking up mid the warbling,
His pleading to commence,
He said, "my own sweet mother,
Can you run upon the fence?"

I kissed the precious darling,
And said, "my blessed child,
Yes, when I was as small as you,
As thoughtless and as wild,
I used to climb those tempting bars,
Unmindful of offence,"—
He clapped his hands, and laughing, cried,
"My ma upon the fence."

"Listen," I said, "those tall elm trees,
Which seem to touch the sky,
Were then so short, my fingers reached
The twigs when running by;
My hands could clasp the branches then,
Whose size your grasp prevents,
'Twas many, many years ago,
That mother climbed the fence.

And once my little brother,
 Now your dear uncle James,
 Was running on the fence with me,
 In spite of mother's pains.
 In watching us, the little ones,
 He fell and broke his arm,
 And after that, I shunned the fence,
 With sorrow and alarm.

And now, my little Harry,
 Remember from this day,
 To hear what older folks advise,
 And *mind* the things they say;
 Then when you, too, have older grown,
 Your mind well stored with sense,"—
 He kissed, and said, "ma, that will do,
 I will not climb the fence."

J. H. M.

NUTS TO CRACK.

Geographical Question.

If a person starts from Portland, Thursday noon, and travels around the world with the Sun, and with a velocity equal to it, it will always be noon with him, will it not? When he reaches Portland again, it will of course, be Friday noon. When will the people first tell him it is Friday noon? TEACHER.

A Riddle.

A crimson door to a cavern small,
 Whose roof was arched, and moist withal;
 I opened the door, and lo! inside,
 On a bed of coral I descried
 Two snowy pearls set side by side.
 Happy young mother, what bright gem
 Better adorns a diadem?

An old Arithmetical Question.

A gentleman three daughters had,
 And they were wondrous fair;
 To each a piece of land he gave,
 A circle and a square.
 A farthing an acre, it was said,
 Was the value of it found,
 And the farthing for each fortune paid,
 Encompassed it around.
 If crust a shilling be an inch,
 (And it is, very near.)
 Which of the fortunes was the best,
 The circle or the square?

SENEX.

Were man a purely intellectual being, intellectual culture would comprehend all that could be included in a perfect education. And were it possible for a moral being to exist without either body or intellect, there would be nothing but the heart or affections to educate.

A Taste for Reading.

SELECTED.

If I was to pray for a taste which would stand me in stead, under every variety of circumstance, and be a source of happiness and cheerfulness to me through life, and a shield against its ills, however things may go amiss, and the world frown upon me, it would be a *taste for reading*. I speak of it of course, only as a worldly advantage, and not in the slightest degree as superseding or derogating from the higher office, and surer and stronger panoply of religious principles; but, as a taste, an instrument, and a mode of pleasurable gratification. Give a man this taste, and means of gratifying it, and you can hardly fail of making a happy man, unless indeed, you put into his hand a perverse selection of books. You may place him in contact with the best of society in every period of history; with the wisest and wittiest, with the tenderest and bravest and the purest characters who have adorned humanity; you make him a denizen of all nations, a contemporary of all ages. The world has been created for him. It is hardly possible but the character should take a higher and better tone from the constant habit of associating in thought with a class of thinkers, to say the least of it, above the average of humanity. It is morally impossible but that the manners should take a tinge of good breeding and civilization from having constantly before our eyes the way in which the best informed men have talked and conducted themselves in their intercourse with each other. There is a gentle but perfectly irresistible coercion in the habit of reading, well directed, over the whole tenor of a man's character and conduct, which is not the least effectual because it works insensibly, and because it is the last thing he dreams of.—*St John Herschell*.

About what can we *write*, save about what we know? A boy might tell us much about Tommy the family horse, which he sees every day, but very little about Bucephalus or Pegasus. Pupils can write only about what they know.

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THE TEACHER AS A GENTLEMAN.

In former numbers of the *Normal*, a few suggestions have been made upon the *language* and the *manners* becoming the teacher, as a gentleman. The general theme would be left quite incomplete without the third and final consideration, that the true teacher will be a gentleman in his *feelings*, also. Here we must find, after all, the foundation of all that is valuable in language or in manners. Elegance of diction and gracefulness of personal bearing, sometimes conceal the veriest harshness and inhumanity at heart.

The teacher who claims to be a gentleman, will not be satisfied with these heartless externals. Other men, in their schemes of personal aggrandizement, in executing their purposes of gain or ambition, may rely upon outward proprieties. But the instructor of the young, in his labors of patience and of love, needs the broad foundation of a generous heart, if he would prove himself a living and lasting gentleman. He must have a ready and hearty sympathy with those around him,—pupils, parents and neighbors. He must possess a benevolent and self-sacrificing spirit, leading him to devote his whole energies, for the time, to the good of his pupils; to an extent, if need be, beyond the demands of the statute—and current usage.

Too many teachers labor with little motive beyond their stipulated wages. With only the slightest interest in the highest welfare of their pupils, the soul of true kindness, the foundation of all politeness, cannot be a strong moving power within them.

Again, the teacher who is a true gentleman in his feelings, will cherish a high regard for all things sacred. It is one of the chief glories of

New England, that her people are, generally, a religious people. You can go into no school district, where you will not find more or less of the citizens sincerely devoted to some form of religious worship. The faith of their fathers, or their own, is to them an object of surpassing interest. They are solicitous, above all things else, that their children may attain to the like precious faith. The teacher should most scrupulously respect this feeling on the part of his employers, even if he has not himself an exact sympathy with them. And he who by one sneer against sacred things, one contemptuous remark in regard to the Sabbath, or the Bible, or the Church of the Living God, should wound the feelings of these parents, or diminish in the minds of his pupils their reverence for sacred things, has no claim to be considered a gentleman.

Equally improper is it for a teacher who has his own religious opinions, to urge his denominational peculiarities upon the notice of his pupils, or their friends. The teacher has other work to do. Bound by the statute, as well as by the Higher Law, to teach the great principles of morality and religion, he must still be gentleman enough in his feelings, to forget the small matters of sect and order, in the earnest effort to direct his pupils to the great principles of goodness, and purity, and truth.

The teacher should be a gentleman, in the *school-room*. Teachers are sometimes careful to bear themselves with propriety when abroad, mingling with the adult society of the neighborhood, but seem to forget that there is a demand for the like bearing in the school-room.

Analyze the word *gentle-man*. And where in all the world are gentle and kindly influences more in demand, than in the circle of young, and trustful, and susceptible minds of the district school? Are those pupils gentle and affectionate now? Let not the irritableness or anger of the teacher, his roughness or unkindness, blight those opening affections. Are there among them uncultivated and stormy spirits? Let the grace of the teacher's lips, the gentleness of his bearing, and the perpetual sunshine of his face, calm the turbulence of those restless spirits, and mould to more graceful forms, those uncouth and wayward characters.

But it may be asked, can the teacher be always thus courteous and gentle among his pupils? Must he not sometimes lay aside the character of a gentleman, and assume the bearing of harshness and severity? Occasions will often arise when reproof must be administered, and

sometimes the severest punishment. But even then, there is no demand for passion, no call for unkindness. On the contrary, the teacher should show that he is actuated by the calm convictions of duty, and a desire for the pupil's good, rather than by any personal ill-feeling. So that, if he should be obliged, in the sorrow of his heart, to administer that last of all punishments, the rod itself, he will do it after the manner, and with the *feelings of a gentleman*.

I have said nothing of the importance of teaching the elements of common politeness in the school-room. It is a sufficient reason for the teacher to be a gentleman in the school-room, that his example, his whole intercourse with his pupils, will leave its impress upon their minds and manners, whether or not he gives them one word of direct instruction. He stands in their presence, day after day, and silently it may be, but not the less surely, stamps upon their impressible characters more or less of his own image.

Again, in his intercourse with the community, the teacher should sustain no doubtful character in this regard. In many country districts the school-master, or the school-mistress, as the case may be, is taken as the pattern of every excellence. Be worthy, young ladies and gentlemen, to hold this pre-eminence. Let not the example of the *master* or *mistress* be quoted in favor of any doubtful habit or practice,—whether of word, or act, or spirit.

The teacher's position, moreover, will be agreeable and profitable to himself, very much in proportion as he commends himself, by his urbanity, to the regard of parents and relatives of his pupils. He thus gains power for more efficient service in his chosen sphere.

As he visits from house to house he should avoid all needless formality and stiffness. On the other hand, he should not cheapen his influence by excessive familiarity. Let him avoid reporting from house to house what he must necessarily observe in the families to which he is received. Every neighborhood has its petty scandal, and the teacher is in danger of being compelled to listen, willing or unwilling, to all the busy-bodies in his circuit. Let him learn the wise lesson of silence. An incautious word of approval or condemnation, or the simple repeating of another's remark, may do the teacher uncounted mischief.

Again, in the families where teachers board, they should regard promptly and with cheerfulness, all their domestic arrangements. Let the summons for rising, for meals, for devotions, be answered with

alacrity. The character of a *good boarder*, thus earned, is invaluable to the teacher. The teacher should thus be known, in the school-room, the family, the lyceum, the church, and wherever else, as a man or woman, of all the proprieties.

To cultivate this spirit in the largest measure, there is need that the teacher receive his lessons elsewhere than in the school of Chesterfield. The precepts of that acknowledged master of etiquette may, indeed, be studied with profit, in learning the proprieties of life. But the spirit of the true gentleman is learned in its perfection, only in the school of Him who taught as never man taught. The often-quoted saying of a distinguished writer, that "Christian is the highest style of man," was not affirmed of the adherent of this sect or that denomination. The *mere* sectarian, alas! is often far removed, in spirit and life, from that highest style. It is he who most largely exhibits the spirit of earth's great Benefactor, who is best entitled to that high encomium.

Let the influences of such a spirit fall, like the sunlight and the dews of heaven, upon the tender plants that wait the teacher's cultivating care. Thus nurtured, they will scarcely fail to grow up into fair proportions, and strength and beauty.

E. P. W.

THE TRUE DIGNITY OF MAN.

The great question in human affairs is the question of *men*. Nothing goes on well without these; nothing goes badly, in the end, if good men are in abundance. Every step of advance in society has been a step taken in advance of society by some strong one. We refer all genuine progress to the divine will and work; but it is also true that God acts upon the world, morally, through means, and chiefly through the instrumentality of men. So when the time comes for a great discovery, or invention, or reformation, there is provided the coming man, the fitting man to lead off in these things. The event calls for the man, awaits the man, is dependent on the man, could not be but for the man,—without a miracle. So the great question in human progress or in christian progress is a question of *men*, next to the hand and breath of God. The grandest production of earth, or the ages, is men. Nothing special comes without them; nothing good is wanting *with* them.

We say, too, that these being given, right men, true men, great men,

equal to great things, great events and changes, will come almost as a matter of course! Hence the importance of producing men, filled with the life of God, and the higher life of their age. It is not absurd to expect, that when the pre-conditions of great events are had, these events will come. If the great things of earth depend thus on great men, when such men are raised, men that have outgrown their times, and stand forth upon the moral stage, steps in human progress may be looked for, and moral progress be counted on.

The law here is reflexive; it interacts in the grand machinery. It is as the shuttle in the world's vast web. If the exodus depended on a Moses, so a Moses, with his superhuman qualities would, probably, bring about an exodus. If the discovery of a better style in human reasoning or metaphysical thought necessitated the coming to earth of a Plato, or a Bacon, or an Edwards, we may infer that these given, or stepping upon the great mental arena, grand discoveries of the sort would be made. Such men make providences, as really as that providences make them! Such men necessitate improvements, and compel progress, as certainly as that the wheels of progress await *their* strength. If the great crises in human history have hinged on great minds, so great minds have their mission in making the events, under God, that have gone upon the pages of the world's history.

The thing, then, the world most needs, next to the spirit of God, is *men*,—cultivated men, men of grand development and proportions, of far-extended look and reach, of upward aims and ideas, and of incorruptible integrity. Then instead of great events having to wait for great men, such men, put in to the world's affairs, will certainly produce great events!

From these thoughts or facts we get at the real worth and dignity of man. He inaugurates change and inspires progress. He touches literature, and it shines! His mind is the prism that gives out its beauties. He puts his hand upon the kingdoms of nature, and the sciences wake from their sleep. He turns his eye into the heavens, and they drop at his gaze, that he may look through their order and systems. Or he turns his eye toward the invisible, where thought veils itself, and spirituality reigns. He asks for light; and obscurity wakes into vision, and the darkness into day!

The true dignity of man consists in what he *is*, in the grand elements of his nature, the vast endowments of his being, and the noble sacrifices

and achievements with which he crowns his creation. The dignity of man is not due to circumstances or surroundings. The consequence given to him by these, is fictitious and shadowy. It is gloss, glare, glamour! The true worth of man does not relate to what appears or dazzles; but to that which *is*, and is capable of grand results. The baser metals may take a higher polish and give out a more brilliant reflection than pure gold. Solid merit only can go into the scales that weigh real worth. To attain and hold position we must deserve it. To stand on the high places of earth, we must have high and god-like qualities. Merit only gives dignity and deserves position. It is pitiful to stand candidate for place; it is noble for place to stand candidate for thee. To deserve to rise is itself exaltation, and is the only thing worth our aim. To merit promotion is success, is position, which indeed, merit itself cannot outlive. Our great concern, therefore, should be to possess the pre-conditions of honor, the prerequisites of true greatness. Then our life is not a loss; its end on earth is gained. We have greatness; we have the crown! Such qualities never fail of influence in the end. They will be recognized in due time. They will outgrow the narrowed circumstances of earth, that had cast over them their shadow. They will outlast time itself, for the truly great are *encored* at death, to return to earth and repeat upon a higher scene, their best deeds and words.

W. W.

TACTICS OF THE SCHOOL-ROOM.

NUMBER SIX.

Assisting Pupils—continued. The principle laid down in the last number of the *Normal*, that assistance should be given to the pupil where he actually needs it, and in no other case, is one that the teacher must constantly bear in mind, and make his guide in this department of his labors. In carrying it out, also, he must, as has before been intimated, be careful to aid the pupil by showing him how to work, and not by doing that work for him. As a general thing, pupils prefer to do their own work, if they can be told how to do it, rather than to have others do it for them. The consciousness that their powers are equal to their tasks, is, to young minds, a source of satisfaction,—a kind of triumphant feeling which makes them equal to the accomplishment of even greater work.

In the common school, pupils ask for more assistance in mathematics,

especially in arithmetic, than in all other branches together ; and it is in this branch of study that the teacher is in danger of doing too much work for the pupil. It is so easy for the teacher to "do the hard sums" for his pupils, and to give the rule outright, that it is not strange that he often yields to the temptation to do what should be done by the pupil himself. But the same pains-taking process, of which we have before spoken, must here be adopted, also, of giving hints to the pupil, and of plying him with questions that shall start a train of thought in his mind, which will lead him to see the nature of his difficulty as well as the proper method of its solution. This requires skill and ingenuity on the part of the teacher, but it is a power which he can acquire by experience, and which, when acquired and properly exercised, constitutes one of the highest agencies in the work of instruction. The grand object is to lead the pupil from the known to the unknown ; to make him use his knowledge, as fast as he can acquire it, in the attainment of greater stores of information ; and especially in getting an insight into principles and an intelligent method of using them. Care should be taken to avoid the use of language that is above the comprehension of pupils. The teacher who once told a pupil, by way of explaining the reason for "carrying for ten," in addition, that it was because "ten in an inferior column is equal to one in a superior column," did not throw much light upon the subject in the estimation of the pupil, whatever may have been the teacher's opinion of his own lucid (?) explanation. The teacher's language and illustrations before his class should be simple, clear, and to the point ; and then the pupil will receive the full benefit of his instruction, and not go to his seat discouraged and bewildered by that which ought to be a light in his pathway.

There is a difference of opinion among teachers in regard to the propriety of allowing pupils to assist each other. If such assistance will stimulate thought and beget a sympathetic interest in study, it is not only allowable, but highly desirable. But, if, as is too often the case, pupils seek aid of each other, to save thought, and to get rid of hard work on their own part, then the result is wholly injurious, and the practice must be condemned. When younger pupils seek aid of those older and more advanced in their studies, the assistance is most likely to be injudicious and productive of harm ; for the two pupils, not being engaged in the same grade of study, have no community of interest in their study, and the advanced pupil most likely gives aid to his junior

friend without explanation, and as a mere act of kindness ; or, it may be, to get rid of the youngster's importunity. Such assistance is not of the kind that is beneficial to the young learner. On the whole, we are inclined to think that, in most schools, pupils are too often allowed to assist each other, or, at any rate, that there is too little discrimination by teachers in allowing them to help each other.

In the preparation of text-books for schools, injudicious aid may also be given. In classical studies, the text-book may be furnished with notes altogether too voluminous ; too many passages may be translated ; and information in history, geography, and mythology, may be too freely given, when it would be better to send the pupil to his classical dictionary and his atlas. Foot notes, upon the same page with the text, are objectionable. If the information in such notes is placed by itself, at the close of the book, for example, and the pupil is not allowed to consult it during the recitation, then he will be compelled, while preparing his lesson, to incorporate the substance of those notes into his own mind, and rely upon his own resources while reciting. Whereas, if the notes are constantly before him in the recitation, there is a strong probability that they will not be thoroughly learned by the pupil, but that he will, on the other hand, trust to the chance, always probable, of casting his eye to the foot of the page, where he can *read* the note, instead of giving it from the fullness of his own knowledge. We deem it proper to state here, that we are in favor of giving assistance to the classical pupil in the way of notes and explanations. What we deprecate is, superfluous aid. We do not subscribe to the doctrine, sometimes advanced, that the pupil should be furnished with the bare text, lexicon, and grammar, and receive no other aid. Few teachers would be willing to risk themselves before their pupils in a classic which they had never read, with no other help. They generally seek all the light they can fairly obtain.

In mathematical text-books, the explanation of principles and the methods of operation are often too verbose and technical. If given in plain language, and with conciseness, they are truly an aid to the learner. For class work, oral instruction by the teacher is generally far better than full explanations attempted in the book.

Answers to examples in arithmetic, algebra, &c., should not, we think, be given as a general rule. It may be well enough to give a few, at first, to encourage the pupil in his first attempts, and before he has become

familiar with the methods of proof; but after that, he should be taught that he can only make sure that he is "right," by actual proof of all his work.

As to the assistance which authors and publishers are so willing to furnish us, *for a consideration*, in the shape of *keys*, we suppose not much need be said. The only argument in their favor is that *teachers* may use them to test the work of pupils, and thereby save time and mere drudgery in looking over operations. We do not particularly object to this view of the question; but let the matter stop there. When keys are advertised in the preface of the text-book, and are conspicuously placed upon the shelves of the book-seller, we protest that more assistance is placed within reach of the pupil than is wise or proper. How far those who furnish these books can exculpate themselves, by pointing to the declaration, usually found upon the title page, "for teachers only," and to the fact that the price of keys is usually put so high as to keep (?) them out of the reach of pupils, we will leave to a candid public to judge. Great as is the evil of keys, it can, nevertheless, have a remedy. Let School Committees adopt the rule, that when keys to the arithmetics and algebras, in use by their schools, are exposed for public sale, then such text-books shall be immediately dropped from their list. Such a rule, inflexibly adhered to, would cure the evil radically.

Fellow teachers, one of your highest duties is to be a faithful guide to your pupils,—to give them assistance when actually needed. Do it. But be careful to do it judiciously and well.

A. P. S.

HENRY PESTALOZZI,

AND HIS SYSTEM OF EDUCATION.

NUMBER ONE.

Henry Pestalozzi was born at Zurich, in the German part of Switzerland, on the 12th of January, 1745. His name originally, was John Henry Pestalutz, the latter being a German-Swiss corruption of the Italian family name of his ancestors. The omission of John is according to the German custom, by which only the last of the baptismal names is kept in use.

In order to enter fully into an understanding of the spirit of the system of education of this remarkable man, it will be well to look care-

fully at the causes and influences which contributed to make Pestalozzi what he was. He began his work of reformation with the lower classes, as an act of charity, and his motives and principles of action, show a knowledge of human nature, which may be useful in training minds of greater culture and strength.

As a boy subject to the rigorous discipline and monotonous routine of the inferior schools, he gave no evidence of any decided taste or remarkable talent. But after he had passed from these into the more liberal institutions, in which the *patricii Turicenses* are fitted for professional life, the latent energies of his mind, no longer trammelled by the unnatural influences which had surrounded it, began to unfold. His taste and talent led him to the study of the languages, as a preparation for the ministry. In other respects, too, he was eminently fitted for that sacred office. A man of unaffected piety, great devotion and consecration, and an uncompromising love of justice, combined with a heart full of sympathy and tender love for the suffering and needy, he gave promise of a life of great usefulness.

With such a view of his character and tastes, we are surprised that his first appearance in the pulpit was also his last. After abandoning divinity, he gave his attention to the study of law; although the tendencies of his mind remained the same, and instead of following the regular course, he devoted the greater part of his time to the science of government. In these investigations the farther Pestalozzi advanced, and compared the state of things, as it then was in his native country, with those principles of justice and freedom which he regarded as the first requisites of good government, the more was he surprised to find the professed purpose of society sacrificed to selfish ends. He found that judges and public officers were educated, not that they might best serve the state, but that they might contribute to their own ease and luxury; that the great claims of humanity were entirely neglected; that even the sacred calling was prostituted to worldly ends; and, as the effect of such corruption among the leaders of society, he found the mass of the people, by the influences of society as well as the instruction of the schools, entirely unfitted for the duties of the world, and in utter ignorance of the interests of their spiritual natures.

The results of his investigations led him to set forth, in an essay while a student at law, his views on the relation which education ought to hold to the various duties of life. Perhaps it was this experience which gave

him such a clear appreciation of the object and end of education, which he announced and followed with so much success after he became a teacher, and to which, reference will again be made. He was greatly strengthened in his convictions about this time by the misanthropic eloquence of "Rosseau's Emile." His philosophy, selfish in its very nature, contributed largely toward confirming him in his convictions, that the existing condition of society was entirely opposed to the dictates of nature and reason.

With these reflections, and feeling that the ills into which society had fallen had their origin in a departure from the simple path of nature, he again abandoned his profession and resolved to become a class student of nature. Leaving Zurich, he went to Kirchberg and apprenticed himself to Tschiffeli, a farmer distinguished not only for his excellence in agriculture, but also for his great interest in the improvement of the agricultural classes. Here he found a new field of study; he engaged in active labor, and while doing so, was constantly studying how he could make that calling the means of intellectual and moral growth.

After being apprenticed to Tschiffeli a sufficient time to become skilled in rural economy, he purchased a tract of land, in the canton of Berne, and erected upon it the necessary buildings, giving it the name of Neuhof, the New Farm. He also came into possession, at this time, of an interest in a cotton manufactory, and took this opportunity to observe the influence of this employment upon the habits and minds of the people. These experiments and observations convinced him more and more, that the prevailing system of popular education was entirely inadequate to develop either the mental or moral nature of the people.

He had a great fondness for children, and was filled with an earnest desire to relieve their wants. Inspired with this love, he resolved to open an orphan school at the Neuhof. Whenever he knew of a child bereaved, or of one supporting itself by begging, he took it into his home, and in a short time he had fifty children under his care. Although he had already made their situation more comfortable, he soon became convinced that no external circumstances could make them good or happy, unless there was an internal stimulus, and a desire on their part, to be good and happy. He found it necessary to "make clean the inside of the cup," in order to make permanent the fruits of his labors. He therefore strove to inspire them with a love for improvement, and endeavored not so much to do them good himself as to enable them to do

themselves good. His immediate object was the amelioration of the condition of those in the place in which he lived ; but his grand, ulterior object was to learn the effect upon mind, of the various influences which surround it, how best to educate and develop that mind to fill the place for which its Creator designed it, to learn by actual experience its capabilities that he might be able to build up a system of education which should become national, and which should raise the condition of the lower classes, and cause them to seek their greatest mental and moral improvement.

To conceive and carry into execution such a project as this was the work of no ordinary mind. Such an undertaking required a perfect organization, governed by general principles, and, as yet, even Pestalozzi himself had not a clear idea what those principles should be. His influence, previous to this time, had been chiefly negative, an opposition merely to the existing state of things ; he now felt the necessity of striking out a new road for himself, and of devising some better means for the accomplishing of his object. In this he was led on by faith and love ; faith, that God under whose guidance he felt he was acting, would enable him to discover the means by which he might awaken to new life the slumbering energies of the soul ; and love, that was ready for any sacrifices in order to relieve suffering humanity.

He continued his asylum at Neuhof for fifteen years, during which time upwards of an hundred children were redeemed by his kind care from the corrupting influences of vice and fitted to occupy positions of usefulness in society. G.

OBSERVATORY AT CAMBRIDGE.

On Thursday, June 25, we availed ourself of the kind invitation of Prof. Winlock, to visit the Observatory at Cambridge, Mass. It is nearly two miles west of Harvard College, on an elevation sufficient to give an unbroken horizon.

From the parlor, we ascended to the computing room. How changed since we stood in this room eighteen years ago ! A fine portrait of the venerable Dr. Bond, then Director, now hangs on the south wall. Near it on the right is the "standard" clock. This clock was manufactured in London for the Paris Exposition, and is regarded as a specimen of very superior work. It was obtained for the Observatory by those determined

to have the best, without regard to cost. It is enclosed in a double case so as to protect it from sudden changes in the atmosphere,—changes so sudden as to prevent a prompt response from a carefully adjusted compensating pendulum. On the east side of the room, is the “east” clock. On the north side we were permitted to examine an ingenious apparatus for recording the *direction* and *velocity* of the wind. On the west side we saw a large number of telegraph keys, for closing the current, so as to communicate with the east, or standard clock, telescope, transit instrument, wind apparatus, or the general telegraph so as to speak Albany, Cincinnati, or Washington. Closing the circuit, we could hear both clocks tick distinctly, although neither could be heard a moment before. By connecting with the general current, the clock in the National Observatory at Washington, and the clock in the Dudley Observatory at Albany, can each be heard to tick, by the observer at Cambridge, Mass.

The direction of the wind is indicated by a vane, and the velocity by four hemispherical cups, attached to horizontal arms at right angles with each other, and which are found, by repeated trial, to revolve at *one-third* the velocity of wind. Both vane and cups, as also the battery which supplies the electric current, are in a building quite distant from the Observatory. We next entered the west wing, where we found the transit. This fine instrument is mounted on a perfectly horizontal axis, upon a stone pier, having a foundation below the reach of frost, and so arranged as to move exactly in the plane of the meridian, to note the exact instant a star passes the meridian, several *spider-webs* are placed in the focus of the instrument, and the record is made by the magnetic current. We examined the plan of a new transit, now being made for the Observatory, at a cost of \$14,000.

Ascending to the dome, we stood beside the great refractor. This splendid instrument was made in Munich, at a cost of \$18,500.* Its entire length is 23 feet; diameter of its object glass, 15 inches. The instrument weighs three tons, and is so nicely poised, that it turns easily in any direction. It is furnished with Azimuth and meridian circles so that it may be directed to any object recorded in the catalogue. By means of the clock work the instrument when once in position, follows

* When the telescope for Cambridge was imported, the *duty* demanded at the Custom House, was so great that the trustees of Harvard College petitioned Congress for relief. Congress not only granted their request, but authorized the importation of Astronomical Instruments for schools of all grades, free of duty.

the star without assistance. In addition to the usual circles, Prof. Winbreck has placed a small one near the eye-piece, so that without leaving his chair, or the aid of an assistant, he can direct the glass to any catalogued object. He holds in his hand a signal key, so as to communicate with the computing man, or any other observatory.

The focus of this huge glass may be lighted up by the electric current.

Under the present prompt, energetic and very efficient director, Prof. Winloch, this Observatory has received several acquisitions. It has no equal in this country, perhaps no superior in the word.

D. H. SHERMAN.

MY MOTHER'S EYES.

Can I tell you what they were?
 Eyes like none I've ever seen,
 Glimpses of the land of promise,
 With a veil of love between;
 Beauteous eyes,
 Like the tranquil summer skies.

Stars of Bethlehem were they,
 Shedding, in their liquid light,
 Peace on earth, good will from heaven,
 Blessing all within their sight;
 Prayerful eyes,
 Looking for the fadeless prize.

It was long ago I basked
 In the sunshine of their ray,
 For they weary grew, and drooping
 Fell asleep, and rest to-day;
 Tired eyes,
 Where the willow's shadow lies.

But I sometimes see them now
 On the shining shore a gleam;
 Like the blessed Mary Mother's
 Is their far off hallowed beam;
 Holy eyes,
 Filled with joy that never dies.

Touch me not, O earthly guile!
 I've a tender mother still.
 Think me not a hapless orphan,
 At the mercy of thy will!
 Angel eyes
 Hold my soul, and help it rise.

Letters to a Young Teacher on Questions of Modern Science.

LETTER VIII.

THE THREE INSOLUBLE PROBLEMS.

III.—THE SQUARING OF THE CIRCLE.

The first feeling which the suggestion of the squaring of the circle, as a mathematical difficulty, excites in the minds of young mathematicians, is surprise that there can be any possible difficulty in it. Here is a circular field of fifty rods in diameter, containing a certain precise quantity of land. The question is, what will be the length of the side of a *square* field of the same area. Or, *vice versa*, it is required to find the diameter of a circle which shall comprise an acre of land, or any other precise quantity contained in any given square. Young persons are always greatly astonished to learn that the problem cannot possibly be solved. It is inconceivable to them that there can be any serious, and still less any insuperable difficulty in such a question,—so inconceivable that for a time the statement seems incredible—they cannot believe it to be so.

The first thing to be done in elucidating the question to the minds of your pupils—I refer only to those who are far enough advanced in their mental developments to take an interest in such inquiries—is to give them a clear and distinct idea of what the question really is. You can present it to their minds in this way, namely:

Suppose you have upon a sheet of paper a circle two inches in diameter. The question is, to find out and express in numbers the length of the side of a square to contain the same area. The thing is impossible. The length of such a line *cannot be expressed* in numbers.

You must in farther presenting the subject to the minds of your pupils explain to them that the dimensions here treated of are *exact* dimensions; that is, that they are ideal ones. A *mark* made upon paper with pen or pencil is not a line. It only represents a line. The ideal or mathematical line has *no* breadth, and, if a *straight* line, it has no deviation whatever from absolute precision and directness. A mark, however finely and nicely made, has a breadth and innumerable irregularities in its boundaries, which the microscope renders very conspicuous.

In the same manner the two inches designated as the length of the diameter of the given circle, are *ideal* inches, of absolute exactitude;

not such a space of two inches as a carpenter can *mark*, or make sensible in any way. The most accurate methods of measurement now known cannot be relied upon within less than a thousandth of an inch of the ideal.

So in the answer to the question stated above, your pupils must understand that what is required is not to know *about* how long the side of the square would be, or how long *nearly*, but *exactly* how long. In other words the difficulty is not a practical one, or one that gives rise to any serious inconvenience either in the processes or in the computations employed for any of the actual purposes of life, but is purely mathematical and ideal.

The difficulty relates, moreover, not merely to the question of finding the side of a square which shall be of the same area as a given circle, but is the same in the attempt to find the sides of *any rectangle* which shall contain the same area, or of determining the area of the circle in any way. Now as the area of a circle, it is proved, is given by multiplying half the circumference into half the diameter, the difficulty resolves itself mainly into the question of determining the ratio of the diameter of a circle to the circumference of it; a thing which is found to be impossible.

If, for instance, the diameter of a circle is one foot, one yard, one mile, or *one* of any other dimension,—or, as mathematicians express it, if the diameter be represented by *unity*, then it is found by mathematical calculation that the circumference will be *three and a little more*. If the calculation is pursued with the view of ascertaining the amount of this *little more*, it will be found that it is *one tenth*, and *a little more*. If this second little more is investigated it will be found to consist of *four hundredths*, and a little more. The third little more will be found to consist of *one thousandth*, and a little more. The next step would give five ten-thousandths, and a little more, and the next nine hundred-thousandths, and a little more, and so on forever. The computation would never come to an end.

As far as I have carried it above, the result would be written decimally thus, 3.14159, and this number is fixed indelibly in the minds of all mathematicians as an expression of the ratio of the circumference to the diameter of a circle sufficiently accurate for any possible practical purpose of man.

As a matter of mathematical curiosity, however, the investigation has been carried by different computers, and by various methods, much farther than this. The result is that the ratio of the circumference to the

diameter of a circle has thus far been ascertained to be 3.14159265358-97932384626433832795028841971693993751058209749445023078164-06286208998628034825342117067982148086513282306647093844609-5505822, and a little more.

Those of your pupils who have any understanding of the nature of decimal fractions will readily perceive how infinitesimally small in amount must be the value of the *little more* that remains to be investigated, while yet the process of investigating it would never come to an end.

This being the state of the case, it is easy to see what the task is that any one who at the present day undertakes to solve the problem of the squaring of the circle—and every few years some visionary schemer appears who does undertake to do it—has before him. He has to show either that all the mathematicians of the world are wrong in the computation resulting in the above array of figures, and have fallen together into some arithmetical error, or that, by pursuing the investigation farther, he can come finally to the end of it.

But the mathematicians are agreed as unanimously in the positiveness of the proof that the computation can never come out to a final result, as they are in the correctness of the partial result thus far developed. There is precisely the same possibility that the schemer may succeed in overturning either of these established conclusions as there is of his being able to construct a triangle in which the united length of two of the sides shall be less than the third side.

Some of your pupils will perhaps wonder how this can possibly be. We can understand, they will say, how the mathematicians can be sure that the result of the computation, thus far, is correct; and even that they can think it *very improbable* that any one can ever come to the end of it. But we do not see how they can be sure that it is *forever impossible* that the end should be attained. Men may be very sure about what has been done in times past, but how can they be sure in respect to what can or cannot be done in time to come.

You can show them how this is possible by the case of the square root of 2. The square root of 2 is a real quantity, having an exact and definite value, which may be added, subtracted, multiplied, and divided, and brought in various other ways into mathematical calculations, and yet it is utterly inexpressible in numbers, and it can be proved positively to the satisfaction of any of your pupils who understand the first principles of

vulgar or decimal fractions, that it *must remain forever inexpressible*. The demonstration is this :

The square of 1 is 1. The square of 2 is 4. Therefore the square root of 2 must be something between 1 and 2: that is, it must be 1 and a fraction.

Now your pupils can be made to see, more or less readily according to the degree of progress they have made in respect to the nature and workings of fractions, that no number containing a fraction can, by being multiplied into itself, give a whole number, but will always give, in the result, a fraction smaller than the one contained in the factors. Thus $1\frac{1}{2}$ multiplied by itself gives $2\frac{1}{4}$. Those even that do not understand algebra can easily be made to see that in multiplying a mixed number by itself, the product of the fractional part multiplied by itself must make part of the answer; and no proper fraction multiplied by itself can ever give a whole number.

Or the principle may be stated algebraically thus :

Any mixed number is a binomial. Thus $1\frac{1}{2}$ is written fully $1+\frac{1}{2}$. Now the square of a binomial, represented for example by $a+b$, must be $a^2+2ab+b^2$. That is, it must contain the square of the second term. Thus the square of a number consisting of 1 and a fraction must always contain within it the square of the fraction. Now the square of a fraction can never be a whole number. Therefore no number consisting of 1 and a fraction can ever give the whole number 2.

Proof equally conclusive may be given of the impossibility of expressing the square root of 2 by a decimal fraction. For it would be necessary that the decimal figures should disappear in the result, in order to give a whole number for the product; but in multiplying a decimal fraction by itself the decimal places rapidly *increase*. They never diminish, still less can they possibly disappear.

Thus it can be seen clearly that while the square root of 2 is a real quantity having a definite and positive value, and is represented by its appropriate symbol $\sqrt{2}$, and under the guise of that symbol can be brought into many calculations, though it cannot be expressed in numbers. The development of its value, like that of the ratio of the circumference to the diameter of the circle, can be carried to any degree of approximation, but can never be brought to an end. Thus the square root of 2 is 1.4142136 and *a little more*. The little more is, however, it must be remembered, only a little more in *value*. The line of figures required to

represent it would be of infinite length. If the computation were continued until the row of figures extended to the remotest fixed star, we should still have to write *and a little more* at the end of it. The whole, however, the little more included, is represented in the computations of mathematicians by the simple symbol of $\sqrt{2}$.

In the same manner the ratio of the circumference to the diameter of a circle is represented by a symbol, namely, π , which is the Greek letter *pi*. This symbol has been in use in all countries and in many ages to denote the quantity vainly attempted to be expressed by the array of decimals given in a preceding paragraph. The figures could not express it, for however far the series might be carried there would always be a *little more* that was not expressed. The symbol, however, denotes, or represents, the actual quantity, though it does not numerically express it.

There is one point more to which I wish to call your attention, and then we will dismiss the subject. You will recollect that I stated at the outset that the three insoluble problems which we have had under consideration differed from each other in this respect, namely, that in the first case, that of the aerial navigation, we could conceive both of the end, and also of means by which, in the nature of things, the end might be attained. In the second, that of a self-producing motion, we might perhaps form a conception of the end, but could form none of any means tending to accomplish it; while in the third case, that of the quadrature of the circle, or rather of finding a numerical expression for the ratio of the circumference to the diameter, in which the problem of the quadrature resolves itself, we could form no mental conception either of the means or of the end. Now it may seem to some of your pupils that though they cannot conceive of any mode of finding a numerical expression for the ratio in question, they *can* conceive of the *possibility of the existence* of such an expression.

But this is an illusion, resulting from the imperfect nature of any mental conception it is in our power to form of the circle. A full and adequate conception of the circle, were it possible for the human mind to form one, would comprise all its properties and relations of every kind,—those properties and relations which in the present imperfect state of our mental powers we have to grope after, and gradually bring out to view, by long and tedious processes of analysis and demonstration. If we could *see the circle completely* by direct intellectual vision,—that is, if all its properties and relations were objects of direct cognizance by the

human mind, we should find it as impossible to conceive the commensurability of the diameter and circumference, or, in other words, of the possible existence of a numerical expression for the ratio of the one to the other, as to picture to our minds a triangle having two sides together less than the third side.

THE OLD MAID.

By some New England quiet stream,
 Whose sylvan waters darkly gleam;
 Among the pine-clad hills of Maine,
 Where wave the golden seas of grain;
 And whose high tops, by summer crowned
 With grazing herds and flocks abound,
 In ancient days a village stood.
 Its borders nearly reached the wood,
 Where frowning peaks in silence rose,
 Lulled by soft winds to sweet repose,
 When ere the gladdened earth proclaims
 That summer o'er the landscape reigns.
 But when the snow-king hurrying forth
 From icy chambers of the North,
 Leaves his white throne, and hurling down
 Low at her feet his jeweled crown,
 Sows broadcast with a generous hand
 Fine snow, like wool, o'er all the land.
 Ah! then, assailed by vague alarms,
 These giant trees, their shrunken arms
 Toss to the storm, in wild despair,
 Like the dread spirits of the air.
 And if perchance some luckless wight,
 When falls the sable robe of night
 Upon these hills, should hither stray,
 With quickened step he speeds his way,
 Remembering tales and legends old,
 By ancient dames and matrons told.
 In days long gone, beneath the shade
 Of these dark cliffs, fair children played,
 And every morn, through fields where grow
 Sweet violets, and daisies blow,
 Wended their way in blithesome mood,
 To where an antique building stood;
 Though old and gray, with moss-grown wall,
 The mellow sunshine hallowed all.
 A lonely spot, they said, but yet
 Here Peace and sweet Contentment met;
 And here, content by love to rule,
 The humble teacher of the village school
 Walked day by day these well-worn aisles,
 With helpful words and loving smiles,
 Pointing to little feet the road
 That leads to honor and to God.

And she was happy, though her life
 Ne'er blest with holy name of wife,
 Was worn with patient toil at best;
 For Peace, white-winged, had built her nest
 Within her quiet home, and she,
 With thankful heart, drank willingly
 The cup that Heaven filled for her,
 The wormwood mingled with the myrrh.
 But young girls pityingly would say,
 She must be lonely, and her way
 Is drear, but what a queer old maid!
 How prim she is! how stiff and staid!
 And bearded men would sometimes tell,
 That since they could remember well,
 She had lived on, unsought, unknown,
 Perchance a little older grown,
 A little faded in these latter days,
 More antiquarian in her ways.
 Year after year she sowed the seed
 Of truth, counting her highest meed,
 The children's love, her sure reward,
 The loving presence of her Lord.
 The aged blessed her, and the poor
 Found a kind welcome at her door,
 And said such love beams in her eyes,
 She walks an angel in disguise.
 One morn, an angel from the land
 Of shadows gently took her hand,
 And led her o'er the darkening slopes,
 Unto the narrow gate, that opes
 Into the garden of the Lord,
 Where Christ himself keeps watch and ward.
 Her form, kind hands for burial drest,
 And left her to eternal rest.
 And when the services were read,
 And hymns were sung, the good man said,
 Who did her burial attend,
 The world to-day has lost a friend,
 One, who in humble garb and mein,
 Through many trials walked serene;
 Who now in the white light of truth,
 Treads the city of eternal youth.
 The friend of age, of youth the guide,
 She was by sorrow purified.
 The cross was borne, the crown is won,
 She hears the blessed words, Well done.
 No stately monument doth grace,
 But simple stone, her resting place;
 While fragrant blossoms bloom above,
 Sweet tribute of the children's love.
 Upon her tombstone, I've been told,
 One reads, in letters quaint and old,
 These words, although defaced by years,
 "They reap in joy who sow in tears."

Editorial Department.

The MAINE NORMAL will hereafter be issued from Portland instead of Farmington, and all exchanges should be directed to THE MAINE NORMAL, Portland, Me.

THE SUBSCRIBERS to the Normal who have received bills lately, that were not correct, will receive this as an excuse, and explanation that there was no desire to collect twice; but that the transactions with agents, by some carelessness on the part of the one who kept the books, did not always get entered rightly.

The business is now in the hands of the subscriber, who will strive to have every account equitably adjusted. Those who have paid agents or others, and will notify us of the fact, shall be duly credited upon the books. In communicating with us upon any matter concerning the Normal, be sure to give the post-office to which it has been sent.

Respectfully,

B. THURSTON.

FROM PORTLAND TO CHICAGO.

Last month you took passage with us on a business tour to Boston, New York, and Philadelphia. Now we invite you to a trip to the West. On the evening of the twentieth of August, we again went to the wharf of the Boston Steamer. It was the night after the steamer had been run into by a schooner, injuring the latter, and considerably delaying the former, but destroying no lives, if we have been correctly informed. During the day the rain had poured in torrents upon the roofs of the buildings in the City of Portland, and the heads of those who, unprotected, walked her streets. As we write about the day, we are reminded of what Irving wrote when in England, of "A wet day in a Country Inn." But at night the wind and rain had nearly ceased, and though the clouds had not lifted, so that it continued to be dark and foggy, yet the sea was uncommonly smooth, and we had quite an enjoyable passage, with the exception that the engineer felt it his duty to be giving continually those short, sharp sounds with the whistle, which we suppose are for the purpose of warding off danger. As our room was just where these sounds are most distinctly heard, we thought we would as lief run out part of the risk of destruction, as be so constantly disturbed of what we would most gladly have had that night—rest.

But the passage was made, as many a one from Portland to Boston had been made, by us before.

We took the 8.30 morning train for Albany, N. Y., by the way of Worcester and Springfield. When the sun rose on the morning of the 21st, it dispelled the clouds that had been hovering about us the day previous, and ere we had proceeded far upon our journey we had as fine weather as one could wish. We were going West, and, of course, began to look for prairies as soon as we had turned our face in that

direction; but it required a greater than ordinary amount of imagination for one even to conceive of those Berkshire hills of Massachusetts, as being even *rolling prairies*. "There," said a friend whom we had met on the way, "we have got to where the water runs with us, I believe." And, sure enough, we all felt a sense of relief (on account of the sympathy we had for the hard-worked engine, we suppose) when we had reached the height of the hill country of western Massachusetts.

We reached Albany at 6.30, P. M., in season to partake of an Albany supper. If the one we saw served is a fair specimen, we cannot praise this element of a western traveler's experience. Its crowning glory consists in the manner in which it is served, this being admirably done—*et preterea nihil*.

But, reader, have you ever taken the luxury of a sleeping-car on the New York Central Railroad, from Albany to Buffalo. We have, and we propose, since we presume you may not have done so, to tell you how it's done, and what you get by the little money arrangement you enter into for the purpose. In the depot at Albany you will find an "Order Book," in which you enter your name, the kind and amount of accommodation you want, and the name of the station to which you are destined. This done, you have completed your part of the transaction, with the exception of seeing the sleeping-car conductor before the train starts, paying him for your night's lodging, finding out the number of your car and section, and placing therein any small baggage you may wish with you for the night, you enter your section. It is a center one, of course; those are preferable to all others, and you have been fortunate enough to obtain one. It has the appearance of a well-fitted saloon, where four may sit *vis-a-vis*, and enjoy a social chat with no intrusion. But, by-and-by, as you sweep along by the banks of the Mohawk, the horizon grows dim in the distance, the lamps are lighted through the car, and you begin to think of trying to partake of the luxury for which you have paid—sleep. By a series of very simple manœuvres, which the conductor of your sleeping-car understands much better than you did before you saw him "do it," your saloon is transformed into just the nicest little bedroom you ever saw. Everything seems to be complete in these cars, and one can have as good a night's rest on them, if no accident happens to the train, as one can ordinarily expect in the quiet of his own home. They say that a person who "has got narves" is *sure* of a plenty of sleep here, that the jar of the train is just enough to be soporific to his nature.

We slept quite well, and morning found us in Buffalo. We wished that we might have time to go into the city, but only forty minutes were allowed for breakfast, and to prepare to journey on. We will speak a good word for the Buffalo restaurant. It was all that we could desire—plenty of well-cooked food, just what a traveler, who is well and wishes to keep well, desires to have every meal of every day.

We would, if we had the time, and our space would allow it, speak in detail of our journey farther westward. The Lake Shore Railway, skirting along the coast of Lake Erie, bearing us out of New York through the north-western part of Pennsylvania, on across the entire northern part of the great State of Ohio, passing on our route the cities Dunkirk and Erie, and so on to Cleveland; gives us a taste of what we have never realized before, to say the least, that the West is indeed great. But we hurry on to this last-mentioned city, where an excellent dinner is provided for us in a most beautiful dining-hall. These western people know how to do it, as far as furnishing accommodations for travelers is concerned. From Cleveland we

proceed to Toledo, and thence in sleeping-car again to Chicago, where we spend the Sabbath. So the journey from Portland to Chicago is accomplished between the hours of 7 o'clock Thursday evening and 8 o'clock Sunday morning,—the whole distance being not less than 1150 miles. One ought not to be expected to have much to tell about what he sees, who travels in this hurried way. You will hear from us again.

TEACHERS, we are desirous to enlist you as correspondents to the Normal. Do not be hindered from writing because you feel that you cannot write a learned essay, or disquisition. Those articles are most influential of good which narrate some experience of actual occurrence in the school-room; or the statement of some difficulty or trial found in your own path; some victory achieved; some method of discipline which conquered without alienation; some satisfactory exposition; some new idea; some want you have felt; some strong desire you have entertained; something, yes, anything that interests you or troubles you in the practice of teaching from day to day. Do not wait to write lengthy articles. We had rather have them short. Write out just one idea, or thought, and send it on. We will not promise to print it, but we will guarantee it will do you good.

THE EASTERN STATE NORMAL SCHOOL, located at Castine, we are glad to learn, has flattering prospects for the future. Nearly five times as many pupils will enter at the next session, as commenced a year ago. Under the efficient management of Mr. Fletcher, we are sure this school will rank high, and those who are under its influence will be fortunate. If they do not leave the school good teachers, the fault will be their own.

EDUCATIONAL INTELLIGENCE.

Biennial Convention at Bridgewater. It was our privilege to be present and participate in the exercises of the twenty-second convention of the Bridgewater Normal Association, which took place Wednesday, July 16th, and which were very fully attended. It is ten years since we took our leave of Bridgewater as a student, and we have been present at every meeting of the Alumni, with one exception, since that time. This was the most interesting occasion of any which we have ever attended, under the auspices of the association. Mr. Granville B. Putnam, Principal of the Franklin School, Boston, was the presiding officer, and much of the pleasure of the day must be attributed to the efforts which he had made to render the occasion one of joyful reunion to the Alumni, and of profit to his Alma Mater. The exercises of the day were as follows: In the morning, a business meeting for the choice of officers, etc., after which was unveiled and presented to the school the Memorial Tablet, on which are inscribed the names of the members of the association who had fallen in the late war. Mr. Geo. A. Walton had been selected to present the tablet, and the Principal of the school, Mr. A. G. Boyden, received it on behalf of the institution. The scene during these exercises was very impressive, and the remarks of both the speakers were appropriate and touching. After this ceremony, the members of the association proceeded to the principal church edifice of Bridgewater,

and were entertained with select readings by Prof. Lewis B. Monroe, of Boston. Thence repairing to the Town Hall, the usual Association Dinner was served. It was a good dinner, and we enjoyed it. Postprandial speeches followed, and in the evening a promenade concert made a fitting *finale* to the occasion. One of the most interesting things of the day, to those of us who were connected with the school when Prof. M. Conant was at its head, was the reading of a letter which the President had received from him. We make an extract from it, as it will interest some who were not present on the occasion when it was read.

WASHINGTON, D. C., July 11, 1868.

MY DEAR SIR,—As I muse, the fire burns. I would be out of this city of sweltering heat, impalpable dust, of shams and shows, where the spirit of the Fathers abides not, but comes, if it comes at all, as a wandering ghost, among the swarm of political intriguers and gamblers, pushing, by bribery, deceit, or usurpation, their cherished schemes for self-aggrandizement. I would hie to the Father-land, the old New England shore. But health good, and pressure of business strong, hold me back.

By night, I think of the dash of the steamer, which I would were bearing us on over the cool waters of the Sound to reach the land, *not* flowing with *milk* and *honey*, but with the streams of *useful knowledge, intellectual and moral culture*.

* * * * *

Before me is the "Maine Normal," which speaks of your gathering, and says, "we intend to be there—as the exercises will be of extraordinary interest." Like a true Dirigo, the conductor of that nice monthly ventures to *Gage* them beforehand. Happening to know something of the man, I incline to take him for a *true prophet* in respect to this matter, and give him the right hand of sonship at a great distance. Nor will I stop there; the *whole host* of Normals there gathered I would salute and cheer on as never before; for my eyes are now open to *see the mighty work they are achieving for the country*.

On this occasion, I recollect you are to place in the wall of the institution the *memorial marble*, the silent recorder of those *life-offerings* of brother Normals made in the hour of the nation's peril. *Precious ones*, destined to a baptism of *death*, that *life* and *untold blessings* might flow to *others*! May the view of that record always nurture the spirit of self-abnegation. I feel a deep interest in this movement, and you will allow me to contribute a mite to meet the expense of the fixture.

A residence of six years at the centre of our national life, and through a period when *former sowings* have *yielded their fruits*, renders it less difficult for me to estimate the influence of all those *training institutions* in the North and West now in successful operation.

* * * * *

Bridgewater Normal School is in the hands of a faithful, efficient man, and its influence is widening every day. May that influence be as beneficial in future, as it has been in the past!

MAINE.—GEO. M. GAGE, late Principal of the Normal School at Farmington, and editor of this magazine, has accepted a call and gone to take charge of a State Normal School in Mankato, Minnesota.

MISS HARRIETTE J. B. DALTON, who has been for the past four years Assistant Mistress in the Portland High School, has resigned her position to enter upon other duties.

CONNECTICUT.—The financial statement of the Executive Committee of Yale College has been published, and shows that the Yale Treasury is in a most satisfactory condition. The endowments of Professorships in the various departments of the College are stated as follows: Natural Philosophy, \$15,000; Modern Languages, \$31,330; Divinity, \$43,443; Metaphysics, \$20,000; Law, \$6,500; Sanscrit, \$12,000; Botany, \$23,000; Musical Instruction, \$10,000.

NEW YORK.—We select the following from the report of Hon. V. M. RICE:

For the support of Common Schools, Public Money, including three-quarters mill tax...	\$1,408,168.84
Voluntary local taxation in the School Districts.....	5,591,871.06
Rate Bills.....	743,306.72
Other sources.....	1,184,800.74

EXPENSES DURING THE YEAR.

Teachers' wages.....	4,981,447.58
Libraries.....	24,414.86
School Apparatus.....	211,637.82
Building and repairs of school-houses.....	1,712,523.36
Miscellaneous and incidental.....	850,884.73
Balance reported on hand.....	1,192,324.06
Total number of children and youth between the ages of five and twenty-one years.....	1,872,853
Number of children between the ages of six and seventeen years.....	943,690
Number of children of school age who have attended the public schools during some portion of the year.....	947,162
Teachers employed in public schools for twenty-eight weeks or more.....	15,606
Number of male teachers.....	5,263
Number of female teachers.....	21,218
Amount of money to be apportioned for the support of Common Schools, for the current fiscal year.....	\$2,400,134.65

PENNSYLVANIA.—Several changes have been made in the faculty of the Pennsylvania University. Prof. STILLE has been elected Provost in place of Dr. GOODWIN, resigned. Prof. HIRAM CORSON, formerly of Philadelphia, an eminent philological scholar, is appointed to the new Chair of Elocution and English Composition, and Dr. C. P. KRAUTH fills the Chair of Mental and Moral Philosophy, vacated by Prof. STILLE.

Prof. E. D. BASSETT, the colored Principal of the Philadelphia Colored High School, has received the degree of Master of Arts from the Lincoln University, Oxford, Pa.

Prof. SAMUEL H. WHITE, Principal of one of the Chicago Public Schools and associate Editor of *The Illinois Teacher*, has been appointed Principal of the new Normal School at Peoria, Ill.

FOREIGN.

GERMANY.—The Teachers' Association in Chemnitz has issued a memorial looking to a reform of school affairs. Four topics are considered,—1. The position of the School; 2. Its outer and inner organization; 3. The education and installation of teachers; 4. Their rights. Under the first head, the memorial, while not attempting to decide whether the school should be a State or Communal institution, evidently leans to the latter. It endorses compulsory attendance, and demands the separa-

tion of the School from the Church. Those parents who fail to educate their children are to be punished,—they must be compelled, until they are educated enough to compel themselves.

In the Prussian Parliament, F. HARKORT complains that although the greatest liberality has been shown toward the heroes in the late war, a smaller amount has been appropriated for the schools than in 1867. In 1853-65 the military budget was 17,000,000 thaler, the population increased from sixteen to nineteen millions; the budget for all schools about 73,000 thaler. "This happens in an intelligent State, which has 35,000 teachers and 3,000,000 school children." The number of uneducated recruits has doubled since 1844. The Normal Schools have but few pupils, and in Liegnitz ninety-one teachers were lacking in 1861.

The city of Danzig has sent in a petition, demanding,—1. The separation of the School from the Church. 2. A higher standard of education in the Common School. 3. The same in regard to the Teachers' Seminaries. 4. The division of pupils in the Common Schools into such classes that no teacher shall be obliged to teach more than fifty to sixty children. 5. The control of the schools to be in the hands of local officers, and not of the State. 6. The schools entirely free. 7. The State to be responsible for the support of the schools. 8. The teachers to have a sufficient salary and pension fixed by law.

The 16th General Meeting of German Teachers took place at Hildesheim, June 10th, 11th, 12th, and 13th, 1867. There were 710 teachers present, 500 of whom belonged to the Kingdom of Prussia. In the main assemblage, the following were among the papers read:—On the Formation of Character; On the Principles of School Legislation in the present time; Popular Superstition and the School, by Dr. RIECKE, of Württemberg; School Statistics.

HUNGARY.—The teachers of the Banat have formed an Association, and a fortnightly School Journal has been established.

BRAZIL.—The Rev. J. C. FLETCHER has been commissioned to collect information in regard to school systems in the United States, with a view to a similar organization in Brazil.

The painter who takes long rambles in search of scenery for his pictures, or the civil engineer who rides through tracts of country, observing all their characteristics with reference to the shortest and most profitable route for a railroad, has mind and body simultaneously exercised, and is consequently ten times more invigorated than a man who does the same amount of riding or walking under the direction of a physician, with no other object than a vague pursuit of health. And he who studies for some definite use, has immensely the advantage over him who pursues the same study merely as a prescribed accomplishment in the routine of education. A man who studies mathematics merely as part of a course laid out for him by tutors, may be able to solve difficult problems as readily as the man who earnestly applies them to the construction of machines; but the mental vigor acquired in the latter process will be tenfold greater than in the former.—*L. Maria Child.*

To discipline a school well—*talk* (when occasion requires). To ruin the discipline of a school in the easiest way—*talk, talk, talk.*

BOOK TABLE.

ASTRONOMY.—We are glad to see a new work on this most inspiring of subjects. There is plenty of research, and the science is developing from year to year with commendable energy; but, in the main, the publications of these investigations are out of reach of the people at large, from their massiveness, and uninteresting from the dryness of detail. All existing school works on this subject are behind the times, none having been published since 1845.

Mr. Steele* has culled these large works and brought out the substance of the immense research now going forward in various parts of the world, in such familiar and popular phrase as to be highly entertaining to the learner, and in so compact a form as to be within the reach of most every one. The discoveries are all brought down to the present time, and reveal a multitude of points of great interest, and correct many very erroneous impressions of the past.

The author says in his preface, "He commits this little book to the hands of the young, in the earnest hope, that, loving Nature in all her varied phases, they may come to understand somewhat of the power, wisdom, beneficence, and grandeur displayed in the Divine harmony of the Universe.

'One God, one law, one element,
And one far-off Divine event,
To which the whole creation moves.'"

COLTON'S JOURNAL OF GEOGRAPHY, issued quarterly from Colton's Geographical Establishment, 171 William street, New York; one dollar a year. Contents of No. 2, for January: I. The Dominion of Canada. II. Plan of Development in the Geological History of North America, by Prof. James D. Dana. III. Abyssinia, with a Map. IV. The Danish West Indies. V. What Geographical Science owes to Missionaries. VI. Immigration in 1867. VII. Publishers' Column. VIII. New Publications. IX. Miscellaneous. With a Map, showing Abyssinia and adjacent countries. Subscribers receive a large Map of Alaska as a premium.

Furnished with the Normal for \$2 a year for both.

Sometimes it is best to punish pupils *in kind*. The following will serve as an illustration. On a certain occasion two roguish boys amused themselves by sprinkling pupils with a watering-pot from an upper window. When called to an account for this they seemed very indifferent, and said "they could not see what harm there was." They were sent down stairs under a window and *sprinkled* till they "saw it."

A quick way of calling the roll in a large school is to give each pupil a number in order, and then require each to announce his number in turn, beginning with the first, as follows: "one, two, three, — five, six, seven, — nine," etc. The blanks indicate absences, which the teacher can easily note.

* A Fourteen Weeks' Course in Descriptive Astronomy, by Dorman Steele, A. M., Principal of Elmira Free Academy. 318 pp., 12mo. A. S. Barnes & Co., New York.

THE STUDENTS' NORMAL.

Portland, September, 1868.

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To Contributors.

Articles should reach us before the tenth of the month preceding the one for which their insertion is desired. It is hoped, that all interested will take due notice of this, and govern themselves accordingly. Sharp, pointed articles are what we want, for all the departments of our magazine, and we shall be glad to welcome contributions from new sources.

To Subscribers.

You can help us very much in increasing the circulation of the *Normal* in its present form, if you will. Address us, and we will tell you how. Meanwhile, you can each send in at least *one new name* the present month, by simply placing this number in the hands of some young friend who will attend school this fall, and who will like to have the *Students' Normal* as a friendly assistant and interesting companion in his studies. Let us take hold together, and sustain the *best educational monthly published in our country*.

EDITORIAL.

Talks about Mental Arithmetic. III. TO SQUARE CERTAIN NUMBERS.

If I could stand before you all, in your various school rooms, I would begin this talk by a thorough *review* of all which we have been over. For I am about to leave our first principle, and to take up another, and we ought never to try to move forward in matters of education, until we have reached a certain amount of familiarity with that which we have been taught. But such a review is not attainable while I address you as at present, by the pen. You can make *yourselves* sure of the past exercises, and I must trust that you will do it. Our problem the present month is this:

To square a number consisting of an integral part and the fraction one-fourth. There will be two cases.

First, where the integral part is an *odd* number. Our rule may then be stated as follows:

Rule. To the square of the integral part add one-half itself, and one-sixteenth.

To illustrate the application of this rule, let us square the mixed number $4\frac{1}{4}$. The operation may be expressed as follows:

$$(4)^2 + 2 + 1 - 16 = 16 + 2 + 1 - 16 = 18 \text{ } 1 - 16,$$

which is the square of $4\frac{1}{4}$.

Again,

$$(12\frac{1}{4})^2 = (12)^2 + 6 + 1 - 16 = 150 \text{ } 1 - 16.$$

The above sufficiently illustrate the application of the foregoing rule, and knowing, as you now do, the squares of all the integral numbers, from 1 to 25 inclusive,

you can easily and rapidly, with a little practice, find the square mentally of all the mixed numbers, that is, the numbers having an integral part and a fraction, below 26, which are even, and have as their fractional part $\frac{1}{4}$.

But what is the rule for the second case, the case of numbers like the above, except that the integral part is odd? I will give you the rule for this case.

Rule. To the square of the integral part add one-half the integer next lower, and add nine-sixteenths. Thus: If I wish to square $17\frac{1}{4}$, my operation may be expressed in the following manner:

$(17)^2 + 8 + 0.16 = 289 + 8 + 0.16 = 297.16$,
which is the square of $17\frac{1}{4}$.

Again,

$$(9\frac{1}{4})^2 = (9)^2 + 4 + 0.16 = 85.16.$$

In order to become familiar with the application of these rules, which are exceedingly simple, you have only to practice in squaring such numbers as may be formed by uniting the fraction $\frac{1}{4}$ with all the numbers from 1 to 25 inclusive; for example, $1\frac{1}{4}$, $3\frac{1}{4}$, $8\frac{1}{4}$, &c. But it is necessary that you become familiar with this lesson, and if you are so, I will promise to show how the principle which these rules embody may be applied in the squaring of larger numbers.

Leaves from Dora Dean's Journal;

OR, STEPS TOWARDS THE TEACHER'S LIFE.

Number Two.

BROOKSIDE, July 18, 18—.

Have not written anything in my journal for a long time, and I meant to write every day. I wonder if older people make as many resolutions and then break them, as I do. I wonder if they commence so many things they do not finish. I hope not. I have had very little time to study or read, since school closed last winter, but I have had grand times taking care of the children, and have learned a great many things not to be found in books. Father thinks I am quite a pattern house-keeper, and Fred and Katie think I am a good sister, so I suppose I ought to be satisfied, but I do love to study so well,

and there are so many things I ought to be learning, especially if I am to be a teacher. I feel almost discouraged sometimes, when I think there is no school for me till next winter. I do not dare to speak of this to father, for I know he cannot afford to send me away to school, and he would feel grieved, if he knew my longings for an education. He has trouble enough now, and I will not give him any more.

July 19. Father brought a letter from the office this morning, and asked me to guess what was in it. It was a letter from Uncle David, inviting me to spend a year at Freetown, and go to school at the academy. I am so happy I can hardly sit still a minute. Mother keeps saying, "Do be calm, Dora," but I can't. I know father and mother are as much pleased as I am. How they keep from being excited is more than I can tell. Wonder if I shall be able to control myself better when I get older.

Aug. 20. My trunk is all packed, and everything ready for a start. It is four o'clock in the morning. I bade all my friends good-bye last night, not forgetting Bruno, the cows, and my little pet lamb. Now the time has come I feel almost sorry to go, but I hope no one will know it, for I am determined to stay a whole year. How much I shall learn, and see, and grow, and— but here comes the stage. Good-bye to Brookside.

Sept. 15. I have been two weeks at Freetown Academy, and begin to feel quite at home. Mr. Watson, the teacher, is very dignified, and I am afraid of him, but he explains beautifully. I know I shall learn. I like the scholars very much, and am not so far behind them as I feared. Uncle and aunt, and Cousin Philip are very kind, and I am usually happy, but I do wish I could see home to-night. Wishes are not horses, though, so I will turn to my Latin lesson. I can learn *amo* very well, if I mix a little Brookside in with the verb, for an object.

Oct. 1. Mr. Watson "put me into" the Latin Reader and Algebra yesterday. I shall have to study very hard, but that is what I am here for. I have only

learned in Algebra, that x , y , and z stand for unknown quantities, and think there are enough of them in my brain already. Don't see what good Algebra does any way, but I suppose I must learn it, for every teacher must, and *I will*.

Nov. 3. Had a bad time at school to-day. The master threw a knife at me for whispering. It was shut, but I had to carry it across the school-house, and give it to him before all the scholars. Oh! he looked so stern I thought I should sink to the floor. I don't think I was very much to blame, for I was helping Addie Sweet get her grammar lesson, and all whispering is not strictly forbidden. I don't think we made much noise, but some one near did, and perhaps he thought it was me. Addie told the teacher after school what we were doing, and he came and sat down in the seat right in front of me, and said, "Dora, I'm sorry I threw that knife at you, won't you forgive me?" He spoke in such a queer way, I almost thought he was making fun of me, and I burst out crying, and ran home as fast as I could. Uncle says, "Mr Watson is a little peculiar sometimes, but has a great many things to trouble him at home, as well as at school." So I think I *will* forgive him, at least *I'll try*.

Dec. 16. I begin to see some sense in Algebra, and like it very much, thanks to Mr. Watson and a little hard study. My Latin lesson troubles me more than anything, but I made out to read a fable to-day, *without help*. It was about the goose that laid a golden egg every day. I couldn't help wishing father had a *flock* of them on his farm. Think we should know better than to kill them, and I don't believe the old Roman widow had more use for the gold than we have. Perhaps I shall give our folks *golden eggs* when I get to *keeping school*. Wonder if there are any in my brain now. It feels big.

Dec. 18. Enjoyed myself very much in school to-day, especially the parsing lesson. We chose sides, and *our side* beat the other, *two to one*. Some of the *other side* got a little angry about it, and

Mr. Watson threatens to give up choosing sides, if they can't control their tempers. I think I controlled mine. Perhaps I was a little too positive about that word being parsed in the feminine gender. I must be more careful.

Dec. 19. This has been a day of trial; yes, of real trial, though mother would say, "O Dora, you have not had any trials yet:" but writing composition and then reading it, can anything be worse? Mr. Watson told us last week we must *all* write this week. So, yesterday, I sat down, and began on—Summer, but concluded, after an hour's useless trying, that my composition was too green. Then I tried winter, but couldn't get warmed up on so cold a subject. I heard the teacher telling one of the older scholars to write on "the analogy between darkness and adversity." I took my dictionary, and looked out the meaning of the words, but I could not see the analogy. It was *all* darkness to my mind. At last I wrote a little story. I was ashamed to hand it in, but it was all I could do. I begged Mr. W. not to make me read it, but it was no use. To-day, when he said "Dora Dean may read her composition," I wished I had never seen Freetown Academy. My face turned, oh, so burning red, and the tears filled my eyes. I tried to read, and then, like a silly girl, burst right out crying. Mr. Watson took my paper, and said, "I will read it." I wanted to stop my ears, but I did not dare to do it, so I hid my head. When he had finished, he said, kindly, "Miss Dora, you need not be ashamed of that; it is very good." I don't believe I ever felt so badly in all my school-days. I did not care so much at Brookside, for the teacher read the compositions there, and I was at home; but here, among strangers, it is terrible. Perhaps the *crisis* is past, and I shall not have such a fever about it next time. I hope so. Mr. Watson's praise has helped me a good deal. I am glad I forgave him.

Jan. 1, 18—. Had a good letter from home to-day, with a Happy New Year from all the dear ones there. They are looking forward to the time when "Dora

will come home." Let me see; the year is half gone, and I have learned so little compared with what is left to learn. Just begin to find out how little I know. Don't feel as proud as I used to at home, when they chose me from one side to the other in the 'spelling-match. Mother would say, "it is a good sign to know your own ignorance." Dear mother and father, what are they doing to-night? Talking about me, perhaps; thinking of me, I know. I hope I may some time be worthy of their love. Good-night, and a Happy New Year to them all. D. D.

Maud's Visit to Engleaside;

OR, SCENES FROM KENTUCKY LIFE.

"I declare, Miss Maud, your Northerners is the queerest folks I ever did see. What for you soil them white hands makin' gruel for old massa? What these black hands made for but poke over the smutty stove. You go long to the house, honey. No place here for the likes of you with your pink and white face and lily hands. You go long."

So saying, Aunt Lize opened the kitchen door, and, with a merry laugh, drove the intruder from her castle. "Dunno what white folks want to be round meddlin' for," she said, as she slammed the door, "jes as though old Lize couldn't make better gruel than any of these northern trash. I'll show 'em." Having thus "spressed her mind," the crippled old creature returned to her work, singing while she stirred the gruel, or gave the fire a periodical poke:

"There's a good time comin' Zlar,

A good time comin';

Black folks shall have their heart's desire

In the good time comin'."

While Aunt Lize was singing over her gruel in the old-fashioned kitchen, Cousin Maud and Lottie Kent were talking, in the cheerful family room, about the whims and caprices of the old creature.

"She is an old family servant," said Lottie. "Was a cook in the house long before I was born, and still retains her skill in the culinary department. So in consideration of her former services and

present skill, we overlook her failings, and allow her to do about as she pleases in her own province. I know it must seem strange to you, coming from so well-ordered and pleasant a home, to see what a harum-scarum place our kitchen is, and how Aunt Lize rules sole monarch there amid the confusion. But you will have to do like the rest of us, or shut your mouth and eyes when you go through her domains. But here comes Sam with the horses; now we will show you a little about Kentucky riding. I reckon you will like it better than the cooking. Do you know how to ride on horseback?"

"Yes, I learned of a master in Cleveland, but have not had much practice. You must give me lessons again."

"I have secured a teacher for you, and one for myself; here they come. Gentlemen, this is my Cousin Maud Miller, fresh from the Yankee city of Cleveland. Cousin Maud, let me introduce you to Mr. Wayland and Mr. Cross, two chivalric sons of the South. Mr. W., my cousin is anxious to improve herself in the art of riding, and I have recommended you as an agreeable and accomplished teacher. I trust you will prove to her that my word can be depended upon. And now preliminaries being over, let us to horse and away." So saying, laughing Lottie led the way to the stile, and soon cousin Maud was taking lessons in Kentucky riding. These lessons must have been pleasant, for they lasted many hours, and the sun was but just tinging the highest hill-tops when the party returned.

"Oh," exclaimed Maud, as soon as she had freed herself from her long riding-dress, and joined her uncle and cousins in the parlor, "oh, I have seen so many funny things."

"And what did my little Maud see?" said Uncle Edward, looking up from over his gold-bowed spectacles. "Oh, I saw so many things, uncle! I saw a woman and two children riding on one horse; the woman had a large green sun-bonnet on her head, leather gloves on her hands, and a bandbox on her arm. One little

girl clung to her dress behind, and a smaller one sat in her lap. She rode along as composedly as though it was an every-day occurrence. Seeing me she said, 'Good morning, Miss,' as if I were an old acquaintance; but I am sure I never saw her before.

"After that we met an old negro woman, walking along with a very stately step, dressed in all the colors of the rainbow, brass jewels on her arms, ribbons in her hair, but bare-footed, and carrying a pail of water on her head, and —"

Just then the door opened, and Silas interrupted Maud's description by the welcome sounds, "Supper's ready. Come to supper, Massa."

When they were all seated around the bountiful table, and had been helped to roast turkey, chicken salad, and biscuit, Uncle Edward, who was something of an invalid, looked up demurely from his bowl of gruel, and said, "Little Maud, can you tell me why a Yankee answers one question by asking another?" Maud, glancing up with an eager surprised look, innocently replied, "Do they, uncle?"

The good-natured laugh which greeted her naive reply was the first suggestion of its appropriateness. So, joining in with the general merriment, she continued,—"Oh, I expect they are so polite they do not wish to be too positive. But then when they do ask questions, they generally ask them correctly. They do not say, like a young man I heard to-day, 'Have you ever saw any Sulphur Springs, Miss Maud? There are *right smart* of 'em round here in these parts.'" "But, echoed Lottie, they don't *always* answer them correctly, for I heard a young lady say, when asked if her mother lived in Cleveland, 'She *doos* now, sir.'"

Aunt Martha here interposed, saying, "Every section of country has its own provincialisms, which are unnoticed by the inhabitants, but seem ludicrous to strangers. If you have all finished your suppers, I suggest that we suspend these

jest and adjourn to the parlor to have some music."

Thus stopped in their banterings, the company willingly followed the advice given, and soon the parlor resounded with merry songs.

As the evening waned, Maud sang a sweet song her mother had taught her, a favorite of her own in early youth when she and her brother Edward dwelt together in a distant New England home. It was this —

"Oft in the stillly night,
When slumber's chains have bound me,
Fond memory brings the light
Of other days around me."

As she rose at the conclusion of the song, a tear in her uncle's eye told that the memory of other days had not faded; but brushing away the tear, and hastily calling the servants from the kitchen, he read from the sacred word an appropriate chapter, and then all joined in singing the good old hymn, "How firm a foundation, ye saints of the Lord, Is laid for your faith in his excellent word."

After the prayer, Maud and Lottie retired to their room. Lottie gave her cousin a good-night kiss, and was soon in the land of dreams; but Maud, excited by all she had seen and heard, could not think of sleep; so taking out her writing-desk, she seated herself to write a letter to her mother.

John Wide Awake's Complaints. No. 3. COMMITTEE MEN.

DEAR NORMAL,—I did not expect to write you again, but I am like the woman who spoke in meeting and couldn't stop. Your praising my letters gives me courage to write again. You said that I might make any complaints "about teachers, committee men, or other parties." When I read that I thought—I will put our committee men over the coals. We have got just the sleepest set that ever visited a school. There is Rev Mr. Smith, an old minister, a great man, I expect in his day, but that must have been long ago. He tells us about our education and the nat'ral sciences. Then he always has the same speech to close with. Perhaps I should like it if I had never heard it before; but as I can say it

faster than he does, it makes no impression. I would repeat it to you, but I don't want to be disrespectful to a minister. Really, Mr. Normal, is there not some way of laying committee men on the shelf as well as ministers and teachers? There is old Dr. Jones. I think he must have a great many patients and be out nights, for the minute he gets into his platform chair he goes right to sleep. He sleeps if we are saying anything, and wakes if we stop. Once he said "get up" as he awoke. I suppose he thought he was on the road and Old Dobbin had come to a halt. Often when he wakes he says, "Please repeat that last remark a little louder." Sometimes there has been no remark made, and then it is rather awkward. Some boys might think it good fun to have such committee men, but I don't. When I have studied hard and know I have learned, I like to have the committee pay attention examination day. It helps me up the hill of science to have real wide awake men to examine us, at least I think it would; but now I don't care.

Mr. White, the third committee man, is not so old as Elder Smith, or so sleepy as the Doctor; but I don't know anything about him, for he never comes into school. What are committees for, any how? Are they chosen just to make speeches, or go to sleep in school, or to stay at home when they feel like it? Frank Harris says, in their village the committee come in the first day of school and class the scholars, and write down how much they know. Then every little while they will slip in to see how the scholars are getting along, and, at the end of the term, they examine the scholars and *promote* some of them. I wish *we* had such a committee. Can't you say something to wake up the ones we are now afflicted with, or give them a hint to resign?

I have been called "one of the boys" long enough, and as our teacher has found out who wrote my first two letters, I believe I will sign my name to this.

JOHN WIDE AWAKE.

P. S. I begin to like our teacher better.

A Simple Dialogue

FOR PRIMARY SCHOOLS.

[Children stand in a circle taking hold of hands. One boy in the centre. They walk around singing the old song:]

"On the carpet here we stand,
Take your playmate by the hand,
Choose the one that you love best
Before you close your eyes to rest.

[One in the centre—chorus:]

Oh what a beautiful choice you made,
Don't you wish you'd longer staid;
Give her a kiss and send her away,
And say you'll call another day."

[Teacher, or some one to represent the teacher, calls them thus:]

Come, children, leave your play awhile;
Come to your teacher now;
She'll greet you with a happy smile,
Or kiss upon your brow;
And when your childish joys and griefs
She patiently has heard,
Each little one may tell in turn
What is the sweetest word.

John.

The sweetest one I ever heard,
Dearer than any other,
An easy and a precious word,
What could it be but *Mother*?

Mary.

Mother is a precious name;
But if afar I roam,
I should think when darkness came,
The sweetest word was *Home*.

Bell.

A *Flower* is sweet, and that's my word,
Until a better one I've heard.

James.

One word will rightly express
My loves and hopes the same;
In boyhood or manhood I ask no less,
No other word than *Fame*.

Susan.

Love is the sweetest name;
Love is the best of all;
Better than home, better than fame:
Love is the name I call.

Robert.

When March winds blow
And tempests ring,
What word we know
Could equal *Spring!*

Little Maud.

I know a word a good deal gooder,
'Tis s-u-sy, g-a-r-gar, *Sugar.*

Fred.

Tired of my play at home,
Or of books when at school I keep,
The sweetest words at night I've known
Are—I lay me down to sleep.

Joseph.

The sweetest words of all to me
I'd have you understand,
Are three that speak of liberty,—
Hurrah for *My native land.*

Little Willy.

(*Bashfully.*)

My sweetest word I cannot tell,
But it is either *Kate* or *Nell.*

George.

Come, stop your prosy foolish rhyme,
It has so little wit,
That I should think 'twas fully time,
For my sweet word—"Tis *Quit.*

Teacher.

George is tired and he may go,
The rest may tell the words they know.

(*George goes.*)

Harry.

The very sweetest word to me,
Is one I daily bless;
Teacher speaks it when she says,
The boys can have a *Recess.*

Sarah.

Three beautiful words I love to say,—
I will softly speak them,—*Let us pray.*

Dora.

My mother says the very first
Of names to mortals given,
Is one that speaks of endless rest;
My mother's word is *Heaven.*

Lizzy.

[Sings from the *Golden Chain*, by BRADBURY.]

"There is no name so sweet on earth,
No name so sweet in heaven;
The name before his wondrous birth,
To Christ the Saviour given.
We love to sing around our king,
And hail him blessed Jesus,
For there's no word ear ever heard,
So dear, so sweet as *Jesus.*"

[Children all repeat the last four lines, singing
with animation.]

BELL BRANDON.

What must the Wish be.

FOR THE LITTLE FOLKS.

Come hither my darling, my beautiful one;
Come sit on your grandmother's knee;
From night's deepening dreariness run, darling,
run,
And rest on the door-step with me.
There, give me your fingers and quietly hear,
While I talk of the stars up so high.
Oh, tell me, said Willy, my grandmother dear,
Are the stars *golden holes in the sky?*

No, Willy, my darling, the stars of the night,
Are worlds just as precious as this,
Where grass grows as green, where flowers bloom
as bright,
And children their grandmothers kiss.
They are far away, and no doubt this is why
They look to our vision so small.
O grandma, said Willy, they're set up so high,
Say, why don't the star people fall?

God keeps them, my darling, you cannot discern
His wonderful knowledge and skill;
But the older you grow the more you will learn
Of things that his wisdom fulfill
For the heavens are just like a beautiful book
You can read when you understand how.
Grandma, Willy said, with a quizzical look,
I want to be older, now.

The years will fly quickly, dear ignorant one,
And then you will beckon them back—
You will long for your childhood's beautiful morn,
And the stars in its silvery track,
And you'll know that beyond this flowery land,
And beyond that glittering sky,
There's a heaven. O grandma, said Willy Rand,
Is heaven so very high?

It is very high, it is very fair,
That glorious heavenly home;
But the good alone can be happy there,
And sorrow is there unknown;
More bright than the stars with their twinkling
light.

O grandma, cried Willy to me,
If the outside of heaven is so very bright,
What must the inside be?

J. H. M.

Talk with Fogy after the Lectures.

PROGRESS. Well, neighbor Fogy, how are you? I have wished to see you ever since the close of the geology lectures. I saw you were present every night. I hope you were interested and got *your money's worth*.

FOGY. Yes, I went all the time because I had my ticket bought and couldn't afford to lose it; besides, I wanted to look after my gals (didn't want none of them high school fellers goin' home with 'em), but as for bein' interested, I had rather read a chapter in Chronicles where it's all hard names, or try to read a Latin book with picturs in it. I never heard such a mess of stuff. *Money's worth!* Guess I didn't,—wouldn't give two cents for all I learned.

PROGRESS. I don't know that I would give much for all you learned, but all you *might have learned* I would not sell at any price. You know the old saying, "None so blind as those that wont see," and I think it is equally true, None so deaf as those who are *asleep*. I think I saw you *nodding* approval quite frequently.

FOGY. Well, let that go, but only think of paying one whole dollar for hearing a man say over every night, Azores, Paregoric, Massasawit, and a whole grist more too hard to pronounce.

PROGRESS. Yes, I know there were many hard names, but he said you old people need not try to remember them.

FOGY. Old! You needn't call me old,—guess I could have remembered them if I had wanted to.

PROGRESS. Well, let the names go. Didn't you get any new ideas? Didn't you learn how the rocks were formed?

FOGY. Oh yes, the lecturer said that fust there was a big pail and they stirred in sand and that hardened, then chalk, and that got hard too, and then one thing and another,—I don't believe nothing of it.

PROGRESS. Hold, neighbor, that was only an illustration; I will tell you what he said.

FOGY. No you wont. I've been to one course of geology lectures and don't want to hear another. I know what he said. I

should think a man who had been a school-master thirty-three years, and taught the children never to tell a lie, would be ashamed to go around the country telling such whoppers as that story about the bird as big as the meetin' house, and some other kind of a critter bigger still.

PROGRESS. Yes, but they have found the bones in the rocks, so they *must have lived*.

FOGY. You needn't tell me they find them bones in the rocks. I spect some sharp feller or other has told the lecturer a long yarn about 'em, and showed him some great wooden machine or other, and told him it was bones, and he's been fool enough to believe it. I'm not so green. Don't I know the bones would have rotted long ago.

PROGRESS. But were you not interested in the account of the making of coal?

FOGY. I heard what he said, but I don't believe it was made so. I think the Creator put it there all made, instead of rottin' the wood and puttin' the rocks on to it and then splittin' them apart afterward. I don't believe he took all that trouble and time neither.

PROGRESS. You forget that a thousand years are to him but as one day, and one way is as *easy* for him as another.

FOGY. Well, I don't know about that, but this interferin' with scripiter I don't believe in. I don't believe in being wiser than what is written.

PROGRESS. Well, what is written?

FOGY. Why, the bible says the earth was created 6,000 years ago, and by Mr. True's account, it has been nearer 60,000,000,000.

PROGRESS. Where does the bible say 6,000 years? Please tell me the chapter and verse.

FOGY. Why, in the fust chapter of Genesis, to be sure.

PROGRESS. I am afraid you have not read the good book lately. It reads, "In the *beginning* God created the heavens and the earth." How do you know when the beginning was?

FOGY. Well, now, I always thought it

said 6,000 years ago. Well, anyhow, he said that the world was not made in six days, and the bible says it was. *I guess I know that much.*

PROGRESS. Yes, the bible says so, and Prof. True did not contradict it. He believes in the bible, but frankly says he does not know whether the six days are six literal days or six long periods of time. A day is put for a long period, you know, in some parts of the bible. I must confess Prof. True did not explain as fully as I expected what his views were on that subject, but presume it was for lack of time.

FOGY. Well, I don't see no good in it all. He said at first he would tell us where gold could be found, and then when my hopes were raised about that shiny stuff in my potato patch, he turns round and says it is fool's gold, and that I am a fool if I expect to find anything else here. I thought some good might come of it, but I am *disappointed*. Instid of tellin' us what is in the town of Strong he tells us a lot of things that *a'nt* here. Can't even comfort us up with the hope of finding a little ile. Nothing but granite and gneiss (nice granite I suppose he meant) at the bottom, and lots of pebbles and boulders at the top, and the valuable stones all left out. Guess we farmers, who have ploughed and picked up stones these forty years, know a sight more about the stones than he does who comes here only once in twenty-five years.

PROGRESS. Why, you cannot blame the man because the stones that have gold and diamonds in them are not found in Strong.

FOGY. He might have said so, and it would have been more likely than so much stuff about them big animals, and a good deal more pleasing. I'd rather have heard that than all his palaver about "your beautiful village" and "this intelligent audience."

No, I wouldn't give two cents for it all. I wish I had my *dollar back to buy me a new hat with.*

PROGRESS. So you mean to have something outside of your head, but nothing

in it. Well, well. *There must be some fossils in every age.* PROGRESS.

Curiosity.

A little dog with heedless glee
Into the battle ran,
Wishing the dreadful game to see
Of man destroying man.

Barking he runs, then sudden stops,
Barking still the louder,
For he has singed his hungry chops
With the exploding powder.

And as a flying fragment throws
His body in the air,
Too late the foolish thought he means
That sent him prowling there.

MORAL.

The moral of this simple tale
Is very plain to see;
'T is better sometimes to curtail
Your curiosity.

Keep far away from other's strife,
Seek not false pleasure's light,
And ne'er in battle risk your life
Unless you go to fight.

An Old Time School-master.

"Come, Uncle Will," cried Harry, Fred, Mary, and Lucy, "tell us a story; we have not heard one for ever so long."

"Well, little teasers, I suppose I must, for when four of you come around your old uncle, he cannot get out of your clutches."

So Mary climbed upon one knee and Lucy upon the other. The boys each took an arm of the chair, and Fred said, "the meeting will come to order, Uncle Will has the floor."

"My respected hearers!" said Uncle Will, "what shall be the subject of my discourse."

"Oh," answered Fred, "please tell us of when you were a boy. Yes, a story of old times," echoed all the rest—"old times when you went to school."

"Well," said Uncle Will, "let me see, "I believe I will go a little further back than my school-days, and tell you of an old-fashioned school-master."

"I name one condition, that you will tell me who he was, and where he lived to-morrow."

"A bargain," cried all the young folks,

and so Uncle Will proceeded with his story.

Away back, many years ago, A. U. 358 (when was that, Harry?), in the country of (you must tell me to-morrow) there lived an old man.

He had taught the boys of his city for many years. The girls did not go to school much in those days. The boys were all from the F. F.'s and were studying hard, that in after years they might be senators, poets, or warriors. I do not know just what they studied, but I presume many things that boys in those days learned at school.

I cannot tell, either, how they liked their school-master, for children then were not allowed to tell tales out of school, and were expected to reverence all older and wiser than themselves.

But from what I can gather I should expect the boys sometimes called him "a cross old fellow," and though I never like to say anything against teachers (between you and me), it must be confessed that he was not all he ought to have been.

He used no doubt to punish the boys very severely when they needed it, and sometimes when they didn't, so as to be sure they had their deserts. Well, in the course of time a war broke out. The city in which this boy's school flourished was besieged—(you know what that means, for you remember how Grant besieged Vicksburg and Richmond).

I don't know how long the enemy besieged the city, but they were likely to take it, and the people were very much alarmed. Some ran away to the mountains. Some deserted to the enemy. The old school-master was one of these timid ones, and so he tried to think of a way to make friends with the enemy. One morning he told the boys to put away their books and take a walk with him.

They thought it would be nice fun: a walk and a holiday instead of books and lessons. The country with its green fields instead of the dusty city. So you can imagine the books were quickly put

in the desks (if this old-fashioned school-house had any desks).

I cannot stop to tell you about the sports or merry talk they had. I know they thought Mr. Magister was very clever that day. After a while they came in sight of men on horse-back and men on foot, of camps and tents, and ere they knew it their false master had led them into the tent of the hostile general. Mr. Magister addressed the general something after this fashion:

"General ——: I have come out from the city which you are besieging. I am the Principal of a Boys' School there. These boys are children of the most worthy and influential men of our city. I have brought them with me. They are your prisoners."

"What do I want of these lads?" the noble general replied. "What have they done that they should be my prisoners?"

"Oh," said timid Mr. Magister, "their fathers will make terms with you if you have the boys."

"You miserable traitor," said the general, in an angry tone. "Do you think it is thus I would conquer cities? Is it thus you fulfill the duties of your office? I will have nothing to do with such meanness. I will fight your soldiers honorably; but I will not treacherously take these boys in order to bring their fathers to terms. Go, unworthy teacher, take back your charge,—but stop; soldiers, tie this school-master's hands behind his back and turn his face homewards. Boys, arm yourselves each with a good rod such as this miserable man has whipped you with, and drive him back to the city as quickly as you please. I want no such traitor in my camp. If any of you have a grudge against the old fellow, you can pay it now. You need not spare the rod."

So Mr. Magister went home rather faster than he came, and to a different tune. You can imagine what a time the boys had. I fear some of them were so very naughty as to think it good fun to pay back their old blows with interest. The teacher must have looked more sheepish than any boy he ever whipped,

as he entered the city. But I think he was served rightly for being a traitor.

This is about all I can tell concerning this ancient school-master. I presume he was put to death as a traitor. I know he never taught those boys again.

The parents were very glad to see their children safe back, and they were so much pleased with the noble and generous conduct of the General, that they made friends with him, and asked him to govern their city; for they thought so honorable an enemy would make a good ruler.

"Where did all that happen, Uncle Will?" said Lucy.

"Oh, you forget that you promised to tell me to-morrow. When you have done so, I will tell you *another story*."

CLINE DUKE.

Niagara by Moonlight in Winter.

The cars were running through the beautiful and populous regions between Buffalo and the falls, but we were in no mood to study the scenes that were so varied. Charming villages, neat farms, noble forests could not bind the thought, and the majestic river with its swift tide and pretty islands could hardly win a glance. As the evening advanced and the villages on the other shore sent scores of gleaming lights across the river telling of peaceful firesides, *their* story was all unheeded. My thought was absorbed in dreams of the wonderful scene I hoped to enjoy that night. I was impatient. The speed of the "lightning express" seemed very tame. Why could they not stir up the fire a bit, and why need they stop at every station? How glad I was when the railway journey for that night ended.

Ridding myself as quickly as possible of the herd of guides that blocked my path I turned my steps towards the falls.

What need of guide with that mighty voice ever and kindly calling. Then I wished to commune a while with nature and have no heavy step profanely intruding. Leaving the village with its fine residences and giant hotels behind, I

passed through the little grove, hurried out upon the great ledge, and the wondrous scene was before me. Slowly its beauties and grandeur were unfolded. The hour added a strange awe to my spirit. It was midnight, and the full moon rose high above me. It was so light that myriads of the stars thought it was day, and had gone to sleep in the heavens. In that pure clear light how distinct every object appeared! How fearful that abyss into which the vast sheet of water was plunging its wild commotion, its white foam! How smooth the river where it sweeps over the edge of the precipice, all unconscious of the fearful leap it is taking! Then how the mist rises many hundred feet into the air! It rests like a white cloud above the falls. The wind sways the cloud toward the further shore; and now as the moonbeams gleam through it, the faint outlines of a *silvery rainbow* appears. It is too delicate and ethereal to be abiding. A glance at its rare beauty and it is gone. But why these gleams of light from the face of the cliff? and from the trees on either bank? A closer view explains it. Every tree, every ledge, even the face of the lofty cliffs below the falls cased in ice. The islands above the falls have the same glittering raiment. In summer, when surging clouds gather, here nature clothes the falls in a dark, solid, every-day dress; but now they are robed in pure and radiant white. Every spot that a beam of light touches answers back with the sparkle of crystal gems.

For hours the loneliness of the scene binds my feet to the spot; and when at length I leave it, my slumbers are filled with gleams of like enchantment.

Other views may be grander, may be more beautiful or more fearful, such as passing under the falls or visiting the little island on the edge of the precipice, but my midnight view will ever hold the first place in memory.

No one has seen the Falls of Niagara who has not seen them by moonlight in winter.

P. L. J.

PORTLAND, Aug. 10, 1868.

DEAR NORMAL,—I have read the puzzles in the last number of the Students' Normal and puzzled my brain over them a good deal, especially the geographical question. If I should go round with the sun, of course it would always be noon with me; and if I started Thursday, it would be Friday when I got back to Portland. I can't see *where* the people would *first* tell me it was Friday noon. (The question said *when*, but father says it was meant for *where*.)

It seems I should have to jump from Thursday noon right into Friday noon somewhere; but I don't see how that could be. I hope some one will explain this to me. Perhaps that smart boy who knows so well what other people ought to do, can give me a rule for performing this question. Of course he thinks he can; but, to tell the truth, I should prefer to hear *your* explanation.

I like your talks about mental arithmetic and grammar very much. Can't you give us a talk on geography?

Please don't print this, for it is not good enough, but answer my questions when you get time. ONE OF THE GIRLS.

We could not withstand the temptation to print the above, and hope to have many more communications of a similar thoughtful and inquiring character.—ED.

POOR SOULS.—Poor and feeble souls exact most from the world. Rich and soaring souls have a self-sacrificing modesty, which, in its own exuberance, asks but little from others. The lark, when at sunrise she rises, singing above our sight, shows that it was not from lack of power to climb that she made the humble choice to build her nest in the grass.—*Alger*.

CONVERSATION.—He who sedulously attends, pointedly asks, calmly speaks, coolly answers, and ceases when he has no more to say, is in possession of some of the best requisites of man.

NUTS TO CRACK.

A Puzzle.

A gentleman met a child in the street and said, I am your father, but you are not my son. Explain this. H.

Mathematical Questions.

If 5 boys do 5 examples in 5 minutes, how many boys will it take to do 100 examples in 100 minutes? M.

A gentleman bought a hat and paid for it with a fifty dollar bill. The hatter could not change the bill but went with it to a merchant who changed it for him.

The hatter then gave the gentleman forty-five dollars, charging five dollars for the hat.

The bill proved to be counterfeit, and after the gentleman had gone, the merchant brought it back to the hatter. How much did the hatter lose? Remember, he paid the merchant back \$50 in good money, and the gentleman had carried away \$45, and the hat. SENEX.

A Riddle.

The letter P pronounced by inspiration,
And found in the language of every nation,
Joyfully spoken when parted ones meet,
Glibly recited by girls on the street,
Lisp'd by the little ones going to rest,
Twining their arms round those loved best.
Pledge of affection pure and true,
Epitome of I love you.

TEACHER.

Answer to Riddle in August Number.

The "crimson door to the cavern small,"
Is *our baby's* mouth. Do you recall
Two dangerous teeth that there we hide?
They are the "pearls set side by side."

SISTER.

TRUTH.—Some one has beautifully said: "Truth is immortal; the sword cannot pierce it, fire cannot consume it, prisons cannot incarcerate it, famine cannot starve it."

What is the difference between hope and desire? Desire is a tree in leaf, hope is a tree in flower, and enjoyment is a tree in fruit.

HOW TO LEARN.—Old sciences are unravelled like old stockings, by beginning at the foot.—*Swift*.

THE MAINE NORMAL.

VOL. II.

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NO. 10.

TACTICS OF THE SCHOOL-ROOM.

NUMBER SEVEN.

The Recitation. The principal duty of a person in charge of a school, is the instruction of that school. This duty, faithfully performed, will require the teacher to devote to it most of his time and strength. Not that the management and discipline of the school are secondary to its instruction, for they are certainly not. There can be no profitable nor successful instruction where there is not good order and system. The discipline of the school must be secured as a necessary condition for good instruction, but it must not monopolize the teacher's time. The most successful discipline is that which is generally established without much apparent effort. When a school is thus managed, the teacher is at liberty to give himself mainly to his duties as an instructor. At another time we may speak more particularly of the qualifications of an instructor; but at present we shall confine ourselves to the general management and the incidentals of the recitation. In a former article, under the head of *organization*, we had occasion to allude to the necessity of so classifying the school, as to secure a reasonable amount of time for each recitation; instead of allowing it to be frittered away upon a large number of classes, when a few moments only could be allowed to each. After the number of classes has been thus established, the time of the teacher must then be fairly divided among them, and his other several and necessary duties. And this is about the only rule that can be given for the *length* of a recitation. Devote as much time to it as fairly be-

longs to it, as a part of your whole work to be done. We believe the feeling is wellnigh universal among teachers, that the greatest possible length of time which they are able to obtain for their recitations is generally too short. The remark is often made: We ought to have a full hour for that lesson. But the zeal of the teacher should not be the only measure of the recitation. When the interest of the class begins to droop from weariness or fatigue, the exercise should be brought to a close; for it can no longer be a profitable one to the pupils. An English Educator, of eminence and experience, has made this subject a matter of extensive inquiry and observation, and gives it as his opinion, that in the case of University students who have about three exercises, or more, per day, the interest very perceptibly flags at the end of fifty, or, at the most, fifty-five minutes. This opinion is quite generally indorsed by practical teachers in this country. If this is true of University and College students, the time should certainly be less for younger classes in the various grades of schools below those just mentioned. If no exercise in a Primary school were to exceed fifteen minutes, we imagine that much of the torpor and dulness, often found there, would be exchanged for vivacity and animation. Above the Primary, an ascending scale may be adopted. Thirty minutes will suffice for the youngest classes in Grammar schools; and when we arrive at the High school and the Academy, forty-five minutes must be considered, we think, about the maximum.

The length of the recitation should be definitely fixed, known to the class, and scrupulously adhered to. It should not be long or short according to the lesson. If half an hour is the time assigned, it should all be used, although the lesson may have been completed, or once gone over, in half the time. Reviews and repetitions should fill up the hour; for it has a bad influence upon a class to have its members feel that the only object of the recitation, is merely to "go over" the lesson. They should, on the other hand, understand that the recitation-hour is to be fully occupied upon the subject of the lesson, and that the work must invariably go on, without intermission, until the expiration of the allotted time for that exercise. When that moment arrives, the recitation should stop. It is not just to a school to allow some exercises to exceed their time, when the result must inevitably be, that other exercises will thereby be robbed of a portion of the time that fairly belongs to them. *Punctuality* should, therefore, characterize the recitation; and punctuality, in

this case, means beginning and closing the exercises at the appointed moment.

For the purpose of fixing indelibly in the mind whatever has been learned and recited before, as well as for the purpose of keeping up the natural connection between the last lesson and the one in hand, the lesson of each day should generally be preceded by some kind of a review of the one last recited. But we intend to devote a future article to the subject of reviews.

In most branches of study it is quite desirable, that before the recitation of the lesson proper actually begins, pupils should be allowed to ask explanatory questions. This is particularly true of the languages, some portions of the mathematics, and of the natural sciences. They must not, however, occupy so much time as to interfere seriously with the main work of the recitation. From three to five minutes, or thereabouts, may be very profitably spent in answering such questions; and it will often throw much light upon the lesson for the pupil's benefit, and will, also, not unfrequently help on the recitation so as really to save time thereby. The teacher must, of course, guard against the practice of indolent pupils, who will avail themselves of such opportunities to ask questions which their own laziness only prevents them answering without aid from others. Not an instant of time should be given to answering questions which pupils can, with proper effort, answer for themselves. The recitation is not the time for the pupil to learn the lesson. Another caution may also be given. There is a class of roguish pupils who delight to get a teacher engaged in the explanation or discussion of some topic, that they may ply him with questions and lead him off from the proper work of the recitation, and thereby "kill time," and, consequently, get the lesson "put over" for the next day. Such pupils must be brought back from their diversions, put upon the track, and be made to *work* in the regular recitation.

The object of the recitation is not to find out how much the pupils do *not* know. It is to ascertain what they have done in their attempts to master the lesson, and how they have done it; and whether they can use and apply what they have learned, and communicate it to others. Consequently the pupil must do the principal part of the work in the recitation. The teacher is the guide to give hints and assistance when needed, and to give tone to the exercise, that the class may have their interest aroused, and their attention secured. All leading questions

and superfluous promptings are out of place on the part of the teacher, and, although often well-meant, are a positive injury to the pupil. One of the rarest qualifications of a teacher is the power to work a class, or, in other words, to keep them thoroughly interested in the recitation, and willing to rely upon themselves and do a good work, without feeling uncomfortable about it. It is a magnetic power, and is emphatically the power that "wakes up mind." Few, very few teachers possess it in a high degree; but it can be, in some measure, acquired, provided one is fully imbued with the real spirit of the teacher. The teacher must be a diligent student of human nature, and cultivate the element of sympathy. Without such a preparation on his own part, he will fail to gain easy and ready insight into the workings of the youthful mind. To be successful, he must understand the material upon which he is to work.

Many teachers talk too much, and ask too many questions. They do not give pupils a fair chance to tell what they know. Such pupils will never be fully satisfied with the results of the recitation. There are, also, teachers who seem to take no part in the recitation. They are mere auditors, listening to what the pupils have to say, and doing nothing to aid or stimulate them in their work. More next month.

A. P. S.

THE DEATH OF THE LEAVES.

The leaves of the forest are dying to-day;
 The trees sing a requiem low;
 For the children whose coming they welcomed in May,
 To their grave in September must go.

Doomed maple leaves, flushed with the hectic of death,
 Whisper a farewell song;
 Seared apple leaves taste, with shortening breath,
 Fruit they have nourished long.

The willow, its drooping eyelids dry,
 Has grief too deep for tears
 Children carried slowly by,
 On airy funeral biers.

rampled and cold on the frosty sands,
 The glory of summer is lying
 While leafless branches wave their hands
 Over the helpless dying.

Dying, and yet 'neath the scars unhealed
 Of the wounded parent tree,
 Perchance in its winter coffin sealed,
 The soul of the leaf may be.

Perchance this falling is casting away
 The faded summer dress;
 Perchance this dying is not decay,
 But a rest from happiness.

Perchance, and yet I know 'tis true,
 When the snows have kissed the skies,
 A leaf each scar will burst in two,
 And in spring-time beauty rise.

So I look to-day at the naked trees,
 Look and repress my sighing;
 For I say—our life is even as these,
 And death is not wholly dying.

'Tis but a resting for an hour,
 A changing of the dress,
 Then rising with increasing power,
 And added loveliness.

'Tis but a *falling* of the leaf,
 A *waiting* of the breath;
 A gathering of the ripened sheaf,
 This fearful mystery of death.

This mystery, and all around
 Stranger mysteries I see,
 Written upon the very ground,
 Ascending with the tree.

Mysterious things these vanishings,
 These joys that come and go;
 But faith this revelation brings,
 "Hereafter ye shall know."

* * * * *

Then if sorrow appears
 In the coming years,
 And *my leaves of pleasure fall*;
Like the trees may I rise
 Toward the upward skies,
 Trusting God in all.

JULIA H. MAY.

HENRY PESTALOZZI,

AND HIS SYSTEM OF EDUCATION.

NUMBER TWO.

In 1804, Pestalozzi opened a school at Yverdun, a beautiful spot on the south end of the lake of Neufchatel. His experience in teaching at Neuhof, and afterwards at Stanz and Burgdorf, had wrought out in his mind a definite plan, and it was here that he was first enabled to bring it into successful operation.

His object was to promote the intellectual and moral growth of the child, to enable him to make a proper use of the talents which God had given him, to fit him, not for the base purposes of a corrupt society, but for that place which his natural endowments had destined him to occupy. Therefore he paid no attention to the existing methods of instruction, but followed that course which his experience and knowledge of the human mind taught him to be the correct one. He made each pupil a study, and applied to each the treatment that seemed best adapted to him.

He endeavored to inspire his teachers, also, with the same enthusiasm which actuated him, to give them a true conception of the exalted and responsible character of their office. The course of study at Yverdun embraced languages, ancient and modern, geography, natural history, physical science, mathematics, drawing, singing, history, and religion.

His leading idea in teaching was, that in children, at an early age, the perceptive faculty alone should be cultivated; that the child should be taught as far as possible, by his own examination of things. This he called *intuitive* knowledge. His own words well express his views upon this subject. "By degrees certain fundamental points established themselves in my mind, and guided me in the further pursuit of my object. I became every day more convinced, that reasoning with children, at an early age, does no good whatever; but that the only way to a real development of their mental faculties is:

"1. To enlarge, gradually, the sphere of their intuition; *i. e.* to increase the number of objects falling under their own immediate perception.

"2. To impress upon them those perceptions of which they have become conscious, with certainty, clearness, and precision.

“3. To impart to them a comprehensive knowledge of language, for the expression of whatever has become, or is becoming, an object of their consciousness, in consequence either of the spontaneous impulse of their own nature, or of the assistance of tuition.”

He did with his pupils as nature does with savages, first presenting an object before them, and then seeking a word to express the perception to which it gives rise. He made it a rule to give the child a clear and distinct notion of the object before giving it its name; and it was one of the achievements of his method to connect language with the knowledge gained from nature, to clothe what he had learned with fitting and appropriate expressions. His account of the course pursued with a child hardly three years of age, throws much light upon his general plan.

“I tried to convert letters, figures, and whatever else was at hand, into means of instruction; that is to say, I led him to form, concerning every object, distinct notions, and to express these notions clearly in language. I made him state positively what he knew of every object, its color, its parts, its position, its shape, its number. Very soon I was obliged to lay aside the alphabet, that first torment of youth; he felt no interest in those dead signs; he would have nothing but things, or pictures of things; and, in a short time, he was able to express himself distinctly respecting any objects within the sphere of his knowledge. He gathered general information from the street, from the garden, and from the house; and, from the basis of clear and self-acquired notions, he soon learned to pronounce correctly even the most difficult names of plants and animals. Nay, by comparing objects entirely unknown to him, with such as he was acquainted with, he was able to form of them a definite idea.”

With pupils of any age he took great care to bring the various branches of study before them, at a time when the mind was best fitted to receive them; and, in the treatment of any subject, he would never leave it, until it was so far explained and simplified, that it was *impossible to go any further*. The effect of such discipline was to give every individual independent habits of thought, and to develop in him the power of pursuing by himself other branches of knowledge. He not only gained positive knowledge, but there was awakened and strengthened within him a love of knowledge and the power of acquiring it.

WONDERS OF GEOLOGY.

NUMBER NINE.

Thus far we have briefly traced the condition of our globe from its liquid condition to that of the solid Azoic rocks, out of the ruins of which were formed sandstone, limestone, and slates which were the abodes of animal life, but all beneath the waters of the ocean. This was the Silurian Period. No land-plant or animal is known to have existed.

But now another great change takes place. Gradually we find the materials of the older rocks worn down by the action of the waters of the ocean, immense beds of pebbles are formed along its shores around the older Silurian islands, while in the deeper and more quiet waters, clay and limestone were deposited. Then all became hardened into stone, and here we have the Old Red Sandstone of Hugh Miller, but now more generally known as the Devonian Period, from the county of Devonshire, in Great Britain, where these rocks were first described. The Old Red Sandstone, in England, in some places, is estimated at 10,000 feet in thickness; in the Alleghanies, in this country, at 14,000 feet. If you were to travel through the north of Scotland, you would see where the sea once flowed. The Grampian Hills have a bed of Devonian rocks around their base which were formed in this manner.

During this period the Alleghany range of mountains was a great sand-bar, so to speak. Probably the waters of the Atlantic and Pacific Oceans met here. The White Mountains of New Hampshire, and the long range of mountains and hills running across the State of Maine, were evidently formed of sediments beneath the waters of the ocean at this time. From the brief explorations of our State Geologists, we have evidence to believe, that the ancient shore of the ocean, with its shallow waters, trended along where now is Moosehead Lake, and extending in a north-east direction as far as Aroostook county. The rocks of this period are full of fossils. Persons, living east of the Kennebec River, have been surprised to find boulders full of fossil shells; and it is as great a mystery to them as anything, how they came so far from the ocean, for they are marine shells. They came from this bed of rocks, and were floated southwardly at a more recent period, as we shall hereafter see. Thus the central and northern portions of Maine belong to this period.

Many of these rocks are composed of water-worn pebbles, which have been cemented together and formed a conglomerate, or Pudding-stone.

It is in these rocks where we find the first land-plants. The earth has now become sufficiently dry, and the atmosphere sufficiently pure, to admit of their existence. If you go to the town of Perry, in this State, you will find these land-plants in the rocks. More than one hundred different plants have been found in the vicinity of St. John, New Brunswick. They are of the lowest order of vegetation. Nothing like our hard-wood trees existed then. The highest were those of the Pine tree. It is now the first time, in the history of our globe, when a man could have found a stick of wood, or timber.

It was in this period where we find the first indications of Fishes on this continent. Hugh Miller describes the strange forms of fishes that abounded in the Old Red Sandstones. They were not generally of the lowest order of fishes. They frequently approached the reptiles. The reader must bear in mind this important fact in the wonderful history of our globe, that although the law of creation is one of progress, yet the very lowest orders, genera, and species of plants were not always created first. Sometimes it commenced in the middle of the series, followed by genera of a lower as well as of a higher order. A knowledge of this fact would have saved a vast deal of useless discussion among scientific men. Mosses and lichens, for example, though among the lowest orders of vegetable life, were not created till a very late period in the world's history.

But let us return to the fishes. They generally had a cuirass, covering their head and sometimes their whole bodies, with which they defended themselves against their enemies. They have the marks of having been ferocious monsters. The slimy deep of this period must have been the scene of many a hard-fought battle among these monsters. Fishes, destitute of this cuirass, had hard rhomboidal scales, unlike the generality of fishes of the present day. Only two or three species are now known of this ancient type. One of them is the Gar Pike, found in our western lakes. I have one now before me from Lake Michigan. His head is long. His teeth consists of several rows, and of unequal length, and are long and sharp pointed, showing that he is a voracious fellow. His backbone is like that of a reptile, with one end of each vertebra concave, and the other convex (look at the backbone of a snake, for an illustration); while his body is covered with a coat of mail

that an axe would not cut through. His scales are hard as ivory. Such is a modern species of the ancient type of fishes, approaching more the character of reptiles than of modern fishes.

It is in the Devonian rocks that we find the immense beds of petroleum, the wonderful discovery of the present century. This curious substance was probably the result of the slow decomposition of vegetable and animal matter, covered over with sediment, and subjected to a great pressure for a long period of time. Petroleum is found as low down in the Silurian rocks as we find fossil remains; but it is not till we reach the Middle Devonian where it is found in quantity. The living lecturer alone can better explain its various conditions; but it is wonderful to think how universal is its use. Our houses are lighted with it either in the form of gas or kerosene. The humblest cottage has its kerosene lamp. When we think how cheap it can be obtained, and what vast quantities have been stored away for these later generations, we may well wonder at the design manifested in the creation of the world, and adore the great Designer for his infinite wisdom.

N. T. TRUE.

THE SONG OF THE SHELL.

I found on the beach a delicate shell
Where the rising billows fiercely swell.

It was rough without, but deftly lined
With glistening gold and pink combined.

Winding strangely round and round,
Like some old labyrinthine mound.

It sang, when I placed it to my ear,
A song like the sea-waves rolling near.

A strange, sad song, so sweet and true,
Of a home far down in the ocean blue.

A beautiful home, near the coral beds,
Woven of moss and sea-weed threads.

There it held inclosed, in peace profound,
A priceless treasure, strongly bound.

A shining pearl; but the diver sank
To that happy home in the coral bank.

The precious jewel away he bore,
Leaving the casket upon the shore.

And ever since, the empty shell
Rings for its lost one a funeral knell.

* * * * *

I found on the strand of life a soul,
Where the billows of sorrow fiercely roll.

It was rough without, but fairer within,
Than any ocean shell has been.

Its inmost thoughts I could not see,
But it softly sang this song to me:

"I had a home in a distant clime,
A happy home, for it was mine.

I had a pearl, but the spoiler's dart
Pierced my pearl, and broke my heart.

My ruined treasure away he bore,
And left me bleeding upon the shore.

Oh, from morn to night as the billows rise,
A requiem I chant for my pearl in the skies."

* * * * *

The mourning shell, and the sorrowing soul
Are alike; I sighed to the ocean's roll.

Like, did I say? No, the pearl that's lost
Will ne'er to the vacant shell be tost;

And the glistening gem may never see
The shell where its dwelling used to be.

But the wailing soul shall find its own
In the land where losses are unknown?

J. H. M.

SINCERITY is speaking as we think; believing as we pretend; acting as we profess; performing as we promise; and really being as we pretend to be.

WHAT TIME TAKES AND GIVES. The passing years drink a portion of the light from our cheeks, as birds that drink at lakes leave their foot-prints on the margin.

FEMALE EDUCATION.

In discussing the education of women, the question has sometimes arisen, "Why should not our young women have the privilege of a *thorough college course*, as well as young men?" Again I ask, Why not? Because they do not desire a professional life, should the benefit derived from the intellectual discipline gained at such institutions of learning be denied them? Those who love learning for its own sake, and desire to be educated, will immediately avail themselves of any opportunities afforded for gaining knowledge. Why should the store-house of a woman's mind remain almost empty, when there is *so much* to be learned? Is it because her mind is inferior to men's, or because it is entirely unnecessary that she should equal her more fortunate neighbor, in the extent and variety of her mental attainments? Woman is and has ever been, the teacher of the human race. Her mental capacities seem to have better fitted her for the work of instruction than those of the sterner sex; in part, illustrated by the greater number of female teachers than male, throughout not only our own State, but every State in the Union.

Men, who engage in the work of teaching, generally make it only a stepping-stone to some more lucrative employment. Like Timothy Titcomb, they soon leave the "dry" routine of the teacher's life for something more agreeable.

Not only in the school-room, but at home, everywhere is woman a teacher. Almost unconsciously, intuitively as it were, young minds look up to her for guidance and counsel,—and she is, perhaps, without realizing it, constantly imparting from the storehouse of her mind. Some of the very highest and noblest duties that are intrusted to human agency are hers to perform, and, for those duties, "the fine machinery that is to perform them should be wrought to its best point of perfectness. The wealth of a woman's mind, instead of lying in the rough, should be richly brought out and fashioned for its various ends, while yet those ends are in the future, or it will never meet the demand. And, for her own happiness, all the more because her sphere is at home, her home stores should be exhaustless,—the stores she cannot go abroad to seek. I would add to strength, beauty, and to beauty grace, in the intellectual proportions, as far as possible. It were un-

generous in men to condemn the best half of human intellect to insignificance, merely because it is not his own."

The training of the female mind, and fitting it for its sphere of action, cannot indeed be accomplished entirely by books. Mere book-knowledge *alone* is not education (for "we are always at school"), but it forms an important part of education. We gain something more than mere facts, and ideas also, in our school-life. Intercourse with minds whose aspirations and hopes are similar to our own, who are seeking the same goal, desiring the same end, the constant interchange of thought and feeling, and more than all, the exercise of kindly sympathy and charity, all these work upon the human mind and heart, in part fashioning them for their own various ends. There is a *higher culture*, however, than that of the mind, of vastly more importance than all others. It is the culture of the *heart*.

The natural inclination of our heart is to do evil rather than good, and "grace" alone can check this tendency. Only by laying the foundation upon the rock Christ Jesus, our Saviour, can we build up a character of symmetry and beauty. The fruits of the spirit are love, joy, peace, long-suffering, gentleness, goodness, faith, meekness, temperance. Our hearts, moulded and fashioned by such influences, combined with the highest intellectual culture, will indeed be fitted for the duties of our life-work, and the influence we exert be felt, not only in time, but in eternity. We, none of us, realize the full extent of the "power of influence."

EDNA.

THE TEACHERS' OPPORTUNITIES.

Many sigh for opportunities, as if in them were lodged creative power. They are ambitious to be great, or to reap the honors of greatness. Like the old Syrian, Naaman, they would do some great thing, not to be cured of leprosy, but to be covered with glory. They are not content with the monotony and tameness of the present, but are impatient for "something to turn up" which shall lift them suddenly to some proud height, or open a broad and sure way thither. As they read of the martial prowess of the world's conquerors, the high heroism of the old Reformers, the undying honors won by many in literature and arts,—their souls are all aglow, and they wish circumstances favoring such grand conquests might be theirs.

Teachers oftentimes are similarly afflicted, and become dissatisfied with their quiet routine of duties. Under the influence of a false philosophy they cherish the idea they are accomplishing but little, and lose all heart for their work. They feel there is a poor chance for them to stamp their impress upon the world.

But they forget that opportunities never create greatness. At best they can only develop it. The peculiar circumstances of their times did not make Washington and Wellington great. Their greatness was native born, inherent in the men. Circumstances only gave it embodiment for the eyes of the world. The war did not make Grant. It was only the artist's pencil sharply outlining latent qualities. Had it not been for the war his deeds might never have been chronicled in history, nor furnished themes for songs of poet; he might not have been honored and trusted by a grateful nation. Yet he would have been as essentially great, though unacknowledged. Samson would have been none the less strong had he never slain a thousand Philistines with a jaw-bone, nor carried off the gate of Gaza.

According to the common idea, greatness is a relative term. It implies pre-eminence among the multitude. Hence a world of kings is impossible. All cannot be peers in the land, wear a nation's highest honors, become stars of the first magnitude in letters, be so conspicuous on the great ocean of life as to make their names household words on the lips of millions.

But there is a greatness of soul not measured by common human standards. Though winning not popular applause, it may shine out gloriously, even in the humblest walks of life. There is a greatness in little things. The master spirit may be manifest as well in the thrifty ordering of a school-room, as in the massing and moving of armies. It is not so much the particular thing done, as the manner in which it is done. The perfection of skill is the true test. Doing one's best in whatever sphere moving, is the distinctive mark of true greatness. Whether known or not, beyond

"The visual line that girds him round"

he is one of the world's peers. The lettered monumental granite may be a less honorable tribute than the memorial chronicles of many hearts! These are within the reach of all. They come from blessing the world, from the perpetual outshining of a true nobility of soul, enlisting all the

energies in a persistent endeavor to make the most of one's self in the circumstances. Here all are on a level. All have golden opportunities, and none more so than the teacher. Opportunities are thrust upon him, if not to emblazon his name on the scroll of Fame, to engrave it indelibly on the tablet of human hearts.

Does the teacher realize his profession? He occupies a high and holy vantage ground of influence. His calling is one of the noblest. Hardly is the pulpit invested with greater sanctity than his desk. He may make it the source of a mightier power than ever emanated from Roman Forum or Egyptian throne, from warrior's tent or monarch's palace. He may lay the broad foundation of a nation's hopes and liberties. He may not command armies, but may be the commander of armies. He may not frame civil laws, but may mould the character of law-makers. He may not entrance the public ear with the "golden-lipped" eloquence of a Demosthenes, but may charm young lives with a nobler eloquence of soul. He may not win conquests, like Alexander, nor be honored with triumphal pageants, yet may give that bias to young souls which may lead them to grander victories and brighter laurels. His eye may never be dazzled with the gleaming of royal purple, and a golden sceptre, yet his may be a prouder satisfaction than any monarch's. He may prove the moulder of kings and controller of kingdoms. Take the man whose high leadership wins for the nation a glorious destiny. Had it not been for the training of some humble teacher, he might have used his splendid talents to cover its name with infamy. Tell me, whose achievement is the worthier?

What if the results of his toil are not soon seen? may never be known by him? It matters little. He must faithfully improve his opportunities. This is his duty. This done, he may well leave the rest to the Lord of the harvest; confidently assuring himself his toil has not been in vain.

Said an old artist, when reproached for his slowness, "I can afford it. I am painting for immortality." So the teacher's progress may seem slow, yet he can afford to wait. He, too, is painting for immortality, out on the perishable canvas, but on the imperishable tissue of souls. How ought he to strive to make the finished work the witness of a wondrous skill! Like a master musician, if he will, from many a "harp of thousand strings," he may ring unending harmonies, charming with their sweetness the bending ear of time!

What encouragement, then, for the teacher to seize and wisely use the opportunities offered him, to ply his toil with an ever fresh and earnest enthusiasm, and bide his time! Ever aspiring and never faltering, consecrating to his work a large loving heart and a willing hand, he shall yet leave

"Footprints on the sands of time,"

win a worthy success, and become entitled to high honor. He shall bless others by influencing them to a nobler and better life, and many shall hereafter rise up and call him blessed.

OUR NORMAL SCHOOLS.

TO TEACHERS AND EDUCATORS,—It is *not* generally known by our people, that the State of Maine has established and put into successful operation two *Normal Schools*—the Western, at Farmington; the Eastern, at Castine. The former has passed its experimental period and is now an established educational agency; the latter has just entered upon its second year with a fair attendance, a vigorous instruction corps, and strong friends among the people of Castine. Notwithstanding all the able efforts made by my distinguished predecessors, Supts. Weston and Ballard, and while I myself have endeavored, by earnest appeal, to induce Town School Committees to take a personal interest in these Training Schools for teachers, and although the teachers of our State number some seven thousand, yet out of this large number scarcely two hundred are found enjoying the admirable discipline of the Normal Schools and fitting themselves as first class teachers in our Common schools.

At present not one half of our common school teachers *know enough*; of this half with sufficient acquisition *in the head*, not one-half know *how* to communicate what they do know, and of this fraction not one-half understand the wonderful, plastic soul-nature put into their moulding hands—its natural growth and development. This pedagogical ignorance ought to fill our training schools to overflowing; there ought to be such a "hungering and thirsting" after skilled tutorial knowledge by our "masters and mistresses," that with all allowance for distance, limited means and positive inability, crowds should be found gathering at Farmington and Castine every opening term. I feel assured, brother

educators, that such would be the case were the fact and the nature of these schools better known.

To illustrate. A few days ago I met a well-to-do farmer considering where he should send his daughter to school, as she wished to teach the coming spring. I asked him why he did not send her to the Normal School. "The Normal School, what's that?" "A training school for teachers, established by the State; just the school for your daughter." "Where is it?" "There are two, one at Farmington, the other at Castine." "But I am afraid it will cost too much; these State Institutions I don't know about." "On the contrary, they are the cheapest schools in the State—tuition free, books free and at half price, etc.; besides, you are paying taxes every year to aid in their support; why not now derive direct benefit from the school?" The daughter went to Farmington.

Again,—I am scribbling this hasty communication in a hotel office, in one of the shore towns in this State, near a city in sight—on one of the great "railroad thoroughfares." The "Journal," "Traveler," "Post," "Press," are thrown into the "reading-room" daily. The proprietor stands behind the desk, a smart, active, thriving, reading, well-informed Yankee. I will ask him a "leader." "Sir, can you inform me how many of your village teachers are graduates of Normal Schools?" "Normal School, what do you mean by that? Ah, I remember; I think I did see a notice of a Normal School. No, sir, I cannot." "Do you know how many Normal Schools there are in the State?" "No, sir, I don't know any thing about them."

So much information I gathered from a "curiosity" question. Such questions I have asked dozens of times in different parts of the State, with like results.

I am persuaded, therefore, that absolute ignorance of the existence and nature of the Normal School on the part of the good people of Maine is one of the principal reasons why our Normal Schools are not filled to their utmost capacity.

What is *our* duty, therefore, gentlemen? We must *talk* Normal Schools. We must seize every opportunity to make them more widely known. We must *urge* upon our *young* teachers especially, the duty and necessity of a thorough drill preparatory to faithful instruction in our primary and grammar schools.

The foregoing expressions have not been penned in a spirit of either

complaint or reflection on the general body of teachers. Present at the opening of the Fall Term of each Normal School, I feel assured that neither ever began a year with better prospects, or with entering classes superior in number or character. There is still room, however, for more, and, considering the large force of teachers required, the great deficiency of good ones, and that we never can have good schools without good teachers, I make this urgent appeal to all educators, *male and female*, that each and all together, put the shoulder to the royal car of education, lifting it out of the slough of "the blind leading the blind," and placing it upon the firm course of a rational, efficient instruction.

WARREN JOHNSON.

THE SPECTROSCOPE AND THE STARS.

This science of solar and stellar chemistry is in its very infancy as yet. Its birth is within the memory of the school-boy who is to-day just beginning the study of the physical sciences. And yet, what a Hercules it has proved, even in its cradle! How varied its applications! how measureless the scope of its achievements! It has discovered new elements which exist in such minute quantities, that, though very widely diffused, they had never been detected by the most delicate methods of analysis before known to chemists. It can detect the 1-6,000,000th of a grain of lithium, or the 1-180,000,000th of a grain of sodium, in a compound. And, on the other hand, it can take the wings of light and visit the sun, millions upon millions of miles away from our little earth; it can analyze the fiery ocean of his atmosphere, and tell us what metals, vaporized by the fervent heat, are mingled in those burning billows. Nor is this all. It is not confined to the narrow limits of our solar system. It flies away to stars so distant that light, traveling with a speed of more than ten millions of miles in a minute, takes ten, twenty, fifty, or even hundreds of *years* to accomplish the inconceivable journey; it analyzes the atmosphere of those remote suns, and selects the metals and gases which are floating therein. These suns, so far off that, to the best telescopes, they still appear merely as glittering points, are as truly in the hands of the chemist as the substances which he is melting in his crucibles or dissolving in his beakers. Compared with this, even the boasted miracles of modern science sink into insignificance. The annihilation of time and space by the electric telegraph, speeding across continents and beneath oceans, is as nothing to this immeasurable sweep of spectral analysis, which overleaps the abyss between world and world, system and system.—*Boston Jour. of Chemistry.*

Editorial Department.

THOUGHTS FOR THE THOUGHTFUL.

ORGANIZED EFFORT.

We are well convinced, that, however well directed, persistent, and earnest the efforts of isolated individuals, or of predetermined cliques may be, for the advancement of any plans to improve the common-school system of our State, these efforts, must prove unhappy failures, unless the individual or the clique reaches out beyond self, to feel the heart-beats of the people, and is willing and desirous to obtain the views and wishes of others, in order that their sympathies may be enlisted, and their co-operation secured. Throughout Maine, there are of course to be found many men and women of intelligence, who believe thoroughly in the importance of universal education, as a preserving element in American civilization. They also have ideas, more or less definitely fixed, as to what the best education for the people, as obtained in the common schools, should comprehend, and how it might be secured. Their minds are, however, very considerably engrossed in attention to the duties to which their chosen life-calling has bound them, and they have left the matter of thinking out and directing the educational movements of the State, to the school officers, teachers, and college presidents and professors in the commonwealth.

We are not aware, that this is, in any great measure, different from what it should be. If the persons comprehended in each of the above classes, are not together sufficient for the primary consideration of all the educational problems which the great science of popular education submits to them, then we hardly know who shall be regarded competent for the business. We said *primary* consideration, however, and we desire that the reader shall emphasize the word which we have italicized.

Let us examine, then, somewhat minutely and in detail, what may be justly called the educational machinery of our State.

I. *School Officers.* Chief among these, of course, stands the State Superintendent of Common Schools. It will be remembered, that one of the topics for consideration and discussion at the late somewhat spirited meeting of our State Teachers' Association, was "The Best System of School Supervision for Town or State." The person who proposed this topic for the consideration of the association, felt that a wise and thoughtful investigation of this matter, lay very near the threshold of anything like true progress in educational reform. His views in respect to that are unchanged. It was thought best, on the part of the association, to appoint a committee to memorialize the legislature of the State upon the subject. Now, whether the committee to whom was delegated the duty alluded to above, did that duty faithfully, wisely, and effectively, is not a question upon which we deem it proper to say a single word; even if they did not, the question was an important one, a fundamental one, one that must be disposed of among the first, if a work of reform is to be pushed forward; and, by the importance which was given to it by the State Asso-

ciation, as well as by the attention that has been given to it by writers for this magazine, and also by the efforts put forth and the discussions held in the last session of the State legislature, it has been lifted into a degree of prominence in the estimation of the people, and especially in the view of all classes of persons immediately concerned in the adjustment of questions affecting the interests of common schools, which is in itself encouraging and satisfactory, and by taking the legitimate and proper advantage of which, results of great benefit to the State may be derived. But some changes have been effected already by agitation. The powers of the State Superintendent have been altered. In some respects, they have been increased. He now has an office in the State-house at Augusta, where his documents, as an officer of State, are kept, and where he may be addressed and visited; where also he has the right to employ a clerk, with a salary for such person not to exceed a sum specified by law; and where it is the duty of local school officers to send him their school reports, and to give him such other information as he may require of them. His salary also has been increased, and his allowance for traveling expenses. So that, so far as legislative enactment was able to do it, or at any rate so far as legislative enactment did do anything, it responded to the felt want of the State Teachers' Association, as its numbers had given expression to it, and their desires became law, thus dignifying the office of State Superintendent of Common Schools. To laud special individuals on account of the official position which they occupy, is not germane to this discussion. But the simple narration of the above facts is sufficient to illustrate what organized effort may accomplish, and it should have a tendency to lead those who represent the interests of education in our State to continue their efforts in the same direction, until a system, still more to be desired has been achieved. Already is the State Superintendent the Eye of the State, in respect to her educational affairs, in a sense which has not been true of that office for several years past; and not only this, but a step has been taken, which, we think, is likely, before its legitimate consequences shall have passed away, to educe such an order of things as will vitalize the common-school system of Maine.

The machinery by which, and through which the State Superintendent is to operate in his immediate official relations to the Common Schools, is the system of town supervision, that is, the town school committees. His authority for demanding the views of committee-men upon various matters, and information concerning the condition of education in the respective localities which they individually represent, has been somewhat augmented of late. Now the School Committee-man in one of the older States, like ours, is oftentimes a man of more than ordinary culture, a man who has had the privilege of being connected with some one or more of the leading educational institutions of our country. An "old fogy" he may be; that is, he may be somewhat slow to receive and adopt some of the notions of modern educational philosophy, and to introduce some of the methods advocated, and occasionally very imperfectly illustrated, by the enthusiastic amateur devotees of the systems of Pestalozzi, John Stuart Mill, etc. And it is well, let me say, that this type of "old-fogy" Committee-man is not defunct. He is needed, to balance another extreme. These men have positive ideas on educational subjects, and good ideas, and they desire heartily to assist in pushing forward the work of procuring a higher education. The true way for the friends of education, the fast and the slow, to operate the great field they have to improve, is to unite; not to wrangle about who is radical and who is "old fogy," but to put shoulder to shoulder; thus the one will supply the deficiency

in the other, and all will move forward with consolidated wisdom, to assured and speedy triumphs. The co-operation of Committee-men in the great work of educational reform, of Committee-men as a class, not of here and there an isolated individual, not of a few who deem themselves, and who perhaps are deemed, progressive *par excellence*, but of the fifteen hundred or two thousand Committee-men of the State, to that extent that the exceptions shall be those who do not, rather than those who do, "lift at the wheel" in the work to be done, this co-operation is to be coveted, is to be labored for, is to be secured. It *can* be secured.

The thing that these men want, in order to draw them out and obtain their views upon educational topics, an object certainly which is most devoutly to be desired on many accounts, not *perhaps* chiefly on account of the information in respect to the condition of schools in various localities thus to be obtained, or on account of the nature of the views which they will be found to entertain, but from the fact that they will at once feel an interest in educational progress, when this shall have been done, such as they have never felt before,—what they want, as we believe, in order to bring them out, is the proper and skillful method of approach, on the part of some person in whom they have confidence. One needs to feel, in order to make others feel. One needs to have sympathy, as a general rule, in order to cause others to believe that he sympathizes with them. When Polonius interrogated Hamlet as to what he read, his reply, "Words, words, words," has seemed to us to indicate the sepulchral, hypocritical character of that which is written, as compared with that which is spoken out of a warm, loving, sympathizing heart. We would rather have a few such fires as actual contact of the right sort, of the real magnetic sort, would light, at a few well-chosen points in the different counties of Maine, than to rely upon any other agency to secure the needed, the essential sympathy of city and town school committee-men. There is a kind of intuitive, indefinable link called sympathy; the feelings of the one are actually identical with those of another; intuition interprets and realizes the fact to each individual. This bond makes the words of the one interesting to, and effectual to move the heart of the other. Where men are to be enlisted to co-operate in carrying forward a good work, this link needs, first of all, to be brightened and made strong. Writings and speeches then become something more than "words, words, words;" they are thenceforth living things; they electrify; they inspire; they control; they perform miracles.

We thought, when we sat down to write upon the subject, a discussion of which we have now barely opened, that we should be able to develop our idea of it, in its relations to all the parties involved, in a few paragraphs; but if we mistake not, we've "struck a vein," or to use the words of a late president of the United States, undertaken a "big job." We have hardly done with what we have to say concerning the relations of school officers to organized effort. We must be allowed to say something of the relations of teachers and college boards of instruction, at another time. Meanwhile, we do most earnestly desire, that these thoughts, which we believe to be of the very highest importance to all who are laboring for the attainment of better things in education, may command the earnest attention of the thoughtful, and that out of ripened thought, wise actions may spring to bless our State.

Friends, there is need that we consider these matters, and that we act soon; for the youth of the present generation will, in a very short time, be beyond the reach of our efforts, and every day's delay is a postponement fraught with too much—too much danger.

EDUCATIONAL INTELLIGENCE.

PROF. G. M. GAGE. We have received letters from our Editor, which show that he is already deeply engaged in the work to which he has addressed himself, in Mankato, Minnesota. He has sent us his circular which fully develops the plan of his school. It is to have two departments; the "Normal Training Department," which occupies the same field as ordinary normal schools; and a "Model Department," which is to embrace two grades. The first, or "primary grade," is designed for children at or near the lowest limit of school-going age. The second, or "preparatory grade," is designed especially for those young misses and lads, who intend to pursue a course of study in the normal department, when they shall be sufficiently mature.

We have received an address delivered by him before the Institute and the people of that place, which will fill some ten pages of our magazine. We should like to give it to our readers this month, but have not room for it, so much other matter having been prepared before the receipt of this. You may look for it next month. It was well received by those who heard it, and a copy requested for publication in the paper published there. We are glad the good qualities of our friend are so well appreciated. He will doubtless have a field large enough to display the powers of organization and development which he possesses. In a new country he will not have the obstacles to contend against which here hedge up the way, and render all progress slow. The prejudices and customs of years are hard to overcome, and only by patient and persistent effort are they finally to be surmounted; while in a new country, with institutions to be planted and plans of action to be formed, the matured conclusions of progressive minds may be introduced as the very woof of society; and the community actually start upon an elevated plane, greatly in advance of the older portions of the country. We rejoice in his position, and wish him God-speed in his good work. His article on Education in Minnesota will be read with interest.

SUB-EDITOR.

EDUCATIONAL CONVENTION AT PARIS.

We learn from the Oxford Democrat that the convention held there on the first instant, was of considerable interest, and was the occasion of forming a County Association, with the following officers:

PRESIDENT, G. L. Vose, of Paris.

VICE PRESIDENTS, A. C. Herrick, of Hebron; Dr. W. B. Lapham, of Bryant's Pond; N. T. True, of Bethel.

SECRETARY AND TREASURER, J. S. Hobbs, of Paris.

EXECUTIVE COMMITTEE, F. E. Shaw, of Paris; H. F. Howard, of Dixfield; Mr. Millett, of Hebron; A. J. Merrill, of Buckfield; A. M. Merriam, of Norway.

Addresses and discussions of much interest, and some of them of marked ability, were maintained by Warren Johnson, Esq., of Auburn, State Superintendent; Rev. Samuel Harris, President of Bowdoin College; G. L. Vose, Esq., of Paris; C. B. Stetson, Esq., of Auburn; Prof. G. A. Walton, of Boston; Mr. Judson W. Shaw,

of Concord, N. H.; Mr. H. D. Sherman, of Winthrop; Mr. Millett, of Hebron; J. S. Hobbs, F. E. Shaw, and Mr. Hewett, of Paris; and Mrs. Lilly, of Hebron.

The subjects discussed were "The defects in our educational system," "The relation of colleges to common schools," "The power of illustration," "The study of sciences as a branch of education," "Whether facts should be taught before *reasoning*," "What should we teach in our common schools?" "The true method of teaching arithmetic," "The remedies for the defects in our school system."

The talent engaged and the subjects discussed must have rendered the occasion one of great interest and profit. We regret our inability to report the words and sentiments of the occasion, as no notes of the remarks were taken.

The editor of the Oxford Democrat says: "It is to be regretted that the teachers and friends of education in this county were so remiss in improving the opportunities which the convention offered them; but it is hoped that hereafter the meetings of the association will be enjoyed by all."

Let such associations be organized in every county in this State, and hold semi-annual, or quarterly meetings for discussion and mutual comparison of notes, and the good effects upon the schools of the State will be manifest, and very satisfactory. They would have a tendency to interest the public as well as the teacher in the improvement and elevation of the common schools of the State.

N. BARROWS, M. D., the successful and accomplished Principal of the Academy at South Berwick, has accepted a similar position in the new Stevens High School at Claremont, N. H.

Mr. EDWIN S. SMALL, of Waterville, has been appointed an assistant teacher in the Portland High School.

MINNESOTA. The eighth annual convention of the State Teachers' Association met at Minneapolis, Aug. 26th, and held two days. The minutes, published in the *Minnesota Teacher*, are so brief that we fail to get at the spirit of the Convention. They passed resolutions favoring Normal Schools, Teachers' Institutes, State University, approving of the State and county superintendency, especially thanking M. H. Dunnell for his labors in the State, and one which we copy in full, as being a "leading" resolution for the teachers of Maine.

Resolved, That it is the duty of every teacher to subscribe for and read the *MINNESOTA TEACHER* [Maine Normal], and that every professional teacher should possess and study carefully the leading Educational works relating to the labors and duties of teachers.

Education in Minnesota. We will give only such facts as have come to our knowledge by actual contact with men at work in the educational field, during the past few weeks. We arrived in Minneapolis on the evening of Wednesday, August 26th. The State Teachers' Association was then in session, its members holding their meetings in Horticultural Hall. After tea, by invitation of our old friend, Hon. Mark H. Dunnell, who is now State Superintendent of Public Instruction for Minnesota, we went over to the hall, which is large, and which we found literally crowded with people. The principal topic of discussion for the evening was with regard to the policy of having *normal departments* conducted in connection with certain of the *graded schools* of the several cities in the State. The topic was ably presented in a written paper, prepared and read by Mr. Hiskey, Superintendent of the schools

at Minneapolis, who argued in favor of the plan. Other gentlemen followed, discussing the question *pro* and *con*, among whom was Prof. W. F. Phelps, Principal of the State Normal School at Winona, who took decided ground against any such movement.

But we by no means intend to report the proceedings of this convention of teachers. It was very fully attended, and the manner in which its discussions were conducted, as also the general scope of the discussions themselves, were such as to impress us very favorably toward the leading educational workers of Minnesota, and convinced us very speedily, that there is a good and safe spirit of progress and determination to excel, among school officers and teachers here, which could not but be gratifying to the *live educators* of every State in our land, might they be allowed to participate in, and witness it.

The address of Hon. Mr. Dunnell, which was given Thursday morning, was very interesting, and was well received by the convention. An interesting fact has come to our notice in connection with this Association. At its annual meeting, held a year or two ago, the question was asked,—some two hundred from various parts of the State being present,—how many of those in attendance were born in Minnesota. It was ascertained, that *not one* first saw the light of day in this State. We believe it to be fair to say of the State Teachers' Association of Minnesota, that if we may judge of it correctly from what we saw while in attendance upon its sessions, we think, that, as an indicator of the educational life of the State, it would do credit to many of the older States of the Union, and that even those which have done most for the cause of common schools, and have, in some respects, the most perfect common-school systems, might learn very good lessons from the enthusiasm and catholicity which characterizes many of the men of the West in matters of education.

But we have already seen something of the *educational machinery*, which this State has in operation, intended to act beneficially directly upon the teachers in its public schools, and indirectly upon the people in respect to education, and the entire work to be done by educators in whatever institutions of learning. The Legislature of the State last winter made an appropriation of \$2,000 for the purpose of enabling the State Superintendent, in conjunction with the county superintendents, to hold twenty teachers' institutes in as many of the counties of the State. To carry out this design the Superintendent held institutes in six counties last spring, and will hold fifteen this autumn.

In three of these institutes, it has been our privilege to be present and participate, and this has enabled us, of course, to gain some knowledge of the teachers in the common schools, of the interest of the people in matters of education, of the efficiency of the institutes in respect to the work which they are designed to perform, and of the manner in which the institutes of Minnesota are being conducted. We need not say, that our work in these institutes has been fraught with much interest. Those who have known us at the East, have known that we could not do otherwise than delight in such labor. We feel compelled to say, that, in our opinion, no State can afford to be without them, that no other agency can by any means supply their place. We wish we might impress this opinion upon those who have influence in respect to educational affairs in the State of Maine. We certainly speak disinterestedly as far as self is concerned. It is not, of course, unlikely that we may never again be engaged in educational work in the State where we were

born. We say emphatically, that we believe that institutes, well conducted, are now, and will always continue to be, essential to the highest interests of our common schools. It is, in our opinion, a penny-wise and pound-foolish policy which the State pursues, while it withholds appropriations for the purpose of defraying the expenses of these institutes. If the teachers of the counties might be brought together once every year, and there might be introduced to them such instruction, both in respect to the facts of science and concerning the best methods of imparting knowledge, as a well-conducted teachers' institute would afford, we should have less complaint of money wasted in the school districts, more well-qualified young ladies and gentlemen seeking for thorough preparation for the work of teaching in our normal schools, and more, vastly more general, intelligent interest in the subject of education among our people. But we are digressing, and with the hope that we may be able to speak somewhat more fully in respect to this topic before we get through with what we shall present under the caption, "Organized Efforts," we will return, to say but a few words more in relation to education in Minnesota. Through the institutes we feel sure, that Mr. Dunnell and his co-workers are doing much for the common schools of this State. He is himself working with much zeal and energy, and, we think, also with much efficiency.

We have not, as yet, become personally acquainted with the status of the State University of Minnesota. We have found out enough, however, to convince us, that with the right management, this is destined to rank well among the institutions of our land designed to impart instruction in the higher branches of learning. Its preparatory department has now been organized. The supplementary course will not probably be provided before another year.

Of some other matters, we may have an opportunity to speak at a future time. But we would not omit, in this connection, to speak of what we consider one of the best and most indispensable elements in the educational machinery of any State, the Educational Journal. This Minnesota has, and under the careful supervision of its editor and proprietor, Mr. W. W. Payne, her necessities, in this direction, have been, and are now, well supplied. We have already had the pleasure of forming the acquaintance of Mr. Payne, and we feel sure that he is a good man to conduct the noble work which he has undertaken.

MASSACHUSETTS.—We condense from the Massachusetts Teacher the following account of the *American Institute of Instruction* :

The meeting of this Association at Pittsfield, on the 5th, 6th and 7th of August, though not so well attended as former meetings have generally been, was yet a very profitable one. The lectures commanded the closest attention, and the discussions were exceedingly well sustained. There was no lack of speaking talent, and the interest manifested in the various questions prolonged the sessions beyond their usual time. It was decidedly a *working* occasion, and will produce good results.

Dr. Root, Chairman of the School Committee, in a very agreeable manner, welcomed the Institute to Pittsfield. The President responded, and addressed the Institute upon the general subject which had brought them together.

The discussion upon the *Defects in our Present System of Education* was opened by Dr. Barnard, of Washington. Prof. Atkinson, of the Institute of Technology, followed. The spiciest part of the debate was a passage-at-arms between him and Mr. Hammond. The other speakers were Messrs. Morse, Smith, and Northrop.

Whether the *defects* were clearly stated or not, we shall leave our readers to judge when they read the report in the published volume of proceedings.

Prof. Bascom's lecture in the evening was upon the general subject of Education. He spoke earnestly in behalf of some subjects, now lost sight of, and argued strongly in favor of the admission of females into our Colleges. After the lecture, Dr. Barnard was invited to give some account of the work done, or proposed, by the Department of Education at Washington. He spoke rapidly and eloquently for half an hour, and presented the matter very clearly. A Committee, consisting of Mr. Cruttenden, of New York, Dr. Van Bokelen, of Maryland, E. Smith, of Massachusetts, and Barrell, of Maine, was appointed to consider what action should be taken by the Institute in reference to the subject presented by Dr. Barnard.

This Committee, at a subsequent session of the Institute, submitted some resolutions, which were unanimously adopted.

There was an interesting discussion upon the *Elementary Study of the English Language*. Mr. Smith's paper upon *School Records*, was an agreeable surprise to the audience. One could hardly have expected so interesting a paper upon such a subject. The opening remarks upon *The True Order of Studies* were made by J. W. Dickinson of the Westfield Normal School. He was followed by Dr. Lambert, A. W. Ladd, of Providence, and Prest. Hopkins, of Williams College. The discussion was evidently interesting to the audience, though it was exceedingly difficult to discover what connection very much that was said had with the subject. *The Course of Study in Grammar Schools*, was opened by Rev. J. H. Twombly, Superintendent of Schools, Charlestown. This led to quite a spirited discussion, in which Messrs. Harrington, Smith, Chapin, Cruttenden, Hammond, White, Greene, and Boyden participated.

Col. Sprague's lecture, on Thursday evening, upon *Milton as an Educator*, was an eloquent production and delighted his audience.

The lecture of W. C. Collar, of the Roxbury Latin School, upon the *Classical Question*, was very carefully prepared, and presented his views of the subject strongly and clearly. A discussion followed in which Messrs. Philbrick, Hammond, Collar, Joseph White, Secretary of the Board of Education, Lyon, Smith, and A. D. White, of New York, took part.

The discussion upon the topic, *What Education should precede a strictly Professional One?* was opened by Mr. Philbrick. Dr. A. B. Palmer, of Michigan University, Mr. Hammond, Rev. Dr. Wilson, President of Hobart College, followed. This was an able discussion though but few took part in it.

John Kneeland, of Boston, was re-elected President for the ensuing year.

The proposed amendment of the constitution admitting ladies to membership excited a good-natured discussion. The arguments, however, in favor of the amendment, were so strong and so well put, that the opposers gracefully yielded, and it was unanimously adopted.

The interest of the meeting was enhanced by a delegation from the convocation of University Regents in session at Albany. The delegates were Rev. W. D. Wilson, D. D., LL. D., Acting President of Hobart College; A. D. White, President of Cornell University; Rev. Jonathan Allen, President of Alfred University; Prof. Thomas S. Lambert, M. D., of Claverack Academy; Prof. Samuel B. Woolworth, LL. D., Secretary of the Regents; and Rev. L. D. Mansfield, Principal of the Rockland

Female Institute. They were cordially received, and invited to take part in the proceedings of the Institute.

A NEW EDUCATIONAL MOVEMENT IN BOSTON.—Boston has long been proud of her schools; and justly so, for they are indeed a power in the city of notions, and their excellence is acknowledged at home and abroad. But the committee in charge of the educational interests of the city do not think they have arrived at perfection. There has been for some time a disposition to make some changes for the improvement of the schools, and recently it has begun to assume a definite form. The main features of this movement may be pretty well understood from the following extract from an article on the subject in the Boston Journal of a recent date:

A New Institution of Learning.—At the last meeting of the School Committee, Mr. F. H. Underwood submitted to his associates an order, which was adopted after a brief but very effective speech by the mover. It provides that a committee of nine be appointed to consider the subject of establishing an institution of learning for graduates of the grammar schools, in which both English and classical studies may be pursued. It also provides that public hearings shall be given to eminent educators, and the feasibility of merging into this new institution the Latin and English High Schools shall be considered.

This is, we think, the most important order that has been introduced into the Board for many years, and we believe that it will lead to information which will show beyond doubt that the necessity exists for an institution of the character which it is proposed to form.

Mr. Underwood proposes to establish a school where Latin shall be taught in a rather more attractive form than it is at present. He proposes to make it the basis, and to popularize its study by imparting the vitality which we find it obtains in the French schools, where Latin is studied and talked as if it were to-day one of the living languages. Of the value of the Latin tongue we need not speak. Among the ignorant there is a prejudice against it, and some educators speak of it as almost useless; but it is as necessary to a good education, as a firm foundation is to a building. It is the mother of languages, and a person once versed in Latin can acquire all the modern languages with a facility which will astound those who are limited to their mother tongue. It is the key which unlocks the secrets of all languages, and makes clear the hidden mysteries of all learning.

With such a basis the scholar is prepared to pursue a classical education, or to devote his attention to a course of education that will qualify him for commercial life. English literature, mathematics, music, and other sciences, will constitute the other features of the institution. The proposition will no doubt meet the opposition of those persons who are ready to fight whatever is new; but we hope the investigation of the special committee will be thorough, for we are confident it will be found that there is still something new which is a little better than anything that now forms a part of our educational system.

BOOK TABLE.

COLTON'S MAP OF ALASKA is received. It gives a range of coast from Queen Charlotte Island to Kamtchatka. The isothermal lines show the average temperature to vary from 54 deg. in summer and 32 deg. in winter at Sitka, to 35 deg. in summer to 18 deg. in winter at the most northerly point.

THE ATLANTIC MONTHLY for October. *Contents*: Petroleum in Burmah; King's Crowns and Fool's Caps; Free Produce among the Quakers; The Two Rabbis; Pandora; Love's Queen. Besides continuations of its three serials, an anonymous story of Southern life, entitled "Edward Brook," and an anonymous paper on "The Finances of the United States." Ticknor & Fields, Boston. \$4.00 a year.

HARPER'S MONTHLY for October contains valuable articles on numerous subjects, and is one of the most readable magazines of the day. Harper Bros., New York. \$4.00 a year.

OUR YOUNG FOLKS is as full of interest for the young as ever. We are inclined to think it grows in interest and value as it grows in age. The young folks laugh, and the old folks are just as much pleased, when your bright face appears within our doors. Ticknor & Fields, Boston. \$2.00 a year.

FIRST PRINCIPLES OF POPULAR EDUCATION AND PUBLIC INSTRUCTION, by S. S. Randall, Superintendent of Public Schools of the City of New York. New York: Harper & Brothers, Publishers. 256 pages, 12mo.

This work treats upon the following subjects: Philosophy of Education; The Family; Public Instruction; The School—Elementary Instruction; Intellectual Culture; Systems of Instruction; Methods of Intellectual Culture; Moral and Religious Instruction; Practical Education; Female Education; The Teacher—his character and duty—mental and moral development; Supervision and inspection; Systems of public instruction—their errors and defects; Science and Revelations—sanctions and motives—public opinion; Objects; Means and ends of education.

These topics are all enlarged upon in the style of general principles, showing what is, and ought, and can be done. It does not give the methods any further than the statement of such points is suggestive.

MUSICAL INSTRUMENTS.—The New Haven Daily Palladium, speaking of the New England Fair, says:

"B. Shoninger & Co.'s palace of Music has attracted the attention of the visiting public at the fair. This firm deserves the thanks of the musical public for the pains they have taken to show their finest instruments, superior pianos, magnificent organs, and the novel Æolichords, to say nothing of their sweet-toned melodeons. All attest the superior skill and design of this very energetic firm. Their Æolichords, we think, will especially become a very popular instrument. There is one magnificent pedal organ, made by B. Shoninger & Co., for a gentleman of this city, worth \$1000. We have never seen its equal. The sweet flute-like tones which, combined with the great volume of power, produce the most mellow harmony, add charms to these instruments which cannot help but recommend them to the lovers of music. Variety is the spice of life. These flute-like tones make a most pleasing variety which cannot fail to please and charm."

J. S. BIXBY, of Norridgewock, is general agent for these instruments, and we doubt not will do a good business in introducing them.

THE STUDENTS' NORMAL.

Portland, October, 1868.

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To Contributors.

Articles should reach us before the tenth of the month preceding the one for which their insertion is desired. It is hoped, that all interested will take due notice of this, and govern themselves accordingly. Sharp, pointed articles are what we want, for all the departments of our magazine, and we shall be glad to welcome contributions from new sources.

To Subscribers.

You can help us very much in increasing the circulation of the *Normal* in its present form, if you will. Address us, and we will tell you how. Meanwhile, you can each send in at least *one new name* the present month, by simply placing this number in the hands of some young friend who will attend school this fall, and who will like to have the *Students' Normal* as a friendly assistant and interesting companion in his studies. Let us take hold together, and sustain the *best educational monthly published in our country*.

EDITORIAL.

Talks about Mental Arithmetic. IV.

TO SQUARE CERTAIN NUMBERS.

It's a long, long way that my voice must reach over the great land which we inhabit, to talk with you, my dear young friends, the present month; and were it not possible for the voice to be heard through the pen, over any extent of territory on the face of the earth, I don't know that I might not despair of arousing your attention. But let us be very thankful for pen, ink, and paper; let us be thankful, too, for post-offices and mail agents and railways; and, perhaps, I may as well say it, let us not be unthankful for schools and teachers and printers and magazines; for without all these our pleasant talks would be interrupted, to be resumed no more.

How are you feeling about this matter which you are told is so important, that is, about obtaining an education? Do you become discouraged sometimes? Do you ever feel as if you did not believe that it is as important a work in which you are engaged as your older friends would have you believe it to be? Are the necessary restraints of school sometimes very displeasing to you? O, my friends, do not, I beg of you, do not give way to any such feelings. Persevere a little longer. Believe the words which those who have been where you now are, are speaking to you. Do with all your might the work of the school. Do not neglect a single opportunity. It will be but a few, a very few days, before, in the ordinary progress of life's events,

you *must* leave the school-room. To overcome discouragements and obstacles, is to be considered a part of the education which you need; and you cannot have too much preparation to be a good citizen of so noble a land as ours. I beg of you, then, to labor on, until you shall have been permitted to stand upon some of the summits of achievement, from which having obtained a few comprehensive views of the scientific field, you will be sure to press on to the mountain tops of Highest Truth.

But I have run far from my subject. I do not often do so in these talks; but somehow I feel as if you would pardon me for this once, and now we are ready, aren't we, for the lesson of to-day. Let us see, we cannot review, by the method which we are compelled to pursue, and so I'm obliged to take it for granted, that you have thoroughly mastered what we have been over up to this point. Have you done it? Then we will proceed. We will first apply the rule which we gave last month, to the squaring of some numbers consisting of some number of two plus one-fourth of ten ($2\frac{1}{4}$). In the first place, let the number representing tens be *even*. Thus $(42\frac{1}{4})^2 = (4\frac{1}{2} \text{ tens})^2 = 16 \text{ hunds.} + 2 \text{ hunds.} + 1-16 \text{ hund.} = 18 \text{ 1-16 hund.} = 1806\frac{1}{4}$. Thus it will be seen, that we obtained the square of our number by adding to the square of the tens (which will always be hunds.), one-half as many hunds. as would be denoted by the figure standing in the tens place, and to this product adding one-sixteenth of one hundred (which is in all cases $6\frac{1}{4}$).

$$(122\frac{1}{4})^2 = (12\frac{1}{2} \text{ tens})^2 = 144, + 6, + 1-16, \text{ hund.} = 150 \text{ 1-16 hunds.} = 15,006\frac{1}{4}.$$

But suppose the number had been 1225. Now please take notice, that 1225 is just *ten times* $122\frac{1}{4}$. Its square, then, must be one hundred times that of $122\frac{1}{4}$. But $15,006\frac{1}{4} = 1,500,625$. Hence $(1225)^2 = 1,500,625$. This same square might be obtained by considering 1225 to be $12\frac{1}{2}$ hunds., and obtaining the square of that number. You may obtain the result in that way, if you please.

$$(1225)^2 = (12\frac{1}{2})^2 \times (10)^2 = (256, \times 8, \times 1-16 \text{ hund.}) \times 100 = 2,640,625.$$

What is the square of

- | | | | |
|---------------------|----------------------|----------------------|-----------------------|
| 1. $1\frac{1}{4}$? | 4. $7\frac{1}{4}$? | 7. $13\frac{1}{4}$? | 10. $19\frac{1}{4}$? |
| 2. $3\frac{1}{4}$? | 5. $9\frac{1}{4}$? | 8. $15\frac{1}{4}$? | 11. $23\frac{1}{4}$? |
| 3. $5\frac{1}{4}$? | 6. $11\frac{1}{4}$? | 9. $17\frac{1}{4}$? | 12. $25\frac{1}{4}$? |

What is the square of

- | | | | |
|---------------------|----------------------|----------------------|-----------------------|
| 1. $2\frac{1}{4}$? | 4. $8\frac{1}{4}$? | 7. $14\frac{1}{4}$? | 10. $20\frac{1}{4}$? |
| 2. $4\frac{1}{4}$? | 5. $10\frac{1}{4}$? | 8. $16\frac{1}{4}$? | 11. $22\frac{1}{4}$? |
| 3. $6\frac{1}{4}$? | 6. $12\frac{1}{4}$? | 9. $18\frac{1}{4}$? | 12. $24\frac{1}{4}$? |

What is the square of

- | | | |
|-----------------------|-----------------------|-----------------------|
| 1. $22\frac{1}{4}$? | 4. $142\frac{1}{4}$? | 7. $222\frac{1}{4}$? |
| 2. $82\frac{1}{4}$? | 5. $162\frac{1}{4}$? | 8. $242\frac{1}{4}$? |
| 3. $102\frac{1}{4}$? | 6. $182\frac{1}{4}$? | 9. $202\frac{1}{4}$? |

What is the square of

- | | | |
|---------|----------|----------|
| 1. 425? | 3. 825? | 5. 1425? |
| 2. 625? | 4. 1025? | 6. 2425? |

But the number of tens or hundreds will sometimes be odd. Then proceed thus:

$$(32\frac{1}{4})^2 = (3\frac{1}{2} \text{ tens})^2 = 0, + 1, + 9-16, \text{ hunds.} = 1056\frac{1}{4}.$$

After what has been said, you will be able to the squaring mentally the numbers which we give below.

$$52\frac{1}{4}; 72\frac{1}{4}; 92\frac{1}{4}; 112\frac{1}{4}; 1525; 1725; 2325; 2525.$$

Practise until you perform all of these examples readily; and I hope to unfold and show the application of a new principle next month.

Talks about English Grammar. II.

FINDING THE ACTION-WORD.

Do you remember what Pestalozzi said is the beginning of all knowledge? Well, if you are attentive and will observe carefully, we will take up the thought which we expressed the other day, and see what we can learn about it.

Charles, what was the expression which the class used the other day, in order to tell what they saw me do?

Charles. They said, "You moved the book."

That is correct. The class may repeat.

The Class. You moved the book.

Can any one tell me what "You moved the book," expresses? You may all think a minute, and then any who are ready to answer, may raise

the hand. I see that Mary's hand is raised. Mary?

Mary. I think it expresses or tells, that something is done.

You have answered very well, and that shows to me, that you *thought* carefully. Good thinking will do much toward making you a fine scholar; and without it you cannot make such fine answers as you have just given. I thank you. The class may repeat the answer which Mary has just made, and Mary may sit down.

The Class. "You moved the book," tells that something is done.

Now I want you to think again. All think, just as Mary and a few others thought, before. Do not speak, but raise your hands when you are ready to answer. All be attentive, and hear my question. What might you say instead of that "Something is done?" Oh, I'm glad to see you all thinking. I'm going to wait a minute to see if every one will not raise his hand. There, every hand is up now, I believe, and you all look very anxious to speak. I think I ought to call on little Ann. Ann, you may answer so that all will be able to hear.

Ann. We might say, that *an action is performed*.

Thank you,—thank you, Ann. I see by the looks of your classmates, that they think you have answered correctly; and they and you are all right. Now, all may repeat Ann's answer.

The Class. "You moved the book," tells that *an action is performed*.

John, what might we call a word that tells that an action is performed?

John. I don't think I know, sir.

Think a minute, John.

John. It might be called an *action-word*.

There, my friend, you have triumphed. Never give up until you have thought well. The truth will come to you if

you will seek for it by careful thought. Class, what action-word have we in the expression, "You moved the book?"

The Class. Moved is an action-word.

That is right. I see that you have brought in your slates, and I presume that many of you have several expressions like the one we have been considering, written out and ready to be read. I want now to hear these read, and when you give them, you may, at the same time, tell which is the action-word. I will call on you by your numbers. Number one?

No. 1. "Charles struck the horse;" in this expression the action-word is *struck*.

I have not space to print all the examples here; but I have heard one from you all, and now I want you to remember, that in thoughts, of three parts, like those which we have been considering, there is always *one action-word*.

I will now assign a reading-lesson, and I want you to find *all the thoughts having three parts*, which you think that it contains, and then tell me *all the action-words* in the lesson. Look carefully, and I think you will find a great many.

Leaves from Dora Dean's Journal;

OR, STEPS TOWARD THE TEACHER'S LIFE.

Number Three.

BROOKSIDE, May 1, 18—.

Got home last night from Freetown, and will now write a few words in my long-neglected Journal. It seems good to be back to the old place once more, to talk over all that has happened since I went away, and to see a glad welcome in the eyes of my friends.

Father has been very unfortunate this year. His crops have almost failed, and he has lost a horse and a cow. It is a hard struggle for him to get along. I do wish I could be of some use to him, and I have been thinking perhaps I might

teach our district school this summer. To be sure I am only fifteen, but Mr. Watson said I made great improvement at the academy, and was as far advanced as many teachers. I'll ask mother this very night. I know she will think I am not *mature* enough, but I hope she will consent.

May 3.

It is all settled. I am to teach our school this summer. Mother and father demurred at first, but I have carried the day. I am to have \$1.50 per week, and board at home. I begin to feel quite dignified already. Bought a penknife and ruler yesterday.

Father has promised to take me to Esquire Burns' to be examined this afternoon. I dread going, but don't expect to fail.

May 4.

My certificate lies on my table duly signed by the three worthies of Brookside. Esquire Burns did not seem anxious to puzzle me, and asked me mostly easy questions, so that I got along very well. I see he has spelled certify with an *s* instead of a *c*, but perhaps it is a slip of the pen.

Oh how my heart did beat, and how the blood rushed to my face when he looked at me over his spectacles, and said, "What are your ideas of school-government, Miss?" I am afraid I did not give him much light as to *my views*, but here is the coveted testimonial, and I am satisfied. School commences next Monday, and I long for the day to come. My plans are all made for the first day. I do mean to do the scholars a great deal of good. I hope ever to remember my dear old teacher's motto, *Excelsior*.

May 8.

The first day of school is over. I rose early this morning to help mother about the washing before breakfast. About eight, I collected my books and started for the old brown school-house. There I found about twenty scholars of various ages waiting to see the school-marm. I was more embarrassed than I expected to be, and forgot nearly all the nice speech I had prepared. I have a few

scholars older than I am, but many of them are small. I have written all their names nicely in my little blank book. Several were strangers to me. One said his name was Eben Dole. I asked if he had any middle name; but he did not seem to understand, so I said *again*, "Have you any name beside *Eben*?" This time he answered quickly, "Yes marm, Nezer." His name is Ebenezer. I got things pretty well regulated to-day, and to-morrow shall go to work in earnest. Like the appearance of all my pupils but Ebenezer. Don't understand whether he is stupid, or mischievous, but I won't borrow trouble about it. *Worry* they say, is a troublesome fellow, and we shall not find a dwelling in my brain if I can keep him out. So I lay down my pen to-night with a feeling of thankfulness that Providence has thus far prospered my little plans. And I lay my head, just a little weary of its new dignity, upon its old quiet resting-place, the pillow.

D. D.

To "One of the Boys."

Perhaps, my little friend, you will think I am going to *blame* you for writing in such a manner about your teacher, but indeed I am *not*. I like what you have written, and am glad you have taken the pains to send it to the Normal, and hope I, as well as other teachers, may profit by it. For I am a teacher, and although I have not taught many terms, I love to teach.

I love to help my scholars in their studies, as far as I think it is for their *best good*, although I generally require them to *help themselves* as much as possible.

There is one thing I want to speak to you about, and that is why I am writing now. Please have *patience* with your teacher. Remember that she has many things to vex her, and it is hard sometimes to be *patient all day*, for the boys and girls will sometimes be mischievous, and one would almost think they loved play and fun better than study. It is on such days that the teacher particularly needs the assistance and encouragement

of her largest and most studious pupils. Therefore, try to be *patient* with her, and to make the school-room as pleasant and attractive as possible, and also call to see her out of school-hours. EDNA.

A Year on Mercury.

We will take a trip to her just in the nick of time when she comes nearest to us. By doing this we shall save 89,000,000 miles of travel; for when she comes between us and the sun the distance is only 47,000,000 miles from the earth. I think we shall find very great changes of seasons; for, to be at one time so near, and at another time so far away from the sun, must produce this effect. But we shall see when we get there. We must take our summer clothing, for it will be very warm there. We had better take a flask of water and a haversack full of provisions, for it is quite probable we shall find nothing there which will suit our palate, either to eat or drink.

Here we are, arrived on time, notwithstanding the weary distance, but how strange everything appears! We see nothing like the soil of the earth, but every thing is hard and solid; yes, as dense as tin. Just as we guessed, too, there is no water to be seen; and if it were here it would be made into steam at once, so great is the heat.

It is very near the sun now, and the heat is intense, ten times as hot as we ever felt before. The path of Mercury round the sun is very elliptical, and anon we are away off at such a distance that we get almost comfortable. It is only a little more than four times as hot here, as it was on the earth. But we don't get fairly cooled off before we are swept into the torrid heat again.

• How the sun dazzles our eyes. It is seven times as large as we ever saw it at home. How grand it looks; it fills half the heavens. We must hasten our travels or we shall be dried up and fly off before we get through with our observations, everything is so strange.

What a *little* world this is; it is only 3000 miles in diameter, and it would take 20 globes as large to make one the

size of the earth, or 25,000,000 to make one as large as the sun. What monstrous mountains we see! Here is one ten miles high, which is equal to having one forty-six miles high on the earth. What awful valleys, or chasms, where the sun never shines!

The days are about the length of those on the earth; this seems rather natural. But how short the years, only eighty-eight days.

How queer this is, summer twenty-two days long, and all the seasons, how quick they fly! They chase each other so quickly round, that one hardly gets accustomed to one before he must prepare for the next.

The people here are regular salamanders, we don't understand them at all. Our heads begin to swim; we are faint and weary, and most unconscious; we don't know really as there are any people here, perhaps it was only our wandering imagination. We think we had better retrace our steps, and get where we can see more clearly, and reflect more calmly. So here we go, "homeward bound," and leave this fiery little ball to run its erratic race on its own track in space. We like our Earth best. It is better suited to our comfort and taste, at all events. T.

The Spelling Lesson.

"Oh dear me. I do detest spelling. I hate the sight of this old spelling-book," said Tommy Read, as he came in from school.

"I do not wonder you dislike the sight of your book," said his mother, "for it is a sorry-looking object. It looks as though the dogs had been studying instead of my son; but what is the great trouble to-night?"

"Oh, the same old story; I missed and had to go *way down*. It's no use trying to spell well."

"Did you try to-day?"

"Why no, not very hard; but the lesson was so queer, I couldn't remember, and so I gave it up. I always forget whether to say *ei* or *ie*. I can't tell a silent letter from a talking one. Oh

dear, why can't people spell words as they are pronounced?"

"Some people do," said Mrs. Clark.

"Well," answered Tommie, "I'm going to.

I can do just as well,
Without learning to spell.

I'm going to be a merchant, and I know there is no need of killing myself over a spelling-book."

"I knew a boy once, my son, who talked just as you do. He *hated* his spelling-book, and I expect it looked very much like yours. He was always getting down in his class. I never knew him to be at the head more than once, and then he was the *only* boy in the class. When he left school he could write a fair hand, was a tolerable scholar in arithmetic, but alas for the words he spelt! they must have been ashamed of themselves. In course of time this young man became a merchant. I once bought some goods of him, and in looking over some old papers the other day, I found a bill made out by the boy *that detested spelling*. Here it is, and I want you to read it."

"Miss July Wite to J. Dole	Dr
1 pr gators	\$2.00
1 led pencil	.05
1 pare gloves	1.00
1 hare brush	.50
1 yds of linnen	.50
1 skane cilk	.05
2 pare hows	.75
1 him book	.37
1 Kard past bord	.10
2 pare shews	4.00
Toe tall	\$9.32

"Oh, mother, what a mixture of letters," said Tommie, as he read and re-read the strangely spelled words, "I could do better than that myself. What a fool that man must have been. Was he a bright boy? I mean, had he common sense?"

"Yes, about most things, but he was very much like a young lad I have heard talking to-night. He could see no use in 'puzzling his brains over a spelling-book.'"

Tommie looked rather ashamed, and

took up his speller more tenderly than it had been handled for some time; but his mother continued,—

"This merchant was the laughing-stock of the country. His orders always needed an interpreter. His customers and creditors alike ridiculed him. Is there any use in spelling, Tommie, for a merchant especially?"

"Well, mother, I do believe there is. I'm sure I don't want to be such an *ignoramus* as that man, so here goes my spelling-lesson. I'm glad I can spell hymn-book, at any rate."

CLINE DUKE.

John Wide Awake's Last Complaint.

DEAR NORMAL,—I fear you will be sorry you gave me permission to make my complaints about school-matters, for now I have started I have gained so much (what is it the philosophy calls it?), that which a moving body gains (please wait a minute till I look in my book), oh, *momentum*; well, my complaints have gained so much momentum, pushed on by your praise, that I cannot stop.

(I have just begun the study of philosophy, and as my teacher says it is a very practical study, I thought I'd *illustrate*.)

But I will proceed to business. My complaint, this month, is about school-houses, especially the one in our "*destrict*."

I have no doubt you have seen many poor school-houses in your day, but I don't believe you ever saw one like ours. It is situated on the top of a bleak hill at a safe distance from all shade-trees. Dr. Wood, they say, gave the land, and I guess it was good for nothing else, for it is a sand-hill, and hardly a spire of grass will grow on it. In summer our *hill of science* is a hot, sandy one, reminding me of a desert. In winter, the wind has full sweep. The house, what there is of it, was built in my grandfather's day, fifty years ago. It is a low room, so low that our teacher, last winter, used to almost touch the plastering when he stood behind his desk. There is only one door

where boys and girls crowd out together. A huge fire-place stands at one end, but it is used only as a ventilator. Now that wood is so high, we have a stove at the other end of the room. The house is very cold in the winter, I tell you. I sometimes put my feet under me to keep them warm, and I often cipher awhile, and then stop to blow my fingers.

The seats are very high and uncomfortable. I can hardly reach the floor *squarely* with my feet, and it must be very hard for the little ones.

The wood never was painted, and now it is so old and hacked up we boys think the sooner it goes the better, and we give a slit here, and a cut there occasionally. But I cannot do justice to the subject, and will only ask you and all other lovers of curious things to come and see for yourselves.

I will close my complaints by telling you, that this must be my last for the present. I hope you won't feel very badly, but my father says that he thinks I have said about enough, and he does not wish me to write any more "pert letters."

So I must end my complaints, but when I am a little older I mean the world shall hear again from

JOHN WIDE AWAKE.

Visions.

Oh, what misty, darkling clouds,
While we linger here on earth,
Mar our visions bright of heaven,
Which of nobler thoughts have birth!

Far beyond the thoughts of mortals,—
Far beyond the spirit's view,
Far above the sparkling ether,
And the star-gemmed, vaulted blue,

Is there, as we hope, a city,
Where the suff'ring ones are blest,
Where the "wicked cease from troubling,
"And the weary are at rest."

Who shall dare describe this city?
Who, its joys to us unfold?
Who shall picture half its beauty?
Ah, the tale is yet untold.

Still the mind, inquiring, wond'ring,
Cannot brook the long delay,
And the weary, restless spirit
Spurns the earth and soars away,

To the fancied, ideal city
Which no mortal eye hath seen;
To that radiant bourne, celestial,
Where God reigns, the Great Supreme.

Often, when the day is closing,
At soft twilight's pensive hour,
When all nature seems reposing,
As I sit within the bower,

Seems to me I hear the voices
Of the loved ones gone before,
Mingling, soft, in strains delightful,
Sounding from the other shore.

And while list'ning, all enraptured,
To the music, clear and sweet,
I can almost think I see them,
Gathered round the Mercy Seat,

Singing praises to the Saviour,
Praises of the holy land;
And they seem so blest, so happy,
That I long to join their band:

Long to dwell with them in glory,
To be robed like them, in white;
And to sing forever with them,
Praising, walking in God's light.

But, while yet I sit enraptured
With the beauty of the place,
With the boundless love and mercy
Beaming from the Saviour's face,

Twilight deepens, shadows darken,
Evening folds her mantle gray,
And the vision, bright, entrancing,
Slowly, gently steals away.

But their memory is left me,
And I sit and ponder long,
On the bright, angelic faces,
And the sweet, celestial song.

And sometimes I wonder, sadly,
Is this vision but a dream
Of a fev'rish wand'ring fancy
With vagaries which doth teem?

Or are mortal eyes encouraged
With a foresight here of grace,
Do they see the Great White Throne,
And the Saviour's smiling face.

Ah, that shining, mystic city
Is a city out of sight;
'Tis eternal, in the heavens,
'Tis star-gemmed, 'tis paved with light.

Sometime, in the far-off future,
May the mists be rolled away;
May we see God's radiant dwelling,
In the light of endless day.

Maud's Visit to Engleside;

OR, SCENES FROM KENTUCKY LIFE.

Number Two.

"MY DEAR MOTHER,—I have been one week in this quiet spot in the very 'garden of Kentucky,' as uncle calls it, I cannot tell you how much I enjoy my visit; how much the novelty of every thing here interests me. The people are so social, and give me such a hearty welcome wherever I go, that I begin to feel almost at home. Not that I would wish to live here, even if you and all my friends could come, but then it is such a nice place to visit. And such visiting! Visiting by the wholesale. Why, Lottie and I were riding out to-day, and saw, at one rather plain farm-house, twelve horses hitched by the fence. Each one of them had borne one, perhaps two guests, who had come *with their knitting* to spend the day.

"All this, it seems to me, though pleasant for a while, must be very expensive; and perhaps this is the reason why most of the small farmers spend so little in improving their buildings outwardly; their surplus is literally *eaten up*. This is only a Yankee notion of mine, however. Lottie says it is the custom of the country, and we might as well be out of the world as out of fashion.

"I would like to have you go to church here some Sabbath, mother. There is, about three miles from uncle's plantation, a small country church. I passed that way to-day and found, by the unusual number, that they were having what is called a 'big meeting.' We entered the church just as the minister was 'lining out' the last hymn. It was a novelty to me to hear old and young join in hearty nasal tones, singing two lines at a time, voiced by the low reading of 'the preacher.' I wish you could have seen them going home. The roads there, away from a turnpike, were impassable for buggies; so they were *all on horse-back*.

"I must not omit to tell you how the expressions of some of the people here amuse me, and also how severely I have

been criticised for some of the very mistakes you have told me so much about at home. I will remember in future not to say *dooz*, or *hadn't ought to*. But I must tell you of the Kentucky blunders. When surprised at what you tell them, many will say, 'I think in my heart;' or, 'I do wonder.'

"When you call at a house you are invited to walk into the fire. There are many more provincialisms, but I do not remember them now, and that reminds me that I criticised Lottie for saying 'disremember', and she got the better of me by showing me the very word in the dictionary. Did you ever hear it used? Lottie has just awakened from a nap, and is reminding me that it is bed-time, so I will close with a kiss for Jenny and Kate, and many for yourself,—from your loving daughter,
MAUD MILLER.

"P. S. Do not show this letter to any one. Uncle Edward said he expected to see letters from me in the papers about Southern society."

THE WEDDING.

It was late on Thursday morning that Maud awoke from her dreams of home. A bright coal-fire was glowing in the grate, while a little curly-headed fellow, who gloried in the name of Nick, stood with a coal-hod in his hand putting a lump upon the fire. "Miss Maud," he said, when he saw her opening her eyes, "there be a letter for you on the table, and breakfast be most ready." So saying, he danced out of the room.

"Old Zolltcoffer's dead,
And the last words he said
Were, 'I see another wild-cat a coming.'
Up jumped Col. Fry,
And shot him in the eye,
And now the good times are coming."

Dressing hastily, Maud read her mother's good letter, and then joined her friends at the table. "We are to have a wedding to-day, cousin," said George,— "Guess who." "Is it yourself?" said Maud. "No." "Lottie?" "No; it is black Dinah. She is going to marry 'Free Joe' to-night." "'Free Joe?'" I think they were all free." "Yes, but he was *always* free, and still bears his old nick-name, 'Free Joe.'"

The day passed in exciting preparations, white folks and black aiding in the work. It was the part of Lottie and Maud to fix the wardrobe of the bride. This they did to her entire satisfaction.

At half-past eight, P. M., the happy pair with their attendants and guests, filed up from the kitchen through the long hall into the parlor, and took their appointed places. The "white folks" standing in the dining-room witnessing the proceedings through the open folding-doors. The bride was arrayed in a white tarleton dress, white kid gloves, white head-dress, which, to say the least, made a strong contrast with her ebon face and neck. The groom was arrayed in broadcloth which glistened hardly more than his shining skin. The minister, an old African exhorter, after a short prayer said, with a pompous air: "You, Joe, and you, Dinah, jine hands." This being done, with an audible grip, the preacher continued,—"I now pronounce ye man and wife. I command you, Joe, to love Dinah; and you, Dinah, to mind Joe; and you, both of ye, to love and obey the good Massa above."

There was a general shaking hands and kissing the bride, and then a merry marching to the dining-room, where a really sumptuous repast had been provided. The sable crowd did ample justice to the viands, having first despatched Nick with a waiter full for "Massa Edward and the ladies."

Music and dancing were heard in the upper kitchen far into the night.

The solemn voice of the negro preacher saying, "And you, both of you, love and obey the good Massa above," seemed to find a deep echo in the heart of Maud, as she lay on her bed that night. Its grave, earnest tones, mingled with her dreams, and she awoke with the dawning of a new and noble purpose in her heart.

Her visit, prolonged several months, was at length suddenly ended by a summons from her mother. Two days after, she was sitting by that mother's side, telling, with sparkling eye, of her first visit to Ingleside. MARY SPOONER.

Talk with Old Foggy on Temperance.

PROGRESS. Good morning, neighbor Foggy, how are you this morning?

FOGgy. Just totable. Walk in.

PROGRESS. We have formed a temperance society in Strong.

FOGgy. So I've *hurd*.

PROGRESS. We want your influence and I called to ask you to join our club.

FOGgy. Join ye? no; you can't gammon me with your secret societies. I believe in temperance (some of it), but in no such sneaking way as that.

PROGRESS. What way do you mean?

FOGgy. Why, you won't let a fellow in unless he will go over a mess of Latin, or some kind of forin' stuff; I believe ye call it the parsing word. Now I never parsed a word in my life, and I won't begin now. Then they say ye march round and round the hall till ye get beat out, and then for a change ye ride the goat till ye say enough. "*I'll sign*." I've *hurd* a master sight more of your foolish doings. I don't see what we are coming to when people run after sich things.

PROGRESS. Well, neighbor, you've made out a pretty big story, but you've not come very near the truth. All the secret we have is the pass-word, and that is simply that we may tell friends from foes, as in an army, so that no spy can get into our ranks.

FOGgy. Du tell! is that all?

PROGRESS. That's all.

FOGgy. Well, I don't see no harm at all in that.

PROGRESS. Glad to hear you say so. Will you come and join us?

FOGgy. Jine ye; no, I guess not.

PROGRESS. Why, you believe in temperance, don't you?

FOGgy. Well, yes. Temperance is a good thing. I don't believe in a man taking too much.

PROGRESS. What do you call too much?

FOGgy. Too much is, well, ahem! too much is too much.

PROGRESS. Really, Mr. Foggy, how plain you make it.

FOGgy. Every man must be his own judge; though I s'pose a man might

be said to have taken too much when he is drunk.

PROGRESS. And drunk, when he is feeling upward for the ground, eh!

FOGY. Sartingly. I don't believe in a man's getting drunk. It is dreadful low business.

PROGRESS. Yes, it generally brings people rather low.

FOGY. I believe in doing as Paul says, take a little for the stomach's sake. That's good advice of Paul's. I follow it.

PROGRESS. Do you follow all his advice as closely?

FOGY. No; can't say I do, neighbor; don't feel the need of it so much as this. I need a little, as I was saying; and I don't believe in signing my rights away for no man. You temperance men would take a man's liberties all away from him.

PROGRESS. Yes, liberty to get drunk. You have no right to do wrong.

FOGY. Don't interrupt me. The Constitution I've been fitin' for, says men have a right to life, liberty, and the pursuit of happiness. Don't it?

PROGRESS. Not that I ever read. It is the Declaration that says that.

FOGY. Oh! so 'tis. Well, all the same. Now I should like to know how you can carry that out if you make laws and have societies to forbid a man's having his liberty.

PROGRESS. It's no use talking with you, Fogy, if you are so far gone, that life, liberty, and the pursuit of happiness means to take a dram whenever you want it. If the Declaration has to you no higher meaning than that, I'll waste no more words on you, but try what I can do with young America.

PROGRESS.

LIVING WITHOUT FOOD. Animals support the want of food much longer than is generally believed. A civet cat has lived ten days without food, an antelope twenty, and a very large wild-cat also twenty. An eagle has survived twenty-two days, a badger one month, and several dogs thirty-six days.

In the memoirs of the Academy of Sciences there is an account of a dog which, having been accidentally shut up alone in a counting-house, existed forty days without any other nourishment than the stuff of the wool of a mattress, which he had torn to pieces.

A crocodile will live two months without food, a scorpion three, a bear six, a chameleon eight, and a viper ten.

Valliant had a spider that lived nearly a year without food, and was so far from being weakened, that it immediately killed another large spider equally vigorous, but not so hungry, which was put along with it.

The celebrated John Hunter enclosed a toad between two stone flower-pots, and found it as lively as ever after fourteen months.

Land tortoises have lived without food for eighteen months, and a beetle has been known to have been kept in a state of perfect abstinence for three years, when it contrived to make its escape.

There is also a well-authenticated account of two serpents living in a bottle without food for five years.

Besides all these facts we have a more astounding one, on pretty good authority, that toads live for many years shut up in the heart of a block of marble.

The Mountain and the Squirrel.

The mountain and the squirrel
Had a quarrel,
And the former called the latter "Little prig;"
Bun replied,
"You are doubtless very big,
But all sorts of things and weather
Must be taken together,
To make up a year
And a sphere;
And I think it no disgrace
To occupy my place.
If I'm not as large as you,
You are not as small as I,
And not half so spry:
I'll not deny you make
A very pretty squirrel track.
Talents differ; all is well and wisely put;
If I cannot carry forests on my back,
Neither can you crack a nut.

B. W. EMERSON.

The Ride.

A FABLE, BY J. P. M'COORD.

A steer, that had never been broke
 To bow to a burden or yoke,
 His frame by a thicket had laid,
 To grind his sweet food in the shade.
 When Frank, on a ramble, espied him,
 He thought 'twould be pleasant to ride him;
 So, guiding with caution his track,
 He settled his weight on his back.
 The beast was so soon on his feet,
 It jerked him almost from his seat.
 Again in his balance corrected,
 He still a gay season expected;
 For twice when the creature had wheeled,
 He moved on a trot to the field.
 But faster and faster he sped,
 Till the rider was conscious of dread.
 Away, yet away, he is bounding,
 His hoofs in the distance are sounding.
 Poor Frank, without stirrup or rein,
 Or even a grasp in the mane,
 Unable his courser to guide,
 Or to hold his position and ride,
 Is planted ere long in the dirt,
 And equally frightened and hurt.

MORAL.

As I looked, to myself I repeated,
 "It is often not hard to get seated;
 But if awkward, or new in the place,
 Though we start on a prosperous race,
 We may get in the end a sad tumble,
 Just to make us a little more humble."

EARLY RISING. A talented physician remarks that "Early rising is the stepping-stone to all that is great and good. Both the mind and the body are invigorated by the practice, and much valuable time is gained that is lost to the sluggard. It is the basis upon which health and wealth are founded.

"The early morning is the best period for reflection and study, for it is then, after refreshing sleep, that the mind is most vigorous and calm. The statesman, as well as the merchant, arranges his plans for the coming day, and all passes smoothly; while he who wastes his morning in bed, loses much of that most valuable commodity—time—which is never regained.

"Early rising will often make the poor man rich, the contrary will too often beggar the wealthiest. It will do much towards making the weak strong, and the reverse will enfeeble the strongest. Se-

cond sleep very naturally produces headache and languor. There is nothing more true than that 'He who loses an hour in the morning, is seeking it the remainder of the day.'"

THE SEASONS IN ICELAND. From the 16th or 18th of June till the end of the month there is no night. The sun disappears for a short time behind the hills, but twilight and dawn are blended together, and the last rays of evening have not faded from the sky before the morning light breaks forth with renewed brilliancy. "I was in Iceland," says Dr. Baird, "from the 15th of May to the 29th of July, and although I never went to bed before 11 o'clock, I did not once require the light of a candle. In May, as well as towards the end of July, the twilight lasted about two hours, but it was never dark. Even at the time of my departure I could see to read till half past 11. At first it seemed very strange to go to bed in broad daylight; but I soon got used to it, and no sunshine was bright enough to keep me awake after 11 o'clock. It often struck me as very ridiculous, however, to go out for an evening stroll about 10, and find myself in the full light of day, instead of the soft glimmering of the moon and stars."

HOW TO WALK. It is a great trick to walk still. Did you know it, boys? Thick boots with heavy soles are apt to report themselves when they come in contact with the floor or benches in a school-room. Learn to step still and prompt. By so doing, you will please your teacher, make your school stiller, and learn a habit which will be worth a great deal to you through life. Some men can never come into meeting, or anywhere else, without disturbing everybody, just because they did not learn to walk right when they were boys. Step light and quiet; go on tiptoe.

Some hearts, like evening primroses, open most beautifully in the shadows of life.

NUTS TO CRACK.

We solicit communications for this department, and in all cases require that the answers shall be sent with the questions.

Geographical.

If a boy starts from the North Pole and goes south six miles, then east six miles, then south-east six miles, what direction will he then be from his starting-place?

Our last geographical question was so well answered, that we will propose another of similar import, but more intricate.

Two persons started from Portland Monday noon, Oct. 1st, 1886, on a tour around the world, one going east and the other west; they arrived at Portland Tuesday noon, Oct. 1st, 1887.

What day of the week and month did each suppose it to be at the time of arrival? How long the day, and how many days to the year of each? On what day of the week will the travelers pass each other on the opposite side of the earth? And which will calculate the days rightly, and at what place will the other lose the right calculation?

Why are the Tropics $23\frac{1}{2}$ degrees from the Equator?

Mathematical Questions.

Required, to find three numbers, each to consist of *three* and the *same* digits; and the largest number to equal the sum of the other two.

A general solution is sought; showing whether there are several answers possible, or whether the problem is susceptible of but one. M. C.

Grammatical.

Parse the sentence—Farmington is situated on the Sandy River.

In giving the page in reading, would you say page sixty-three, or page sixty-third?

Chemical.

Why do black sheep have less wool than white ones?

Answers for September Number.

A PUZZLE is answered rightly by two persons. The gentleman met his *daughter*.

ARITHMETICAL. Answered rightly by two persons. M., Five boys; Senex, \$50.

A RIDDLE. A Kiss.

Perhaps the following ideas will help "One of the Girls" out of her difficulty in regard to the Geographical Question.

As the sun seems to come from the East, it will of course be Thursday noon in Asia, Europe, and Africa before it is in Portland. Then if you start from Portland Thursday noon and go round with the sun, when you and the sun reach Asia it can't be Thursday noon *there*, for it *had been* Thursday noon there before you started from Portland. Of course, then, it must be one day later when the sun gets there again, or Friday noon. Will not Asia, then, be the place where the people will first tell you (if you ask them) that it is Friday noon? By looking at a map of the world, having London for its center, you can better understand this explanation. MARCUS.

A TEACHER asked a bright little girl, "What country is opposite to us on the globe?" "Don't know, sir," was the answer. "Well, now," pursued the teacher, "if I were to bore a hole through the earth, and you were to go in at this end, where would you come out?" "Out of the hole, sir," replied the pupil, with an air of triumph.

Which travels fastest, heat or cold? Why, heat to be sure — anybody can catch cold.

"The first requirement made by the genius of scholarship of a student, in his very novitiate, is self-control."

ERRATA. On page 363, of September number, in heading "What must the wish be?" read "What must the inside be?" Also, 14th line from bottom, read "moon" for "morn."

On the 367th page, third paragraph from the bottom, read "loveliness" for "loneliness," and "dreams" for "gleams."

THE MAINE NORMAL.

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NO. 11.

THE ADAPTATION OF THE NORMAL SCHOOL TO THE SPECIAL WANTS OF A NEWLY-SETTLED STATE.*

LADIES AND GENTLEMEN,—In all the questions which affect the general welfare of society, the representatives of all professions and avocations have a common interest, and meet upon common ground. And in this social fabric, we are so interwoven in respect to interests and responsibilities, as to compel us to hold mutual consultations, that from an interchange of views, we may so harmonize what might otherwise be conflicting opinions and purposes, as to educe order and regularity, with the least possible discord and angularity of individual design.

It is a great question for each individual to consider, how he shall best serve his fellow men and his Maker in his chosen sphere of action. In respect to this, he may be guided, to a certain extent, by the precedent formed by the recorded lives of those who like him have lived and labored, but who have perhaps long since laid the armor of this life down, and gone to the victor's home. He may also, indeed, be much helped by the counsels of his elders, those whose attempts and failures, whose achievements and disappointments, whose studies and observations, have given them established and well-earned reputation for sagacity and integrity of character.

But, after all, in a very important sense, every man is the builder of his own temple of character, shapes his own destiny, must ascertain and decide for himself how he may best fill out his mission of life, how most benefit mankind, how best honor God.

* A Lecture delivered before the State Institute, and the citizens of Mankato, in the Hall of the Union School Building, Mankato, Wednesday evening, September 2, 1868, by Prof. Geo. M. Gage, and published in the Mankato Weekly Record at the request of the citizens.

So while as individuals we have a most sacred individuality, an inner temple of the human soul, to make which common is to profane it, it is equally true, that when systems which affect the welfare of all alike, are to be considered, systems, the good or ill working of which reaches on through indefinite periods of time, then we need a careful comparison of individual views, and to find, if possible, what are the lessons of history transmitted to us for our instruction and warning.

Should my friend who has made Scripture history and biography a special study, who has applied himself assiduously and during a considerable period of time, with the best aids and guides at his command, to obtaining the power to interpret and enforce the truths of the Divine Word; should he who has done these things, and who has also devoted himself to those related pursuits intended to fit him to be a minister of the everlasting gospel of peace, claim that by reason of his labors and his opportunities he had a certain special right to judge in respect to those matters pertaining to his profession,—then I think I should be exceedingly presumptuous and foolish, were I not to concede that his claim is probably founded in justice and common sense. I will not, to be sure, allow him to enforce upon me a policy in respect to the matters about which he teaches, at all times, and arbitrarily; but I certainly think that he ought to know what is best, and that he should be able to commend his views, in plain language, to my somewhat enlightened common sense. If he fails to do this, I think I may be warranted in hesitating, before I follow his lead.

I would pursue a similar course of reasoning, reaching similar conclusions, in respect to the physician who practices in my family, the attorney whom I employ to conduct my cases in litigation, the architect who plans my house, and the man of whatever employment with whom I have to do.

There is a bond which binds us together, as the representatives of one family, which, when we touch it, so affects us all, that we claim at once the right to be heard in respect to its adjustment, and to have our interests consulted in any arrangements which any parties may enter into concerning it.

Such a bond is that which makes men of all classes desire to have a voice in any discussions which appertain to whatever touches the important subject of education. And since this bond becomes so large as to enfold the whole people of a State, when a question which relates to common schools is agitated, it follows that a great number of the State's

citizens should, if possible, be consulted, whenever any reform is proposed in relation to these institutions.

To say that Normal Schools are calculated to affect common schools, would be to put the matter very daintily; to say that they are essential to the highest success of those institutions, would, perhaps, come nearer the true statement of the case; to say that they are a *sine qua non* of their existence, would be to fly in the face of history. The Normal School is an institution which now has so much of a history in this country, and has numbered among its advocates and promoters such a class of educators in modern times, as, to say the least, to be its sufficient claim to a respectful hearing. If it were to be considered merely in the light of an experiment, its objects are such, the attempt which it makes is so worthy, that it should command careful consideration on the part of whoever pretends to influence in the educational arena. Its advocates may say, at least, in respect to its career, the past certainly is secure; and in respect to its objects and designs, none can be nobler. It aims, as you all know, to provide for better training in the common schools. It is this foundation-work which it has volunteered to perform. It has no sounding titles to confer. It is the willing helper of those who desire to have practical knowledge of the common things, the elementary truths of those sciences about which experience has decided that all the youth of our land should be able to obtain a thorough knowledge. It makes no claims which conflict in the remotest degree with the time-honored prerogatives of colleges and the highest private seminaries of learning. It should rather seek to promote a better appreciation of every educational institution which is well conducted, and to carry a truer light into those schools which are the feeders of the Academy, the College, and the University. It ought to be modest, but it ought to be true to its mission. In fact, the less pretending and the more truly efficient it is, the more really is it normal. It cannot afford to put on airs. It is an almoner of good gifts, a benefactor of the lowly, a lover of mankind; and, as such, it is quite out of place for it to sound trumpets in advance. It is a working institution for the benefit of the children of working men. Its appointed sphere of labor is such as to make its influence wide-felt, and it must be content by hard work to honor that sphere. I love Normal Schools. I believe in them. The work which they have enabled me to do in the public schools, and which I have been permitted to do in them, has afforded me the highest satisfaction of any which I have thus far performed

on earth. I know the blessing which they have been to some who have been taught within them. I have observed the improved methods which they have promoted in respect to the instruction of some schools where their graduates have taught. I have read the testimony of those of riper years and more extended research and observation than mine, to their merit of conception and their reformatory power.

My friends, I have no sympathy with that sentiment, if there be any who entertain it, which would decry the paramount necessity of normal training-schools properly managed and thoroughly supported by good educational machinery. It is the philosophy of a constitutional dyspeptic, or of one who has not given the matter its due amount of considerate investigation. Let us not, then, argue at all the desirability or necessity of normal schools. It has been argued already successfully. Probably objectors have no special new arguments to offer, and the road which he who would speak in their support must travel, is worn with the tread of the master spirits of the age.

Our attention can be turned to the consideration of questions to the solution of which we are at this time especially and urgently invited.

The question, to which I refer particularly, is that of how the normal school shall best subserve the interests of a newly settled State.

To the consideration of this question I now invite your attention.

I have not, as I am preparing this address, the exact data which I would like to draw upon, for the foundation of the ideas which I shall set forth. I shall be obliged to speak, in these respects, in a somewhat general way.

When the Normal School was first put into operation in this country, in the State of Massachusetts, and when Hon. Horace Mann was Secretary of the Board of Education for that State, it was, I think, started with a course of study quite comprehensive in its scope, requiring for its completion one year and a half. The first school was opened at Lexington, and the gentlemen who had the matter in charge, were flattered with an immediate attendance of three pupils. This course of study has since been increased to cover a period of two years, and an advanced course of one year's duration has been added, intended for the further preparation, in some of the branches of polite literature, of those who wish to teach in high schools, or who are ambitious to have a special culture to fit them as instructors in any institutions designed rather to meet the demands of particular classes of society, than of a whole community. And

what is true of Massachusetts, is in a great measure true in respect to other of the older States of the Union, where normal schools have been established.

When these institutions have been grafted upon the existing educational systems, they have had a full course of study marked out at the very beginning, and students attending have been expected to remain and complete that course; to state, in fact, at the beginning, as one of the conditions of admission, that it was their intention to remain during consecutive terms, until the course should be completed.

With educational institutions of established reputation and with a history sufficient to constitute them venerable, with graded schools already having reached a high state of perfection, with a great infusion of representatives of the highest culture of the old world, it would hardly have done to look to anything else than unbending adherence to a plan like this, to insure success for Normal Schools in the northern States of the Atlantic sea-board. Teachers were plenty there; those who had had successful experience, and who had seen long service in the work, could be had in great numbers only for the asking. Educational institutions there were, too, which had graduated men and women whose distinguished services in the educational field were a sufficient guaranty that they were able to fit teachers for teaching. The problem to be solved was, whether special training-schools for common-school teachers would not, when once established and in successful operation, prove themselves so useful as auxiliaries in the great educational work, as to commend them to the generous support of a people who desired for their sons and daughters an accuracy and completeness of culture in those branches belonging to the common-school curriculum, which would be better than that which had hitherto been provided.

And that problem has been solved. There is no longer a battle to be fought in the legislature of the Commonwealth of Massachusetts, in order to obtain appropriations when desired for the Normal Schools founded by Horace Mann. Of the male graduates of the school at Bridgewater, sixteen have been honored with positions as principals in State Normal Schools in various States of our Union. They command the best positions in the public schools of all the States. They have made their impress in the literature of the school-room. Where will you find books which illustrate more fully and clearly the principles which underlie that branch of mathematics which we denominate Arithmetic, than the works of

Dana P. Colburn, late principal of the State Normal School of Rhode Island, a man who crowded the work of a lifetime into a few brief years, and lay down lamented in an early grave? Where, again, will you find the principles of the same science more clearly enunciated and popularly presented, than in the series of arithmetics prepared by Mr. Geo. A. Walton, late Principal of the Oliver Grammar School in Lawrence, Mass. The works of Page and Wickersham are the teachers' best national helpers; and Richard Edwards, of Illinois, President of the Normal University of that noble State, is a graduate of the State Normal School of Bridgewater. The problem has been solved.

But perhaps it has not been fully solved for the State of Minnesota. The newly settled and rapidly becoming populous States, present new features to those who would solve the Normal School question for them. It is necessary, that we consider those new elements, in order that we may be successful in adapting our operations to our field of labor. It is true, in fact, that no two States have ever taken this question in hand, without finding that there must be a special mode of operations in the case of the one, which would only partially meet the demands of the other. Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Delaware, Maryland, and so on through the long list of States where the normal idea has gained a foothold, have, in each individual case, approached the object to be attained in differing ways; and the question of their success has depended, not upon whether they have followed any special standard entirely, but, to a very great extent, upon whether they have adapted their efforts to the conditions of their several communities; and Maine and Minnesota, if they would make most useful the idea which underlies the normal or training-school, must not forget to study the demands of their respective populations.

The question, then, is brought down to simpler conditions. It is reduced to this. What are the special demands of Minnesota in respect to Normal Schools? She may have these institutions, as many of them as she can support, and she may have them for many years to come; but they will be of little value to her, provided they are not so managed as to supply the varying demands of her changing population. Minnesota of to-day is not what the Minnesota of a very few years hence will be; and Minnesota, with her representatives from every State of our Union, is not like the older States. To legislate here now, is not what it will be to legislate in this State when her resources shall have been more fully

developed; and to teach here now, is not what teaching here will be by and by. We adapt our buildings to present wants, and we change them as those wants change. In the same way, we must adapt the Normal School to present wants, to the pressing demands of the public schools, and we must be ready to make changes when those demands shall be changed. "He that will be greatest among you, let him be your servant." It is the crowning glory of a good idea, that it takes everywhere. It is not of local application. This glory must be vindicated for the Normal School.

From a great many sources, as I have moved about among men interested in education since coming into the State, I have learned that the immediate demand is, that teachers in our public schools and those intending to become such, shall receive a part, if only that is possible, of the benefits to be derived from a full course in the Normal School, in some shorter period than the customary and law-established term of two years. It is desired by many, that as soon as may be, the fruits of the special kind of training pursued in Normal Schools may be felt in the common schools.

Those ladies and gentlemen, whether quite young or more advanced in years, who are impressed with the conviction that there is truth and good sense underlying these institutions, and who are desirous to avail themselves of every auxiliary which modern civilization affords, in order to prepare teachers to do better, with more satisfaction to themselves and more profit to others, the important business intrusted to them, those persons, I know, are not, in many instances, so situated as to permit them to attend consecutive terms during a period of two full years, in order to obtain a Normal School education. Teaching in the common schools, my friends, is a blessed missionary work. It involves sacrifices, and not many from the mansions of the rich are found to enter it. Therefore, it not unfrequently occurs, that a young man or young woman, fond of children, fond of imparting instruction, by nature apt to teach, one whom God has set apart for the work of training the young, is unable, from pecuniary circumstances from the fact that he must make his way to the teacher's desk by his own exertions, or because, perhaps, the duties growing out of the relation of son or brother, are such as to preclude it, to go to a Normal School and pursue the full course, or at least to do so without the interpolation of terms of labor, either in or out of the school-room. Now that these persons oftentimes, I think I might say generally,

possess in a high degree the qualifications, as far as nature supplies them of the good instructor, I think that my experience and observation warrant me in saying, that their desire to be benefited by those institutions, which the liberality and wise forecast of our State have established, is a most natural and commendable one, cannot be denied.

I know that the work to be done in the Normal School will be much increased by granting admission to those who expect to remain connected with it for but a brief period of time. I know that to grant the diploma of the school to those who have but partially completed its course of study, would be to lower the standard of qualification required for the teacher of our common schools, and the fundamental law of the normal schools forbids it. But then I know, from what I have observed and experienced in relation to similar institutions elsewhere, that to allow students to take a part of the course, has a tendency to lead a great many more, in the end, to take the complete course in the Normal School. It gratifies a great many persons, scattered over various regions of a State, to know, that though there is a full course of study in the institution, to complete which it is required in order to secure its diploma, it is yet permissible that one unable to take that full course, may take a part of the same, and receive in due form a certificate as to the time of his connection with the institution, and the portion of the full course completed by him; and the prestige of this favorable impression is needed in Minnesota, as it would be in any new State, and as it is in any new enterprise. We must, then, waive the question of more labor on the part of the Board of Instruction, accept the situation, and enter earnestly into the work. That time will develop favorable and satisfactory results, I have faith to believe.

Minnesota, with her inexhaustible material resources, with her beautiful climate and delightful scenery, with her population permeated with the best ideas of the best of the older States of the Union, with her enterprise and wise liberality, with her numerous good gifts conferred by the Supreme Artificer of States and nations; Minnesota, with her good and attractive form of free government, protecting all classes of her citizens in their inalienable rights to life, liberty, and the pursuit of happiness; Minnesota, with her generous infusion of that spirit which would carry the light of divine truth to every creature; Minnesota, whom it takes none of us long to learn to love, has not forgotten to make the most generous provision by her fundamental law for the establishment and maintenance of a more ample and beautiful system of free education,

than the sun has hitherto shone upon in all his course. At the foundation of this system she proposes to place normal training; upon this cornerstone, this living stone, rejected through long years by the mother commonwealths on the Atlantic shore, this rock of correct primary teaching, which must be buried deep under the rubbish of the temple, and under the other covering that will hide it from the gaze of those who look to the outward appearance only; upon this she thinks to erect an educational edifice more beautiful in its design, more expansive in its dimensions, more magnificent and thorough in its details, than has hitherto been brought to the view, and afforded shelter and sustenance to the aspiring genius, of any time or any country. She throws the responsibility of carrying out in detail this work of most transcendent importance, upon the men whom she has mustered into her educational field. She will hold them to a strict accountability. They cannot evade the consequences of failure; they will not fail to reap the reward of victory. They must stand their ground.

My friends, I stand with you as one of the workers. I love the work, I accept my portion of the responsibility. I must try to fulfil the duties of my position. But I need your co-operation, need your counsels and your moral support; I need that you use your efforts to lead worthy and well-qualified young men and women to come into the institution of which I have come to assume the charge. Let them come: if they cannot for the full period of two years, come for a shorter term. Let them come determined to remain as long as their circumstances will permit. I trust that those who are interested in the improvement of our schools, those who desire to see the highest and most rapid development of our material resources, those who wish to encourage the immigration into Minnesota of an intelligent, thrifty population, those who desire to vindicate and maintain for this commonwealth the proud title of the pattern North Western State, those who love their children and love their race, and love the God who gave them all the good things of earth, will accept the hand that the Normal School at Mankato stretches to clasp theirs; and that, hand in hand, shoulder to shoulder, heart to heart, the grand educational army of this region, strong in the might of a united purpose, strong in the impulse of a noble work, strong in the power of constantly increasing numbers, strong in the action of constantly increasing and improving machinery, invincible in the channel of eternal rectitude, and

under the smiles of the Great All-Father, will move straight onward and upward, remembering, that

“Not once nor twice in our proud nation’s story
 The path of duty was the way to glory.
 He that treads it, only thirsting for the right,
 And learns to deaden love of self,
 Before his journey closes,
 He should find the stubborn thistle
 Bursting into glossy purples,
 Which out-redden all voluptuous garden roses.

Not once nor twice in our proud nation’s story,
 The path of duty was the way to glory.
 He who with toil of heart and knees and hands,
 Through the long gorge to the far light has won
 His path upward and prevailed,
 Shall find the toppling crags of duty scaled,
 Are close upon the shining table-lands,
 To which our God himself is Moon and Sun.”

Teachers and citizens, I thank you for the kind attention which you have accorded to me to-night. For about fifteen years I have been devoting whatever of intellectual power I possess to the work of education. In that time I have learned again and again the lesson, that the teacher cannot be too well prepared for his work, that he cannot drink too deeply at the fountains of knowledge, that he cannot appreciate too thoroughly the best methods of presenting truth to the young minds whom he has to instruct, that he cannot comprehend too well the extent of what is included in the term education, that he can never estimate with any approach to the actual, the reach of the impressions he is making upon the plastic material given him to mould for an endless destiny.

Said the great Arnold, writing to a friend when he had heard of his election to the school which he afterwards made famous by the force of his own inherent worth, “I feel that I have need of the prayers of all my friends;” and when I contemplate for a moment the magnitude of the work which is intrusted to the friends of education in Minnesota, I feel sure that a similar key-note may well be theirs. The time is short, and the task is great, my friends. God help you and me to stand in the night-watches like sentinels on guard, and in the day to do duty well.

TACTICS OF THE SCHOOL-ROOM.

NUMBER EIGHT.

The Recitation, continued. The old adage: "As the teacher, so the school," is nowhere truer than in the recitation. If the teacher is enthusiastic and full of life, the recitation will be animated, and the most lively interest will be awakened among the pupils. If, on the contrary, the teacher is cold, spiritless, and formal, it is quite certain that the same, or a worse temper will pervade the class. When pupils cease to feel an interest in the exercise, the recitation becomes irksome, and young spirits will look about them for some diversion to relieve the hour of its tediousness and dullness. And this will take place even among those children who are not generally inclined to mischief; for all young people have, more or less, a superabundance of energy which must expend itself in action of some kind; and if the recitation is not conducted in a manner that invites them to enlist in its work, then they will allow themselves, without really any malicious intent, to be drawn into mischief in some of the many forms in which youthful natures so often indulge, to the great annoyance of the teacher, and, not unfrequently also, to the almost entire perversion of the real object of the recitation. Hence it follows, as a matter of course, that those teachers who cannot awaken an interest in the recitation are troubled to keep order in their classes. It becomes, therefore, a matter of the first importance to the teacher, to bear this principle in mind. The success of the recitation depends largely upon his own interest manifested, and the freshness and vivacity he gives to it. He must engage in it with an intensity of life that shall beget the same spirit in his pupils. He must not work at random, but must have the good judgment to know when he is interesting his class, and, that point being secured, the tact to keep up that interest unabated to the close of the exercise. To do this will often task the teacher's resources to their utmost extent. He must not only seem animated, but must really be so. All the ingenuity and devices that tact can furnish to enlist the sympathy of the class, must be employed. In the exhibition and application of principles, the greatest fertility in illustration will be absolutely necessary. This is one of the most valuable agencies which the teacher can use before a

class. Those who can illustrate a principle, or any point under consideration, in such a variety of ways that it cannot fail to be made plain to all minds, and at the same time can make those illustrations ever varying and fresh, have a power that opens to them an easy way to success in the work of instruction. One of the greatest naturalists living never fails in his teachings and lectures to make himself fully understood, even to the most uncultivated mind; and yet it is a most noticeable fact, that his illustrations of the same subject are constantly varying. The same point is scarcely ever illustrated twice alike. This gives a freshness to his instructions that is enjoyable in the highest degree. Different, very different, is such teaching from the monotonous and dull routine of some persons who, month after month and year after year, go through with the same tiresome and stale repetition of the only methods they ever knew or practised. It is not strange that the school-rooms, where such teachers labor, are pervaded by a kind of torpor that is absolutely withering in its influence upon the young mind. The only caution we feel called upon to suggest to the young teacher is, that in his efforts to be animated and lively in his teaching, he must carefully guard against boisterousness and ineffectual bluster. There is the same difference between an enthusiastic teacher and a boisterous one, that there is between the steady but intense glare of the light and heat of the sun, and the spasmodic flashes from an intermittent volcano.

As no scholar is worthy of the name, as such, who is not independent and self-reliant, the teacher must be careful to make his pupils do the work of the recitation without too much prompting, and, especially, without numerous questions to call out from the learner what should be given in answer to a single question, or upon the bare mention of a topic. Many teachers expend a vast amount of time and strength in asking continuous questions simply for the reason, that they do not seem to know how to train their pupils in a systematic way of reciting without so many useless questions. We have witnessed the following dialogue, in substance, between a teacher and pupil, in a recitation in grammar and parsing, where the lesson began with the sentence: "The hunters saddled their horses and rode away to the mountains, etc."

Teacher. What part of speech is *hunters*? *Pupil.* Noun. *T.* What kind? *P.* Common. *T.* What gender? *P.* Masculine. *T.* What number? *P.* Plural. *T.* What case? *P.* Nominative. *T.* Of what is it the subject? *P.* Saddled. *T.* Rule? *P.* The subject of a finite

verb must be in the nominative case. Now it will seem to most teachers hardly necessary to say, that when the pupil was told to parse the word "hunters," all of the above information should have been readily given in its proper order, without any questions or suggestions from the teacher. But there are many teachers who never obtain a recitation from their pupils except by the piecemeal process, of which the above is certainly not an unfair specimen. Pupils should be taught to prepare their lessons in such a manner, that when a question is asked, or a topic named, they can tell all that is known upon the subject, in methodical order, and, as far as possible, in their own language. Such recitations will show not only what the pupil knows, but whether he can communicate and use his knowledge.

Most teachers experience considerable difficulty, in the case of large classes, in calling up all the pupils at every recitation. Where the class is really large, this is certainly a difficulty of no small magnitude; and it is one from which we would all at times like to be relieved. If possible, classes should not be so large as to preclude the possibility of requiring each pupil to recite at every recitation. But we know very well, that that is impossible in some classes in almost every school. The best classification of the school that can be had, under all the circumstances, will still leave some classes inconveniently large. Where such is the case, the teacher must use reasonable despatch, and by varying the order in which pupils are called upon, give them to understand, that they are liable to recite at every recitation. It has a bad influence upon a class, for a teacher to call upon pupils in the same order so that they can know, with considerable certainty, about what time they will be called upon, and also what portion of the lesson they will recite. It is a strong temptation to prepare the lesson merely for the recitation. Let the largest number of pupils possible be called upon, even if it is to answer only a single question. When pupils feel that there is a moral certainty that they will recite at every recitation, and that there is no certainty as to what part of the lesson they will recite, they will have the strongest inducement to prepare the whole of every lesson. A. P. S.

"The great end of Education is, to *discipline* rather than to *punish* the mind; to train it to *the use of its own powers*, rather than to fill it with the accumulations of others."—*Edwards*.

WONDERS OF GEOLOGY.

NUMBER TEN.

Thus far we have considered the earth as it appeared with its low ranges of mountains formed by the folding up the earth's crust. In North America, its formation north of the latitude of middle New York was nearly the same as now. In consequence of this folding of the rocks, immense valleys, or rather shallow basins, were formed, which were covered with the waters of the ocean. In its quiet waters there was the most astonishing prodigality of the lower forms of animal life. Various species of the coral insect abounded which built up reefs of coral rock, while the encrinite family, now extinct, lived in the greatest numbers. Their remains became consolidated, and formed what is known as the Sub-carboniferous limestone. It is known in Europe as the Mountain limestone. It formed the border of the continent along the southern part of New York, Kentucky, and other States to the west. It is in this limestone where the immense caves, like that of the Mammoth Cave, are chiefly found. The rock is frequently porous, and water works its way through, and forms subterranean rivers, which wear out the limestone and leave these caverns. Hence streams of water are frequently found in caverns, as may be seen in the Mammoth Cave, sufficiently large to carry a boat.

Now there seems to have been another change. After the limestone formation had ceased, and its multiplied forms of animal life had died out, the shores were covered with rocks and sand and pebbles just as they now are, which became cemented together with lime and oxide of iron. This is called the Millstone-grit formation. It is more commonly known by the name of *Pudding-stone*, or conglomerate. If you go to Roxbury, Mass., you will find this formation, and this is the way it was originally done. If you examine the pebbles you will see that they are composed of the older rocks, and are all perfectly waterworn. This millstone-grit may be seen overlying the carboniferous limestone, or near it wherever the latter abounds.

Now let us look at the condition of this continent at this period. New England, except Rhode Island and the valley of the Connecticut River, are nearly the same as now. These places were occupied by basins of water. The Alleghany Mountains were only low reefs formed of accu-

mulated sandstone and limestone which sunk as they accumulated. West of these was an immense basin of many thousand square miles. There was another basin in Illinois; one in Missouri and one in Michigan; and one in Nova Scotia and New Brunswick. Gradually these basins were lifted up above the surface of the waters. The atmosphere is warm and moist. No cold winters as yet sweep over these latitudes.

Soon there are ushered into existence the most luxuriant forms of vegetable life the world ever saw. If you go into one of our forests you will find the trailing clubmoss, such as you adorn your church with on Christmas, creeping along on the ground. It never becomes a tree. But in the time spoken of, the same family of plants became trees sixty or seventy feet in height. It is known to botanists by the name of *Lepidodendron*. There were several species of it, not now existing. Then there is a plant now growing on wet meadows, called the Horsetail, or Pine-weed. It never grows more than a foot or so in height, but in that age a plant nearly like it grew to the height of thirty or forty feet. This is called the *Calamite*. Then there were trees called the *Sigillaria*. I have in my hand now a piece of bark of one of those old trees. It is curiously spotted where the leaves grew out. If you go into our swamps you will find the brakes and ferns not over four feet high; but in that age they grew to the height of forty feet, and must have made a splendid appearance. Then there were various species of the pine tree. It was the first time, that, had man lived upon the surface of the globe, he could have taken his ax and gone into the forest and hewn out a stick of timber. There were smaller ferns in great number which covered the surface of the ground. There were no hard-wood trees, no peat-moss, nor such mosses and lichens as fasten themselves upon trees and rocks.

All these plants and trees grew in the greatest profusion. They died out and others grew up in their places, until, in the lapse of perhaps countless ages, they formed in places immense jungles and muck-swamps hundreds of feet in thickness.

Gradually a change takes place in the level of the country. It slowly sinks beneath the level of the ocean, and all this decayed matter is covered with sediment. It is compressed by the immense pressure above, and, by the aid of a slow chemical process, it is converted into *coal*. This is called the Carboniferous Period.

But the process does not stop here. You must always remember that

the surface of the earth has never been fixed. It has always been exposed to changes of level. Now the lately sunken swamps again rise to the surface with a fine sediment from which spring forth a new crop of vegetable matter. A new muck-swamp is formed, and again it sinks beneath the waters of the ocean to be covered with sediment, and to form a new layer of coal. Thus in some places this is repeated many times. In Nova Scotia, there is an accumulation of nearly fifteen thousand feet in thickness, which contains in one place no less than seventy-six different seams of coal. One of these seams is forty-two feet in thickness. Who can estimate the length of time necessary to bring about such results!

It was in this way the coal was formed in Rhode Island, Pennsylvania, Illinois, Missouri, Michigan, and in Europe and Asia. They are the immense accumulations of past ages in the history of our globe reserved to meet the wants of civilized man.

We have now to notice another important event. After the great coal deposits were completed, there was a folding up of the rocks from the Atlantic coast to the valley of the Mississippi on the west, and to the Canadas on the north. If you take a half quire of large paper, and lay one edge parallel with the coast of the Atlantic, and fasten the opposite edge, and then attempt to shove the former edge from the ocean toward the north-west, you will throw your paper into folds running in a south-west and a north-east direction. Now this is exactly the way in which the rocks from Maine to the west side of the Alleghany Mountains are folded up. Try the experiment as I have described. From some cause, or causes, the rocks have been pressed in a north-westerly direction, and, as Sir William Logan has expressed it, the Laurentian hills of Canada formed a buttress which resisted the pressure, while the region of the Alleghany Mountains was folded, and, in some instances, even tilted over. This folding up raised the coal with it, and frequently broke it up into dislocated masses very troublesome to the miner. On this side of the Alleghany Mountains the coal is very much disturbed, while in the west side at Pittsburgh it lies nearly horizontal, as it was originally formed.

You will here notice the different kinds of coal. That which has been recently formed and still retains its woody structure is called lignite. This is found at Brandon, Vt., in a recent formation, where it has been formed so as to be covered up with sediment, but not sub-

ject to a folding process of the rocks, and it is called bituminous, or cannel coal. Where the rocks have been metamorphosed by the action of heat and the folding process, the bituminous matter has been driven off, and we have left a hard shining looking coal, called Anthracite. If the coal is still further acted upon, it is changed into plumbago, or black lead. It is generally supposed, by geologists, that the plumbago found in different parts of this State is only the remains of vegetable matter highly metamorphosed.

No genuine coal has ever yet been discovered in Maine, at least in the regular coal-bearing rocks, because the formation is wanting.

For the first time an air-breathing animal has been found in the coal period. It has been supposed, and with good reason, that previous to this time the earth was so charged with carbonic acid that air-breathing animals could not breathe upon its surface, but that the profuse vegetable growth absorbed it to such an extent, that reptiles could live in the water and on the land.

You may remember the name, if you can, of the oldest air-breathing reptile. It is called the Archegosaurus. Insects, such as the dragon-flies, abounded in the swamps. As yet there were no colored flowers; no land reptiles; no birds; no quadrupeds; no man. At the close of the Coal Period nine-tenths of the surface of the globe were nearly the same as at the present day.

N. T. T.

HENRY PESTALOZZI,

AND HIS SYSTEM OF EDUCATION.

NUMBER THREE.

In teaching English Grammar by the Pestalozzian method, synthesis is used rather than analysis. The object of its study is to learn to speak and write the language correctly. This is to be done, not by the learning and application of rules, but by model sentences which the teacher gives the pupil, and then requires him to repeat, with the double purpose of acquainting him with the structure of language and of giving him facility in its use.

The most simple sentences are taken first, those containing but a sin-

gle idea : as, "The butterfly is pretty." Then mention is made of as many more objects as this adjective can be applied to. Then other adjectives are taken and treated in the same way, the pupil being required to form and repeat a large number of sentences that would answer the question, "Who or what *are* what?" Next, some such sentence as the following is taken, "The lion has strength;" and, in connection with it, any sentences that will answer the question, "Who or what *has* what?"

To become familiar with the different parts of the verb and their use, the sentence, "I respect authority," may be taken. Similar sentences involving every person, number, tense, mode, and voice of the same verb may be formed. Other verbs may be treated in like manner with nouns, going through the whole round of declensions and conjugations till the pupil has complete mastery of their use. In the same way, the other parts of speech are to be treated. A sentence containing a preposition may be given, then several other sentences with the same preposition; afterward, the same sentences with other prepositions may be recited, especial care being taken to point out the differences of meaning, and to show the proper use of each word.

After the pupil has gone through all the parts of speech in the same way, and has become familiar with them in all their inflections, and has acquired a facility of expression in their use, a gradual enlargement of sentences may be made, as follows :

"I *shall*.

"I shall *preserve*.

"I shall preserve *my health*.

"I shall *not* preserve my health *by any other means*.

"*After all that I have suffered*, I shall not preserve my health by any other means.

"*After all that I have suffered in my illness*, I shall not preserve my health by any other means *than temperance*.

"*After all that I have suffered in my illness*, I shall *not be able to* preserve my health by any other means than *the greatest temperance and regularity*."

In enlarging these sentences, all the parts of speech should be taken in a variety of forms, and then each of the sentences may be carried through the different persons of the two numbers, and afterward the same may be translated into the other tenses.

As these model sentences, by their frequent repetition, will be deeply impressed upon the pupil's mind, they may be made the source of instruction and improvement by taking subjects within the sphere of juvenile life. He may now attempt a description of objects with which he is familiar, by reciting verbally, and also by written exercises. These exercises should be carefully corrected and returned to him to revise, until he is able to describe, clearly and concisely, any object coming under his notice. In other words, he should be made to *talk* correctly and sensibly, to describe an object, to give an account of a circumstance in accurate and intelligible terms.

From this the pupil may pass to simple exercises in composition, and, while some attention may be given to style, all errors in construction, also, can be pointed out, and brought to his notice in such a way as to give him a clear conception of the right use of language. All this can be done, too, without cumbering the memory with long definitions of terms, and dry and abstract rules conveying little or no meaning to the mind of the pupil.

Lastly, he should be directed to read selections from standard authors, taking care to observe the manner of expression, the use of terms, etc. Such a selection, accompanied by a short history of literature and short biographical notices of the writers, would be of great value in enlarging the mind and giving it a clear conception of, and a facility in the use of language.

Pestalozzi acted upon the principle, that language was made first, its rules afterward. A person who has always been accustomed to hear good language spoken, will speak and write that language correctly; although he may be in entire ignorance of the science of grammar. And, on the other hand, a person may know every rule of grammar, with its exceptions, and still not make use of good language. It is not to be supposed, that Milton's or Shakspeare's command of the English language was the result of studying its grammatical analysis. It is the teacher's province to recite the language in its purity before the pupil, then to require him to repeat it, and afterward to aid him in clothing his own ideas in fitting and appropriate expressions. G.

“It is good to know much, better to make good use of what you know, best of all, not to be proud of either.”

THE WATER-SPOUT.

It is more than half a century since the writer first heard of this phenomenon, but the circumstance is distinctly remembered.

Some carpenters, framing a building near by, were driven from their work by a copious shower. On returning to it again they discovered, in one of the mortises nearly filled with water, a small fish, enjoying himself in his own element. But *whence?* and *how?* The event led to many *fish-stories*, and much curious discussion, that vastly interested the lad.

Tempestuous clouds, passing over the sea, lakes, or ponds, were said to suck up the water, at times, in huge columns, and throw it down again in *wide-spread showers*. And the sun, when descending among those broken and fragmentary clouds and throwing far out his peculiar *beams*, was said to be *drawing water to fill* those clouds; and thus to be "eye, soul," and *pump*, for "this great world."

These magnificent ideas contained precious truths in the *rough*, and stimulated to rational inquiry. But no class of phenomena, perhaps, requires more care in proceeding from elementary principles to their combination wrought into the result, than that properly termed meteorological. Patient and persistent thought, however, will enable any one to set clearly in the mind what occasionally so displays itself in the sky.

The water-spout is of two kinds; the *descending* and the *ascending*.

The first appearance of the descending water-spout is that of the projection downward of a portion of dark cloud, then in a very active state of condensation. The form of this projection very much resembles that of an inverted cone, starting from its base in the cloud and diminishing in its descent till it terminates in a small, rounded surface below. The form and size, indeed, are quite changeful. Sometimes the lower portion has an irregular, vibratory motion; and observers always speak of a horizontal whirling, or rotary motion of the mass about a general, unstable axis.

In several articles under the head of EVAPORATION, published in former numbers of this work, the writer has endeavored to present a clear idea of the formation of vapor, and the true mode of its condensation into clouds; and of these, into rain, hail, etc.

It will be remembered that only a *part* of the vapor in the atmosphere, at any time, *can* be condensed; and that this depends on the

amount of reduction of temperature and pressure in the region of the atmosphere the vapor occupies. When a large amount of vapor rises into an elevated tract of the atmosphere whose temperature is a number of degrees lower than that in which it was generated, near the surface of the earth, its partial condensation into cloud is a necessary consequence. And the higher the temperature at which the vapor is generated, the more rapid is the process of evaporation and the more dense the vapor produced ; so that, on ascending into a region of much lower temperature and less external pressure of the atmosphere, the greater will be the amount of condensation, and the more rapid the process.

It is an important fact always to be borne in mind, in meteorological investigations, that a decrease or increase of pressure upon air *saturated* with vapor, causes a partial condensation of the vapor ; and that, in either case, this condensation develops heat.

Remembering, now, that the expansion of any portion of the air lowers its temperature, and the condensation of any portion augments its temperature, let us consider a large mass of vapor, generated under great heat at the earth's surface, to have risen to a height at which, both by a decrease of temperature and the external pressure of the atmosphere, it begins rapidly to condense. Keeping in mind the fact, that it takes about thirteen hundred cubic feet of vapor to make one of water, it is clear, that around the general center of condensation of the mass will speedily be formed a partial vacuum, toward and into which the surrounding air will rush, thus pressing upon the vapor, hastening its condensation, and quickly extending the cloud. But the heat developed by this process and by the meeting and mutual pressure of these aerial currents in the general center, will expand the air around and reconvert into vapor a small part of the cloud, causing an upward current from this center. And the elasticity of the air, produced there by the meeting of the horizontal currents rushing into it, as before described, will expend its force mainly, in quickening this upward current.

If, in the meeting of these horizontal currents, they do not exactly balance each other, they will generate a *rotary* motion about a *vertical axis* passing through the general center of condensation ; and, at the same time, effect a *progressive* motion of that axis, the more *rapid* as certain of these currents are more forceful than their opposites.

All these operations being simultaneous, will soon result in a projection downward of a portion of the cloud, having the form and movement

before described. The rotary motion of the air, not rapid at first, will soon increase, by the diminution of the circle of rotation caused by the external pressure of the atmosphere in a horizontal direction toward the partial vacuum ; so that this increase of rotary motion will so much the more prevent the free flow to this partial vacuum of this external air pressing horizontally toward it. The consequence will be an *upward* current to it, along the axis of the rotary mass ; and from a much more undisturbed portion of the atmosphere below. Of all these operations, the peculiar *form* of this downward projection of a portion of the cloud is but the legitimate result.

As the process of condensation goes on, the projection from the cloud must descend, carrying down the water (sometimes in large drops, as in a copious shower, at other times almost in streams), whirling about the general axis at a distance from it, decreasing with the descent, till it comes near the terminus of the projection. There, the rush of the air up the axis will hurl back a part of the water to the cloud, whence it may be scattered widely abroad, or be returned again with accessions down the column.

The depth of the rotary mass must evidently increase with the descent of the projection ; and when that nears the broad surface of water, as that of the sea or a lake, the whole depth of the atmosphere from the cloud to that surface must revolve ; so that an upward current toward the partial vacuum in the cloud can no longer ascend along the center of the column, from an undisturbed depth of air below, and the centrifugal force of the rotary mass acts against its admission laterally to that center, while, at the same time, the *descent* of a current to the partial vacuum in the cloud is prevented by the *ascent* of one thence, generated as before described. So that now, by the greater pressure of the air external to the rotating mass and the less pressure of this mass upon the surface of the water, the water will flow rapidly toward a general center under the axis of rotation ; will rise there in tumultuous and unsteady heavings, mixed with portions of air fitfully struggling up the general axis to the partial vacuum in the condensing cloud.

This is a general description and explanation of the water-spout which conveys the water from a suddenly condensing cloud to the surface of the sea or a lake. Why this column (when complete) should always be smaller near its middle than above or below, finds an easy answer from the fact, that the horizontal pressure of the air is not opposed *there*

as above, by friction against the cloud, nor as below, by friction against the surface of the disturbed water, or that of the land.

The descent of the water is always by a whirling motion, and mostly near the surface of the column, giving it a kind of twisted appearance ; while the slight ascent is by the way of the center of the column, and, in the state of spray, large drops and snatches from the foaming crests of the leaping masses. The column appears to be irregularly hollow ; and, by the variable force of the horizontal currents of the air, constantly changes its direction, while it is borne forward in space with the movement of the cloud.

In all cases the discharge of the water from the cloud is rapid ; in quantity, sometimes enormous. But at sea it cannot be estimated as on land ; large tracts of which have occasionally been deluged by it.

We have Major Sherwill's account of the setting in of the north-east monsoon at Calcutta, as it occurred nine years since, when it came in conflict with the existing south-west monsoon. He says, "This north-east wind had for some days previous disturbed the dense cloud-bank lying along the southern slope of the Himalaya, and given a varying movement to the clouds then covering nearly the whole sky. On the 7th of October, 1859, several water-spouts having formed and vanished, the wind lulled at 3 o'clock P. M. ; soon after which, from the horizontal base of a heavy cumulus, fifteen hundred feet in height, three thousand in length, and five thousand thick from base to summit, a bulging or protruding portion was observed, from which a broad, pale column, like an attenuated cone, suddenly descended ; its lower part being seen to gyrate rapidly, and also, as it neared the earth, to oscillate quickly from right to left ; still lower, its column parted into two more slender ones ; and as soon as it had reached the ground, the appearance of the whole instantly changed ; the column now becoming a heavy mass of water, through which, within a few seconds, almost the whole cloud above, rushing inward from its sides, poured in rain to the earth.

"The duration of the spout previous to the so-called *bursting* of the cloud, was about twenty-five seconds ; and the fallen water covered a grassy plain to the extent of half a square mile, and to the depth of six inches ; requiring fourteen days afterward to drain off. As the torrent came down, the cattle fled in all directions. Half an hour later a spout descended some nine hundred feet from a cloud about two thousand feet above the earth ; this lasted about half an hour, and then disappeared upward into the cloud."

Not unfrequently this kind of water-spout, after commencing in manner as now described, has the downward projection from the cloud reabsorbed; which seems to be effected by the higher temperature of the ascending current of air reconverting it into vapor, on its way to the partial vacuum in the cloud. What is much more common is, so rapid a condensation of the cloud, that the force of the ascending current, whatever its temperature, is wholly powerless to arrest or materially to modify its downward projection; which, in such cases, only serves as a funnel to gather the mighty torrent in its plunge to the earth.

The ascending water-spout is a phenomenon of no infrequent occurrence in certain latitudes; and the causes producing it are by no means hidden.

We know that the sun heats up the earth in many places to a much higher temperature than in others at no great distance. The consequence is, a greater radiation of heat into the atmosphere there, causing an upward current, and, also, horizontal currents coming in radially to supply the place partially vacated by the ascent of the more heated air. These horizontal, radial currents, not accurately balancing each other, generate a rotatory motion in the atmosphere near the earth round the ascending current as a center; which generally moves forward with greater or less rapidity, according to the amount and difference of force in these horizontal currents. In this way are whirlwinds generated. The true cyclone, which prevails in the West Indies and some other tropical regions, is but a larger kind of whirlwind; in which the air rotates in one rather than in another direction, and the center of which, in its movement, takes a certain course. In whirlwinds of small extent, the rotation is in either direction, and the center pursues no particular course.

The rotatory motion about a center in which the heat is still increasing, the student will have already understood, must be quickened by the pressure toward that center of the air external to the rotating mass acting to *diminish* the *circles* of rotation. Hence, when at the commencement the rotatory motion is in large circles and quite brisk, it attains ultimately, by means of this diminution of those circles, a very *great* velocity. And it is in this way, that some of our fiercest gales arise, and that the destructive force of the tornado and whirlwind is generated.

It is easy to perceive how the ascent of this heated current must produce a rotatory motion of the air about its general center to a height *far above* the *surface* of the earth; and that, on attaining that height, it

must expand. Consequently, if nearly saturated with vapor on leaving the earth, this expansion must cause a degree of condensation of the vapor, and so form a partial vacuum near the summit of the axis of rotation. At this stage, therefore, the upward current must have become forceful; frequently carrying with it objects of great weight, as portions of buildings, unroofed and torn in the sweep of the revolving mass, and pushed in by the fitful surface-currents in their rush toward the partial vacuum made by the ascending current.

In case the circle of rotatory motion is small and the motion very rapid while the general column is borne forward over a portion of the sea or a lake, it is manifest, that the surface-water must take an action similar to that before described in relation to the descending water-spout. Only here it must be far more violent; the crested waves leaping much higher and becoming more thoroughly mingled with the air, while swooping in portions of them containing, perhaps, specimens of the finny tribe to be whirled aloft in the upsurging column.

Navigators always report this rapid, whirling motion, and the irregular, twisted appearance of the column, with a base not unlike that of the mighty oak springing from the earth with its radical buttresses. And they frequently testify to a height of column of many hundred feet; which is conclusive evidence that the water must ascend in a very *divided* state, mingled with the upward current of air. For, if the vacuum were *perfect*, at the top of the column and throughout its extent, the whole pressure of the atmosphere upon the surface of the sea or lake could elevate within it a solid column of water only about thirty-four feet high. The *solidity* of the column, so frequently insisted on, is no doubt an *appearance, wholly due to the rapidity of descent*.

In this ascent the water forms the visible surface of the column, and whirls about its center at such a distance, that its centrifugal force balances the external pressure of the atmosphere; and the same is true of the descending water-spout. And in no department of nature, perhaps, will the student find a more striking example of this force.

Sometimes the conditions are such, that on the descent of a portion of cloud with its whirling motion, there immediately begins a whirling motion in the air underneath, at the surface of the earth; and if then the cloud is borne forward over a portion of the sea, or a lake, the water quickly rises and forms a visible column extending to the cloud. On passing to and over the land, the column soon breaks; the lower part

falling to the earth, and the upper, rising into and disappearing in the cloud. In very high columns the water-spout is seen frequently to wave and curve in various directions, as the cloud moves forward; and, on breaking up and disappearing, to do so piecemeal; which is owing to its extent through different portions of cloud and vapor then successively expanding.

Occasionally the water-spout makes its appearance when only a slight haze overspreads the sky. Its aspect then bears strong resemblance to a silver thread quietly floating in the air. It lasts but a short time, and generally breaks up piecemeal, vanishing by an ascent into the expanding vapor.

In respect to the accompaniments of lightning and thunder, the student is prepared to regard them as natural only in the more striking cases of these phenomena. And as to those whirlwinds and storms of the desert, by which those immense clouds of dust are raised from certain tracts and carried to far distant regions, he will perceive them to be mainly due to the same causes which operate to produce the water-spout. c.

WASHINGTON, D. C., Oct. 8, 1868.

THE TWO STREAMS.

Behold the rocky wall
That down its sloping sides
Pours the swift rain-drops, blending, as they fall,
In rushing river tides.

Yon stream, whose sources run
Turned by a pebble's edge,
Is Athabasca, rolling toward the sun
Through the cleft mountain ledge.

The slender rill had strayed,
But for the slanting stone,
To evening's ocean, with the tangled braid
Of foam-flecked Oregon.

So from the heights of will,
Life's parting stream descends,
And, as a moment turns its slender rill,
Each widening torrent bends,—

From the same cradle's side,
From the same mother's knee,—
One to long darkness and the frozen tide,
One to the Peaceful Sea!

HOLMES.

Editorial Department.

THOUGHTS FOR THE THOUGHTFUL.—II.

ORGANIZED EFFORT.

In what we were able to furnish for this department last month, we called attention briefly to the importance of organized effort, and also to the parties to whom the consideration of questions involving the interests of Education practically addresses itself. We then passed to discuss very partially and imperfectly the relations of school-teachers to the work which should be done. It is our desire the present month to carry our readers with us to reflect upon the relations of some other parties to the subject we are endeavoring to analyze, and lift into the prominence which its significance demands.

II. *Teachers.* No teacher ought to desire to shirk his portion of the responsibility in this matter of maturing and putting into operation plans for the advancement of the State's educational interests. The living, practical teacher is the central figure in the fight. There is a car of progress here, and the teacher must be the wheel-horse. He must start the load. Want of philanthropic earnestness on his part, want of a careful study of the field, indolence, selfishness, and apathy, ever have and ever must be the most terrible and tormenting clogs and drawbacks to delay, and retard all that any man or set of men who undertake a noble work in behalf of the education of the people may propose. If the light that is in **THEE** be darkness, how shall the gloomy regions of ignorance be lighted up? who shall swell the column that is pressing forward to rescue mankind from the slough of despond into which error and moral and intellectual blindness have drawn their victims?

The teacher is a representative man, a representative woman. The Prussian maxim, "As the teacher," etc., may be seen to have a wider application than its originators claimed for it. The teachers of a State are no less the town barometer, indicating the condition of the State's educational atmosphere, than is the individual teacher the embodied representative of his school. If 5,000 or 6,000 teachers, scattered over a very considerable extent of territory, have suffered themselves so far to forget the relations which they sustain to one another, to the general cause of education, to educational intelligence and literature, and to whatever is designed to promote their common welfare, as to allow educational associations to die, teachers' institutes to die, teachers' journals to die, then there can be very little danger that one's position will be controverted, when he assumes, that as far as a healthy life-sending vigor throughout the whole educational system is concerned, a desideratum whose importance is not in danger to be overestimated, it has ceased to be. The body may remain, but the soul has fled. There is need of a miraculous resurrection power.

Happily if the teachers of our State have in times past seemed, when judged by the standard of which we are making use, to fall short of the mark, if indications of vigorous condition have appeared to be wanting, more recent indications are contrariwise. There have been signs of resurrection unto life. Returning animation is apparent.

The State Association has been revived. A new life has assumed organic form. A channel has been opened by which whatever of oxygenized blood is to be found, may be sent coursing through the educational body. Pulsations are discoverable. There is ground for hope. Under suitable conditions, the patient will live. County associations either have been or are soon to be formed. The process of educational vaporization going on from off the central organization, spreading abroad through our atmosphere the purified waters of the great depository, have caused the smaller streams to rise as they have been condensed and fallen upon the hillsides of Maine, and the solitary places are being made glad. Amen. So mote it be.

Teachers' Institutes will, we have no doubt, very speedily be revived. They are the legitimate results of such efforts as have been put forth during the past few years. They are also essential to the retention of the life already manifesting itself, and requisite to the promotion of the higher life toward which true educators are aiming. They are surely coming, and they will be among the auxiliaries more potent for good than almost any other of which the State can make use. An endeavor to secure an appropriation for the holding of teachers' institutes should be made at once. Our friends of the State Educational Association express themselves in favor of anything calculated more immediately and beneficially to affect for good all the interests of education, than by pronouncing, at their annual meeting, soon, we suppose, to be held, emphatically and in language plain enough to be understood, their opinion that economy demands, on the part of our State, that she return, under proper limitations and modifications if necessary, of course, to the support of teachers' institutes.

The Educational Periodical has been revived. The present number completes the second year of its existence under its new name, and with its new management. Another number will be required to conclude the current volume, but the present is the twenty-fourth monthly number of THE MAINE NORMAL. May it be continued through many numbers and volumes yet to come, and may its improvement be more marked in the future, than it has been in the past. With the issue of one further number, our editorial connection with the NORMAL will cease, and we may then take occasion to speak as we feel in respect to the consequence which attaches to the wise management and generous support of the teachers' journal. Meanwhile, we would suggest to the State Educational Association, that they may well take such action, when they meet, as will secure the continuance of this auxiliary to organized effort.

Normal Schools have been established. And during the four years for which we have been connected with one of these, nothing has afforded us more encouragement, more hope, than the constantly increasing confidence which the common school teachers, the generous and intelligent friends of education, and, in many cases, the honest, and, as far as school attendance is concerned, uneducated farmers and mechanics of our State have manifested and expressed in ultimate good results which will flow from the operations of these institutions. God bless our normal schools! Let not the ruthless hand of envy, jealousy, or prejudice wrest them from their appointed field of labor; and let no schemes of penny-wise economy, conjured

up by unscrupulous politicians, work their overthrow. Let them stand to do the simple blessed work for which they were established, and to which they have been devoted, and out of them shall go forth streams of pure water, causing future generations to rejoice for the wise action of their fathers. Our hearts will yearn for those with whom we have been most interestingly and intimately associated, and thus does ours go forth in earnest sympathy to touch those whom we have known so well in days now gone forever.

The teachers of Maine! We wish that the words we write, nay, rather, the feelings we entertain, might reach them all. And something within us responds to the sentiment we have here expressed, and says, The spirit of your words shall yet reach them all. Have faith. And so we commend what we have here written hastily to the teachers of Maine. May it be as bread cast upon the waters!

EDUCATIONAL INTELLIGENCE.

MAINE.—Mr. Waterhouse, of the Augusta High School, has resigned his position and gone to Newton, Mass., to take charge of the High School in that place, at a salary of \$2,500 per year.

New School-houses.—The people of Gorham have recently erected and dedicated a new house for a public High School. It is an elegant and commodious building, and is both an ornament and a credit to the town.

The late Eliphalet Greeley, of Portland, left a sum of money for the support of a free High School in the town of Cumberland. A very fine building has just been finished and supplied with apparatus; and there still remains a fund of twenty-five thousand dollars for the support of the school. It will be called the Cumberland Institute.

MASSACHUSETTS.—The twenty-fourth annual meeting of the State Teachers' Association was held in Boston, Oct. 15, 16, and 17, and in many respects it was one of the most important and successful educational meetings ever held in New England.

On Thursday afternoon a meeting of the Superintendents of Public Schools was held at the Girls' High and Normal School-house.

Hon. Joseph White, Secretary of the Board of Education, was chosen Chairman, and J. P. Averill, of Northampton, Secretary. It was a meeting of great interest to those present. The discussion embraced a somewhat wide range of topics, among which were the following: The best system of school statistics; the duties and tenure of the office of Superintendents of Schools; the best mode of examining and certificating teachers; the promotion of pupils; provisions for meetings of teachers.

This is the first meeting of the kind ever held in the State, and shows the increasing interest in the very important subject of School Superintendency.

In the evening the opening session of the Association was held in Tremont Temple, the President, C. C. Chase, Esq., of the Lowell High School, in the chair. Addresses of welcome were made by the President and by Loring Lothrop, Esq., of the Boston School Committee. An address was then delivered by Dr. Geo. B. Loring, of Salem, upon "The Importance of Careful Culture as the Basis of Popular Edu-

cation." He said it was careful culture which had fitted out the great educators of our State for the work which they have performed. Men and women who would be more worthy citizens of the United States must recognize in every way the diligent use of all possible improvements. We must have the daily paper to give us a photograph of the state of the world. We must use labor-saving machinery on our farms and in our shops, and must pay tribute to all the achievements of science. It requires a great deal of knowledge to enable one to live respectably in this age, and it is only natural that every possible effort should be made to simplify the great work of modern education. He spoke of the value of a knowledge of the physical sciences in the education of the human mind, but knowledge is not enough to insure culture. All the tendencies of our lives and thoughts draw us away from general culture to the acquirement of a practical education, but these tendencies must be striven against, especially by those who impart instruction to youth. He would place the highest value upon practical education and upon all the achievements of modern science, but in the face of all this he could not forget or ignore the value of classical study, and associations for the acquisition of a broad and generous culture which will honorably crown a practical and popular education.

The address was an earnest and enthusiastic plea for that general culture which is imparted by a liberal education, and he defended the general system of collegiate and literary study against the attacks and criticisms that have been made upon it by those who can see no value in any kind of education which is not directly practical. He paid a glowing tribute to the influence and power of such men as Edward Everett and President Felton, and other prominent scholars and public men in Massachusetts, and showed that it was their finished culture which gave them their power.

On Friday, the Association met in three different sections. The High School teachers assembled in the hall of the English High School, W. F. Bradbury, of Cambridge, in the chair. More than six hundred persons were present.

Mr. E. S. Frisbee, of Northampton, read a paper on branches to be included in our English course of study. He thought the High School should meet all reasonable claims of utility, and have for its great and mental growth, power, culture, and refinement. The fitness of the several branches to produce these ends was examined at some length.

Elbridge Smith, Esq., of Dorchester, read a paper on the subject, How shall the English language be studied in the High School?

In the afternoon, a very able paper was presented on the relations of the High School to the College, by S. H. Taylor, of Phillips Academy, at Andover. All of these papers were fully discussed.

The Grammar School section met in the Lowell Institute, A. G. Boyden, of Bridgewater, in the chair. It was thought about fifteen hundred persons were present.

L. B. Monroe, of Boston, delivered a lecture upon Physical Culture in schools. He thought teachers should seek more to promote in their pupils symmetry of form, a proper position and carriage of the body, right habits of breathing, good voices, and all things which would conduce to general good health.

Addresses were also made by Mrs. Smith, of Oswego, N. Y., on the method of teaching Geography; by Mr. Scott, of Westfield, on teaching Grammar; and by Mr. Harrington, Superintendent of Schools in New Bedford, on Oral Instruction.

Very lively discussions took place upon the several subjects.

The Primary School section met in the Wells School-house. Mr. Hagar, of the Salem Normal School, conducted the session.

Miss Stickney, of the Boston Training-school, read an essay on the influence of Primary Schools in educational reforms.

Several persons read essays or made speeches upon the method of Primary Instruction; Primary School government and management; and Phonetic Spelling.

Miss Fessenden, of Boston, gave a very interesting object-lesson to a class of little children.

There were about a thousand persons in attendance at this section. It will thus be seen that fully three thousand persons were in attendance upon the several meetings during the day.

The evening was devoted to a social re-union of the teachers and their friends. Faneuil Hall was opened to them, and was filled from an early to a late hour with an array of intelligence, manly and womanly beauty, seldom seen within its walls. Gilmore's Band was stationed in the gallery, and did their best to add to the enjoyment of the occasion.

On Saturday morning Tremont Temple was filled, notwithstanding the driving snow-storm which took every one by surprise. Mr. Greenough, of Westfield, spoke upon the teacher's work in the school-room. His remarks were eminently practical and characterized by sound common sense.

Dr. Henry W. Williams, of Boston, read an elaborate scientific paper on "Near-sightedness and other optical defects in our school children." The object of the paper was to point out the danger to eyesight in keeping pupils too long poring over small printed books, and other occupations which too severely taxed their eyes.

Prof. Atkinson, of Boston, made an address upon Mathematical studies. He contended that a reform is needed in those branches—that the right things are not taken up at the right time. His remarks elicited quite a sharp discussion by Mr. Philbrick, Superintendent of Schools in Boston, and others.

J. W. Dickinson, of the Westfield Normal School, was chosen President of the Association for the ensuing year.

The whole tone of the meeting from the beginning to its close was interesting and profitable to all present.

GERMANY.—A new and not unimportant reform is about to be introduced in German schools, viz., the abolition of all afternoon classes. It was principally during the past summer months that the experiment was almost forced upon the authorities. The results are, on all sides, reported to have been more than brilliant. The forenoon classes are, we believe, somewhat, but not much, longer than formerly, but it is said that the pupils show an eagerness and a vigor in those short morning hours which has never been known before, and their progress is quite in keeping with their keen and energetic assiduity. The most curious point about the matter seems to be the fully authenticated fact, that, the schools having hitherto only closed experimentally earlier or later according to the wishes of the respective head masters, the progress shown by the various schools stands in an inverse ratio to the duration of the classes, or, in other words, the less hours beyond the four or five of the morning in school, the more did the boys get on with their work.

The school population of the United States is 5,000,000, requiring 20,000,000 books at a cost of \$18,000,000.

BOOK TABLE.

A MENTAL ARITHMETIC, by Geo. P. Quackenbos, A. M. D. Appleton & Co., New York.

This book shows many important improvements over any former publication of the kind. It is made more practical and less merely theoretical than is common thus familiarizing the pupil with such matters as will come before him for solution most every day in business life.

GUYOT'S ELEMENTARY GEOGRAPHY for primary classes. New York. Charles Scribner & Co.

This work is a small quarto of about 100 pages. It is very attractively arranged and executed. We should think the scholar would be interested in the study. The geographies by this author seem to be meeting with public favor, a half a million copies having been sold since they were put upon the market, a little more than a year ago.

FELTER'S FIRST LESSONS IN NUMBERS, illustrated, Chas. Scribner & Co., New York, is a very clear, simple, and well-illustrated book for beginners in arithmetic.

FELTER'S INTRODUCTION TO THE ARITHMETICAL ANALYSIS, designed for Primary Schools, containing mental, slate and blackboard exercises. Chas. Scribner & Co. New York. This book is one step in advance of the first lessons, and comes on with ease and by natural progress.

ELEMENTARY HISTORY OF THE UNITED STATES, with numerous illustrations and maps, by G. P. Quackenbos. New York. D. Appleton & Co.

This is a new and improved edition of the author's former work, with the text unchanged, but improved in form, new maps added, tables with questions on them introduced, and the whole brought down to July, 1868.

The book is really an interesting one to read, and cannot fail to hold the attention of the learner.

THE ATLANTIC MONTHLY for November opens with the first of a series of articles on "Co-operative Housekeeping," in which associated action the writer proposes to find the remedy for woman's wrongs. "What Five Years will do," is a story of the war. "My Visit to the Gorilla," describes, not the wilds of Africa, but one of the wonders of Barnum's Museum. There are valuable papers on "Sculpture in the United States," and "Calico Printing in France." These, with the remaining articles, make up an average number.

ARTHUR'S HOME MAGAZINE is always welcome. With increasing years it increases in interest and usefulness. "The Hollands," a new serial, by Virginia F. Townsend, is now running through its pages.

HARPEBS' MAGAZINE for November has been received. The article on fish-culture is timely, and will be read with interest. The general table of contents is of the usual character.

THE YOUNG FOLKS for November has the usual variety of good things from the children's favorite authors. It is profusely illustrated by Champney, Eytänge, Geo. G. White, W. L. Sheppard, C. C. Griswold, and B. Day. The attractions for 1869 will exceed, if possible, those for the current year. Ticknor & Fields, Boston. \$2.00.

THE STUDENTS' NORMAL.

Portland, November, 1868.

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THE EDITORIAL for this department was not received till too late for insertion in this number.

A Year on Venus.

Our visit to Mercury was not so pleasant as it was instructive. We have learned some facts which we did not know before. We propose now to take a journey to the most beautiful of all the stars of the solar system. Venus is called the "queen of beauty;" she is the most brilliant of all the planets, shining so brightly in some cases as to cast a shadow at night. At times she is evening star, and, at other times, morning star. She is so very bright at some seasons as to be seen with the naked eye at midday. This occurs only once in eight years, when the earth and planet return to the same situation in their orbits. The last time this happened was in February, 1862.

We have learned all this by watching her from our own home. We will now take passage to the fairest of planets, and note what we see on its surface. The distance is about 23,000,000 miles when she is nearest to us, and when farthest away, it is more than 159,000,000

miles. This aerial traveling is splendid, how quick we go, we have arrived already, and it is the first day of summer.

The climate is quite tolerable compared with the excessive heat we experienced on Mercury. The light and heat of the sun are only about twice as great as we have them at home. This makes it quite hot of a summer's day, to be sure, but very agreeable in the winter.

The hardness or solidity of Venus is only one-fifth greater than that of the earth, and we find both soil and water here. The heat of the sun draws up the vapors which form thick dark clouds that hang over us every day and relieve very much from its oppressiveness, and prove truly grateful to us this midsummer day. We did not like cloudy weather at home, but here we enjoy it vastly. The days here are just as long as ours, Venus revolving on her axis once in twenty-four hours. This is so natural we hardly should know but we were on the earth still. But the summer is gone and we have been here only fifty-six days.

Autumn is quite pleasant, and we are only surprised that the people have found time to do anything besides plant, and weed, and cultivate, and harvest, everything grows so rapidly, and the seasons are so short. Harvesting has been completed while we have been occupied with the strange and curious things that meet us on every hand, noting the monstrous mountains, that even in this torrid land, rise so high that their tops are covered with perpetual snow; viewing the beautiful streams, cascades, and lovely lakes; the superb minerals, which are so abundant as not to be re-

garded with anything like the appreciation we should expect.

Winter has come, and here in this temperate zone, it is truly delightful. With open windows and doors, we are exceedingly happy to chat away the time with the pleasant inhabitants, and anon with covered carriage and good steed, we view the landscape, and quaff the spicy breeze. By traveling around Venus, we find she is almost as large as our earth—only 1245 miles smaller in the whole circumference.

It is growing warmer every day, and spring is upon us. We must be diligent in our observations or we shall not get through in the allotted time. The unevenness we noticed on the edge of Venus when looking at her through a telescope is probably occasioned by the shadows of the great mountains, and the spots we so often see must be the thick dense clouds. The atmosphere of Venus gives her beautiful twilight evenings, and a long dawn in the morning, very much like what we have on the earth, but we have seen no moon to gladden and make beautiful her nights, and the clouds are so constant we have little opportunity to see the stars.

Venus travels round the sun once in 225 days, making her year equal to seven and a half of our months. She moves very rapidly, twenty-two miles in each second, but not so fast as Mercury, which gets over thirty miles of space in a second of time. Our time is up; the car is ready, and we will go home. But on the way we will converse a little about this lovely speck in the skies.

This planet, being between us and the sun, has all the appearances, when seen through a telescope, of the moon. It is *new*, and shows a delicate rim of light; it grows to be a *half* when half its surface is lighted by the sun, and anon it is *full* when it is far away beyond the sun, and no shadow falls upon it. The apparent size, when at its extreme distance, is as ten to sixty-five when it is nearest to us.

The study of this beautiful planet is very interesting to us, and gives us a de-

sire to know more of the others. It recalls to us some of those expressions of David in the Psalms, concerning the heavens, and magnifies God in our minds and exhibits his glory.

Composition Day.

A DIALOGUE.

"Don't you hate composition days," said Nellie to her Cousin Ella, who was visiting her.

"Hate Fridays, no indeed; why, it is the pleasantest day of all the week at our school. We have real fun."

"Real fun! You are a funny girl, Nell, to get fun out of a composition. Why, at our school, we all have a regular cry, and the pouts every time compositions come round. Miss Small has to threaten and scold to make most of the girls write. Then it is all so pokey after it is written. Let me see, the subjects to day were three springs, two summers, and I don't know how many autumns and winters. One wrote on Happiness, and thought she was far enough from it while reading and writing her composition. Then we had one on Temperance, and so on and so forth, all as dull as an old sermon."

"You do make out a doleful case. I don't believe I should enjoy your Fridays very much."

"Well, what do you have so much better? I should like to know how you make it *bearable*."

"We all have composition just as you do, but there is no threatening or scolding. After our teacher gives us subjects and a few hints, Thursday afternoon. Sometimes we have a debate. Then we choose sides and try hard to see who will have the best arguments. Our last question was, 'Is it right to follow the fashions?' and we had fun enough too."

"Did you read your own debates?"

"Yes; and while the others were reading we wrote answers on our slates, and read them too. Then we took a vote, and I tell you there was considerable excitement about the yeas and nays. The little girls had very cunning little stories about their kittens, and dolls, and plays. Oh, I know you would enjoy our Fridays! Every one says, when school is done, haven't we had a *splendid time*?"

M.

The Travelers.

A Simple Dialogue for Primary Schools.

TEACHER.

Bright little children, all in a row,
Tell me where you'd like to go.

JOHN.

I should like to go to that garden bright,
Where Adam and Eve first saw the light;
Its pretty flowers and fruit I'd see,
And I'd look for the famous apple tree.

MARY.

I should like to visit the distant west,
Where the golden sun lies down to rest;
I'd touch those clouds of crimson hue,
And see what is behind them too.

FRED.

I should like to visit that sea-port town,
Where the British rule first tumbled down,
Where Bunker Hill towers up so high,
And *Yankee notions* you can buy.

GRACE.

I should like to go to Dixie land,
Where the flowers blossom on every hand,
Where the cotton waves and the rice flowers
nod,
Where *all nature* speaks the love of God.

LITTLE WILLY (*nodding*).

I am sleepy, and my head
Says, "I should like to go to bed."

JOSEPH.

I should like to go to Switzerland,
Where the mountains are high, the glaciers
grand;
Far better than Boston or Eden 'twould be,
The home of William Tell to me.

KATE.

I should like to visit the silver moon,
And see the man that came down too soon;
Old mother Goose would pass me by,
Sweeping the cobwebs from the sky.
The stars would be my shining track,
I'll tell you the rest when I come back.

JAMES.

I should like to go, if I had my mind,
Where plenty of gold and silver I'd find;
Pleasure and honor I would not miss,
Do you know of any such country as this?

MARY (*singing*)

Mid pleasures and palaces
Though we may roam,
Be it ever so humble,
There's no place like home.
A charm from the skies
Seems to hallow us there,
Which, search all the world through,
You cannot find elsewhere.

Home, home, sweet sweet home,
Be it ever so humble
There's no place like home.

All repeat the chorus together.

BELLE BRANDON.

Leaves from Dora Dean's Journal;

OR, STEPS TOWARD THE TEACHER'S LIFE.

Number Four.

BROOKSIDE, June 10, 18—.

This is the second week of my first school, and I have got things into pretty good working order. The dreaded committee visited us Friday. They made the remarks usual on such occasions, and expressed themselves satisfied with the appearance of things. Father says they told him, "*Dora had some snap.*" I hope they didn't mean *snappish*. Dr. Day's last words when he left the school-house were, "Be strict, now, Dora. Put it on to them if they don't mind."

June 15.—Ebenezer is beginning to show his colors, and I fear I shall have serious trouble with him. He is sixteen years old, but a very backward scholar. Does not even know the multiplication table. I have been trying to drill it into him at the particular request of his parents, but I have not carried him beyond the line of threes in as many weeks.

To-day matters reached a climax. Eben absolutely refused to recite. I tried gentle means at first, but at length (like the old farmer who drove the boy from his apple-tree) I was obliged to try "the virtue of stones." With fear and trembling I took a rod from my desk and brought it down heavily over his unresisting shoulders.

How it happened I know not, for, though very small of his age, he might easily have overpowered me, but he made no attempt to do so. He only cried lustily, and promised to do all I wished.

I felt like a conqueror when I came home to-night, but since I have cooled down a little, I cannot help feeling something like a sense of degradation at the conquest I have made.

Just think of it. I a girl of fifteen years engaged in a pitched battle with a boy of sixteen. And yet what else could I do? I had tried (as I thought) all that gentleness could do, but without effect. I must then either call in the rod or the committee. Public opinion is such that if I call in the committee, I might as

well leave the school. "She cannot keep order," would be the cry. "Had to call in the committee."

I dread to-morrow very much. The path of the school-teacher is not all strewn with roses.

June 16.—My pummeling experiment seems to have had a good effect. Ebenezer has begged my pardon, and is as good a boy to-day as I want. I am not more than half convinced, however. I think there must be some better way, if I could only find it.

Aug. 1.—My Journal, you have been neglected for the past few weeks, but you must excuse me (for you, poor unconscious paper, do not know the anxieties of a young school-teacher, as the dreaded examination approaches). But now my school is closed, and I can say with Cæsar, "*Veni, vidi, vici!*"

It has, on the whole, been a very pleasant term. I think the scholars have learned, and I know their teacher has learned still more. Ebenezer has overcome the multiplication table. Tommy Jones, who was a week in learning A, can spell easy words of one syllable, and the first line in "B-a-k-e-r."

Examination day passed away pleasantly. The children trimmed the house with evergreens, put vases of flowers in every corner they could, had their faces clean and hair smooth, and, best of all, recited "remarkably well." All seemed pleased. One of the visitors made a speech that I shall never forget. He commenced by saying, "I thought I would come in for to see how you were gotten along. I'm dreadful pleased with your performances. You done well. You've got a first-rate little teacher, and in after years you will look back upon the instructions of that young lady, *Dory* (here he pointed at me with his finger), with great gratitude."

I think I can say to you, my Journal, that the day was a success, and that the tears I could not help shedding as we parted were tears of mingled sorrow and gratitude. I feel that "that young lady, *Dory*," has *reason* to be thankful that this first attempt in her chosen calling has not been a *failure*.

D. D.

The Two Angels.

A TALK WITH THE LITTLE ONES.

"What is it, Charley? I saw your hand raised, did I not?"

"Please, teacher, you said you would tell us something if we had our lessons good."

"Yes, Charley, you have recited your lessons nicely. You have all been very good children. So we will have one of our pleasant talks together. I told you a story yesterday; who can tell it to me to-day? One, two, three hands up; yes and more too. I am glad so many remember it. Arthur, will you tell the story?"

* * * * *

"That is very well. Now see if you can remember what I tell you to-day as nicely.

"You have heard a great deal about angels and know who they are. We cannot see them, but I think some of them can see us, and are very near us all the time.

"Some writer says there are *two angels* near each of us. One is over the left shoulder with a book in his hand to mark down every bad word we speak. He looks very sad as he puts down those terrible black marks. If he sees a little boy take anything that is not his, he puts that down. If a little girl tells her teacher something untrue, he puts that down. If you whisper and say you have not, he makes another long black mark. I wonder how many black marks he has put in his book for you to-day."

"Teacher, tell us about the other angel; what does he do?"

"The angel over the right shoulder writes down the good things. I think his task is much more pleasant. Still he must be very sad sometimes that he has so few good deeds to put down.

"Now I want you to think a few minutes, children, and then tell me which angel has made the most marks for each of you to-day?"

"Helen, how is it with you?"

"I don't believe I have got one good mark, not one."

"Why not, Helen?"

"Oh, I was cross, and everything went wrong this morning. Then I plagued Hattie so that she couldn't study, and I—I—whispered and laughed and played. I am afraid my marks are all bad."

"And, Willy, what do you say?"

"I know I have had some wrong things written down, for at recess I got mad with Charley about a ball, and I called him names. I wish I hadn't now."

"Minnie, what do you think about it?"

"I guess I got a black mark in the angel's book, for I took some sugar out of the sugar-bowl when mother told me not to."

"I expect *all of you* can think of some wrong things done. Can you think of as many good deeds? I hope the angel over the right shoulder has some good marks for you."

"But are the angels really there teacher? (asked Charley, looking over his shoulder)."

"I cannot say, my boy; I do not know. But I do know that God is by your side. He keeps a book of remembrance, whether the angels keep one or not. Should you like to see the book to-day? Ah, you shake your heads. You would be afraid to see it. But if you go on thus every day, think how many black marks you will get in a week, in a month, in a year. What will you do with them?"

"We will try and do better."

"But doing right to-morrow will not mend to-day's report."

"What shall we do, teacher?"

"Get God to *rub out* all those black marks."

"Will he do it?"

"Yes, if you are really sorry you have done wrong, he loves to rub out your sins. Will you all ask him to-night to forgive you, and make you better children? Ask it for Christ's sake, who loves children and who died for them." S. E. M.

Butler compared his knowledge to a point; Newton his to the shells a child picks up on the shore, and Socrates represented his as nothing.

Labor makes ease delightful. Nothing valuable is attained without exertion.

Old Foggy in the School-room.

PROGRESS. Well, neighbor Foggy, I was glad to see you at the examination of our school to-day. I hope you enjoyed it.

FOGgy. Yes, jest about as much as I should to listen to a parcel of Injins a talkin. There was some sense in teachers and schools *when I was a boy*, but things is different now. Don't know what the world's comin to.

PROGRESS. Why, what is the matter now?

FOGgy. Oh, so many new-fangled studies. Don't believe in so many ologies and all that sort of things. Its enough to know how to read and write and cipher through interest. What's the use turnin boys, and girls, heads with 'Stronomy. They'd a sight better be workin for a livin than gazin at the moon and countin the stars. Don't wonder we have so many moon-struck youngsters. All nonsense, too, tellin how far off the stars is, and what they's made of. No human bein can measure the miles from here to the moon.

PROGRESS. Oh, neighbor, you are indeed behind the times. Science can really determine the distance of heavenly bodies within a thousandth part of an inch.

FOGgy. Don't believe it, and don't want to, either. Better look on the earth and let the folks that lives in the stars have their own row. Then all them figers they explained in philosophy. Don't believe they believed what they were saying theirselves. *Bile an egg 'thout cookin of it!* How Peggy would laugh to hear that. Then its more'n human natur can bear to have these little upstarts stand up there and tell us old folks that the air of heaven is lighter on a wed day than on a dry day. My father and grandfather before me used to say,—

"Rain is there,
Heavy's the air,
For the smoke comes down
Upon the town."

PROGRESS. Ah, neighbor, you have quoted one of the very arguments the scholars gave to-day. The air is light

and the smoke is heavier than air, so it sinks.

FOGY. No it don't, nuther.

PROGRESS. What, do not heavy bodies sink in lighter ones?

FOGY.—No, some don't. I know the air is heavy when it rains. Shan't believe nothin else.

PROGRESS. Oh, that's the trouble, is it? You *wont* believe anything. You are not open to conviction. I am sorry; for this is nevertheless an age of progress. Things are *not* just as they were fifty years ago. Every year brings some new discovery in science and art.

FOGY. So you say, but I say the schools of fifty years ago were enough right, better'n all your modern trash. What's the use now of all that beatin and jerkin and clappin the hands, and kickin the feet. Looks foolish to try to git larnin that way, or if you mean it for a frolic, an old-fashioned dance is better'n all your *German antics*. Shan't send my child to no sich place.

PROGRESS. Well, neighbor Fogy, I give you up as a hard case. Permit me to say in closing, however, that it strikes me you know very little about the schools of even forty years ago. I presume they studied grammar then, and I take the liberty of an old friend to inform you, that yours does not in all respects agree with *ancient* books I have read on the subject. It strikes me if you had been more thoroughly taught in the schools of your own time, you would better appreciate the advantages of ours. I will not trouble you further with discussion as to the improvements of to-day. Our schools need not my defence, and as to yourself, perhaps I should remember the old adage, "Where ignorance is bliss, 'twere folly to be wise."

Knowledge is worth nothing, unless we do and teach the good we know.

He that learns *useful* things, and not he that learns *many*, is the wise man.

Why is knowledge like a river? Because the stiller it is the deeper it runs.

Those who know everything in general know nothing in particular.

NUTS TO CRACK.

Grammatical.

Parse the following sentence: "He said that, *that that (that that, that that man mentioned)* was a conjunction."

Arithmetical.

Use all the ten numerical characters, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, but each only once, to form numbers which, when added together, shall amount to just 100. This must be done without the use of fractions.

A man over 72 years old has had but 17 birthdays. Explain this.

Shakesperean.

KIND.

You will observe that the D is not quite perfect. There is a little notch in it. The answer to this puzzle is found in Hamlet.

Answers for October Number.

Geographical.

ONE OF THE GIRLS has done very well on this, and we hope the following will clear the matter up to her understanding:

The length of the day to the one going east is $3\frac{3}{4}$ days = 23 hrs. 56 min. $3\frac{1}{2}$ sec. The length to the one going west is $3\frac{3}{4}$ days = 24 hrs. 3 min. $57\frac{1}{2}$ sec. The one going east thinks he returns on Saturday, April 2d. The one going west thinks he returns on Thursday, March 31st.

To the last question I may not give the right answer. If the days of the week in the United States harmonize with Europe, and if Asia harmonizes with Europe as regards the days of the week, then the calculations of the man going east will be correct. He will meet the other man on Friday noon, the other thinking that it is Thursday noon. The man going west will lose the right calculation in crossing the Pacific.

Chemical.

Black sheep have less wool than white ones, because there are *fewer* of them.

THE MAINE NORMAL.

VOL. II.

DECEMBER, 1868.

NO. 12.

TACTICS OF THE SCHOOL-ROOM.

NUMBER NINE.

Reviews.—Reviews are recitations in every proper sense of that term. It is hardly correct to call them a kind of recitation merely; for no recitation, or series of recitations, can be complete without reviews. All teachers think highly of reviews, and talk much of their importance, but do not, we think, as a general thing, make much of them. Admitting that a thorough review of a lesson is equally important, if not even more so, as the same lesson recited as an advance, they nevertheless devote far less time to it than they do to the advance, and seldom exact as much of the pupil in the way of thorough and critical explanation, as when he goes over the lesson for the first time. In other words, reviews are greatly slighted; and to the teacher they are to a very considerable extent unsatisfactory. The usual complaint is, that want of time prevents that attention to them which they would very gladly give were it in their power to do so. Teachers who slight reviews for that reason, err greatly in judgment. If we have an advance lesson to-day, and a review of the last lesson, the review should be attended to first, even if it occupies the greater part of the recitation-hour. If any part of the lesson is to be short of time, let it be the advance; for that can be attended to at a future day; but a review once slighted for the want of time, will hardly be likely to receive any attention afterwards. In general, reviews of a text-book or of considerable portions of it, teachers often attempt to do so much work in a short space of time, that the work

cannot be thorough or satisfactory. Not unfrequently the advance work in a branch of study is pushed forward with great rapidity, until near the close of a term, for the purpose of completing the book or topic, and then the general reviewing must all be done in a few days and at high pressure speed. Such a course is unwise. Half a text-book, well learned and thoroughly reviewed, will be more beneficial than the whole of the book rapidly and superficially learned, and but poorly reviewed. Teachers are quite as much to blame as pupils for that foolish ambition so often witnessed, to "get through" with a book or subject.

Reviews are too often conducted without a judicious plan. We have a decided objection to what may be denominated *periodical* reviews. By this we mean the practice of reviewing once a week, or once a month, etc. The object of a review is not merely to go over a lesson a second or third time; on the principle that repetition will aid the memory in retaining what has been once learned. There is a higher and more important object to be attained; and that is to present a subject to the mind as a whole, and in its various relations, so that it can be grasped and retained philosophically, and thereby become a permanent acquisition capable of ready and intelligent use. Topical reviews are therefore far preferable to the kind mentioned above. Daily reviews of the last previous lesson we have already spoken of in a former article. Next after such reviews, let them be taken up by topic or subject, in such a way that there may be a completeness to the review when it is done. In Arithmetic, for example, instead of stopping on a given day in the week, in the midst of a rule or example, to review merely the past week's work, let the topic or chapter upon which the class is engaged, be taken up as a whole. When multiplication is finished let the whole of it be reviewed; and so of any other rule or subject. In History, let the reviews be by periods, campaigns, settlements, the term of a ruler's administration, etc., etc. These few hints will give the teacher, we think, an idea of what we mean by topical reviews.

Reviews should be varied so as to look at the subject from different stand-points. We may review the history of the American Revolution chronologically, taking up the events in the order in which they took place, each year by itself; then by States; then by campaigns, as the New England campaign; Burgoyne's campaign; the campaign of the Southern States, and so on. Settlements may be reviewed by varying them according to their dates; section of the country where they were

made ; and according to the different nations by whom they were made. The geography of a continent, or a country, may be taken up as a whole, and then by its mountains ; its rivers ; the face of the country ; productions ; climates ; government, &c. The teacher's ingenuity and good judgment will readily suggest an almost endless variety of reviews after the manner above mentioned.

If it shall be objected that such a method will require much time to carry it out, we would say, in reply, that that is its chief recommendation ; for it will secure what is greatly needed—more thoroughness in reviewing.

Frequency of reviews should be more encouraged by those who have the oversight of schools. Many subjects need not only to be reviewed, but to be re-reviewed over and over again. The benefits to be derived from such a course are so obvious and so sure that any further explanation is unnecessary.

We bespeak, therefore, for reviews, that they may be more frequent, more thorough, never slighted, and always conducted upon some regular and judicious plan.

A. P. S.

DEBATES IN SCHOOL.

DEAR NORMAL,—I cannot let your second volume be completed without further proving to you my interest in your welfare. In a former number I gave you some thoughts upon Journal-writing in school ; now let me present for your consideration some remarks upon Debates in school.

In my early days of teaching, I found great difficulty in developing the *thinking* powers of my pupils. The memory had been well cared for. Lessons assigned were glibly given, but when questions outside of the text-books were asked, then came a silence. How can I develop this power ? was the question that constantly presented itself to my mind for solution. I decided it in this way : I told my pupils that on the following Friday afternoon I should form them into a Literary Society, and that they should be prepared to choose their officers. The time came. All were eager ; and, after some remarks by myself on the advantages to be derived, we proceeded to the organization. The various officers were duly chosen, and also a debate committee to select questions for discussion. That afternoon was well spent ; although none of the

pupils recited any lessons, they learned how to organize a society. They learned how to vote intelligently, and how the ballots on such occasions are counted, besides becoming acquainted with a few of the more common parliamentary rules.

The following Friday the debate came off, together with some readings and declamations. On this afternoon I allowed those who were to take part in the debate to *write* what they had to say, with the understanding that thereafter, *notes only* were to be used. I tried the plan through a term of seventeen weeks, and was well pleased with the result at its close. At first, many of the pupils could get no further than "Mr. President—I think—I think;" but with true yankee pluck and with encouragement, they soon were able to discuss, in a creditable manner, any questions propounded to them. At the end of the term they voted to have a public meeting, and invite their friends. The occasion was gratifying to all, and on Fridays, of the following term, persons visited the school who could not be induced to come at any other time.

Now see the effect. It sharpened the wits of the pupils. The questions, proposed a week beforehand, were thoroughly discussed by them during the week, on the play-ground and at home. From the pupils it spread to the parents, and I found that not only were the questions discussed by the former, but that the latter seemed equally interested; and at the "sewing circle," the same questions furnished topics of conversation.

The organization and its management I placed fully in the hands of my pupils, reserving to myself, however, the veto power which was rarely called for. The order of the meetings was entirely under the control of the President. Cushing's Manual was their parliamentary guide. Frequently I left them alone, and always found that they fully appreciated the trust. The thought that the maintenance of good order rested upon their shoulders, was sufficient to deter any from being "out of order."

Soon after the second term had commenced, came "Town-meeting day," and the pupils had an opportunity to observe how such meetings are conducted. Some of them afterwards told me that "the moderator wasn't posted in parliamentary rules and practice,"—and their criticisms, to my thinking, were not very unjust.

Now let me enumerate what I considered as gained by the introduction of the plan:

1. The pupils become interested in Friday's work (in some schools it is Wednesday's).

2. It set them to thinking, and sharpened their wits, and this whetting I took advantage of in conducting their recitations.

3. It enabled them to rise and speak their thoughts without hesitation, stammering, or unnecessary clearing of throats; and were their arguments assailed, to reply; replying briefly and to the point, as some were allowed to speak more than twice on the same question.

4. They gained a knowledge of parliamentary rules and tactics.

5. It led them to read more carefully what they read, and to remember what they read.

6. Being thrown thus upon their dignity, they learned how to take care of themselves.

Other points might be noted, but my time will not permit. Some, perhaps, may say that such a plan could be adopted in a private school of boys, and not in a public one. In reply, I would say, that I have since tried it in a public high school, where both sexes attend, and the ages of the pupils range from thirteen to twenty, with as good success as in the case I have described.

Truly yours,

G. FRANCIS ROBINSON, A. B.

Kennebunk, November, 1868.

THE GREELY INSTITUTE

AT CUMBERLAND, ME.

The founder of this Institution of learning, Eliphalet Greely, Esq., late a resident of Portland, left in his will to this his native town, the sum of twenty-eight thousand dollars for educational purposes,—namely, for the erection of a brick edifice, two stories high, with suitable apparatus and library, at the expense of eight thousand dollars; the remaining twenty thousand to constitute a fund, the avails of which are to be employed in keeping the school in operation.

It will be seen that the tuition will be gratuitous. The persons, enjoying this privilege, are all belonging to the town of Cumberland, between the ages of twelve and twenty-one.

The building has been faithfully and tastefully finished, under the supervision of Mr. Harding, of Portland, architect, with play-grounds of pleasant location, containing three or four acres, and is situated near the cemetery, where repose the relics of the ancestors of Mr. Greely, in close

proximity with the church (rebuilt) where he and his fathers worshipped. A splendid monument, near the academy building, marks the spot of his sepulture.

The dedication of the building took place on the 29th of September. An address on the occasion was delivered by Rev. E. S. Jordan; consecrating prayer by Rev. Isaac Weston. Several extemporary addresses followed, and a hymn, prepared for the occasion by I. Weston, closed the services.

Your magazine, we doubt not, will love to record in its columns this act of the beneficent donor, as worthy of such a memorial, and as an example of high regard for the cause of education, and of his deep affection for his own birth-place.

The school is in operation under the care of Thos. J. Emery, a recent graduate of Bowdoin College, and Miss Russell, of Yarmouth.

Already is this beautiful building inspiring by its very presence the susceptibilities of our youth, to improve the rich opportunities it affords of gaining sound and ample learning; and it will, doubtless, prove as an awakening monitor to the generations following, to "watch at wisdom's gates, and to wait at the posts of her doors."

Preparation for college, and for the higher walks of life, will here be afforded, and the inconvenience of having to repair to other towns for an education for our youth, which the present times demand, will no longer exist.

Thus it may come to pass, in all coming time, as, in the language of the Bible, "That our sons may be as plants [not weeds] grown up in their youth [strong and healthy and wise men even in their youth]; that our daughters may be as corner-stones, polished [or cut, it is in the margin] after the similitude of a palace." How beautifully descriptive is this allusion which the Psalmist has made to the daughters of the land, and how just. "Corner-stones" in the social compact; and "polished" is enough, one should think, to be said in their favor, to meet their highest and justest claims.

I. W.

The secret of successful teaching is, to teach *accurately, thoroughly, and earnestly*, which will impart interest to instruction, and awaken attention to them.

THE SEA.

“Break, break, break,
At the foot of thy crags, O sea!”

Who does not love the sea? One who has lived upon New England's stern and rock-bound coast—perhaps his birth-place—has learned something of the power and majesty of God, and the grandeur and magnificence of his handiwork.

He has seen his power displayed in the fury of the storm, the waves lashing against the stern and weather-beaten rocks, which have borne the wear and washing of many a storm, and the rough usage of many years. He has seen the gentle zephyr swell suddenly into the powerful gale, the blue waters—which were lying calm and tranquil beneath the azure sky—rise, under the influence of the storm, and swell into mighty billows, “roughening their crests and scattering high their spray,” and dashing against the shores in almost ungovernable fury. God pity and help the mariner at *such* a time!

“And there shall be no more sea.”

How expressive and suggestive to those who make “old ocean” their home! The sea is an emblem of separation. It divides lands and countries from one another, parts continents, and washes the shores of lone and solitary islands, isolated as it were from other parts of the world. It is also an emblem of solitude. Friends leave us and go to distant lands. We bid adieu with moistened eye and trembling lip, for after they have left us, we know that *the sea* divides. We are alone!

If we would go to them or they would come to us, we feel that the dangers of the deep are to be braved, and our lives perilled, before we can meet again.

Those who go down to the sea in ships, are constantly exposed to danger and peril, and loving hearts at home are filled with anxiety on their account. The sea is an emblem of unrest, discontent. How like the heart of man! dissatisfied, longing for what it has not; restless, changeful.

The waves seem sometimes as if they would burst the barriers of land which skirt them, and chafing under restraint like a bridled horse, would break away and rush forward in ungovernable fury. We should almost fear for our own safety, did we not feel that “He holdeth the waves in

His hands,"—"He rideth upon the storm," and feel secure beneath the protecting arm of our heavenly Father.

And if Christ, our Saviour, is our Pilot when the storms of life are over, we shall not fear, but shall anchor safely in the haven of *eternal rest*, to go no more out forever.

"And there shall be no more sea."

EDNA.

THEN AND NOW.

The hawthorn trees were white with bloom
 And like the fallen snow,
 Upon the ground the blossoms lay,
 In the days of long ago.

Into the church the south wind bore,
 Upon its airy wing,
 The scent of the early blossoms,
 The harbinger of Spring.

The people came from far and near,
 On that sweet Sabbath day,
 To hear the word of God, and round
 One common altar pray.

And the good man preached a sermon,
 Of the blessed life to be,
 While a morning hymn the robins
 Sang in the hawthorn tree.

The years have flown, the people gone,
 The church stands here alone;
 The gray moss creeps, the ivy twines,
 Around its walls of stone.

The cricket chirps a sad refrain,
 The silent spider weaves
 His silken tent. I list, and hear
 The rustle of dead leaves.

The shadowy faces of the dead,
 Around me come and go;
 And from the old church-tower, the bell
 Swings noiseless to and fro.

The sad winds wail the vanished years,
 The good man, where is he?
 Ah! the wild birds sing of a new-made grave,
 Under the hawthorn tree.

E. W. J.

"Drill makes the scholar as it makes the soldier; steady, sturdy drill."

FUN IN THE SCHOOL-ROOM.

When I went to get my first certificate, the venerable committee-man along with it gave me much good advice, some of which I have tried to follow, and some I have not. I cannot tell you all the heads of his sermon, but one I do remember,—one as impossible for me to follow as could possibly be. “Madam,” he said (I was only fifteen, and could not keep from laughing while he thus addressed me), “Madam, I wish you to guard against one thing, and that is levity in the school-room. I see even now you are rather prone to lightness, but beware! Never laugh or even smile in the school-room. Always carry a dignified sober face if you would have your scholars respect you.” I thanked the gentleman for advice I knew I could never keep, and, taking my certificate, started for the scene of my labors.

The very first day I caught myself smiling to the little boys and girls as they watched the new teacher, and looked into my eyes to see if I was going to love them. Once in a while something so perfectly ludicrous would happen, that I laughed outright, in spite of myself, and the children laughed too. Sometimes I thought they studied all the better for it. Perhaps my smiles took away from my dignity, but I couldn't help it.

We were parsing one day, and I said to Harry Smith, “Harry, it is your turn, the sentence is, ‘The dogs have barked;’ you may parse it all.” “Oh,” said he, speaking quickly, “teacher, I've *barked*.” We all had a hearty laugh, and Harry joined in it as loud as anybody when he found he had said *barked* instead of *parsed*.

At another time, I called out the primer class to spell, and Joseph, almost a man in size, in a fit of absence of mind went and stood with them, and did not discover his mistake until I put out “boy” to him. Then he laughed and took his seat. How could teacher and scholars keep perfectly sober then?

At another time, I asked John to give me the feminine of monk. “Monkey,” he answered, in a loud, confident tone.

At another time, I asked my pupils if any of them smoked, and one little fellow about ten, raised his hand and said, “I don't, I quit a long time ago.” I wanted to laugh then, but I did not, for I thought that was one of the times when my old friend's advice ought to be followed.

I have generally found that a good laugh, in the right place, will do

more good than a rod. I heard a lecturer, not long since, who said it was always dangerous for a teacher to joke with his scholars. It seemed to me that he was about as far from the truth as my old friend the committee-man. Never joke with your scholars when they have done wrong, would be my advice to any who might want it, but do not be too much afraid of real wit, even in the school-room. It sharpens the intellect wonderfully. I do not wish to laugh at the misfortunes or follies of my scholars, but their innocent witticisms, their child-like blunders, their happy laughter, their quaint sayings, bring the smile unbidden to my face, and do my soul good like a medicine. What shall I do about it?

M.

REMARK. Go on doing just so. You seem to have a common-sense view of the matter. We would give more for the hearty and prompt obedience begotten of cheerful and loving respect, than all the slavish and insincere obedience that has or that ever will be begotten of austere and cold-hearted command. Doubtless there are times to command with a determined and indomitable bearing, but they will not very often occur where the system above described is carried out. ED.

TEACHERS STUDYING.

"I wonder if we have got a good teacher this winter," said Mrs. B to her neighbor, Mrs. A, on the first week of the district school.

"I hope so," was the reply; "and I think so too, for my children are very much interested in their lessons."

"Well, I hope so too, but I've felt suspicious he ain't much from something I've heard."

"What is it, Mrs. A, nothing against his character, I hope."

"No; oh no! I guess he's a good young man."

"Doesn't he keep good order?"

"Yes, for all that I know. I guess he does, for he don't allow any whispering, and when a teacher can govern his scholars' tongues, I think he can keep them straight."

"He ought to know enough to teach our little school, for he's in college."

"Well, yes; but that is what I'm afraid of. I haven't heard any complaint, but I'll tell you what troubles me—you need not mention it. My husband, you know, is agent. Last night he wanted to see the teacher, so he went to his boarding-place and inquired for him. He was in

his room, and Mr. A went up there. What do you think he was doing?"

"Nothing very bad I hope,—reading novels?"

"No, he was *studying his lessons for the next day*. He had even been *studying geography* when Mr. A went in, and he didn't seem a bit ashamed of it neither. There was an arithmetic open too, and a slate that he had been figuring on. Mr. A said, 'perhaps he was keeping him from his college studies; but he said, 'oh no, I make it a rule to study my lessons every night.'"

"Why Mr. Brown," said my husband, "I never heard of a school-master studying his lessons. You mustn't let the scholars know it, or they'll think you don't know much, and have to study to keep up with them."

"What did Mr. Brown say to that?"

"He only smiled, and said, 'I told them to-day that I studied an hour or so every night, and wanted them to do the same.' Don't you think it is rather a bad sign that he has to study so much?"

"No, indeed, my good woman. If that is all you have against the teacher, I guess he'll do. Why, in the seminary where my daughter Mary is teaching, the teachers are all required to study their lessons before going to their classes. It is considered as much the duty of the teachers as the scholars to study."

"But a teacher ought to know enough without studying, so I always thought."

"Yes, but one can find something new about almost every lesson, a new thought or illustration or manner of teaching. I was reading a few days since the life of a celebrated teacher, one who was an honor to her sex and profession, and whose name and words will long be revered,—Mary Lyon. In her advice to pupils who were soon to be teachers she said, 'Study every lesson before you give it to be learned.' I'm glad our teacher follows this advice. If that is all the trouble with him, I'm sure he'll do."

"Perhaps so, but in my day teachers didn't have to study their lessons."

S. R. M.

Alphonse Karr wittily said, touching the abolition of capital punishment for murder: "By all means, only let Messieurs the murderers give the example, and cease to execute us."

ENLIGHTENED JUDGMENT.

To show how our school system, and the practice under it, is received by an enlightened foreigner, we make a few extracts from the special report of Rev. E. Ryerson, chief superintendent of education for Ontario, Canada, on the systems of education of various countries. With reference to the United States he says:—

“GENERAL EXCELLENCE OF THE SCHOOLS. Taken as a whole, I do not think, from my best observations and inquiries, that there is any country in the world in whose cities and towns (except Leipsic in Saxony), the systems of education are so complete and efficient as in the neighboring States, especially in Boston, Providence, New York, Philadelphia, etc. In the style, arrangements, and furniture of their school buildings, in the character and salaries of their teachers, and in every provision for the education of all classes of citizens, there is a manifest earnestness, and intelligence, and princely liberality truly admirable and patriotic. Nothing but a personal visit and inspection can convey an adequate idea of the comprehensiveness and completeness, and even in some instances, grandeur of the establishments and systems of education in the cities, and in not a few towns of our American neighbors.

“THE CITIZEN’S RECOGNIZED RIGHT TO EDUCATION. There is another educational feature common to all the neighboring States, and worthy of the highest respect and admiration; it is the recognition of the right of every citizen to the means of a good education, and the obligations of the State to provide for it. This is an article in the constitution of several of the States, and is recognized by a liberal provision in setting apart the proceeds of the sale of one-sixth or seventh of their public lands to form a school fund for universal education. This has been followed up by school laws, framed in the same spirit and with the same design; very large sums of money have been raised and expended, and a net-work of schools has been spread over the land.

“INADEQUATE RESULTS. But here, in the most of the States, the work has begun to halt, and the patriotic objects of its projectors have been disappointed. The State has acknowledged, and nobly endeavored to redeem, its obligation to provide an education for its every child; but it has not provided that every child should qualify himself by such an education for citizenship. It has placed the right of the

parent or guardian and of the employer or master to perpetuate ignorance, above the right of the child to be educated. It has made universal suffrage the lever to lift the masses to universal education and intelligence, in the absence of the requisite educational power to move that lever. Nor is there any adequate provision to secure the operations of a school in a single neighborhood, much less to secure properly qualified teachers where schools are established. The result is, that when you leave the cities and large towns, and go into the rural parts of the State—the peculiar field of a national school law and system—you there find that our American neighbors are not so successful in their public school economy, and accomplish results very far below and short of the State appropriations they make, and the machinery they employ for the sound education of all the people.

“CAUSES OF FAILURE IN AMERICAN COUNTRY SCHOOLS. An imperfect state and deficiency of sound education must result where the schools are kept open from four to six months in the year by boys and girls from sixteen to twenty years of age, themselves poorly educated, and when so large a number of children of school age do not attend school at all, as shown by the official statistics.

“To what cause or imperfections in American systems of popular education are so much educational failure and deficiency in the rural parts of the States to be attributed? The subject is too extensive for discussion; but I will indicate two or three causes which have been impressed upon my own mind.

“1. The *first* is a *deficiency in the qualifications of teachers*. There cannot be a good school without a good teacher. There must, then, be provision against the employment of ill-qualified teachers, and for securing good ones. In the neighboring States, there is no State standard of a teacher's qualifications, though, in one instance, there is a State Board; there is no State programme for the examination of teachers; in most instances, the Boards of Examiners of teachers are not only local, but are elected by county or township universal suffrage, and each local Board thus chosen fixes its own standard and makes its own conditions and regulations for the licensing of teachers. The State Commissioner of Ohio says: ‘No one can visit the country schools, hear the recitations, observe the discipline, examine the teacher's records, and look upon the cheerless interior and exterior of the school-rooms, without a most depressing conviction of the inferior advantages enjoyed by the pupils, and the unfavorable educational influences by which they are surrounded.’

"2. The *second* cause of this deficiency in the country Common Schools of our American neighbors, appears to me to be, the *temporary employment and insufficient remuneration of teachers*. This is indeed the chief cause of the 'low grade of teachers,' and the still lower grade of the schools. The country male teachers do school-teaching work when they can procure it to best advantage, and farm or other manual work of some kind the other larger part of the year; and the female teachers do likewise. Now, whatever may be the liberality of the Legislature, and the framework of the school system, and the patriotic aspirations and efforts of great numbers of citizens, in such a system of temporarily employing and perpetually changing teachers, there can be no material improvement in either the qualifications of teachers or the efficiency of the schools, or the education of the country youth.

"3. A *third* and fruitful cause of inefficiency in the American systems of popular instruction, appears to me, to be the *mode of appointing the administrators of their school systems, and their tenure of office*. In all the neighboring States, the mode of appointing their State Superintendents has been by popular universal suffrage vote, and for a period not exceeding three years, and in some instances not exceeding two years; in the election of their county or town Superintendents the same system has been pursued. In New York and Pennsylvania a beneficial change has been introduced in regard to the appointment of their State Superintendents—in the former the State Superintendent being appointed by the joint ballot of the Senate and House of Representatives, and in the latter by the Executive with the advice of the Senate; but the tenure of office in both States is for three years, as it is in the State of Ohio, where the State Commissioner of Common Schools is still elected by universal suffrage throughout the State. In looking at the school history of these States for the last twenty years, there are very few, if any, instances of any one of these highest educational officers continuing in office more than three years at a time. There is no department of civil government in which careful preparation, varied study and observation, and independent and uniform action, are so important to success and efficiency, as in founding, maturing, and developing a system of public instruction; which it is utterly impossible to do where no one, placed at the head of the system, has time or opportunity to establish and bring into effective operation any one branch of it. School legislation, therefore, with our American neighbors is as unsettled now, as it was at the beginning of

the last twenty years and more ; it has been undergoing successive modifications ; and their schools (except in cities and towns) are less improved than their country in every other respect. They seem to forget that the *representative* functions of government,—the power to exercise which is based on popular election—relate chiefly to the *making* of laws, and the *imposition of taxes* ; but that the *administration* of law should be free from the influences of popular passion, and be based on immutable maxims of justice and patriotism. They recognize this in the selection and appointment of their supreme judges of constitutional and civil law ; so should they in the supreme administration of school law, and in the development of school economy. Should their State School Superintendents, after being carefully selected, hold their offices during pleasure—another word with us for during the caprice of our complacency—there would be much more hope and certainty of maturing and efficiently consolidating their school systems.

“ Our American friends appear to me to suffer equally, if not more, in their educational interests from their love of rotation of office and frequent popular election to it, in respect to their county and town Superintendents of schools. Their system appears to me to be inconsistent, as a general rule, with the selection of competent superintendents, or with the impartial and thorough administration of the law, among those by whom the local superintendents are elected or opposed, and to whom such superintendents are looking for votes at an approaching election. Under the operations of such a system, it appears to me there must frequently be as much electioneering as school superintendence and administration ; that the latter will often be warped to advance the former ; or, as is expressed in an American report, that there will be much “ log-rolling and pipe-laying ” to secure the universal suffrage of election or re-election to the office, at the expense of the advancement and elevation of the schools.”

TRY.

There's a little word
 I have often heard,
 And it bears a magic spell ;
 It is sweet and clear
 To the listening ear,
 As the sound of a tinkling bell ;
 Would you travel the road of honor,
 You must practice its teachings well.

THE EFFECT OF KINDNESS.

A few years since, while engaged in teaching school for a winter term in the center of the town of C——, not many miles from Worcester, Mass., it was my good fortune to spend occasionally an evening at the house of the venerable Gen. Salem T——, who was then nearly eighty years of age.

He had been a "school-master" in his younger days, and could well instruct me, a novice in the profession.

During his experience, he had for a pupil at one time, Wm. L. Marcy, afterward Governor of New York, and Secretary of State under the administration of Franklin Pierce; and the account he gave of him was exceedingly interesting and instructive.

The school was an "old-fashioned" country school, and young Marcy was one of the "big boys."

Mr. T—— was waited on at the close of his first day's labors by the "Prudential Committee-man," and advised to turn young Marcy out at once, for he would certainly break up the school, as he had done where he had attended before.

Mr. T—— listened with respect to his advice, but replied, that he had seen nothing thus far to justify him in such a course, and proposed to wait until he had a sufficient reason before proceeding to such summary measures. The next day passed quietly and pleasantly in the school-room, but at night Mr. T—— was again waited on, and this time by several of the neighbors, all insisting that "Bill Marcy" should not be allowed to remain in the school.

The teacher was firm, he did not propose to convict without sufficient evidence, and the result was, young Marcy remained in school, worked faithfully, and through the advice of Mr. T—— continued his studies, went through college, and rose to eminence.

Now, why was there such a change in the boy? The explanation is brief. The governor himself used to tell the story, and say that Mr. T—— was the first teacher that ever said "good boy" to him.

Fellow teachers, take the hint. That venerable school-master is now living and enjoying life in his ninetieth year. I met and shook hands with him a few days since at the fiftieth anniversary of the Worcester County Agricultural Society. He is the only original member now living. May his remaining days be his happiest, and may we remember his example.

HENRY PESTALOZZI,

AND HIS SYSTEM OF EDUCATION.

NUMBER FOUR.

The method of instruction followed by Pestalozzi and his disciples in teaching Geography, was eminently successful. The situation of Yverdun, the place in which he lived, was peculiarly favorable in this respect, as in its immediate vicinity were to be found constant illustrations of many of the various forms in which land and water present themselves on our globe. The town is situated in a valley of from six to eight miles in breadth, between the extreme western terrace of the Alps, and the eastern ridge of the Jura. Near by are vast morasses intersected by canals running in every direction. The river Orbe taking its rise in the caverns of the Jura, a short distance from Yverdun, winds through a fertile plain, and descending through rugged scenery; now hemmed in between crags, and now almost stopped in its course by the rocks with which its bed is strewed; swelled by the melting of the mountain snows, precipitates itself over a fall of about twenty feet, forming a magnificent cascade, and filling the surrounding forest with the roar of its thunder. A gradual ascent of successive terraces leads from the town to an eminence from which can be seen the lake into which the Orbe pours its waters. This beautiful sheet of water, from six to ten miles in breadth, is surrounded on one side by ranges of hills, and on the other by luxuriant fields rising in gentle slopes from the water's edge, and delighting the eye with choice vineyards and rich pastures. To add to the grandeur of this view, one-half of the horizon, from north-east to south-west, is broken by the snow-capped summits of the Alps towering in echelon, and far above them all the huge Mont Blanc lifts his awful form in lone and silent majesty.

Such was the school in which the pupils of Pestalozzi studied Geography. Their lessons were given from the book of nature. With them he climbed mountains, explored caverns, traced the winding of the river, and listened to the roar of the cataract, and thus within the sphere of their own horizon taught them more of the natural features of the earth than they could have learned from weeks of study in poring over the pages of a book. Not only this, but he improved the opportunity to

cultivate in them habits of observation, and thus a lively interest was awakened which insured attention to whatever further knowledge he wished to impart. Physical Geography, founded upon knowledge derived from observation, was first taught, and after that, the political divisions into which man has divided the earth.

It is true that but few localities present such facilities for studying the various natural features of the earth; yet almost any spot has many things, which, if aptly made use of by the teacher, would impart much useful information to the pupil, and, what is of the greatest importance, would awaken an interest for something more. When the pupil has become interested, he is sure to learn; while that which he studies as a task does him about as much good as the food taken into the stomach when the appetite does not ask for it. It has been well said that all true knowledge comes from a love of it.

In connection with these studies from nature, and while the pupil is interested, his plan was to require him to draw from maps and data furnished by the teacher the leading natural, mathematical, and political divisions of the globe. For this purpose the modern invention of slate globes is very convenient. One map, as globe, represents the equator, the meridians, the parallels of latitude, the tropics and polar circles. With this map and a globe, for geography ought never to be taught without a globe, the pupil can easily be made acquainted with the change of seasons, and that of day and night. With some object placed near the globe to represent the sun, he can readily comprehend why the sun seems to rise and set, while, in reality, it is relatively stationary.

In a similar way, after having previously led him to observe the fact, that in the morning when the rays of the sun fall obliquely upon any given spot of the earth, the heat is less intense than at noon when the rays are nearly perpendicular, the change of seasons may be illustrated. In studying latitude and longitude, the pupil may first find that of the place in which he lives, and mark the place upon his map, and then locate upon it any other place which the teacher indicates, giving him the latitude and longitude of it.

Thus the phenomena of day and night, and of the seasons and the various problems of latitude and longitude are clearly set before the *eye* of the child; and although he may not yet have mastered all their technical names and definitions, he surely has a more thorough knowledge of the facts themselves, than it would be possible to acquire by a verbal recitation of them.

The next map represents the physical features of the earth. After the general outlines of the continents have been sketched, the first things to be noticed and talked about, are the different ranges of mountains as the supporters of the whole system. The teacher should require the pupil to draw the different chains of mountains which encompass the earth, including those, so far as known, which at their average elevation, lying beneath the level of the sea, raise their highest summits above it, forming groups of islands. An island, then, becomes known to the pupil not as "A portion of land surrounded by water," but as one of the highest summits of a range of mountains chiefly submerged beneath the level of the sea.

The mountains may be divided into classes according to their relative elevation, and marked by a different number of lines, those in the first class by a simple, those in the second by a double line, and those in the third by three parallel lines. This is also a proper time for explaining to the pupil the geological structure of the mountains, the ores which they yield, the snow-line, etc.

Next in order come the rivers. Here the teacher shows the influence which the mountains exert in determining the course of the rivers, how both operate in the formation of the coast.

Following this should be a course in which the pupil is taught the economy of nature in the different countries of the earth. Their vegetable productions and animals should be given in groups, showing their connection with each other, with a reference also to the soil which produced them, and to the climate under which they are placed, so as to form a course of natural history classified according to locality.

Thus far the earth has been presented to the pupil as the creation of God, and not as the dwelling-place of man. It is now time to introduce the latter. The teacher should communicate to the pupil general information concerning the gradual spread of our race over the earth, and the state of society at different periods and in different places, so arranged as to form a brief history of the race in geographical order.

After this, very properly comes the special geography of the different countries. That in which the pupil lives should be made the subject of particular study. Maps should be drawn on the same progressive plan as in universal geography, care being taken to bring out all important facts connected with particular localities. All the leading places should be *talked about*, and located upon the map. Foreign countries may be

treated less minutely, though upon the same general plan. Their productions, articles of export and import, climate, soil, and temperature, as well as the character and occupation of the inhabitants, the pupil knows as soon as he has learned their locality. Thus with continually increasing interest, the pupil, in connection with instructions from the teacher, has gradually built up the whole science of geography without being once compelled to sit down to the mere drudgery of learning a lesson for recitation.

G.

THE SECRETS OF THE OCEAN.

Mr. Green, the famous diver, gives the following sketch of what he saw at the "Silver Banks," near Hayti:—"The banks of coral on which my divers were made, are about forty miles in length, and from ten to twenty in breadth. On this bank of coral is presented to the diver one of the most beautiful and sublime scenes the eye ever beheld. The water varies from ten to one hundred feet in depth, and so clear that the diver can see from two to three hundred feet when submerged, with but little obstruction to the sight. The bottom of the ocean, in many places, is as smooth as a marble floor; in others, it is studded with coral columns from ten to one hundred feet in height, and from one to eighty feet in diameter. The tops of those more lofty support a myriad of pyramidal pendants, each forming a myriad more, giving reality to the imaginary abode of some water-nymph. In other places the pendants form arch over arch; and, as the diver stands on the bottom of the ocean, and gazes through the deep winding avenues, he finds that they fill him with as sacred an awe as if he were in some old cathedral which had long been buried beneath old ocean's wave. Here and there the coral extends to the surface of the water, as if the loftier columns were towers belonging to those stately temples that are now in ruins. There were countless varieties of diminutive trees, shrubs, and plants in every crevice of the corals where water had deposited the earth. They were all of a faint hue, owing to the pale light they receive, although of every shade, and entirely different from plants that I am familiar with that vegetate upon dry land. One in particular attracted my attention; it resembled a sea-fan of immense size, variegated colors, and the most brilliant hue. The fish which inhabit these 'Silver Banks' I found as different in kind as the scenery was varied; they were of all forms, colors, and sizes,—from the symmetrical goby to the globe-like sun-fish, from the dullest hue to the changeable dolphin."—*Journal of the Telegraph.*

Editorial Department.

THE EDITOR TO HIS FRIENDS.

MANKATO, MIN., Nov. 9, 1868.

My Dear Friends,—The time having arrived, when my relations to you and to the cause of education, as editor of this Magazine, must terminate, it seems not only becoming, but also necessary, that I should address a few words to you, for the purpose of leaving the field in which I have labored, with due tokens of regard for the position I have occupied; and furthermore, that I may formally commend to you and to all the good friends of education in Maine, the enterprise which is represented by THE MAINE NORMAL.

In beginning the publication of this periodical, I was impelled to undertake the labors and expenditures which its conduct would involve, by the interest which I felt in the success of the normal and common schools of our State, and by the conviction which had been forced upon me by experience, observation, and careful thought, that in no other way should I be able to do so much to secure the success which I so ardently desired, as by creating and endeavoring to keep open a channel, through which might flow the best thoughts of the best writers whose services I could command.

At the time when the NORMAL was started, November, 1866, the State Normal School at Farmington had been in operation two years. I had been connected with it from its commencement, Aug. 24, 1864, and had been its Principal for one year. We were beginning to graduate students, and they were going forth to fulfill the pledge which they had taken, to teach in the common schools of Maine. It often occurred to me, that the encouragements which they had, to enter upon the work which their course in the Normal School was designed to fit them to perform, were far from being such as I could wish they might be. Poor school-houses, poor compensation, and, in many instances, poor moral support, seemed to be staring us in the face; and I could hardly expect this to be different, at any rate, for a considerable period of time, and perhaps not at all, without the intervention of some more potent auxiliaries than were then in existence and within reach. I felt, too, that those who would go out from the normal school, would be much more likely to succeed, provided they were the recipients, from month to month, of such counsel and encouragement as a well-conducted teachers' journal might bear to them.

But more than this. There were questions open in respect to normal schools in Maine, in the decision of which I, in common with many others, was deeply interested. The Normal School at Farmington was in operation, but only upon an experimental basis. The State might, at the expiration of five years, abandon its support. In respect to this much depended on the success which attended it from year

to year, and from term to term. To secure and maintain the argument founded upon the support of the people was essential. It was known to a limited number in various parts of our State, that one of the normal schools had gone into operation; but comparatively few had an intelligent interest in it. It was desirable that year by year the State legislature should take such steps as would place the normal school enterprise upon a basis of permanent establishment, so that when the question of continuance should come up at the end of the five years' experimental period, the feeling would be prevalent, that to what one legislature after another had set the seal of its approval, the legislature of 1838-9 could not do less than render its indorsement, creating it a fixture among the educational institutions of our commonwealth. Both sections of our State, too, were to be benefited by the schools for teachers, as was contemplated by the original bill which passed the legislature. Now, to secure these results, some one must work, and what so legitimate and feasible medium and instrument might the friends of public instruction employ, as an educational periodical? It would keep these matters before the people, and in due time and manner secure the ends to be desired.

But there were other arguments in favor of the establishment of this Magazine which had their weight with its projector. The awakening of an increased general interest in educational progress and the maintenance of the same (which have already been alluded to), the securing of such legislation as would give more efficiency to our entire common-school system, the formation and upholding of teachers' associations, State and county, the revival of teachers' institutes, and all the general advantages likely to flow from the proper conduct of such an organ as the *NORMAL* was designed to supply, had their weight in carrying me to the decision which I finally adopted.

I presume from what I know of remarks which have been made, that the *NORMAL* has outlived the expectations of many who saw it launched upon the sea of adventure. It may be, that it has been a better periodical than some anticipated; it may be, that it has disappointed others in the opposite direction. It has made its record, and is hereafter to pass out of the control of the one who was its originator. And it is now either to pass out of existence, or to be continued and improved with new managers. Which, my friends, shall be the further record? It is for you to decide.

It is with a feeling of mortification and sadness, that I record the fact, that *THE MAINE NORMAL* has never been and is not now, a paying concern as a pecuniary venture. There are those to whom the Editor is indebted now for articles which have appeared upon its pages, and who should long ere this have been rewarded for the mental labors they have performed in its behalf. Of course, every considerate philanthropist knows that such should not be the record which I am now forced to make. I believe, however, that this is the time and place to make public just this truth. Now, it is not necessary that this condition of affairs shall continue; it is, however, inevitable, unless those whom I now address, *themselves* decide that it shall be otherwise. I cannot help hoping that measures will be taken at once, to secure the continued publication of this friend of the teachers. The subscribers to the *NORMAL* will bear the writer witness, that it has been free from agonizing appeals for sustenance, and that it has rather sought so well to fulfill its mission as to merit a generous support. I now appeal not for myself, but for the cause of common-school education, and I trust that many will be found ready to give a hearty response, that Maine shall not lack a representative of her educational life, in the

issuance of a journal devoted to the advocacy of whatever tends to promote educational progress.

The work is not yet done, to secure the completion of which THE MAINE NORMAL was started. Maine has her two normal schools in successful operation; but it is necessary, that some provision be made for their permanent support, and they are both in need of a generous outlay for improvements in their interior equipments, and better building accommodations. We have our State Educational Association, and some of the counties of the State, County Associations; but these are young, and what better advocate and supporter can they have, than the NORMAL? We have inaugurated some changes in respect to school supervision, but what has been done is almost naught, in comparison with what remains to be done, in order that efficiency may be secured in this direction. We have not the County Teachers' Institutes, without which (or some substitute therefor, what it might be I know not), what is doing in other directions loses much of its effectiveness for good. And then, there is a sort of State pride which is becoming. Is Maine, now putting herself in battle array to fight for the commerce of the world; Maine, the seat of destiny in respect to manufactures; Maine, that has given to the counsels of the nation some of the ablest statesmen of these latter years; is she to let a periodical, designed to benefit her schools die, ignominiously die? I should ask pardon for the thought. It will not be.

I will bring this letter, which has been too long for interest, but not too long to contain what it was proper for me to write, to a termination.

To the Readers of the Normal. I would say, that I most sincerely ask your pardon for my own short-comings in the department which it has been my lot to superintend principally. May I not ask you to remember all excellences, and forget all defects? I trust that you will be better provided for, editorially, in the future.

To the Publishers of the Normal, both Mr. Swift and Mr. Thurston. Appreciating the labors which you have performed in behalf of the causes which the NORMAL has advocated, and the trials which you have undergone with an Editor unable always to come to time, I bid you farewell, and wish you abundant prosperity.

To the Contributors for the Normal. I know that your part of the work, appertaining to the conduct of a journal like this, has been done in a way of which all parties concerned may properly be proud. None of you shall lose your reward. To say I thank you, expresses but feebly what I feel. I love to think that work done in so good a cause as the one for which I have labored is never performed in vain.

To the Press of the State. I feel that I ought to thank the Editors of the various newspapers in Maine especially, for the uniform appreciation which they have shown of the enterprise in which I have been engaged, and for the substantial assistance which they have rendered.

Permit me to subscribe myself, my friends and fellow-laborers,

Faithfully and affectionately yours,

GEORGE M. GAGE.

President Haven of the Michigan University, in his annual report just presented to the Regents, has taken bold and emphatic ground in favor of the admission of women to all the privileges of the University, in every department—law, medicine, science, and art.

THOUGHTS FOR THE THOUGHTFUL.—III.

ORGANIZED EFFORT.

It has been our aim in the two preceding articles, written for this Magazine under the above caption, to discuss the relations of school officers and teachers, to organized educational effort, hoping, at least, that some under whose observation our thoughts might fall, would be led to labor with yet greater vigor and enthusiasm, to secure for Maine a more complete unity of design in respect to her common-school system, and to produce more union of effort to bring about desirable results, than has been had hitherto.

In the present article, we desire to speak of other parties to the work of education. Education is a unit. From the primary school to the university, the aims of educators are directed to one end. Education, *true* education only, does *more* for some men than for others. It does the same work for all; the difference is only one of degree. Lincoln was as truly educated as was Everett. The one had the discipline which fitted him to fill the chair of State in the hour of a nation's peril, the other had that ornate culture of the mind, which gave him power to shine in oratory and literature. Both were eloquent at Gettysburg; but Lincoln not less so than Everett. David P. Page was educated; and so was Horace Mann. The one could not have filled the sphere of the other, and it was unnecessary that he should. The late Prof. Wm. G. Smythe was an able mathematician; and so was Dana P. Colburn. The one had a kind of culture which led him to delight in, and consequently to write upon, those branches of mathematics, of which comparatively few obtain anything beyond a partial knowledge; the other was fitted to add something valuable to the discussion of that branch of the same science, which must be practically known by the people. What the one might have done, had he undertaken the task so well performed by the other, we are unable to know. It is enough for us to know, that both these men were educated, and in their turn became useful educators of others. The hand cannot say unto the foot, I have no need of thee. Both are alike honorable. Education is one.

III. *College Presidents and Professors.* In some articles which have appeared already in the *Normal*, persons who have been contributors for our pages have taken occasion to speak as they have felt in respect to the relations sustained by the professors in our colleges to public school education. What we shall say will be brief. We have long wished to hear from the gentlemen of whom we now write. Their responsibility to the cause in which we are engaged is the same as ours; and our pages have always been open to receive their contributions. We think we may also say, that what they would have written, would have been in worthy companionship. The time for the reception of any aid in the work which we have been endeavoring to push forward in editing this periodical is now past. We have desired to have our friends speak of what they felt and hoped and desired, and were willing to labor for, in regard to the special sphere of our own exertion; but they have not felt it a duty to do so, and therefore our readers have been deprived of many valuable thoughts which they in turn might have given forth for the benefit of the many with whom they are immediately associated. We have no bitterness of feeling on this subject; but we are not yet so far enlightened in regard to that which

appertains to educational progress, as to perceive that this is precisely as it should be.

Common schools are very imperfect. Those who labor unremittingly to secure their improvement, need the wise counsel of men of liberal culture. They need the moral support which the presence of such men in their associations would afford. They need the light which the superior intelligence and refinement of the best men connected with our colleges, might shed upon their deliberations. They need the rebuke which their egotism would receive in the audience of those who are learned. They need the encouragement which would come from feeling that a bond of sympathy runs through the whole educational army, from the humblest to the loftiest soldier. They need that the vital current of the higher educational life which is supposed to be kept warm and pure in those upper regions where the literary man dwells, by constant draughts from the living waters, shall descend and fill their hearts.

American colleges are imperfect. In a letter recently received from one whose life has been devoted to educational pursuits, whose head is now silvery with the frosts of many winters, and whose name will forever be honorably associated with some of the most important enterprises for the advancement of education in our land, we were almost surprised to find the following sentences:

"I have long studied the *effect* of our training institutions, and clearly perceive that they are to shape our destiny as a great people. Our collegiate institutions are mighty helps to knowledge, but *not* favorable to the growth and establishment of the moral principle. I am sorry to write this of them; but taking their *fruits* as my criterion in forming this judgment, I believe I do not err in respect to this matter. And can those institutions be so remodeled, as to become a purifying and exalting power on the character of their students? Only in *part*, I believe."

We quote, in this connection, from an address delivered Dec. 15, 1837, by Cyrus Pierce, founder of the first American Normal School, words as true to-day as when first written:

"Our own nation, though young, has more than once been seen to tremble on the verge of ruin; but it is worthy of remark, that such a crisis in no instance has been the result of *ignorance*, but of the destitution of moral principle. If our union and liberties are ever shipwrecked, this is the rock on which they will split. We shall always have enough *great* men, the only danger is, that there will not be enough *good* men,—men of disciplined passions, nice moral discrimination, and active benevolence. * * * * * A cultivated intellect cast upon society uncontrolled and unsanctified by moral sentiments, is but the scattering of arrows, firebrands, and death."

We can add nothing to the force of these utterances. The one is the voice of the living, the other, that of the dead. Both are voices of authority. Accepting them as wise and true teachings, the conclusion is inevitable. American colleges are imperfect. They are controlled by their patrons; their patrons are, many of them, rich, and around them has gathered that which is too often found to have entered into, and taken possession of, the mansions of the wealthy, influences which breed and foster corruption. Now, then, let those who form the boards of instruction in our colleges meet from time to time with the teachers of the common schools, and they will, we warrant, breathe a moral atmosphere as healthy as is that of their own temple of science and its surroundings. We believe that discussions relating to the

various topics which are connected with the comprehensive work in which all are engaged, would be mutually beneficial; that in this case, as in others, the participants would find, that charity is twice blessed, blessing him that gives, and him that takes; and perchance the college professor would realize the truth, that 'tis mightiest in the mightiest, an attribute to God himself.

To only a comparatively small number of leading educators in this or any other country might words more highly eulogistic be applied with justice, than the following, which we extract from a tribute to the memory of Jenison Olmstead, late Professor of Mathematics in Yale College:

"Professor Olmstead has been one of the few teachers in our higher seminaries of learning who have assisted from the start, by their presence and co-operation, the efforts of the friends of common schools and popular education. His sympathies have been with those who have labored for the improvement of the schools of his native state. In 1838, he delivered a lecture before the American Institute of Instruction on the school system of Connecticut, in which, after an interval of nearly a quarter of a century, he a second time points to the absence of an institution for the education of teachers, as the great defect in the school system of the State."

We would gladly quote other sentences of similar tenor with the foregoing; but this will answer for a specimen, and we have not room.

When the enthusiastic lawyer who conducted the case of *Bardell vs. Pickwick*, asked his first question of the redoubtable Sam Weller, he ended it with the injunction, "Now, speak up, Mr. Weller;" to which Sam innocently replied, "I mean to speak up, sir." We have endeavored, in this and in the two preceding articles, to speak plainly of matters whose importance seemed very great to us.

All honor to earnest, discriminating, philanthropic school officers! We have met such in our day, who receiving but a scanty pittance for their labors, and oftentimes hearing almost nothing in the way of criticism save unkind words from those for whom they labored, have yet left their impress for good upon the schools for whose interests they have studied and wrought. They shall not lose their reward!

All honor to faithful, studious, unselfish teachers! In every grade of schools we have met these. We have been with them in their course preparatory to the work in which they have since done praiseworthy service. And we have met them, hosts of them, in different parts of our land, striving to obtain oil for their lamps, that they might go down to lead the ignorant and erring out into the light of knowledge and virtue.

All honor (we dare say *it also*) to the whole-souled, Christian college professors. These we have met, and as we have felt that they were indeed ready to award the meed of praise which belongs to the faithful worker in whatever sphere of educational labor, our heart has swelled with joy, and we have felt disposed to say, Behold an American indeed, one who, while delving into the mysteries of Hebraisms and Greek roots, has not lost sight of what is the genius of American liberty!

In those regions beyond the veil, where dwelleth the Ineffable Glory, where the redeemed shall know even as they are known, where there is but one Lord, and where earthly titles and distinctions of place count for naught, the FAITHFUL man will enter into the joy of his Lord, and be made ruler over many things.

The donations to the various colleges and universities of America, for the year were \$3,100,000.

A WORD WITH THE READER.

On leaving the State of Maine for another field of labor, Mr. Gage transferred the responsible publication of the Normal to us, while he was to retain the care of its editorial department to the close of the year. With this number his official connection with the Normal ceases, though we hope to have frequent communications from him in the future.

The teachers of Maine owe Mr. Gage a debt of gratitude for starting the Normal, and faithfully cherishing it until now; and in their behalf we record this testimonial of regard to a faithful laborer in the cause of education in this State; and wish him prosperity and influence in his new field.

The annual meeting of the Teachers' Association at Augusta have taken hold of the matter in earnest, and relieved our anxiety for the future editorship of the magazine by doing just what, in our estimation, is the very best thing for the educational interests of the State, and the prosperity of the Normal, by appointing twelve editors, one for each month.

We shall make some slight changes in the appearance of the magazine, drop the Students' Normal Department, and by the diversity of practical talent engaged, hope to make it an *indispensable help* to every teacher in the State.

B. THURSTON.

LARGE DISTRICTS AND GRADED SCHOOLS.

We have received a long communication from J. W. P., on the importance of graded schools. The paper contains good ideas, that would require more time than we have at command, to put into fit shape to appear in the Normal. There is certainly a very erroneous course pursued by many of the towns in regard to cutting them up into small districts. Better, a great deal, have larger districts with longer and better schools. Better for scholars to walk a longer distance and get double the schooling, than a short distance, and a short school. Better to double up the districts, and have graded schools, than to compel one teacher to half teach all branches, where they might have teachers adapted to different departments, and confine their attention to those they are most familiar with.

Better for teachers and scholars to have this division of labor, and concentration of funds.

Some valuable articles for the Students' Normal were unavoidably crowded out by the report of the annual meeting of the Teachers' Association at Augusta, which came to hand at the last moment.

THE MAINE NORMAL. Any one who has the January, February, March, and April numbers of the Normal for 1868, which they are willing to part with, will confer a great favor upon the publisher by sending them to him. Direct, Maine Normal, Portland, Me.

THE WESTERN STATE NORMAL SCHOOL at Farmington under the supervision of Mr. C. C. Rounds, has just closed a successful term, with eighty-four scholars.

OTHER MAGAZINES

FURNISHED WITH THE NORMAL FOR 1869 ON THE FOLLOWING TERMS:

Atlantic Monthly.....	\$4.50	Our Young Folks.....	\$3.00
Harper's New Monthly.....	4.75	Godeys Ladies' Book.....	4.00
Harper's Weekly, illustrated.....	4.75	Peterson's Magazine.....	3.00
Harper's Bazaar.....	4.75	The Riverside Echo.....	3.00

EDUCATIONAL INTELLIGENCE.

MAINE EDUCATIONAL ASSOCIATION.

The second annual session of this Association commenced at the Representatives' Hall, in Augusta, on Monday, Nov. 23. The meeting was called to order at 4½ o'clock, P. M., by the President, Rev. Dr. BALLARD, of Brunswick.

The following Committees were then appointed:—

On Nomination of Officers for the ensuing year.—Messrs. Stone, of Portland; Rounds, of Farmington; Fletcher, of Castine; Tash, of Lewiston; and Gross, of Brunswick.
On Teachers and Teachers' places.—Messrs. Chase, of Portland; Rounds, and Gross.
On obtaining Signatures to the Constitution.—Mr. Allen, of Bath.

Mr. Stone, of Portland, called the attention of the Association to the MAINE NORMAL, and asked whether the teachers of Maine would do anything to sustain it,—the former editor and proprietor having left the State. After some discussion, the subject was referred to a Committee, consisting of Messrs. Dike, of Bath; Stone, and Dr. True, of Bethel; with instructions to report to-morrow.

The Teachers' Association of Bowdoin College presented a Memorial, asking the co-operation of the Association in securing legislation in regard to the powers of the teacher. The memorial was referred to a Committee on Legislation, consisting of Warren Johnson, of Topsham, State Superintendent of Public Schools; Hon. N. Dingley, jr., of Lewiston; A. P. Stone, of Portland; J. H. Hanson, of Waterville; and C. B. Stetson, of Lewiston.

At the evening session, the hall was well filled. Hon. Mr. Williams, Mayor of the city, was introduced to the Association, who welcomed the teachers to Augusta, and expressed his hearty sympathy in their work.

President Ballard appropriately responded in behalf of the Association. He remarked that the welcome came at a time when the cause of education had been awakened by a new impulse. The system of normal schools, in Maine, was now firmly established, although it had passed through a season of uncertainty. He believed that, for the past ten years, the interests of education had improved, and were better regarded than ever. There had been a gradual elevation. Teachers were better qualified from year to year, and their work better done. He believed that our high schools would bear a favorable comparison with those of the same grade in other States. Finally, he agreed with Mayor Williams, that the cause of education would ever be the handmaid of religion.

A letter was read from President Harris, of Bowdoin College, expressing his regrets that official duties would prevent his attending the meeting. He thought the interests of education, in our State, demanded earnest work; and he assured the teachers of his sympathy with them, and of his willingness to co-operate with them in their labors.

Hon. Warren Johnson, State Superintendent of Public schools, then occupied half an hour in some remarks in relation to educational progress at the West,—reading, in the course of his remarks, extracts from Western school reports. He thought New England must bestir herself, if she is to continue to be the brains of our body politic.

A general discussion upon the subject then followed.

Dr. N. T. True, of Bethel, spoke of the West as being full of young life, and the liberality that was displayed in the erection of school-houses. He was pained to see such a drain made on us for our young men, and yet he felt that Maine was doing a great work in enlarging the brain-mind of the West by sending forth her young men.

A. P. Stone, of Portland, thought that, in some respects, the West had the advantage of New England. We have a conservative element to hold back, which he deprecated.

We want to overcome the prejudices, the apathy that exists among us, and which so retards our progress.

C. C. Rounds, Principal of the Normal School at Farmington, spoke briefly on the defective educational system, in vogue, and contrasted them with those in France and Prussia. He advocated a change by the Legislature in our common-school system.

Prof. Fletcher, Principal of the Normal School at Castine, showed that what made Western schools superior to our own, was that they were the fruit of our best minds transplanted.

Rev. V. V. Norcross, of Union, urged the necessity of the teaching of morality and religion in our schools.

John S. Sayward, of Augusta, Editor of the Kennebec Journal, took a hopeful view of the cause of education in New England. He thought there was no cause for discouragement, and advocated the raising of a higher standard in every department.

The Convention then adjourned to Tuesday morning, at 9 o'clock.

TUESDAY MORNING.—In the absence of the President, Hon. NELSON DINGLEY, JR., of Lewiston, was called to the chair. The meeting was opened with prayer by Rev. Mr. Bingham, of Augusta.

Two amendments to the Constitution of the Association were proposed by Mr. Stone, of Portland, and adopted. One, enlarging the number of the Executive Committee, and the other, making one fee only necessary for membership, instead of an annual, as heretofore.

Mr. C. B. Stetson, of Lewiston, then read a paper upon **READING**. He gave a very clear and thorough analysis of the art and philosophy of Reading, and concluded that it involved a three-fold labor,—pertaining to the eye, the ear, and the vocal organs. Good readers can best be made in childhood. He would have a graded library in every school, containing the productions of the great master-thinkers, to be used instead of the collections of short extracts now in use. Object-lessons, charts, and vocal drill, are indispensable. The reading of the essay was followed by an interesting discussion of various topics suggested, which was participated in by Messrs. Rounds, of Farmington; Hanson, of Waterville; Tash, of Lewiston; Gross, of Brunswick; Ballard, of Brunswick and others. Many valuable suggestions as to the best modes of reading were thrown out, while all seemed to agree as to the general drift of the essay.

Mr. Gilman H. Tucker, of Boston, then took up the subject of teaching Geography, and spoke for a full hour. In the study of this science, he would recommend a proper regard as to the mental growth of the child. He would suggest as a formula, the development of the child's perceptive faculties; then the retentive faculties, or memory; then the analytical, and then the reasoning powers. He presented his views as to a true conception of the science, as distinguished from a false conception, and the proper method of teaching it. He would recommend oral teaching, in the first place,—this is the preparatory course. Then he would recommend map-drawing; and he gave his reasons for a study of maps, showing the advantages to be gained by acquiring a knowledge of the soil and climate of a country, of its adaptability for agricultural or manufacturing purposes.

Mr. Tash, of the Committee on nominations, submitted the following list of officers for the ensuing year,—all of whom were elected.

President—A. P. STONE, of Portland.
Vice-President—J. H. HANSON, of Waterville.
Secretary and Treasurer—C. B. STETSON, of Auburn.

Executive Committee—

C. C. ROUNDS, of Farmington. J. E. LITTLEFIELD, of Bangor. J. P. GROSS, of Brunswick.
 G. L. FLETCHER, of Castine. M. C. FERNALD, of Orono. J. B. WEBB, of Yarmouth.
 L. D. CARVER, of Hallowell.

Adjourned to 2 o'clock, P. M.

AFTERNOON.—On the assembling of the Convention, Mr. Stone accepted the Presidency, and declared his purpose to do all in his power to promote the interest of education.

Messrs. Tash, of Lewiston; Webber, of Portland; and Smith, of Chesterfield, were appointed a Committee on Resolutions.

The subject of Reading was then discussed by several gentlemen, for a quarter of an hour.

Mr. A. H. Bowler, of Boston, spoke for an hour upon the subject of PENMANSHIP,—illustrating, at length, the principles and methods to be followed in giving instruction in that branch.

The next hour was occupied by A. P. Stone, of Portland, in an address upon the subject of the study of History in our common schools.

A discussion followed upon the same subject; after which, there was some talk upon SCHOOL GOVERNMENT, by Messrs. Sherman, of Winthrop; Dike, of Bath; and Dr. True, of Bethel.

Adjourned to 7½ o'clock in the evening.

EVENING.—At the opening of the evening session, Mr. Barrell, of Lewiston, in behalf of a Committee appointed last year, reported, that several railroads had signified their willingness to grant reduced fares to Teachers attending educational gatherings.

Hon. Warren Johnson, State Superintendent of Public Schools, was then introduced, who took for his subject, OUR COMMON SCHOOL SYSTEM.

An interesting letter was read from William Allen, of Norridgewock, a veteran teacher, aged 83½ years, who taught in this State in 1798. It contained many curious reminiscences and valuable thoughts.

Mr. Johnson then gave a series of statistics, comparing the status of education among us in 1868 with that of 1858. He then proceeded to urge, for the consideration of the people of Maine, five points:—1. The abolition of the District system. 2. The revival of Teachers' Institutes. 3. County Supervisors. 4. Uniformity of Text-books. 5. Compulsory attendance. These points were urged with great clearness and force.

At the close of Mr. Johnson's address, the various topics presented by him were discussed at considerable length by several gentlemen of the Convention.

Mr. Dike, of Bath, in behalf of the committee on the Maine Normal, submitted two resolutions. The first asserted that it is the unanimous opinion of this association that the journal should be continued and supported by the teachers of the State. The second resolution recommended the appointment of a board of twelve editors for the ensuing year. After some remarks, all in favor of the resolutions, they were unanimously adopted, and the following gentlemen were elected editors accordingly: G. T. Fletcher, of Castine; J. P. Gross, of Brunswick; Galen Allen, of Bath; J. H. Hanson, of Waterville; Warren Johnson, of Topsham; C. C. Rounds, of Farmington; Thomas Tash, of Lewiston; A. P. Stone, of Portland; C. B. Stetson, of Lewiston; J. S. Sewall, of Brunswick; Geo. C. Webber, of Portland; and R. Woodbury, of Farmington.

Messrs. Allen, of Bath; and Gross, of Brunswick, were appointed a committee to solicit subscriptions for the Journal at the present meeting.

Adjourned to Wednesday morning.

WEDNESDAY, at 8½ o'clock, the meeting was opened by prayer by Rev. Mr. Norcross, of Union.

Mr. Tash, of the committee on Resolutions, made a report tendering the thanks of the Association to the Governor and Council for the use of the Hall; to the railroads and hotels for reduced fare; to the citizens of Augusta for free entertainment for the ladies. Also the following:

Resolved, That the results of the two meetings of this association already held, give us

a continued faith in its abiding success, and in the efficiency of this instrumentality in the great cause of education, and fresh courage to press forward in our good work.

Resolved, That inasmuch as we believe that the system of public education in our State should form a harmonious whole, and in recognition of the truth of the old adage, "if union is strength," we solicit the co-operation of all educators, and especially of the faculties of our colleges and higher schools, in the work of our association.

Resolved, That we tender our thanks to Prof. GEORGE M. GAGE, the retiring editor of the *Maine Normal*, for his untiring zeal in establishing and conducting that periodical; also, for his active exertions in behalf of education while in our State, and with regrets at his departure, we extend our sincere wishes for his success in his new field of labor.

Mr. Dingley, of Lewiston, offered a resolution approving the recommendation of the State Superintendent for the establishment in this State of a system of county and district supervisors, and also for the revival of the system of county institutes, improved and extended, and urging upon the Legislature the importance of promptly taking measures to secure the inauguration of these reforms; also that the District system ought to be abolished at once, and recommending that the employment of teachers be transferred from Agents to Superintending School Committees.

An able address was then delivered by Geo. A. Walton, of Westfield, Mass., on *Method in Education*.

At 10½ o'clock the Association finally adjourned.

We regret that our report of the meeting could not be more extended. Many of the addresses and discussions might profitably be given at length, but a want of space will not permit. As the Association voted to publish the proceedings in pamphlet form, our readers will doubtless have an opportunity to peruse them in a fuller report. The meeting was an excellent one, the attendance being good and the entertainment at Augusta in every respect satisfactory. We think good things are in store for the cause of Education in Maine.

NATIONAL ASSOCIATION. We are indebted to the Boston Journal for the following account of the meeting of the National Association at Nashville, Tennessee:

A goodly number of prominent educators came together from various parts of the country, and discussed with earnestness, ability, and good feeling, important educational questions.

The Legislature of Tennessee adjourned its special session for a week in order to give the associations the use of the Representatives' Hall. All persons from abroad, who attended the meetings, were generously entertained, gentlemen as well as ladies. Those who stopped at hotels found that their bills were paid by the city. The authorities of Nashville did everything in their power to render the sojourn of teachers in their city pleasant and profitable, and in the matter of hospitalities surpassed all the cities in which the national meetings had hitherto been held.

It is a matter of regret that so few of the teachers of New England manifested their sympathy with the teachers of the South and West by their presence at Nashville. One man and six women had the honor of representing all New England. Gardiner, Me., sent one enterprising woman; New Bedford, one, who had the courage to travel the entire distance to Tennessee without a companion; and Boston, four. The solitary male representative, feeling under personal obligations to these extraordinary ladies, held a special meeting, at which he unanimously adopted a series of eloquent resolutions in their honor. After serious consideration he indefinitely postponed a resolution of regret in regard to the numerous gentlemen who wouldn't, couldn't, at any rate didn't, avail themselves of an excellent opportunity to aid in giving a fresh impetus to the cause of education, especially in the South where it is so much needed.

EASTERN STATE NORMAL SCHOOL. We extract from a letter just received from the Principal of this school, and hope to have frequent communications from him.

"We have just closed a pleasant, and, I trust, a profitable term. Quite a number of young men and women from the school go out to teach the coming winter. For their benefit teachers' meetings have been held in the evening during the latter part of the term. Questions of practical importance bearing upon the interests of our common schools have been freely discussed.

"If the agents and citizens of our country districts will but realize the responsible duties which devolve upon them, and enter with earnest co-operation into the teacher's work, the schools will meet with a success unknown in the past. When will district agents realize their duties and privileges? They should learn by study and observation what a teacher ought to do, and then demand that he do it. They should visit the school several times each week, encourage the teacher, criticise him and *push* him, and demand of him that he be a growing man in his work.

"While the present miserable district system lasts, let our people make the most of it."

MINNESOTA. Our Editor writes that he is prospering finely,—has about eighty scholars.

MOSES WOOLSON, Sub-master in the English High School, Boston, has been promoted to the position of master, to fill the vacancy occasioned by the transfer of Mr. Hunt to the Head Mastership of the Girls' High and Normal School.

Miss E. O. PATCH, a graduate of the Framingham Normal School is Principal of the State Normal School at Castleton, Vt.

A. P. Marble, Esq., a graduate of Waterville College, and formerly a successful teacher in Waterville, has been chosen Superintendent of the public schools of Worcester, Mass.

The report of the State Superintendent of Schools in Pennsylvania, says that of the 1,940 occupants of the county jails, only 504 could read well; and of 2,809 inmates of poor-houses over ten years of age, only 412 could read well, and only 70 were good scholars.

Rev. Thomas Hill, D. D., for six years President of Harvard College, has resigned on account of his wife's and his own ill health. The Corporation offered to give him six months leave of absence.

TEACHERS AND TEACHERS' PLACES.

At the Teachers' Convention a committee on "Teachers and Teachers' places" was appointed. It is earnestly desired that all *good* teachers wanting situations will aid this committee in its labors by sending to any member of the committee a full statement of their experience in school-teaching. And that Superintending School Committees, who are in want of *good* teachers, will apply for them through this committee. A more complete statement of the purpose of this committee will appear in the January number. (*All persons expecting an answer will please enclose a stamp.*)

A. E. CHASE, *Chairman, Portland.*
C. C. ROUNDS, *Farmington.*
N. T. TRUE, *Bethel.*
J. P. GROSS, *Brunswick.*
G. T. FLETCHER, *Castine.*

CONNECTICUT. "Eternal vigilance is the price of liberty," is an acknowledged maxim in political economy, and may with equal propriety, be applied to systems of education.

Having attained an eminence in educational matters and practice, is not sufficient. It will never do to be satisfied with any present attainment, for the moment we cease to strive for something better than we now have, we either actually retrograde, or some more ambitious or persevering neighbor strides by us, and we find ourselves in the rear, even though we have maintained the point we had previously reached. As a case in point we cite from the report of the board of education for Connecticut.

"Notwithstanding this marked advance in our appropriations, and the admirable condition of the schools in many bright and luminous places in our State, I am compelled, most reluctantly, to concur with the oft-repeated statements of my predecessors, and with the recent testimony of school visitors, that in a large number of towns the schools have not only ceased to progress, but have sadly retrograded. The strangest contrasts are found in the schools of towns and districts side by side. In the one, you find public spirit, progress, harmony, interest, and liberality; in the other, indifference, lethargy, opposition to change, parsimony, and the extremest individualism, if not antagonism.

"Once the schools of Connecticut were the best in this country. We may well honor our fathers for their noble work in founding public schools. They were the pioneers in this great movement. Their example has not only been a power in the land, but is known and honored in all Christendom. It has led to the organization of other and even better systems in the newer States. The text-books in geography formerly lauded the Common School system of Connecticut, but they no longer utter its praise, unless it be as a matter of history. Are not many of our people willing to live upon the glory of the fathers, content with their achievements, without following their example? The noblest family or State is likely to degenerate, when it ceases to emulate its ancestral virtues. Those who boast of their perfection are apt to fall from grace. Because our fathers were in advance of their age, shall we be behind ours? While the schools of other States are rapidly progressing, shall our honored State, so long foremost, be left in the rear? On this subject permit me to cull a few sentences from the Prize Essay of Prof. Noah Porter, of Yale College.

"Where is Connecticut, who was once the star of hope and guidance to the world? She was the first to enter the lists, and was foremost in the race. Is she foremost now? It is the general opinion, *out of Connecticut*, that she is doing little or nothing, and, whereas, a few years since her name was mentioned in common with common schools with honor only, it is now, in this connection, coupled with expressions of doubt and regret, and that by wise and sober men. Those who go from other States into Connecticut, can hardly credit the testimony of their own senses, when they are forced to believe the apathy that prevails. Every newspaper and lecturer *out of Connecticut*, sneers at the present condition of the common schools.

"Are the people of Connecticut aware that this is the case? Do they know what the people of other States think and say of them? Do they believe that what is thought or said is true and deserved? Those who go from Connecticut into other States, and from them into Connecticut, feel a shock in the transition. It is like going from a cellar into the sunshine, or from the sunshine into a cellar. The truth of the case can be demonstrated, till no man shall dare to deny it, that Connecticut is far behind her sister States in this matter, and will soon be still further in the rear."

THE STUDENTS' NORMAL.

Portland, December, 1868.

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EDITORIAL.

Talks about English Grammar. III.

NAMES FOR ACTION-WORDS.—NAMING-WORDS.

I think that, as we have found so many *action-words* in the thoughts which you have expressed, and in the reading lesson, you must have concluded that there are a great, *great* many words of that sort in our language. You have found that you can hardly give expression to your thoughts at all, without being reminded that you have had one, or more than one, of these thoughts. Indeed, as I talk with you now, I am continually saying things which show my thoughts to be—many of them—in three parts. And you have seen, that in thoughts of this kind we have an *action-word*. You have now learned, also, to *discover* the *action-words* very readily.

Now when a considerable number of you come together to study a certain branch, what name do I give you?

Class. You call us a *class*.

Yes, that is true; and when several *words* are used to *do the same office*, what should you think we might call them?

Class. You might call them a *class*.

Well, this is just what we do. Thus, as you have just seen, we have a *very large class* of words, which tell that an action is performed, and we call them all?

Class. We call them all *action-words*.

That is correct; and now I want you to remember what I am about to say. I will give you a name for this *class of action-words*. They are called **VERBS**.

I want you now to speak as many of these thoughts in three parts as you can think of, if we have time during the present recitation, and as you speak them, tell the *action-word* or *verb* in them, thus: "Charles read his lesson;" here the *action-word*, or *verb*, is *read*.

You have gone through with this exercise very quickly and correctly; now I will tell you why this class of words has received the name **VERB**. In the Latin language, that is, a language which was spoken by the people who anciently lived in Rome, there was used the word **VERBUM**, and the meaning of it was **THE WORD**. Now **THE VERB** is the most important word in our language; it is *the* word. You could not have expressed any of the thoughts which you have just been giving, without the *action-words* which you have used; and you will never be able to express in words any thoughts whatever, without words which perform an office somewhat like these *action-words*. Remember, then, that these are *the* words of our language, and that we shall call them all, **VERBS**.

But we must leave this part of our les-

son now. I see that you have become very much interested in this study. I want you now to observe carefully, for we are about to step from the known to the unknown, and when we are doing that, we cannot be too observant. I will write upon the blackboard a considerable number of thoughts in three parts, and then we will examine them. Here they are:

John obeys his parents.

Mary expressed a thought.

The teacher explained the lesson.

God loves all men.

Henry did a wicked deed.

These are all the thoughts I have time to write out now; and these are enough for our purpose. Ann, you may tell which are the *action-words*, or *verbs*, in these expressions.

Ann. The verbs are, obeys, expressed, explained, loves, and did.

Correct; now there are other words here which are *not* verbs. Of course, then, they do not belong to the same class that verbs do. They do not perform the same office. But what office *does* the word John perform? James, you may answer.

James. It tells the name of a person.

Class, are there any other words in these expressions, which tell the names of persons?

Class. Yes, sir. There are the words Mary, teacher, God, and Henry.

You say that these all tell the names of *persons*. Are there any words there which tell the names of things?

Class. There are; the words parents, thought, lesson, men, and deed.

Do these words all perform an office somewhat alike?

Class. Yes, sir, they tell the names of persons and things.

I think, then, we may call them by some name which will apply to them as a *class*. Jane, can you think of a name?

Jane. I should think that as we called the other class *action-words*, we might call these *naming-words*, but I don't know what other name those people that you told us about may have given to them.

Well, no matter about that. You have

given them a very good name, and will call them by that, for a while, just as we called the words which tell that an action is performed *action-words* for some time, before we gave them any other name.

I will now assign another reading lesson, and you may find both the *action-words* (or what?) and *naming-words* in it. This, I think, is all we shall have time to do to-day. Now be very faithful. Ann, I see that your hand is raised; what do you want?

Ann. If you please, I think we should all of us like to bring in some thoughts written out on our slates.

You may do so, and I hope you will be able to put into practice everything which we learn.

A Year on the Earth.

We suppose you will say, we know all about the earth now; but notwithstanding that, we have our doubts, and if you don't object, we will take you with us in a brief survey of its peculiarities during one of its revolutions round the sun. We have taken notes on Mercury and Venus, and as we go outward from the sun the earth is the next planet we meet. It seems very strange to "class our world among the heavenly bodies. They are brilliant, while *it* is dark and opaque; they appear light and airy, while *it* is solid and firm; we see in it no motion, while they are constantly changing their position; they seem mere points in the sky, while *it* is vast and extended." But the earth is as truly a planet, and shines as brightly in the heavens; and appears to the inhabitants of other worlds as Venus does to us. It hangs in space, "held by an invisible power of gravitation which it cannot evade" any more than the ball with which you play, can go beyond the length of the string you have attached to it. You may hardly believe it, but you shall see "that it is small and insignificant beside the mighty globes that so gently shine upon us in the far-off sky"—a mere atom among ten thousand other worlds equally well fitted for the abodes of life as this.

The earth is round, but not a perfect sphere, as its diameter through the poles is twenty-six and a half miles less than through the equator. Do you ask how we know that the earth is round? We will tell you. When sailing on the ocean in a vessel, a ship comes in sight; we first see only the very tops of her masts and the uppermost sails, but as we draw nearer to each other, we see more and more, until we get to be about seven miles apart, we see the whole down to the water's edge,—the waves rippling and foaming under her bow. Why, it is just like this; see that fly walking up one side of that apple, and there's another fly on the other side of the same apple walking toward the top of it. They do not see each other, and cannot till they get very near each other on the top, because the round surface of the apple rises up between. It was very hard for people to believe at first that the earth was round. There was a member of a State legislature within this present century, who became very angry with another man for trying to make him believe it. He thought the man was hoaxing him. There are other ways by which we know that the earth is round, such as these: The shadow of the earth, as seen on the new moon covering almost its whole surface, gradually decreasing to the full, is always round. Another; you can see a great deal further by going to the top of a monument, or a high mountain, than when standing on a plain. Still another; as you travel south, the north star will appear nearer the horizon, until when you get within about 500 miles of the equator, it is lost to sight altogether.

How distinctly we remember, some years ago, we had not seen this star of our home for about four years, and were coming north, we watched with the greatest interest night after night the cloudy sky, to get a glimpse of this old friend, we had missed from view so long. At last we saw it peering out between the rifts of clouds, and a shout of joy ran through the whole company, as if we had met an old friend, and found him safe and well.

So much for the general shape of the earth; we will now consider for a moment the mountains and valleys which appear so large to you, that we presume you have already said they must make the earth very far from round, after all. Take an orange, one with the roughest rind, and the most uneven parts of it will well represent the highest Himalaya mountains, and the deepest valleys to be found on all the earth. This is literally true, and the thin rind of an orange is just about as thick in comparison to the whole orange as the crust of the earth is to the whole earth. This crust is about twenty-five miles thick, and envelops a mass of molten lava which boils and seethes and roars and surges to such an extent sometimes, as to make the crust of the earth to undulate like the waves of the sea; to throw up great masses of it in some places, and in others to settle large surfaces below their usual level, and remain so permanently. An illustration of this has recently occurred in South America, where those terrible earthquakes changed the whole face of the country and destroyed so many cities, and 30,000 or 40,000 human lives.

We think the earth is very large, and so it is, for we can no more affect it by any power we can bring to bear upon it, than we can create a world. But all things are really large or small by comparison. There are three planets smaller than the earth, and there are four that are larger; and Jupiter is so much larger that it would take 1387 of our earths to make a world as large. It would take 1,245,000 earths to make a globe the size of the sun. We can really have but a very faint conception of these enormous globes, but certainly enough to impress our minds most deeply with the mighty power of God who created them all, and governs all their movements.

The earth appears to us to be at rest—quite still—while the other heavenly bodies are in motion; but it is far different in fact. It is constantly turning on its axis once in twenty-four hours, with a speed at the equator of a thousand miles an hour, and where we live of about 450

miles an hour; and this motion gives us day and night. Then it turns round the sun, at a distance from it of ninety-one and a half million of miles, at the astonishing rate of eighteen miles a second; a thousand and eighty miles a minute; and this motion gives us the changes of seasons, summer and winter, spring and fall. It is truly wonderful how varied, and yet how precisely, this great ball moves round and on from day to day, and from year to year, not varying a hundredth of a second in the last 2,000 years.

Steele says, in his *Astronomy*, with reference to this, "we do not perceive this wonderful velocity with which we are flying through space, because the air moves with us. Yet were the earth suddenly to stop its rotation, the terrible shock would destroy the entire race of man, and we, with houses, trees, rocks, and even the oceans, would be hurled headlong into space. On the other hand, were the rate of rotation to increase, the length of the day would be proportionately shortened, and the weight of all bodies decreased by the centrifugal force thus produced. Indeed, if the rotary movement should become swift enough to reduce the day to 84 minutes, the force of gravity would be entirely overcome, and all bodies would be without weight; and if the speed was still further increased, all loose bodies would fly off from the earth, like water from a grindstone when swiftly turned, while we would be compelled constantly to "hold on" to avoid sharing the same fate. But against such a catastrophe we are assured by the immutability of God's laws."

From the laws of motion, attraction, and repulsion, Sir Isaac Newton, many years ago, discovered that with equal precision he could weigh the heavenly bodies. The earth for instance weighs 6,069,000,000,000,000,000 tons and is five and half times as dense as water. Jupiter, though so much larger than the earth, is only about as dense as cork, and weighs 1,825,900,000,000,000,000,000 tons. If it was as dense as the earth, it would weigh more than ten times as much as it actually does.

THE MOON.

The earth has one child, the Moon; astronomers call it a satellite. It is a wonderful little toy that the earth threw off from her surface some years ago, and ever since it has been revolving around the mother, once in twenty-seven and a third days, borrowing a little light from the sun, and shedding it upon her to make the nights more pleasant. She is made of very much the same material as the earth, save that she has no water. She has no atmosphere that is worth naming. Nothing could live there. The surface of the moon is very hot, and all that we can see of it is made up of ragged mountains, some of which exceed 20,000 feet in height, and yawning craters, rent and torn by volcanic power, which have now, for the most part, ceased to be active.

We never see but one side of the moon, therefore it is plain that it turns on its axis once a month. It is 2,160 miles in diameter, and 238,000 miles away from the earth. It has an excentric orbit, and is sometimes 26,000 miles nearer to us than at other times. This causes it to appear larger at some times than at others. "It always looks larger than it really is, on account of its brightness. To illustrate this, cut two circular pieces of the same size, one of black and the other of white paper. The white circle, when held in a bright light, will appear much larger than the black one." It appears to different observers to be of different sizes. It is quite amusing in a large company to get their different estimates of its size; as they will range all the way from a tea-plate to a cart wheel.

The moon is a good companion, and we should be very loth to part with it. In the long nights of winter it runs higher in the heavens and remains much longer above the horizon than it does in summer to "light the traveler on his way." In September we have what is termed the Harvest moon, and in October the Hunter's moon, so called because it rises several days in succession soon after sunset, thus giving an unusual series of brilliant evenings, which adds to the joys of the husbandman and the hunter, and has

been celebrated in story and in song, by festivities and by general good cheer.

The moon has already been mapped out by astronomers, and her mountains, plains, and craters called by name. There are the mountains of Plato, Aristarchus' Copernicus, Kepler, Tycho, Newton, etc. It used to be thought there were seas there, which by our more modern glasses prove to be plains, that were named the Sea of Tranquility, the Sea of Nectar, the Sea of Serenity, etc., and still retain these names, notwithstanding they are no seas.

The craters "constitute by far the most curious feature of the lunar landscape. They are of volcanic origin, and usually consist of a cup-like basin, with a conical elevation in the center. Some of the craters have a diameter of 100 miles. Others are deep and narrow—as Newton, which is said to be about four miles in depth—so that neither earth nor sun is ever visible from a great portion of the bottom."

The moon cannot properly be said to have any seasons. During nearly fifteen of our days, the sun pours down its rays unmitigated by any atmosphere to temper them. To this long torrid day succeeds a night of equal length and polar cold. How strange all this would be to us! The disk of the sun seems sharp and distinct. The sky is black and over-spread with stars even at midday. "There is no twilight, for the sun bursts instantly into day, and, after a fortnight's glare, as suddenly gives place to night. No air to conduct sound, no clouds, no wind, no rainbow, no blue sky, no gorgeous tinting of the heavens at sunrise and at sunset, no soft blending of colors, no delicate shading, but only sharp outlines of sun and shade. What a bleak waste! A barren, voiceless desert." T.

Energy and earnestness give life to teaching.

"Education is the cheap defense of nations."—Burke.

"Why is the knowledge of some persons like money taken from the bank?

Because it is received upon trust, without examination."—Emerson.

Leaves from Dora Dean's Journal;
OR, STEPS TOWARD THE TEACHER'S LIFE.

Number Five.

BROOKSIDE, July 1, 18—.

Nearly a year has passed since I commenced teaching. I have taught three terms and with good success, so the school reports say; but I see more and more every day how little I know, and the vast field of knowledge that remains unexplored. I feel that I must go to school more, and though the way now looks dark, I believe it will yet be clear.

July 15.—Aunt Mary has been visiting us. She is the kindest and best aunt in the world, and when she found how I felt about getting an education, she promised to send me to Fairmount Seminary three years. The term begins in October, and I have already commenced preparations. I cannot be thankful enough that my cherished dreams are so soon to be realized, and that Providence and Aunt Mary have been so kind.

July 17.—Bob True called to-day. He has grown to be almost a young man, and is quite prepossessing in looks and appearance. I could hardly realize that he was the same boy that used to be the plague of my school-day life. He is now a Freshman in college, and I believe they call him quite a promising fellow. He teased me a little about old times, but somehow it did not seem as disagreeable as it used to. In fact, I really believe Bob is going to make quite a man. He is good looking, certainly.

Sept. 27.—I am nearly ready for my journey. Mother and Aunt Mary have helped me so much about my sewing, that I have found time for other things. I have been reviewing my Latin Reader preparatory to examination. Sister Mary and Brother John have been looking over the common branches also with me, or rather we have been reciting to each other. We have concluded that I shall pass the dreaded ordeal. I am to start next week, and feel more anxious just now about the long journey of five hundred miles than anything that may follow.

Oct. 10.—Here I am at the famous Fairmount Seminary, little trunk, big trunk, band-box and all.

I was very fortunate on my journey to meet with a gentleman bringing his daughter to this institution. We sat near each other in the cars, and he soon found out my destination, and asked me to join their company. I thought of mother's caution about pickpockets, but when he told me his name was the Rev. Mr. T—, of whom I had often heard, I thankfully accepted his kind offer.

Met with no incident worthy of recording until we reached Buffalo, where we took the stage for Fairmount. The coach was crowded with girls of all sorts, evidently bound for boarding-school. I noticed nothing very peculiar about any of them, except one tall, black-eyed, loud-talking girl, whom I disliked very much. Her dress and manners were uncouth, and although she talked a great deal to me, I answered only in monosyllables.

We arrived here about nine o'clock at night, and, as I knew no one here, I was told, to my extreme dismay, that for the present I might room with my stage-coach aversion, Sallie Simpson. I had a good cry after I went to bed, but felt condemned this morning, for Sallie seems so kind and so willing to initiate me into the mysteries of this big house (she is an old scholar), that I know I ought to be grateful; but I cannot feel right about it yet. After all, what does it signify; I am here for study, not for other pleasure.

Oct. 18.—I have passed the examinations, and am regularly enrolled a member of the junior class. *How well* I succeeded I cannot of course tell, but I am satisfied, since I did not entirely fail.

Oct. 20.—The tables are turned. Yesterday I resolved to try and like my room-mate, so I was pleasant as I knew how to be. She is from Virginia, and not dreaming of harm, I asked some questions about the peculiar institution, and inadvertently betrayed my own feelings on the subject.

She gave me no light, but has been as black as a thunder-cloud ever since.

Well, I believe father told the truth when he said, as I parted from him at the depot, "It takes all sorts of people to make a world, but each one has only his own place to fill."

I'll try to mind my own business hereafter, and fill my own place.

Nov. 16.—I like our school very much, but am dissatisfied with myself that I know so little; and here, among strange teachers, and so many students, I cannot do myself justice. A large school like this is a great leveler. I used to be called the smartest scholar in the district away in Brookside, but oh me, there are so many ahead of me, I am almost discouraged. But patience, Dora, this is good for you, and perhaps after a while you may be nearer the head at least. We are not allowed many studies, but our lessons are long in these, and must be learned so thoroughly. I think I can feel my mind expanding a little bit already. I do hope I shall rightly improve my privileges. Our Principal I admire very much. He seems an earnest Christian, a perfect gentleman, and an excellent scholar. He never scolds, but we care very much for his mild reproofs. I have never seen a frown on his face. He governs by love, but he governs firmly indeed; perhaps I should express it better by saying he makes us govern ourselves, for he leaves a great deal to the consciences of his pupils.

He gives us a short lecture daily on some familiar theme. To-day his subject was friendship; and he told us, among other things, that he often felt a great attachment for the *parents of his pupils before he had seen them*. He loved them for their children's sake, and read the character and manners of the mother in the daughter. I thought, as he spoke, he will never know the worth and goodness of my dear parents if he judges by me, but I will try to do them no great dishonor. Mrs. Downs, the principal's wife, is a dear little woman, so loving and motherly to us mother-sick, and sometimes homesick girls. To-day she came into our room and talked and advised with us. I felt so happy after she

had gone I could not help crying. All the teachers are not so social and affectionate as Mrs. Downs. Miss Harris is so dignified she hardly speaks to new scholars, and seems to feel her position very much. I believe she does delight to puzzle us when we have studied particularly hard, and think we have an uncommonly good lesson. Still she is an excellent teacher in many respects. In geometry as clear as — but there's the retiring bell, and I must say good-night to my Journal, for the rules here are like the laws of the Medes and Persians.

Saturday, Dec. 1.—Have spent most of the day writing composition. Felt a little homesick, and could hardly write at all. I tried one subject and then another, and, at the eleventh hour, wrote a few silly little verses on Home. Miss Harris returned them to me to-night marked, "*Improper use of capitals.*" I spent a very blue evening alone in my room. Was only glad once, and that was when I thought of Bob True, and how he used to laugh at my childish rhymes. I was glad then he was not here to tease me. One thing is certain, I never shall attempt anything of the kind here again. Perhaps it is the very best thing that ever happened to me, but it might have been kinder.

I wonder if I shall ever have the heart or brain to write an essay twelve pages long, like Miss Brown, of the senior class. I hope not, if it is as dull as that was; but some of the seniors do write beautifully. I'm glad now I had some practice in composing before I came here. I'll show Miss Harris next time, that I know how to use capitals, if there is any virtue in trying.

Dec. 2. The Sabbath.—How I should love to spend this pleasant day at my old home, to be in my old seat in the church and Sabbath school; and yet it is pleasant here. We are obliged to go to some church all day if we are well, but have prayer-meetings in the building. Our little gatherings for prayer are very sweet. It seems as if the Great Teacher often met us there. Mr. Downs tells us that our Sabbaths tell more on our characters than any other day; as we spend Sunday, so shall we be apt to spend the week. He tries to make the Sabbath a delight to us. Our Bible lessons are now upon the history of the Israelites. Mr. Downs says we "can hardly give too much study to this part of the Bible. In it we can see much of God and more of human nature than anywhere else."

D. D.

NUTS TO CRACK.

Arithmetical.

A man wishes to carry one hundred ears of corn into the barn; how many times must he go to the barn, carrying three ears only, at a time?

A Riddle.

Dreaded instrument of pain,
In every land and clime the same,
Cure for a dangerous disease,
Applied in mild or harsh degrees,
Invented centuries ago
When remedies were few, you know.
And yet this medicine remains
Sole antidote for certain pains,
At least so some physicians say;
While others cry "a better way."
'Tis not an herb, in wood's it grows,
Tell its name, whoever knows. X.

Mathematical Questions.

If a boy advance three feet per day in climbing a hill one hundred feet high, but slips back two feet every night, how long will it take him to reach the top of the hill?

There were some school children standing in a row, two before two, two behind two, and two between two, and the smallest number that could be so arranged. How many were there?

Geographical Questions.

What causes the river Nile annually to overflow its banks?

It is said that the waters of the Mississippi in flowing from its source to its mouth gradually ascend a hill more than two miles in height. What is the explanation?

S. P. HARLEY.

Answers for November Number.

ARITHMETICAL.

23

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SHAKESPEREAN.

When Danes' and Denmark's Prince had lost their king,

And Claudius ruled, with damning passion blind,

What sifter meer could loyal Hamlet bring
Than 'little more than *his*, and less than *his*.'

BOOK TABLE.

THE NEW TESTAMENT HISTORY, edited by William Smith, LL. D., with maps and wood-cuts. Harper & Brothers, New York. 780 pp.

We have received from the publishers this new issue, in continuation of their admirable series of **STUDENTS' HISTORIES**. The learned editor has here condensed within limits suitable to the design of the work as a *Students' History*, "the main facts of the general history of the East," between the close of the Old Testament canon, and the opening of the New. Then follows the *Gospel History*, carefully arranged and harmonized, and the *Apostolic history* after the method of Paley, and extending to the destruction of Jerusalem. The work is well adapted to the use of both Sunday school teachers, and classes in the higher public schools. We trust the time is not far future, when our Sacred Scriptures shall be studied in the schools of a Christian land, with as much care, at least, as the Greek and Roman classics.

A TREATISE ON PHYSIOLOGY AND HYGIENE. For schools, families, and colleges. By J. H. Dalton, M. D., with illustrations. New York, Harper & Brothers.

The aim of the author in this treatise is to present the facts of physiology in such a way as to be easily comprehended, without the use of difficult scientific terms. In this book bones are not *ossa*, nor holes *fovamina*! At the same time the author has not gone to the opposite extreme of excluding all those expressions that belong to the subject and are nearly indispensable in its discussion. This study we have long regarded as vitally important to the best public school education; and we shall rejoice in the multiplication of good text-books in this line, until every school district is supplied.

LION BEN OF ELM ISLAND. By Rev. Elijah Kellogg. Boston, Lee & Shepard.

Boys in our schools are familiar with "Spartacus the Gladiator" and other "pieces" prepared by Mr. Kellogg for declamations. The Reverend author here enters upon a new style, and gives us a characteristic story of old times on the coast of Maine. It is told in a "rough and ready" way, and will interest the boys "hugely." The language is careless, and, in some parts, objectionable. It is *Kellogg* all over, but not necessarily on that account a model for boys to study or imitate. Let our authors study to improve the taste and style of their young readers, as well as to secure their attention.

OGEOGRAPHIC GEOLOGY; or the origin and structure of Mountains. A Review, by Geo. L. Vose. Boston, Lee & Shepard.

This book by our scientific neighbor is modestly styled a *Review*, and was suggested by several recent publications upon American Geology. It is nearly an exhaustive examination of the theories of the most eminent European and American geologists, and is fortified on every page by references to the original works. We have been much gratified by a cursory glance at its well-printed pages, and feel that we have in our hands a key to unlock the scientific treasures of the mountains, which we had not before possessed. The student in geology will find it a valuable acquisition.

SCHOOL LYRICS. A collection of Sacred Hymns, for schools. New York, Harpers. A very choice collection of hymns is here for the use of our schools. Too many hymns and songs prepared for day schools and Sunday schools are the veriest *trash*. This little volume has nothing of the kind—no odor or taint of the pot-house—no rhymes without reason or devotion. We thank Mr. Capron for his pains in preparing it.

THE HUMAN INTELLECT. With an introduction upon psychology and the soul. By Noah Porter, D. D., Professor of Moral Philosophy and Metaphysics in Yale College.

New York: Charles Scribner & Co. 672 pp. large octavo. An hour with this solid volume is a short time to form such an opinion as would warrant a positive assertion of its merits or defects. It needs, however, but a brief examination to show that the plan is comprehensive, philosophically arranged, and carefully wrought out. The table of contents presents a bill of fare which the hungry soul contemplates with delight, accompanied with a sort of dissatisfaction that he cannot devour the whole at a sitting! As might be expected, Dr. Porter announces the philosophy taught in this volume as "pronounced and positive in the spiritual and theistic direction, as contrasted with the materialistic and anti-theistic tendency," &c. On this solid basis he erects his system of intellectual science; laying one stone upon another, each fitly hewn and polished, until the edifice stands comely and complete.

We invite the attention of teachers to its thorough examination. He who deals with *mind* as his daily duty, should understand what may be known of its faculties and powers, and the laws of their action. Thus only can he truly educate; thus alone can he prove himself a workman that needs not to be ashamed.

We can suggest no more valuable exercise for the teacher, in the work of self-education and personal training, than the earnest study of mental science, with such a help as this volume must afford.

THE ATLANTIC MONTHLY for December is full of attractive reading. The promise for 1869 is still "excelsior." The liberal patronage bestowed upon this magazine encourages the proprietors to supplement the fact, by the ablest writers of the country. Fields, Osgood & Co. Boston. \$4 per year.

OUR YOUNG FOLKS is still the pride and joy of its possessors. We should say the prospects for 1869 bids fair to eclipse any former volume in substantial interest and worth. Fields, Osgood & Co., Boston, \$2.

EVERY SATURDAY still continues to give its readers a weekly transcript of foreign literature. Fields, Osgood & Co. \$5 per year.

HALL'S ALPHABET OF GEOLOGY; or, First Lessons in Geology and Mineralogy, with suggestions on the relation of rocks to soil, by S. R. Hall, LL. D., with illustrations. 16 mo, 196 pp. Boston, Gould & Lincoln.

This is not an exhaustive treatise on the subject, but "such an amount of information as may be acquired by the young while prosecuting other studies, and by those of any age who have not time or opportunity for extended research."

MARK'S FIRST LESSONS IN GEOMETRY, objectively presented, and designed for the use of primary classes in grammar schools, academies, etc. 12 mo, 158 pp. New York, Ivison, Phinney, Blakeman & Co.

This work is a plain, simple, progressive treatise upon the elements of geometry, profusely illustrated. It works upon the true principle that the *perceptive* faculty in children and youth is the very best medium by which to communicate instruction, and also upon the idea that some geometry and less arithmetic is better for the boy, who does not have the time or opportunity to master both, than all arithmetic and no geometry.





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