It will not seem, to men of intelligence who are familiar with his work, any exaggeration to say that it is seldom the choice of a diplomatic representative of the United States falls on one so worthy as Dr. Gregory to represent Americans and Americans at a European court; surely President Garfield could not more deeply gratify the educators of Illinois and the promoters of social and political reform in this State, taken as a whole, than by nominating Dr. Gregory to succeed the scholarly Marsh at Rome.

The latest farce played in this city is "on the boards" at this moment. It will run probably for a fortnight or more to come. It would be too much for our veracity to call it popular. Were the people to get behind the scenes, or would the Board of Education but favor them by ringing up the curtain, it would "draw" beyond a doubt, and raise such a furor among the sensation seekers as our sleepy stage managers have not given them for a long time. The *dramatis personae* are certain enterprising publishers of school text-books; certain other publishers who are not so enterprising, or, at least, not so familiar with the stage machinery, and the "gallery gods," whose nods and smiles inspire success; a dignified conclave of worthy inspectors and directors general of the system of public instruction of this great city; and, in the background, far enough away to overhear what is being said or understand what is being done in their behalf, a regiment of 85 teachers, a grand army of 56,500 school children, and a half million people in general, largely composed of tax-paying parents, who should in fair play constitute the audience. The "action" of the latter does not come in until the farce is all over and the serious, earnest, "your money or your chattels" acts of the play are rung in. Now, as we have before hinted, if the half-million were only permitted to see, hear and fully comprehend the farcical part of the play, either as an audience or as actors, instead of being shut off from all this by a wooly curtain of pretense, there would be a "heap" more of action in the performance, and the majority would get very much more enjoyment out of it.

If it were only in good taste for us to explain a joke, we could explain all the foregoing, so that it would be, (to borrow the diction of our Chicago high school girls), "awfully funny."

What more ridiculous subject for a farce could any playwright wish for, than our Board of Education has furnished. Having resolved to hide a blunder of the Board, or something worse, committed a year or so ago, in the adoption of a stupid concoction of interrogation points and figures, labeled, Elementary Arithmetic, these gentlemen, or their coaches, resolve to introduce a certain other text-book on arithmetic. They also resolve to bounce a certain long tried and generally approved grammar, and to introduce a certain other grammar, something new. Of course, if *business* were all these gentlemen were bent on, the direct way of proceeding would be "to ring out the old, ring in the new," by a simple resolution, and be done with it. But, no, that would be a dull procedure, so far as the Board are concerned, while it might seem hasty to outsiders; so the Com-
mittee on Text-Books is directed to advertise for bids. Publishers are requested to send in propositions to supply not only elementary arithmetics and grammars, but various other books. Not that there is probably any serious intention of changing all the old text-books, but it will look better, and at the same time make the farce all the broader and more sensational.

Of course the book publishers, generally, respond. It would be too funny to describe all the scenes in which the book agents and the text-book committee are the chief actors. The doors of the committee, and the doors of the several individuals of the committee, their down town offices and their private sanctums, are invaded by good looking, suave gentlemen, with piles of textbooks under their arms. These gentlemen mean business. Not so with certain members of the text-book committee. Their business was all transacted days, if not weeks, ago. The non-enterprising agents who were not present at that time, who had no hint of this thing until the call for bids was received, looked very much in earnest, as bowing themselves into the text-book committee man’s presence, one by one, they make known their errand and propose to show their books. On the other hand the text-book committee man feigns attention, or looks bored, smiles graciously, or looks August or Sphynx-wise, seems courteous, communicative, unperturbed, or brusque, as becomes the farcical action of the moment best. Sometimes the book agent looks confiding and happy, again he looks nervous and distressed, at least suspicious. But perhaps there is no part of the play so startlingly thrilling, as when one of these committee men, saluted by a polite book agent in the former’s down town office, coolly tells him that he may as well save himself the trouble of showing his books, that it is not even worth while for him to see them, since the committee’s mind is fully resolved already to put in certain other books. “But,” protests the benefactor of the o’er worked schoolboy, “you advertised for bids from publishers of this class of books. Our firm have responded with a bid, in which we offer the Board a better book, at less cost, as I think you will find, than any other books of this class. You have received that bid, for we have your acknowledgment of that, but you have never seen the books. You are one of the judges. Of course we do not expect you to decide until you have examined the books we offer you. When will it suit your convenience to do this? Please name some convenient time and place, and I will be there.” It is really laughable to see the expression in the committee man’s off side eye, as he replies: “My good friend, don’t trouble yourself to do all this. You see we have familiarized ourselves with these other books, and it’s all settled, or as good as settled.” “At least let me leave our books,” persists the agent. “I understand it will be some weeks yet before the Board takes formal action in this matter, and—well, something might turn up, you know, and you might find a few moments to glance at the covers of these books, if nothing more. Remember I am here by invitation. At least I think I have a right to construe your call for our bid as such.” It is simply the sublimity of farce to see how the committee man’s cheek glows, not with blushes, but with the sheen of sevenfold heated brass, as he listens to this last appeal. Oh! the effect is grand, magnifique! side-splitting.

This play is running in Chicago at this very hour. The people should insist upon seeing it. All the people, we mean.

The reason more people have not seen it is that there are so few book publishers, for one thing; and because they are similarly affected when they come out of the show, to the patrons of the impertinuous Yankee, who, being out of funds, advertised to show a horse with his tail where his head should be. The first patrons of this wonderful show beheld a horse with his tail in the manger. They swallowed their indignation, and as they came out, applauded the show, until after all their friends were as badly sold as themselves.

We cannot approve of profanity under any circumstances, but if there ever could be a time when it was excusable, it would be not far from this time, and in the offices of certain respectable school book publishers. The atmosphere in those places is not good for “a moral” just now, so we omit that part of this article.

PRINTING INK.

AN ESSAY IN THREE CHAPTERS, BY DAVID KIRK.

CHAPTER I.

It has grown into a truism, that the art of printing is of some benefit to mankind. By means of it, the best thoughts of the best minds of all ages are preserved in a convenient and durable form. The knowledge acquired by any generation of men is communicated to every succeeding generation, and thus progress is made possible, and the power of mankind over the elements and forces of nature and the malefic influences that surround them is increased.

The invention of printing has made books so cheap, that the pauper of to-day is more favorably situated, as regards the acquisition of knowledge, than the kings and princes of ancient times. As a natural consequence of the multiplication of books, the incentives to learning and culture have been multiplied, and mankind has gone on obtaining knowledge in an increasing ratio.

The boundaries between truth and falsehood have become more clearly defined, and superstition has, in like ratio, declined.

The sayings and doings of the entire human family, and the notable events that transpire throughout the world are speedily made known to all by that patent agent of modern civilization, the newspaper. The advantages that accrue to mankind from the “art preservative,” are obvious, and a further enumeration of them would be useless.

CHAPTER II.

The invention of Guttenburg and Faust, or of some “Ah Wing,” who, ages before, “winged” his way from the “Flowery Kingdom,” has brought some evils on the human species, and it is proper that they should be pointed out. Whether these evils are the inseparable concomitants of all things human because they are human, or that manifestations of the dual nature of things whereby, according to some, good and evil are co-existent, and inherent, each elucidating the other by contrast, I shall not attempt to say. Whether electricity is a single force with what are termed positive and negative manifestations, or two forces, is not essential to an understanding of its effects.

We know that the power that transmits our messages, can also shatter our dwellings and stop the pulse from beating.

So with other forces, and with the inventions of the brain; we are mainly concerned with their effects. Neither is it material to our purpose whether we adopt the theological or the utilitarian view of evil. If we admit that knowledge is power, we must admit that it is a power for evil, as well as good. Bad men have availed themselves of the printing press to circulate their vicious views and theories among their fellow-men, and great damage has resulted.
THE EDUCATIONAL WEEKLY.

Mischievous literature is made by the ton; trashy literature by the hundred tons; and second-hand literature by the thousand tons.

Of course, some men must get a large share of their knowledge from the writings of others; but, the number of men who go to original sources for information is smaller than it should be. Men would rather be the disciples of a compiler of books for a subscription-book publishing house, than of an Agassiz.

As to the prevalence of vicious literature, it is only necessary to read the reports of Anthony Comstock, concerning his efforts to suppress it.

Trashy literature comprehends three-fourths of all the works, called novels, also the other fourth, and a large number of so-called newspapers.

Second-hand literature consists of works that are mere compilations, and comprises a majority of the books that are written.

The reading of many books and papers injures the mind in various ways. The mind, like the stomach, must have time to digest its contents, and like the stomach, the mind will resent repeated attempts to overload it. It has been said that a thought, like an animal in embryo, has its period of gestation. We know at last, that time is an element in the formation and completion of a thought.

The spectacle of Buddha sitting cross-legged under the banyan, for days at a time, reflecting on the problems of existence and the hereafter, represents the reflective phase of the mind in the evolution of thought. Joseph Cook, who reads nearly every book as it falls hot from the press, in such a manner, using the words of Carlyle, as to feel the jugular vein of the writer, which means to pencil-mark a few striking passages, represents the receptive phase of the mind, and the two above-mentioned worthies well illustrate the relative values of their methods. Buddha, without books, accomplished something lasting, and we believe valuable. Joseph Cook, who would keep a librarian like Magliabecchi, on the trot to find books for him, has added very little to the stock of the world's knowledge, and when he leaves the world (which we hope will not be soon, for he is a good man) he will not be specially remembered as a teacher or philosopher. The reading of many books and newspapers injures the memory.

Emerson says, that memory is genius. This is so far true that no better definition of genius has been given. Genius, then, is in danger of becoming extinct; for the human memory is utterly unable to grasp the enormous amount of material that is poured into the mind through the newspapers and current literature of the day.

A certain clergyman says that he takes fourteen religious papers. It is safe to assume that he also takes one or more secular papers, and perhaps, a magazine. It is impossible that this man should remember all he reads, or any considerable portion of it. His mind, wearied by ineffectual effort to retain so much, will finally lose its power to hold anything, and will resemble a sieve that lets almost everything through it. The alarming increase of insanity, noticed by all, is perhaps due to some extent to the bewilderment caused by reading the opinions of "men of many minds."

One farm journal will recommend deep plowing. Another will as strongly advise shallow plowing; and the opinions on this and other subjects in agriculture are about as various as the number of persons who discuss them. So, with every department of business or pleasure. The parties who gave advice to the man with his donkey, can now use the press, and advise hundreds of men and donkeys. Nothing personal meant. It is doubtful whether the country newspaper is indispensable to the well-being of a community. A few houses sprang up in a mushroom town, and a newspaper makes its appearance.

Not being able to compete with the large city papers in the matter of general news, it confines itself mainly to local affairs, and invades the privacy of the home circle in quest of items which cannot be found on the street. Much space is devoted to short paragraphs composed in the language of slang.

We are informed that "Smith is at home; 'Jones is out of town; Miss A. is visiting friends; Mr. B. is painting the front door of that tony house of his."

"And now, it is 'Tip Spaggin', who has been and gone and done it, and got spliced; happy dog, you bet. Pass the cigars Tip." "That unadulterated fraud and humbug, Sam Spickett is running for office on the Democratic (or Republican) ticket. We'll wager the drinks that he will get both histed and busted, and so will the party that ties itself to such a corpse of seeking corruption."

And, so on, ad infinitum. It is evident that such reading as this, has a bad effect on society. The lack of veneration, the prevalence of slang, the dislike to substantial reading, and many immoral practices, are largely due to such miserable discourse as we see in the country newspapers. Some country papers are not open to our censure, while some metropolitan papers are. The circus poster that speaks of a sorry collection of animals and performers as the "greatest show on earth," "unparalleled and unapproachable," "inimaginable in splendor and magnificence," "eclipsing the glories of ancient times," and even threatening to go ahead of itself, does no special harm, because nobody believes it; but, the advertisements of quack medicines, gift enterprises, and other humbugs are a source of great damage. We would not abolish advertising, however, but would be glad if our type-setting machines could be endowed with intelligence and instructed to set up nothing objectionable in this department of journalism.

Chapter III.

Obscuring and destructionists, who, like Richard Grant White, Gail Hamilton, and other cynics, would tear down our school system, because it is not perfect, are not as useful to the cause of education as philosophers like Harris, Mayo, Philbrick, Miss Bracket, and other men and women who seek to strengthen that which is weak, and amend that which is faulty. Ruskin does not like the noise and smoke of the locomotive, as it rolls along over his beautiful landscapes, but he should content himself with trying to abate the smoke and the noise, for the locomotive will go on. We have a suggestion or two, which, if followed, may reduce the evils of too much printing to a minimum.

First, Let every person read but one general newspaper. In addition to this, take a local paper, if it is a good one.

Second. Let every man take a paper devoted to his profession or trade. The teacher should take a school journal; the mechanic, a journal devoted to his special trade. The professional man a journal edited specially for his department of learning or business. These periodicals, with a few standard works, and such technical publications as relate to the pursuit of each individual will furnish reading enough.

Third. These publications should be read with the view of remembering the useful matter in each.

Fourth. Though much is said about the evils of cramming the memory in our schools, very little is seen of said "cran-
LABOR-SAVING TRAVEL.

As a rule, we are believers in labor-saving machinery, and in every improvement that may lessen mere-physical exertion, and tend to elevate the human race to a higher moral and intellectual position, but there are some departments of activity in which the object sought can only be grasped by the application of one's own brains, muscles, and will-power. There is no labor-saving machinery by which the mind can absorb valuable information without effort; and the system has not been patented that will enable a teacher or professor to throw the flood of light that irradiates his being upon his stupid and non-appreciative pupil. There are some things in which labor saved, is time, talent, and money lost. The person who makes a foreign tour, trusting to professional guides and guide-books to interpret to him the wonders of the world, is one of that deluded class which seems to imagine that in mental idleness can be found all the elements of true pleasure. Others, like Mark Twain's "Innocents Abroad," trust their fate to a "Tourists' Agency," swallowing the magnificent thrown out in its glittering prospectus, and resigning themselves to its fortunes and fate. Such agencies promise to materially cheapen the expense of an European trip, as well as to save the tourists from ten thousand perplexities and troubles; but, by the time the average traveler by these patent labor-saving associations has achieved the grand tour and returned home, he will be found thoroughly disgusted. Not only has he been obliged to conform his movements to a certain prescribed programme, arranged not with a view to agreeable sight-seeing, but he has discovered that the alluring promises held out, of comfort and good living, have been mostly confined to the prospectus. Even the hotels discriminate against the tourist parties; the accommodations advertised not being provided to this class of travelers. A victimized tourist of 1880 writes to the Chicago Tribune warning the public against trusting implicitly to the representations of the official programmes of these agencies. Read all the fine print in them:

Wherever it reads, "Time will be afforded to visit," etc. etc.; or "A party can be organized to visit," etc., etc., you can safely depend upon such as being extras, but carefully incorporated among the inducements, with intent to deceive. It will be found that the tourist is expected on every occasion, except such as are expressly stipulated, to pay his own carriage-hire, and, in fact, to make a trip as a first-class passenger is expected to make it, although assurances will be given that every necessary expense has been included in the price of the trip.

I recommend to those traveling through the medium referred to, that they provide themselves with at least 25 per cent. in excess of fare paid, for necessary extras.

In extended tours, such as Egypt and Palestine, it will be found cheaper and more satisfactory to travel independently than to join any party through the medium of these agencies. The writer purchased an excursion ticket through the Boston agency or branch of a London firm, whose courier went and took charge of the party on its arrival in Great Britain, and by whom it was conducted to Jaffa, in Palestine, where we were turned over to a native Arab conductor, named Alexander Howard, whose principal pleasure seemed to be in abusing the muleteers and camp-followers under his charge, all of whom, it seemed, were incapable of resentment. Every promise made by the Boston end of this combination was ignored by this person. We were furnished with a lot of jaded and worn-out horses, and with saddles and bridles which required constant tying to make them hold together. The food furnished was insufficient and of inferior quality. The dragomans, who were relatives of their chief, and equally unreliable, quarreled among themselves, keeping up a constant wrangle day and night, making it impossible to sleep. This disagreeable state of affairs existed during the whole trip from Jerusalem to Damascus. I mention these facts merely to show how incompetent are agencies in America to make good their promises to patrons when thousands of miles intervene. During the journey referred to, many small parties were met who were traveling independently; and, on inquiry, we found that our expenses were generally in excess of theirs, while they, by making their own contracts with their conductors, were in a position to compel their fulfillment, and were enjoying comforts it was not possible for us to obtain. A reasonable conclusion, when we stop to consider that we are paying three profits,—one to the Boston agency, one to the London agency, and one to the Arab Howard, in whose interest we find, on arrival at Damascus, that, after 250 miles in the saddle, we must, in order to reach Beyout, travel three days more on horseback over a rugged mountain-path, devoid of interest, or pay our fare a second time by the Oriental Diligence Company and go through in ten hours in a comfortable coach. It is needless for me to add that all of the party paid their fare over this portion of the journey for the second time, and traveled quickly and comfortably by the route named,—the knowledge of its existence having been sedulously withheld until its advantages became apparent to us.

A GOOD CREED.

The following on the qualification of teachers, taken from the report of County Superintendent Sabin, of Lake County, printed in the last Illinois School Report, sets a high standard; but is it too high to aim at? Would there be any questioning the value of the public schools, or doubting the progress in them, if all examiners and employers of teachers would first subscribe to County Superintendent Sabin's creed, and then show their faith by their works?

All persons licensed to teach stand on an equal basis before the law. The lowest second grade has as good a title as the highest first grade. The young aspirant, who has never seen any but a district school, has never attended an institute, or, perhaps, read a book, competes with the college and normal graduate for the office of instructor—and has a right to, with certificate in hand. Consequently, if my will be law, a candidate to teach in Illinois should possess something like the following qualifications: He should be a good penman, and know how to teach writing; should have the ability to write a letter, or a theme, grammatically, with the words used correctly spelled; should know the inflexions of etymology, and the principles of syntax; should be able to read, and to teach reading; should understand principles of arithmetic and algebra; should be thoroughly familiar with the text-books of trigonometry and analytical geometry; should possess knowledge of political and physical geography, and know how to teach the subjects in an ungraded school, with text-books by at least a dozen authors or publishers in actual use; should understand something of the distribution of the American continent, and the history of the constitutional government of the United States and of Illinois. He should also be familiar with the principles
of physiology and hygiene, and the elements of algebra and geometry: for, without the latter, he cannot adequately teach some of the most practical parts of arithmetic. And, lastly, he should have a reading acquaintance with Prescott, Irving, Longfellow, Lowell, Whittier, Cooper, Holmes, Hawthorne, Tennyson and Macaulay.

I believe in teaching as a profession, and that every profession requires a training school. I, therefore, believe in that wise legislation which fosters normal schools for the training of teachers.

I believe that the public schools are established by the State, for the State, in the interest of the State, in obedience to the will of the people which, it is hoped, will cultivate the State. I further believe, that an education is an inalienable right of every child of Christian State. I, therefore, believe that the State has a right to enact a compulsory law of attendance, and that such a law is needed in Illinois to secure to children their rights.

I believe that "knowledge, morality and religion" are the safeguards of the State. I would, therefore, give the Bible a place in the public schools.

Schools cannot run alone. They must be superintended. If counties will not provide for intelligent, competent, supervision the State should, and, I believe will.

There is a great lack of permanence in the teacher's office. New supplies are in constant demand. Consequently the institute must be constantly demanded. I am of the opinion that the school law should provide for it.

EDUCATION OF THE INDIANS.

It has been only a few years since the government of the United States turned its attention seriously towards solving the question of Indian education. In a report on this subject in 1879, the House Committee on Indian Affairs showed that under treaty stipulations of the government specially providing for education of nomadic tribes, including about 71,000 Indians, with over 12,000 children of school age, less than 1,000 children had received schooling during ten years. A bill was introduced providing for the utilization for such school purposes of certain vacant military posts and barracks, as long as not required for military occupation, and authorizing the detail of army officers by the Secretary of War, for service in such schools, without extra pay, under direction of the Secretary of the Interior.

The truth of the present systematic attempt at Indian education and its results are shown in an article contributed to Harper's Magazine, by Helen W. Ludlow. The idea seems to have germinated in the humane brain of Capt. H. R. Pratt, of the cavalry service, who was in charge of the Indian prisoners at Fort Marion, St. Augustine, Florida. The king of leading a revolt of the Kiowas, Comanches, Cheyennes, and Arapahoes in the Territory in 1875. Aided by benevolent ladies, Capt. Pratt, it appears, was restrained from the exercise of intellectual curiosity among the Indians, in which he was successful to an extent that rendered the experiment of increasing interest to himself and the friends who stood by him, and when the period of six months had terminated, and the Indians were to be returned to their homes, leave was obtained from the War Department for as many of them to remain as were willing to go to school, and could be provided for by private benevolence. Twenty-two of the youngest remained, seventeen of whom were received at Hampton Institute, Virginia, and were placed under the care of Captain Pratt. An interest soon began to be developed in the experiment by the officials at Washington, and the President of the United States and several of his Secretaries were among the visitors to the institution, the results being deemed so favorable that it was determined that the government should take an active part in the work so well commenced.

Six months after the reception at Hampton of the installment of St. Augustine prisoners, 49 young Dakotas, chiefly Sioux, with a few from other tribes were brought there, the United States being responsible for $120 yearly, while it should keep them at the school, which is a private corporation, supported chiefly by Northern benevolence. The school supplies the deficiency of the government appropriation, amounting to from $200 to $300 a year for each of these students, and has erected the buildings necessary for their accommodation. Nine of the sixty-dollar scholarships are given by the American Missionary Association of New York, and the rest have been made up by donations of the Institute were anxious that one-half of the students should be girls, but it was found very difficult to obtain them on account of their services as drudges at home, and their matrimonial value to their parents, which, it was realized, would be lost by education. Out of the 40 arrivals from Dakota, nine were girls. The new savages were amicably received by the St. Augustine students, and instructed into the routine of their new life. The Indian students at the institute now number 200, some of them having an educational experience of two years, from which some gratifying results have been developed.

The early teaching has mostly to be conveyed to the torpid minds of these pupils by the exhibition pictures, object-lessons and blackboards, the lan.

SLATE OF LITTLE SIOUX BOY AFTER SEVEN MONTHS' TRAINING AT CARLISLE.

SLATE OF LITTLE SIOUX BOY AFTER SEVEN MONTHS' TRAINING AT CARLISLE,
gauge being taught by the aid of signs, as well as sounds. Geography is taught with moulting sand and raised dissecting blocks; and arithmetic, also, with blocks, the Indians now becoming adept in figures. Reading, writing and spelling are taught by the word-method and charts, and children's magazines are brought into requisition, most of the Dakotas being able to read their simple sketches and stories related to them by their teachers conveying moral lessons and exciting close attention. One evening in the week is given to English games, and one to singing, both of which departments they are making proficiency. The mornings only, are given to study, and the afternoons to industrial training and exercise, with Saturday as a holiday. A Boston lady has given the institution a farm of 300 acres, which, with the school farm of 150 acres, affords opportunity for training in farming and the care of stock. There are large brick workshops erected by Mr. C. P. Huntington, of New York, a sixty-horse-power Corliss engine, given by Mr. G. H. Corliss, supplying the power. All the lumber and bricks used are made on the place, and there is special training for blacksmiths, carpenters, wheelwrights, engineers, tin-smiths, shoemakers, harness makers, tailors and printers. The Indians are also employed as waiters and janitors. They like to work as well as most boys, are slow and need watching, but show a special aptness for mechanics. Most of the shoes worn by the Indian boys, are made by themselves, and they are also proud to point to various other evidences of their skill. Their instructor in farming says: "They don't like to turn out early in the morning, but otherwise, do as well as any class of workmen, and seldom have to be spoken to for any slackness." A system has been established of paying them wages, it being understood that the money so paid is for the purchase of their clothing, which operates as a stimulus to exertion. There is an efficient military organization under command of an army officer. In the summer vacation, the boys who remain at the school alternate farm work with camp life, sleeping in tents, living outdoors, cooking for themselves, fishing, hunting and rowing. Seventeen boys and eight girls were last summer distributed in five families of farmers of Berkshire county, Mass., working for their board, and having the home life of New England, with good results. The improvement of the Indian girls has been as marked as that of the boys. The former are trained in the various household industries, and all take delight in cultivating flower gardens, and in decorating their rooms. A cooking class is one of the successes of the Indian development.

A remarkable meeting occurred at Hampton about a year ago, when twenty-five or thirty Sioux chiefs visited the institute, where some of their own children and those of their tribes were being educated, and the interest with which the grim warriors reviewed this scene in youthful civilization, may be imagined. A subsequent visit of "Bright Eyes," the Ponca advocate, led to her project of raising $5,000 to enlarge the school by the erection of a building for Indian girls, and for this purpose a site has been donated by a
lady, and the Secretary of the Interior will extend the government appropriation of $500 a year apiece to the girls desirous of an education.

In Carlisle, Pennsylvania, the War Department turned over Carlisle Barracks to the Interior Department. Capt. Pratt was detailed in September, 1879, to bring Indian children from the western agencies. He returned from Dakota in a few weeks with 34 young Indians. Forty-two others were gathered in the Indian Territory, and Carlisle Barracks were opened on the 1st of November, 1879, with 147 Indian children, most of the St. Augustine pioneers going to Carlisle to aid in its inauguration. In his message in December of that year, President Hayes commended these schools to the care of Congress, and mentioned that a similar attempt at Indian teaching had been made at Forest Grove, Oregon. At present, there are 156 pupils at Carlisle, 57 of whom are girls, representing a large number of tribes from different States and Territories, many of them being children of chiefs, or head men. The system of education and training at Carlisle is of the even, general character, and would like a town; but, of course, this is not meani ng that the results are as good as a town, but simply because such an answer cannot be arrived without an accurate trigonometric survey of the entire country.

Through what cities in Indiana would a straight line from New York to San Francisco pass?

This problem is more curious than useful, and, we might add, more curious than possible.

We should have a definite point in each city, between which to draw the line, for it is plain that lines might be drawn between these cities which would be miles apart. We should also have a more accurate map of the States in question, than any given in the atlases. Indeed, the question cannot be answered without an accurate trigonometric survey of the entire country.

But lest we should be charged with avoiding the question, we shall discuss it as well as we can with the data at our command.

A straight line between the cities would run many miles under the surface of the earth, and it might pass through some towns, for according to the common law of England, a farm extends from the center of the earth to the top of the atmosphere, and so do a town; but, of course, this is not the line that is meant in the question. A direct line, that is, one that would cross every meridian at the same angle, or, in other words, one that would continually point to the same point of the compass until it reaches San Francisco, would be called a rhomb line. This line is far from being a straight line, for it is a curve of double curvature, in fact, a kind of spiral, and would not be the shortest distance between the two cities.

The shortest distance between the cities, measured on the surface of the earth, would be an arc of a great circle passing through them, and for this reason, and because such an arc is the nearest approach to a straight line of any that can be drawn on the surface of the earth, we shall assume that it is the line referred to in the problem. An arc of a great circle between these cities, together with the complements of the latitudes of the cities, forms a spherical triangle, in which we know two sides and included angle, viz: the complements of the latitude \( \alpha \) and \( \beta \), and the difference of the longitudes, the angle \( C \).

Assuming the latitude of New York to be \( 40^\circ \ 40' \) and of San Francisco \( 37^\circ \ 40' \), the side \( \alpha \) is \( 52^\circ \ 20' \), the side \( \beta \) \( 49^\circ \ 20' \), and assuming the difference of longitude to be \( 48^\circ \ 40' \) the angle \( C \) will be \( 48^\circ \ 40' \). Using the first and second of Napier's proportions, we find the angle \( A \) to be \( 78^\circ \ 19' \ 28' \), and the angle \( B \) \( 69^\circ \ 47' \ 06' \).

Knowing these angles we can find the side \( AB \) by using Napier's formula for tang. \( \frac{\alpha}{2} \), or by applying the principle that the sines of the sides are proportional to the sines of the oppos-
site angles. Calling the radius of the earth 3,956 miles, the arc AB is about 2,584 miles, which is the distance between the two cities, according to our data.

By making another calculation, it appears that the arc AB passes 18 or 20 miles to the north of the northeast corner of Indiana.

We think it would be more appropriate to ask: Through what towns in Michigan does said line pass?

This is all the light we can give on the problem under discussion with the data at hand; and as we have no time to revise our figures, we shall feel obliged for any suggestions or corrections.

GENERAL NEWS OF THE WEEK.

Secretary Winfield's plan of refunding the maturing six per cent. bonds at three and a half per cent., by simple endowment of the change in rate of interest, seems to be interesting. If he carries it out it will save the country a handsome sum in the cost of calling in and destroying old bonds, preparing new ones, and commissions.

The New York Central, Erie, and Pennsylvania roads have subscribed $450,000 toward the World's Fair, while $1,000,000 was the amount expected from them. The fate of the scheme will doubtless be settled this week.

It can hardly be doubted now that there has been corruption in the "Star Routes" mail service. The star routes, it is scarcely necessary to explain, are those over which the mail is carried by means of conveyances other than railways. There are about 10,000 of these routes, many of them in the far West, in districts not touched by railways, and many others in localities where citizens of both parties have united in an imperious demand for increased mail facilities. As the service over these routes was subject to extraordinary conditions, the Postoffice Department was allowed large discretion in the matter of expenses and contracts. When the expenditures went beyond the estimates it was easy to explain the discrepancy, and when there was a large increase in expenditures, as for the year ending last June, the facts cited in reports seemed to bear out the argument that the increase was necessary. It is now charged that General Brady has abused the confidence reposed in him, and a ring to defraud the Government has been in successful operation for some years past, in which several members of Congress, of both parties, are likely to appear in a light too conspicuous for their honor. The President has demanded and received General Brady's resignation, to be held pending a searching investigation.

The flood in the Missouri at Omaha is twenty inches higher than the mark reached week before last. This is far above the highest record of any year before. All the buildings on the levee at Omaha have been abandoned, the water being twenty inches higher than during the late flood. On the Council Bluffs side the Chicago railroads send their passengers two or three miles in skiffs to the transfer depot. Taking in both sides of the river, several hundred houses in Council Bluffs and Omaha are now entirely surrounded by water, and most of them are abandoned.

The fine statue to Admiral Farragut, ordered by Congress some time ago, was unveiled on Monday. It occupies one of the handsomest of the many small parks of Washington. "Hero worship is growing in this country. The nation favors a reasonable degree of such exaltation of the virtues of valor and statesmanlike wisdom and integrity.

The mayor of Cincinnati persists in his determination to enforce the law against theatrical exhibitions on Sundays, and his energetic action led to the closing of every theater in Cincinnati last Sunday, although one German place gave a free concert, and doubled its bar receipts.

The Strike-Fever spreads all through the country. The street-car strikers have not succeeded perfectly in Cincinnati. The street-car of St. Louis—excepting those of one company—are all 'stabled' by reason of a strike there. The companies decline to grant the men all they demand. They will raise their wages to $2 and $2.25 per day, but refuse to reduce the schedule time to twelve hours. Tailors, railway employees in car-shops, and other classes of workmen, are striking on all sides. About four hundred employees of the Rock Island car-shops struck last Monday morning for an increase of 2% per cent. in wages.

Rev. Phillips Brooks declines the professorship of Christian morals at Harvard University.

There will be a lively contest for the speakership of the next House, Congressmen Kason, Keifer, Dunell, Burrows, and Haskell, all of whom are candidates for the place, are to meet in Washington this week and arrange, if possible, such a combination as will secure a fair representation for their counties. The West is determined to obtain this position.

Mears, Moody and Sankey have returned from their evangelizing labors on the Pacific Coast, and conducted a service in Mr. Moody's old church, Chicago, last Sunday. There was an immense congregation.

The creditor class of business men are very desirous that Congress should pass another national bankruptcy law. Their objections to the old law were inspired by the enormous fees given to the registrar and receivers, which swallowed a large portion of the assets of the bankrupt estate. But even with those drawbacks, the law was better than none. Senators Ingalls, McMillan and Garland have been appointed a sub-committee of the Judiciary Committee to consider the subject of bankruptcy during the recess of Congress. They will report a bankruptcy law at the next session.

Congress recently appropriated $30,000 for a monument to George Washington, at his birthplace in Virginia. A Boston artist having submitted to Secretary Evans a design for this monument, Secretary Blair has now called for working drawings and an estimate of the cost, and it is probable that the design will be accepted.

The French invasion of Tunisian soil was begun on Saturday. Here is the lighting of a match that may end in a comparatively trifling bonfire, or may possibly expand into a configuration involving the greatest part of Europe. Let the students of history watch the proceedings carefully in the Gulf of Vola increases daily. A telegram from Constantinople to the islands of Smyrna to the islands of Asia Minor. The Greek government has ordered the delivery of six transports within fifteen months. The number of recruits for the Turkish army in the Gulf of Vola increases daily. A telegram from Constantinople to the islands of Smyrna to the islands of Asia Minor.

Neither Turkey nor Greece seems to have any faith in the permanency of the "arrangement" made for them by the Great Powers. Both are steadily loading down their tax-burdened people with new debts to increase their armaments. The Greek government has ordered the delivery of six transports within fifteen months. The number of recruits for the Turkish army in the Gulf of Vola increases daily. A telegram from Constantinople to the islands of Smyrna to the islands of Asia Minor.
constantly receiving petitions, some in favor of, some against, a participation of England in the conference. It may be, however, regarded as certain that if the present programme implies that any state sending a delegate to the conference expresses thereby an adherence to bimetallism, the cabinet of St. James will take no part in the proceedings. The result of the present negotiations as to a change in the programme, will, therefore, decide the course to be adopted by England.

The international monetary conference was opened at Paris by St. Hilaire, minister of foreign affairs. On motion of Mr. Evans, Mr. Magnin, the French finance minister, was chosen president. He expressed the belief that international bimetallism alone could restore monetary regularity in all parts of the world, while he hoped that all systems would be fully discussed. Fifteen states are represented. The delegates from England and Italy have not arrived.

STATE NEWS.

ILLINOIS.

Champaign Chat.—The students are kindly allowed by the citizens to take part in the local elections here.

The University this year restores the rule requiring all the senior class to prepare graduating essays. John E. Gough will give us the long expected lecture 'May 2. C. L. Hayes of the class of '73 surrender connection with our horticultural department at the close of the present year. He goes to Colorado as superintendent of mines for the Connecticut and Illinois mining company. He announces an intention of returning to the state and one day engaging in some of the classes. Wood's Coordinate Geometry is the latest victim.

Normal News.—Miss Nannie Smith of Denver will visit Europe this summer.

Miss Adeline M. Goodrich, class of '77, who has been prostrated by disease during all the last four years, rose from her bed the other day and believes she is cured in answer to prayer. Her many friends will be glad to learn of her recovery.

Flora Fuller has given up her school at Delavan and returned to Normal to care of her sister.

A. C. Russel spent his vacation in Normal. He is much pleased with his work at Peru.

R. R. Keeder stopped here on his return to Rutland.

Miss Bertha Crawford visited school during her vacation.

Miss May Hewett has been engaged in re-arranging, labeling, and cataloguing the books in the reference library.

The Normal school board estimates the expenses of the school for next year at $5,500. In addition to this, some payments will be made on the bonds. The amount to be raised from taxes is $7,000, the same as last year.

Miss Addie Goodrich is now able to walk, for the first time in nearly four years.

Mr. Joseph Frenchard was here last week, taking examination in two or three studies. He is nearly through the course, but will probably postpone graduating till next year.

The Philadelphia Society at its last regular meeting adopted the following resolutions, relative to the death of Mrs. Frank Burr, formerly Miss Allie Adams:

Whereas: In the dispersion of an All-wise Providence, we are called upon to mourn the loss of Mrs. Allie Adams Burr, formerly a fellow-student and prominent worker and officer of our Society; and recognizing that in her death not only our Society, but society at large has lost one whose example and influence have ever been on the side of right; therefore be it

Resolved, That we, the members of the Philadelphia Society of the Illinois State Normal University, tender to the bereaved family our heartfelt sympathy; be it further

Resolved, That the Philadelphia Hall be draped in mourning for thirty days; be it further

Resolved, That copies of these Resolutions be sent to the Bloomington Pantagraph and the Educational Weekly for publication, a copy sent to the family of the deceased, and one placed on the Records of our Society.

Lizzie P. Swan, Chairman of Committee;

David W. Reid, Chairman of Committee;

William W. Beal.

President Hewett has issued a circular containing information concerning the August term of the Normal University. The term begins August 1, and concludes August 10. The object of writing is to know further concerning it, should write to Dr. Hewett for a copy of the circular.

The senior class was out Thursday and Friday of last week, working on their final examination. They met in the Assembly Room on Friday evening they were very pleasantly entertained at the house of Miss Anna Knight. Miss Louise Lewis found the work at Gardner so heavy that she was obliged to resign. She is in school again.

An effort is to be made in June to induce the alumni of Monmouth College to endow a professorship. The proposition was made by the Alumnae of the University of Chicago, that South Park boulevards be utilized for the game of "Hare and Hounds." The observatory is now connected by wire with the city fire-alarm office. The fire-bell hereafter will thus be made to strike at noon every day. Observatory is open to the public from 10 a.m. to 4 p.m. daily.

The University of Chicago is in serious difficulty, being unable, notwithstanding the vigorous efforts of its President, Dr. Galusha Anderson, to raise $150,000. The bank has failed for its deficiency, and the bank, therefore, has not paid. The debt has risen from $100,000 to $500,000, the chief creditor, a Maine life insurance company, has offered to settle for $100,000. The company has been offered $100,000 in settlement of the claim; but this is not accepted, and suit is brought. An effort is made also, to declare the mortgage void, on technical grounds.

INDIANA.

There is a great demand for a Normal School in Eastern Indiana. Not enough State establishment has been made for the Schools.

The legislature of this State has been rather niggardly in making sufficient appropriations for our State educational institutions.

The draweth night (June) and the superintendents are to be elected. In view of this fact we feel like saying a few words in reference to their qualifications. 1. A county superintendent should be a scholar and fully versed in office duties. 2. He should lead his teachers in all educational progress and not be led by them. Some superintendents never accept any changes until they are forced upon them by the spirit of the time. 3. They should lead in all reforms in temperance and morals. 4. They should be public spirited and take a special interest in all county and state improvements. 5. They should be liberal with what surplus funds they have over the cost of living in aiding to build up the educational interests of their counties. Some superintendents have money in bank and never use it for the development of their counties in a moral or educational direction.

When all things are considered, the office should be given to the person best fitted for the work. The person who is qualified to hold the office, but a practical teacher, one whose interests and whose time will be wholly devoted to the work. Other things being equal, a poor man should be preferred to one with means, on the idea that a man with money and position. A man having a family to support is to be preferred to one who is single. Politics should form no part of a man's preference or objection to a candidate. A young man of 26 is as good in judgment and experience is to be preferred to one old and broken in health.

Prof. James H. Smart has received the democratic nomination for Mayor of Indianapolis. This is a high compliment, as Prof. Smart was not a resident of this city until he became so in the discharge of his duties as a State officer.

Prof. John Cooper, of Richmond, has been elected superintendent of the Richmond public schools, in place of Prof. John M. Bloos, now State Superintendent.

The legislature has completed the period of its extra session without completing its work. The result is that the regular session in January will bring to the schools laws with the exception that all school offices are thrown open to women just the same as to men.

In the reconstruction of the general school law for the purpose of codification, several changes of considerable importance had been made by the House, but the Senate failed to take any action upon the bill.

The following are the officers of the Indiana College Association for next year: President, W. B. Hotell, of Bloomington; Vice-President, C. B. Landis, of Wabash college; Corresponding Secretary, E. E. Stevenson, of Franklin college; Recording Secretary, E. L. Phillips, of Butler university; Treasurer, W. J. Cox, formerly a fellow-student of the Bloomington College, and C. E. Shepard, of the Wabash college.

Indiana Asbury University is reported by the Northwestern Christian Advocate as well represented in the State government of Indiana. Gov. Albert G. Porter, of Bloomington, Lieutenant Governor and President of the Senate, and Hon. William Redpath, Speaker of the House, are all alumni of Asbury.

The Earlham College class of '82 has for a motto, "Ex milio nihil fit," "Out of nothing nothing comes." Draw your own conclusions. Classes of '82 and '83 gave public exhibitions on March 10 and 20 respectively, and the freshman girls had a banquet. Bill of fare: Sardines and lemons.

MICHIGAN.

Prof. W. J. Cox, formerly Principal of the Second Ward school of Three Rivers, has taken charge of the editorial duties of the Three Rivers Tribune, and has taken upon himself the burden of apology caused by the indiscretion of Miss Ada St. John, a teacher in the Sturgis School, while attending the Teachers' Institute at Coldwater.

It is understood that Prof. C. T. Bateman, Superintendent of the Sturgis schools, will quit the profession at the close of the present school year. Declining health is assigned as the reason.

Prof. G. F. Plowman has just made a contract with the School Board of White Pigeon, by virtue of which he will superintend educational affairs in that village at least two years longer. Prof. Plowman has been the principal of the White Pigeon schools for ten years, and this is the second time he has made a contract for two years. The Board is inclined to doubt that any consideration would induce the people of White Pigeon to part with him. His salary is $1,150 per annum.

The legislature of Michigan has now been in session three months, and has, as yet, done nothing of educational interest beyond making the necessary appropriations for the State institutions. The University gets $160,000. The Detroit Reform School, a new institution, located at Adrian, receives $100,000. The Agricultural College, $60,000. That blunt upon the educational
CALIFORNIA.

The largest class ever graduated by the University of California numbered fifty-four, and included eight ladies. The first lady was graduated in 1874. California has just apportioned among the counties the largest amount which the State has ever subscribed in a single year to the public schools. Altogether it is $1,505,956.66.

EASTERN STATES.

The Judiciary Committee of the College Base Ball Association met in Springfield, Mass., March 12th, and arranged a schedule of games for the coming season. Harvard, Williams, Brown, Amherst, and Dartmouth are included in the association. Thirty games will be played, giving each college ten games.

It is proposed by some of the students of Dartmouth College to organize a Base Ball Troupe. If it is done, entertainments will be given at surrounding towns. Profit to be given to the Base Ball Association of the college.

Rev. J. L. M. Curry of Richmond, Va., has been appointed successor to the deleted Dr. Sears, as Superintendent of the Peabody Fund. The treasurer's annual report showed an available income for the coming year of over $90,000. The committee to report as to the future policy of the work under the fund, reported a resolution directing the general agent to expend as far as possible the revenues in the education of teachers for Southern schools, giving authority to the general agent and the executive committee to expend a sum not exceeding two-thirds of the income for destitute children. The committee is composed of Senator Evans, Chief Justice Waite, Judge Maning, Judge Jackson and Bishop Whipple.

The Hebrew Union College, Cincinnati, has been recommended to the Board of Regents to establish a course in political science in Kansas University similar to the one in Columbia College. The Hebrew Union College at Cincinnati, the only one of the kind in the United States, is dedicated on Sunday. The institution occupies a residence purchased by the contributions of Jewish congregations throughout the country. It is intended, among other things, to educate young men to be rabbis.

Wisconsin.

The public schools in Potosi closed about a week ago, and the students and parents are all sorry that the district, at its last annual meeting, voted for or against. Results for the examination for the ninth class with L. L. Lighthap as principal, that we have had for twenty years.—Exchange.

Prof. Graham closed a two weeks institute at Fond Du Lac on the 11th. The model department opened on Monday, the 18th.

Fourteen of the preparatory classes, numbering forty-two succeeded in passing the examination for promotion to the Normal, held at the close of last term.

W. W. Kimball, County Superintendent of Schools, completed his spring examination of teachers at the Oskosh Normal School on Saturday. About forty applicants were examined, of which two-thirds were successful.

KANSAS.

It is thought that the Kansas Reform School, North Topeka, will be open by June 1st for the reception of inmates. The State Board of Charities has appointed Hon. J. P. Eckles, of Rice County, as Superintendent.

The Summer County Institute will be conducted by Prof. Knowles, which course terminates August 9th.

To the credit of the School Board of Leavenworth City, Prof. Fitzpatrick the efficient Superintendent of Schools, has been re-appointed with a salary of $1,000—an increase of $200.

The Catholic college at St. Mary's Mission has an attendance of 155 pupils. A two-story building was erected last year, and another will be constructed this year.

It has been recommended to the Board of Regents to establish a course in political science in Kansas University similar to the one in Columbia College. A chapter of Kappa Delta Rho. There was organized by thirteen young ladies of the A. S. E., on the 18th of March.

Kansas has now 6,134 school districts—an increase of 512 during the last year. In the past four years 1,402 school-houses have been built. The school population of last year was 304,457, and the number of pupils in the public schools was 251,434.

The average daily attendance was only 138,667.

NEBRASKA.

The State Teachers' Association had an interesting meeting at Omaha in the last days of March. Several important and valuable papers were read; but the one that seemed to excite the most interest was one on "Books in Relation to Education," by A. R. Goodwin, of Pacific City. The discussion was on the best means of leading pupils to like good reading, and how to place such reading within their reach. Some one strongly insisted that to teach children to read, without at the same time instilling a taste for good reading, might be an injury rather than a benefit. An interesting paper was read by Prof. J. M. McKennie, of Peru, giving the history of the State Teachers' Association. Prof. McKennie ought to be qualified to speak on the subject, as he was present at the organization of the association, and has attended every meeting since—fifteen in all.

C. J. Davis, for the past four years Principal of the Hastings schools, has left the profession for the present to engage in employment connected with the B. & M. R. R. Mr. Hubbell, late of Sutton, succeeds him at Hastings.

Miss Elizabeth Smith, of the State University, and a lady greatly beloved by her friends, died suddenly at Mendota on her way home from Michigan. A baseless story that she committed suicide, has been published in certain papers, and has been a great annoyance to the family. It is certain that the death was a shock of grief in the story.

COLORADO.

A public building is now in process of erection on the Government Square, in Denver, Colo., and is to be one of the finest structures in the West. One wing is designed for the High School, the other for a free public library. There will also be a lecture hall with a seating capacity of 7,000.

SOUTHERN STATES.

The Louisville School Board has rescinded the rule sending pupils for punishment to principals, and only ten cases have been punished by the teacher. Each case is a liberty to inflict punishment when he or she sees fit.

Delaware has at last made a movement toward aiding the colored population in educating their children, but the appropriation is a mere pittance. $2,000.

SOUTHERN STATES.
THE SCHOOL ROOM.

WRITING IS REMEMBERING.

Mr. William D. Howells recently wrote a letter to the children in one of the schools of Jefferson, O., referring to their purposes to make his life and works the subject of literary study, in which he said:

"As you get on in the forties you will understand that life is chiefly what life has been, and that an author is merely one who has had the fortune to remember more of it than other men. A good many wise critics will tell you that writing is inventing; but I know better than that. It is only remembering. And I want to whisper to you that a great many thoughts, feelings, and ideas in my books are those which I remember to have had in Jefferson when I was a boy there. By and by you will all be authors, or rather you will realize that you have been authors, as you set down for the printed page or for the circle of your own forefathers the history of your life. I hope that history will be for each of you a true and sweet and good one, without harm for any living soul in it, and with help to all who come to know it."

USE YOUR EYES.

A teacher can hardly be too watchful in the school room. He should be "on the lookout," as we might say, all the time, and cultivate the habit of seeing things without seeming to see them. This is the secret of successful use of the eyes. Some teachers that we have known were particularly remiss in this particular. A dozen objectionable practices would go on in the school room, under their very eyes, without their perceiving them. Children would eat apples behind their desks, whoops and make faces at each other, shielded by the same convenient object, pass books and other things about the school room, unproven and unchecked, simply because the teacher could not see them. But, teachers who have so little power of observation should endeavor to cultivate their weak ability in that line. It is all essential to their doing their work well, and preserving any real discipline in their school at all.

Be alert, be vigilant, look out for this thing; your alertness will forestall it.

CULTIVATE SELF-RELIANCE.

Many teachers fail of success through want of sufficient reliance upon themselves. They, of course, are continually meeting with difficulties, for many of which they are in no way prepared. But however tremulous at heart one may feel at the necessity of coping with these things, he must never let the children suspect it. To them he should seem to be ready for anything. Especially should he never seem to be in fear of his pupils. We knew a young lady, who might have made a successful teacher, if she could have overcome or velled her cowardice. She never could control her pupils, because she was too afraid of them. "I enter my school-room every day," he heard her say, "actually sick with dread of what mischief the children will think of to-day." It was no wonder that she failed hopelessly as a teacher, and yet she had ability enough to have succeeded well could she have cultivated self-reliance.

The teacher, if he has doubts of his own ability, must not show them. He must always act as though he felt sure of being master of the situation, whatever happens. Never let him betray perplexity; the sharp-eyed youngsters will see it and take advantage of it. But he must seem to be ready on all occasions, and seeming to be reliable is the first step toward being so. Cultivate, then, a habit of relying upon yourself and acting with promptness and ready decision, and you will find it the greatest help you can possibly have.

SLIGHTED SOUNDS—DROPPED LETTERS.

The English are more prone than we are to slighted sounds and dropped letters. The American is apt to go to the other extreme, and dwell too much on the vowels in unaccented syllables. He speaks of "territory, history, and being not fixed with us as it is in England, and Americans being great readers, pronunciation is apt here to come nearer to the form of the written word. This middle-class pronunciation, derived from books and not by society, is a little pedantic and a little scholastic. It is like the little mountainous foreign parts of a modern map. It is like the "Worcester in three syllables; it is far inferior to the common pronunciation of "worse."

Many persons with us being specially disrespectful to the letter r, talking about our "lip-kissed," and our "glorious free government." And we are so prone—in common here with other English literature—to drop the final consonant in words ending in -ing, as in ringing, sing, sing, etc., which commonly come forth clipped to ring, ring, go, etc., and to ignoromically disport round, bound, and, etc., of their final letter, that, applying the Walker
When he can do that well, he must be allowed to write them. As soon as the scholar has learned the exact forms of print from copies written on the slate. At this stage of his progress, be particular that his tails here almost inevitably. He makes that at different times either available, used it should be limited to the words found in the reading lessons, and to write the vowel-sounds of unaccented syllables. The vulgar, slovenly speaker fails here almost inevitably. He makes honest either honest or honest; he talks to us of inaudible, of history, etc. The easy, light, accurate touch of these vowel-sounds is the true test of refined punctuation.—Appleton's Magazine.

**WRITING AS A METHOD OF STUDY.**

**By John A. Wills, School Commissioner.**

The only thing new about the method of study for which I contend, is that it is all done with the pencil. It can be best explained by applying it to practice.

Take the primary scholar who has come to school for the first time and does not know the alphabet. Put the slate and pencil at once into his hand and say, let him make it. Keep him busy in making that letter till he can do it well; then give him another. Proceed in the same manner until he has learned letters enough to make some words, such as cat, dog, pig, etc.; then give him work to write. Proceed then to little, easy sentences, and have him write them from copies written on the slate. At this stage of his progress, be particular to have him use the same letters as nearly as possible like the printed letters. When he can do that well, make good letters, name them readily, pronounce the words readily at sight, either as written, or from the book, then, let him take the Primer or First Reader. There is no objection in my mind to his spelling the words orally but, not in general till after he has written them. As soon as the scholar has learned the exact forms of printed letters, script letters should be taught him, and printing should be discontinued in the Primer, but through the subsequent Readers to the Fourth, should be written before it is read in class. Let the scholar proceed through the First, Second, and Third Readers in this way. Spelling, either orally or by writing, should be continued through the entire course, but it should be limited to the words found in the reading lessons, and every word should be explained and defined. Every time a scholar spells a word, he should tell in his own language what it means, or give an example of its use.

When the scholar has advanced to the Third Reader, he should have lists of words given him, (not generally more than ten) selected from his reading lessons, which he is required to put into his own composition. His original productions, as well as his copying, should be examined by the teacher, and his mistakes in spelling, in capitals, in punctuation, and in construction, be pointed out to him, for correction. The same course should be followed in the Fourth Reader.

Nearly the same plan of study with the pencil should be carried out in all the elementary schools in the state. In geography, a map should be drawn of every state and country that is then studied.

In arithmetic, all of the examples given out for a lesson should be brought to the class, worked on paper or slate, and handed to the teacher for inspection. The rules and explanations should also be written. In grammar, writing, embracing examples of the principles learned, should make a large part of the study. Written analyses should also be required.

The advantages of this method are these:

1. It secures in every instance a still and quiet school, with no necessity for punishment and with few rules.
2. Under this plan the scholars commence at once to study. They think they are studying when they are only sputtering with their lips, writing, without thought, over the words of their lessons. When they come to recite they should have some general idea of all. By writing their letters they are obliged to pay such attention to them as to get some idea of their meaning.
3. Another advantage is that they learn to write. That is as important as any thing that the scholar learns in school.
4. They learn to spell. The true way for a scholar to learn to spell, so that his spelling will be of use to him in after life, is to learn to write such words as he uses in business and correspondence.
5. They learn to read in the manner here pointed out much faster than in any other way.

An other advantage is that the scholars like it. Children are naturally active. Writing, when they have learned how to do it, and do it with ease, is as natural to them and as pleasant as play. It is already matter of experience in some communities that children love to go to school when the school is conducted in this way.

Spend your time profitably, young men, by attending H. B. Bryan's Chicago Business College. A practical training will help you.

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**BOTANY FOR COMMON SCHOOLS.**

**THE PLANT CHEMICALLY CONSIDERED.**

**By T. W. Fields, Powers, Indiana.**

First Paper—What It Feeds On.*

* * *

There are events of every day life, which we scarcely observe, that are wonderful. Strange things are taking place around us and about us, in country and in town, that from their frequent occurrence have become so familiar to us that we give them scarcely a moment's consideration, and soon cease to wonder at them at all; When a child first learns to notice these things, they are subject of great surprise to it, and its curiosity is excited to know more concerning them.

There is an expression of surprise and wonder to the child when it first beholds the tree put forth its leaves, or a rose bush unfold its tinted petals; but the birth of these wonders is soon forgotten, and ceases to excite the mind for lack of further culture.

The child often asks itself the question, Why the tree with its roots growing in the soil and its leaves fluttering in the air, continues to increase in size? If the tree drew from the earth the same aqueous fibre of which the respiring atmosphere is composed, there would be but little mystery connected with it. But it accumulates the aqueous fibre and no wood is near it. This puzzles the youthful mind, and an explanation of such phenomena will awaken an interest even in young pupils, set their minds to thinking in a new direction, and give them material with which to form very many conclusions, growing out of kindred subjects.

When a tree or stalk of grass is burned, the greater part of the mass passes away in the form of a gas, and but a small portion of a grayish substance, which we call the ash. This experiment teaches us that the wood is malleable into two separate substances by burning; one becoming a gas, the other remaining and refusing to be consumed.

Plants derive their food from both the air and soil. That amount which comes from the two different sources is inversely what we are first led to believe. The child would think it the most probable that the entire substance of the plant's accretions was derived from the earth, and that the air, which is so thin a medium, contributed nothing to the plant's growth; but such is not the case. Teach the child that in the burning of wood all that was derived from the earth still remains with it, and that it is but a small part of the bulk or mass. That the greater part of the plant passes away as gas or smoke, and that this part is which was derived from the air. This is carbon. The air is the great feeding-ground of the plant. From it is derived the food from which plants renew and augment their growth.

The food derived from the air is mostly carbonic acid, together with ammonia, nitric acid, and watery vapor. The elements derived from the earth that enter into the plant's composition, are certain salts found in all fertile soils. No distinct line of separation can be made respecting the two sources of plant food, for, without doubt, water enters the plant from both the air and earth. Some of the other elements may be possibly derived in a measure from both sources.

These gases, as they enter the structure of the plant, unite to form compounds. In some instances, it appears that all these elements combine in certain proportions to form some complex substance in the manufacture, which is situated within the plant, whilst in others but few simple elements are necessary. The simple compounds or substances are: the sugars, gums, starch and oils, which, as it will be shown, are nothing more than carbon abstracts from the air and the water combined, existing in different proportions, and are varied as the new compound takes the name of starch, sugar, gum, oil. It may be remembered that carbonic acid and water are not of themselves simple elements, but are compounds, and we must see that by uniting them we get a greater number of single elements. From carbonic acid we get carbon and oxygen, and from water we obtain hydrogen in addition to oxygen. Now we see how easy it is to manufacture substances differing in name and character from these simple elements by varying the proportions.

*This is the first of a series of articles on "The Plant Chemically Considered," contributed to the Educational Weekly by Professor Fields, formerly editor of the Western Normal Educator, in which portions of some of these articles are printed. Professor Fields is now associate editor of the Common School Teacher.

No man is wise enough nor good enough to be trusted with unlimited power.
In the kindergarten the children use slates marked in squares of a fourth inch, by light grooves; the squares are guides to the eye, and the grooves steady the pencil. They afterward use drawing books ruled in squares.

The child is directed, that is, shown how, to make lines the length of one square, then of two and of three. These he makes both vertically and horizontally. Everything the child spontaneously makes he intends to represent some object, and, if the kindergarten can make life-like these little fundamental exercises, the child will have a delightful play out of what would otherwise be dull routine work. For example: he may call the vertical lines sticks of candy, canes for pop, or little children marching in a row; and the horizontal may be pleased to call ladders, railroad, or tired, sleepy children lying down to rest.

Several of these lines, of the same length, may then be grouped into small symmetrical forms. Using these small forms as starting points, large forms may be built out by keeping the four sides alike and working by opposites. Pictures of objects the child sees around him may also be made, using only one kind of line in each picture until he becomes familiar with the lines of each length, after which he may use all together.

These two opposite lines may then be united and form right angles, the right angles may then be combined in different ways as shown last month in illustration for sewing; they may also be joined to make squares. Here again new starting points are gained from which to build out symmetrical forms as well as variety in representing objects.

The slanting and half slanting lines may be treated in a similar manner, after which all may be combined.

Throughout the whole the work the child is encouraged to make designs of his own, both in symmetry and pictures of objects.

The kindergartener series of drawing, of which this article covers but a short initiatory step, could be used quite as profitably in the primary school as in the kindergarten, and thus, that period in the child's education which few teachers of drawing can so simplify their work as to reach, could be made the most profitable to the child; as the early training of the eye to observe and the hand to execute cannot be overestimated.

TALKS WITH YOUNG CHILDREN.

ABOUT OURSELVES.

Let us look at ourselves; each has two arms, two legs, a body, and head. We are very different from the desk, or chair, or table. We can move about and we can understand things. Let me see, I take hold of the snow and it is cold—\textit{I feel it}; I inhale the perfume of the rose—\textit{I smell it}; I strike the floor with the stick and \textit{I hear the noise}, \textit{I taste the sugar}. (These should be exemplified to the pupils.) These are ways in which I obtain knowledge. Let us think about the ways in which we find out things. I take hold of the rose and do not put it up to the nose.

THE SENSE OF SMELL.

Of the many beautiful arts which have been drawn upon to furnish occupation for children in the kindergartens, perhaps there is no other which has been so universally used as that of drawing.

People of all nations, in all stages of society and degrees of civilization, have used it as a means of communication, often to express fancies or sentiments which otherwise never could have been expressed. It might appropriately be called nature's written language.

The little child loves to trace, with his finger or a stick, forms on the frosted window pane, in the dust by the roadside, or in the sand on the shore; and happy is he if by chance he becomes the fortunate possessor of a piece of charcoal, chalk, or the remnant of a lead pencil, in fact anything that has mark in it; he will make it mark.
GOOD READING.

CENSUS RESULTS.

For several weeks an expert calculator has been at work in the census office, figuring out the location of the center of population of the United States. In 1800 the center of population was not far west of Baltimore. In 1810 it was near Harper’s Ferry. Each year the census has showed the population to be westward at the rate of from five to six miles annually. In 1870 the center was about fifty miles east of Cincinnati. Between 1870 and 1880 the increase in the West was greatest, and it was westward at the usual pace, and the increase in the Southern States has drawn it in that direction about eight miles. These two causes acting together, it is thought, cause the present center to be about one or two miles south of the Ohio river, immediately back of Covington, Kentucky.

WOOD ENGRAVING.

A late English writer says in reference to the instruction of girls in the art of wood engraving, that the girl who would succeed in it must be willing to give "six hours every day for six years, to learning the work." A striking refutation of this is the fact that won the American prize in the engraving class, in a recent number of the monthly, which is given to workers who have practised respectively six and fourteen months. The further statement, that for three years of that time a girl must not expect to earn anything, and afterwards, will not get more than twenty shillings a week until she becomes an expert, speaks poorly for English encouragement of art.

A QUESTION OF ACOUSTICS.

One night M. Meyerbeer entered the French Comedy late. He had not been seated long, when he asked a friend: "Arent the actors speaking tonight in a louder tone than usual?" "I think not," the friend next day repeated M. Meyerbeer’s question to the French Comedy, who, in turn, asked: "What time was it when Meyerbeer entered the theatre?" "About 10 P.M." "That explains it. The theatre’s atmosphere had time to heat, and the tone which sounded his ears as he came from the cold air out of doors would have seemed the ordinary tone had he, like you, been seated in the theatre from the beginning of the performance. The tone of a theatre continually rises as the performance progresses; this is a question of acoustics. One must witness the performance from the commencement, catch the keynote from the start, else one will not at all be in the tone during the whole evening."

PETER COOPER.

Mr. Cooper is one of the rare, rich men who regard wealth as a trust to be administered for their fellows; and he is worth a dozen Astors, Stuarts and Vanderbilt. This Cooper Union is one of the most noteworthy institutions in New York. Here, in a good building, have been examined on foot, for twenty-three years, during eight months every year, free day and evening school for the children of science and art, at a cost of over $50,000, the present day losing $50,000 a year. Here a free reading-room and library are used day and evening by thousands of people, and the foundress has just added a special movement of $150,000 to support and increase them. Free lectures are given in the class-rooms to students and in the large hall to the public. Another story has been newly built on the Union to extend its advantages to more night classes and to add a select library and art museum. The free school of telegraphy for women and women’s art school are notable specialties of the Union. These schools and other means of instruction are all for working people not for to amuse themselves in, and they are enabling thousands of young men and women to do good work in the world.—Springfield Republican.

THE DISTANCE FROM THE EARTH TO THE SUN AND THE FIXED STARS—THE SPACES FULL OF TUMULT.

Prof. Richard A. Proctor is delivering a course of astronomical lectures in New York. The following is a synopsis of one of them. The subject of the discourse was "The Sun and His Brother Suns." The speaker said in part:

When we look at the skies on a calm, clear night, when all the myriad of stars are shining, the least thoughtful mind is impressed with the idea that a solemn calm reigns there. One is inclined to believe that all those suns are in a state of rest; that each is a little earth, on which vegetation and human life are carried on. They have several different movements. These, however, are only apparent. The turning of the earth upon its axis and its movement around the sun cause these movements to appear. The astronomer recognizes the stars as in one sense still or fixed. But the star depths are full of noise and tumult. Go into some manufacture where a mass of machinery is in motion, where there is one of great energy of work, and then compare with what is going on in the depths of space. We are able to understand this when we know that the stars are so far away. The nearest of all the stars is such a distance that we cannot see it, and it would seem to be an ordinary star of the second magnitude. The star which is considered nearest to us is Alpha Centauri. I think I am justified in saying that it is the only one whose distance from the earth is absolutely known. For instance, No. 61 of the constellation of the Swan is said to be the second in distance from us. It is said that 400 times as great as that of the nearest star, which lies twenty millions of millions of miles from America. It makes it appear as far as it is. Hence between the two calculations there is an error of at least ten millions of millions of miles.

One of the first points that astronomers cannot get space enough to work upon. No base line can be obtained of sufficient length for the calculation of the triangulation of such enormous distances. But we know that these stars lie so far away that the sun would be a small star beside one of them. The sun is not a star of the first magnitude, but we shall take him as a specimen star. As, in the last lecture, the earth told us the history of a planet, so the sun can tell us what will be the history of the star. Sirius is far larger than the sun. He lies at least four times as far away from the earth as the nearest star, Alpha Centauri. That star removed to the same distance from us would shine with only one-sixtieth of his light. But as he is four times as large as Sirius, with sixty-four times the surface, he would have their paths so widened that they would not get the right amount of heat and light from the sun. Hence, gravity traverses distance at a rate infinitely greater than the velocity of light.
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