The Educational Weekly.

The Educational Weekly.

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CONTENTS OF THIS NUMBER.

EDITORIAL:
A Strange Article in the Premium List of a School Journal 201
Moral of the Failure of the Bank of Glasgow 199
Advice to Correspondents 199
“Cash” “Cash,” from Strangers 199
School Sport 198

CONTRIBUTIONS:
The Teaching of Physical Science—Prof. C. M. Bostelle 197
Primary Reading 200
A Saturday Afternoon Experiment—Miss S. F. Bartlett 203

REVIEW:
Brown’s Grammar 198
Franklin Arithmetic 199

CORRESPONDENCE:
Cuba Root—Villa Small 206
The Number of Inhabitants Necessary to make a State—A Student 206
The Heren-Stenotype Method—F. E. 206
What is Sound—Marxisten 206
How to Compute Estimated—F. A. 206
How “Nebulizer” Finds Averages 206
An Answer from F. G. 206
Questions 206

EDUCATIONAL INTELLIGENCE:
The East, The West 202
The South: Miscellaneous Items 202

PRACTICAL HINTS AND EXERCISES:
How to Teach Grammar—Dr. Zor Brauer 204
Situation of the Premiums for November—Berlin H. Wright 204

HOME AND SCHOOL:
A Saturday Afternoon Experiment—Miss S. D. Bartlett 205
Barbola and Master Beckwells—The Maid of Star 205

MISCELLANEOUS:
Grandma’s Pocket: A Poem—Ida Whipple Brown 206
Publishers’ Department 206

CHICAGO, THURSDAY, OCTOBER 31, 1878.

Editorial.

The Educational Weekly Free!

For every subscription accompanied by the full price, $2.50, received between this date and Dec. 31, 1878, we will send the “Educational Weekly” free till Jan. 1, 1880. This affords those whose subscriptions are expiring an extraordinary opportunity to renew at reduced rates. A hundred different subscribers ought to take advantage of this offer every week until the end of the year. In order that teachers who do not now take the “Weekly” may know of the opportunity we offer them, our readers, especially superintendents and principals, must take pains to announce it. The sooner we receive the remittance the more the subscriber will get for his money. Hurry up your subscriptions and renewals.

A valuable paper on the Life and work of Froebel, read by Miss Mina Ballard at the Peoria City Teachers’ Institute, is crowed out this week. It will appear in our next issue.

In this number appears the first third of an article “On Brain Forcing,” which we republish from the first (April) number of Brain, A Journal of Neirology, published by McMillan & Co., and devoted as its name indicates, to matters of the nervous system. It is an article that will repay careful reading. It is a source of great regret that we cannot present it entire in an issue. As a matter of practical, work-a-day mental philosophy—a case thing—it is admirable. It is free from the technicalities and ideas so abstruse to the common mind, which almost invariable constitute the discussions on the connection between the nervous system and the mind.

The author’s discussion of our nervous action from the five points of view of Quality, Quantity, Tension, Variety and Control, is perfectly intelligible, especially after his exposition and illustration so ably drawn from the history of the world’s great men. And then his discussion of the effort that education can have on each of these ingredients, if they may be so called, of our nervous make-up, is most helpful. Do not dismiss it at a single perusal.

For ourselves and our readers we wish to acknowledge great obligation to Mr. Brett, the courteous agent of McMillan & Co., for calling our attention to the article.

We read about books in trees and sermons in stones. But we hardly expect to find a sermon in the premium list of a school journal. Nevertheless a most perverser sermon is before us in the circular of a respected contemporary. The sermon appeals eloquently to the female heart in behalf of corsets. It offers to give the article, whalebones and all, for nothing to every lady who will accept it. This argues a perversion of taste and morals which it is sad to see in an influential journal. To offer to give a jack-knife to an impecunious teacher is really a meritorious deed. So it would be for him a box of collars or a pair of suspenders. But to offer to ladies a premium to wear such an abominable thing as a corset borders on degeneracy, if not on depravity. It is a sin against the present, and a worse sin against the future. If the paper feels an interest in ladies garments, and really wishes to benefit the race, as it is presumed that every school journal does, why does it not offer to the ladies a “reform,” or a “hygienic,” or a “combination” suit of under garments? Then, while it was obeying the generous impulses of its nature, it would be performing a service for which generations yet unborn would rise up and call it blessed. We earnestly beg the ladies into whose hands may fall the graceful and bewitching picture of this “perfectly soft and flexible Tampico” improvement on the bust which the creator gave them, to remember that familiar prayer,—“Lead us not into temptation.”

The recent failures of enormous magnitude in Scotland and England must be greatly deplored by every worthy American citizen. The bank of Glasgow disaster will probably cause more hardship and distress than any half dozen failures which have occurred in the United States. Whole lines of business have been greatly embarrassed if not entirely interrupted. We have seen no aggregate given of the amount of money involved in the other failures which have already occurred, and directly in consequence of the suspension of the Bank of Glasgow. But it seems safe to say that the aggregate announced at this date is not less than $20,000,000, not including the $50,000,000 involved in the Glasgow bank. The number and extent of these collateral failures show how wide-spread is the disaster.

It may be ungracious to attempt to draw from so sad a calamity a moral in the interests of our own countrymen. But there are so many pple now-a-days,—and they are not all foreigners by any means,—who find consolation in reminding us of the solidity and regularity and honesty of the merchantile world abroad in contrast with the unstable and convulsive character of
the commercial world at home, that we cannot forbear to call
their attention to the actual state of things.

No one can find pleasure in such lamentable proof that fraud
and dishonesty are not confined to American directors and
cashiers. For the sake of humanity we would that our own
Winslows, Spencers, Angells, Chaces, and Hathaways might be
scape-goats for the sins of the merchantile world everywhere.
But in the presence of such astounding evidence that we are not
sinners above all others, it would be well for our detractors and
disgusted natives to be a little moderate in praise of "the way
they do things over there."

However, there is one feature in this catastrophe which we
imitate too faithfully. The six directors of the bank now rest be-
hind prison bars, waiting to find what there is in Scotch justice.
Some months since when a few peculating presidents of insurance
companies were treated in a similar way in New York, we looked
on with gratified surprise, indicating the rarity of the pro-
cedure among us. It is to be hoped that the examples of the
Scottish authorities will have a wholesome effect in quickening the
tardy pace of our own courts in such cases.

Since the above was put in type we notice that Hathaway, the
Fall River defaulter, has been sentenced to ten years' imprison-
ment. Chase, his leader in crime, has been sentenced to twelve
years.

When people send messages to newspapers they should take
pains to give no indication of the name of the state in which
they live. Of course it is the business of the post-master to do
that, or of the man whom he hires to wield the dating stamp.
This stamp is always distinct you know, especially on postal
cards, and it always tells plainly where your correspondent
lives, doesn't it? Of course, when you write to editors you must not
think of insulting their omniscience by insinuating at the top of
your letter that they don't know where every Jonesville and
Smithtown in the country is located. And if they have so far
missed their calling as not to know such important facts, why,
you see it is a delightful privilege for them to take five or ten
minutes of their abundant leisure time to peruse the diver-si-
fied and brilliant pages of a post-office directory for the sake of as-
certaining just where the particular Smithtown is situated which
happens to hold their correspondent. And then if that town
happens to be twins, or triplets, or a quadrille, it is such a
delightful sensation to be in doubt whether to send the letter to
Vermont or to Iowa, and the delight is so greatly increased in a
few weeks, when a wrathful letter comes from some other
Smithtown than the one to which the letter was sent calling upon the
unfortunate editor to "rise and explain."

For the sake of uniformity in its letter-files, the WEEKLY has
concluded to ask all its correspondents to refrain hereafter from
letting it know where they live, for the sake of being in harmony
with those who think they live somewhere, but don't know
just where. If you are having any letter-heads printed, we hope
you will instruct your printer to leave out all allusion to county
and state, they are such insignificant things.

Another piece of advice is volunteered. If you have been so
well trained by a mother's early efforts—as we are happy to say
about one correspondent in fifty seems to have been—to feel
an inward yearning to enclose return postage when you write for
information or some personal favor, why just run your tongue all
over the glazed side of George Washington's head, and then
press that glorious encephalic mass so hard onto the top of your
letter as to defy all editorial efforts and patience to disengage it
without mutilation. There is nothing like doing a thing well
when you are at it.

Just as we finish opening the safety-valve as above to relieve
pressure good-naturedly which has been on the increase for
months, comes a correspondent who drives a sharp postal card
right under our fifth rib. As if to spite us to the utmost he gives
his name, town, and state. If he were the first or the only one
of these mild savages who attempt to prick us to the quick we
would grin and bear it. But we propose now to grin and not
bear it. The publishers of the WEEKLY advertise that they will
send for a definite amount of money certain articles; for in-
estance, 120 sheets examination paper for 56 cents, 100 letter-
heads, $1.25, etc. Their advertisements all say plainly in sub-
stance, that orders unaccompanied by the cash will not be filled.
And yet letters come daily asking to have so-and-so sent, but
without enclosing a cent. In the past we have taken pains to
handle these orders with care, and to tenderly fashion an an-
swer by mail calling attention to the neglected condition. We
rarely hear anything more of the order; but we generally hear
something else. The last instance of the kind was the postal
card this morning. We publish it as a model for other corre-
respondents like tempered:

"Dear Sirs:—Your favor received. If you are so particular about your
'cash,' or are so afraid that you will not get the money, it will certainly be to
your advantage to withhold it until the cash arrives.

Very truly,

P. S. You publish the EDUCATIONAL WEEKLY, I believe."

"So particular about your cash. That sounds queer, doesn't
it? Where has the man been living the past few years?
"Cash." "Cash." That word sounds familiar. Now that we
come to think of it, we begin to recognize the fact that we,
in common with the rest of mankind these times, are a trifle
particular about "cash." But, oh! that P. S. 'Is this a dagger
which we see before us?' May our fates defend us! Why didn't
we send that Wolverine a whole ream of letter-heads and ask
him to be so kind as to accept them as a gift from us? Why
didn't we do almost anything rather than send him that unlucky
answer? We do, we do publish the EDUCATIONAL WEEKLY!
and more is the pity. All the three teachers in that town, and
who knows how many more? will be told what a contemptible
affair the paper is. Alas, the whole state of Michigan is to be
counted against us from this time forth!

But enough. It is sufficient to say that such letters have lost
all their terrors. The file on our desk of unfilled promises to
"remit after the goods are received" is quite large enough to
gratify our ambition. We are trying to conduct a safe, and hon-
est business. We are willing to be held responsible for the man-
er in which we fill orders. Our prices, we think, are fair. We
question no correspondent's honesty or intentions. We simply
prefer to do less business and on a sure basis, than to do more
and to take the invariable risks of uncertainty and delay in col-
lection. So if our goods are wanted on our representations let
the cash come with the order. If any customer is imposed upon,
it will then be time for him to enquire if we do not publish the
EDUCATIONAL WEEKLY?

SCHOOL PLAY.

It is a difficult matter for the teacher to regulate the sport of
boys at school and to keep it at the golden mean between play
which is too rough, and play which lacks the elements of vigor
and heartiness. Nobody wants to see boys turned into girls, or
next morning he complained of a severe pain in the side. Dr. Jennings was called, and upon examination, said that the boy had been strained and was suffering from inflammation in the lung. 

A sad case recently occurred in the city of Dayton, Ohio. The local paper furnishes these facts:

"About two weeks since some boys at the Intermediate School, while acting up after school in the evening, took hold of a comrade, Clarence Powers, and said they would throw him down stairs. He held to the banisters, and they caught hold of his feet and pulled, trying to scare him. He begged them to desist, as they were hurting him; but they only laughed, thinking that he was fooling. When they did let go, however, he fainted, and had to be carried to his home. After he arrived there, he did not seem to be much hurt, but the next morning he complained of a severe pain in the side. Dr. Jennings was called, and upon examination, said that the boy had been strained and was injured internally. Inflammation set in, and on last Tuesday night at 11 o'clock, after suffering untold agonies, Clarence died."

It seems to have happened in innocent amusement; although it is surprising that it should have happened under the circumstances as narrated, and in so well managed a school as we know this one to be. It is a terrible reminder of the dangers that our boys encounter in the ordinary dissections of school life. No teacher but a father or a mother can realize what a weight of anxiety such an accident throws upon the hearts of the patrons of the public schools. Their first thought is, 'What if my boy should be brought home as Clarence was?' It is safe to prophesy that every father in the land who stands at the head of a system of schools, and whose eye falls upon this sad account, will increase his watchfulness over the play of his pupils. The thought of that grief-stricken father and mother will often come to his mind.

But what can be done to increase the security against not only such terrible results as this, but also against less serious accidents, such as broken bones, and dislocated joints? Although the number of these occurrences is comparatively small, and although serious consequences will often flow from causes in which the most careful person would not suspect danger, still it is not a fact that the number of these accidents is greater than it should be? The proper remedy is a closer supervision during play-hours. Regulations cannot control the matter without repressing youthful spirits and muscle to an unworthy extent. And do not let it be forgotten that good play is a vital necessity to our school children. Games and plays cannot be permitted or interdicted by classes as a general thing. The danger is not usually in the game itself, but in the conditions under which the activity is excised. In crowded school yards almost any vigorous play is more or less dangerous; and we have never seen a school yet of any size in which the presence of the master was not more imperatively demanded upon the play-ground during intermission, than it was in the school-building during study hours. With a few exceptions, our teachers do not exercise a proper oversight over pupils during play-time. There is a neglect here which ought to be cured. Do not allow any inside engagements to occupy your attention during recess. Be on your play-ground among your boys, not as a terror or a policeman; but as a moderator, a sort of adjuster between unequal elements. If you will join in the sport yourself it will do you good, and your school also. But be on hand to see that the rough are moderate, and that the strong pay proper regard to the weak. There is an education of the play-ground quite as important as that of the school-room. Knocks, and bruises, and scratches are not to be entirely avoided, nor is it desirable that they should be. They are before us all. They are a part of the discipline of life. There is no better place than the school-yard to learn how to endure them without whining or improper resentment. On the other hand heedlessness, tyranny, and oftentimes cruelty, stand out as predominant factors in boy-life. They are not only to be controlled; they are to be put under the control of the boy himself. His manhood, his generosity, his pride, his ambition, all that there is good in him is to be appealed to and stimulated by the influence of a kind, watchful, superior power. The place for the principal of a school is on his play-ground the same as the general's place is on the battlefield; not to hinder the conflict, but to direct it.

THE TEACHING OF PHYSICAL SCIENCE — II.

Prof. C. M. BOUTELLE, State Normal School, Winona, Minn.

WHERE should we have science taught? In a systematic way in all the high schools; to a certain extent in all schools whatever. There is hardly a subject in physics or chemistry from which something may not be drawn suitable to any grade; there is hardly a subject that cannot be to some degree illustrated at a very small cost. There are one or two cautions that must be heeded;—teach things as their are; hardly a fact but admits of a simple explanation, even though the absolute proof may be complex; let the work be as simple as is necessary, but let it be such as will not have to be unlearned. Again, experimental work should never become mere exhibition work. An experiment may be a brilliant and striking one, or one of equal or greater value may be very common place.

How shall science be taught? There are two principal methods, aside from the method of the regular lecture system, which will not be largely attempted except in technical schools or those giving the same grade of instruction; in one the teacher performs the experiments before the class, or has them performed by students under his immediate direction, no experiment being performed more than once or twice; in the other the students have the benefit of regular laboratory work. In the former, there are the advantages of economy of time, less wear and tear of apparatus, less expense for materials, and perhaps others. In it, however, the teacher does much of the work that should be done by pupils, the latter seeing results in many cases without any adequate notion of the care and forethought necessary to produce them. There can never be so accurate knowledge gained as when each student comes into personal contact with all the conditions of the work. In chemistry especially, where the point of an experiment may be some change sensible only to the most careful examination, the student must rely on the teacher rather than on his own powers of observation. In physics, many experiments are well adapted for use before a class.

Were these subjects to be generally introduced into our schools, and treated in an experimental way, considerations of room, of time, of apparatus, and of skill would in many cases compel the adoption of the former method. I shall try to point out some of the ways in which the disadvantages of that method may be partly obviated. Students may learn of the work and thought that lie back of a successful experiment by assisting the teacher in the preparation for it; and may become somewhat proficient in the use of apparatus by occasionally performing experiments before the class. The work in such cases should be considered
as no more than class work, everything of an exhibition nature being kept out of these exercises; failure should be counted as equivalent to failure in recitation, and no more. The apparatus should be fitted up and the experiments gone through with in detail a short time before the work is to be done before the class, not to hide difficulties and make the work show off better, but because it secures directness and clearness, avoids the loss of valuable time, and the distraction of the attention.

Experiments should usually not be taken up until that part of the text-book which they are to illustrate has been carefully read. The value of some experiments may be greater when the result is not known beforehand, but in general a student will see more of the details that constitute the spirit of the phenomena when the main points of the experiment are expected.

If time permits, a very good plan is to have a recitation, and then take up the experiments for the following day, the class having been directed to read the necessary text in the book. Perhaps the best time for experiments, however, is at the same recitation hour as that in which the knowledge of the book is tested. Clear results will come from bringing the statements of the book and the illustrations of experiment near together in point of time. If the experiments are used as material on which to build an argument, they may come together at the beginning of the recitation; if the statements are positive and the experiments merely illustrative, they may follow the recitation work. The time used will be less when the experiments are given together, although when the connection between the parts of the lesson is not close it will be best to connect them with the text to which they belong. The teacher may briefly explain each one as it is taken up, or still better, call upon some member of the class to explain it. A class can be led to a knowledge of details by the teacher questioning at each step, keeping the class answering while he works. The same plan will make a tired class attentive. Experiments should be taken up in a logical order; if more than one principle is illustrated by an experiment, the latter should be repeated as each new principle is reached; it is best to illustrate every point possible, no matter how simple it may be. The knowledge of experiments can be tested in several ways; by having the work repeated; by having it described; by questioning in detail; or by testing the knowledge that the class have gained of the principle involved. I have found it a good plan with my class in physics to leave the apparatus for a day or two where the pupils can examine it, allowing them, except in rare cases, to repeat the experiments for themselves out of school hours. They should also be encouraged to perform such experiments at home as they can, stating the results to the teacher, and in some cases to the class.

When possible, the method of actual laboratory work should be adopted. The teacher may perform the experiments before the class first, or the students may be required to do the work for themselves from the beginning. The former plan will provide against accidents and many of the difficulties incident to the fitting up and use of apparatus; the latter, by throwing the student at once upon his own resources, secures to him the full educational value of all there is in the work. The experiments should be performed before the recitation is required, with the books open before the pupils, and used in every sense as a part of the preparation, not as recitation work; as a means, never as an end. With my chemistry class, I assign experiments enough for Tuesday’s, Wednesday’s, and Thursday’s exercises; the class recites Friday and Monday on the work done and the part of the book corresponding. The plan works well.

For physics the laboratory should be arranged by subjects, the apparatus for any one part of the work being kept by itself; for chemistry, in which most of the apparatus will of necessity be made by the students, each one or two students should have a desk or table at which all their work is done. During last year we had two students working together at each desk in the laboratory of the Normal School at Winona. I find that both feel responsible for every detail in the work, and that each sees more of the experiment than either would alone. This plan will commend itself to schools in which economy of time, of room, and of materials is important. Some advantages would attend its use in any school. A few of the more common chemicals should be found on each desk; the remainder should be kept in a case and issued by the teacher as they are needed. In this way the liability to accidents is lessened, the amount of material used is made smaller, and, by requiring pupils to call for things by both their common names and their formulas, a knowledge of the latter grows rapidly. Pupils can take turns in assisting in the issuing of chemicals; this will increase their own knowledge, and leave the teacher free to oversee the work going on at the desks. Written reviews once in three or four weeks will be of value. From them the teacher can see what aid is necessary; the student, what effort must be put forth. Laboratory examinations should supplement the written ones. The entire ground passed over should be covered by the class, four or five experiments selected at random being given to each member. No hint as to what is to be used, or how it is to be used, should appear on the slip or card naming the experiment; but the pupil should be thrown entirely on his own resources and held responsible for every step from the selection of the chemicals he will use, to the end of the experiment.

A little thought and care, a little ingenuity and patience, will, I am sure, enable any teacher to give the members of his school something at least in physical science. The benefits, directly to the student, and indirectly to society at large, will be found well worth the trouble and cost.

REVIEWS.


The First Lines of English Grammar; designed for young learners. By the same publishers as above.

To the reader who is acquainted with Brown’s Grammar of Grammars it is needless to explain the nature of these books. They are grammars of the strictest sect. Etymology, Syntax and Analysis on the good old plan. None of your food for babes or play-work in language lessons. It is the stuff that our fathers and mothers and most of the present generation of teachers were brought up upon. The fact that these books are now brought out in a new dress, and under the supervision of such an eminent educator as Superintendent Kiddie, seems to indicate something of a reaction against the language-lesson system which has been so much in use for the last two years. Those who would like to help the reaction, or who desire books of more "substance," as some put it, should procure the books named above. Those whose brains are troubled with grammatical points, but whose pockets cannot afford the Grammar of Grammars, will find Goold Brown’s Institutes of the greatest service to them.

The Franklin Written Arithmetic with examples for oral practice by E. P. Seaver, and G. A. Walton.

These two books differ from most series in as much as each book is complete in itself. The elementary book contains enough, the authors think, to meet the wants of those pupils who leave school at the age of twelve or thirteen. It does not pretend to teach the science of numbers, but to impress the operations. In its problems and explanations the book seems a happy medium between too much and too little. The absence of rules and of everything requiring memoriter work is highly commendable. Its object is to teach processes, and it does so by actual exercise and not by descriptions.

In the written arithmetic, definitions and principles are illustrated and explained, and rules are given by which the various processes are to be performed. Decimals and integers are generally treated together, a sensible plan for pupils old enough to use this book. The various cases in percentage are referred to a very few concise principles. To make pupils really comprehend the process of extracting square and cube roots, the subjects are better presented, it seems to us, in some other books. The combination of oral and written exercises throughout seems judicious. The drill tables are a combination of oral and written exercises throughout seems judicious. By actual exercise and not by descriptions.

The drill tables are a combination of oral and written exercises throughout seems judicious. By actual exercise and not by descriptions.

By the higher quality of the brain or of a part of it, I mean that structure of cell and fiber which corresponds more widely or more intimately with outer conditions, so that by virtue of such the really apprehends things and conceives them. This is genius in the stricter sense. By quantity I mean the volume of nerve force given off by the brain or its parts without regard to quality of work done. By tension I mean the power in the nerve action to overcome inner or outer resistance—'nervous energy,' as it is colloquially called. By variety I mean the congregation of different centres, and the weaving of mediate strands which give the possessor, not higher or wider, but a greater number of relations with outer things. In common life this is usually called versatility. By control I mean that subordination of one centre to another, whether inherited or acquired, which if of the lower to the higher results in obedience to the more permanent order of the universe. Thus a man may have a lofty, an abundant, an intense, a versatile, and a well-rulled nervous system, or he may have any measure of each of these states in various proportions. Goethe, whose life and character are so well known to us, seems to have possessed all these faculties in marvellous combination. His insight or brain quality was vast and penetrating; his stores of nervous energy were inexhaustible, burning with steadfast heat or flaming in passion; his faculties were infinite in variety, and they were under a control rarely in the world's history known to have harmonized endowments so manifold and so potent. To take in like manner a few more names by way of illustration, we may consider Lord Byron as one in whom quality and tension of nervous force were more remarkable than quantity, though this in him was not inconsiderable, and in whom variety was less manifest and control defective. Schiller again had high quality, tension and control, but was defective in endurance and in variety. In Keats we recognize quality, tension and variety in high degrees; control in less measure, and quantity in defect. His brain, inconstant in current, was worn out ere it was built up. Macaulay was, if the word be permitted to me, a remarkable 'all-round' man, and presented an equal development of quality, quantity, tension, variety and control, though of course he is not to be compared to the former examples in quality. Brougham has still less quality, but quantity in overflow and at high tension. Sir James Simpson again always seemed to me a good instance of a man lacking the higher complexities of brain, but abounding in mental force at high tension. In him also variety was striking, more striking than control. One of the most vivid instances of nervous energy at high tension to be found in modern history is perhaps Admiral Korniloff, as described by Mr. Kinglake, in the fourth volume of the cabinet edition of his History of the Crimean War (p 108). He says of Korniloff: 'It is hardly to be shown that this chief was gifted with original genius, still less with piercing intellect; nor was Korniloff to be called precisely an enthusiast. Our knowledge of Korniloff must rest upon a perception of what people did when they felt the impulse they gave. At a time when there seemed to be room but for despair and confusion, he took that ascendant which enabled him to bring the whole people in this place—inhbitants, soldiers, sailors—to his own heroic resolve. In a garrison town of an empire which had carried the mania of military organization to the most preposterous lengths, all those strained notions of rank and seniority and, in short, the whole network of the formalities which might have been so potent a barrier to his command, flew away like chaff at the winnowing. By the fire of his spirit there was roused so great an energy on the part of
thousands of men as has hardly been known in these times; and he so put his people in heart, that not only the depression created by defeat, but the sense of being abandoned and left for sacrifice by the evading army, was succeeded by a quick growth of warlike pride, by a wholesome ardor for the fight, by an orderly joyous activity." We may compare with this description by the same fine hand of General Todleben, in whom quality and quantity of brain, variety of resource, and of smiling self-control, were all made efficient by high tension. Mr. Kinglake says, "Although Todleben seemed to be one to whom the very labors of fighting and of exterminating the weaker breeds of men must be an easy and delightful-exertion of natural strength, he had joyous kind-looking eyes, almost ready to melt with good humor, and a bearing and speech so free and genial, that he was like a child, and very soon after to trust in him. From his looks and demeanor, it could not at all be inferred that he was a man who had devoted his mind to a science; nor imagine that his power of doing the right thing at the right time had been warped at all by long study of the engineering art." "Few men of great intellect have attained so closely what Englishmen mean by practical." How great quality and quantity of brain may fall short of achievement for lack of high tension rather than of control, must be sought in the story of Hamlet and like inventions, for, although the unhappy General Trochu is not yet quite forgotten, none such leave an enduring name. How many of us know that quiet friend unnoted of the many, unseen by the world; whose powers of assimilating knowledge are great, whose intellect is capacious, and whose accomplishments are manifold, but whose nervous currents are of low or inconstant tension! He finishes no work, he fathoms no research, and he dies leaving but the memory of great powers wasted. Other curious instances of low tension are seen in those unhappy mortals, who conceive so truly, and have mental force in such quantity, that they spend their lives in bestowing volumes of good advice upon their fellows, but who never rouse themselves to do their work or duty. How, lastly, the greatest quality and capacity of mind, varied attainments and spiritual fire, may be spent as a skyrocket is spent for lack of control and direction, has been the theme of moralists of all centuries, from the death of Abel to our own time. Of all endowments control is the most precious, and its nurture our most bounden duty. For a happy and useful life, perhaps control is more needful than quality, volume, variety or even tension of brain. But were not men born to us whose high qualities of brain enable them to see more deeply into the secrets of nature our progress would cease; did quantity of brain-force cease from a people, that people would lack endurance; were tension feeble, the lions would roar on in the paths of our enterprise; were self-control wanting, that which were won would hardly be won ere it was lost. Of all gifts then to be cherished and nurtured, perhaps we should place first control, as by it effort is multiplied; perhaps of equal or scarcely of the second place comes tension; quality of brain cannot be had for the asking, and lack of quantity in individuals may be compensated by selection; variety, however charming, however grateful, is the least precious of those conditions of brain, and the last which calls for nurture. How, then, are we to wield our instruments of education as to promote the increase of control, tension and quantity without stifling quality and variety, and how are we to use these virtues in the riper man without disabling him?

PRIMARY READING.

The lesson previously assigned is a lesson about "The Cow." Of course the picture of a cow, with all her surroundings, is first made the subject of a familiar conversation with the class. Every object in the picture is minutely noticed and discussed. First to develop close observation. Second to cultivate language and interest the class. Next, the more difficult words of the lesson, in their disconnected forms, are dwelt upon, until all in the class have mastered them, so that they can readily name them at sight. The class is now prepared to read the lesson, either from the book or from the board where it may appear in the printed or written form. After the lesson has been read several times according to the usual manner, the majority of the class will read it from memory, having heard it repeated so often. Here the ingenious teacher must present the same subject in some other form. Here, by bearing in mind the chief words of the lesson the teacher can easily recognize them, and also bring into use words used in previous lessons, thus giving to the class the words previously presented, but in a different combination. The newly arranged lesson can be presented in a lively and spirited manner by the teacher so that the interest of the class shall be continued. While the teacher prints or writes the new words she may require from the class an immediate pronunciation. And when the entire work thus newly arranged is before the class, individual members may be called upon to read, and the class as a whole to correct all errors. It is surprising to notice the interest that may be awakened in this manner. The little ones leave the recitation, feeling that they have had a real pleasant recitation, and, with all their work, some little fun. Do not try to suppress mirth, but let it find its legitimate way out of the mind of the child, by means of a good laugh, if necessary, and then pass on to cheerful work. A good, clear tone of voice, distinct articulation, proper position of the body and head, are all of such great importance, that no teacher does his full duty, who fails to call attention to them, even in the most primary reading class. Primary teachers above all others should be kind-hearted, patient, and forgiving, but withal firm and precise in their manner of governing. The daily reward of knowing that you have added to the pleasures of happy, merry childhood, that you have done what you could to direct the feet of little erring ones to better paths and nobler lives, is reward enough to strengthen the most discouraged laborer in the great field of education.

L. F.

CORRESPONDENCE.

CUBE ROOT.

Mr. R. C. Markham, of Concord, Mich., says he finds cube root one of the easiest and most interesting subjects in arithmetic. Out of a class of twelve, ranging in age from 13 to 16, none failed to explain the process at the third lesson. He sends a paper from one of his pupils, which speaks for itself. If Miss Ailie had no memorized form to go by, the correctness and clearness of her language are more noticeable than the mathematical explanation itself. We have not made a single mark or correction in her "copy"—a thing we cannot say for the majority of "big folks."—[Enn.

We have 912673 small cubes to arrange into one large cube. Beginning by pointing our number into periods of three figures each, we find we have two periods or two places in the root. These will be tens and units. The greatest cube in the first-hand period is 729000 of which the root is 90 units. Removing 729000 from 912673 we have a remainder of 183673. We now have a block 90 inches long, 90 inches wide, and 90 inches thick; therefore, the solid contents are 90X90X90=729000. This has already been removed from 912673 and the remainder is 183673. We now have a block one side of which is 90 inches long, and 90 inches wide. In order to keep this block a perfect cube we must make additions on three sides beside the three corner blocks. The three side additions must be of the same length and width as the sides of the large block. If the width is 90 inches long and 90 inches wide the area must be 90X90=8100. If this is the area of one side addition, then of three it must be 3X8100=24300. This we will use for a trial divisor. It is not the true area but near enough so that if we divide 183673 inches or the solid contents by it the quotient will be the thickness, also the width of the three corner blocks and the little corner block. Dividing we find the quotient is 7. The length of one corner block 90 inches, and the width is 7 inches, so the area is 90X7=630; and of three will be 3X630=1890. The little corner block is 7 inches long and 7 inches wide, so the area is 7X7=49. Adding the areas all together we have 24300+630+49=25039 inches. Removing this from 183673 we have no remainder. We have now arranged 912673 small cubes into one large cube one side of which is 97 inches. Therefore the Cube Root of 912673 is 97.

I have had but three lessons in Cube Root. I have performed this problem and written this demonstration without assistance. My age is 14 y. are.

ALLIE SMALLEY.

THE NUMBER OF INHABITANTS NECESSARY TO MAKE A STATE.

To the Editors of the Weekly:

I am not satisfied with the answer of S. W. Culp to my inquiry as to the number of inhabitants a territory must have before it can be admitted as a state. I hoped by raising the question before the teachers of this section to correct a wrong opinion held by many. S. W. Culp says, "I will say a territory must according to law, a certain number of inhabitants before it can be admitted as a state." Now, I do not believe it, but If it is so, I am willing to believe it and teach it, for I am teaching the contrary now. Will S. W. Culp
The statement of the question as it is worded, is clearly at variance with mer- 
ner usage. The difficulty is not in solving the problem but in deciding 
whether the language is to be strictly construed or interpreted in, the light of 
business custom.—Ed.)

To the Editor of the Weekly:
I notice that in number 8b I am "asked to explain" in regard to solution of 
Prob. 2, in WEEKLY of Sept. 26, "Nebraska" states that it was solved—not 
at an average of $2o per acre, but at $30.11 per acre. According to "Ne- 
braska's" method of finding average such would doubtless be the case. The 
average is as follows:

<table>
<thead>
<tr>
<th>Acreage</th>
<th>Price per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>46.27+ acres</td>
<td>$21.61+</td>
</tr>
<tr>
<td>53.73+ acres</td>
<td>$18.61+</td>
</tr>
</tbody>
</table>

100 acres for $2000
1 acre for $20=the average price per 
acre, and not $20.11 as he informs us. He says

$31.61 A's price per acre 
$18.61 B's price per acre

$40.22=price of 2 acres 
$20.11=average per acre

According to this it would be consistent to say that the average price of
3 oranges at 5 cents each, and
2 oranges at 10 cents each, is 7.5 cents (since $1 of
5+10=7.5) instead of 7 cents the real average price.

"S. W. C." has made the same error in his statement

\[ \frac{y+y+3}{2} = 20 \]

Since \( y \) and \( y+3 \) represent the respective prices per acre it will be seen at 
once that this "method of averaging" was the same as "Nebraska's." The 
following statement would be correct:

\[ \frac{53.73+46.27}{2} = 50 \]

Simplifying it \( 53.73+46.27=100 \)

\[ \text{Average price per acre} \]

H. R. of Milwaukee, and J. M. Maxwell of Louisville, rally to the 
defense of "F. G." with proofs that are clear and positive. We fear Ne- 
braska will have to strike his colors, and as to the teachers of his state "who 
couldn't be fooled on that second problem," well——May it be will be 
give an extract from Mr. Maxwell's defence.—Ed.]

Let us try "F. G.'s" solution in another, but similar problem:—A & B buy 
7 head of hogs, each paying $10; but B pays $3 per head more than A.

How many head does each get? Solution:

\[ \frac{10+10}{2} = 7 \]

\[ \text{Average price per hog} \]

\[ \frac{y+y+3}{2} = 30 \]

\[ \text{Average price per hog} \]

\[ \frac{y}{y} = \frac{30}{y} \]

Is there any "fallacy" in this solution? If not then there is none in "F. 
G.'s".

To the Editor of the Weekly:

Will you please insert these questions in your column?
1. What is now the ratio of representatives in the House of Representa- 
tives? Townsend'd Civil Government states it as 134.684; Martin's, 130.533.
2. Under constitutional authority, Congress passed a law Feb. 2, 1872, fix- 
ing the time for election of Representatives and making it obligatory upon all 
the states to hold such election on the first Tuesday after the first Monday in 
November. The law was to become operative in 1876; why is it not enforce-
3. If the caret and tilde are both called the circumflex, how do you distin-
guish between them? (Mr. ROUSEAU, CO. School Superintendent.


[Hazel Green, Wis., Oct. 15, 1878.

1. In the word care, is it proper to say the a is marked with a caret? 
2. In the word firm (I with a tilde), is it proper to say the i is marked with 
a tilde?
3. If the caret and tilde are both called the circumflex, how do you distin-
guish between them?
4. The Fourth Principal Meridian passes through Wisconsin, from north to 
south, a little west of the center. Where are the First, Second, and Third? 
How many such meridians are there, and from what point are they reckoned 

WISCONSIN.
Educational Intelligence.

EDITORS.

Maine—Prof. J. Marshall Hawken, Principal Jones School, Portsmouth, N. H.


Indiana—J. M. DeArmond, Principal Grammar School No. 5, Davenport.

Ohio—J. B. Roberts, Principal High School, Indianapolis.


Dakota—W. M. Brabant, Supt. Public Schools, Yankton.

New Hampshire—Mrs. Samuel M. DeMerritt, of Portsmouth, has left, by will, $4,000, the interest of which is to aid Portsmouth youths of limited resources in the pursuit of a college education.

The wife of principal A. P. Kelso, of the State Normal School at Plymouth, has just inherited $400,000.

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The State Teachers' Association was in session at Nashua, Oct. 17 and 18. A. P. Kelso discussed "Normal Methods of Teaching," representing that year before last about 600 persons, wholly without experience in teaching, entered the work as teachers in the state of New Hampshire, and that this year a still larger number of the same class of persons was admitted to its schoolrooms; and further, that on the average, to the fact mildly, at least one school in every town was a total failure. He claimed that in this waste of energy was sunk money enough to support three normal schools. He criticized the normal schools of Massachusetts and New York, asserting that formerly Massachusetts did not turn out machine teachers while New York did; and that now New York was the more liberal in the two in allowing individuality of methods, while Massachusetts was doing the work as performed years ago by the Empire State.

Massachusetts.—A new feature at Harvard is the publishing of the awards of scholarships by the college, hitherto kept private. The change was perhaps made to prevent men applying who stood in no need of the fund. Scholarships varying from $50 to $400 were awarded; $2 to the last graduating class to the present senior, $2 to the present junior, and $10 to the present sophomore classes.

Vermont.—The normal school at Johnson has 100 pupils.

Pennsylvania.—At the late meeting of the State Teachers' Association, Sup't. Woodruff is reported to have said: "We are told that the kindergarten will save one year of the pupil's school life, the spelling reform two years, and the metric system two years more, making five years to each child, in one generation of 8,000,000 pupils there would be saved 40,000,000 years. This is an item worthy of attention."

THE WEST.

Indiana.—About twenty per cent of the students at the Indiana State University are ladies.

Washington Territory.—The University of Washington Territory is located at Seattle. A. J. Anderson, A. M., is president. The announcement, issued in January last, records 50 ladies and 67 gentlemen in attendance. The university is a territorial institution, and is under the control of a board of five regents appointed by the governor in accordance with the terms of the university law. It has, at present, three sources of support: First, $1,000 by direct appropriation of the legislature, being the payment of the tuition of thirty pupils appointed as directed by law. Second, $500 interest on endowment fund, and third, income from tuition of pay pupils.

Missouri.—The Missouri Valley State Teachers' Association will meet in Kansas City, Dec. 26, and 27.

Minnesota.—Mrs. A. W. Anthony, of Kasson, was elected a member of the Society of American Women, Mary Wheeler, of the same town, having served as a member of the board for two years.

Supt. D. C. Cameron, of Houston county, has our thanks for a copy of his annual report. It shows the following statistics: No. of pupils enrolled within the year, 4,928; No. of teachers, 160; average monthly wages paid to male teachers, $39.00; average monthly wages paid to female teachers, $26.75. The number of applicants for teachers' certificates was 169; number rejected, 34. Whole number of certificates issued, 135. First grade, 4; second grade, 91; third grade, 40. 87 report that their houses have been kept in good repair, and 75 that they have been properly supplied with fuel. 43 are ventilated through the doors, 55 are ventilated through the windows, 4 have ventilators, and 3 are reported as being "ventilated through the cracks." 8 have earruins at the windows, 19 are supplied with blinds, 3 have both, and the rest neither. 47 blackboards are reported in good condition, 37 as poor, leaving 11 unsupplied or useless. I cannot comprehend how a teacher can make a success of a school without a blackboard. 54 school houses are supplied with gas, 9 with charcoal, 24 with wood. In this respect there is a very great improvement over last year. Fifty-two use well or spring water for drinking, 21 have cisterns, leaving 22 to supply themselves as best they can from rain or melting snow. Twenty have no house, the lack of which is a disgrace to civilization. These statistics speak for themselves.

Ohio.—A special honor was shown the public schools of Cincinnati, at the Paris exhibition, in the award of both a gold and a silver medal, for the exhibit which they made there. Supt. Peasee has received a letter of special congratulation from Hon. J. D. Philbrick, who superintended the educational section of the exhibition.


The New York Tribune says that "The educational system of America" should not be mentioned in the school described recently by Supt. Parker, of Elyria, Ohio. "Last winter," he said, "I visited a school where a boy sixteen years old was studying only arithmetic and spelling. He could write his name but he could not write a sentence of the simplest kind correctly. In the room of the class where he was taught there were but five of forty pupils practicing pencilmanship. When asked why so few were learning to write, she said they did not seem to care to learn, and she found it a good deal of trouble to keep the ink from freezing. In another school the teacher told me she had been trying to teach a pupil to write, but he would not write books, but "his parents would not buy them." Mr. Parker lamented the desire to engage cheap teachers shown by many school directors in the state; the result is a supply of inefficient teachers. "When I am placer for so low by incompetent teachers, those who wish to become good teachers cannot do so because they have not money enough from their labor to properly qualify themselves for becoming successful in their chosen calling. One young man taught in Mahoning county this summer for $2.50 a week, and boarded himself."

The Union Meeting of the Teachers' Association of the several counties composing the Nineteenth Congressional District was held in Warren, Oct. 10. L. C. Jones, of Warren, was chosen chairman of the meeting, and Prof. C. W. Carroll, of Geauga county, secretary. Addresses were delivered by Hon. J. J. Burns, State School Commissioner; Hon. Thomas Hay; Ex. State School Commissioner; Hon. W. D. Henkle, editor of the Educational Monthly; Prof. J. Tackerman, of Ashtabula county; Supt. W. C. Carroll, of Geauga county; Supt. L. C. Campbell, of Trumbull county, and Supt. Jones, of Columbiana. The object of the meeting was to express the sentiment of the teachers and educators in this section on the question of consolidating the numerous school sub-districts throughout the country into one district in each state. Each first-class union applicant for teachers' certificates was paid the amount of the county Superintendent's. Resolutions embodying these ideas were unanimously adopted. There were about 350 teachers present. A committee of fifteen gentlemen, with alternates, was appointed to attend the meeting at Columbus next winter, and to circulate "petitions to the General Assembly of Ohio," organized on the plan of the Wisconsin resolution, in accordance with the resolutions here adopted. The committee consisted of three gentlemen from each county in the district.

Colorado.—The Denver Times speaks as follows of the State University: "The University of Colorado is again the recipient of a munificent donation. The large and valuable mineralogical museum of Mr. J. Alden Smith has been presented to the institution. The University is thanking beyond the expectations of its friends. Those who knew Dr. Sowell, looked..."
for prosperity when he was called to the helm, but no one expected to see
within twelve months, a library and museum worth at least $5,000, given to
the state, and an attendance of nearly one hundred students, including a
goodly-sized freshman class proper.

When it is well understood that the Colorado youths are already represented
at the University free, the school will increase even more.

WISCONSIN.-The University of Wisconsin, at Madison, is said to be in a
flourishing condition this fall under the presidency of Prof. McLaury.

A teachers' association has been organized in the Trempeleau county. We
have not received the report of officers elected.

Supt. Robinson reports that in the public schools of the county, a Crosse for month of September shows 1,654 enrolled, average attendance, 1,507; number average attending, 1,548; per cent of attendance, 97.5; per cent of males, 70; per cent of females, 30; per cent of pupils absent not tardy, 1,048; number of pupils present, 5,223; visits of superintendents to schools, 205; visits of inspectors to schools, 205. The school buildings are all except the new one just erected in the Fourth ward, in which there are over 200 enrolled; there are 120 in the high school. The new building is a very substantial and beautiful one. It is the best in the city. The cost was $18,267.25, the site, $6,000, the furniture, fixtures, etc., $1,877.67, making a
total cost of $25,444.92.

We glean the following items from the annual report of the Oconto county
superintendent: Total number of children of school age, 3,401. Total
number of children who attended school during the year, 2,006. Total number of
teachers required for the schools, 53. The number of different ones employed
during the year, 43. Total number of certificates granted during the year, 90:
first grade, 53, of the second, 5; of the third, 91; to males, 28; to females, 71. Oconto city is not included in the above.

MICHIGAN.—Prof. Watson is reported from Madison, Wis., to have accepted
the charge of the new Washburn Observatory at that place, with a professorship
in the State University. Every good workman likes to have the best of
tools. It was the telescope and not the salary that drew Prof. Watson to
Wisconsin.

It is reported that a project is on foot to raise something, like $75,000 for
the purchase of a larger telescope at Ann Arbor. New and improved
provisions for the care of surgery in the Homoeopathic College, Dr. Franklin, late
of St. Louis, is proving very popular among the students. Rev. J. T. Sunders-
der, formerly of Northfield, Mass., later of Chicago, is the new pastor
of the faculty. Prof. A. H. Pattengill was restored to his position in the faculty of the
State University at the late meeting of the regents, and Prof. Calvin Thomas,
who had been temporarily filled that position, was transferred to the
department of modern languages and history.

The students of the University are taking steps toward the establishment of
a gymnasium.

IOWA.—Iowa College has received $10,000 of the legacy of Hon. Sam-
uel W. Williston, of Massachusetts, the delay of which has caused severe embar-
acement. Another installment of $10,000 is yet to be paid. This legacy
was secured a dozen years ago for the Presidency by Dr. Magoun.

Tippecanoe has 247 children of school age. About 300 are attending
public schools.

Davenport's new school building cost $12,467.30. It has eight rooms, and
as regards clothes rooms, etc. it is only tolerably well arranged.

Dubuque has an attendance of 2,919 children—an increase of 68 over last
year.

The Scott county teachers' Library is a popular and growing institution.

The Mt. Pleasant circulating library contains 2,816 volumes.

The Medical Department of the State University has an enrollment of 89.

Prof. E. F. Clapp, of Iowa City, delivered the opening address. The following
bills will give some idea of its scope and character.—The student who
attempts a circuitous route to get around an obstacle he should boldly sur-
mount will meet greater obstructions than he seeks to avoid. The world
demands of the physician to-day more than it ever did before, and the student
of medicine who thinks that the labor pertaining to its pursuit is light is
grievously mistaken. Success requires a certain fitness for the work, indeed an
actual love for the study. He who can do it easily is not worth the degree.

He has shown that out of 100 medical students, 23 had achieved
distinguished success, 69 considerable success, and 90 fair success. Thus
we have nearly double the per cent succeeding, not a bad showing, being a much larg-
er proportion than in any other learned profession can show. The profes-
sor expected that soon every medical school will add to its curriculum a post
graduate course, where ample time will be allowed for research work. More about medicine and other branches of mensa are named as offering subjects for this study.

ILLINOIS.—Messrs. Cook and Stevens, principals of the Normal and Sci-
cific Institute at Morris, announce the opening of a business and commercial
course Nov. 12. Their Institute is flourishing well; about 100 students are
now in attendance. A series of popular and instructive lectures is commenced
for the benefit of such as are preparing to teach. Nine teachers are to be
employed next term.

Prof. Waters, superintendent of public schools at Morris, has been seriously
ill for several weeks. We are glad to learn that he is gaining strength; it was
expected that he would be removed to Aroclis last Saturday, where his brother
is engaged in teaching.

The teachers of McHenry county held an institute at Woodstock, commencing
Oct. 6, and closing Oct. 12. About 75 and 100 teachers were in attend-
ance. The exercises were of a practical character and of more than usual
interest. James P. Slade, Republican candidate for State Superintendent,
gave an able and instructive lecture upon the subject, "Improvement of Our
Common Schools," and State Sup't. Master, upon "Necessity of our Common
Schools." At the close of the institute resolutions were adopted recognizing
the value of teachers institutes, and extending the thanks of the teachers to
Prof. Slade and State Sup't. Etes, these showing lectures 10;

Prof. W. Wilkie, J. Piper, A. W. Young, county superintendent, and others
for services as instructors, and to the board of Education of Woodstock for
the free use of the school hall and for many other courtesies extended to the
teachers.

Knox county leads the counties in her educational display at the county
court, having a building erected by the schools of the county, and which was
occupied exclusively by the exhibit.

Supt. Harrington, of Bureau county, has issued an address to the patrons
and teachers of his county, in which to make some excellent points and asks
some very pertinent questions.

The Wyanet school, G. P. Peddicord principal, took the following premiums
at the county fair: For best general exhibit from a graded school; For best
collection of maps; For best specimen of penmanship; For best collec-
tions of woods and plants. Exhibits were made as follows: 1st, To Prof. G. P. Peddicord, for the best programme for non-
graded schools from any teacher. 2nd, To Miss Jessie Sparks, 1st, For best map in prize collection, and 2nd, for best speci-
men of penmanship. 3rd, To Miss Carrie Bard, for best scrap book
from any pupil. Total received in behalf of the school on the above is $38.50.

Twenty dollars which has been paid on debt for school organ, and the re-
maining funds for book and other purposes also exhibited. 262 new
varieties of plants, with their common and scientific names attached. Also
eight volumes of examination papers of monthly and term examinations,
bound with Emerson's patent binder. Bureau County Republican.

For the first time this year if we mistake not, there was an educational exhibit
at our State Fair. The character of the work done in our schools is such
that an attempt to represent it to the public, by an "educational exhibit" must
always result disastrously; nevertheless, these displays, as they are,
serve to call the attention of the people to the schools and lead them to
ward a more correct estimate of their importance. The exhibit was under
the charge of Mr. Emory Cobby, of state Board of Agriculture, and he was
assisted by Prof. C. C. Snyder of Freeport.

THE SOUTH.

NORTH CAROLINA.—The eighty-third anniversary of the opening of North
Carolina University has just been celebrated.

GEORGIA.—A new corporation, organized to promote scientific educational
objects, and called "The Georgia Academy of Science," has just applied for
a charter. It will conduct its business in Atlanta.

TENNESSEE.—Tennessee has 4,591 public schools, an increase of 694 over
last year.

TEXAS.—The East Texas University is an institution which has just been
opened in Tyler. It has accommodations for about 500 students. Prof. T. L.
Norwood, formerly of the University of North Carolina, is president; the other
members of the faculty are also from Southern colleges.

MISCELLANEOUS ITEMS.

The firm of Harper & Brothers, of New York City, the publishers of Stan-
ley's "Across the Dark Continent," have filed a petition against Robert
Clarke & Co., of Cincinnati, praying for an injunction to restrain the
Toronto (Canada) edition of "Across the Dark Continent," and asking that an
account of sales be ordered. The Toronto (Canada) edition is in one volume,
and the Harper Brothers' edition consists of two volumes. The plaintiffs set
forth in this as an infringement of their copyright, and that it damages them
materially.

The College of New Jersey, Princeton, has just been connected with the
Washington Observatory by telescopes, and electric lights are to be
placed in the buildings.

Dr. Hitchcock, of Amherst College, has been induced by the common
remark that there is an excess of professional men in the country, to compile
a list of number of students from Massachusetts in elx on New England
colleges, as shown by the annual catalogues from 1800 to 1876. He has also
in another column of this table placed the census returns made during the
years 1800 to 1805. The proportion of Massachusetts college boys to the whole
population was 8.6, this ratio was only 5.5 in the years 1875-6. The average ra-
tio of increase of population since 1800 has been fifteen per cent, but of
students it has been but eight per cent.
The Educational Weekly.

[Number 88]

204

HOW TO TEACH GERMAN.

By Dr. Zoë Brücke.

SIE, DIE SONNE, DIE SONNE.

DEFINITIONS: Der Himmel, the sky or heavens; heizt, macht warm, heats, makes warm; die Luft, the air; die Stube, das Zimmer, the room; alles, everything; wenn, if or when; in der Nacht, or des Nachts, at night; rund, round; ein Feuerball, a fireball; roth, red; glänzend, glistening; unentbehrlich, indispensable; wenn, scheint uns, shines upon us; die Wolke, the cloud; hinter, behind; hinter den Wolken, behind the clouds; immer, always; entweder, oder, either, or; könnten wir, could we; entbehren, dispense with; erwärmen, to warm up; das Wasser, the water; in den See, in the lake or sea; der Brunnen, the well or spring; der Garten, the garden; so dass, so that, die grasen and die flowers may be able to grow; können, may be able; wachsen, to grow; darin, in it; wann, when; an dem, on the.

In order to draw the attention of the pupils, the teacher remarks.—Ich sehe die Sonne, die Sonne scheint in dem Himmel! (the sun shines in the heavens, or sky.) Die Sonne macht das Zimmer warm; die Sonne macht die Luft warm. Die Sonne macht dieses Zimmer (these Stube) warm. Die Sonne macht Alles warm. Die Sonne macht das Licht. Ich kann Alles sehen, wenn die Sonne scheint. Die Sonne scheint am Tag; die Sonne scheint nicht in der Nacht (des Nachts). Die Sonne ist ein Feuerball; die Sonne ist rund; die Sonne ist rot; die Sonne ist glänzend; die Sonne scheint auf uns; die Sonne scheint hinter den Wolken; die Sonne scheint bisweilen, auf uns; die Sonne scheint hinter den Wolken; die Sonne scheint in den See; die Sonne scheint hinter der Sonne; die Sonne scheint hinter dem Garten; so dass, so that, die grasen and die flowers may be able to grow; können, may be able; wachsen, to grow; darin, in it; wann, when; an dem, on the (am) entferntesten, literally, at the farthest, the most distant; am längsten, the longest; friert es, does it freeze? schmilzt es, does it melt? die Wärme, the warmth; kein lebendes Wesen, no living being; ohne, without; könnten, would be able; ganz und gar, none at all; leben, to live; auf dieser Erde, on this earth; wird erwärmt, in, or, becomes illuminated; durch, by means of; luna, for.

NOTE:—The computations in the following are made for central Illinois, Indiana, Ohio, and Southern Pennsylvania, and Northern Missouri and Kansas, and are expressed in mean, local time.

The following is a table of the positions of the planets for November, 1873.

<table>
<thead>
<tr>
<th>Planet</th>
<th>Position</th>
<th>Nov. 1, 1st. 10m. eve.</th>
<th>Nov. 10, 2h. 40m. eve.</th>
<th>Nov. 20, 3h. 8m. eve.</th>
<th>Nov. 5, 3h. 56m. eve.</th>
<th>Nov. 15, 2h. 31m. eve.</th>
<th>Nov. 30, 5h. 37m. eve.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun</td>
<td>Rising</td>
<td>9h. 30m.</td>
<td>11h. 20m.</td>
<td>13h. 10m.</td>
<td>15h. 45m.</td>
<td>17h. 40m.</td>
<td>19h. 35m.</td>
</tr>
<tr>
<td>Mercury</td>
<td>Setting</td>
<td>2m. 45m.</td>
<td>4m. 35m.</td>
<td>6m. 25m.</td>
<td>8m. 15m.</td>
<td>10m. 45m.</td>
<td>12m. 35m.</td>
</tr>
<tr>
<td>Venus</td>
<td>Position</td>
<td>8h. 15m.</td>
<td>10h. 30m.</td>
<td>12h. 45m.</td>
<td>2h. 30m.</td>
<td>4h. 45m.</td>
<td>7h. 00m.</td>
</tr>
<tr>
<td>Mars</td>
<td>Setting</td>
<td>11h. 40m.</td>
<td>13h. 25m.</td>
<td>15h. 10m.</td>
<td>17h. 55m.</td>
<td>19h. 40m.</td>
<td>21h. 25m.</td>
</tr>
<tr>
<td>Jupiter</td>
<td>Position</td>
<td>5h. 30m.</td>
<td>7h. 15m.</td>
<td>9h. 00m.</td>
<td>10h. 45m.</td>
<td>12h. 30m.</td>
<td>14h. 15m.</td>
</tr>
<tr>
<td>Saturn</td>
<td>Setting</td>
<td>7h. 00m.</td>
<td>8h. 45m.</td>
<td>10h. 30m.</td>
<td>12h. 15m.</td>
<td>13h. 50m.</td>
<td>15h. 35m.</td>
</tr>
<tr>
<td>Uranus</td>
<td>Position</td>
<td>10h. 30m.</td>
<td>12h. 15m.</td>
<td>13h. 50m.</td>
<td>15h. 35m.</td>
<td>17h. 15m.</td>
<td>19h. 00m.</td>
</tr>
<tr>
<td>Neptune</td>
<td>Setting</td>
<td>12h. 15m.</td>
<td>13h. 50m.</td>
<td>15h. 35m.</td>
<td>17h. 15m.</td>
<td>19h. 00m.</td>
<td>20h. 30m.</td>
</tr>
</tbody>
</table>

SITUATION OF THE PLANETS FOR NOVEMBER.

By Berlin H. White.

NOTE:—The computations in the following are made for central Illinois, Indiana, Ohio, and Southern Pennsylvania, and Northern Missouri and Kansas, and are expressed in mean, local time.

MERCURY.

It will be quite useless to attempt to find this planet with the naked eye this month. He will be best situated during the latter part of the month; setting Nov. 30 at 5h. 35m. evening.

VENUS.

This planet is also unfavorably situated for observation, being invisible during the latter part of the month, and rising Nov. 1 at 5h. 45m. morning.

MARS.

Mars will be best situated during the latter part of the month, rising Nov. 30 at 4h. 2m. morning. He will be near the moon Nov. 22, being in the constellation Libra.

JUPITER.

Jupiter will be the most brilliant object in the heavens throughout the month, and sets as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov. 1, 10h.</td>
<td>10m. eve.</td>
</tr>
<tr>
<td>Nov. 10, 2h.</td>
<td>40m. eve.</td>
</tr>
<tr>
<td>Nov. 20, 3h.</td>
<td>8m. eve.</td>
</tr>
<tr>
<td>Nov. 5, 3h.</td>
<td>56m. eve.</td>
</tr>
<tr>
<td>Nov. 15, 2h.</td>
<td>31m. eve.</td>
</tr>
<tr>
<td>Nov. 30, 5h.</td>
<td>37m. eve.</td>
</tr>
</tbody>
</table>

He will be in the constellation Sagittarius a few days during the first of the month and afterward in Capricornus.

A telescope magnifying 8 or 10 diameters will enable one to observe the eclipses and occultations of his satellites. For the benefit of those possessing good opera glasses, sky glasses, or small telescopes, we give a synopsis of the phenomena of this system for November.

Satellite I. begins a transit at 6h. 5m. eve. and completes the same at 8h. 29m. eve. Begins transit 9th, 8h. 7m. eve.; 24th, 6h. 32m. eve., and completes one 17th, 6h. 55m. eve. Reappears from an eclipse 22d, 7h. 6m. eve., and 9th, 5h. 25m. eve., and is occulted by the planet 9th, 7h. 27m. eve., and 16th, 7h. 25m. eve.

Satellite II. disappears behind the planet, 5th, 7h. 46m. eve., and 30th, 5h. 30m. eve.; ends a transit, 7th, 5h. 38m. eve., and begins one 14th, 5h. 31m. eve. Reappears from an eclipse 16th, 5h. 14m. eve.

Satellite III. begins a transit, 10th, 5h. 25 m. eve., and comes out of an eclipse 22d, 6h. 42m. eve., and begins an eclipse 29th, 6h. 31m. eve.

SATURN.

Saturn is well situated for observation, passing the meridian as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov. 1, 9h.</td>
<td>1m. eve.</td>
</tr>
<tr>
<td>Nov. 10, 8h.</td>
<td>30m. eve.</td>
</tr>
<tr>
<td>Nov. 20, 7h.</td>
<td>50m. eve.</td>
</tr>
<tr>
<td>Nov. 5, 7h.</td>
<td>31m. eve.</td>
</tr>
<tr>
<td>Nov. 15, 8h.</td>
<td>1m. eve.</td>
</tr>
<tr>
<td>Nov. 30, 7h.</td>
<td>11m. eve.</td>
</tr>
</tbody>
</table>

He is in Aquarius and very near the eastern boundary.

The following are calculations for the Southern States, Northern New England, Central Illinois, Indiana, Michigan, and Southern Iowa, being for Nov. 16.

<table>
<thead>
<tr>
<th>Planet</th>
<th>Magnitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aphiadri</td>
<td>8</td>
</tr>
<tr>
<td>Alpha Persei</td>
<td>10</td>
</tr>
<tr>
<td>Antares</td>
<td>11</td>
</tr>
</tbody>
</table>

First Magnitude Stars

The following are the positions of the stars for November, Central Pennsylvania, Northern Ohio, Indiana, Illinois, and Southern Iowa, being for Nov. 16.

<table>
<thead>
<tr>
<th>Star</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aphiadri</td>
<td>8 Am. 15m.</td>
</tr>
<tr>
<td>Alpha Persei</td>
<td>10 Am. 30m.</td>
</tr>
<tr>
<td>Spica</td>
<td>11 Am. 45m.</td>
</tr>
<tr>
<td>Antares</td>
<td>12 Am. 00m.</td>
</tr>
</tbody>
</table>

The last deficiency in public school instruction is the want of wise administration. Towns may lack the wisdom and good will to do this administrative work well; and cities, when ignorance or selfishness are in power, may pull down in a few weeks what has been years in building. The state should be thoroughly provided with all its limits for the best and brightest men to be placed on its educational boards. If we insist, as we ought, on intelligence and integrity and strength, these desirable men are not easily found, and certainly are not always found. The public interests in no portion of their administration call for more wise, liberal, and disinterested men than do our educational institutions—men who were born men, and have been growing into manhood ever since. When we look at the willful mischief hourly wrought, and hourly liable to be wrought on our schools, it is but the plain truth as it is painful, that we suffer irreparable loss from the want of a just and generous administration.

—Pratt. John Bascom.
Home and School.

This department is designed for the instruction and entertainment of parents and children. Original contributions and translations are solicited.

A SATURDAY AFTERNOON EXPERIMENT.

For the Children of "Home and School."

Miss S. P. Bartlett.

First, ask your mother if she is willing. Perhaps she sometimes objects to your Saturday afternoon contrivances for amusement and diversion. I know something about that, because I have seen boys and girls who would litter over two or three nicely ordered rooms with their materials for enjoying themselves, and when they had done leave the whole for somebody else to clear away. Some families dread holidays, because their little folks are quite sure to make the mother tired and troubled, and create disturbance.

Perhaps those children never have thought there was something wrong about this, and wondered why they and every one else in the house felt out of patience, and as if somebody was a trial, and extensively naughty, by Saturday night. You see the sunshine of a family gets sorely clouded when its children run wild, and have their own way, say a day, or even half a day, at a time. I'll tell you how to make this right, and have Saturday afternoon the happiest time of the week, as it ought to be, by a little golden rule all children shall learn to keep. Ask mother, when you wish to do anything, and then make mother's way your way.

This is not, therefore, so very inappropriate a bit of advice with which to preface a soap bubble experiment for you to try if she is willing.

You will want her help a little about it, too. All children love to blow bubbles. These are the directions, and they are said to produce a specially beautiful kind of soap bubble. Take three quarters of a pint—how many gills will it be?—of rain water that has been boiled, and become cold, and put into it or so, into a sauce pan of water, to heat upon the stove; there let it remain an hour to settle; then pour off the fluid, and add to it four ounces of glycerine, and your soap bubble solution is ready. A tobacco pipe will answer to blow very fine bubbles of exceedingly bright rainbow hues, but—if any one wishes to attain perfection, he is advised to have a glass pipe. Somebody who ought to know, aware, moreover, that by adding a larger quantity of glycerine you may make the bubbles so strong that you can play battledore with them...

As to that, I cannot say; but very likely some of you will try, and see if you can toss the exquisitely colored floating castles in the air for playing things in the house, some November day, when you may not run out doors for recreation.

BARDIE AND MASTER BERKROLLES.

Our Bunny now could spell "cat," and "dog," and could make a good shot at some other words, and enjoyed a laugh at the children, head and shoulders over her, whenever they went amiss and she from the Master's face was sure of it. But Bardie had never been to school; for I thought below her rank so much; and now I contrived for our great schoolmaster to come to my cottage, and there begin.

It must have made the very gravest man ever cut from a block of wood laugh, to behold Master Roger and her. He, with his natural dignity and well founded sense of learning and continual craving for a perfect form of discipline, yet unable to conceal his great wonder at her ways; she, on his side, taking measure of him in a shy glance or two, and letting her long eyelashes fall, and crossing her feet with one shoulder toward him, for him to begin with her. He vowed he never had such a pupil; instead of learning, she wanted to know the reason of everything. Why A had two legs and a girdle; while B had two stomachs and no leg at all? C was the moon, from the shape of it. It was no good to tell her that C was the cat; a cat had four legs, and C had none; and as for D being a dog she would fetch dear Dutch, if he would not believe her, and show him what a dog was like. And then perceiving how patient he was, and understanding his goodness, the poor little fatherless soul jumped up on his knee, and demanded a play with him. He did not love to play very well, being an ancient bachelor; but en- tering into her sad luck, from a knowledge of her history, he did the very best thing, as I thought, that had ever been done to her. He put her on a stool between his knees, and through the gloss of her hair he poured such very beautiful and true stories that one could almost see her mind, like the bud of a primrose, opening. She pushed up her little hands, and tossed her thick hair out of the hearing way, and then, being absorbed in some adventures like her own almost, round she turned, and laid her eyes upon his furrowed, yet beaming face, and delicate elbows on his knees, and drank in every word, with sighs, and short breath, and a tear or two.—The Maid of Sker.

It is one of the mysteries yet to be revealed to short sighted mortals, why parents, and members of churches, having children in our public, private and Sunday schools, so seldom see where their children are, what they are learning, and by whom they are being instructed. Owners of cattle and other stock are careful to know what food they have given them daily and by whom it is dealt out, while thousands of parents of lovely children seem utterly to avoid any supervision of their children's culture in public, secular, or religious schools.—The Baptitl Weekly.

More and more one must feel that simply imparting the facts of a "grade" to a pupil is an imposition. The teacher owes much more to the pupil than that. That may be done and no teaching; teaching is the product of the living mind of the teacher upon the growing mind of the scholar. It is not a "filling-in-process," as they practice it in grading a street.—N. Y. School Journal.

GRANDMA'S POCKET.

[For Recitation.]

Our grandma came on Christmas day, And what do you think she brought us? Some real wax dollys, do you say, And other things she'd brought us?

No, you are wrong. At first she gave Her gentle words of greeting— Real blessings, just as sweet and grave As any said in meeting.

How shocked I was when Eddie cried, "The next thing on the docket Is just to get a peep inside My grandma's deepest pocket!"

"Hush, hush!" said mother, "Naughty boy!" But words were lost on Eddie, For he had found the well of joy— His hands were in already.

And grandmamma so gently smiled, And spoke so low and sweetly In praises of the restless child, His head was turned completely.

First, from the depths, with might and main, He pulled a roll of mittens; Then thrust his hand deep again To find some pastry kittens.

Soft, home-spun lace for Mary's use; A tidy knit for mother; A string of buttons to amuse Our teething baby brother;

A cushion made of bits of silk, A row of pins to stock it, And a flannel rabbit white as milk, All came from grandma's pocket.

Then papa laughed. "This pocket yield Might well become a juggler, If grandma wears such loads concealed, They'll take her for a smuggler!"

Then kissed her cheek, and went to buy A present fit to give her, While we besought her—Ned and I— To live with us forever. —Ada Whipple Bellamy, in Youth's Companion.
THE VERY BEST LINE.
Chicago, Mill. & St. Paul RAILWAY.

ITS ADVANTAGES ARE:
1. It has no superior in any point of merit in favor of its competitors.
2. There is no other line running through Chicago, St. Paul, and Minneapolis.
3. It runs in the main line of travel between Chicago and any point in Minnesota.
4. It makes more frequent stops at Chicago and St. Paul than any other North-Western line, and on all lines running in and out of those cities; and at La Crosse, Winona, etc., on the Mississippi River.
5. It is the only line running through the heart of the richest and most fertile section of the country, and is the most direct route to all parts of Minnesota.
6. It is the only line running its own Palace Sleeping Cars from the Pacific Northwest to Chicago, or from Chicago to the Pacific Northwest.
7. It is the only line running its own Palace Sleeping Cars from the Pacific Northwest to Chicago, or from Chicago to the Pacific Northwest.

Clubs and Double Entry Book-keeping.

For twenty years the industry of book-keepers has been devoted to the perfecting of the art of double entry book-keeping. This has been accomplished by the use of a system of book-keeping which has been in existence for twenty years, and which has been used by the finest book-keepers in the world. The system is based on the principle of keeping two accounts for every transaction, and it has been shown that this is the only way to keep the books in order and to have them ready for examination.

Single and Double Entry Book-keeping.

Single and Double Entry Book-keeping is the only way to keep the books in order and to have them ready for examination. The system is based on the principle of keeping two accounts for every transaction, and it has been shown that this is the only way to keep the books in order and to have them ready for examination.