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# Educational Weekly 

Vol. IV.

## The Educational Weekly

Edited by T. Arnol.d Hauiman, M A.

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Jasies V. Wkight. General sfanaper.

TONONTO, $7 U L Y 29, ~ J S S 6$.
The second-class algebra paper set at the recent Jure examination of teachers, has caused much comment in the press during the past week or two, and we have received numerous letters from our subscribers on the subject; for the informa. tion of whom as well as for that of our readers in general, we have printed in another part of this issue, a copy of the paper of which complaint is made, together with solutions of the questions by Mr. Glashan, including some most useful exijlanatory notes; these we have had the pleasure to receive from Professor George Paxton Young, whose very lucid and satisfactory letter transmitting these papers to us, will also be found in our columns, and to which we would call special attention as affording an explanation eminently satisfactory.

We commend to the consideration of our readers the following remarks of Mr. 18. W. Arthy, Superintendent of Schools, Montreal: "The profession of teacher, in point of dignity and importance, is second to none, not even to that of the minister of religion. I think that there is hardly anything more to be lamented, to feel more sorrowful about, than the knowledge that men should work as hard as ministers of religion, and produce so little effect up. on those among whom they minister. Ministers and teachers of religion have to speak mainly to adults. They have a material that is not plastic, and upon which they can make little impression. The teachers in our schools are in an entirely different position. We have a plastic material upon which we are able to impress our minds and our sentiments, and though that plastic material may be moved and worked and impressed for evil as well as for good, yet, secing that the great mass of the teaching in our schools tends infinitely more to good than to evil, we may confidently expect that we shall make an impression of lasting benefit upon the young minds with which we constantly come in contact. But, it behooves us to be earnest and watchful, even in the smallest things. Every exercise in the school-room, every particle of teaching involves, on the part of the child, moral action and generates power. This power may be used either morally or immorally, and the greater the amount of power generated, the greater the responsibility of the teacher, for the clearer the comprehension (if divorced from right choice and moral action) the greater the capacity for wrong-duing. It is the nature of the small human being to do again, whatever he has done before; in other words, the tendency of action is to become habitual. It follows then, that whenever he commits a wrong act he is training for worse things. On the other hand every time he has been led to do right, he has gained so much moral staniina. In conclusion, I would recommend as a watchword to every carnest teacher, a sentence quoted by Miss Partridge, "in her Quincy methods." As a
terse aphorism it is worth remember. ing, but it is far better worth remembering, for the deep truth it crystallises"Sow an act, reap a habit ; sow a habit, reap character; sow character, reap destins."

No one doubts the efficacy of an examination. Were there no examinations there could be no standards of valus. What should be the standard of education? Should it be knowledge, or influence, or character? Col. F. W. Parker, of Chicago, who is an acknowledged authority on the subject, recently said in an answer to this question, "the object of an examination is to ascertain the condition of the child and find out what to do next. The whole child goes to school; the whole child must be examined. The examination that binds the teacher to a method is radically wrong. One of the reasons why we make so little progress is because we cut off originality. One of the reasons why we are slaves of method is because we surrender to them. Promotion is made a matter of per cent. One-half of the class with their inherited strength and home advantages go up; the other half, with their inheritance of weakness, and poverty, and wretchedness, go down. Selfishness is ingrained in the child by arousing the spirit of emulation. Per cents., and prizes, and ranks buy the schular in the common schoni, the academy, and the college; and when he steps out into the world he says, What will you give for me? If knowledge is made the end of education, then per cents. must be. But suppose character were made the end, does a teacher need to mark down in per cent. the fact that a boy is growing better under her charge? To promote chiddren, put them where they will do most good. If you cannot explain this you are not fit to teach; you have not lived up to your opportunities. Sweep the Regent's examinations into the past. When you have done this, and something better has taken its place a great step in advance will have been made.

## Contemporary Thought.

Ture Educational Department of Ontario is a nide-awake branch of government, and fully appueciates the ueeds of the hour. The reeens issue of a text-hook on hygiene, and the pamphlet on schoul architecture and bygiene demonstrates this conclusively: The irook on rehool architecture and hygiene is copiously illustrated with plans, and is designed for the guidance of school trustees in the erection of new huildings. - Chicago Sanitary Neaus.

As a rule, the editor is a very poor newspaper man, not half so versatite in journalism generally as the humblest police reporter. He can wear a full-dress suit with credit, howe ver, and is a good mall to apply to when you want something kept out of the paper. Often he is called upon to correet some truthful statement that has been printed hy an honest and energetic reporter. This is a task which pleases him immenery, and he toes it luilliantly. The more an edator beeps out of his paper the more valuainle be becomes to the business department. He is expected to see tha: the policy of the paper is strictly observed, and to pay close attention to the ubnuary column. In addition to these prodigious and over-powenng duties he is expected to claim all the complimentary circus tickets that cone into the office, and to associate himself closely with all pablic banquets, State conventions, and national political issues. If an anbitious reporter writes an occassional bright paragraph for the editorial page which autracts some altention, it is the eduror's duty to admit that he wrote it himself.- Yenouine's Netus, Chicago.

Amamios, what is it? Weloster detines it, an eager desire of prefergnent, hanour, superiority or power. Who of us is not ambitious? Perhaps we may not realize it ourselves, or others may not think it of us, yet it is there, a latent germ that only needs the rousing by proper means, and a decelopment of our mental and moral poners. How bright the hopes, how great the plans formed in the minds of the young in years, with all the possibility of a long life of health and strength stretching out before them. How different the hopes and plans of different prople ; what would satisfy one would fall far short of another's desire. One must stand on the topmost round; another might be content in whatever sphere he chances to be placed, willing and glad to work for others, making his litte corner of the world the better and happier for his having lived in is. Seekers for wealth, and for the high positions in society, are spurred on by their ambitions. The busy student toiling over his books by the midnight lamp, until weary and oftentimes discouraged, is pushed on by his ambition as with a relenticss hand that will not suffer him to rest until the object is attained, or till foreed by a failing hody and overtaxed brain to give over the struggle. $E x$.

Oux scheols seem to be naking execllent progress. Indeed, the work done during the term merits the highest approbation. This is true of every department of all our schools. In such a system as we have it is in the highest sense neces-
sary that the teactiers in every grade should be capable, and thoroughly unilerstand their profes. sion. The system is like a great cog whect, and if one of the cogs be defective or broken there will lee a jar in the machinery. Should the teacher of one of the grades be careless or incflicient, and slight the work of his grade, there will be a $=0$. responding blank in the education of the children, which the eacher of the grade above will have to make up, if he or she can, but this is rot always possible. It seems to me that there ought to be some better test of a teacher's ability to impant instruction than mere scholarship. The most learned of men have been utter failures as educs. tionists. But under the present rule the teacher who has passed the highest examination gets the highest pay, while a more successlul teacher, having a lower class of license, gets less money. The examination should also be more frequent, in order that teachers should keep abreast of the times in educational matters.-Daily Talegraph, St. John's, N.B.
Ture idea that genius seveals itself eatly in life docs not at once recommend itself to common sense, Olservation of nature as a whole suggests Girst of all, perhaps, that her choicer and more cosily gifis are the result of a long process of preparation. And, however this be, there is certainly nore of moral suggestiveness in the thought that intellectual distinction is the result of a strenuous adolescence a:ad manhood than in the supposition that it can be reached by the stripling at a bound, through sheer force of rative talent. And it may not improbalily have been a lively perception of this ethical significance which fostered in the classic mind so widespread a disbelief in sarly promise of great intellectual power. We find a typical expression of this sentiment in the saying of Quintilỉ̊n: "Mlud ingeniorum velut pracox gemus non temert unguam fervenit ad frugen." That is to say, the carly blossom of talent is rately followed by the fruit of great achievement. It is evident that this saying embodies something like a general theory of the relation between rank of talent and rate of development. Where superior intellectual aniluy shows itself at an early date, it is of the sort that reaches its full stature carly, and so never attains to the greatest height. On the other hand, genius of the finer order declares itself more slowly: -The Naneteanth Centary.
Tue Natior sajs: "The laiour problem is primarily a problem for each individual man, and it consists in how to wring a living from mother earth. In so far as any individual is unable or unvilling to solve it for himsclf, he increases the lahour of some of his fellows, they beig, in the vast majority of cases, just as sorely beset in the effort to make ends meet as he is. Now this disposition to make A solve not only his own labour problem, but B's as well, which is at the bottom of much of our labour troubles, is much encouraged by s:ch sermons as Mr. Newton's. Their tendency is to belitule the industial value of individual skill, industry, prudence, and seif-reliance, and exalt the value of unions, and congresses, and councils, and rules, and grips, and signs, and charity, and philanthrophy, and legislation, and all sorts of other contrivances to save men from the natural consequences assigned by the moral government of the world to laziness and stupidity and envy."

This is all true enough, but it does not make plain the other truth, that unions are always composed first of men who have solved their own labour problem. If these be camp.followers, the union docs not exist through their efforts. Because of the difficulty of life the labour problem is as hard as it is. The man who sees the evils while he toils, forgets those evils as soon as he ceases to toil. Doubless the toilers will always have to groan with weariness, but let us hope the something servile which remains as the rudiment of the sting of the lash shall yet pass away.

Whes a young poet first enters the lists of song he seldom stops to think that he is running against Shakespeare and Milton, who have two hundred years stant of lim. It is as well that the bards of our day are so blind, else our woods of poesy would be as still as the forests of winter. But if the philosopher look across the rather prosaic meadows of our latter-day song, he may discover some reasons why our poets do not run a swifter race to fame; and one salient reason lies in the fact that the tableau. as a "property" of verse is used entirely as the be-all of the ordinary poem. "The sun arises," says the aspiring poet, and that is all. What of it? Alas the poetaster does not tell! The sun of Austerlitz '-there is some poetic sense in that! The flowers bloont in the spring in our poems until the satirist cries out " $O$ bother the flowers !" and the whole world goes off into a guffaw. Now the fact is that only the very highest type of intellectual imagination is able to repel 'he satirist if that malevolent person set on a pure tableau. Milton, ahnost alone, was enough artist to hold his tableau separate from the juman heart -and everyone knows how few real worshippers the author of "Paradise Lost" commands. "Now came still Evening on" begins a tableau which has no purpose other than description; no heartstring is to be pulled. Hut how many poets could do as nuch? In looking over the foating yoems of the day, one is impressed with their descriptive rather than their ideal character. A river runs by; a daisy grows thereby; Ah! beauliful river; ah ! modest daisy ; Now that may be poctry, but it is the raw material. It is only the one end, the little end, of a poem. In true poetry there must be a plainer reason twhy the river runs. And the reason must be as subtly conveyed as is the case in the sun of Austerlity. "There is a willow grows aslant the stream," begins the Quecr, and we weep over Ophelia's death. "Her voice was ever soff, gentle and tow !'" wails Salvini in his wenderful alt, and we choke and sob to think of the hanging of the beauiful Cortclia who lies in the dying king's arms. "How soft the moonlight sleeps on yonder bank!" coos the lover as sweet as any dove. Could maiden resist such wooing? "Here wast thou dayed, brave heart!" crics Antony at the climax of onstorical effect. "O, limed soul !" groans the wicked King in Hamlet. " O , Thou whose hand from solid darkness struck that spark the sun, strike wisdom from my soul !" implores the prayerful Young. Are not these great poets thus constantly asing their tableaus? Do they net handle the keen tools of trope and metaphor with some skill after they have fashioned the teol itself? This, then, if we complain of to-day's poetry, is its principal faut: it is all implement.-The Carrent.

## Notes and Comments.

Thar the cause, or one of the causes, of the troubles existing in fociety of the present day is the want of a feeling of reverence and respect, is we think only too true. On this subject a writer in Our Jouth says:-There is little hope for an irreverent fellow. It is hard to get hold of him. There is so little in him to get hold of. There is in irreverence a vein of meanaces which makes one shrink from meddling with it.
"Should we say two pairs of socks or two pair of socks !" asks a Wisconsin reader. in the New York Graphic; of its able and affable editor. Editor responds: "Neither. The correct term for the articles referred to is now accepted to be 'half-hose.' The answer in full would then be two pairs of 'half-hose.'" This is the latest American for a good honest English word that stoud the wear and tear of centuries without shocking anybody's sensibilities until it fell upon the ultra susceptible ear of our cousins of the Republic. Whereupon the foregoing polite substitution :-Prunes are prismsand half-hose!

Prof. W. H. Payse, of Ann Arbor, speaking on the subject of the life and teachings of Pestalozzi, says: It was his spirit, not the methods of his teaching, that has made him famous. The secret of his power was his sympathy with the lower classes. It is true of all the world's greatest teachers that they owed their success to their philanthropy. The modern tendency is away from these ideals. The school is drifing away from the people, and there is a pronounced tendency toward an intellectual aristocracy. An earnest purpose is of more value than mere technical scholarship; and in giving licenses to teachers, the moral qualities of the candidate should be taken into consideration as well as superficial accomplishments and text-book knowledge.

Professor blackie says he wishes himself back in the middie ages when singing was the only sermon and the minstrel the only teacher. We are runring too much to books The people don's cone together any more. There are no more grand public reunions of the masses. A man buys a book or a paper, and, hurrying home, shuts the door and reads. Everybody reads. Enter a family circle nowadays and man, woman and child has his, her or irs nose poked down between printed pages. It's read, read, read. Absolute silence reigns through. out the house. It's despairing. I sometimes feel like yelling and demolishing the furniture, when I get into such a solemnvisaged circle, as a sort of counter-irritant. These human reading machines are stuffed
full of the sausage meat of literature. Wher: the world was the wisest it read no books. Its teachers taught them from nature. -Neic, York Ciraphis:
Tue New York Inditator says that it may seem hard that one man can hold a fortune of $\$ 100,000,000$ and another not have enough money to purchase a night's lodging. It is also hard that one man is born blind and another is permitted to travel around the world and see everything that is beautiful in this world. But we must go beyond human existence to fix the responsibility for the inequality, and if any remedy exists it must spring from the source that makes all things unegual. The nearest approach that man has yet come, or will ever come, to fixing a common level is through the elevation of the individual, not the lowering of any class. By education man may be raised to almost any estate, but no leveling process can ever make the man of lofty attainments and high moral culture less than what he is-the noblest work of God. Let the Knights of Labour address themselves to raising the standard of manhood, instead of lowering it.

Ar a meeting of the London Scientific Association recently, Sir John Lubbock exhibited a tame wasp which ate sugar from his hand and made no attempt to sting him. Those moralists that are fond of holding up the habits of various insects as mude!s that should be followed by humanity with its weaknesses are going to get left. Science has discovered that the busy bee, which, from time immemorial, these persons have described as improving each shining hour, really works but two hours a day. The pet which Sir Join Lubbock introduced to his scientific friends the other evening, proves conclusively that even the wasp, an insect popularly supposed to attend strictly to business at all times and in all places, is willing to neglect business for pleasure; and a further investigation of the ant, the bete noire of the sluggard, will probably show that she has her hours of ease and idleness and is far less industrious than she has been cracked up to be.-EEx.
ON the subject of athletics which is one of daily increasing interest, the opportune remarks of a correspondent in The Canadian Athictic Necus, ought to be published far and wide. He writes : The pursuit of athletics is unquestionably beneficial, but the difficulty arises when men will not recegnize that they are over doing it. Hundreds may be benefitted where the few are injured. This is what I want to impress on those who read this column, and who are at present taking part in athletic contests, or who may contemplate doing so. I will not in this article go into the various methods of training, or indicate what I consider the best system. What I want to impress upon athletes is, to
busband their strength, develop their muscles in moderation, train so long as they feel they are improving in health, and obsaining greater freedom of movement, but they must come to a stop whenever the least indication is given of ailing powers, or any particular organ gives signs of being prejudicially affected by the unwonted stran. By careful attention to this advice many may be prevented from doing themselves injury.

Mr. O. B. Buncre's remarks on the subject of reading are quite in accord with our views. Hestys that it should never be forgotten tha it is what a man assimilates, not what he reads. that determancs the breadth and quali:y of his culture. All prescribed courses of reading simply cause a great deal of purely perfunctory reading, and perfunctory reading is about as profitable as pouring water into a basket. Let men and women read the books for which they have an affin-ity-the books that take possession of their minds, that stir their sympathies, that awaken their faculties-whether they be books old or new, books of imagination or books of facts. In intellectual pursuits every individual intelligence is a law to itself -and no one can obtain genuine culture of any kind unless he follows the bent of his own nature. "A boy," said Dr. Johnson, "should be turned loose in a library, if it contains no unfit books, and allowed to choose for himself." Very likely taste can be suided a little; and it is well to compare notes as to what is worthy; bus it is only the books that we delight in that do us any real good.

Professor von Ranke, who died at Berlin last month, in the grst year of his age, was born in Thuringia, December 21st, 1795. On March 3Ist, 1585 , he completed the sixtieth year of his own professional career in the University of Berlin. The work that gave him his continental reputation was "The History of the Popes," and this was really a continuation of his "Princes and People of Southern Europe." It appeared in $1 S_{34}$, and the review of it by Lord Macaulay in the Edinburgh would alone have made von Ranke's name familiar to the English-speaking world. The greatest work undertaken by this wonderful German was a history of the world in nine volumes. Of this he had completed only six volumes, but it is understood he has left notes and documents from which at least one more volume can, without difficulty, be compiled. He was a man of great mental power, but some of his works exhibit prejudices, both national and religious, that are hardly consistent with the character of an impartial historian. It is not, we believe, generally known in this country that Dr. von Ranke's wife was an Irish lady, whose maiden name had been Miss Greaves.-Halifax Critic.

## Literature and Science.

THE EXAMINATHONS.
THE HROWSING OF THE SOHIOMORES.
"When the morsing etarg sang together."
Weth., I'll be一 beg your pardon sir ! but see, Ilere by this morning's IIorh, you know. good ged!
Started, plucked, and starred! 'Twas Tristran's singing sped
"A star was my desire,"-ch ? 'Secms to me
He ne'er wore cap and gown. Howeter, we .
As, stars, and garters, too! When the poet said
fer inane micantes, and so forlh-pshaw! my head
Is hadly dezled, muddled terribly !
When it first hit me, it spun me round and round;
Bu:, Lond bless you ! now, sir, I dun't care.
I was metagrabolized, I couldn't act,-
Why, stary fircworks seened to fill the air,
As when my sinciput smote hard the ground,
I' the soller skating tink last summer. Fact!
W. J. M. in the 'I 'arsty.

THE ADVENTURES OFULYSSES.女r CHABLBx LAyb. CHapter It.-(Continued).
But now came a mournful ghost, that late was Agamemnon, son of Atreus, the mighty leader of all the host of Greece and their confederate kings that warred against Troy. He came with the rest to sip a little of the blood at that uncomfortable banquet. Ulysses was moved to compassion to see him among them, and asked him what untimely fate had brought him there, if storms had overwhelmed him coming from Troy, or if he had perished in some muting by his own soldiers at a division of the prey.
"By none of these," he replied, "did I come to my death; but slain at a banquet to which I was invited by Egisthus after my return home. He conspiring with my wife, they laid a scheme for my destruction, training me forth to a banquet as an ox goes to the slaughter, and, there surrounding me, they slew me with all my friends about me.
"Clytemnestra, my wicked wife, forgetling the vows which she swore to me in wedlock, would not lend a hand to close myeyes in death. But nothing is so heaped with impietics as such a weman, who would kill her spouse that married her a maid. When I brought her home to my house a bride, I hoped in my heart that she would be loving to me and my children. Now, her black treacheries have cast a foul aspersion on her whole sex. Blessed husbands will have their loving wives in suspicion for her bad deeds."
"Alas!" said Ulysses, " there seems to be a fatality in your royal house at Atreus, and that they are hated of Jove for their wives. For Helen's sake, your brother Menelau's
wife, what multitudes fell in the wars of 'I'roy!'

Agamemnon replied, "Fur this cause, be not thou thore kind than wise to any woman. Let not thy words express to her at any time all that is in thy mind, keep still sone secrets to thyself. But thou by any bloody contrivancee of thy wife never needst fear to fall. Exceeding wise she is, and 10 her wisdom she has a goodness as emituent; Icarius's daughter, l'enelope the chaste: we left her a young bride when we parted from our wives to go to the wars, with her first child at her breast, the young 'lelemachus, whom you shall see grov'n up to manhood on your return, and he sinall greet his father with befitting welcomes. My Orestes, my dear son, I shall never see again. His mother has deprived his father of the sight of him, and perhaps will slay him as she slew his sire. It is now no world to trust a woman in. But what says fame? is my son yet alive? lives he in Orchomen, or in Pylus, or is he a resident in Sparta, in his uncle's court? As yet, I see, divine Orestes is not here with me."

To this Ulysses replied that he had received no certain tidings where Orestes abode, only some uncertain rumours which he could not report for truth.

While they held this sad conference, with kind tears striving to render unkind fortunes more palatable, the soul of great Achilles joined them. "What desperate adventure has brought Ulysses to these regions," said Achilles; " to see the end of dead men, and their foolish shades ?"

Ulysses answered him that he had come to consult Tiresias respecting his voyage home. "But thou, O son of Thetis," said he, "why dost thou disparage the state of the dead? seeing that as alive thou didst surpass all men in glory, thou must needs retain thy pre-cminence here below: so great Achilles triumphs over death."

But Achilles made reply that he had much rather be a peasant-slave upon the earth than reign over all the dead. So much did the inactivity and slothful condition of that state displease his unquenchable and restless spirit. Only he inquired of Ulysses if his father Peleus ware living, and how his son Neoptolemus conducted himself.

Of Peleus Ulysses could tell him nothing; but of Neoptolemus he thus oore witness : "Firom Scyros I convoyed your son by sea to the Greeks : where I can speak of him, for I knew him. He was chief in council, and in the field. When any question was proposed, so quick was his conceit in the forward apprehension of any case, that he ever spoke first, and was heard with more attention than the older heads. Only myself and aged Nestor could compare wilh him in giving advice. In battle I cannot speak his praise, unless I could count all that fell by his sword. I will only mention one instance of his manhood. When we sat hid within the
wooden horse, in the ambush which deceived the Trojans to their destruction, I, who had the management of that stratagem, still shifted ing place from side to side to note the behaviour of our men. In some I marked their hearts trembling, through all the pains which they took to appear valiant, and in others tears, that in spite of manly courage would gush forth. And to say truth, it was an adventure of high enterprise, and as perilous a stake as was ever played in war's game. llut in him I could not observe the least sign of weakness, no tears nor tremblings, but his hand still on his good sword, and ever litging me to set open the machine and let us out before the time was come for doing it: and when we sallied out he was still first in that fierce destruction and bloody midnight desolation of king I'riam's city."

This made the scul of Achilles to tread a swifter pace, with high-raised feet, as he vanished away, for the joy which he took in his son being applauded by Ulysses.

A sad shade stalked by, which Ul;'sses knew to be the ghost of Ajax, his opponent, when living, in that famous dispute about the right of succeeding to the arms of the deceased Achilles. They being adjudged by the Greeks to Ulysses, as the prize of wis. dom above bedily strength, the noble Ajax in despite went mad, and slew himself. The sight of his rival turned to a shade by his dispute so subdued the passion of emulation in Ulysses that for his sake he wished that iudgment in that controversy had been given against himself, rather than so illustrious a chief should have perished for the desire of those arms which his prowess (second only to Achilles in fight) so eminently had deserved. "Ajax," he cried, "all the Greeks mourn for thee as much as they lamented for Achilles. Le: not thy wrath burn forever, great son of Telamon. Ulysses seeks peace with thee, and will make any atonement to thee that can appease thy hurt spirit." But the shade stalked on, and would not exchange a word with Ulysses, though he prayed it with many tears and many earnest entreaties. "He might have spoke to me," said Ulysses, " since I spoke to him ; but I see the resentments of the dead are eternal."

Then Ulysses saw a throne on which was placed a judge distributing sentence. He that sat on the throne was Minos, and he was dealing out just judgment to the dead. He it is that assigns them their place in bliss or woe.

Then came by a thundering ghost, the large-linbed Orion, the mighty hunter, who was hunting there the ghosts of the beasts which he had slaughtered in desert hills upon the earth. For the dead delight in the occupations which pleased them in the time of their living upon the earth.

There was Tityus suffering eternal pains. Two vultures sat perpetually preying upon his liver with their crooked beaks; which as
fast as they devoured, is forever renewed; nor can he fray them away with his great hands.

There was Tantalus, plagued for his great sing, standing up to his chin in water, which he can never taste, but still as he bows his head, thinking to quench his burning thirst instead of water he licks up unsavoury dust. All fruits pleasant to the sight, and of delicious flavour, hang in ripe clusters about his head, seeming as though they offered themselves to be plucked by him; but when he reaches out his hand, some wind carries them far out of his sight into the clouds : so he is staried in the midst of plenty by the nghtcous doom of Jove, in memory of that inhuman banquet at wnich the sun turned pale, when the unnatural father served up the limbs of his little son in a dish, as meat for his divine guests.
There was Sisyphus, that sees no end to his labours. His punishment is, to be forever rolling up a vast stone to the top of a mountain, which, when it gets to the top, falls down with a crushing weight, and all his work is to be begun again. He was bathed all over in sweat, that reeked out a smoke which covered his head like a mist. His crime had been the revealing of state secrets.

There Ul-sses saw Hercules-not that Hercules who enjoys immortal life in heaven among the gods, and is married to Hebe or Youth ; but his shadow, which remains below. About him the dead flocked as thick as bats, hovering around, and cuffing at his head : he stands with his dreadful bow, ever in the act to shoot.

There also might Ulysses have seen and spoken with the shades of Theseus, and Pirithous, and the old heroes; but he had conversed enough with horrors; therefore, covering his face with his hands, that he might see no more spectres, he resumed his seat in his ship, and pushed off. The bark moved of izself without the help of any oar, and soon brought him out of the regions of death into the cheerful quarters of the living, and to the island of sexa, whence he had set forth.

## HOW I WAS EDUCATED.

The editor of The Forum has thought that a series of papers, in which different people shall describe the methods of their school education, may be at least amusing, and perhaps profitable, if only by way of caution. He has, therefore, induced a good many men to pose on his platform as "awful warnings," and, as it happens in the story of the Indian march, he selects a little elephant to lead the risky way down into the river. I anticipate so much pleasure from reading the revelations of those who come after me, that I have promised to be as frank as Rousseau pretended to be, and much more than he was,
in telling' my story. "Story-God bless you, I have none to tell."
Really, I am selected as pioneer in this march because there was nothing exceptional in my school or college course. It was just like that of thousands of other men of the last fifty years. I never was sent to Germany to study. I never played with an abacus. Inever sat at the feet of any Fellenberg. I did see Mr. Alcott's amusing schools, but only as a base Philistine, who went in to scoff and came away to report transcendental vagaries. The everyday education of a boy iorn with good health, of good parents, in New England, sixty odd years ago-this is what the reader has to follow, and what came of it.
I had the great good luck to be born in the middle of a large family. What saith the Vulgate? "Da mihi nee primum esse nec ultimum." Is that the text ? My Vulgate is in too small type to consult, and the passage will be hard to find, but when found will be well worth noting. I lived with three brothers and three sisters; I was the fourth, counting each way; and I should advise anybody, who is consulted in such matters, to select that place in the family economy. And all well-meaning parents would do well could they arrange to give that place to each of the nine or thirteen children. A large family and a good place in it: that is the thing to be very grateful for.
While you are planning, also, you might to advantage put in absolutely sound health; a good vigorous constitution. For a boy or young man, particularly, put in a digestion which, as Dr. Holmes says, does not shrink from hot gingerbread just before dinner; that is an excellent marching companion. I will thercfore suggest that also for people who are asking the fairies for good gifts to their children.

The fourth child will be apt to wish to go to school when the three older children go. The mother will not object if the school be unscientific, happy-go-lucky, and simply a place where a good-natured girl of twenty keeps thirty children reasonably happy for three hours in the morning and two in the afternoon. To such a school, miscalled a dame school by writers now, I went or was led, willingly enough, for four years. I remember four realitics there. One was the flickering of motes of dust in the sunbeams, when the shutters were closed-curtains there were none in those primeval days. My observations then have assisted me in following out Mr. Tyndall's since. One was the method of making sand-pies on the floor. One was the first page of the New York Primer-and I wish I had the book now. The fourth was sitting in a yellow chair in the middle of the school-room, reading an interesting book. I was quite absorbed in the book when Abel Fullum came for me. Abel Fullum was the "hired man," who was
:hen, in $18: 0$, in my father's employ, and who now, in $18: 6$, kindly oversees my daily dusies, lesi 1 should go far astray. He accompanied us to and from school four times a day, the distance being too great for inexperienced fect. "Doctor," sald Jullum to me, when we were well in the street, "what-ure-been duin' that was naughty?" I said 1 had done nothing wrong. But Liullum assured me I had, and that no one ever was placed in that yellow chair who had not been naughty. This ! then remembered to be true. But it had not crossed my mind before. Nor do 1 now know, nor have I ever known, from that time to this, why 1 was thus punished. I did not then know, but by accident, that I was punished. It is not the only time, I believe, when I have wounded my friends without meaning to and without knowing it, and have borne their wrath with equanimity frow sheer ignorance that they were displeased, for which I now apologize to them. And I mention the anecdote by way of suggesting to teachers that it is well for them to tell chuldren why they punish them, if, by good luck, they know themselves.
From this school I went at five to another school kept by a man. I went because it seemed best that I should go to a man's school, not because I had learned all that Miss Susan Whitney knew. Sweet saint, she died, honoured of all men, not long since, and now is in a world where they do not need to learn or teach the letters. By great good fortune, a young man whom I will cail Simple had come to town after graduating at the college where a friend of my father was clucated. This friend had a son named Edward, who was a crony of mine at the dame school. His father had Simple to take care of, and Simple had opened a boys' school. To this school my friend and I were sent, he a few days before me. I wondered, in my boyhood, why my father, who was the most sensible man I ever kr: w-indeed the only thoroughly sensible man I ever heard of except Bea. Franklin and two other men who shall not be named here now-why, I say, he sent me to Simple's school. But I found out, long since. He had tried other schools for my older brother. He knew the tomfoolery of the Lancastrian system then in vogue, and the kindred tomfoolery of the martinet systems, much in vogue since. Having found Simple, he found what be wanted-a good-natured, innocent fellow, who would neither set the bay on fire nor want to, who could and would keep us out of mischief for five or six hours a day, and would never send us home mad with rage, or injustice, or ambition. A feather-pillow sort of man Simple was. I have been surry to know since that his last days were not comfortable. For I owed him much, that he never nagged me, nor drove me, never punished me but once, and then I was probably in the
wrong, though again 1 do not know, "no more nor the dead," as the vernacular says, what I was punished for. P'ossibly I gained under his care a happy scorn and contempt for all the mechanism of schools, which I have kept until this day. Sometimes he would be "tardy" himself. I remember marshalling all the boys in their seas, and having one class out to recite, so that 1 might shame him when he came after dinner. But it made little difference whether he were there or no. I owe him one thing, that he or my older brother taught me "vulgar fractions" well, so that I have ever since been fond of mathematics. That same brother used to say, what I think is true, that when any one say's he is not "fond of mathematics," he means that he was not properly taught vulgar fractions and the rule of three. For the rest, I was put on my latin paradignss when I was six years old, and learned them reasonably well. We limped through a Latin version of Robinson Crusoe when I was cight years old. But I knew nothing of the Latin language, as a language, till I went to the Boston Latin School.

I cannot remember the time when I could not read as well as I can now. This is saying very little, if I may judge from what the teachers of Elocution tell me, who call on me every now and then, asking permission to improve my cacology. But I now read well enough to understand the simpler parts of the Bible, and such passages of the newspapers as are meant to be intellygble. And, to answer the question of The Fortu", "what came " of my education of the first seven or eight years, I should say that this ability to read was one thing, a thorough fondness of arithmetic was another, a decided indifference to school-rank, as something of no great consequence, was another. I had, all along, a very decided feeling that I comprehended the postion as well as the master did, and that it was as fitting that he should consult me, as I him. But I do not think that this was any pecultarity of mine. It belongs to what the orthodox call the depravity of human nature, what Artemus Ward calls " absolute cussedness,' and what Dr. Channing calls man's consciousness of the Divinity within him.

I was nine years old when I was transterred to a public school. And if anybody is reading this gossip for my advice, it would be simply this: If you are an American, send your boy to a public school. When I sometimes meet an American who does not seem to me to understand his own country, because he does not understand his own countrymen, I always suspect that he never had the great prowilege of assoctating with the other boys of his town and his time at a public school. Uf course, this advice is wholly ditierent from the advice which the same words would give in England. The public school there is a school of one
social class, as most private schools are with us.

The school I was sent to was the Lafin School of Boston, the oldest school in America. It was the school of Ben. Frank. lin, of both Adamses, of John Hancock, and in later times of Everett, of Sumner, and Wendall Phillips. We are all proud of it in Boston. In my day it was under the adinirable care of Mr. Dillaway, the same who is well known to teachers by his good editions of Latin text-books.

I came home from this school at the end of the first month, with a report which showed that I was ninth in a class of fifteen. That is about the average rank which 1 generally had. I showed it to my mother, because I had to. I thought she would not like it, To my great su:prise and telief, she said it was a very good report. I said 1 thought she would be displeased because I was so low in the class. "Oh," she said," that is nomatter. Probably the other boys are brighter than you. God made them so, and you cannot help that. But the report says you are among the boys who behave well. That you can see to, and that is all I care about." The truth was, that at the end of the report there was a sort of sub-report of "Rank as regards conduct alone," as if conduct alone were not the most important affiair in carth or heaven.
It was spoken of as an insignificant ard mean affair, somewhat as the orthodox pulpit used to speak of " merc morals," ac if mere morals were some low trade a man engaged in. The boys never cared for this " conduct alone" report, nor the masters, as far as I saw. But if my people did at home, that was enough for me. And from that moment, till I left college, I was comfortably indifferent as to school-rank or college-rank, regarling which, as has been said, I had formed my own opinion before.
I had four useful years at that school. I was growing fast, physically, and I remember two summers when I was taken out of school, and read the books at home. That is an excellent plan, when a boy is growing fast. He soon finds out that he can do twice as much in the same time at home as he ever does at school. But it would be a very poor plan to have him at home so much that he did not know "the other fellows." I remember where I sat at school, and how the room seemed glorified to me, when, after I had been studying Latin three years, a gentleman named Streeter explained to me what was meant by certain verbs "governing" the accusative and genitive. It had never oc curred to Simple that it was of any consequence that I should know what this meant. Francis Gardner taught me Greek from the beginning. He was, in Bostōn, a distinguished man for nearly fifty years. It is a privilege to have learned Greek with such a
man. I know it better than I know Latin now, and this is partly because he laught me. But it is, I suppose, an casier language.

In the years between 1832 and 1852 the real system of instruction by popular lectures was at its best in New England. The present system of entertainment by lectures is wholly diffeient. As boys, we learned a great deal at evening lectures, and spent our evenings in winter very profitably. I see no such opportunities now, and I fancy that bright boys now learn from books, what we learned from men.

I was at Harvard College from 1835 to 1839. The men whose names are still well known among my teachers there, were Sparks, both Wares, Palfrey, Channing, Longfellow, Pierce, Felton, Lovering, Bowen, Mason, Dana, Bache, and, older than any of the rest of them, dear old Francis Salet. Josiah Quincy was President. A philologist did the Latin, and made us hate it, and we should have hated him too, had we not thought of the possibilties of human nature and that, deep hid in him, there must be something divine. Among them all, I detested Greek and Latin, when we left them at the end of the junior year, and I should never have read a word of either since, if I could help it, but that I had to teach them. Then I regained the natural love of them; " of which," as my great Master says, "in its place."

The Channing spoken of above, was Edward Tyrrel Channing, and I wish the exigencies of The Forum would permit me to use fifty of its pages in expression of gratitude to this gentleman, and in such explanation as I could give of the skill by which he interested us in the study of English, and irained us to the use of this noblest language yet knuwn. I am told that, now, nobody will look over students themes if he can help it, that it is a sort of drudgery from which a man escapes to some duty considered higher in grade. Ah me: There are hundreds of us still knucking about who are grateful to him that he did not think so. And if the dear public thinks that Clarke, Hoimes, Dana, Stury, Lowell, Higginson, Frothingham, Child, and Parkman write good English, let them be grateful to dear "Ned Channing," who taught them how.
The classical men made us hate Latin and Greek, but the mathomaticai men (such men: Pierce and Lovering ${ }^{\prime}$ ) made us love mathematics, and we shall always be grateful to them.

We gained a great deal from Longfellow. He came to Cambridge in our first year. He was not so much older than we as to be distant, was always accessible, friendly, and sympathetic. All poor teachers let "the book "come between them and the pupil. Great teachers never do; Longfellow never did. When the government acted like foole, as governments do sometimes, he always
smoothed us down, and, in general, kept us in good temper. We used to call him "the Head," which meant, head of the slodern Language Department. One could then pick up a decent, ready knowledge of the modern languages in the course of the four years. No effort way made to speak or iwrite them, and this, I think, was wise.
But the good of a college is not in the things which it teaches. I believe the "New Education" thinks it is, but that is the mistake of the New Education. The good of a college is to be had from "the fellows" who are there, and your associations with them. With a small circle of admirable friends, of whom this world is by no means worthy, and to a less degree in the various clubs, even in the much abused debating societies, I picked up a set of habits and facilities for doing things one has to do, for which I am very grateful to Harvard College. I disliked the drudgery of college life, through and through. I counted the days to the next vacation from the beginning of every term, and there were then, alas, three terms in every year. But, none the less, I ought to say, that I do not believe that any life outside of a college has been yet found that will in general do so much for a man in helping him for this business of living. I could get more information out of "Chambers's Encyclopxdia," which you can buy for ten dollars, than any man will acquire, as facts, by spending four yez's in any college. But the business of charging a boy into a man, or, if you please, changing an unlicked cub into a well-trained gentleman, is, on the whole, more simply and certainly done in a good colleqe than anywhere else. So, as Nestor says, "t seems to me."
This record of three schools and a college, which, because I have been asked, I have attempted, is not the record of my education. 1 owe my education chiefly to my father, my mother, and my older brother-none of whom are now living. My father always took it for granted that his children were interested in what was worthy of interest, and, if he were engaged in $t$, he made us partakers of his life. He introduced the railway system into New England. When I was eleven years old, I held his horse on the salt marshes oy Charles River while he was studying routes, grades and distances. He would come back to his "chaise" and explain to me the plans and the necessities, as if I had been his equal. I doubt if I were twelve years old when he gave me a scrap of French, in the "Journal des Debats," about excavations in Assyria, and asked me to translate it for his newspaper. He intrusted all of us with delicate and difficult commissions, while we ranked as boys. He gave us his entire confidence, and never withdrew it. I remember coming to hum in a rage at some absurdity of a little man to whom the college had given some authority. I wanted to
leave the college and be done with the whole crew of them. My father showed me at once that he had more respect for my judg. ment than for that of my oppressor ; that in human life we have all to deal with inferior men, and must not quarrel with that neces. sity ; and sent me back to my drudgery well satisfied because I could not lose his regard. He made me a man by treating me as a man should be treated. I am sure that fathers cannot over-estimate the value of such direc. tion of the education of their sons.

My older brother was at an early age an accomplisted mathematician, and afterward a wonderfully well :ead man; indeed a person of very wide accomplishments, as of a most kindly and affectionate nature. We were forcver together, in boyhood and in college. I learned very little where he did not go before me and show me the way. And this I should liko to say to any puzzled teacher: if you have ever a pupil to whom you cannot explain some mystery of arithmetic, bid an older boy, on whom you can rely, take the little fellow into another room, where they can work it out together. It will be made plain.

After I left college I was an usher in the Latin School, then under the admirable lead of Mr. Dixwell. I was a ieacher of Latin and Greek there for two years. As I have said, the natural fondness for language then came back on me, in teaching the two languages to amiable and bright boys. To some of those boys, therefore, I owe all the pleasure which I have ever since derived from Latin and Greek literature-not to my college teachers, who made me hate the languages.

To sum up: my experience with schools and with the college teaches me to distrust all the mechanism of education. One comes back to Mr. Emerson's word, "It is little matter what you learn, the question is with whom you learn." There are teachers to whom 1 am profoundly and eternally indebted. Of all those with whom I have ever had to do, I owe the most to my father, my mether, and my older brother.-Eaiward $E$. Hale, in The Forum.

In a leading German review, the Unsere Zeit of September, occurs the following remark from a competent observer:-"A large head and a small head indicate differences in temperament. The former usually possesses a cold, the latter a fiery temperament. . . . If we could.magine two persons whose body was exactly alike, but one with a larger, the other with a sinaller skull, the pressure of the blood would be very unequal in the two-moderate in the larger, stronger in the smalfer head. It is self-evident that the greater pressure of the blood would have an exciting infuence on brain and soul." (! ?)

## Educational Opinion.

## " NOLI IIE TANGERE."

"Toucu me, if you dare," is a very good translation. The boy walks into his schoolroom with a chip on his shoulder, and challenges the teacher to knock it off. 0 course the pupils admire this jouthful hero, and the teacher must either submit to his insolence, or run the risk of a reprimand by the Board, if she touclies the chip which is the young man's property. "The person of the pupil is sacred," and the switch which our fathers thought an excellent remedy for some of the evils to which youthful flesh is heir, is now considered "a relic of barbarism." But there is another side to this picture.

Provided the school house stands in the neighbourhood of a church, and the church windows are broken, or the fence whittled and defaced, then it is a very different story indeed; but stll the poor teacher is blamed. This time it is because " she don't keep the young vandals under control." The old Israclites, forced to make brick without straw, had an casy task compared with the teacher of to-day who is expected to keep fifty children in good order without a particle of authority to back her.
What are you going to do about it? You can answer that question, Mr. Director. I am rot able to. In fact, the teacher is largely in your power. A director once said to a teacher just before the contract was signed, "WVe expect you will govern your school. The school is not a luxury, but an expensive necessity. Obedience is absolutely necessary to its success. Be firm, reasonable and judicious, and you can depend upon our hearty support; but when you find you cannot govern the school we hope you will resign. This community cannot afford the example of disobedience and disorder in their school."
There was no disturbance in that school no cases of whipping, and the teacher, feel ing that she had the support of those who employed her, exacted prompt obedience. But the Directors felt that they had the influence of the whole community to sustain them ; that the whipping of an idle, disobe. dient boy would not occasion a lawsuit, and that it would not be necessary for them to meet in solemn conclave and reprimand the teacher because she laid hands suddenly upon some lawless lad.
I do not wish to appear as an advocate of whipping (I avoid the term " corporal punishment" as too indetinite), but about the first thing to be taught in juverile theology is the doctrine that "there is a God in Isracl." Many an unruly boy is sultering in the formation of his character, because the faculty that our fathers so well understood, of putting the whip " where it would do the most good" is becoming "one of the lost arts."-Intellagence.

## TORONTO:

THURSDAY, JULY $29,1886$.

## INDUSTRIAL EDUCATION IN SCHOOLS.

The introduction of industrial education into schools has many upholders, and some of those who advocate it, appear to believe that it would be advantageous to substitute it, in part, for the general train. ing which is now customarily given in the ordinary course of higher education. This we firmly believe to be a mistaken notion, in fact, a pernicious one. Manual training should be used merely as an adjunct and come after the common school to afford to those who may expect to be engaged in trades and factories, technical knowledge and manual prowess. 1)r. W. 'T. Harris, writing on this subject in Education, says "this is the age of the newspaper and democracy: The most important of all knowledge is the knowledge of the arts of intercommunication, the language studies, reading and writing, and the knowledge through the use of these, of the most enlightened public opinion of our civilization, especially in its echical and religtous aspects. Next comes the knowledge of science as the instrument of human freedom-freedom in two directions: physical freedom over nature by the application of intelligence to the mastery of force and matter; spiritual freedom through the insight that science gives into the necessity of the institutions of civilization, and the duty of each and all to support the established order while he endeavours to perfect it by reforms, and not by revolution. Thirdly and lastly, comes knowledge of the special knacks useful in one's vocation-though last yet not by any means of sligh: importance.
" Education must relate first to cituzen-ship-the production of the human being that can live peaceably in our civilization and combine civilly with his fellow-men; secondly, to the intellectual mastery of the scientific view of the world; thirdly, to the mastery of the technical matters that go to making a living. This is the accepted doctrine consciously or unconsciously of all our people. No parent would prefer that his children should know how to work skilfully in preference to knowing how to behave morally, and hew to act according to the accepted code
of manners, to say nothing of knowing the religious theory of the universe as the ultimate form of all phases of human life. Nor would he place a knowledge of science before morality, and such behav. iour as the conventionalitics of social life demand as essential for social co-operation and for life in the community. These qualifications are obviously indispensable, and their want insures the necessity of imposing the restraints of prison bars or of resorting to social ostracism.
"What is true of education in this most general form is true of the school. The school is established to re-enforce the education incidental to the institutions of civilization, family, civil society, state, church. In the school, as in the com. munity, we must place the first stress on those studies and disciplines that concern the individual as destined for life in intercommunication and co-operation with his fellow-men. Hence, he must learn intercommunication by means of languagewritten and printed and oral ; the must be disciplined in the matters of behaviour towards those in authority and towards equals. He must learn to know human nature, and the general revelation of this is to be found in literature and nowhere else. His school readers answer, as nothing else could, to give him this knowledge or at least to set him on the road to it.
" No matter how important these three R's ma;' seem, however, it is not necessary to slight the other matters. Science should come in for its share in the curriculum in the common school. One lesson a week, if it is made an hour long, will take the child over the rudiments of all the sciences and give him possession of the point of view which they hold towards the world, for the outline of these sciences sets in the foreground the net results and general outcome ; besides this, the rudiments contain the tect nical terms-the language in which science expresses itself-and by learning this, the pupil is able to avail him. self of the scraps of science which are constantly set before him in the periodical literature which he sees every day of his life. In addition to elementary oral lessons in natural science and general history, there is also room in the commonschool curriculum for lessons in mechanism and the useful arts. But these lessons must not be daily lessons any more than the lessons in science and history. Science. if taught in daily lessons, would do more
harm than good in the primary and grammar schools. If taught in the lessons of more than usual length and only once per week, the exercise will constantly react favourably on the regular lessons, causing the teacher to teach with more skill the ordinary branches of instruction. So, too, the lessons in the arts should be given only once a week, also in all cases by a special teacher; and in a separate shop for the saike of association. Transition from one subject to another is facilitated by change of place; the associations being broken, the mind is able to take up something new without a strong tendency to drift back into habitual channels of thought not pertinent to the matter in hand."
"What arts can be taught in the industrial appendix to the school? Certainly all arts most useful and most required. The manual training school has accomplished a great result in the way of reducing the wood and meial trades to a teachable shape. A general discipline prepares the youth for the manipulations necessary in the majority of the artisan trades. Twentycight in one thousiand in the entire population, or eight in every hundred of thuse who work for the production of gain, need to learn how to manipulate wood and the metals. Over-production of specialists in any particular direction of industry must be carefully avoided as much as over-production of goods for the market. To educate all children in specialies that require only eight per cent. of them in after life is to prepare nincty per cent. for discontented workmen. The groatest and most rapid progress in machinery lies in the direction of the wood and iron tades. Hence, the danger of oversupply in the wood and iron market is greater than in the other directions. This only means that care should be taken not to get too many into shops of the manual training school order."

First amoug the disciplines fitting for manipulation comes drawing. This is so important that it ought to have a place in all common schools and through all grades. Its chief value is first æsthetic, and secondly, a training of the hand and eye. If we but think of it,-is not machinery and mechanic invention continually operating to push out labourers from their vocation? In any one department of industry there are less and less workmen needed, because of the aid furnished by steam and machinery. From all the trades that minister to the imperative wants,
food, clothing and shelter, workmen are driven out to find new vocations in the realm of protection, culture, and luxury. New vocations continually arise in the following four departments: "

1. "Luxury and creature comfort."
2. "Protection, including government officers and employees, and the officials managing public works, the medical profession and the care for public health, as well as the management of charities, public and private."
3. "The means of as. dsement and recreation."
4. "The instrumentalities of culture, moral, intellectual and resthetic, including rhe occupations that produce works of art and ornament, and that cultivate tastes, the pursuit of science and the discovery of inventions, the profession of literature and the collection and diffusion of information, as well as religious teaching."
"The producers of ornamented goods of the highest quality will never be thrown out of employment on account of overproduction. While Sweden was teaching mere carpentry in its schools. and neglecting drawing and the study of resthetic form, it, together with Norway, exported to ti. . United States (in 1881) wais $\$ 137$ of wooden manufactures, counting all kinds; while in the same year Sweden and Norway sent us $\$ 39,090$ worth of rags!"
"A course of ten lessons in cookery, requiring a set of pupils to devote one half.day each week for ten weeks, benefits the entire population. Every woman shouid understand enough to cook properly plain, wholesome food herself, and to teach others how to do it. The ignorant mistress of a house is at the mercy of unskilled domestics bccause she does not know how to educate them."
"Why should there not be special instruction given in the country schools, say once a week or once a fortnight, in the principles that lie at the basis of good farming? I believe that the agricultural schools could work a miracle if they established an empirical course of three weeks each year, in which farmer boys (and men, too) were to come to the school and bring with them a small box of soil from some one of their fields for analysis and discussion."
"At least one school in each city should be open to pupils for special instruction on the subject of textile fabrics
(including a study of material and me. chanical process). Another school couid be devoted to ihe study of leather produc. tion, structure and manufacture. . . school for the manager ent and care of domestic animals, and espenially of the horse, would be useful."
"But only one half-day per week should be spared from the common school for these and all other specialties. And one half-day would certainly be enough. It is all-important, from a pedagogical standpoint, to arrange the branches for . Iformamation and practical skill so that they do not interfere with the discipline studies which are of an abstract, severe character"

## OUR EICHANGES.

Sf. Nicholas for July is, as usual, replete with superb illustrations and good things for the young folks. "Fij-Fishing for Trout" affords many hints of value. "The Jack-in-the-Pulpit" yarns are amusingly odd. The tale of " I.ike Lord Fauntleroy ;" "The Kelp Gatherers," "The Letter and Riddle Boxes," are all good for summer reading. Other altractions, including poems, make up a chatming numbe:. New York : The Century Co., $\$ 3.00$ : year.
The Allaritic Monthly for August is at hand with fresh instalmerts of the serials: "The Golden Justice," hy W. II. Bishop; "The Princess Casa. massima," by Henry James, and "In the Clouds," by Charles Eghert Craddock. David Dodge furnishes an economic study of the South durng the revolution periad. Of the miscellaneous papers that on "The Benefi's of Superstition," by Agnes Repellier, and on • andividual Continuity," by Andrew Hedl.ooke, will be read with interest "Six Visions of St. Augustine, ' by Octave 'I hanet, are six letters written to a lady in the North de. scriptive of life in the "city" of St. Augustine, Floida, by writer residents there. After all, no foreigner can approach the Yankee writer in touch. ing up the conditions and shallowness of life in his own land. The always delightful Contributor's Club contains skits upon such topics as "The Slipperiness of Certain Words," " Human Nature in Chickens," "Can Tunes be Inherited ?" etc. Sarah Orne Jewelt has a fascinating short story called "The Two Browns." "The Indian Ques. tion in Arizona " is discussed by Rubert h. Evans. The reviews for the month ... of Bunner's "The Midge," Eleanor Puunam's "Old Salem," and "The Life and Letters of Joel Barlow, LL. D." The poctryis by San.uel V.Cule, Edith M. Thomas, Caroline Wilder Fellowes, and Charles Gayley. (Houghton, Mimin \& Co., Boston and New York.)

## REVIEIVS AND NOTICES OF BOOKS.

Studies in General Ristors. By Mary D. Sheldon. formerly Professor of History in Wellesley College, and Teacher of History in Oswego Normal School, N.Y. Boston: 1). C. Heath \& Co.
This is a ne text-book with the object of affording a col tion of historic matter which
may le deale with lirst hand, as the pupil deals with the actual substance in Chemistry, the living plant in Butany, the fenuine text in Literature, thus atimulating not only memery, but o'servation, judguent and genesalization. Such criginal matter or materal, which may be described as maps, pictures, bicgraphics, peems, lists of : aportane evems, including constitutions, crecis, laws, and chronicles, ate not only difficult to find, but when found are inaceessible to any number of pupils, besides being hulky in many instances and difficule to decipher, sequiring much time to guther and select their really important and useful portoons. To select these portions and phace them within reach of the class-room, is one nim of this work: the other is, to frame such questions as will develope the historic infumation afforded hy these materials, and at the same tine stimulate the sudent to deal with social and prolticat problems for hmmself. It is a losk to be studicd, net merely real.

Tint: autnor of the popular ouizism and //s Kicy has written a similar look of odd questions and answers, calle.' "Handy Helps," to be published in Alag:3t by E. I.. Kellogs \& Co., of New Surk.
" School. Devices" is the name of a new look to be ready in sugust, by E. R. Shaw and Welb Donnell, of Yonkers, N.I: The object is to aflord practical assistance to teachers who wish to keep their work from degenerating into mere rouline by giving them in convenient form for constant use at the desk, a multitule of new ways to present old trulis.
A vekr neat 72 pp. catalogue of Books for Teachers has just been issued by E. L. Kellogg \& Co., of 25 Clinton Place, Ni.Y. It centains a list of 250 that are recognized as having practical value. Each book is classificd, described, and indexed by author, sulject, and title. To each is given the special teachers' price and postage. Nany of the more important have contents given. Under the department of Principhes of Education nineteen looks are described; Methods of Teaching has fifty-one; School Management, seven; Primaty Education, ten ; Kindergarten Education, fousteen, ctc. It has also a short introduction on the selection of books. The printing and paper is very excellent, the cover being in two colours. Sent for 4 c . in stamps.

## BOOKS RECEIVED.

The Canadian Congregatsonal Year Book for 8885.6 . Edited by the Rev. W. H. Warriner, B.D. Toronto: Congregational Publishing Co.
Rasselas, Prime of Abyssinia. By Samuel John. son, LL.D. Fidited, with notes, fer schools. Boston: Ginn \& Co.
Six Weeks' Preparation for Reading Cosar. Adapted to Allen $\&$ Greenough's, Gilderslecve's, and Harkness's Grammars. By Jas. Moris Whiton, Ph.D. Boston : Ginn \& Co.
The Symthetic Philosophy of Expression, as Applied to the Arts of Reading, Oratory and Persona. tion. By Moses True Brown, M. A., Principal of the Boston School of Oratory, and Professor of Oratory at Tufl's College. Brston and New Yotk. Houghton, Mifflin \& Co. Toronto: Williamson \& Co. $\$ 2.00$.

## Special Papers.

THE SECRET OF GOOD DISCTPLINE.
The secret of good discipline lies in adap. tation of forces to the nature of the child. Consideration of peculiarities must be made even in very young children. Seldom two children can be governed in the same way; and it is a duty of parents to study their individualit:es, otherwise there is ne discipline, but the care given aggravates evil tendencies in them. There can be no doubt that much of the naughtiness in childrea is unintentionally taught or developed in them. When grown people are so far from perfect, it seems unfair that every apparent fault of the child should be made so much of; and many times what seems wrong in a child is only a natural act under exciting conditions, and if we take time to examine the matter we shall be more just. ha: stice and weakness in parents make sad savoc with children's characters. There is a strong latent force in children which we must strive to control; we cannot change its nature, but by strength and patience, and thoughtfulaess we may guide it.
Over discipline is as injurious as the lack of discipline. It may be worse, for if a child is let alone, there is a chance for a natural development of good; but if a child is continually prodded with rules and directions, it may grow rebellious, its obstinacy is aroused, and its finer feclings are blunted. Many a time by forbidding we create a desire; as we invite falschood by prohibiting something that the child will de thoughtlessly, and can only refrain from doing by constant self-control ; and often the thing forbidden is of little consequence compared with the train of evils its prohibition introduces. When the child has disobeyed it is punished ; the next time it disobeys it naturally tells a falsehcod to avoid punishment. Children are morally and physically cowards, and the greatest care is necessary to prevent this weakness from becoming a large elemen: in their character.
A thoughtless, wrong act is not so bad as wiliul disobedience. We may give a child many opportunities to do wrong in the thoughtess way. It docs not follow that because a mother slips over many of the small misdemeanours in a child's life that she is without law or order. The strengith of her influence is needed for the more important occasions. Let a child revolve in its own orbit ; when it is out of order replace it with as little disturbance as possible. It will live its own life in spite of everything, and it is the duty of the parents to see that the conditions sursounding it are conducive to a healthy and pure growth, and that the family traits it has undoubtedly inherited be eradicated by every means nossible.-Rose Dallon in Good Housckcçing.

## the second class algebra PAPER.

To the Editor of the Euecational Waenly.
Sif,-As the Second Class Algebra Paper set at the recent examination of teachers ${ }^{3}$, f provoked a good deal of comment, it ray interest your readers to see Mr. Glashan's solutions of the questions, with some notes which he his added.

The paper has been called "cranky." Nathing can be more absolutely opposed to the tauth than such a statement. The ninth question is an exercise, in which there is nothing peculiar, in the formation of equations; the others, without exception, are applications of the broadest principles of Elementary Algebra.
When the paper was handed in to me as Chairman of the Central Committec, it did not strike me as being too difficult. Nor do I yet think it too difficul: for Second Class teachers, prepared as they ought to be. But I admit that I was wrong in supposing that it was suitable for he candidates coming up for examination. It has, in fact, been found to be above the mark of the great majority of them. I need not say how much I regret this error of judgment on my part ; and I shall do what I now can to prevent any candidate from being injuriously affected thereby. I am, sir, your obedient setvant,

George Paxton Young.
Tononto, 21st Julj, $1 S 86$.

## MIDSUMNEK EXAMIINATIONS, ISS6.

SECOND Claiss teachers.

## ALGERRA.

Examizey.-J. C. Glashais.

1. Divide $x^{z^{n}}+1$ by $x^{2^{n-1}} \div 1$.
2. Simplify $1 \div \frac{z}{x \div y-=}+\frac{y}{z \div x-y}$

$$
+\frac{x}{y+=-x}
$$

3. Resolve into linear factors:
(a) $a(b+c)\left(c^{2}+c^{2}-a^{2}\right)+b(c+a)\left(c^{2}+a^{2}-b^{2}\right)$ $+<(a \div b)\left(a^{2} \div b^{2}-c^{2}\right)$.
(b) $\left(a^{2}-b^{2}\right) c^{2}+\left(b^{4}-c^{4}\right) a^{2}+\left(c^{4}-a^{2}\right) b^{2}$.
4. If

$$
\frac{2 x-y}{2 x+b}=\frac{2 y-}{2 \dot{c}+c}=\frac{2 z-x}{26+a}
$$

show that

$$
\underset{x+y+3+3}{x+y+}=\frac{41 a+3 s b+4 \pi}{21(a+b+c)}
$$

5. Irove that if $x^{2}-\boldsymbol{q} x+r$ have a square factor then will

$$
\left(\frac{9}{5}\right)^{2}=\left(\frac{r}{4}\right)^{4}
$$

6. Solve the simultancous equaticas

$$
\begin{aligned}
& \frac{2 x+3 y-4}{x+5}=\frac{3 x+4 y-25}{5 x}=\frac{4 x+2 y-30}{4 x-1} \\
&=\frac{x+3}{6}
\end{aligned}
$$

7. Solve

$$
\left\{\begin{array}{l}
x^{2}-x y=11 x+4 \\
4 y-y^{2}=11 y-8
\end{array}\right.
$$

8. Elininate $x, y$ and $z$ from the equations

$$
x-z=a(x-y), \frac{1}{x}-\frac{1}{z}=b\left(\frac{1}{x}-\frac{1}{y}\right)
$$

$$
x^{7} z=3^{3}
$$

9. A walking along a road passes $B$, but finding he has lost something turns back and meets $B$ two hours after he passed him. liaving found what he lost he overtaties $B$ again theee hours after he met him, and arrives at his destination one hour later than he would have done had he not turned back. Compare the rates of walking of $A$ and $B$, assuming them to have beenuniform throughout the whole time.

## SOLUTIONS.

hy mr. J. c. glashan.

$$
\text { 1. } \begin{aligned}
& \left\{\left(x^{n-2}\right)^{2}+1\right\} \div\left(z^{n-1}+1\right) \\
= & \left(x^{n-2}\right)^{2}-3^{n-1}+1 \\
= & x^{n-2} X=-3^{n-2}+1 .- \text { Ans. }
\end{aligned}
$$

2. The expression ranishes if $x=0$,
$\therefore x$ is a factor of the numerator.
The Expn. is symmetrical with respect to $x, y, z$, $\therefore y$ and $z$ are also factors of the numerator.
The numerator is of the third degree,
$\therefore$ there are no other literal factors of it.
$\therefore$ Expn $=m x y=;(y \div=-x)(=+x-y) x+y$ $-2)$.

To determine m, let $x=y=z=1$,
$\therefore 1+1 \div 1+1=m . \quad \therefore m=1$
$\therefore$ Expn. $=4 x y z j(y+z=x)(z+x-y)$ $(x+y-z)$.-ANs.
3. (a) The Expn. vanishes if $x=0$.
$\therefore a$ is a factor of it .
The Expn. is symmetrical with res. .et to a,l,c,
$\therefore b$ and $c$ arc also facicrs of it.
The Expn. is of the fourth degree,
$\therefore$ it must have a fourth lincar factor.
This factor must be symmetrical with respect to
$a, b, c$,
$\therefore$ it must be $a+b+c$
$\therefore$ Expn $=$ mabc $(a+b+c)$.
To detcrmine $m$ let $a=b=c=1$.
$\therefore 2+2 \div 2=2 m . \quad \therefore m-2$.
$\therefore$ Expn. $=2 \operatorname{arc}(a+b+c)-A N s$
(b) The Expn. vanishes if $a^{2}=b^{2}$,
$\therefore a^{2}-b^{2}$ is a factor of it
The Expn. is symmetrical with respect to $a^{2}$. $b^{1}, c^{2}$,
$\therefore a^{2}-b^{2}, 1^{2}-c^{3}, c^{2}-a^{2}$ arc factors of it.
The Expn. is of the sixth degree,
$\therefore$ it has no other literal factors.
$\therefore$ Expn. $=m\left(a^{2}-b^{2}\right)\left(b^{2}-c^{2}\right)\left(c^{2}-a^{2}\right)$.
To determine m let $a=0, b=1, c=2$,
$\therefore-4+16=12 m, \therefore m=1$.
$\therefore$ Expn. $=(a-b)(b-c)(c-a)(a+b)(b+c)$
4. Let each fraction $=m$,

5. I.et $(x-a)^{2}$ be the factor, then, by division,

$\therefore$ if $(x-a)^{2}$ be a factor of $x^{2}-q x+r$,
$a^{3}-q\left(2+r=0\right.$, and $5 a^{c}-q=0$,

$$
\therefore a^{6}=1 q
$$

$\therefore 3 q a-q a+r=0$,
$\therefore a=\frac{5 r}{4 i}$.

$$
\begin{aligned}
& \therefore\left(\frac{5 r}{4 q}\right)^{4}=1 q \\
& \therefore\left(\frac{r}{4}\right)^{4}=\left(\frac{3}{5}\right)^{3} \text {-Ans. }
\end{aligned}
$$

6. Ald the numerators together for the numerator and the denominators together for the denominator denominator of a new fraction, which, since the given fractions are all equal to une another, must be equal to each of them.

$$
\begin{aligned}
& \because \frac{10(x+y-y)}{10(x+1)}=\frac{x+y-=}{6} \\
& \because x+1=6 \quad \therefore x=5
\end{aligned}
$$

Substituting this value for $x$,

$$
\frac{10 \div 3 y-4}{10}=\frac{15+4 y-25}{25}=\frac{5+y-y}{6}=
$$

$\therefore 7 y-16:=-20$,
and $4 y-7:=-5$,
$\therefore y=4$ and $=5$, and as found, $x=5$.
Ass.
7. By division

$$
\frac{x}{y}=\frac{11 x+4}{11 y-S}
$$

$\therefore-S x=4 y \quad \therefore y=-2 x$.
Substitute for $y$ in first of giren equations
$x^{2}+2 z^{2}=11 x+4$
$\therefore 3 x^{2}-11 x-4=0$
$\therefore(x-4)(3 x+1)-0$
$\left.\begin{array}{l}\therefore x=4 \text { or }-\frac{1}{3} \\ \therefore y=-S \text { or }\end{array}\right\}$
S. Clear second equation of fractions

$$
(=-x) y=b(y-x)=
$$

Sulstitute for $=-x$ its value as given by the first cquation, and divide the resulting equation by $y-x$.
$\therefore a y=b=\therefore y=\frac{b=}{x}$
Substitute b: ior ay in first cquation
$\therefore x-==\pi x-b=$
$\therefore x=\frac{1-b}{1-a}=$
Substitute for $x$ and $y$ in thisd equation their values given by $A$ and $b$, and divide the resulf try $:^{2}:$
$\therefore\left(\frac{1-b}{1-a}\right)^{2}=\frac{b^{3}}{a^{3}}-$

Ans.
9. Let $x$ equal . I's rate in miles per hour, and $y=33^{\prime}$ rate in miles per hour.

From the time $A$ first overtook $l$ till he overtook him again was $;$ hours, $\therefore$ during those five hours 13, who had gone steadily forward, had made $5 y$ miles progress.

A was one hour later in arrivingiat his.destination than he would have been had he kept steadily on, and the delay, occurred during the five hours between the two overtakings; . $\therefore$. made only $4 x$ miles progress while $B$ was advancing his $5 y$ miles. But they made equal progress during the 5 hours,

$$
\begin{gathered}
\therefore 5 y=4 x \quad \therefore y=\frac{4}{3} x \\
\text { i.e., } D \text { 's satc }=\frac{4}{8} \text { of A's ratc.-A.s. } \\
\text { Notes. }
\end{gathered}
$$

Q. I was set about iwo years ago to candidates for junior matriculation in Toronto University, and an examiner might reasonably suppose that mathematical masters in our high schools would have made a note of it quite irsespective of the fact that it is a particular case of a well-known elementary theorem. The problem is a practical test of an examince's knowledge of the meaning of an exponent.
Q. 2 can be worked by multiplication and addition, or be made an exercise in factoring as is donc above.
Q. $3(a)$ and (b) are simple exercises in the theory of divisors and the principle of symmetry. The examinees are fold that the factors are linear.
Q. 4 is an example of the form in which homosencous simple equations present themselves in actual investigations.
Q. $j$ is an example of the most important use in algelora of the process for finding the II. C. F. of two expressions, and the solution as given above exhibits how the process may sometimes be shortened.
Q. 6 affords an illustration of the widely useful theorem

$$
\text { " If } \frac{a}{b}=\frac{c}{d} \text { then will } \frac{a}{b}=\frac{m a+}{m b+} \frac{m e}{m a} "
$$

The theorem may be applied to resolve the equations in the way exhibited above, or to show that cach of inc gri:ch fractions is cgas to : ; for cach of thein

$$
\begin{aligned}
&=\frac{(x \div y-2)+(4 x \div 2 y-3}{+1}+(2 x \div 3 y-4) \\
& 6 \div(4 x-1)-(x \div 5) \\
&=\frac{35}{3 x} x=1 .
\end{aligned}
$$

This reduces the equations to the simplest ijpe.
Q. 7 is an easy simultancous quadratic pair.
Q. $S$ is a very casy problem in climination, one of the commonest operations in algebra.
Q. 9 is an ordinary problem. If was taken, with a slight change to render it easier 10 work, from an algebra paper set to boys and gizls in England.

Tue public schools of Si. Juhn and Portland, N.B., befrote closing for the summer vacation were visited by the irusiecs. Senator Boju, chairman of the board of trustecs, in all of the schools put the question to voie as to whether the children, pareats and pupils wauld like to have the bolidass exiended to Alugust afth, as the trusices sceom. mended to the lonard of educstion. The decision was unanimously in favor of the recommendation of the trustecs in erery school.

## STUDIES IN ZOOLOGY.

We now come to a most interesting group of animals: forms which have had much to do with determining the outine of contineuts, and have been no small factors in the growth of islands. We have to deal with the coral animals (insects they ate not) ; and how best, with liste material, 30 direct a class of young people, so that they may easily comprehend their structure and habits.

Surely every teacher has, or can borrow, a few pieces of branching coral. These sloould be passed round the class that each scholar may examine a specimen, and then, by ques. tioning, the more prominent characteristics of the coral's structure can be drawn out.

As a whole, the specimens will be found to have the appearance of a branching twig from a tree, though there is no regular order displayed. Douting the outside of the stem will be noticed a multitude of pores, about equal to a pencil's point in size. At the tips of the branches there will generally; be found a pore considerably larger than those found elsewhere, and if the broken basal portion be examined there will be noticed a central circle with radiatiog partitions, apparently the axis; or, were it a vegetable growth, the pith.

Now, belere the class, if one can afford to do so, it would be well to break one of the main stems in several pieces, and examining the ends of the several sections, inform the pupils that in all cases you find the axis the same. If pieces, a quarter of an insh in length, be held up toward the light by some of the class, one of the brighter pupils will notice that he can see through this axial openinig, as the might through a tube. As this is always the case, the class is justified in sup. posing that the opening runs through the entire length of the branch.

Now let one or two of the young investigators examine this central opening with a hand leus, and they will iniorm the class that it has a series of partitions passing inward from the circumference, and much resembling the arrangement of the radiating tubes of the sponge. We are hence dealing with a radiate animal. If others are now directed to count these pattitions, on calling for results, the teacher will make note of the fact that the numbers, if properly given, are multiples of six.

We can now surn to the smaller pores which npen on the sides. Some seholars, who have not as yet zaken part in the work, mitht now be allowed to examine these lateral pores and count the partitions. The number of these partitions will be found to agree with those of the axial pore.

Keturn now once more to the base of the main stem, and there, in most cases, it will be easily seen that the pores of the surface really communicate with the axial pore.

It will now be brought to mind that the hydra had a general structure very similar.

By proper questioniny it can be drawn out from the class, that the hydra was elongated, and sometimes bore similar, though smaller, individuals on its side. Here in the coral we have an elongated axial canal, bearing similar, though smaller, canals. But some bright scholar objects that, while the hydra was soft and capable of more or less motion, we here have a stiff, hard body, apparently organized, but destitute of life. This objection leads to the explanation that the piece of coral is no tuore than the skeleton of hydra-like animals, the soit parts of life having been washed away.
In the sall water, which contains much lime, many animals which at first sight resemble the hydra, having arms or tentacles which they can move about in search of prey and with which they push their food into their centrally placed mouths, are found to take the lime from the water and strengthen their bodies with it, so that, when they die, each leaves a little cup of lime. Since many of these marine hydra-like animals grow in clusters, as some of the hydras were found to do, these cup; are joined by their limy substance to the central or parent form, as well as to each other.
The class will thus understand how the branch of coral was made, and can picture to themselves how it must have appeared as it grew from the side of some overhanging rock in a warm pool of some tropical bay. At its apex was a large, bright-coloured individual, is arms expanded and waving in the gentle cursent standing alone, the patriarch of a host of smaller individuals, equally beautiful in their colouring, but of lower position. All had a more or less complete system of communication with each other, but always through the parent form, as was noted when the base of the stem was examined. It was no wonder that such forms were for centuries regarded as plants, for tiney rival in beauty the choicest selections of the conservatory:
it would, perhaps, be well now to tell the class about, the coral islands. Years ago some bit of co:al nay have begun to grow on the bottom of the ocean. Little by littic it branched out until finally its uppermost twigs came so near the surface that passing vessels broke them off as they sailed along The branches came still nearer the surface and finally the floating seaweeds and logs setuled upon them. fit low tides the birds collected upon them, and finally shrubs and trees found soil on which to grow.-Aymeriane Tachiter.

## PUNCTUATION IN READING.

Pusctuation, I should say, is of twofold importance. It is a great help to the clear understanding of the meaning and the plezsanz reading of what is wrmen. The ancients were not acquainted with the use of
punctuation-marks. This art is said to be an invention of the Alexandrian grammarian, but was so forgotten and neglected that Charlemagne found it necessary to ask Warnefried and Alcuin to restore it. At first it consisted of a point called stigma, and sometimes a line.

The system of punctuation now in use was introduced by the Venetian printer Manutius, in the latter part of the fifteenth century. Very little cnange has since been found necessary. Witiout the use and observance of these marks, much oi the comfort and pleasure of reading would be lost. There are some very excelient teachers who never say one word about punctuation in class un:il the pupils a.e somewhat advanced in the Second Reader. They argue, it is too much and :oo difficult for the very littie ones to be worried with. 1 certainly should not the first day, or even the first week of a child's schooliffe, harass it with commas and periods; but just as soon as co:.mmas and periods occur in the little sentences, 1 would zeach that the observance of such marks made a great difference in the reading. Even the least of the little tots will be pleased to learn the name and use of such marks. Must children take pride in learning new words, especially if they soound big.

Without the observance of punctuation the meaning of the writer is obscure alike to the reader and listener. A person listening cannot see these points. He must depend upon his hearing to get the sense. In order to do this the reader should read in such a manner that the listener can punctuate as he hears. That is, the reader must make distinctions in his rests, modulations, and inflections, while reading, according to the punctuation. A reader who observes these rules will transfer the ideas on his paper to his hearers as fast as he reads them. On the other hand, one who ignores these punctuations cannot read intelligently until he has studied his article and guessed at the meaning. He cannot be certain that he has guessed at the correct meaning.

It follows, then, in order to make good readers, that the use and proper observance of marks for punctuation be taught 20 fupils; that this work be commenced in the primary grades, as soon as such marks uccur in their work. Let a child learn to read, regardiess of the:c marks, by passing over them, or by allowing the wrong inflection to be given, and you will have untold srouble in breaking up the bad habit. We all know from cxperience, that it is easier to teach several things correctly than to anfcatin one that has been wrongly taught.
Attention should be called to the shades of meanings made, according to punctuation. To do this, 2 sentence may be written upon the board. Change the punctuation, and
require them to reat, cbserving the pauses and noting the change. The following sentence will illustrate: " Will went to town in the buggy; John rode upon the horse's back; Guy sas with Arthur as they drove home, and they all uere happy." The same words punctuated differently read, "Will went to tawn, in the buggy John rode, upon the horse's back Guy sat with Arthur, as they drove home, and all were happy."
Panctuation and anticulation should be ta :ght in conversation during the preparation of the lesson, and not be left entirely until the recitation. It is discouraging to a child, when attempting to get a thought, to be corrected for mispronunciation, or the giving of the wrong inflection. It it will confuse and frustrate its ideas. Care must be taken, lest the littic ones conclude pronumciation and purnctuation, not hought, be the main object of the lesson. To cultivate habiss of observance, the class should somet.mes be allowed to note earefully and correct every mistake. Generally a mispronunciation, correctly pronounced by the teacher, is better.-American Teacher.

THE HAPPY ART OF ILLUS. TRATION.
The mind, whether of the child or of the adult, delights in making comparisons. We want to know not ouly what a thing is, but also what it is like. We hold up as a torch that which is plain, so as to see that which is dark, and we compare truths in the spiritual world with objects which we see in the world of nature. In this way the field of truth is enlarged before our vision, and what we see is not soon forgotten. A word-picture is always a pleasant object to gaze upon, and the teacher who can draw it at will is apt to be the centre of a charmed circle.

Mr. Proseaway is groping his way in a cloud of discouragement. His mind is full of thoughts about the lesson which he knows how to tell, but not to illustrate. "I cannot make an illustration," he says, "for my mind does not run in that direction." How does he know whereof he affirms? Did he ever try to put his mind on the right track, and then apply a little steam in the way of well directed energy? He certainly has imagination, for he can understand and enjoy an illustration. Let him have hope and courage, and even be may find, to his joyful surprise, that he has learned the happy ant of illestra. tion. Nothing is impossible to him that wills.
Suppose you cannot originate an illustra. tion-then borrow, and borrow with the utmost freedom. Do a big business on the capital of other men, and by and by you will have a little capital of your own. Dare so be a universal plunderer. Ineest some supertuous cash in a book of illustrations, and use them freely and on the slighiest pretext.

Some persons will say this is very bad advice. and iends to make one only a borrower and to restrict the free action of the mind. Nuthing of the kind! If you borrow and use, you will find out that you can make an illustra. tion quite as good for your purpose as any in the book. You will begin to see resemblances, and find that a hidden power to see a likeness between things now begins in show and to assert itself. What have you done? You first threw into your dry intellectual pumpa few quarts of illustations from various col. lections, and now you begin to pump ous a thin but growing stream of illustrations which are all your own. "I am," said lialstaff, "not only witty myself, but the cause of wit in others." "1 am," Foster might well say, "not only the collector of many good illustrations, but the cause of many other good ones used by preachers and eachers, and which are not found in any of my books."

The fact is, every faculty of the mind can be cultivated if one only knows how, and has the spirit of perseverance. Let not the faithful teacher despair. He has imagination, and he can perceive the force and beauty of the illustrations which others use; and if su, he can make some of his own if he will first !ive by borrowing. The trouble yet may be that his wealth will embarrass him. What an annoyance it is, when ore desires to illustrate a subject, to find not one or two but a whole flock of illustrations flying to him as the pigeons fly to the piazza of St. Mark's. in Venice, when the clock strikes two!

Let no man think that to teach by illustra. tion is only a method for children. It is suited for them, and it is suited for all others. It breaks upon a subject like a burst of light through a storm-cloud, and sometimes it has all the force of an argument. It makes the theme linger in the memory. Never undervalue the art of illustration. Learn to practice the ant, and then the dry and dreary desert of your irstruction will blossom with flowers.-Neu York.School Jou'nal.

Our readers who are familiar with the lifework of the Rev. Moses Harvey, of St. John's, Newfoundland, will be very glad to hearthat the council of the Koyal Geographical Society of England have elected him one of its Fellows. Air. Harvey owes his election to his eminent services to the cause of geographical science, in his various works on Newfoundland, and his able articles on lab. rador and Newfoundland, in the ninth edition of the "Encyclopredia Britannica." This handsome recognition of Mr. Harvey's brilliant literary athaioments is especially gratifying to his friends all over this western continent. His Excellency the Governor-Gencral of Canada, and other Fellows of the Society, were his sponsors, and his election, we belicue, was unanimous.-Qucbec Ciror:icle.

## Educational Intelligence.

THE ST: FOHN COUNTY (NEH. BRUNSUICR TEACHERS ANSTITUTE.
The St. John County Teacher: Institute hedd iss annual gathering on the 24 h and $25^{\text {ith }}$ ultime. The preident, Mr. W. P. Dole, took the chair. The number of members enrolled was isj. The lollowing officers were elected for the ensuing year : W. M. McLean, A.b. President; F 11. Hayes, Vice-president; J. W. Hickson, A.B., Secretary-Treasurer ; all of whom, tugether uilh Miss Kate Kerr, of 'lorland, and Miss Annic M. Hea, of St. John, were appointed members of the executive committee. Mr. II. Town, principal of the Centennial Building, reailan interesting paper on " Primary Work in Schools." Other pap is entitled "How to Secure Good Results in Writing and Drawing ;" "Temperance in I'ublic School ;" "How to Deal with Indolent Pupils," by Mr. M. J. McKeluna; "Primary Gcography," ly Miss Grace Murphy; and "Canedian History." by Arr. 1. F. Dean, were read and fully discussed. Afterwards the members adjourned to the studio of Mr. John C. Mills, Germain Stre et, and listened to an able address on "Drawing." Thenext meeting will be held on the last Thursdiny and Friday in Octolker, $1 S 57$.

## THE CHANLOTTE COUNTY (NEW ERUNSWICK) TEACHERS'

## INSTITUTE:

Tus Charloute County Teschers' Institute met on the $34^{\text {th }}$ and 25 th June, at St. Andrews. Mr. James Vroom presided. Thily:ino members were present. The officers elected were: F. O'Sullivan Iresident; J. 13. Oakes, Viec-President ; T. A. Hant, Secretary-Treasurer ; and Miss Algar of St. Andrews, and Miss Alice M. Kubin. son, of St. Stephens, were adided to the commitice of management. The number of enrolled meanbers was stated to be 46. The following papers wete read and discussed: "Oral Lessons," by Mr. Wn. Brodic; "Healh," by S. W. Hall; "Object Lessons," by the Misses Dowling, Dibble, and Veazey; " Punctuality and Regularity of Attendance," by Miss Dowling ; and " How to Teach Arihmetic," by Mr. Joha Lawson. The determining of the time and place of next mecting was left to the commintee, and the customary votes of thanks brought the mecting to a close.

## KINGS COUNTY (NEW SRUNSIWICK) TEACHERS SNSTITUTE.

Tuts Institute having lapsed, owing to the nonassembling of the teachers for some years, wac reorganized on the בa:h Junc. Thinty-nine seachers enrolled themselves as members, alihough many others a: ended later on. The oficers elected were: Inspectur D. F. Weimore, Iresident; Principal F. S. Chapman, Wice-President; Principal F. E. Whelphey, Secretary.Treasurer ; : ill of whom, :ogether with Miss Mariun Wetmore, and Miss lienha Robertson, were appointed to form a cunmitice of management. The papers read and discussed were: "School Discipline," by C. E. Black; "Rewards and Punishments," by J. W.

Cample:ll; "Cultivating a Taste for English literature," by F. S. Chapman: "The Culture of Teachers," by W'm. Sumerville; " Plant Life," by J. E. Wetmore ; and " Cirammar." by Horace Wetmore. After passing various votes of thanks the nueeling adjourned.

## YORK COUNTY (NEW BRUVSWIC゙K) TEACHERS' INSTITUTE.

At a meeting of this institute secently held, Mr. jeremiah Meagher, read his paper on the "Forest Trees oi New Brunswick, with their Characteristics," illustrating his descripuions by exhibiting specinens of the most important productions. The forest treas, he said, were his old familar friends. There was not a tree of them that ded n. $t$ recall the past and associate it with youthful companouns in many holiday excursirns. With some happy references to the poetical inspirations of the American rorests by Fenimure Couper, he pro. ceeded to describe the most impurtant forest productions of the province. He touk up the hard woods in the following order: maple, ash, elm. oak, beech, birch, butcernut; then the pine family, including white pine, whte spruce, Llach spruce, hackmatack, balsam, fir and cedar, bricthy describing the different varieties of trees of the same family, the properties and utility of the most important of them. In conclusion, he stated that he had written the paper, not for the purpose of making any display of knowledge on the subject, but to show with how litle acientific knowledge very useful lessons may be taught in our schools.

At the conclusion of Mr. Meagher's paper a short discussion followed on the suliject maticr of the paper, in which the eachers tool occasion to compliment the writer on his scholarly effors.

## THE EDUCATIONAL HASTITUTE OF NEIV BRUNSWICK.

Tue Educational Institute of New Brunswick met on the aSth ultimo. The meeting was pre. sided over by Mr. Crocket, Chief Superintendent of Education. Some 212 names were enrolled in the secretary's book, embracing teachers from nearly every part of New lisunswick. 11. C. Creed was appminted sec--ireasurer, and H. C. Simpson, assiotant secretary. F. II. Mayes introduced the following resolutions:-

Whereas, l'revious to November, 1SS.t, the school terms liegan on the first day of May and the first day of Noveminer in each year ; and

Whereas, the beatd of eclucation has shanged the day of opening of terms to the first of July and the fist of january in each year, and

Whereas it is the oplirion of this institute that such a change is not in the interest of true elucayion: and

Whercas this institute, at its session last year, unanimously resolved, that in the opinion of the members of the institute the change of school terms recenty made is opposed to educational interests of the province; therefore

Nesolved, that this institute reiterate tine resolutinns of last year, and nemorialize the board of education that the sehool tetms le made to legein and end on the same day as was the case previous to the change in November, iSS4.

This motion was unanimously carried.
de the erening session, addresses were made by the superintendent, Judge King, Senator loogd, J. V. Ellis, the Rev. Dr. Hopper, Dr. Stoctiton, J. Allen Jack, Dr. Bydone Jack, and the Rev. Dr. Diacrac. On the following day the meeting was continued. Inspector Oakes read an cacellent paper on " Secondary Education," its importance, ths present condition, and its needs. A discussion followed in which Messiss. Palmer, Jonah, Oakes, Jack, Con, Relyea, and Steeves took part. In tie afternoon Mr. John Lawson read a paper on the " Tonic Sul Fa System of Teaching Singing." dt the evening session W. C. Gaunce's paper on "Temperance in the l'ublic Schools" was read. This was followed by remarks by Mr. Crocket and the Ilon. Mr. Bujd, and Mr. Chamberlain's paper on the "Sisudy of Bird I.ife." In the morning of the thitd and last day of meeting Mr. Oakes' paper was further discussed, and a speech was made by Dr. Inch who received a warm greeting. In the afternoon Mr. Wilber read a graphic and humourous paper on "The Means for Securing Gireater Permanency in the Profession of Teach. ing." Messrs. Hajes, Dalmer, and Cox were appointed a commitice to prepare and present to the Government a memorial with reference to the change of terms. A delate on the making of some change in the registers then took place, and a motion endorsing Mr. Oakes' paper was carriedIn the evening a motion relative to an arbour day was carric.l unanimously. The result of the ballot for the extcutive committec consisting of nineicen members showed that the following wete elected by the institute from its members:Messrs. Cox, Hajes, Haj, Brydges, Willeer, Monigomery; l’almer, Melean, inches and Barry; the other nine are the officers who are ex offecio members. This ended the business of the insti. tute.

## RECENT EXXLORATMON AND SCIENTIFIC INVESTIGATION.

Tue lirector of the Gcological Survey of Ircland, Professer llull, F.R.S., delivered the annual address of the Victoria (Ihilosophical) Institute in London, on the 2Sth of May, on which occasion the institute's new president, Professor Stokes, Iresident of the Rojal Society, took the chair. The report was zead by Caphain F. Petric, the honorary secretary, and showed that the institute's home, colonial and forcign members were epwards of eleven luundred, including many who joined from a desire to avail themselves of the Institute's privileges. An increasing number of leading scientific men now contributed papers and aided in the work of bringing alout a truer appreciation of the result of scientific inquiry, especially in cases where scienific diseovery was alleged by the opponents of religious beliefs to te subversive thereof. The author of the address then gave an account of tife work, discoverics, and general results of the recent geological and geosraphical expedition to Leypt, Arabia, and Western Palestine, of which lie hat charge. Sketching the course taken b; him (which to a conside rable extent iook the route ascribed io the lstaclites), he gave an account of the physical features of the country, cvidences of old sea margine 200 fect above the present sea margins, and showed that at one time an arm of
the Mediterranean had occupied the valley of the Nile as far as the First Cataract, at which time Africa was an island (an opinion also arrived at by another of the institute's members. Sir W. Dawson), and that, at the time of the Fixodus, the Red Sea ran up into the litter Lakes, and must have formed a barrier to the traveller's progress at that period. He then alluded so the great changes of elevation in the land eastward of these lakes, mentioning that the waters of the Jurdan valley once stood 1,292 feet above their present height, and that the waters of the Dead Sea, which he found 1,050 feet deep, were once on a level with the present Mediterrancan sea margin, or 1,292 feet above their preeent height. The great physical changes which hat taken place in geological time were evidenced by the fact that whilst the rocks in Western Palestine were generally limestone, those of the mountains of Sinai were amongst the must ancient in the world. The various geological and geographical features of the country were so described as to make the rddress a condensed report of all that is now known of them in Egypt, Palestine, and Arabia Petraa. Sir llenry Harkly, G.C.M.G., F.R.S., moved a vote of thanks to Professor IIull, and to those who had contributed to the work of the institute during the year, which included Assyriological investigations by Professor Sayce, Mr. Boscawen, and others; M. Maspero's and Captain Conder's Egyptian papers ; Professor Porter's Eastern rescarches: also a review of the question of evolution, by Professor Virchow, and the resules of investigations in regard to the sulject of the origin of man, as to which it had been shown by Sir William Dawson, that geology divided the chronology of animal life intc. four "great periods;" in the first, or Eozois, in the Geological as in the Bible records, were found the great icptiles; and the last, or Tertiary, was again subulivided into five "periods," and it was only in the last of these, the "modern" period, that the evidences of man's presence had been found. Again, as regards his ape descent, the formation and proportions of the skull and bones of the ape considered most like man were found to le so different from those of man as to place insuperable dificulties in the way of the theory. In the gorilla, the high crest on tine skull, which was also found in the hyena, was alisent in man. Also, among other points, if the capacity of the brain of the anthropoid ape were taken at ten, that of man cuen in his savage state was twenty-six, or nearly thrice as much, a very important fact when, as it was known, any appreciable diminution in the brain of man was at once accompanied by idiocy. As regards tine transmutability of species, Ilarrande's arguments against the theory; founded on the results of a life of rescarch among the foss: strata, had not yet been ovcithrown; and modern rescarch clearly prointed to the fact that one great bar to the transmutability of species lay in the refined and minute differences in the molecular arrangements in their organs.

The proceedings were concluded by a vote of thanks to Professor Stokes, under whose presidency it was remarked that the work of the institute would be carricd out with the increased help and guitance of men of the highest scientific allainments, and in at manner to iend to advance inuth. it conversazionze was then held in the muscum.

We hear that Mr. Thomas O'llagan, of Pem. broke, is taking a special course in clocution at Chautauqua.
Mr. A. B. Wright, B.A., of the Walkerton Iligh School, has left to assume a position on the Galt Collegiate Institute staff. Mr. Wright has made many friends in Walkerton who regret his departure.

Tute position of head teacher for the Brockville public school is vacant, owing to the resignation of Mr. J. L. Margach, to whom the school board propose to present a tostimonial, which they have appointed a committee to draft.

Miss Louisa M. Wright, M. E. L., daughter of l'rofessor Wright, formerly of Ilamilton, has been appointed Preceptress of Music in the University of Southern California, located at Los Angeles. This, following her successful course as a teacher in the Ottawa Ladics' College, is a high conpliment to her musical ability. Miss Wight was one of the most distinguished graduates of the IIamilton Ladies' College.
We have received a copy of an interesting report on the puilic schools in the district of Durham and lont Hope, including the town of Bowmanville, by P. S. Inspector IV. E. Tilley. It contains a vast amount of information, including valuable instructions for teachers. To the trustees of the district also it will, no doubt, be found of great use. We venture to recommend this report to other school inspectors throughout the Dominion, as an admirable model of an able and useful report.

Comietitors forthe King's College County history prize this year will have as a subject the townships of Dartmouth, Pseston and Lawrenceton, in Halifax county. The object of the prize is an admirable one, viz., "to preserve as far as possible the local records and traditions relating to the commencement and progress of the settletnents in the various counties of the province." Competition is open to the whole province, and the essays must be sent to the governors of King's college before June 15 th, 1887 . -Halifax Herald.

The Whitby Boasd of Education, at a meeting held on the s th inst., appointed Mr. T. MelIenry, now head master of Newbury high school, to the position of mathematical master of the Collegiate Institute, with a salary of $\$ 1, \infty 00$ per annum. At the same meeting Miss lurns was promoted to fill the position lately occupied by Miss Hickic, with a salary of $\$ 325$; and the allention of the board was called liy the committec on school manage. ment, to the unsatisfactory nature of some of the examination papers set for the recent entrance examinations to high schools, with a recommendation that the matter be brought belore the notice of the Minister of Education.

AT the mecting of the New York State Teachers' Association had at Niagara Falls during the current month, Profersor MeVicar of Toronto gave an address upon "The Work of a True Educator," which he treated under thice heads: I. Nature of the matcrial upon which the teacher works; 2. The time required; 3 . The nature of the products. His oft-reiterated statement that "Man is a complex organized animal composed of body and mind, and so constructed that no element of the complex whole can be dereloped without an
effect upon every other element," was treated in a way that proved him a decidedly progressive teacher. He advocated the development, not only of the intellectual and physical sides of our being, but the motal and intellectual as well; and claimed that the time of growith alone supplies the necessary conditions for the symmetrical development of the entire nature; adding an carnest assertion of his belief that much good is to come from cocducation, which he thinks will soon be the rule instead of the exception.

The following circular has been issued from the office of the Chief Superintendent of Education in New Brunswick: "The Board of Education has been pleased to make the following Order amend ing regulations 19.2 (3) (3): (2) There shall be a summer vacation in all schools extending from June joth till the first Monday in August, but in rural districts subject to spring and aumumn freshets, or where the harvest is late, the Board of Trustecs having first oltained the formal approval in writing of the Inspector, may permit a part or the whole of the summer vacation to be taken at another time. The Inspector shall notify the Chief Superintendent of each approval given by him. (3) In cities and incorporated towns, organixed under Sec. 105 (School Manual) ; the summer vacation shall exiend from June joih till the third? Monday in August; there shall also be an Easter vacation (beginning en Good Firiuay) of three days, the same being week days other than Saturdajs. These provisions apply also to the schuols in the lowns of St. Andrews, Chatham and Newcastle.Wm. Crocket, Chici Supt. Education. Educa. lion Office. Fredericton, N.B., July 9: $h, 1$ SSU. P. S. -The above provisions take effec: daing the current year. W. C.

A very suecessful teachers' institute was held at Lennoxville, Que., between the 6th and 9th inst., conducted by Mr. Robins, M.A., LL.l., Principal McGiil Normal School, Rev. Mr. Nexford, B.A., Secretary Department of Public School Instruction, Quebee, and Mr. McGiregor, L.L.D., Prof. of Mathematics in the McGill Normal School. There were about seventy teachers in attendance. The average attendance was decidedly better than last year. The lectures were very interesting, especially Mr. Kexford's remarks on the " Duties of School Officers, Teachers, etc., in Government Schonls, as laid down by the Qucluec School Act," and those of Dr. Nobins and Dr. McGregor on "Methods of Teaching." The institutes are likely to become a power for good in the Province of Quebec. Not only do the icachers whose schools are closed, attend, but also a number of the teachers whose schools are open in July, were present with the consent of tle Commissioncts, and are not required to make up the days. The principal of Bishop's College, the Kev. Mr. Adams, and Mr. Henneker also addressed the assembled ieachers. A very pleasing feature of the three day's work was a few chemical experiments conducted by Dr. Robins on Wednesday evening, followed on Thursday by the professors' and students' mecting in the class-romm for read. ings, recilations, music, etc. On Friday afternoon the institute closed in Lennoxville. W'e understand that on the 13 th there will be an institute opened at Knowlton, and on the 20th, the third and last this summer, will be at Lachute.


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Education Debarthent, Ontario, Tononto, May 21st, 1886.

Dear: Sik,--
From the replies already received respecting the proposed Summer Class in Botany, the Minister of Eiducation has decided to complete arrangements for ita final organization. The Opening Lecture will be delivered in the l'ublic IIall of the Education Department, on Tuesday, July 2oth, al 2 p.m.

Mr. Spotton suggests that those purposing to join the class shoutd read the following portions of Thome's Text lluoh: Chapters 1, 2, 3 and 4, and so much of Chapter 6 as relates to Phanerogams and Vascular Ciyptogams; or, the corresponding portions of Prantl's Text Book (Vines' Translation). Meniliers should als, come providedwith Pochet Lens, Kinife, Dissecting Needles, Cullecting Bux, Part II of Spotton's Ibutany and Gray's Manual.

The Depantment will grant a Certilicate, signed by the Minister, of Attendance on this Course, but will not undertake to conduct any examination with a view to test the proficiency of the class.

Yours truly,
ALFK MARIING,
Scerclary.

## CIRCOLAR TO POBLIC SCHODL INSPECTORS.

## Education Depastment, Ontakio, Toronto, May 1st, 1886.

Sik,-The Drawing Classes conducted at the Education Department, Toronto, during the last two summers will not be continued during the current year. It is nevertheless desirable in order still further to qualify teachers in this subject, that facilities of some hind should be offered for thenr self-improvement. Instead of the classes formenly taught at the Department it is now proposed to give a grant to each Inspectoral Dwision in which a class is formed for instruction in elementary drawing.

The conditions on which such classes may be formed are:-
5. The chase must consist of at least gen persons holding a Publac School Teacher's Cerificate.
2. The seacher in charge must porsess a legal certificate to teach drawing: or be approved of by the Edducation Department.
3. As least 30 lessons of two hours each must be given.

4 Teachers who attend this course will be allowed to write at the Departmental Examination in Drawing in April, 8857.
5. The Primary Drauing Course only shall be taught.
6. A grant of $\$ 20$ will be made for each class of ien pupils, but ouly one class will be padd for in any Inspectional Division.

Will you be good enough to inform the teachers of your inspectorate of these proposals in order that they may make the necessary arrangements for organizing classes.

## Yours truly,

GEO. W. ROSS.
Minister of Education.

