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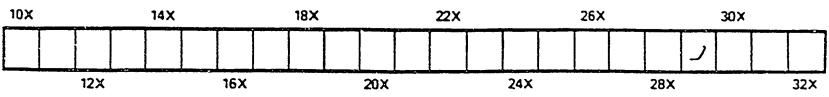
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# Educational Weekly

### Vol. IV.

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Edited by T. ARNOLD HAULTAIN, M A.

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THE second-class algebra paper set at the recent June 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 information 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 explanatory 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. E. 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 upon 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, seeing 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-doing. 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 stamina. In conclusion, I would recommend as a watchword to every earnest teacher, a sentence quoted by Miss Partridge, "in her Quincy methods." As a

terse aphorism it is worth remembering, 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 destiny."

U. W. O. Link, Serv

No one doubts the efficacy of an examination. Were there no examinations there could be no standards of value. 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 meshod 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 scholar in the common school, 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 children, 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.

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### Contemporary Thought.

THE Educational Department of Ontario is a wide-awake branch of government, and fully appreciates the needs of the hour. The recent issue of a text-book on hygiene, and the pamphlet on school architecture and hygiene demonstrates this conclusively. The book on rehool architecture and hygiene is copiously illustrated with plans, and is designed for the guidance of school trustees in the crection of new buildings. --Chicago Sanitary Netws.

As a rule, the editor is a very poor newspaper man, not half so versatile in journalism generally as the humblest police reporter. He can wear a full-dress suit with credit, however, and is a good man to apply to when you want something kept out of the paper. Often he is called upon to correct some truthful statement that has been printed by an honest and energetic reporter. This is a task which pleases him immensely, and he does it brilliantly. The more an editor keeps out of his paper the more valuable he becomes to the business department. He is expected to see that the policy of the paper is strictly observed, and to pay close attention to the obstuary column. In addition to these prodigious and over-powering duties he is expected to claim all the complimentary circus tickets that come into the office, and to associate himself closely with all public banquets, State conventions, and national political issues. If an ambitious reporter writes an occasional bright paragraph for the editorial page which attracts some attention, it is the editor's duty to admit that he wrote it himself .- Venowine's News, Chicaso.

AMBITION, what is it ? Webster defines it, an cager desire of preferment, honour, 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 development of our mental and moral powers. 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 people ; 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 little corner of the world the better and happier for his having lived in it. Seekers for wealth, and for the high positions in society, are spurred on by their ambitions. The basy student toiling over his books by the midnight lamp, until weary and oftentimes discouraged, is pushed on by his ambition as with a relentless hand that will not suffer him to rest until the object is attained, or till forced by a failing body and over-taxed brain to give over the struggle.-Ex.

OUR schools seem to be making excellent 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 teachers in every grade should be capable, and thoroughly understand their profession. The system is like a great cog wheel, and if one of the cogs be defective or broken there will be a jar in the machinery. Should the teacher of one of the grades be careless or inefficient, and slight the work of his grade, there will be a corresponding blank in the education of the children, which the teacher of the grade above will have to make up, if he or she can, but this is not always possible. It seems to me that there ought to be some better test of a teacher's ability to impart instruction than mere scholarship. The most learned of men have been utter failures as educationists. But under the present rule the teacher who has passed the highest examination gets the highest pay, while a more successful 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 Telegraph, St. John's, N.B.

THE idea that genius reveals itself early in life does not at once recommend itself to common sense, Observation of nature as a whole suggests first of all, perhaps, that her choicer and more costly gifts are the result of a long process of preparation. And, however this be, there is certainly more of moral suggestiveness in the thought that intellectual distinction is the result of a strenuous adolescence and manhood than in the supposition that it can be reached by the stripling at a bound, through sheer force of native talent. And it may not improbably have been a lively perception of this ethical significance which fostered in the classic mind so widespread a disbelief in early promise of great intellectual power. We find a typical expression of this sentiment in the saying of Quintilian : " Illud ingeniorum velut præcox genus non temere unquam fervenit ad frugem." That is to say, the early blossom of talent is rarely 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 anothy 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 Nuneteenth Century.

THE Nation says: "The labour 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 unwilling to solve it for himself, he increases the labour of some of his fellows, they being, 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 such sermons as Mr. Newton's. Their tendency is to belittle the industrial value of individual skill, industry, prudence, and self-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 there be camp-followers, the union does not exist through their efforts. Because of the difficulty of life the labour problem is as hard as <sup>i</sup>t is. The man who sees the evils while he toils, forgets those evils as soon as he ceases to toil. Doubtless 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.

WHEN 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 start of him. 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 I the poetaster does not tell I The sun of Austerlitz '-there is some poetic sense in that ! The flowers bloom 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 the satirist if that malevolent person set on a pure tableau. Milton, ahnost alone, was enough artist to hold his tableau separate from the human 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. But how many poets could do as much? In looking over the floating poems of the day, one is impressed with their descriptive rather than their ideal character. A river runs by; a daisy grows thereby; Ah ! beautiful river; ah ! modest daisy; Now that may be poetry, 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 why the river runs. And the reason must be as subtly conveyed as is the case in the sun of Austerlitz. "There is a willow grows aslant the stream," begins the Queen, and we weep over Ophelia's death. "Her voice was ever soft, gentle and low !" wails Salvini in his wonderful alt, and we choke and sob to think of the hanging of the beautiful Cordelia 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 BAYED, brave heart !" cries Antony at the climax of oratorical 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 using their tableaus? Do they not handle the keen tools of trope and metaphor with some skill after they have fashioned the tool itself? This, then, if we complain of to-day's poetry, is its principal fault : It is all implement .- The Current.

JULY 29, 1886.]

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### Notes and Comments.

THAT 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 Youth* 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 meanness 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 stood 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. PAYNE, 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 drifting 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 middle ages when singing was the only sermon and the minstrel the only teacher. We are running too much to books The people don't come 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 its nose poked down between printed pages. It's read, read, read. Absolute silence reigns throughout 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. When the world was the wisest it read no books. Its teachers taught them from nature.—New York Graphic.

THE New York Indicator 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 unequal. 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.

AT 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 models 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 John 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 bête 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.-Ex.

On the subject of athletics which is one of daily increasing interest, the opportune remarks of a correspondent in The Canadian Athletic News, 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 husband their strength, develop their muscles in moderation, train so long as they feel they are improving in health, and obtaining greater freedom of movement, but they must come to a stop whenever the least indication is given of failing powers, or any particular organ gives signs of being prejudicially affected by the unwonted strain. By careful attention to this advice many may be prevented from doing themselves injury.

MR. O. B. BUNCE's remarks on the subject of reading are quite in accord with our views. He says that it should never be forgotten that it is what a man assimilates, not what he reads, that determines the breadth and quality 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 affinity-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 guided a little ; and it is well to compare notes as to what is worthy ; but 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 91st year of his age, was born in Thuringia, December 21st, 1795. On March 31st, 1885, 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 1834, 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 EXAMINATIONS.

THE BROWNING OF THE SOPHOMORES. "When the morning stars sang together."

WELL, I'll be beg your pardon sir I but see, Here by this morning's *ll'orld*, you know-good ged 1

Starred, plucked, and starred ! 'Twas Tristram's singing sped

"A star was my desire,"-ch ? 'Seems to me

He ne'er wore cap and gown. However, we . . Ay, stars, and garters, too ! When the poet said

Per inane micantes, and so forth-pshaw ! my head

Is badly dezled,-muddled terribly !

When it first hit me, it spun me round and round;

But, Lord bless you ! now, sir, I don't care. I was metagrabolized, I couldn't act,-

Why, starty fireworks seemed to fill the air, As when my sinciput smote hard the ground, I' the roller skating rink last summer. Fact !

W. J. H. in the 'Varsity.

### THE ADVENTURES OF UL YSSES. BY CHARLES LAND. CHAPTER 11.—(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 mutiny 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 Ægisthus 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, forgetting 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 impieties as such a woman, 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 Troy !"

Agamemnon replied, "For this cause, be not thou more kind than wise to any woman. Let not thy words express to her at any time all that is in thy mind, keep still some secrets to thyself. But thou by any bloody contrivances of thy wife never needst fear to fall. Exceeding wise she is, and to her wisdom she has a goodness as eminent; Icarius's daughter, Penelope 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 Telemachus, whom you shall see grov > up to manhood on your return, and he shall 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-eminence 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 were living, and how his son Neoptolemus conducted himself.

Of Peleus Ulysses could tell him nothing; but of Neoptolemus he thus bore witness: "From 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 with 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 my 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. But 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 urging 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 Priam'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 Ulysses 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 wisdom above bodily 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 judgment 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. Let 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-limbed 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 sins, 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 starved in the midst of plenty by the rightcous doom of Jove, in memory of that inhuman banquet at which 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<sup>1</sup>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 bad 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 itself 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  $\lambda E x a$ , 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, 1 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. I never 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 born 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 nec 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 therefore 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 realities 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 then, in 1826, in my father's employ, and who now, in 1886, kindly oversees my daily duties, lesi I should go far astray. He accompanied us to and from school four times a day, the distance being too great for inexperienced feet. " Doctor," said Fullum to me, when we were well in the street, "what-ure-been doin' that was naughty?" I said I had done nothing wrong. But Fullum assured me I had, and that no one ever was placed in that yellow chair who had not been naughty. This I then remembered to be true. But it had not crossed my mind before. Nor do I now know, nor have I ever known, from that time to this, why I 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 from 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 children why they punish them, if, by good luck, they know themselves.

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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 call Simple had come to town after graduating at the college where a friend of my father was educated. 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 know-indeed the only thoroughly sensible man I ever heard of except Ben. 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 he 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 sorry 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 I do not know, "no more nor the dead," as the vernacular says, what I was punished for. Possibly 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 seavs, and having one class out to recite, so that I 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 says 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 paradigms when I was six years old, and learned them reasonably well. We limped through a Latin version of Robinson Crusoe when I was eight 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 intelligible. And, to answer the question of The Forum, "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 position 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 peculiarity 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 transferred 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 privilege of associating with the other boys of his town and his time at a public school. Of course, this advice is wholly different 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 Latin School of Boston, the oldest school in America. It was the school of Ben. Franklin, 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 admirable care of Mr. Dillaway, the same who is well known to teachers by his good editions of Latin text-hooks.

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 I generally had. I showed it to my mother, because I had to. I thought she would not like it. To my great surprise and relief, she said it was a very good report. I said I thought she would be displeased because I was so low in the class. "Oh," she said, " that is no matter. 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 affair in earth or heaven.

It was spoken of as an insignificant and mean affair, somewhat as the orthodox pulpit used to speak of "mere morals," as 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, regarding 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 Boston, a distinguished man for nearly fifty years. It is a privilege to have learned Greek with such a | as governments do sometimes, he always

man. I know it better than I know Latin now, and this is partly because he taught me. But it is, I suppose, an easier 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 different. 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 possibilities 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 trained us to the use of this noblest language yet known. 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 knocking about who are grateful to him that he did not think so. And if the dear public thinks that Clarke, Holmes, Dana, Story, 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 mathematical men (such men ! Pierce and Lovering) 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 fools,

smoothed us down, and, in general, kept us in good temper. We used to call him "the Head," which meant, head of the flodern Language Department. One could then pick up a decent, ready knowledge of the modern languages in the course of the four years. No effort was made to speak or write 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 Encyclopædia," which you can buy for ten dollars, than any man will acquire, as facts, by spending four years 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 college than anywhere else. So, as Nestor says, "it 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. I 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 it, 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 by 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 him 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 judgment than for that of my oppressor; that in human life we have all to deal with inferior men, and must not quarrel with that necessity; 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 direction of the education of their sons.

My older brother was at an early age an accomplished mathematician, and afterward a wonderfully well read man; indeed a person of very wide accomplishments, as of a most kindly and affectionate nature. We were forever 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 like 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 teacher 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 I am profoundly and eternally indebted. Of all those with whom I have ever had to do, I owe the most to my father, my mother, and my older brother.—Edward 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 imagine two persons whose body was exactly alike, but one with a larger, the other with a smaller skull, the pressure of the blood would be very unequal in the two—moderate in the larger, stronger in the smaller head. It is self-evident that the greater pressure of the blood would have an exciting influence on brain and soul." (!?)

# Educational Opinion.

### " NOLI ME TANGERE."

"TOUCH 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. O course the pupils admire this youthful hero, and the teacher must either submit to his insolence, or run the risk of a reprimand by the Board, if she touches 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 still the poor teacher is blamed. This time it is because "she don't keep the young vandals under control." The old Israelites, forced to make brick without straw, had an easy 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 not able to. In fact, the teacher is largely in your power. A director once said to a teacher just before the contract was signed, "We 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, feeling 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, disobedient 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 indefinite), but about the first thing to be taught in juverile theology is the doctrine that "there is a God in Israel." Many an unruly boy is suffering 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."—Intelligence.

### 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 training 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. Dr. 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 ethical and religious 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 slight importance.

"Education must relate first to citizenship—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 behaviour as the conventionalities 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 community, 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; he 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 may 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 tech nical terms-the language in which science expresses itself-and by learning this, the pupil is able to avail himself 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 sake 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 metal trades to a teachable shape. A general discipline prepares the youth for the manipulations necessary in the majority of the artisan trades. Twentyeight in one thousand in the entire population, or eight in every hundred of those 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 specialties that require only eight per cent, of them in after life is to prepare ninety per cent. for discontented workmen. The greatest and most rapid progress in machinery lies in the direction of the wood and iron trades. Hence, the danger of over-supply 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 among 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,

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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 :"

r. "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 an usement and recreation."

4. "The instrumentalities of culture, moral, intellectual and æsthetic, including the 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 æsthetic form, it, together with Norway, exported to the United States (in 1881) any \$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 should 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 because 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 mechanical process). Another school could be devoted to the study of leather production, structure and manufacture. ... school for the manager ent and care of domestic animals, and especially 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 . formamation and practical skill so that they do not interfere with the discipline studies which are of an abstract, severe character "

#### OUR EXCHANGES.

St. Nicholas for July is, as usual, replete with superb illustrations and good things for the young folks. "Fly-Fishing for Trout" affords many hints of value. "The Jack-in-the-Pulpit" yarns are amusingly odd. The tale of "Like Lord Fauntleroy;" "The Kelp Gatherers," "The Letter and Riddle Boxes," are all good for summer reading. Other attractions, including poems, make up a charming number. New York : The Century Co., \$3.00 c year.

The Atlantic Monthly for August is at hand with fresh instalments of the serials : " The Golden Justice," by W. H. Bishop; "The Princess Casamassima," by Henry James, and "In the Clouds," by Charles Egbert Craddock. David Dodge furnishes an economic study of the South during the revolution period. Of the miscellaneous papers that on "The Benefits of Superstition," by Agnes Repellier, and on ' individual Continuity," by Andrew Hedb.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 descriptive of life in the "city" of St. Augustine, Florida, by writer residents there. After all, no foreigner can approach the Yankee writer in touching 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 Jewett has a fascinating short story called "The Two Browns." "The Indian Ouestion in Arizona" is discussed by Robert K. Evans. The reviews for the month ... of Bunner's "The Midge," Eleanor Putnam's "Old Salem," and "The Life and Letters of Joel Barlow, LL.D." The poetry is by San. sel V. Cole, Edith M. Thomas, Caroline Wilder Fellowes, and Charles Gayley. (Houghton, Mifflin & Co., Boston and New York.)

REVIEWS AND NOTICES OF BOOKS.

Studies in General History. 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 cold tion of historic matter which

may be dealt with first hand, as the pupil deals with the actual substance in Chemistry, the living plant in Botany, the comune text in Literature, thus stimulating not only memory, but o'servation, judgment and generalization. Such original matter or material, which may be described as maps, pictures, biographies, poems, lists of l'aportant events, including constitutions, creeds, laws, and chronicles, are not only difficult to find, but when found are inaccessible to any number of pupils, besides being bulky in many instances and difficult to decipher, requiring much time to gather and select their really important and useful portions. To select these portions and place 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 information afforded by these materials, and at the same time stimulate the s'udent to deal with social and political problems for hunself. It is a book to be studied, not merely read.

THE autor of the popular *Quiesism and Its* Key has written a similar book of odd questions and answers, called "Handy Helps," to be published in August by E. L. Kellogg & Co., of New York.

"SCHOOL Devices" is the name of a new book to be ready in August, by E. R. Shaw and Webb Donnell, of Yonkers, N.Y. The object is to afford practical assistance to teachers who wish to keep their work from degenerating into mere routine by giving them in convenient form for constant use at the desk, a multitude of new ways to present old truths.

A VERY neat 72 pp. catalogue of Books for Teachers has just been issued by E. L. Kellogg & Co., of 25 Clinton Place, N.Y. It contains a list of 250 that are recognized as having practical value. Each book is classified, described, and indexed by author, subject, and title. To each is given the special teachers' price and postage. Many of the more important have contents given. Under the department of Principles of Education nineteen books are described; Methods of Teaching has fifty-one; School Management, seven; Primary Education, ten ; Kindergarten Education, fourteen, etc. 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 4c. in stamps.

#### BOOKS RECEIVED.

The Canadian Congregational Year Book for 1885-6. Edited by the Rev. W. H. Warriner, B.D. Toronto: Congregational Publishing Co.

- Rasselas, Prince of Abyssinia. By Samuel Johnson, LL.D. Edited, with notes, fer schools. Boston : Ginn & Co.
- Six Weeks' Preparation for Reading Casar. Adapted to Allen & Greenough's, Gildersleeve's, and Harkness's Grammars. By Jas. Morris Whiton, Ph.D. Boston: Ginn & Co.
- The Synthetic Philosophy of Expression, as Applied to the Arts of Reading, Oratory and Personation. By Moses True Brown, M.A., Principal of the Boston School of Oratory, and Professor of Oratory at Tuft's College. Boston and New York. Houghton, Mifflin & Co. Toronto: Williamson & Co. \$2.00.

### Special Papers.

### THE SECRET OF GOOD DISCI-PLINE.

THE secret of good discipline lies in adaptation 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 individualities, otherwise there is no discipline, but the care given aggravates evil tendencies in them. There can be no doubt that much of the naughtiness in children 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. Injustice and weakness in parents make sad havoc 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 thoughtfulness 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 feelings are blunted. Many a time by forbidding we create a desire ; as we invite falsehood by prohibiting something that the child will do 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 falsehood to avoid punishment. Children are morally and physically cowards, and the greatest care is necessary to prevent this weakness from becoming a large element in their character.

A thoughtless, wrong act is not so bad as wilful disobedience. We may give a child many opportunities to do wrong in the thoughtless way. It does 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 strength 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 surrounding it are conducive to a healthy and pure growth, and that the family traits it has undoubtedly inherited be eradicated by every means possible.-Rose Dalton in Good Housekeeping.

### THE SECOND CLASS ALGEBRA PAPER.

### To the Editor of the EDUCATIONAL WEEKLY.

SIR,—As the Second Class Algebra Paper set at the recent examination of teachers '--> provoked a good deal of comment, it r-ay interest your readers to see Mr. Glashan's solutions of the questions, with some notes which he has added.

The paper has been called "cranky." Nothing can be more absolutely opposed to the truth 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 Committee, it did not strike me as being too difficult. Nor do I yet think it too difficult 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 servant,

GEORGE PANTON YOUNG. TORONTO, 21st July, 1886.

### MIDSUMMER EXAMINATIONS, 1886. SECOND CLASS TEACHERS. ALGEBRA. Examiner.-J. C. GLASHAN. 1. Divide $x^3 + 1$ by $x^{3^{n-1}} + 1$ . 2. Simplify $1 \div \frac{z}{x+y-z} \div \frac{y}{z+x-y} + \frac{x}{y+z-x}$ .

3. Resolve into linear factors: (a)  $a(b+c)(b^2+c^2-a^2)+b(c+a)(c^2+a^2-b^2+c(a+b)(a^2+b^2-c^2),$ (b)  $(a^2-b^2)c^2+(b^4-c^4)a^2+(c^4-a^4)b^2.$ 

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

show that

$$\frac{x+2y+3z}{x+y+z} = \frac{41a+38b+47c}{21(a+b+c)}$$

5. Prove that if  $x^* - qx + r$  have a square factor then will

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

6. Solve the simultaneous equations

$$\frac{2x+3y-4z}{x+5} = \frac{3x+4y-2z}{5x} = \frac{4x+2y-3z}{4x-1}$$
$$= \frac{x+y-z}{6}$$

Solve  

$$\begin{cases}
x^{2} - xy = 11x + 4, \\
xy - y^{2} = 11y - 8.
\end{cases}$$

7.

8. Eliminate x, y and z from the equations

$$x-z=a \ (x-y), \ \frac{1}{x} \ - \ \frac{1}{z} \ = \ b \ \left(\frac{1}{x} - \frac{1}{y}\right)$$
$$x^{2}z=y^{3}.$$

9. A walking along a road passes B, but finding he has lost something turns back and meets Btwo hours after he passed him. Having found what he lost he overtakes B again three 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 been uniform throughout the whole time.

SOLUTIONS.  
NY MR. J. C. GLASHAN.  
1. 
$$\left\{ \left( \begin{pmatrix} n^{n-1} \\ x \end{pmatrix}^{n} + 1 \right\} + \begin{pmatrix} n^{n-1} \\ x \end{pmatrix}^{n-1} \right\} = \begin{pmatrix} n^{n-1} \\ x \end{pmatrix}^{n-1} + 1 \\ = \begin{pmatrix} n^{n-1} \\ x \end{pmatrix}^{n-1} + 1 \\ = \begin{pmatrix} n^{n-1} \\ x \end{pmatrix}^{n-1} + 1 \\ = \begin{pmatrix} n^{n-1} \\ x \end{pmatrix}^{n-1} + 1 \\ = \begin{pmatrix} n^{n-1} \\ x \end{pmatrix}^{n-1} + 1 \\ = \begin{pmatrix} n^{n-1} \\ x \end{pmatrix}^{n-1} + 1 \\ = \begin{pmatrix} n^{n-1} \\ x \end{pmatrix}^{n-1} + 1 \\ = \begin{pmatrix} n^{n-1} \\ x \end{pmatrix}^{n-1} + 1 \\ = \begin{pmatrix} n^{n-1} \\ x \end{pmatrix}^{n-1} + 1 \\ = \begin{pmatrix} n^{n-1} \\ x \end{pmatrix}^{n-1} + 1 \\ = \begin{pmatrix} n^{n-1} \\ x \end{pmatrix}^{n-1} + 1 \\ = \begin{pmatrix} n^{n-1} \\ x \end{pmatrix}^{n-1} + 1 \\ = n^{n-1} \\ = n^{n-1} \end{pmatrix}^{n-1} + 1 \\ = n^{n-1} \\ = n^{n-1} + 1 \\ = n^{n-1} \\ = n^{n-1} + 1 \\ = n^{n-1} \\ = n^{n$$

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A. R

C.

D. E.

4. Let each fraction $= m$ ,			
2x - y = m(2a + b),			
$2y-z=m(\qquad 2b+c),$			
$-x + 2z = m(\alpha + 2c).$			
$\therefore 4A+2B+C; 7x = m(9a+8b+4c),$			
A+4B+2C; $7y = m(4a + 9b + Sc),$			
2A + B + 4C; $7z = m(Su + 4b + 9c),$			
$\therefore \frac{D+2E+3F}{D+E+F}; \frac{x+2y+3z}{x+y+z} = \frac{41a+3Sb+47c}{21(a+b+c)}$			
D + E + F, $x + y + z = 21(a + b + c)$			
5. Let $(x-a)^2$ be the factor, then, by division,			
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			
11 The Tell of The T40			
and a second and a second and a second			
$x^{3} + 2ax^{2} + 3a^{2}x + 4a^{3}$ $5a^{4} - q$ . 2nd Rem.			
$\therefore$ if $(x-\alpha)^2$ be a factor of $x^2 - yx + r$ ,			
$a^{*} - qa + r = 0$ , and $5a^{*} - q = 0$ ,			
$a^{\prime} = \frac{1}{2}q$			
$\therefore \frac{1}{2}qa - qa + r = 0,$			
$\therefore a = \frac{5r}{10}$			
$\frac{1}{49}$			
. 157 .			
$\therefore \left(\frac{5r}{4q}\right) = \frac{1}{2}q,$			
17.4			
$\therefore \left(\frac{r}{4}\right)^4 = \left(\frac{q}{5}\right)^4 - \text{Ans.}$			
···· · · · · · · · · · · · · · · · · ·			

6. Add 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 one another, must be equal to each of them.

$$\because \frac{10(x+y-z)}{10(x+1)} = \frac{x+y-z}{6}$$
  

$$\because x+1=6 \quad \therefore x=5.$$
  
Substituting this value for x,  

$$\frac{10+3y-4}{10} = \frac{15+4y-2z}{25} = \frac{5+y-z}{6}.$$
  

$$\therefore 7y-16z=-20,$$
  
and  $4y-7z=-5,$   

$$\therefore y=4$$
 and  $z=3$ , and as found,  $x=5.$  ANS.  
7. By division  

$$\frac{x}{y} = \frac{11x+4}{11y-8}.$$
  

$$\therefore -8x=4y \quad \therefore y=-2x.$$
  
Substitute for y in first of given equations  
 $x^{2}+zz^{2}=11x-4=0$   

$$\therefore (x-4)[3x+1]=0.$$
  

$$\therefore x=4 \text{ or } -\frac{1}{3}.$$
  
S. Clear second equation of fractions  

$$(z-x)y=b[y-x]z.$$
  
Substitute for  $z-x$  its value as given by the first equation, and divide the resulting equation by  $y-x$ .  

$$\therefore ay=bz \quad \therefore y=\frac{bz}{x}$$

Substitute be for ay in first equation .: x-z=ax-bz

$$\therefore x = \frac{1-b}{1-a}$$

Substitute for x and y in third equation their values given by A and B, and divide the result by ta;

 $\therefore \quad \left(\frac{1-b}{1-a}\right)^2 = \frac{b^2}{a^3} - \frac{b^$ 

9. Let x equal A's rate in miles per hour, and y = B's rate in miles per hour.

From the time A first overtook B till he overtook him again was 5 hours, .: during those five hours B, who had gone steadily forward, had made 5y miles progress.

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

$$\therefore 5y = 4x \quad \therefore y = \frac{1}{2}x,$$
  
i.e., B's rate =  $\frac{1}{2}$  of A's rate.—Ans  
NOTES.

Q. 1 was set about two 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 irrespective of the fact that it is a particular case of a well-known elementary theorem. The problem is a practical test of an examinee'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 done above.

 $Q_{1,2}(a)$  and (b) are simple exercises in the theory of divisors and the principle of symmetry. The examinees are told that the factors are linear.

Q. 4 is an example of the form in which homogeneous simple equations present themselves in actual investigations.

Q. 5 is an example of the most important use in algebra of the process for finding the H. 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

" If 
$$\frac{a}{b} = \frac{c}{d}$$
 then will  $\frac{a}{b} = \frac{ma + nc}{mb + nd}$ "

The theorem may be applied to resolve the equations in the way exhibited above, or to show that ANS. each of the given fractions is equal to z ; for each of them

$$=\frac{(x+y-z)+(4x+2y-3z)-(2x+3y-4z)}{6+(4x-1)-(x+5)}$$
  
=  $\frac{3x}{3x}$  = 1.

This reduces the equations to the simplest type.

Q. 7 is an easy simultaneous quadratic pair. Q. S is a very easy problem in elimination, one

of the commonest operations in algebra. Q. 9 is an ordinary problem. It was taken,

ANS.

А.

B.

Ass.

with a slight change to render it easier to work, from an algebra paper set to boys and girls in England.

THE public schools of St. John and Portland, N.B., before closing for the summer vacation were visited by the trustees. Senator Boyd, chairman of the board of trustees, in all of the schools put the question to vote as to whether the children, parents and pupils would like to have the holidays extended to August 26th, as the trustees recommended to the board of education. The decision was unanimously in favor of the recommendation of the trustees in every school.

#### STUDIES IN ZOOLOGY.

WE now come to a most interesting group of animals : forms which have had much to do with determining the outline of continents, and have been no small factors in the growth of islands. We have to deal with the coral *animals* (insects they are not); and how best, with listle material, to 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 should be passed round the class that each scholar may examine a specimen, and then, by questioning, 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. Dotting 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 radiating partitions, apparently the axis; or, were it a vegetable growth, the pith.

Now, before 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 inch 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 he might through a tube. As this is always the case, the class is justified in supposing 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 inform 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 partitions, 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 turn to the smaller pores which open on the sides. Some scholars, who have not as yet taken part in the work, might 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.

Return 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 questioning 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 caual, 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 more than the skeleton of hydra-like animals, the soft parts of life having been washed away.

In the salt 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 cups 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, its arms expanded and waving in the gentle current 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 they 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 coral may have begun to grow on the bottom of the ocean. Little by little 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 seawceds and logs settled upon them. At low tides the birds collected upon them, and finally shrubs and trees found soil on which to grow.—American Teachtr.

### PUNCTUATION IN READING.

PUNCTUATION, I should say, is of twofold importance. It is a great help to the clear understanding of the meaning and the pleasant reading of what is written. 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 enange has since been found necessary. Without the use and observance of these marks, much of the comfort and pleasure of reading would be lost. There are some very excellent teachers who never say one word about punctuation in class until the pupils are somewhat advanced in the Second Reader. They argue, it is too much and too difficult for the very little ones to be worried with. I certainly should not the first day, or even the first week of a child's schoollife, harass it with commas and periods; but just as soon as collamas and periods occur in the little sentences, I would teach 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. Most children take pride in learning new words, especially if they sound 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 to pupils; that this work be commenced in the primary grades, as soon as such marks occur in their work. Let a child learn to read, regardless of these marks, by passing over them, or by allowing the wrong inflection to be given, and you will have untold trouble in breaking up the bad habit. We all know from experience, that it is easier to teach several things correctly than to unfeach one that has been wrongly taught.

Attention should be called to the shades of meanings made, according to punctuation. To do this, a sentence may be written upon the board. Change the punctuation, and

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require them to read, observing 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 sat with Arthur as they drove home, and they all were happy." The same words punctuated differently read, "Will went to town, in the buggy John rode, upon the horse's back Guy sat with Arthur, as they drove home, and all were happy."

Punctuation and articulation 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 little ones conclude pronunciation and punctuation, not thought, be the main object of the lesson. To cultivate habits of observance, the class should sometimes be allowed to note carefully 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 he may find, to his joyful surprise, that he has learned the happy art of illustration. Nothing is impossible to him that wills.

Suppose you cannot originate an illustration—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 to be a universal plunderer. Invest some superfluous cash in a book of illustrations, and use them freely and on the slightest pretext.

Some persons will say this is very bad advice. and tends to make one only a borrower and to restrict the free action of the mind. Nothing of the kind ! If you borrow and use, you will find out that you can make an illustration 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 to show and to assert itself. What have you done? You first threw into your dry intellectual pump a few quarts of illustrations from various collections, and now you begin to pump out a thin but growing stream of illustrations which are all your own. "I am," said Falstaff, "not only witty myself, but the cause of wit in others." " I 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 teachers, 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 so, he can make some of his own if he will first live by borrowing. The trouble yet may be that his wealth will embarrass him. What an annoyance it is, when one 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 illustration 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 art, and then the dry and dreary desert of your instruction will blossom with flowers.—New York School Journal.

Our readers who are familiar with the lifework of the Rev. Moses Harvey, of St. John's, Newfoundland, will be very glad to hear that the council of the Royal Geographical Society of England have elected him one of its Fellows. Mr. Harvey owes his election to his eminent services to the cause of geographical science, in his various works en Newfoundland, and his able articles on Labrador and Newfoundland, in the ninth edition of the "Encyclopædia Britannica." This handsome recognition of Mr. Harvey's brilliant literary attainments is especially gratifying to his friends all over this western continent. His Excellency the Governor-General of Canada, and other Fellows of the Society, were his sponsors, and his election, we believe, was unanimous .- Quebec Chronicle.

### Educational Intelligence.

### THE ST. JOHN COUNTY (NEW BRUNSWICK) TEACHERS INSTITUTE.

THE St. John County Teachers' Institute held its annual gathering on the 24th and 25th ultimo. The president, Mr. W. P. Dole, took the chair. The number of members enrolled was 133. The following officers were elected for the ensuing year : W. M. McLean, A.B., President ; F H. Hayes, Vice-president; J. W. Hickson, A.B., Secretary-Treasurer ; all of whom, together with Miss Kate Kerr, of Portland, and Miss Annie M. Hea, of St. John, were appointed members of the executive committee. Mr. II. Town, principal of the Centennial Building, read an interesting paper on "Primary Work in Schools." Other pap is entitled "How to Secure Good Results in Writing and Drawing ;" " Temperance in Public School-;" "How to Deal with Indolent Pupils," by Mr. M. J. McKehna; "Primary Geography," by Miss Grace Murphy ; and " Canadian History," by Mr. 1. E. Dean, were read and fully discussed. Afterwards the members adjourned to the studio of Mr. John C. Mills, Germain Street, and listened to an able address on "Drawing." The next meeting will be held on the last Thursday and Friday in October, 1887.

### THE CHARLOTTE COUNTY (NEW BRUNSWICK) TEACHERS' INSTITUTE.

THE Charlotte County Teachers' Institute met on the 24th and 25th June, at St. Andrews. Mr. James Vroom presided. Thirty-two members were present. The officers elected were: F. O'Sullivan President; J. B. Oakes, Vice-President ; T. A. Hartt, Secretary-Treasurer ; and Miss Algar of St. Andrews, and Miss Alice M. Robinson, of St. Stephens, were added to the committee of management. The number of enrolled members was stated to be 46. The following papers were read and discussed : "Oral Lessons," by Mr. Wm. Brodie; "Health," 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 Arithmetic," by Mr. John Lawson. The determining of the time and place of next meeting was left to the committee, and the customary votes of thanks brought the meeting to a close.

#### KINGS COUNTY (NEW BRUNSWICK) TEACHERS' INSTITUTE.

This Institute having lapsed, owing to the nonassembling of the teachers for some years, was reorganized on the 24th June. Thirty-nine teachers enrolled themselves as members, although many others at ended later on. The officers elected were: Inspector D. P. Wetmore, President; Principal F. S. Chapman, Vice-President; Principal F. E. Whelphey, Secretary-Treasurer; ell of whom, together with Miss Marion Wetmore, and Miss Bertha Robertson, were appointed to form a committee of management. The papers read and discussed were: "School Discipline," by C. E. Black; "Rewards and Punishments," by J. W. Campbell; "Cultivating a Taste for English Literature," by F. S. Chapman; "The Culture of Teachers," by Wm. Somerville; "Plant Life," by J. E. Wetmore; and "Grammar," by Horace Wetmore. After passing various votes of thanks the meeting adjourned.

#### YORK COUNTY (NEW BRUNSWICK) TEACHERS' INSTITUTE.

At a meeting of this institute recently held, Mr. Jeremiah Meagher, read his paper on the "Forest Trees of New Brunswick, with their Characteristics," illustrating his descriptions by exhibiting specimens of the most important productions. The forest trees, he said, were his old familiar friends. There was not a tree of them that did not recall the past and associate it with youthful companions in many holiday excursions. With some happy references to the poetical inspirations of the American forests by Fenimore Cooper, he pro. ceeded to describe the most important forest productions of the province. He took up the hard woods in the following order : maple, ash, elm. oak, beech, birch, butternut; then the pine family, including white pine, white spruce, Llack spruce, hackmatack, balsam, fir and cedar, briefly 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 little scientific knowledge very useful lessons may be taught in our schools.

At the conclusion of Mr. Meagher's paper a short discussion followed on the subject matter of the paper, in which the teachers took occasion to compliment the writer on his scholarly effort.

#### THE EDUCATIONAL INSTITUTE OF NEW BRUNSWICK.

THE Educational Institute of New Brunswick met on the 25th ultimo. The meeting was presided 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 Brunswick. H. C. Creed was appointed sec.-treasurer, and H. C. Simpson, assistant secretary. F. H. Hayes introduced the following resolutions :--

Whereas, Previous to November, 1884, the school terms began on the first day of May and the first day of November in each year; and

Whereas, the beard of education has changed the day of opening of terms to the first of July and the first of January in each year, and

Whereas it is the opinion of this institute that such a change is not in the interest of true education; and

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

Resolved, that this institute reiterate the resolutions of last year, and memorialize the board of education that the school terms be made to begin and end on the same day as was the case previous to the change in November, 1884. This motion was unanimously carried.

At the evening session, addresses were made by the superintendent, Judge King, Senator Boyd, J. V. Ellis, the Rev. Dr. Hopper, Dr. Stockton, J. Allen Jack, Dr. Bydone Jack, and the Rev. Dr. Macrae. On the following day the meeting was continued. Inspector Oakes read an excellent paper on "Secondary Education," its importance, its present condition, and its needs. A discussion followed in which Messrs. Palmer, Jonah, Oakes, Jack, Cox, Belyea, and Steeves took part. In the afternoon Mr. John Lawson read a paper on the "Tonic Sol Fa System of Teaching Singing." At the evening session W. C. Gaunce's paper on "Temperance in the Public Schools" was read. This was followed by remarks by Mr. Crocket and the Hon. Mr. Boyd, and Mr. Chamberlain's paper on the "Study of Bird Life." In the morning of the third 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 Greater Permanency in the Profession of Teaching." Messrs, Hayes, Palmer, and Cox were appointed a committee to prepare and present to the Government a memorial with reference to the change of terms. A debate on the making of some change in the registers then took place, and a motion endorsing Mr. Oakes' paper was carried-In the evening a motion relative to an arbour day was carried unanimously. The result of the ballot for the executive committee consisting of nincteen members showed that the following were elected by the institute from its members :-Messrs. Cox, Hayes, Hay, Brydges, Wilber, Montgomery, Palmer, McLean, Inches and Barry; the other nine are the officers who are ex officio members. This ended the business of the institute.

### RECENT EXPLORATION AND SCI-ENTIFIC INVESTIGATION.

THE Director of the Geological Survey of Ireland, Professor Hull, F.R.S., delivered the annual address of the Victoria (Philosophical) Institute in London, on the 2Sth of May, on which occasion the institute's new president, Professor Stokes, President of the Royal Society, took the chair. The report was read by Captain F. Petrie, the honorary secretary, and showed that the institute's home, colonial and foreign members were upwards of eleven hundred, 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 about a truer appreciation of the result of scientific inquiry, especially in cases where scientific discovery was alleged by the opponents of religious beliefs to be subversive thereof. The author of the address then gave an account of the work, discoveries, and general results of the recent geological and geographical expedition to Egypt, Arabia, and Western Palestine, of which he had charge. Sketching the course taken by him (which to a considerable extent look the route ascribed to the Israelites), he gave an account of the physical features of the country, evidences of old sea margins 200 feet 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 Exodus, the Red Sea ran up into the Bitter Lakes, and must have formed a barrier to the traveller's progress at that period. He then alluded to the great changes of elevation in the land eastward of these lakes, mentioning that the waters of the Jordan 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 Mediterranean sea margin, or 1,292 feet above their present height. The great physical changes which had 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 most ancient in the world. The various geological and geographical features of the country were so described as to make the address a condensed report of all that is now known of them in Egypt, Palestine, and Arabia Petræa. Sir Henry Barkly, G.C.M.G., F.R.S., moved a vote of thanks to Professor Hull, 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 researches ; also a review of the question of evolution, by Professor Virchow, and the results of investigations in regard to the subject of the origin of man, as to which it had been shown by Sir William Dawson, that geology divided the chronology of animal life into four "great periods ;" in the first, or Eozoic, in the Geological as in the Bible records, were found the great reptiles ; and the last, or Tertiary, was again subdivided 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 be so different from those of man as to place insuperable difficulties in the way of the theory. In the gorilla, the high crest on the skull, which was also found in the hyena, was absent in man. Also, among other points, if the capacity of the brain of the anthropoid ape were taken at ten, that of man even 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 the transmutability of species, Barrande's arguments against the theory, founded on the results of a life of research among the fossil strata, had not yet been overthrown ; and modern research clearly pointed 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 carried out with the increased help and guidance of men of the highest scientific attainments, and in a manner to tend to advance truth. A conversazione was then held in the museum. WE hear that Mr. Thomas O'Hagan, of Pembroke, is taking a special course in elocution at Chautauqua.

MR. A. B. WRIGHT, B.A., of the Walkerton High 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.

THE 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 Professor Wright, formerly of Hamilton, 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 Ladies' College, is a high compliment to her musical ability. Miss Wright was one of the most distinguished graduates of the Hamilton Ladies' College.

WE have received a copy of an interesting report on the public schools in the district of Durham and Port Hope, including the town of Bowmanville, by P. S. Inspector W. 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.

COMPETITORS for the King's College County history prize this year will have as a subject the townships of Dartmouth, Preston 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 settlements 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 15th, 1887.-Halifax Herald.

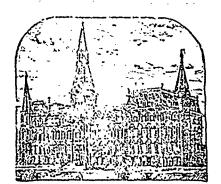
The Whitby Board of Education, at a meeting held on the 14th inst., appointed Mr. T. McHenry, now head master of Newbury high school, to the position of mathematical master of the Collegiate Institute, with a salary of \$1,000 per annum. At the same meeting Miss Burns was promoted to fill the position lately occupied by Miss Hickie, with a salary of \$325; and the attention of the board was called by the committee on school management, 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 before the notice of the Minister of Education.

AT the meeting of the New York State Teachers' Association held at Niagara Falls during the current month, Professor MeVicar of Toronto gave an address upon "The Work of a True Educator," which he treated under three heads : 1. Nature of the material 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 developed 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 moral and intellectual as well; and claimed that the time of growth alone supplies the necessary conditions for the symmetrical development of the entire nature; adding an earnest assertion of his belief that much good is to come from coeducation, 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 30th till the first Monday in August, but in rural districts subject to spring and autumn freshets, or where the harvest is late, the Board of Trustees having first obtained 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, organized under Sec. 105 (School Manual) ; the summer vacation shall extend from June 30th till the third Monday in August ; there shall also be an Easter vacation (beginning on Good Friday) of three days, the same being week days other than Saturdays. These provisions apply also to the schools in the towns of St. Andrews, Chatham and Newcastle .-WM. CROCKET, Chief Supt. Education. Education Office, Fredericton, N.B., July 9th, 1886. P. S.-The above provisions take effect during the current year. W. C.

A VERY successful teachers' institute was held at Lennoxville, Que., between the 6th and 9th inst., conducted by Mr. Robins, M.A., LL.D., Principal McGill Normal School, Rev. Mr. Rexford, B.A., Secretary Department of Public School Instruction, Quebec, and Mr. McGregor, I.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. Rexford's remarks on the "Duties of School Officers, Teachers, etc., in Government Schools, as laid down by the Quebec School Act," and those of Dr. Robins 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 teachers whose schools are closed, attend, but also a number of the teachers whose schools are open in July, were present with the consent of the Commissioners, and are not required to make up the days. The principal of Bishop's College, the Rev. Mr. Adams, and Mr. Henneker also addressed the assembled teachers. 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' meeting in the class-room for readings, recitations, music, etc. On Friday afternoon the institute closed in Lennoxville. We understand that on the 13th 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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Send for descriptive circular. Will be ready latter part of July. Address, WILLIAM BRIGGS, PUBLISHER,

75 & So King St. East, Toronto.

### McGILL UNIVERSITY, MONTREAL.

The Calendar for the Session 1886-87 is now published and contains detailed information re-specting conditions of Entrance, Course of Study, Degrees, etc., in the several Faculties and Depart-ments of the University, as follows : FACULTY OF ARTS.--Opening September 16th,

1886.

DONALDA SPECIAL COURSE FOR WOMEN .---September 16th.

FACULTY OF APPLIED SCIENCE .- Civil Engineering, Mechanical Engineering, Mining Engi-neering and Practical Chemistry, September 16th. FACULTY OF MEDICINE .- October 1st.

FACULTY OF LAW. - October 1st.

MCGILL NORMAL SCHOOL-September 1st.

Copies of the Calendar may be obtained on application to the undersigned.

W. C. BAYNES, B.A., Address-McGill College. Secretary.

### THE EDUCATIONAL WEEKLY.

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Summer Shorthand Class.

With the consent of the Hon the Minister of Education, the undersigned will conduct a Shorthand Class in the Education Department concurrently with the sessions of the Botany Class in July. For particulars address,

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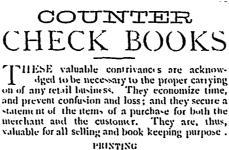
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TORONTO, May 21st, 1886.

### DEAR SIR,---

From the replies already received respecting the proposed Summer Class in Botany, the Minister of Education has decided to complete arrangements for its final organization. The Opening Lecture will be delivered in the Public Hall of the Education Department, on Tuesday, July 20th, at 2 p.m.

Mr. Spotton suggests that those purposing to join the class should read the following portions of Thome's Text Book : Chapters I, 2, 3 and 4, and so much of Chapter 6 as relates to Phanerogams and Vascular Cryptogams; or, the corresponding portions of Prantl's Text Book (Vines' Translation). Members should als, come provided with Pocket Lens, Knife, Dissecting Needles, Collecting Box, Part II of Spotton's Botany and Gray's Manual.

The Department will grant a Certificate, 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, ALEX MARLING, Secretary.

### CIRCULAR TO PUBLIC SCHOOL INSPECTORS.

### EDUCATION DEPARTMENT, ONTARIO, TORONTO, May 1st, 1886.

SIR,—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 kind should be offered for their self-improvement. Instead of the classes formerly taught at the Department it is now proposed to give a grant to each Inspectoral Division in which a class is formed for instruction in elementary drawing.

The conditions on which such classes may be formed are :---

r. The class must consist of at least ten persons holding a Public School Teacher's Certificate.

2. The teacher in charge must possess a legal certificate to teach drawing; or be approved of by the Education Department.

3. At 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, 1887.

5. The Primary Drawing Course only shall be taught.

6. A grant of \$20 will be made for each class of ten pupils, but only one class will be paid for in any Inspectoral 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.