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## The Educational Weekly

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We may, we think, without fear of wearying our readers with the salary question, add to the statistics already given the following from *The London, Eng., Schoolmaster* :—

“The more intelligent of the School Boards in all parts of the kingdom are alive to the advantages of proper remuneration for their teachers. They are aware also that a fixed progressive salary is better by far than a scheme of payment which includes any bonus or portion of the allowances obtained as the result of examinations. We are glad to find that a change of this kind has been carried out by the School Board for Edinburgh after due consideration with the teachers. At the last meeting of the Board a new scale of payment was unanimously adopted, as follows :—I. Head Masters.—That the salaries of head masters of permanent schools with accommodation for 400 pupils and upwards, calculated at 8 square feet per pupil, shall be as follows, viz. :—

In Schools with accommodation for	Shall commence at	And may rise to
400 pupils, and under 500 pupils....	£230	£300
500 “ “ “ 600 “ ...	250	320
600 “ “ “ 700 “ ...	280	350
700 “ “ “ 800 “ ...	310	380
800 “ “ “ 900 “ ...	320	390
900 “ “ “ 1,000 “ ...	330	400
1,000 “ “ “ 1,200 “ ...	340	410
1,200 “ and over.....	350	420

“That the salaries of head masters of temporary schools, and of permanent schools with accommodation for under 400 pupils, calculated at eight square feet per pupil, be specially considered. II.—First Assistant and Infant Mistresses.—The salaries of first assistants and infant mistresses in schools with accommodation for 700 pupils or over, calculated at eight square feet per pupil, shall commence at £130 and may rise by £5 a year to £150, and thereafter by £10 a year to £200. That the salaries of first assistants and infant mistresses in schools with accommodation for under 700 pupils calculated at eight square feet per pupil, be specially considered. III. Male Assistants.—That the salaries of male assistants shall commence at £85, and may rise by £5 a year to £120. IV. Female Assistants and Sewing Mistresses.—That the salaries of female assistants, also of sewing mistresses whose time is fully employed, shall commence at £65, and may rise by £5 a year to £100. That the salaries of sewing mistresses whose time is not fully employed be specially considered. V. Singing Masters.—That the salaries of singing masters shall be £10 per session for one hour per week, and £10 for each hour additional.”

THE following from the *New England Journal of Education* will inform our readers of the many summer schools existing upon the other side of the boundary which it is in their power to make use of if they desire to travel beyond the limits of our own domain during the coming vacation :—

The farm is good as a resort, if one chances to have access still to the rural home of childhood; the lake, the forest, the seashore have their advantages; but from

time immemorial the teacher, male and female, has returned to the autumn school thoroughly dissatisfied with the way the money and time have gone. There has been “evolved,” in these later years, a new disposition for the vacation days. Summer science schools, schools of oratory, elocution and expression, kindergarten instruction, schools of pedagogy, schools of methods, schools of languages, etc., etc., have been established in every conceivable attraction of location. Boston, with its cool summer breezes, its innumerable retreats by the sea, its art and its oratory; Harvard, with its classic halls, exquisite botanical grounds, observatory, libraries, and laboratories; Amherst, with its beautiful college grounds, elegant drives, and scholastic association; Chautauqua, with its unique inspirations of lake and hillside; Saratoga, with its subterranean laboratories, distilling health and social good cheer for the Hathorn, the Congress, and the Geysers, as mere desert for the intellectual feasts of King and Stern; Oswego, world-famed for its science and art of teaching, welcomes the linguists; Glens Falls answers the call with promise of every delight of lake, mountain, and rapids to her devotees; while Grand Rapids speaks from the Michigan forests of the beauties of her groves and halls; Martha’s Vineyard—city by the sea, queen of the cottage towns—renews her invitation of other years;—one and all of these vacation homes are cordial in their coquetish greetings to those who await the special fascination of some resort. Numerous as are these homes for the season, by sea and mountain, in classic halls and magnificent groves, there are too few for those who ought to seek them for the study of science, language, oratory, methods, pedagogy, etc. We have never known the teacher who closed a season with such study with any regrets at the sacrifices made; while we have known scores who have gone back to their work in September regretting above all else that they did not make their summer count for something definite by attendance upon some one of the summer schools.

## Contemporary Thought.

THE Hon. George Bancroft and Prof. F. H. Hedge are believed to be the only living Americans who had an acquaintance with Goethe. Dr. Hedge is about to publish a volume of "Hours with German Authors," for the writing of which his long and intimate acquaintance with German authors and their writings peculiarly fits him.

THERE is once more a wife at the White House. To nearly all men the intense degree of interest which nearly all women have exhibited in the Presidential marriage has furnished more food for thought than the fact of the marriage itself. The wedding cements no nations. It implies no heir to the White House, for the very next occupant of the greatest of human offices may even now be rooming over some hardware store in Albany or Buffalo. It means only that the President takes a wife and stoically undergoes the sharpest curiosity which the great American Paul Pry has ever inflicted on anybody so far. One might have supposed that the President would have chosen to wait until his marriage could have been considered his own affair, yet it must be remembered he is not youthful, and cannot afford to throw away three long years. Anyway, he is well married. Better late than never.—*The Current.*

IT would be difficult to overrate the significance and interest of the ceremony (the opening of the Colonial and Indian Exhibition) which took place at South Kensington. For the first time since our brothers began to leave their narrow island home to rear a Greater Britain beyond the seas, do they all assemble under the old roof-tree, bringing the choicest of their hard-won treasures to lay at the feet of the "Great White Mother," as a proof of how amply they have sustained the family reputation for dogged courage and hard and successful work. The Queen-Empress has seldom exercised a more queenly, a more imperial function; and she might be excused for cherishing a feeling of pride as she walked through the splendors of India, the treasures and trophies of Australasia, the varied products of Canada and the multifarious spoils of her other widely-scattered domains; as she looked upon the loyal and devoted faces of the thousands of subjects, white and dark, many of them come from the ends of the earth to do her homage; and reflected that in the long history of our world to no monarch has such a measure of honour, power and glory, and, we may add with truth, devotion been vouchsafed. This unparalleled Empire began hesitatingly some 300 years ago, under the reign of another great Queen, with a precarious footing on an area of 40,000 square miles, amid a population of savages; it culminates to day with an area of 9,000,000 square miles and a population, including feudatories, of something like 270,000,000, one-seventh of the landed surface of the globe, and one-sixth of its inhabitants, and that excluding the mother country.—*The London Times.*

SCHOOL and industrial exhibitions are becoming more and more common. When their object is to awaken a more intelligent interest in school work, and they honestly exhibit the actual daily results of pupils by exhibiting what attainments they have

made in all forms of school execution, they are excellent: but if they are prepared, in order to catch the breeze of popular applause, they are not worth the time spent in preparing for them. Supt. S. T. Dutton, of New Haven, Conn., is preparing a genuine exhibition for the purpose of showing the people of his city what their schools have been doing in penmanship, drawing, and other forms of hard work. They will comprise penmanship, including copying, dictation, and composition; drawing, including maps, original designs, all kinds of freehand and mechanical drawing, and envelopes of geometrical solids cut from paste-board; busy work, including work done in the primary grades for occupation and training, such as folding, cutting, weaving, peas-work, embroidery, painting, etc.; needle-work, including specimens of plain sewing, darning, knitting, embroidery, or other forms of needle-work; wood-work, including all kinds of work in carpentry, turning, scroll sawing, and carving; and miscellaneous, including models, casts, or any work in metals or leather, whether useful or ornamental.—*New York School Journal.*

THE question of University Confederation is again coming to the front. The rejection of the scheme by the Universities of Queen's and Trinity has narrowed the question to that of confederation between Victoria and the University of Toronto. At a meeting of the Board of Regents of Victoria University, held in Elm Street Methodist Church, Toronto, on Friday, May 21st, communications were read from the Attorney-General of Ontario, and from the Minister of Education, expressing the readiness of the Government to go forward with the proposed federation, if Victoria would fall in with the scheme. The official action of the Methodist Church cannot be taken before the meeting of the General Conference this autumn. Meanwhile, the noise of battle is again beginning to be heard along the line, and no doubt, before many weeks the whole question will come under renewed discussion in the newspapers. We sincerely hope that the authorities of Victoria will see their way to join with the University of Toronto. One warning must, however, be plainly given. The maximum of concession has already been made on behalf of the Provincial University, and the Convocation of that institution has expressed itself as strongly opposed to any considerable departure from the scheme of confederation as agreed upon in Conference. The Methodists have everything to gain from confederation, and many are beginning to question whether the University of Toronto has much to gain from it, in the modified form that is now possible. Certainly every reasonable concession has been made by that institution, and very little more in that direction need be expected.—*Evangelical Churchman.*

WHATEVER may be our individual views or prejudices in relation to the use and abuse of alcoholic liquors, the process of their manufacture is a very interesting chemical operation. Proof-spirit is defined by the United States internal revenue laws to be that mixture of alcohol and water which contains one-half of its volume of absolute alcohol and 53.71 parts of water. When the alcohol and water are mixed together—while combining—contraction of volume takes place to the extent

of 3.71 parts, resulting in 100 parts of proof-spirit. The law declares that the duties on all spirits shall be levied according to their equivalent in proof-spirits. The hydrometers adopted by the Government for the purpose of testing the degrees of strength are graded and marked (0°) for water, (100°) for proof spirit, and (200°) for absolute alcohol, at a standard temperature of 60° Fahr. Alcoholic liquors can be made from any substance that contains saccharine matter already formed by nature, or from any substance that contains the constituent elements that can be converted by some artificial process into the saccharine principle. In the United States they are generally produced from corn, rye, wheat, barley, rice, molasses, apples, grapes and peaches; sometimes from potatoes and beets. Vinous fermentation converts sugar, glucose or saccharine matter into alcohol and carbonic acid gas; the latter passing off into the atmosphere. In order to bring about vinous or alcoholic fermentation five agents are indispensable, viz., saccharine matter, water, heat, a ferment and atmospheric air. Sugar or saccharine matter in its various forms is the only element from which alcohol can be produced; the others are mere auxiliaries to the decomposition.—*Mr. Joseph Dawson, in Popular Science Monthly.*

A SECOND plan for making competition a public benefit has been that of State ownership of part of the competing lines. It has been tried on a large scale in Belgium and Prussia, and on a smaller scale in most other countries, the United States not excepted. It was thought by the advocates of the system that the government would thus obtain a controlling influence over the railroads with which it came in contact, and be able to regulate their policy by its example. These hopes have been disappointed. The private railroads, under such circumstances, regulate those of the government far more than the government regulates the private railroads. There is no chance to carry out any schemes of far-sighted policy. If the private roads are run to make money, the government roads must be managed with the same end in view. The tax-payers will not let the government lines show a deficit while competing lines pay dividends. No administration would dare to allow such a thing, however important the end to be attained. As a matter of fact the government roads of Belgium and Germany were as ready to give rebates as the private lines with which they came into competition. In Belgium they went so far as to grant special rates to those persons who would agree not to ship by canal under any circumstances. The same thing has been done in New York State; but in Belgium the peculiar thing was that the canals and railroads both belonged to the Government, and yet were fighting one another in this way. The system of partial state ownership was hardly distinguishable in its effects from simple private ownership. This fact has been clearly recognized within the last twelve years. Within this period, Belgium, Prussia and Italy have abandoned the "mixed system." Belgium and Prussia have made state management all but universal; Italy has practically given it up.—*From "The Difficulties of Railroad Regulation," by Arthur T. Hadley, in Popular Science Monthly.*

## Notes and Comments.

A LECTURE by Will Carleton was delivered at Kingston under the auspices of the Collegiate Institute on the 28th ultimo. Much appreciative interest; a full house; and large receipts were the results.

A PAGE of the *Phrenological Journal* is given to the pertinent question: Whether it would not be better for all concerned if daily papers should publish the decent and laudable acts of the people rather than the indecent and criminal acts.

WE devote some little space this week to the subject of music, and call the attention of our readers to the special paper contributed by Mr. J. L. Robertson, late managing editor of the *Canada School Journal*, and to the paper on "Tests of Intelligence in Music" under "Educational Opinion."

WE take pleasure in calling attention to the class in shorthand writing which, with the consent of the Hon. the Minister of Education, Mr. Thomas Bengough is intending to conduct in the Education Department concurrently with the sessions of the Botany Class in July. Stenography is a most useful acquisition; one, too, that can with ease be made lucrative. Its principles are not difficult to master, and the practice which makes perfect is a matter of individual effort. We think, therefore, that a part of the summer spent in making oneself *au fait* with the foundations of shorthand writing would be time well spent.

WE are in receipt of the following from the Education Department:—By a minute of the Education Department adopted 21st May, it was ordered:—That the "Public School History of England and Canada," published by The Copp, Clark Company (Limited), at thirty-five cents per copy, be authorised for use in the Public and High Schools of Ontario, subject to the regulations of the said Department. The Department further orders that "Creighton's Epoch Primer of English History," authorised in 1879, "Edith Thompson's History of England," authorised in 1877, and "Collier's History of the British Empire," authorised in 1867, be removed from the list of authorised books, on and after the first day of July, 1887.

THE financial depression in the country stands more in the way of educational advancement at present than perhaps any other cause. Money is so scarce that it is difficult to get districts to provide suitable school accommodation. Lower salaries are also paid; and this, in connection with the reduction in the provincial allowance, has caused the loss to the profession of many of the higher class of teachers. With a greater degree of prosperity in the country we would

see a proportionate degree of improvement in school matters, and it is to be hoped that the "good time coming" will not much longer be delayed.—*D. P. Wetmore, Inspector, Clifton, King's County, New Brunswick, in the Report for 1885.*

PROF. LEOPOLD VON RANKE, the most celebrated of Germans, died in the ninety-first year of his age. Dr. von Ranke was born at Wiehe, Thuringia, on December 21st, 1795, and completed his sixtieth year as Professor in the University of Berlin on March 31st, 1885. The work which first gave him European reputation was "The Popes of Rome," a continuation of his "Princes and Peoples of Southern Europe." It appeared in 1834, and the review of it by Lord Macaulay in *The Edinburgh Review* made Von Ranke's name familiar to English and American readers. He married an Irish lady, Miss Graves, and had a son and two or three daughters. Among his more recent publications were "A History of Wallenstein" (1869); "The German Powers and the League of Princes," being a history of Germany from 1780 to 1790 (1871); "A History of England, Principally in the Seventeenth Century" (1875); and two biographies of Frederick the Great and Frederick Wilhelm (1878). The great work of his life was a history of the world, entitled "Weltgeschichte," which was to be in nine volumes. He had completed but six volumes, but it is believed that he has left sufficient notes and documents to permit at least one more to be prepared by his literary executors.

A WANT of interest in school matters on the part of the trustees and community generally, frequently militates against the efficiency of the school. Teachers need the sympathy and moral support of the community, and if this is withheld, even though no fault is found with the teacher, it has a depressing and discouraging effect upon him. In almost any other concern in life more interest is manifested than in educational concerns. Let there be a report circulated that the country is in danger from an invasion, and every community is at once stirred to its very depths. Or let there be a case at law to be tried, no matter how trivial, and people will flock to the court of justice, and spend perhaps days in the most unprofitable manner. Or let there be an election and people will assemble (and rightly, too) from all sections. But let it be announced that there will be an examination of the public school, and the teacher may possibly secure the attendance of the resident Clergyman (if there be one), the Secretary to the Board of Trustees, and perhaps one or two others. If, however, on annual meeting day, there is a prospect of cutting down the teacher's salary, or in any way lessening the taxes of each ratepayer, even if it is only to the

amount of a few cents; or if there should be a prospect of preventing the trustees from appropriating a small amount for prizes; or if, in short, there is any move to defeat the great object aimed at by free schools the community will turn out *en masse*; for it is a deplorable fact that many ratepayers never attend an Annual School Meeting except for the purpose of recording their votes against the best interests of the school.—*Geo. Smith, Inspector, Elgin, Albert County, New Brunswick, in the Report for 1885.*

WE have received from a correspondent a communication which, with the omission of names, reads as follows:—

"In a certain school section we are very much troubled with the children of the separate school supporters. We are situated in the southerly suburb of a large town adjoining thereto and we maintain a large and graded school, about one-third of the children of school age in our section are those of Catholic parents. The R. C. school of the town is a mile and a half north of our school. During the winter months it is difficult for the young children of catholic parents to go so far to the R. C. S. In order to obviate the difficulty the parents of these children promised, verbally, that their taxes should be paid to our school this year, and on that promise we admitted the children. We now find at the termination of the final Court of Revision, that almost all the taxes of the Roman Catholics in our section are to be given the R. C. S. this year. Thus we have been educating, purely through sympathy, the children of these catholic parents, some 30 or 40 in all, so far in 1886 for nothing, and more, when they have been sending their taxes to the R. C. S. S. We here regard the separate school law as bad, but, more, it is so ambiguous that the trustees hardly know how to proceed. If we were to exclude these children until after the Court of Revision on the 31st of May it seems a hardship, and the innocent children suffer from it. But it is manifestly unfair to the other ratepayers to make them pay all the taxes, and keep up the school, and educate the catholic children for nothing. If the law was so framed that we could *compel* such catholic children attending the common schools to pay a rate bill, until it was found, after the final Court of Revision that their taxes came to the common school, it appears to us it would be far better. As it is, we know no way out of the muddle, and yet we do not want to do an injustice to the innocent catholic children. If you have any suggestions to make, Mr. Editor, we would like to see them through your journal."

WE fear scarcely any suggestion is possible. It is apparently a question of philanthropy *versus* legality. The kind treatment of the catholic children is highly laudable, but we fear that the law will take no cognizance of the verbal promises of the parents of the children to pay their taxes to the school section which they were permitted to attend. We think no taxes can be expected from these parents until their names have been transferred from the separate school to the public school roll.

## Literature and Science.

### ADVENTURES OF ULYSSES.

BY CHARLES LAMB.

CHAPTER I.—Continued.

THE Grecians hid themselves in the remote parts of the cave at sight of the uncouth monster. It was Polyphemus, the largest and savagest of the Cyclops, who boasted himself to be the son of Neptune. He looked more like a mountain crag than a man, and to his brutal body he had a brutish mind answerable. He drove his flock, all that gave milk, to the interior of the cave, but left the rams and the he-goats without. Then taking up a stone so massy that twenty oxen could not have drawn it, he placed it at the mouth of the cave, to defend the entrance, and sat him down to milk his ewes and his goats; which done, he lastly kindled a fire, and throwing his great eye round the cave (for the Cyclops have no more than one eye, and that placed in the midst of their forehead), by the glimmering light he discerned some of Ulysses' men.

"Ho! guests, what are you? Merchants or wandering thieves?" he bellowed out in a voice which took from them all power of reply, it was so astounding.

Only Ulysses summoned resolution to answer, that they came neither for plunder nor traffic, but were Grecians who had lost their way, returning from Troy; which famous city, under the conduct of Agamemnon, the renowned son of Atreus, they had sacked, and laid level with the ground. Yet now they prostrated themselves humbly before his feet, whom they acknowledged to be mightier than they, and besought him that he would bestow the rights of hospitality upon them, for that Jove was the avenger of wrongs done to strangers, and would fiercely resent any injury which they might suffer.

"Fool!" said the Cyclop, "to come so far to preach to me the fear of the gods. We Cyclops care not for your Jove, whom you fable to be nursed by a goat, nor any of your blessed ones. We are stronger than they, and dare bid open battle to Jove himself, though you and all your fellows of the earth join with him." And he bade them tell him where their ship was in which they came, and whether they had any companions. But Ulysses, with a wise caution, made answer that they had no ship or companions, but were unfortunate men, whom the sea, splitting their ship in pieces, had dashed upon his coast, and they alone had escaped. He replied nothing, but griping two of the nearest of them, as if they had been no more than children, he dashed their brains out against the earth, and shocking to relate, tore in pieces their limbs, and devoured them yet warm and trembling, making a lion's meal of them, lapping the blood; for the Cyclops are *man-eaters*, and esteem human flesh to be a delicacy far above goat's

or kid's; though by reason of their abhorred customs few men approach their coast, except some stragglers, or now and then a shipwrecked mariner. At a sight so horrid, Ulysses and his men were like distracted people. He, when he had made an end of his wicked supper, drained a draught of goat's milk down his prodigious throat, and lay down and slept among his goats. Then Ulysses drew his sword, and half resolved to thrust it with all his might in at the bosom of the sleeping monster; but wiser thoughts restrained him, else they had there without help all perished, for none but Polyphemus himself could have removed that mass of stone which he had placed to guard the entrance. So they were constrained to abide all that night in fear.

When day came, the Cyclop awoke, and kindling a fire, made his breakfast of two other of his unfortunate prisoners, then milked his goats as he was accustomed, and pushing aside the vast stone, and shutting it again when he had done, upon the prisoners, with as much ease as a man opens and shuts a quiver's lid, he let out his flock, and drove them before him with whistlings (as sharp as winds in storms) to the mountains.

Then Ulysses, of whose strength or cunning the Cyclop seems to have had as little heed as of an infant's, being left alone, with the remnant of his men which the Cyclop had not devoured, gave manifest proof how far manly wisdom excels brutish force. He chose a stake from among the wood which the Cyclop had piled up for firing, in length and thickness like a mast, which he sharpened and hardened in the fire, and selected four men, and instructed them what they should do with this stake, and made them perfect in their parts.

When the evening was come, the Cyclop drove home his sheep; and as fortune directed it, either of purpose, or that his memory was overruled by the gods to his hurt (as in the issue it proved), he drove the males of his flock, contrary to his custom, along with the dams into the pens. Then shutting to the stone of the cave, he fell to his horrible supper. When he had dispatched two more of the Grecians, Ulysses waxed bold with the contemplation of his project, and took a bowl of Greek wine, and merrily dared the Cyclop to drink.

"Cyclop," he said, "take a bowl of wine from the hand of your guest: it may serve to digest the man's flesh that you have eaten, and show what drink our ship held before it went down. All I ask in recompense, if you find it good, is to be dismissed in a whole skin. Truly you must look to have few visitors, if you observe this new custom of eating your guests."

The brute took and drank, and vehemently enjoyed the taste of wine, which was new to him, and swilled again at the flagon, and entreated for more, and prayed Ulysses to tell

him his name, that he might bestow a gift on the man who had given him such brave liquor. The Cyclops, he said, had grapes, but this rich juice, he swore, was simply divine. Again Ulysses plied him with the wine, and the fool drank it as fast as he poured it out, and again he asked the name of his benefactor, which Ulysses, cunningly dissembling, said, "My name is Noman; my kindred and friends in my own country call me Noman." "Then," said the Cyclop, "this is the kindness I will show thee, Noman: I will eat thee last of all thy friends." He had scarce expressed his savage kindness, when the fumes of the strong wine overcame him, and he reeled down upon the floor and sank into a deep sleep.

Ulysses watched his time, while the monster lay insensible, and, heartening up his men, they placed the sharp end of it in the fire till it was heated red-hot, and some god gave them a courage beyond that which they were used to have, and the four men with difficulty bored the sharp end of the hugh stake, which they had heated red-hot, right into the eye of the drunken cannibal, and Ulysses helped to thrust it in with all his might, still farther and farther, with effort, as men bore with an auger, till the scalded blood gushed out, and the eye-ball smoked, and the strings of the eye cracked, as the burning rafter broke in it, and the eye hissed, as hot iron hisses when it is plunged into water.

He, waking, roared with the pain so loud that all the caverns broke into claps like thunder. They fled, and dispersed into corners. He plucked the burning stake from his eye, and hurled the wood madly about the cave. Then he cried out with a mighty voice for his brethren the Cyclops, that dwelt hard by in caverns upon hills; they, hearing the terrible shout, came flocking from all parts to inquire, What ailed Polyphemus? and what cause he had for making such horrid clamors in the nighttime to break their sleeps? if his fright proceeded from any mortal? if strength or craft had given him his death's blow? He made answer from within that Noman had hurt him, Noman had killed him, Noman was with him in the cave. They replied, "If no man hurt thee, and no man is with thee, then thou art alone, and the evil that afflicts thee is from the hand of Heaven, which none can resist or help. So they left him and went their way, thinking that some disease troubled him. He, blind and ready to split with the anguish of the pain, went groaning up and down in the dark, to find the door-way, which when he found, he removed the stone, and sat in the threshold, feeling if he could lay hold on any man going out with the sheep, which (the day now breaking) were beginning to issue forth to their accustomed pastures.

(To be continued.)

## Special Papers.

### TORONTO PUBLIC SCHOOL TEACHERS' TONIC SOL-FA CLASS.

A few teachers from each of the public schools in the central part of Toronto, having the desire to test the Tonic Sol-fa method of teaching vocal music, were taught gratuitously during the past three months in the Kindergarten room of the Victoria Street school, by Mr. A. T. Cringan, graduate of the Tonic Sol-fa College, England. They assembled for the final lesson on the 31st ult., and after it was given, Mr. Parker was moved to the chair. Mr. W. J. Hendry, principal of the Jesse Ketchum school, addressed the teachers on the aspect of the method as it was presented to them, and said he was perfectly of opinion that the Tonic Sol-fa is a simple system, and that no person beginning to study music could do so with such ease as it afforded. The application of it to the staff notation, if necessary, is a ready process, and those who taught the staff are compelled to use some letters or syllables to indicate the notes. He saw in other classes that pupils paid more attention to these syllables and sang actually from them instead of the notes. He even did the same himself. In justice to Mr. Cringan, and to give an expression on the merits of the Tonic Sol-fa for the guidance of the inspector, he would move the following resolutions:—1. That in the opinion of these teachers who attended the singing class conducted by Mr. A. T. Cringan, the Tonic Sol-fa system of teaching music is an exceedingly simple and easy system by which to begin the study of music. 2. Inasmuch as it presents so few difficulties, we hold strongly to the opinion that it is admirably adapted to the wants of the junior classes of our public schools. 3. That a copy of these resolutions be sent to the inspector, with a view to his laying them before the committee of school management.

Mr. A. F. Macdonald, principal of the Wellesley school, seconded the motion, and the resolutions were discussed separately. Before putting them to the meeting the chairman remarked that teachers are not professionals in vocal music, and as they had to teach the subject in the schools, they were bound to accept the method that is productive of the best results. The class could now adapt the instruction they had received to that given in their schools. His own experience, after being six years in the city, is, that the children of the public schools do not sing from sight. Miss Macintyre said that the same results, as produced by the tonic sol-fa, could be attained by any other method that gives names to the notes, if the teachers were capable of teaching it, and advised that, before the

resolutions were discussed, a committee should visit the normal school and see the effect of the teaching given on Mr. Holt's system. It was not the system so much as the manner of teaching it. Mr. Stephens was of the same opinion, and did not consider the staff notation too difficult. Mr. Macdonald said that, from what he saw, the tonic sol-fa was better to learn from than the staff notation for junior classes. He did not think there was any class in the city that could sing a piece of music at sight from the staff notation. Mr. H. J. Clark said that he had seen the class at the normal school, and perceived that the instruction required a large amount of study, and much time was taken up in technicalities. With the tonic sol-fa any teacher with a fair knowledge of it could commence and produce good results, and children were pleased at being able to read the music readily. Mr. Perrin, public school music teacher, said that his time was so limited in the schools that it was hard to expect results from his teaching. In many cases he could only give ten minutes once a week to a class. Mrs. Arthurs remarked that she could not understand music from Mr. Perrin's teaching, but the tonic sol-fa had given her such a good knowledge of vocal music, that she could now turn it to account in the school. Mr. W. J. Hendry said that the system is just what is needed. Mr. Perrin gave satisfaction in his school, but the sol-fa has greatly helped. There is the same difference between the tonic sol-fa and the staff notation as there is between the phonic system of teaching to read and the old alphabetical or the "look and say" methods. In the staff pupils have to make calculations, and difficulties are presented at first which are obviated by the tonic sol-fa. The latter could be used to help the former with the very best results. The resolutions were carried—only two dissenting.

The chairman then, on behalf of the class, presented Mr. Cringan with a purse of money, and expressed the great satisfaction they felt at the beneficial course they had gone through, which, he hoped, would be reflected in the schools. In returning brief thanks, Mr. Cringan remarked that he had experienced the greatest pleasure in teaching such an intelligent and appreciative class.

J. L. ROBERTSON.

### TESTS OF INTELLIGENCE IN MUSIC.

SINGING in concert is a poor test of the musical intelligence of a class or school. Ten scholars, who can read readily at sight, distributed throughout a school of one hundred, can make the school appear much more intelligent in music than it really is. Remove that tenth and you remove half of the musical ability.

The reason of this is plain. Imitation is one of the earliest faculties developed, and children at first are trained in imitating musical sounds in their rote-songs. When it comes to singing by note some of them know as much as they appear to, but many of them find it easier to continue as they began, by imitating.

The rapidity with which an experienced pupil will catch and imitate a sound is almost marvellous. Children singing with an instrument depend on the instrument for the tones, and by a process of almost instantaneous imitation they sing with the instrument. Teachers are waking up to this fact, and condemn the use of instruments in this manner as uneducational.

The trouble, however, is not with the instrument because it is an instrument, but because the tones are produced for the children to imitate, instead of allowing the children to think the tones for themselves. This is justly deemed uneducational; yet in singing at sight in concert there is largely the method pursued so far as the duller part of the class is concerned—the part that needs the most help. The tones are produced by the bright, naturally-musical pupils before the dull ones can thing, and they are thus robbed of the chance for growth in musical intelligence in the same manner that all are when they depend on an instrument.

Individual singing, and writing music which is heard, are the two ways which avoid these disadvantages of singing in concert. The latter has its advantages, but it is not the best test of musical intelligence.

While such matters as voice culture, singing in correct time and tune, expression, etc., can be tested by individual singing only, intelligence in music can be better tested by written examinations. By written examinations we do not mean answers to such questions as "How many quarter-notes in 3-4 measure?" That has very little to do with music. But let the teacher sing a short phrase, and require the class to produce the written representation of what they hear. Present the thing itself—not its representation—and see if your pupils understand it. It would be well to begin by giving simply time without regard to tune, and tune without regard to time, later giving examples in melody.

One cannot judge how good a knowledge of spelling members of a class have by presenting printed words, and requiring them to tell, in concert or individually, what the words are. By pronouncing the word—presenting the thing itself—and requiring the class to individually give the written representation, an accurate idea can be gained of the real intelligence of the class, collectively or individually.

To test the ability of each individual scholar to read music by requiring him to sing,—using of a necessity a different example for each pupil, or else examining in a separate room,—would take more time than is allowed to music in the public schools; but to sing before the school a short exercise, requiring each pupil to produce the written representation of what they hear, would take very little time indeed, and would in some respects, aid to an intelligence in music more than deciphering a representation.

Giving the representation of what is heard by the pupils has the same value in music, so far as an intelligent understanding is concerned, that it has in language.—*The School-Music Journal.*

### CAPITAL, LABOUR, AND EDUCATION.

IT is a fallacy that the interests of capital and labour are at all time identical. Conflict is as much—perhaps more—a part of the order of nature as peace. They are identical only in so far as that they are both in the world, and it is better that the world should be at peace than at war. It is fallacy also to argue that the interests of these two are antagonistic. There is a middle ground upon which the truth stands. The interests of an employer and his employé lie together with reference to outside inimical interests. The employer and employé are at peace with each other in their mutual contest with competition. But, as between themselves, it is to the interest of the employer to get the best service for the least pay; it is to the interest of the employé to get the most compensation for the least self-expenditure. The organization of labour is not to be feared, but encouraged. The avowed object of labour organization is not to incite, but to abate violence. Such organizations, though protective, are not, therefore, warlike. Their influence is educational. Free discussion always, in the long run evolves truth. There is, therefore, little to be dreaded.

So rapid is the education going on in this country that the footstep of enlightenment is at every threshold. The children of nearly every household are reading and thinking. Poverty no longer wears the gaunt and ignorant shape it once wore. The equitable adjustment approaches when all classes shall have more privileges and all individuals shall have found their best employment. With the progress of ideas come a belief that liquor is a destroying element, and the beneficent influence of women grows daily more potent. With the growth of public knowledge, there is reason to believe a public sentiment will continue to grow which will prevent the absolute supremacy of any one class.—*The Current.*

### DON'T.

I BELIEVE, if there is one word that grown-up folks are more fond of using to us little folks than any other word in the big dictionary, it is the word *don't*. It is all the time "Don't do this," and "Don't do that," and "Don't do the other," until I am sometimes afraid there will be nothing left that we can do. Why, for years and years and years, ever since I was a tiny little tot, this word *don't* has been my torment. It's "Lizzie, don't make a noise, you disturb me," and "Lizzie, don't eat so much candy, it will make you sick," and "Lizzie, don't be so idle," and "Don't talk so much," and "Don't soil your clothes," and "Don't" everything else. One day I thought I'd count how many times I was told not to do things! Just think! I counted twenty-three *don'ts*, and I think I missed two or three little ones besides.

But now it is my turn. I have got a chance to talk, and I'm going to tell some of the big people when to *don't*. That is what my piece is about. First: I shall tell the papas and mammas—Don't scold the children, just because you have been at a party the night before, and so feel tired and cross. Second: Don't fret and make wrinkles in your faces, over things that cannot be helped. I think fretting spoils big folks just as much as it does us little people. Third: Don't forget where you put your scissors, and then say you s'pose the children have taken them. Oh! I could tell you ever so many *don'ts*, but I think I'll only say one more, and that is—Don't think I mean to be saucy, because all these *don'ts* are in my piece, and I had to say them.—*E. C. Rook in the American Teacher.*

### INFECTIOUS DISEASES.

MANY an epidemic of scarlet fever, measles, or diphtheria might be entirely avoided, or at least greatly curtailed in the extent of its prevalence, if the teachers of the public schools were able to recognize the appearance of these diseases in the schoolroom. Unfortunately, however, those symptoms which mark the onset of an infectious disease are often vague and ill-defined, and it is frequently difficult, and sometimes impossible, to decide which disease is about to make its appearance. There are, however, certain danger signals which should always arrest the attention of the teacher and lead her to suspect that the illness may be due to causes dangerous to the health of the other pupils; for example: A child appears listless and dull, shows marked inattention to study, and is disinclined to play as usual; or, he may be unusually restless, and perhaps complain of headache, sore throat, or pain in the head or limbs; fever, with great

thirst, may be present, or he may suffer from nausea and vomiting, or from a cough, which may be teasing, and persistent, metallic, or paroxysmal in character. These symptoms occurring in a previously healthy child should place the teacher on her guard and lead her to ask for the opinion of the family physician. Such action can lead to no evil results, even if the indisposition should be only temporary while an outbreak of contagious disease might, in this way, often be prevented. An excess of caution on the part of the teacher cannot be blameable; certainly a child suffering from these symptoms is better off at home than in any schoolroom.—*L. W. Baker, M.D.*

TEACH the pupil in every subject and at all times with a view to his power of thought, ability to think clearly, definitely, promptly, and vigorously. The art of thinking is acquired largely in the lower grades. It is a mistake, oftentimes a fatal one, to consider the high school as the place in which to teach this art. The reliability of thought is in the reliability of the premises, in appreciation of single, simple facts and truths. Processes of reaching conclusions are of no value if we are not skilled in the art of perception and conception in regard to initial facts. The expert instructor in any art detains the pupil upon the rudiments until patience is nearly exhausted, after which he advances rapidly. In thinking, the foundation of success lies in the power to handle individual facts keenly, quickly, promptly. It is this personality of acquaintance with individual facts that makes conclusions valuable. This power must come early or it will never come. The child must know what he sees, and know that he sees just that and nothing else. We talk much of the value of correct observation without emphasizing the fact that we need it as the preliminary of vigorous thought. In many essentials of thought the country school and the lower grades often do more for the pupil than the college does for another who has not had this foundation-work.—*American Teacher.*

IN a quiet, effective way our teachers can lay before the school authorities the *fact* that with maps, blackboards, a globe and a magnet, you can teach a whole class of twenty or thirty, more and better than you can teach a single pupil without these helps; it will be an easy matter to take the next step and convince them that true economy demands that the school shall be furnished with these things without delay. All get the benefit of these helps—and the cost when scattered over all the taxable property of the district—railroad and non-resident—becomes so small that it cannot be figured or computed.—*American Journal of Education.*

Mathematics.

SOLUTIONS TO FIRST CLASS "A" AND "B" ALGEBRA PAPERS FOR 1885.

15. (3) Solve:

$$(1+x^2)^2 - 2ax(1-x^2)$$

$$1 + 2x^2 + x^4 - 2ax - 2ax^3$$

$$x^4 + 2ax^3 + 2x^2 - 2ax - 1 = 0$$

$$x^2 + 2ax - 1 = \frac{2a}{x} - \frac{1}{x^2} = 0$$

$$\left(x^2 - 2 + \frac{1}{x^2}\right) + 2a\left(x - \frac{1}{x}\right) = 0$$

$$\left(x - \frac{1}{x}\right)^2 + 2a\left(x - \frac{1}{x}\right) + a^2 - a^2 = 0$$

$$x - \frac{1}{x} + a = \pm \sqrt{a^2 - 4}$$

$$x - \frac{1}{x} = -a \pm \sqrt{a^2 - 4}$$

$$x^2 - 1 = (-a \pm \sqrt{a^2 - 4})x$$

$$x^2 - (-a \pm \sqrt{a^2 - 4})x - 1 = 0$$

$$x = \frac{(-a \pm \sqrt{a^2 - 4}) \pm \sqrt{(-a \pm \sqrt{a^2 - 4})^2 + 4}}{2}$$

16. If  $a_0, a_1, a_2, a_3, \dots$  be the coefficients in order of the expansion of  $(1+x+x^2+\dots+x^n)^m$  prove that

$$(1) a_0 + a_1 + a_2 + \dots + a_{nr} = (r+1)^n$$

$$(2) a_1 + 2a_2 + 3a_3 + \dots + nra_n = \frac{1}{2} nr(r+1)^n$$

$$a_0 + a_1x + a_2x^2 + a_3x^3 + \dots + a_nx^n$$

$$= (1+x+x^2+\dots+x^n)^m \text{ identically}$$

Put  $x=1+z$

$$\text{Then } a_0 + a_1(1+z) + a_2(1+z)^2 + \dots + a_n(1+z)^n$$

$$= \{1 + (1+z) + (1+z)^2 + \dots + (1+z)^n\}^m$$

$$\therefore (a_0 + a_1 + a_2 + \dots + a_n) + (a_1 + 2a_2 + 3a_3 + \dots + nra_n)z$$

+ terms involving higher powers of  $z$

$$= \{1 + 1 + 1 + \dots + (r+1) + (1+2+3+\dots+r)z + \dots + z^n\}^m$$

$$= \left\{ (r+1) + \frac{r(r+1)}{2}z + \dots + z^n \right\}^m$$

$$= (r+1)^m + n(r+1)^{m-1} \left\{ \frac{r(r+1)}{2}z + \dots \right\} + \frac{n(n-1)}{2} (r+1)^{m-2} \left\{ \frac{r(r+1)}{2}z + \dots \right\}^2$$

$$= (r+1)^m + \frac{rn(r+1)^{m-1}}{2}z + \dots + \text{terms involving higher powers of } z$$

Equate coefficients and  $a_0 + a_1 + a_2 + \dots + a_n = (r+1)^m$

$$a_1 + 2a_2 + 3a_3 + \dots + nra_n = \frac{rn(r+1)^{m-1}}{2}$$

PROBLEMS IN ARITHMETIC.

SUITABLE FOR CANDIDATES PREPARING FOR THIRD AND SECOND CLASS CERTIFICATES.

1. A owns a square field which contains as many acres as there are rods around it. How many acres in the field? Ans.—2560.

2. Suppose A and B work together for 4 hours, after which A leaves, and B does the remainder in 3 hours 36 minutes; but if B had left, it would have taken A 4 hours 30 minutes to finish the work. Find in what time each would have done it alone. Ans.—A's time is  $13\frac{1}{2}$  hours, and B's to 3 hours.

3. A, B and C start at noon from the same point to travel around a circle of 390 rods. A walks 7 rods and B 13 rods per minute in the same way; C travels 19 rods per minute in an opposite direction. At what time will the three meet at the starting point, each travelling at a uniform rate? Ans.—In 3 hours 15 minutes, viz., 3:15 p.m.

4. A man bought 50 bushels of grain, paying 75 cents a bushel for rye, and \$1.25 for wheat; how many bushels of each did he buy if the grain cost him \$52.50? Ans.—20 bu. of rye and 30 bu. of wheat.

5. How many miles of furrow 15 inches wide are turned in plowing a rectangular field whose width is 30 rods, and length 10 rods less than its diagonal? Ans.— $49\frac{1}{2}$  miles.

6. A, B and C having four loaves for which A paid 5 cents, B 8 cents, and C 11 cents, eat three loaves and sell the fourth to D for 24 cents. Divide the 24 cents equitably. Ans.—A gets  $2\frac{3}{4}$  cents, B gets 8 cents, C gets  $13\frac{1}{4}$  cents.

7. A drover paid \$76 for calves and sheep, \$3 for calves and \$2 for sheep; he sold  $\frac{1}{4}$  of the calves and  $\frac{1}{2}$  of the sheep for \$23; and in so doing lost  $\frac{1}{2}$  on their cost. How many of each did he purchase? Ans.—12 calves and 20 sheep.

8. What is the face of a note which yields \$115.80 when discounted at the bank for 90 days at 6%? Ans.—117.62.

9. At 20 cents per square foot of surface find the cost of a stove pipe 16 feet long and 7 inches in diameter. Ans.—\$5.86.

10. How much currency is required to purchase United States 5% bonds, interest payable in gold, to yield an income of \$544 in currency when gold is at 36 per cent. premium; the broker's commission being  $\frac{1}{4}$  per cent in currency on the par value of the bonds? Ans.—\$8020.

11. A man bought a farm for \$3,500 to be paid in 4 years, with annual interest at 6%, but failed to pay the interest. What was due at the close of the fourth year? Ans.—\$4415.60.

12. I have a certain number of 3 inch cubes which exactly fill three cubical boxes. The first box contains 217 more than the second, and the second 169 more than the third. How many cubes are there, and what is the size of the boxes? Ans.—1584 cubes; sides of boxes are 21 inches, 24 inches and 27 inches, respectively.

TORONTO:

THURSDAY, JUNE 10, 1886.

*THE PENSION FUND.*

We take this opportunity of calling the attention of our readers to the fact that arrears of subscriptions to the pension fund will not be received after the *first day of July next*, and that *no new names can now be added to the list.*

The regulations read as follows:—

194. (3). To remove doubts, nothing in this section contained shall be held as applying to any person who, prior to 1871, had ceased to be engaged in his profession as a teacher, and has not heretofore contributed to the said fund, and no payment for arrears shall be received after the first day of July, 1886.

280. Arrears, if any, from 1854 inclusive (if the applicant was then teaching), shall be charged at the rate of \$5 per annum, and must be paid before the applicant ceases teaching. All arrears must be paid before 1st July, 1886.

*THE QUEBEC EDUCATIONAL BLUE-BOOK.*

The Report of the Superintendent of Public Instruction of the Province of Quebec for the year 1884-85 is a volume of close upon five hundred pages, replete with matters of interest to all concerned with the educational system of the Dominion of Canada.

It is well occasionally to look beyond our own sphere and note what is taking place around us, to compare the growth of different methods in different circumstances, and to learn such lessons as may be drawn from the comparison. A few words, therefore, on the state of education in our sister province will not be out of place.

The first thing that is noticeable in the Quebec blue-book is that, although progress is reported, it is spoken of in guarded terms. There is cause for congratulation, but for congratulation not of an unqualified description. The first sentence of the General Statement tells us that "at the present moment educational matters in this Province are on as satisfactory a footing as possible." Further on we shall discover what is more particularly meant by "as possible."

The number of educational institutions of all kinds has increased from 5,079 in

1883-84 to 5,131 in 1884-85, and the number of pupils attending these from 252,932 to 258,099 during the same period—an increase of 5,167. If we take into consideration the natural increase of population (the population of the Province of Quebec is 1,359,027), and remember that we are speaking of a province in which there is a predominance of French inhabitants, we shall conclude that an increased attendance of about five thousand pupils in one year is by no means phenomenal. The increase for the two years preceding 1884-85 is 7,707 and 6,100 respectively—figures which go to prove that not much has been gained during the past twelve months. The increase in the amount paid by the Government for educational purposes is ridiculously small, being only \$417.

In the paragraphs which sum up the various points touched upon in the numerous Inspectors' Reports, M. Ouimet, the Superintendent, first mentions the improvement in the "condition of the school-houses and furniture." He proceeds then to deplore "the intrusion in most of the municipalities of non-certificated female teachers, whose number has a tendency to increase; this unfortunate result," he says, "is due to the smallness of the salaries, which has also had the effect of turning away those laymen who wished to devote themselves to teaching." And he goes on to say, "I have already suggested—and the majority of the inspectors seem to agree with me—that a minimum should be fixed for the salaries as the only remedy for so deplorable a state of affairs." This intrusion of non-certificated female teachers is an evil of which many complaints are made.

M. Ouimet also once more strongly urges the necessity of establishing regularly organized Teachers' Institutes. Quebec, it seems, lacks this powerful stimulus to progress. In 1880 a Teachers' Congress was held in Montreal which was productive of great benefit; and in 1884 Teachers' Institutes were inaugurated in the Eastern Townships; but apart from these little has been done in this line. We think Quebec could with much advantage to herself take a chapter out of Ontario's book in the matter of Teachers' Institutes.

Another interesting and important paragraph in the statement of the Superintendent is that relating to "Elementary Physiology and Hygiene." He says:—

"Special efforts have been made during the past few years by leading educationalists in different countries to provide for the instruction of youth in the principles which underlie the preservation of health and the formation of correct physical habits. In several of the neighbouring States, instruction in physiology and hygiene, with special reference to the effect of stimulants and narcotics upon the human system, has been made compulsory, and all teachers are required to pass examination in these subjects, in order that they may be able to teach them successfully in their schools. This widespread effort in the United States to provide scientific temperance instruction in the schools, is influencing the course of education in this Province. In response to petitions from different parts of the Province, the Protestant Committee, at a recent meeting, resolved, 'that as preparatory to the introduction of physiology and hygiene into the schools, the subject be required, and a text-book thereon appointed in the Regulations for the Examination of teachers: and that the Principal of the McGill Normal School be requested to report to the Committee as to the instruction in physiology and hygiene, thereon, with any suggestions for additions thereto.' This is the beginning of an important movement which will, no doubt, become general, and which must exercise an important influence for good upon the youth of the Province.

Coming to the Appendices, we find in No. 1—the Reports of the School Inspectors—a large number of highly instructive facts stated, and opinions expressed. The large number of non-certificated teachers with the cause of this high numerical proportion—low salaries—is frequently alluded to and commented on. On this topic a paragraph or two may be quoted:

"I would be in favour," says one, "of establishing a minimum amount for teachers' salaries, because these persons, as you very properly observe, should be better treated than a wood-chopper or a servant; and it is really shameful to see how some municipalities treat their teachers, whom they consider too well remunerated. I think that such a law would have a good effect in my district, and would give rise to but few discriminations."

"Arithmetic," says another, "is indifferently taught; it is taught only theoretically, and no heed is paid to its practical application. But how can this be helped when we have *cheap* teachers, who are just as good as able ones for commissioners and many parents who cannot be made to understand that their money is thrown away if they do not engage good teachers."

"It is beyond a doubt that, with our present system of having the greater part of the schools taught by female teachers, very little or no encouragement is given to the education of boys from twelve to sixteen years of age. . . . This is the naked truth: A youth of sixteen has the right to go to a school taught by a girl of eighteen. Is it not a painful sight to see such a youth placed by authority of the law, under such frail control? . . . At the age when the critical period of his physical, moral and intellectual education commences—at the age when passions have their birth and projects for the future are formed, it seems to me that a youth should have a firm and safe, a wise

and experienced guide. He is not given one, and these big lads rather become enervated and degenerated by being left to the guidance of a young girl who, very frequently, can hardly succeed in getting herself obeyed by a child of ten years without appealing to outside authority."

Another Inspector, writing in the same strain, says:—

"This year again I regret to find so many young girls, barely fifteen years of age, placed in charge of schools. It is a fact well known to all who are experienced in teaching, that it requires more tact to manage a school of young children and to mould their intellects than to manage those who already possess the rudiments of knowledge. In the first case, a foundation has to be laid and if it be a solid one, the edifice built upon it will be secure, but if, on the contrary, a foundation be built upon sand, we can never succeed in giving permanence or stability to any work, and can one find a nobler work than that of the education of a nation. Now, how can these young girls, with all their courage and zeal, impart what they do not possess, and mould and direct these young intellects in the right path? If, in addition to this, their education is defective, the result is sure to be deplorable. Assuredly, the least we can require of a teacher is that she be able to properly pronounce the words most commonly used. I do not claim that these teachers should have a very extensive literary knowledge, or that they should express themselves in elegant language. It would be requiring too much, if we consider the slender pittance which most of them receive. But we are at least entitled to insist upon their being able to pronounce correctly. After due reflection I think that it will be a long time before we can effect any reform in these schools; we shall probably have to wait until the present generation of youths has grown older and feels that it is imperatively necessary to make a better selection."

Yet another complains: "Most of the inferior schools are taught by non-certificated teachers, whom the commissioners are obliged to engage because they can get no others. Some of them teach well, but they are the exception. . . . As a general rule, these young teachers who have been educated in good schools are not deficient in knowledge, but in professional training. Having no experience, they teach without method or discipline, and frequently without energy; their indifference shows that they attach but little importance to their office, and are but little impressed with their responsibility. The result is suspicion and want of confidence on the part of the interested parties; the pupils become less assiduous in their attendance at school, and the parents frequently prefer to keep them at home."

On the other important matter alluded to in the General Statement—Teachers' Institutes—much also is said. There is little doubt but that, with the strong belief in the benefits to be derived from these gaining ground rapidly, we shall soon be able to record their establishment in Quebec.

Amongst other topics mentioned in these Reports, M. C. Brault, of Pointe-Claire, makes a good suggestion. Speak-

ing of the celebration of Arbour Day in his Inspectorate, he says: "Would it not be advisable to keep you informed every year as to the number of trees planted in each school-lot?" This, we think, would be an admirable addition to the information which is sent to the Education Department.

Mr. A. Fontaine, of Joliette, also touches on a vital question in a laudably practical manner:—

"I cannot conclude these remarks," he says, "without saying a word on the diseases which have prevailed in some municipalities, and the death-rate amongst the school children. When we notice the ravages made by epidemic diseases, and especially diphtheria, may we not ask ourselves whether it would not be advisable, and even necessary, to teach in all the schools the first principles of hygiene? For I have no hesitation in saying that hygiene or the science of preserving health, is unknown or misunderstood. Now, if it be necessary to learn all the sciences, the knowledge of the means of preserving health and life are, in my estimation, of no little importance. The people of Canada deservedly bear the reputation of being strong, hardy and intelligent. But in order to maintain this reputation they must submit to the ordinary laws of hygiene; they must learn its principles and observe them; they must learn them in the common schools as well as in the universities."

Amongst minor points, the Inspector for Ste. Rose advises recommending pupils to read aloud at home; he also requires children to be taught to say their prayers with reverence, and to be accustomed to be polite, and to acquire good habits. It is pleasant to see details of this description mentioned by Inspectors in their official Reports; it is evidence, we think, of zeal and ardour.

#### REVIEWS AND NOTICES OF BOOKS.

THE *Spectator*, commenting on Sir John Lubbock's list of a hundred books, says: All this sort of language about books seems to us conventional. Books are favourites when they refresh and inspire, not when they counsel and comfort. If the present writer, for instance, made a list of his favourite books, how surprised some of his friends would be! Very high on his list would stand Grimm's "Volksmährchen"—not Grimm's "Popular Tales," because some prime favourites, the old monkish legends, are seldom rendered in the English versions. Now, what is the charm of a book like that? If it is to be called a faithful friend, certainly it is not so even in the sense in which a dog or a bird is a faithful friend. It gives no signs of attachment. It obtrudes no remonstrance. It tenders no sympathy. It simply gives a delightful picture of the *naïveté* and childlikeness of the mediæval world. The simplicity of the tales of wonder, the shrewdness and weirdness, with the singularly simple wisdom, of the stories of Death, Satan, and the Saints, are of a kind which fascinate the mind in this sceptical century, and refresh it with the picture of a very primitive

humour and a very primitive conscience. As Arnold says of Wordsworth, not very truly, but as we can say of Grimm's "Volksmährchen" with perfect truth,—

The cloud of mortal destiny,  
Others will front it fearlessly,  
But who like him will put it by?

That is what we very often want of a book, to put by "the cloud of mortal destiny." And that is what Homer, and Herodotus, and Grimm's "Volksmährchen" alike give us—a complete refreshment of spirit. In such writers we find once more the old, childlike attitude of man, without missing his noble aspirations, his inextinguishable curiosity, and his awestruck recognition of the heavens above and the hell beneath him. Again, take a very different book, which probably a great number of our readers have never read, Cardinal Newman's "Callista." That which makes "Callista" so refreshing to the present writes is its wonderful restoration of the age in which Christianity was struggling with the Roman paganism, and giving men at once new life and a new indifference to death. To the mind of any one who has fully enjoyed that book, it is a book not to be read once, but year after year, with an ever-growing sense of obligation. It does not, indeed, restore to us the delight with which a renewed vision of the childlike stage in man's growth always fills us, as do the great imaginative works of the ages of legend, and the stories of marvel in the Middle Ages. But it makes us see as no other work of fiction has ever made us see, what Christianity had to do in the age of the martyrs, and what it really did. In fact, it brings before our eyes the inward significance of the greatest of the historical tragedies in the whole story of our race. In a lesser degree, such stories as Sir Walter Scott's "Abbott" or "Old Mortality" do us just the same kind of service. They give us some impression of the inner life of the great dynastic and religious conflicts of past times, and suggest something of what they meant to the hearts of those who were the chief actors. We cannot regard even the greatest of Shakespeare's plays as offering the same kind of refreshment. No greater work than "Hamlet" was ever produced by the human intellect; and "Hamlet," no doubt—with many others of Shakespeare's plays—is a great resource whenever the mind is at its highest point of energy. But then its imaginative flight is too independent of real conditions to render it possible that we should follow it with the ease with which we follow the creations that fill up known historical conditions—that vivify the well-marked testimony of history. And even these great books are not counsellors, not comforters, not friends. They are stimulants and tonics to the feeble imagination of man, and enable us to connect in some way the present with the past—or, what is still more difficult, and requires a higher energy for which we are only now and then adequate, they enable us to connect the present with the future. But the best of books are resources, not friends—resources which, if properly used, open our eyes, nerve our imaginations, stir our sympathies, and sometimes, through comparatively rarely, shame our supineness and our miserable ambitions. But in any case, the books to love and cherish are not those which give us the largest measure of knowledge, but those which awaken the activity of our truest self.

## Educational Opinion.

### "CAN COLLEGE GRADUATES SUCCEED IN BUSINESS?"

"DOES college graduation tend to aid a business man in earning his livelihood? I very much doubt it." Thus begins a short article by James Hunter, M.A., in the last number of *Lippincott's Magazine*. Well, it is not to be supposed that the "graduation" tends very strongly "to aid a business man in earning his livelihood." Some one asked a young man, who had just graduated from college, "Well, did you learn anything when you graduated?" He very properly replied: "No, sir; what I learned was learned *before* I graduated." So, we may fully agree with James Hunter, M.A., when he answers his own question with that frank, ingenuous statement, "I very much doubt it."

But we have a deeper interest in Mr. Hunter's reasons for believing that college graduates cannot succeed in business. He says: "A trained intellect is a fine tool. But we know that in many mechanical operations the very fineness of an implement is a bar to its usefulness. Let us illustrate by the use of a file: A fine steel file, exceedingly fine and very hard, may be quite inappropriate to file coarse castings. Hence our critic would probably suggest that it were unnecessary, indeed a grand mistake, for a file-maker to manufacture fine files. Such a file either cannot do coarse work, or it does it imperfectly, . . . as well as with almost certain damage to itself." But we hope it will not be deemed an impertinence to suggest that a watchmaker may need just that fine, hard file, and that the services of a watchmaker with his files are quite as needful to human society as the labour of the poor boy who, for the paltry pittance of two dollars a week, files iron castings in a foundry.

Says Mr. Hunter, "There are a thousand contingencies in the store, the warehouse, the shop, and the counting-room, wherein the *average cultured mind* finds itself out of place." (The italics are ours.) Ergo, what? Are we to infer that the whole world must therefore discard "*average culture*?" When will the time come that men who put "M.A." after their names will cease to write such stuff? But permit a further quotation from our Artium Majister, and we fear *ad nauseam*:

"*O quam miserimum olim fuisse beatum!*" was the pathetic cry wrung from the desolate heart of Coleridge when serving as a private in a British regiment of dragoons. . . . Coleridge never rose out of the awkward squad. The man of culture whom the humdrum drudgery of every-day commercial life affects similarly is certain to continue in a corresponding lowly position."

Did Coleridge "continue in a corresponding lowly position"? Did he die "a private in a regiment of dragoons"? His experience as a "private" was singular enough. He had spent two years in Jesus College, Cambridge, when "in a moment of despondency and vexation of spirit," he left Cambridge, and repaired to London. Here "he was reduced to want, and observing a recruiting advertisement resolved to get bread and overcome a prejudice at the same time, by becoming a soldier." He accordingly enlisted, and his adventures as a soldier, as he afterward related them, "were uncomfortable and amusing enough." After a brief military career of but four months, during which time we may well believe that he did not get beyond the "awkward squad," his friends effected his discharge, and he left the army.

Had Coleridge been the coarse file, fit for the rough castings, he might have enjoyed himself, at least been contented in the life of a private soldier, and in due time, perhaps, with some outside influence, become a corporal, or even a sergeant in his majesty's service, and left his bones in India, with a volley fired over his grave by his comrades. But in that case he would never have written:

"The butterfly the ancient Grecians made  
The soul's fair emblem, and its only name,—  
But of the soul, escaped the slavish trade  
Of mortal life!—For in this earthly frame  
Our's is the reptile's lot, much toil, much blame,  
Manifold motions making little speed,  
And to deform and kill the things whereon we feed."

It were useless to follow the article under consideration through all its logic. (?) The following paragraph is the conclusion, and the verdict of our author upon the whole question:—

"Why, then, it may be asked, do so many business men give their sons a college education? Largely, it may be, because such persons attach an exaggerated importance to any branch of knowledge or learning in which they feel themselves deficient; and, more legitimately, because they have learned by experience that a certain degree of culture is necessary to enable a man to move comfortably in a social sphere to which they have attained. It must be borne in mind also that the sons of such men have not to commence their business life at the bottom of the difficult ladder, but are at once placed on the higher steps and have all the advantages in climbing. And yet, withal, it would be curious matter for inquiry to determine what proportion of those youths born with the silver spoon in their mouths better or maintain their father's position."

Why has Mr. Hunter forgotten to inquire why so many young men, whose fathers either cannot send them or do not desire them to go to college, deny themselves comforts and subject themselves to all sorts of

hardships to obtain an education? And what, indeed, has "the silver spoon" to do with a college education? Let us be thankful that "the rich and the poor meet together" in college as well as elsewhere, and "the Lord is the maker of them all."

We beg to commend to Master Hunter the following little poem, written by Coleridge fifteen years after his short experience as "private in a regiment of dragoons." He may not be able to read all there is between the lines, for there are many men of whom Wordsworth wrote in *Peter Bell*:—

"A primrose by the river's brim,  
A yellow primrose was to him:—  
And it was nothing more."

Here is Coleridge's thought about this life, its successes and its failures:—

#### "COMPLAINT."

How seldom, Friend! a good great man inherits  
Honour or wealth, with all his worth and pains!  
It sounds like stories from the land of spirits,  
If any man obtain that which he merits,  
Or any merit that which he obtains.

#### REPROOF.

For shame, dear friend! renounce this canting strain!

What would'st thou have a good great man obtain?  
Place,—titles,—salary,—a gilded chain,—  
Or throne of corses which his sword hath slain?—  
Greatness and goodness are not means but ends:  
Hath he not always treasures, always friends  
The good great man?—three treasures, love and light,  
And calm thoughts, regular as infant's breath:—  
And three firm friends, more sure than day and night,—  
Himself, his Maker, and the angel Death."

—Education.

### HIGHER EDUCATION OF WOMEN IN ENGLAND.

A ROYAL commission was appointed to inquire into general education about fifteen years ago, and they reported the condition of the girls' schools to be in a lamentable condition. Mr. J. G. Fitch, one of the commission, well known to American readers by his admirable lectures, said in his report: "Parents do not recognize the plain facts of life—that women who have more leisure than men, have it in their power to make, even unconsciously, the noblest use of any culture they possess. The true measure of a woman's right to knowledge is her capacity for receiving it, and not any theories of ours as to what she is fit for, or what she is likely to make of it."

The universities of Oxford and Cambridge, in response to memorials by leading men and women, opened to girls the "local examinations." This led to the establishment of Girton College, in 1869, in order to prepare women for these examinations. It was begun with six students; at the end of the year five young ladies passed the examination held after students are one year in the university. This encouraged action, and in 1873, Girton College was erected two miles from Cambridge, at a cost of \$100,000.

The course here requires three years; the entrance examination calls for a knowledge of arithmetic, grammar, geography, English history, composition, three books of geometry, trigonometry, conic sections, Latin, Greek, French, German. Of the last seven, two may be selected, one to be a language. (This is not so severe as at Vassar, Smith, or Wellesley.) The graduates and honour pupils pass the same examinations as the young men at the universities.

Besides Girton College, two buildings have been erected, costing \$60,000 each, for Newnham College. These are in Cambridge, and Miss Clough is principal. No entrance examination is required; they select such courses as they choose, attending the lectures of the university professors. Of the 184 that have passed examinations, 27 have gained honours in moral science, history, or natural science. An honour in moral science is gained by passing a six days' examination in such books as Mill, Kant, Spencer and Lotze in metaphysics; Mill, Whewill, and Neberweg, in Logic; Fawcett and Cairnes in Political Economy; Maudsley's Physiology of the Mind; Venn's Logic of Chance; Matthew on Population; Bentham's Principles of Morals and Legislation; Mill's Republican Government, and many more.

At Oxford is Somerville Hall, on which \$70,000 was spent; it opened in 1879. There is no entrance examination. The examinations given to women by Oxford University are the same as to young men. Some have gained honours in Modern Languages, in Classics, and in Mathematics.

At London University, since 1878, women receive the same examinations as men. In 1879 a lady took honours in Latin, and also in English. To obtain the former, a student must pass an examination for three days, of six hours each, in Plantus, Terence, Lucretius, Virgil, Horace, Juvenal, Persius, Cicero, Livy, and Tacitus; be able to put English into Latin, and Latin into English; have passed previously the Bachelor of Arts examination. A lady took honours in French, also in German, also in Mathematics, standing first class—that is, stood an examination of eight days, of six hours each, in arithmetic, algebra, geometry, trigonometry, mixed mathematics, chemistry, calculus, optics, etc. Honours in law, botany, mental and moral science, anatomy, have also been taken by women at the university examination. At the late examination, there were 237 candidates; 42 per cent. of the men obtained the degree, and 73 per cent. of the women; 27 per cent. of the men went into the first division, and 68 per cent. of the women.

The new college, by Mr. Halloway (of patent medicine fame), costing a million of dollars, is nearly completed. It is near Windsor. The movement for the higher education of women is penetrating every part of England. The "Woman's Educa-

tional Union" has been a great aid; it has raised scholarships and encouraged young women to pass the examinations.—*New York School Journal*.

#### FORESTRY IN EARLY JUNE.

THE following paragraphs written by Mr. R. W. Phipps, an authority on forestry, and contributed by him to *Truth*, may, we think, with propriety be inserted under the heading of "Educational Opinion":—

"I wish to lay one point in connection with forestry prominently before my farming readers, and that is, a particular species of injury inflicted on crops by the absence of shelter. It is a point not very generally understood, but when considered its importance will at once appear to be very great.

"We have all noticed, of course, the great value of timely showers to the growing crops, and have observed that a day or so after such rain has fallen, the advance of vegetation was very rapid, and the farmer is apt to say, 'If it would only keep growing like this for a week or two, what crops I should have.' We shall find, on reflection, that this rapid growth occurs while the surface of the earth is yet partially saturated with the lately fallen rain, and that, while heat and moisture continue so to work together, growth is rapid (I mean on ordinarily drained land); on low-lying lands there is a stagnation of moisture, which gives a different state of affairs.

"But on ordinary land this state of healthy warmth and moisture can be continued for a much longer period than it is usually enjoyed, by the simple expedient of giving shelter from the wind. Soft, gentle summer breezes do no harm, but great good. On the contrary, a strong wind dries out the land far too rapidly, and will often reduce the period of rapid growth following a shower to a couple of days or less, when it might have lasted a week. The mechanical operation of this drying process is plain. As a stratum of dryer air passes over the ground rapidly it withdraws a certain portion of moisture. It is immediately followed by another, equally dry, which absorbs more, and these succeed each other it may be all day long, and carry away a vast amount of moisture, which had far better been allowed to remain until it rose in the crops or sank slowly into the ground. In properly sheltered land this is not so; the local climate, so to speak, is more favourable to agricultural operations. This was an advantage once given us by our interspersing forests—an advantage, which, as I said, much of Ontario has lost—much is losing. But there is a cheap expedient by the use of which we might again enjoy this vanished or vanishing benefit—an expedient it is the principal object of this letter to suggest to my readers: "This is simply the planting of lines of

evergreens along the north and west sides of farms. This can be done with the native pine, cedar or spruce, with the Norway spruce, and many other evergreens. Evergreens are better for this purpose than deciduous trees, because they serve a valuable purpose in winter as well as in summer, preventing snow-drifts, greatly mitigating the severity of the cold winds, and benefiting the crops of winter wheat and clover to a very important extent. I have no doubt that were this measure generally carried out, larger crops would be obtained with less labour; in other words, all farms would yield a much better return for the investment. It is a benefit which could be procured at very slight expense of time and trouble—putting in and caring for a line of trees is a small matter compared with starting a broad plantation. From the middle of May to the tenth of June will be found a good time to plant them. As for the young trees they can be had, when small, cheaply of nurserymen, or they can be had sometimes for nothing in our woods and fields. Those who own them often set too little store by them. I saw last week in one field, which was being cleaned up, thousands of beautiful young pines, many of them just the size for planting piled up in heaps to burn. The owner never seemed to think of planting them along the borders of his farm, on which he seemed scarcely to have left a tree. It may be well to mention that anyone who plants evergreens should keep the roots moist and covered from digging till planting. A few minutes' exposure to the sun might dry the resin in the roots and kill the tree. This proposal demands no great labour, but it would, if adopted, change for the better the whole of Ontario. It is hardly to be expected at once that vast forests should be planted here. But surely every farmer could easily grow a line of evergreens along the exposed sides of his farm. Nothing will pay him half so well.

EVEN the unworthy males who "never believed" in Girton and Newnham Colleges, because girls should be taught cookery and dressmaking instead of having their heads filled with Greek verbs and conic sections, will (says the *St. James's Gazette*) have to hold their tongues now. Evidently the "higher education" has been misunderstood. A widespread association of dressmakers is now being established, with branch shops in all the large towns; and not only is Miss Welsh, the mistress of Girton College, one of the heads of the movement, but it is offered, as an inducement to ladies to patronise the association, that "the ranks of the first workers will be recruited from the ladies' colleges at Cambridge—the very best guarantee that could be given that whatever work is undertaken will be thoroughly well done." If this be so—and ladies will soon find out—Girton will rise in public estimation. Already it has produced one successful dressmaker; but who would have thought of it training a whole association of them?

## Methods and Illustrations

### WHEN TO ABANDON OBJECTS IN TEACHING NUMBER.

A CORRESPONDENT asks, "When would you, in teaching arithmetic, abandon the use of objects, and when would you begin the use of abstract numbers?" This twin question seems to indicate that the correspondent refers to some definite point of time, some definite stage in the child's development. If this is the case, it will be impossible for me to answer the question. The use of objects in teaching arithmetic seems to me desirable long after beginning the use of abstract numbers; and, on the other hand, numbers begin to be used abstractly, and, indeed, are used abstractly as soon as the child has recognized two *single objects* as *two* objects.

The fact is that, at least during the period of ordinary school-life, the young human being never in any direction reaches wholly or perfectly abstract ideas of things or qualities of things. His so-called abstract ideas are merely approximations, moving more or less steadily toward abstractness. Similarly the child's ideas, even in the earliest stages of development, never are wholly or perfectly concrete, that is connected with notions of things, but begin to be tainted with abstractness from the very moment when the child begins to notice the connection of his *inner* notions with *outer* things. Indeed, it is the thing that is concrete, the idea—however much or little there may be of it—is always abstract, in so far as it does not need for its existence in consciousness the presence of direct sensations. Even the images of things, lingering in memory, are true abstractions, though of a lower order than the generalizations derived from things. Older persons who may have forgotten how they grew in power of abstraction, will do well to observe little children before venturing upon a judgment in this question. They may then find that the child's emancipation in his thought-life from direct sensations—and, hence, from the necessity of concrete things—is a much more gradual process than is claimed by book-psychologists; and also, that he begins to revel in abstractions at a very early period, long before school-life, indeed. He may find it exceedingly difficult to fix the birth of the abstract idea, but he will surely see it try its wings as soon as the child uses the first word intelligently. Ever after it will grow in power and independence with the help of language which meditates between things and thought; but we must remember that, like the fabled phoenix, it cannot forever subsist on air, but must now and then touch earth again to obtain a new lease of life.

Considerations, similar to these, must guide us in answering our correspondent's

twin question with reference to arithmetic. They will teach us that the use of things cannot at any time be wholly abandoned. Again and again, though at increasing intervals of time and with increasing persistence, we should return to things—actual or imaginary—for purposes of verification or to gain new points of view. New processes, new applications, new classifications rest securely only on this foundation. On the other hand, we shall learn that abstract notions represent, from the very start, the real inward gain of all this school-work with things; that whatever remains in the mind as a permanent residue from this work is abstract: that, indeed, the teacher's very first business on the child's entrance in school is to determine with the help of things and words how far the child has progressed in abstract notions; and that, consequently, we should "begin the use of abstract numbers" on the first day of school-life.—*The American Teacher.*

### FIRST STEPS IN WRITING.

From an address by Dr. H. W. Bearce, before the teachers of the schools of the Children's Aid Society of New York.

THE first thing is to teach children how to hold a pen. To do this, let them place the pen over the ear. Then take it down. They will hold it then just right. The position should be according to circumstances. Generally, at desks, a half-oblique position seems best.

In teaching proper movement of the arm, consider the peculiarities of the arm and hand. The fingers are made to do small work. The muscles of the arm are for large work; part of the fingers are adapted to clasp, and to hold. Use them for the work to which they are adapted. The little finger is good to slide on. It can slip over the paper.

At first children rest the hand on its side. To correct this, use a cross-bar fastened to the hand, and let the fingers clasp a ball of some sort. This will keep the hand and pen in the right position. Then give an exercise in making long sweeping straight lines. Then long sweeping curved lines. You can illustrate curves and straight lines and angles by a string suspended from a nail over your blackboard.

It is poor policy to set children to copying the same word a great many times. They simply copy their own mistakes. Give them something that interests them, but one thing at a time. You can not learn how to paint a picture by merely copying it. You have to draw to learn perspective, and color by degrees. I was the worst writer in a school of 1500 boys, and was held up as an example of bad writing. I wrote with my fingers, a cramped hand. My teacher took me in hand, and told me to make ovals or Os, with a right movement for a week, doing it eight hours

each day. Next week I was given the task to make O by left movement for a week. The result was I got the figure which enters into all capitals and every part of them. The lines run into each other in every graceful form.

In making letters that are one-space high, first teach how to make such a word as minn, "mum." Properly made, it will be the same upside down. It must be made without taking the pen from the paper. It is injurious to teach letters in parts, lifting the pen after forming a letter, or a part of a letter. Let the space be even. Practice a great deal on trial papers. Let forty minutes out of sixty be on trial papers. Shading should be rare. Some writers do not shade at all. Better shade every third letter. Better not write in columns, but rather in lines.

### HOW I TEACH LANGUAGE AND COMPOSITION.

WHEN the little child first enters the school-room, the first thing I learn is the *extent* of the child's knowledge, and where its knowledge ends my teaching begins. The most important step in teaching language and composition, is to teach pupils to think and give oral expression to their thoughts. Let them tell the names of everything they can see, everything noticeable on their way to school; different kinds of animals they have seen, taking great care that each sentence be expressed correctly. In this way *oral* composition is developed before *written*, and a correct habit is formed of talking in sentences. As they learn to write, the different kinds of sentences are taught, such as—telling, strong feeling, question. Pupils at this early stage are taught to read a sentence in various ways, emphasizing different words, and to discover for themselves the meaning caused by different renderings. *Kinds* of words are next taught, such as Name words, Action words and Quality words. Pupils are required to name and write the names of things perceived by the five senses, using these words in sentences. Different kinds of actions are performed, as walking, jumping, talking, etc., thus giving a correct idea of Action words. Quality words are taught by having objects described. Every recitation now becomes a composition exercise. The language of number is first taught by having pupils give answers in complete sentences which are written on the board. The object is first presented with questions, as: "Two books and one book are how many books?" No incomplete sentence allowed as an answer to any question. After a number has been thoroughly taught, pupils are required to write all they can see in its various combinations, separations, divisions, etc. Little problems are next taught, after which

they delight in composing and writing their own problems. Besides every recitation being a composition exercise, we have a special time to devote to it. I study what will best please the little ones, and find that animals sketched on the board afford pleasant subjects. How the eyes of the little child sparkle when he writes, in his simple language: "The horse has four legs. The cow has a long tail," and with what pride does he read his own thoughts, in his own words, penned by his own hand. By this means they are led to the art of writing little stories, and have the true key to composition.—*Texas School Journal*.

### TEACHING TO SPEAK AND WRITE CORRECTLY.

The following paragraphs occur in the *New York School Journal* over the initials F. W. P., which, there is little doubt, belong to the well-known Col. Parker:—

"Correct speaking and correct writing can only be learned by constantly speaking and writing correctly. No incorrect form should ever be presented to pupils until they reach the age of careful reflection. The custom of writing incorrect syntax for children to correct, is a vicious one. Many teachers who are now breaking away from the cast-iron method of teaching, parsing, and analysis, are diluting the old forms by an infusion of weaker ones—i. e., they are training children to use words for the sake of using them, without regard to the thought that should always inspire their use. They lead children to make sentences, using "are," "is," "been," etc., just (as I have said) for the purpose of using the word. Now, if the child is continually writing, from the second year to the eighth inclusive, and every sentence is written under the stimulus of thought, he will use all the necessary words correctly and repeatedly. There is, therefore, little or no need of purely word lessons.

"But the teaching of grammar is infinitely better than the old way of taking a sentence, that was made to express a beautiful thought or behind which lies a grand picture, and mangling it by hard names, cutting it into minute pieces, hanging its mutilated remains on cruel diagrams; while the author's meaning remains as far away from the pupil's mind as the bright stars in heaven. There will come a time, in the course of proper development, when teaching technical grammar may be made a most excellent and profitable study; when the rich mines of thought and emotion, of which our literature is full, may be opened to the growing minds of children. Technical grammar, to my mind, as it is usually taught, effectually disgusts children, and bars the way to deeper insight into the beauty and strength of language."

### SCHOOL GOVERNMENT.

The following principles are adapted from Betham, who, first among English lawyers, enunciated the basis on which all government should be administered:—

#### LIMITS OF CONTROL.

1. Authority exists for the benefit of the pupils.
2. Restraints should be as few as possible.
3. Duties and offences should be clearly expressed.
4. Offences should be graduated according to degree.
5. The teacher should observe due formality in exercising authority.
6. The teacher should avoid occasions of disorder by organization.
7. Those in authority should cultivate a benign character.
8. Reasons for discipline should be made intelligible.
9. Punishments should be regulated according to certain principles. *as*—
  - a. The punishment should be such as is best adapted to the offence.
  - b. Never punish in anger.
  - c. Except in extreme cases, never administer corporal punishment without the consent of parents, etc.

#### MEASURE OF PUNISHMENT.

1. It should not outweigh the profit of the offence.
  2. The sensibility of the offender should be considered.
  3. In case of two offences the punishment should be such as to make the less preferred.
  4. The punishment should not be greater than is needed.
  5. The greater the offence, the greater the expense it is worth while to be at in the way of correction.
  6. The punishment must be increased as it falls short of certainty.
  7. When the offence indicates a habit, the punishment should be adjusted to counteract the habit.
  8. In adjusting the measure, account should be taken of the circumstances that render all punishment unprofitable.
  9. In administering punishment, omit all those things that do more harm than good.
- All the motives that result in a given offence may not be observed at a glance and readily referred to a classified list, and the means and measure of correction is not always obvious.—*Our Country and Village Schools*.

### GEOGRAPHY WORK.

HERE is a general outline by which I make my pupils study each state in the Union. Of course certain of the topics will be omitted in the consideration of some of the states. We first study our own state thor-

oughly and exhaustively, taking up several topics which are not given in this outline. Then in taking up each of the other states, we compare it with our own in as many respects as possible.

#### I. Position.

1. In the United States. 2. Latitude and longitude. 3. Boundaries. a. Natural.
- b. Artificial.

#### II. Size.

1. Actual. 2. Comparative.

#### III. Surface.

1. Mountains. 2. Slopes. 3. Rivers. 4. Lakes. 5. Prairies. 6. Forests.

#### IV. Coast.

1. Capes. 2. Gulfs and bays. 3. Islands.

#### V. Climate.

1. Temperature. 2. Winds. 3. Moisture.

#### VI. Healthfulness.

#### VII. Soil.

#### VIII. Productions.

1. Animal. 2. Vegetable. 3. Mineral.

#### IX. Population.

#### X. Industries.

#### XI. Cities.

1. Capital. 2. Largest city. 3. Commercial. 4. Manufacturing. 5. Mining centres.
6. Others of note.

#### XII. Natural Curiosities.

#### XIII. History.

1. When and by whom settled.
2. When admitted into the Union.
3. Progress and present condition.

#### XIV. Education.

—*Texas School Journal*.

### TEACH INTELLIGENTLY.

The following paragraph was entitled "Teach Intelligently," in the periodical from which it was taken. "Teach Intelligently" would, perhaps, be preferable:—

"It cannot be too constantly borne in mind that the true measure of mental development is not what is learned, but what is understood. The old days have, it may be hoped, gone for ever, when children were required to memorize great quantities of dry rules, definitions, and formulas, which conveyed no distinct ideas to their understanding, and which they were not even expected to comprehend till some future day, when as their powers approached maturity the hidden meaning might dawn upon them. The writer has very vivid recollections of school work of this kind. There can be no doubt that such methods have been responsible for the life-long dislike to books and study of many a pupil who might, under a more intelligent teacher, have become a well-educated and useful member of society. Training, not cramming, and thinking, not memorizing, are the proper functions of teacher and pupils respectively."

## REMINISCENCES IN SCHOOL DISCIPLINE.

### FIGHTING.

How to deal with it. Time—a quarter of a century ago. Place—the playground in front of the little red school-house. Persons—a group of school-boys.

In the midst of the group stood two boys, one a bragging bully of fifteen, the other a shy, bashful boy of fourteen. All day the former had been trying to "pick a fight" with the latter. But the smaller boy would not fight; he would not quarrel. All day he had tried to keep away from the other. He had submitted to sneers and taunts; his hat had been knocked off; he had been called a coward; but fight he would not. His friends were ashamed of him, and strongly urged him to "pitch in, and thrash Dick," at which Dick laughed, and shaking his fist under the other's nose, sneered:

"You little Englishman, you dasn't fight."

Scarcely were the words spoken before a fist shot straight from the shoulder, and the bully's back kissed the snow quicker than it ever did before.

Boy nature had been taxed a little too much. It was possible to submit to sneers and insults so long as they included nothing but himself, but when it was insinuated that he would not fight because he was a "little Englishman," that was quite another matter, and he resented the implied insult to his nationality by knocking the fellow down. And the fellow had quite enough of it. There was better muscle under that little coat-sleeve than he had dreamed. The fight was ended.

But there was an investigation by the teacher, a boy of nineteen. He enquired carefully and minutely into the matter, then said: "Richard, you were served quite right. Go and apologize to William; ask him to shake hands and be good friends."

That young teacher's dust has long since mingled with that of some Southern battlefield, but he has never been forgotten by that shy, bashful boy, who has long since been a teacher, and has, himself, had to deal with a "fight." A coloured boy was reported to him for having pretty thoroughly thrashed three or four white boys, in doing which he had used stones and clubs pretty freely.

"Well, Mortimer," said the teacher, "what have you to say for yourself?" "Well, sir, they wouldn't let my sister alone. They pulled her hat off and threw it over the fence; they pushed her down, and hurt her. They wouldn't stop—so I licked 'em." It was found that the boy's story was substantially correct.

"Well, Mortimer, you did quite right. Fighting is low, mean business—as a rule. There are times when nothing else answers. This seems to be one of them. The next

time, however, don't use clubs and stones, if you can possibly do the whipping without." Another boy was reported for knocking a boy down and choking him.

"Medford, any explanation to make of this matter?"

"No, sir, excepting that George was bound to fight when we were going home at noon though I had not troubled him in any way. I told him to let me alone, that I did not wish to fight. But he kept getting in front of me, and sticking his fist under my nose, so finally I knocked him down and choked him."

"Well, Medford, you had a perfect right to the road without interference or insult from any one. You did all that could be reasonably be asked of you in trying to avoid him, and in trying not to have any quarrel with him; as he persisted in his insults and interference, you served him right by knocking him down. You should be ashamed of yourself, however, for choking him after he was down." Medford admitted that he was. "Very well, I must punish you for that. George will be punished for trying to make a boy fight."

Four boys were reported for fighting. Investigation brought out the fact that three of the boys had been "picking" at the other all day, mainly because they thought he wouldn't strike back. He was a blue-eyed, fair-haired, timid boy, who certainly wouldn't get into a quarrel if he could possibly keep out. This day, however, he was goaded too much and too long. He struck back. But the odds were too great; he got the worst of it.

Investigation brought out the facts as given. "Alfred, had these boys hurt you when you first struck them?" "No, sir; but they had been misusing me all day." "You struck first, though?" "Yes, sir." And the boy seemed to shrink almost down into his shoes, as he recognized the enormity of his offence. "Well, my boy," said the teacher, in the presence of the assembled school, "you did quite right, and I heartily wish that I had been a boy in the yard with you. We could, I think, have soundly thrashed any three boys without manliness enough to keep them from attacking one. You may take your seat. I never respected you so much before. I will settle with the others."

In his school of nearly six hundred a fight is a very rare disturbance. There is never one among the larger boys; although when he first took the school, two or three fights a day, even among the larger boys, was nothing unusual—a ring being formed for that purpose nearly every night.

He tries to impress upon the boys that nothing can be more vulgar or brutal than settling disputes by fighting—defending oneself or others is, however, quite another matter, and something that every boy should do.

He tries to look upon fighting from a manly boy's stand-point. The boys appreciate it, and, in return, try to look upon it from the teacher's stand-point.

The way may not be an extra good one, but it stops fighting.—*Teachers' Institute.*

## SUGGESTIONS FOR PRIMARY NUMBER WORK.

First, find out how much the pupil knows. It may be done by drawing a basket on the board, and asking a child to put in it a certain number of apples and eggs; then ask another to take away so many, and let another tell how many are left. It is better to use a variety of things—splints, marbles, shoe-pegs, little balls of clay, etc., etc. When you know their attainments, classify them in groups of ten or twelve, and extend their knowledge of number slowly and systematically through the use of a variety of objects.

The grouping is an essential feature, as a teacher can adapt the lesson to a much better advantage, if the class are of about equal mental calibre. Let the children stand on each side of a table holding the objects used. The teacher at the head can direct their movements. But tables are not necessary. The class may use objects on their desks or benches. Let the lesson be made short and interesting. When a teacher has not the attention of every member of the class, the fault is her own. Handle the objects with increasing rapidity, so that quickness in the act of seeing will give a readiness in expression. The results of the combination and separation should be seen and stated by pupils without hesitation or reflection.  $9+7$ ,  $8 \times 2$ ,  $20-4$ , should be seen and stated by pupils as 16, without any attention to the parts. This will develop rapid and accurate calculation.

The first aim is to promote the growth of the reasoning powers. Pupils must not only be led to see the facts objectively presented, but also be led to discover facts which are consequences.

Allow freedom of expression. Adopt the language of the children. Better say, "There are two threes in six," than "Three is contained in six two times."

Let no day pass without some mental work. A question: "Show me with your blocks how many marbles you can buy for six pennies, if each marble costs two cents." Let them think out questions and give them to the class. They will do it, and you thereby get a great variety of mental examples.

When their mental picture of the relations of things is distinct, and they can combine and separate things to ten, associate the objects with signs or figures, and then give exercises without objects. Put tables of numbers on the board for them to copy, like:  $8+4=?$   $6-3=?$   $5+?=10$ ,  $12 \div 3=?$   $9-?=4$ .—*New York School Journal.*

## Educational Intelligence.

### ONTARIO TEACHERS' ASSOCIATION.

THE Programme of the Twenty-sixth Annual Convention of the Ontario Teachers' Association, which is to be held in the Public Hall of the Education Department, Toronto, on Tuesday, Wednesday and Thursday, August 10th, 11th and 12th, has been issued and is as follows:

#### GENERAL ASSOCIATION.

Our Profession, Mr. Joliffe, Ottawa.

A College of Preceptors for Ontario, George Dickson, M.A., U.C.C.

Conservatism and Reform in Educational Methods, J. E. Wetherell, M.A., Strathroy.

Prizes and Scholarships, D. C. McHenry, M.A., Cobourg.

The Teacher as a Student, A. Purslow, LL.D., Port Hope.

Science Teaching, George Baptie, M.A., Ottawa.

Addresses will also be delivered by the President of the Association, Mr. W. Mulock, M.A., M.P., Vice-Chancellor of Toronto University, and Professor Clark, of Trinity College, Toronto.

#### PUBLIC SCHOOL INSPECTORS' SECTION.

Inspection of Junior Classes in Graded Schools, W. H. Ballard, M.A., Hamilton.

Promotion Examinations, D. P. Clapp, B.A., Harriston.

Inspection of Schools in New and Poor Townships, H. Reazin, Lindsay.

Graded Schools, J. C. Brown, Minden.

Details of an Inspection, J. R. Miller, Toronto.

Should Schools be Graded as well as Certificates? J. C. Morgan, M.A., Barrie.

College of Preceptors for Ontario, F. L. Mitchell, M.A., Perth.

#### HIGH SCHOOL SECTION.

Report from High School Representatives on the University Senate, Messrs. Millar and Embree.

Report of Committee on Assimilation of Entrance Examinations in Medicine, Civil Engineering, Dentistry, Pharmacy, etc., J. Miller, M.A., Chairman.

Report of Committee on College of Preceptors for Ontario, A. Macmurchy, M.A., Chairman.

Constitution, By-laws and Rules of Order for H. S. Section.

High School Text Books, C. Fessenden, M.A.

Increased Legislative Aid to High Schools, L. E. Embree, M.A.

Uniform University Matriculation Examinations, J. W. Connor, M.A.

Suggestions of the High School Inspectors as embodied in their recent reports, Messrs. J. Henderson, M.A., and J. E. Dickson.

#### PUBLIC SCHOOL SECTION.

Modified Forms of Kindergarten Work suitable for Public Schools, J. Suddaby, Berlin.

Etiquette in Schools, R. W. Doan, Toronto.

Principals and Assistants, F. C. Powell, Kincardine.

The Marking System, John Munro, Ottawa.

Phonetics, C. P. Simpson, Essex Centre.

The Executive Committee earnestly calls the attention of all who are engaged in the work of education to the importance of attending the above meeting. Certificates will be issued to those who wish to attend the meeting, entitling the holder to return tickets on the railways at reduced rates. These certificates must be procured from the Secretary previous to commencing the journey.

ROBERT W. DOAN, *Secretary*,  
216 Carlton Street, Toronto.  
S. McALLISTER, *President*.

### COUNTY OF CARLETON TEACHERS' INSTITUTE.

THE teachers of No. 1 Division, County of Carleton, including the townships of Fitzroy, Huntley, Torbolton and part of March, held their first semi-annual township convention in the school house, at Carp, on Thursday and Friday, 6th and 7th ult. The attendance was very good, seventeen teachers being present.

The first exercise taken up was an illustrated address on "Writing," as he taught it, by Mr. J. W. Kemp, Stittsville. The audience was then entertained by Rev. Mr. Scudamore, who, in an essay set forth his sentiments on "Odd Moments and their Opportunities." Mr. J. McElroy, Huntley, conducted a class in Fourth Book literature the selection being "Boadicea." He dealt with the subject under the various heads of pronunciation, audibility and tone, etymology of words, reproduction of lesson by pupils, author and his works. He advocated the importance of drawing the attention of the pupils to the elegant forms of expression to be imitated by them; and to the learning by heart of choice selections of poetry. He gave thorough analysis of the lesson, explaining his method. The discussion which arose was very instructive, being participated in by Revs. McDowell, Scudamore, McClaren, Messrs. R. Foster, J. W. Kemp, and Miss L. Richardson.

The convention was re-opened on Friday by the president. Miss L. Richardson taught a third class lesson on "Reading." The subject of music was next introduced by Rev. Mr. McClaren, who illustrated his method on the blackboard in a clear and satisfactory manner. He advocated the tonic Sol Fa system as being much simpler and being more easily and more quickly taught than the common method. He claims many advantages for the system over the present one, and maintains that by its adoption throughout the public schools in Canada thousands would easily glide into the kingdom of music, who are at present prevented by "the five barred gate." The last paper of the afternoon was one by T. P. Moffatt, teacher of S.S. No. 1 Huntley, on "Orthography." A well-deserved vote of thanks was tendered Mr. Moffatt for his essay on so important a subject. The place of next meeting was considered, when it was resolved to meet in school section No. 3, Carp, on Thursday and Friday, 19th and 20th May.—*Ex.*

### EAST BRUCE TEACHERS' ASSOCIATION.

THE semi-annual meeting of the East Bruce Teachers' Association was held in the school house, Tara, on 20th and 21st May. The programme was entered upon by Mr. G. W. Campbell, of Tara, who introduced "Pupils' Difficulties."

J. Morgan, B.A., of the Walkerton High School, took up the subject of "False Syntax."

Mr. Keith introduced the subject of "Corporal Punishment," in a few well-chosen remarks. The subject was handled by many of the teachers, all arriving at the same conclusion, that the strap (no raw-hide) is a necessary adjunct to the discipline of a school.

The meeting was opened on Friday morning by the president's address on "The Teachers' Outlook." Mr. Munro showed by statistics that more ladies than gentlemen entered the profession every year. Lack of permanency, resulting from inadequate remuneration, leaves the greater number of our schools in charge of young teachers who are using the privilege of teaching as a stepping-stone towards something else.

"Literature for Entrance" was handled by A. B. McCallum, B.A., of Listowel High School.

Mr. H. B. McKay, of Allenford, then illustrated his plan of teaching the "Railway System of Ontario" with clearness and brevity.

### NORTH GOWER AND MARLBOROUGH TEACHERS' LOCAL INSTITUTE.

THE first meeting of the North Gower and Marlborough Teachers' Local Institute was held in the public school building at North Gower village, on May 14 and 15. On the whole, the attendance was much larger, in proportion, than at the county associations.

The president, Mr. J. H. Moffatt, read a paper on "Importance of Physical Education." The following resolution was carried unanimously—"In the opinion of this association more attention should be given to the physical training of the pupils in our schools." Mr. J. V. Beaman gave an interesting and well written paper on "Primary Science" (The chief forces in Nature). Rev. R. Stewart, B.A., of North Gower, gave an address.

On the morning of the second day, after routine business had been completed, Mr. R. Acton read a suggestive paper on "The Responsibility of the Teacher."

The following question, which evoked warm discussion, was proposed by Mr. Smirle, "In how far is the Teacher Responsible for Irregularity, Untidiness, and Immorality?" Miss Lucy A. Hume outlined a practical and orthodox method of teaching geography. In the afternoon an admirable paper on "The Arrangement of a Timetable for an Ungraded School," was given by Miss Irene Watson. Rev. S. Daw, of North Gower, read an essay on "Mental Development."

IN Italy the Minister of Public Instruction has ordered the gradual adoption of "Froebel's Method" in all elementary schools.

THE semi-annual meeting of the Teachers' Association, Dist. of Muskoka, will be held at Bracebridge, on Thursday and Friday, June 17th and 18th, '86. J. A. McLellan, M.A., LL.D., Director of Teachers' Associations, will be present. Among the subjects to be discussed are the following:—"Primary Education," "Topical History," "Book Keeping," "Drawing," "History," "Hygiene," "Telescope," "Applied Mathematics," "Teacher's Influence."

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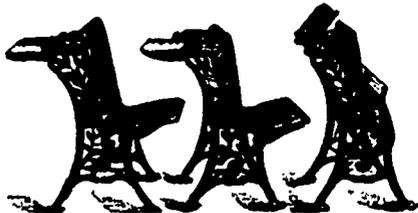
With the consent of the Hon. the Minister of Education, the undersigned will conduct a Shorthand Class in the Education Department concurrently with the sessions of the Botany Class in July. For particulars address,

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**EDUCATIONAL WEEKLY,**

GRIP OFFICE, TORONTO.

EDUCATION DEPARTMENT, ONTARIO,

TORONTO, 29th April, 1886.

SIR,—I have been informed that many High School Masters and Assistants would gladly avail themselves of a course of lessons in Botany during the summer vacation, provided arrangements were made by the Education Department for that purpose.

It has occurred to me that a series of lectures by some competent teacher each forenoon for three weeks, with field work in the afternoons, would be such a happy combination of both theory and practice as would secure the best results, and at the same time prove the least irksome to many who could not very well dispense with the relaxation which the summer vacation is intended to provide. The lectures would be given in the Public Hall of the Education Department by Mr. Spotton, M.A., and the field work directed according to his instructions.

As it is desirable to ascertain the number likely to take this course in order to complete arrangements, would you kindly let me know, at your earliest convenience, how many of your staff are prepared to join this class.

Yours truly,

GEO. W. ROSS.

### 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:—

1. 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.

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