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THE ONTARIO TEACHER :

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SHOULD THE OLD COUNTY BOARD CERTIFICATES BE RECALLED ?

It is supposed to be the privilege of the County Boards of Examiners to recall the old County Board Certificates. Whether that privilege should be exercised at an early day is a matter worthy of some consideration.

That the standard of examination is now much higher than formerly is not to be disputed. Under the old *regime* the standard of the profession was as various as the different Boards of the Province. In some counties the examinations were formerly partly oral and partly written, and varied according to the ideas of the different Boards. The result of this was really that there was no standard at all—a first class certificate in one county being no better than a second in another. This variety arose from two circumstances. First, each Board prepared its own questions, and second, there was no uniformity of valuation. Under the new system, much of this diversity has been overcome. By the preparation and valuation of the examination papers by a certain Board, a uniform standard of qualification has been

secured, and it is only from the diversity of the judgment of different Boards of Examiners that any diversity at all can take place in the value of certificates in different counties.

It is now contemplated, we believe, to recall the old County Board certificates, thus obliging all to comply with the new standard. To this we cannot object, in fact, as we believe the tendency would be beneficial both to the interests of education and teachers themselves.

There is no doubt that the impression is fast gaining ground among Boards of Trustees, that a third class certificate under the new system is just as good as the highest certificate given by the old County Boards. If this be true, it follows that, on this score, those holding old County Board certificates, who could pass a third class examination, would lose nothing. But then, there is another consideration. Many certificates were given "until recalled," and the impression was that, so long as the teacher's conduct was becoming, his educational status would not be called in question. We

are aware that there are no legal grounds for such an assumption on the part of the teacher. But we are yet compelled to believe that many holding such certificates would feel that, though perhaps not *illegally* dealt with, yet they were at the least *harshly* dealt with, and a legal rendering of their case made to tell to their disadvantage.

To overcome the difficulty that would arise in this way, we propose that all except first class certificates should be recalled unconditionally. In regard to those holding first class certificates, we would propose that their case should be left in the hands of the County Boards of Examiners, to be dealt with at their discretion, under certain conditions. For instance : they might be required to produce certain evidences of their success as teachers, which, if satisfactory to the Board, would entitle them to a *special* certificate, valid during pleasure. This would enable the Board to compel those teachers to undergo examination who were apparently behind the times, whereas it would allow the faithful and successful teachers to continue on in the even tenor of their ways.

The advantages of this proposal are quite apparent. Those who are advanced in years, and who, by faithful services rendered, have certain claims upon the public, would have these claims respected. It is certainly no small burden, if not an imposition, upon a teacher at fifty or fifty-five years of age to revise his studies so as to undergo examination, and particularly if he undertakes to get up the new work required for second class certificates. If, however, he can urge his success as a teacher, as an offset to any deficiency in the

newer branches, he will feel that his professional status is respected, and his services, to a certain extent, appreciated. That such a course would be fair and right, we believe no one can doubt.

But it might be objected that such a course would not accomplish the object in view, viz : the cutting off of those who are faithless and negligent. We answer, that their fate would be entirely in the hands of the County Boards of Examiners. No certificate would be valid except those issued after the date of recall. And if it was felt, on consideration by the County Board, that any teacher was deficient in his attainments, they could require him to submit to examination. The granting of special certificates would only apply in such cases as the Board felt that no injury could be inflicted upon the profession or the public.

It might be objected again, that the design of raising the status of the profession to a uniform standard of attainments would be defeated by this scheme. We answer again, that the injury on this score would be very slight, if any at all. All below the first class would at least be cancelled. And in the case of those holding first class certificates, so far as the approval of the Board was concerned, or so far as the license to teach was concerned, it would be more an evidence of success in the profession than an evidence of educational standing. The number of old first class certificates that would be affected by this arrangement, according to Dr. Ryerson's last Report, would be 1512—a number sufficiently large to deserve some consideration at the hands of the Council of Public Instruction.

HIGH SCHOOLS VS. PUBLIC SCHOOLS.

There is no doubt but our High Schools were designed to be a link in the great scheme of a national education system, to connect our Public Schools with the University. Theoretically, the design of providing such a link is excellent, but practically, we fear very much, the result has been a *failure*. In discussing this matter as we propose, briefly, we do not set out at all with the design of questioning the ability of those men engaged in High School work. No doubt they are, in some respects, at least, qualified, otherwise they would not hold the position they do. We believe, however, there are several objections which can be rationally taken to the basis on which the whole fabric of High Schools has been reared, which not only operates unjustly to the Public Schools, but which has impaired the High Schools themselves.

First, the injustice to the Public Schools. It is universally admitted that the Public Schools are the real foundation of our educational system. The higher schools, whether High, Collegiate, or University, are but the development of what began with the A B C classes of the Public School. Admitting this, then, it must follow, that the greatest care should be taken with the *feeder*, or with the foundation (if you choose) of this fabric. Both in the pecuniary support given and the care taken in the selection of teachers—school organization—inspection, and all the other *et ceteras* of a Public School. That considerable attention has been paid to the education of Public School teachers and school management generally, there is no room

for doubt. And yet it is certainly on the face a glaring mistake to find that for twenty years only one Normal School existed to supply teachers for a large Province like Ontario, when the demand was really so great, whereas, in the matter of training for High Schools, we had a University liberally supported to provide teachers for our High Schools, where the demand was only one fiftieth of our Public Schools.

But, although this injustice will soon be a thing of the past, another yet exists. By the Report of the Chief Superintendent for 1872, we find that High Schools received from Government a sum more than twenty times greater in proportion to the pupils taught, than the Public Schools. While the Public Schools received barely forty cents for each scholar attending school during the year, the High Schools received \$8.75. Nor is this all; while a Public School scholar costs the country for his education \$4.04, the High School scholar costs \$20.45.

Now, with such liberal support, both from the Government and the country, we have a right to expect corresponding results. We are well aware that as a scholar is advanced to a department of school work, in which the education is more expensive, that his *education* will be more thorough and substantial, and that he will be so much better qualified to reward society for what that education costs.

Well, is this true with regard to High School education? As we are not able to answer this question from observation, we

must rely upon the statements of those whose business it is to know.

Turning to the Report of the two Inspectors of High Schools, published with Dr. Ryerson's last Report, we find much cause for uneasiness on this point. In the classification made by them of the 102 High Schools in the Province—a classification made according to the average attainments of the pupils—we find that only four schools—Galt, Hamilton, Kingston, and Ottawa—stand in the first class. The second class consists of 19; the third of 35; and the fourth of 45. "In regard to class IV." the Inspectors say, "we agree in considering the following schools as not only at present far below the standard of High School, but as likely to remain so for years to come, since the villages in which they are situated have not as yet Public Schools in a sufficiently effective condition to furnish material for the support of anything worthy of the name of High Schools, viz., Richmond, Pakenham, Osborne, Alexandria, Metcalfe, Manilla, Oakwood, Stirling, Scotland and Wardsville.

We are not informed on what *percentage* or average of work done by the pupils at the examination, this classification was made. At any rate, we are pretty safe in assuming that those in the fourth class, or nearly one half of the whole, are in a pretty low state.

Referring to their remarks upon the attainments of the pupils in some of the more important English branches, we find the following:

"READING.—Whilst in some of the schools great attention is paid to the most important subject of Reading, and the scientific method of teaching it is successfully pursued, in many others a lamentable deficiency must be reported. In not a few schools it is almost entirely neglected, no place being assigned to it in the programme of weekly exercises. In many others it oc-

cupies altogether a subordinate position, and forms only incidentally a part of the school work; as, for example, when a class in History or English Literature is to recite, its members are permitted, before recitation, to "go over" the lesson as an exercise in reading; and in only a few schools is it taught with a true regard to scientific principles, and with a full appreciation of its worth as a means of culture.

MATHEMATICS.—We regret to have to state that, with a few gratifying exceptions, the standing of the schools in this Department is rather low. In some cases, perhaps, the Mathematical teachers, having passed through their University course, and graduated with a minimum of mathematical knowledge, do not possess that thorough mastery of the subject which is essential to successful teaching. In others, again, there seems to be no just appreciation of its value, both as a means of intellectual discipline and as a necessary element in material progress. The value of Mathematics, and, in fact, of every other branch, as a means of mental discipline, depends on the mode in which they are taught; and, in this respect, the Mathematical teaching in the High School is not all that it should be. Too much is made of rule and formula, and too little of principles. Let us particularize somewhat. Trigonometry is taught in so few of the schools that it requires no special remark at present. Greater attention is given to Euclid. In the two first-class schools it is taught with an intelligent appreciation of its value in discipline, and of the mode in which it should be taught, in order that its value may be fully realized. But, in many of the schools, the lesson in Geometry is a mere routine—the pupil having no clear ideas of the premises from which he reasons; of the conclusion to be established, and of the true logical processes of the demonstration. The "two invaluable lessons," which Mill says "we learn from our

first studies in Geometry," are, therefore, certainly not learned. The pupils are not taught to "lay down, in express and clear terms, all the premises from which they intend to reason; and to keep every step in the reasoning distinct and separate from all the other steps, making each step safe before proceeding to another step, and expressly stating, at every point of the reasoning, what new premises are introduced," so that logical *habits* of mind may be formed, and so acute a perception of the form and essence of sound reasoning, that the mind is enabled, instinctively, as it were, to detect the presence of even the most subtle fallacies.

ARITHMETIC.—In Arithmetic, we find the pupils, too generally, slaves of rule and formula—not capable of interpreting the formula (which ought to be banished from *Arithmetics*), and perfectly in the dark as to the reasons of the rule. They are quite oblivious of the fact that it has a principle, or, granting that it has, they have not the slightest idea that it concerns them to *know* it. The rule is memorized; it is applied to the solution of questions to which it is supposed to be applicable, from the fact that they are "set under it," and whose *phraseology* goes far to verify the supposition. And all this is too often not only countenanced, but encouraged by the teacher.

In a very good school, in which the pupils were quite expert in the application of the rule when they *knew what rule to apply*, the following question was given:—"Bought 5,225 lbs. of coal at \$7.25 per ton of 2,000 lbs., what was the cost?" None of the class could "find the cost." The teacher, somewhat chagrined at their failure, said "If you'll allow me to state the question, I think they'll do it." Assent was, of course, given, and he stated the question thus:—"If 2,000 lbs. of coal cost \$7.25, what will 5,225 lbs. cost?" And the question was soon worked out by

several of the class; they had recognized the familiar language of the "Rule of Three," which was thus made to usurp the place of the simple rules. In all the schools the following questions, among others, were proposed:—"My purse and money together are worth \$48.60; the money is eleven times the value of the purse; what is the purse worth?" "An army lost one tenth of its number in its first battle, a tenth of its remainder in its second battle, and then had 16,200 men left; how many men formed the army at first?" It will, perhaps, hardly be believed that more than ninety-five per cent. of the pupils in the High Schools failed in the first question; and a much larger percentage failed in the second! Here are some of the records. In a school of 21 pupils, neither question solved; in one of 25, neither question; in one of 23, neither; in one of 32, one solved the first question; in one of 19, neither question solved; in one of 60, neither solved; in one of 25, neither solved; in one of 92, one solved both; in one of 43, one solved both; in one of 84, one solved the first; in one of 120 (present), ten solved the first, and three the second; in one of 72, five solved the first, and one the second; in one of about 120, twenty-nine solved the first, and one the second."

These quotations shew that, so far as the attainments of pupils in the English branches are concerned, that there is deficiency calling loudly for energetic action on the part of those controlling our High Schools.

But let us take the latest report—that of J. A. McLellan, dated Jan. 3rd., 1873. Our readers will pardon the fulness of the quotation, on account of its great importance.

"I have the honor to submit for your consideration, the following memoranda concerning the admission of pupils into the High Schools: *Guelph*. Found a class of

about 20 in course of training for the entrance examination by masters, who assumed that "All of them would be admitted on the following day." The *reading* of nearly all these 20, (whom the regular pupils hardly surpassed) was *very bad*, pupils not familiar with common words—pronunciation atrocious; violence read *voilence*; *torrit*, for torrent; *genus*, for genius; *laborisly*, for laboriously, &c. In Grammar I gave the "Candidates," "Few and short were the prayers we said." This sentence too difficult; e. g. "few" a preposition—governs prayers; "short, a preposition; do. "were a transitive verb—governs prayers;" said, "an intransitive verb, passive voice." None of the candidates could parse said; only 12 of ALL SCHOOL, (50) could solve question in subtraction of fractions; and only 8 could find cost of 5,250 lbs. of coal at \$7.50 per ton of 2,000 lbs. You can imagine how much the candidates knew.

Elora.—Trustees rejoice that "checks to entrance removed." 4 candidates for entrance—20 pupils present; 4 did question in subtraction of mixed fractions, and 5 got "coal" question! Three "old pupils." One would think that with the 'harsh checks to entrance,' the pupils had not been stringently dealt with in their entrance examinations.

Stratford.—22 admitted; 79 on roll; about 60 present; only 16 got "coal" question. The entrants did badly; analysis and parsing by whole school anything but good.

London.—72 admitted after my visit; have not seen the papers—these were already admitted as school pupils, a large number who could not have passed (and cannot pass) a *fair* entrance examination. The City Inspector (virtually manager of the school), Mr. Boyle, sent me a note stating that "the Board of Examiners had admitted 72 pupils out of 78 candidates;" did not condescend to forward copies of examination papers.

St. Thomas.—15 admitted; 61 on roll. The examination was better than some others, but much below what it should have been.

Strathroy.—19 admitted; 40 on roll. *Reading* very bad, *History* do.; *Geography* do.; 8 in *whole school* found difference between 2275 and 5-16ths and 2174 and 11-112ths. Judge what the entrants could do. *Grammar* very bad.

Sarnia.—Eighty-seven on roll; thirty-eight admitted—nearly whole of senior public school division. Examination papers fair; but pupils not up to papers: Query—had the thirty-eight been aided by teachers? *that has been done*. A year ago there were twenty-eight pupils on roll, now eighty-seven! Even the "old pupils" did badly: gave exercise in grammar, "and first one universal shriek there rushed louder than the loud, loud ocean, like a crash of echoing thunder, &c." All *failed* in analysis. A large number failed on *universal, first; shriek, there, like*.

Wardsville.—Forty-four on roll, eight admitted, not one of whom qualified, twenty-four present; Reading utterly bad; only seven got subtraction question and of coal; Grammar, very poor performance, nearly all failed to parse *first*, (see above) and *all*, (and then *all* was hushed, &c.) "universal" is a noun, third person, singular number, &c.; "louder" too much for many; "ocean" noun, objective case, after rose; "crash" noun, objective case, after rose; "crash" noun, nominative case, to was understood, &c.

Oakville.—Thirty-six on roll; about thirty to be admitted. These were already in High School. Parsing utter failure; "shriek" objective case, governed by one; "universal" a verb, in the possessive case; "first" a preposition, governed by one. Gave "few and short were, &c." too, difficult for nearly the whole school—certainly for all the candidates. A more deplorable exhibition of "grammatical" ignorance could not be imagined. Oakville is of course glad that estimate as to admission has been done away. Only three in school got above question in subtraction; seven got "coal."

Mount Pleasant.—Forty on roll; twenty-three of whom admitted. Only thirteen in the whole school could do the question in subtraction, and five the coal question! A fair examination would have excluded twenty of the twenty-three.

Grimsby, St. Catharines, Smithville, Beamsville, Niagara.—Had some examination. One question in grammar, and one in arithmetic constituted the whole examination; e. g. add $\frac{3}{4}$, $\frac{4}{7}$ ths, $\frac{3}{5}$ ths, 1. Grimsby had no candidate for admission, probably because not a *Union* School. Beamsville was held in check by its master (Teefy) who is determined to admit none

but qualified pupils. Smithville—admitted five, all far below the mark. St. Catharines—admitted forty-seven, and has now one hundred and eighty-eight on roll; about three times as many as it had a year and a half ago.

Dunnville.—Thirty-nine on roll; (twenty-three girls) twenty-two admitted. Trustees and masters admitted that these were far below the legal standard, but had to have two teachers, and must give them something to do; would soon work the juniors up, &c. The teacher gave "To love our enemies is a command given," "to" a preposition, governs the noun; "to love" an intransitive verbal noun; "command" objective case, governed by is. "We must obey our rulers;" "must obey" intransitive verb, indicative mood, &c. "The boy with the long black hair was found in the wood." All entrants failed to parse "boy;" "hair" is a verb, third person, singular, objective case, governed by with. "John runs swiftly." "John" a verb, third person, singular, &c., &c. None of these entrants could do the elementary questions above mentioned; many of them could not get through the multiplication table.

Caledonia.—Thirty-six on roll; twenty-five admitted. Only seven of whole school got subtraction question. The arithmetic utterly bad.

Also read the following by the late Rev. J. G. D. McKenzie, in regard to the Ottawa High School, placed in first or highest class(!)

Ottawa.—The deficiencies of the "entrance" pupils in this case took me much by surprise. Twenty-five were present at the inspection, and were subjected in the first instance to an oral examination in parsing. With the exception of the relative "that" everything was missed except by some two or three. I then tried them with written work, the result being not much more satisfactory. Arithmetic also was weak. So glaring were the deficiencies of these pupils that one of the masters confessed they were the worst of the kind they had ever had. From causes on which I do not feel called upon to enter, and which, perhaps, I do not fully apprehend, there has sprung up a feeling of positive alienation between the Collegiate Institute and the Public Schools of the City, so that the former is almost wholly cut off from its nat-

ural source of supply, and depends mainly on pupils from private schools. This is a very serious evil. I am happy to say, the trustees are sensible of it, and will take steps to rectify it."

We are aware that the Inspectors endeavor to throw blame upon the system of Entrance Examination, and the amount of work required of High School Masters. Admitting the force of this, as a reason for the present state of affairs, then it follows, as our High Schools have been working under the present system for the last thirty years, that their condition, in all probability, for that time has been deplorably bad, and that the money paid in this way has been, to a great extent, wasted. The country really cannot afford to pay so large an amount out of the public funds for such "loose teaching," or bad management, as the reports of the High School Inspectors display.

Now, the question might be asked, why this inefficiency? We have already referred to the explanation given by one of the Inspectors; but is that explanation sufficient? Has there not been too great a laxity allowed in the establishment of High Schools—an utter disregard, in some cases, of all the conditions required to make them successful? Have they not, in too many cases, attempted to do work which should have been left to the Public School, and which, we have reason to believe, would have been better done by the Public School? Have they not been bolstered up by Boards of Trustees, and packed with pupils from the Public School, simply to draw on the School Fund? Is it not also true that there are a greater number of High Schools than the wants of the country require? We do not want to be understood as opposed to the establishment or increase of High Schools, but we do most distinctly say, if their inefficiency is such as the Reports of Inspectors already referred to would lead us to believe, then, the fewer of such schools the better. Far

more profitable to the public would it be to expend the same amount of money on their Public Schools.

There is a good deal of force, we believe, in the concluding remarks of Inspector McLellan in the last report made to the Department.

"I presume but very few of our head masters could take a "First A," under the new law. Let every High School master be required, in addition to his degree, to hold a first class provincial certificate, or to teach a year (or so), as assistant-master, before he becomes qualified for a High School mastership. It is insisted that a person shall have a second class provincial certificate to qualify for a first class. Why should not a candidate for a High School certificate be required to hold the highest grade of Public School certificate, in order to qualify for the highest educational positions! The subjects generally taught in

the High Schools are identical (except a smattering, in most cases, of classics and French,) with those required in the examinations for first provincial certificates, and I unhesitatingly assert that (and my notes will prove it,) a great majority of our union grades are not as well qualified to teach these subjects as Public School teachers holding "A 1" certificates under the new law; and yet a great many of these men prate about the "indignity" of having Public School Inspectors associated with them in the examining boards on terms of perfect equality! A great many of the High Schools of the country would, under the present circumstances, be far better off—more rapidly "worked up"—if under the charge of first class provincial teachers.

We propose next month to follow up this question, by referring to the impropriety of requiring High Schools to do so much of Public School work.

MODERN CULTURE.

READ BEFORE THE ONTARIO TEACHERS' ASSOCIATION, AUG. 14TH, 1873, BY J. HOWARD HUNTER, M. A., PRINCIPAL, ST. CATHARINES COLLEGIATE INSTITUTE.

The remarkable age in which it is our great privilege to live has been characterized as the age of free thought and inductive science. Perfect freedom of discussion ought to possess an especial charm for teachers, for they of all men have hitherto been most obnoxious to the assaults of bigotry and intolerance. Teachers of special religious opinions have, of course, been pre-eminently conspicuous for their zeal and their sufferings; but hardly less numerous have been the martyrs of science and philosophy. There can be no more sublime spectacle than that of the human intellect, divested of its well-worn fetters, and impelled with the stupendous powers bestowed by its Creator, rising to the height of its full stature, and striding forth from its prison-house in the fearless pursuit of truth. This is a spectacle which the

poets and sages of the olden time lovingly portrayed and longed to witness, but the phenomenon has been, until our more fortunate day, rare and exceptional. For the first time in the annals of the world is culture becoming truly liberal, or is discussion becoming really free—when an independent thinker has to fear neither the fate of Socrates, Seneca, or Servetus, nor the hardly less terrible sentence of social outlawry. It would be a subject of surpassing interest to resolve the forces that have afforded this result, and to trace the stages of this grand intellectual emancipation, for which the most pusillanimous thinker among us must surely have the courage to be grateful. But at present I have to do, not with the discussion of general phenomena, but with that special phase of the intellectual revolution which relates to scholastic culture.

Amid the general political upheaval that marked the year 1848, a very distinct reaction against "authority" and precedent was discernable also in the monarchy of intellect. "I think," says Professor Masson, "that I can even mark the precise year, 1848, as a point whence the appearance of an unusual amount of unsteady thought may be dated—as if, in that year of simultaneous European irritability, not only were the nations agitated politically, as the newspapers saw, but conceptions of an intellectual kind, that had long been forming themselves underneath in the depths, were shaken up to the surface in scientific journals and books." (*Recent British Philosophy*.) It fortunately happened that, when the political atmosphere had somewhat cleared, and while men's minds continued still in the quickened and receptive condition which recent events had induced, that great school of applied science—the Exhibition of 1851—opened in London. Here was registered in a few months what an Ontario teacher would call an "aggregate attendance" of more than six millions and a quarter of pupils. The vast educational value of this reunion is now, after the event, apparent to the dullest mind; but it argued great sagacity in Prince Albert to define, more than twelve months before the inauguration, its true significance, in these memorable words: "The exhibition of 1851 is to give us a true test and a living picture of the point of development at which the whole of mankind has arrived, and a new standing point from which all nations will be able to direct their further exertions." (*Speech at Mansion House, March 21st, 1850.*) The impulse thus given to education on the Continent was immediate. In 1852 the French Government were already recasting their whole University system, and bestowing on the newer knowledge its appropriate recognition in the degree, Bachelor of Science. (*Baccalaureat es Sciences.*) Special scien-

tific schools and universities began at once to multiply in Germany, Prussia and Switzerland. For want of wise concession a mischievous distinction had, early in the 18th century, arisen on the Continent between "useful" as opposed to "liberal" education—two things which (as Sir Thomas More once said of law and equity), "God hath joined, but man hath put asunder." The classical schools became, in Germany, stigmatized as "word Schools," (*verbalschulen*) while those institutions which restricted their training to the "3 R's," and to industrial science, were dignified as "thing schools" (*realschulen*.) The publication of Rousseau's "*Emile*" in 1762, powerfully stimulated the demand for objective teaching; every new scientific discovery added to the momentum, and advanced men's minds further towards those fundamental changes, which the middle of the 19th century saw initiated in the whole theory and practice of teaching. While these profound educational movements were in progress on the continent, England was peacefully sleeping on. In 1867, however, the nations assembled at Paris in industrial congress, and England was unspeakably startled to find that a brief interval of sixteen years had, in numberless departments, converted her industrial and artistic superiority into the most palpable inferiority; and that neglect of those general and special educational appliances, which her continental rivals were strenuously perfecting, signified rapid national decadence. Then followed the usual and characteristic panic; commissioners were sent to France and Germany, to report on the systems of instruction there pursued. Then was issued, in hot haste, a Commission of Inquiry into the condition of English Grammar Schools, which has since been followed by similar investigations in the subjects of Primary and University Education. A considerable number of the English Grammar Schools, (which furnish a con-

venient *average* between the highest and the most elementary institutions of learning) were founded and endowed from the spoils of the monasteries, in the days of the second and third Tudors. From their foundation almost to the present time, these schools have suffered but little change. The truth is, they were the victims of prescription and "regulations." Henry VIII had an unfortunate weakness for "regulations" and "authorized text-books." He extended his paternal care of his subjects to questions both religious and grammatical. As "Defender of the Faith," he compiled a manual of Christian belief, devoting a whole chapter to his favorite subject, the sacraments. This manual was "authorized" by convocation, and thus was fixed—until the publication of the second edition—the standard of orthodox Christianity for all England. This text-book was to be universally employed with an occasional and fortuitous admixture of the Creed, the Lord's Prayer, and the Ten Commandments. Early in Henry's reign, one William Lilly, after a pilgrimage to Jerusalem, and much other vagabondizing over Asia and Europe, came to the English capital and fell into favor with Sir Thomas More and the High Church party, then predominant at the court. "Master Lilly" had nursed a weakness for both grammar and doggerel, two ingredients which our school apothecaries not unfrequently compound together. Well, by painful patchwork and botching, Lilly got his metrical rules to scan, and Lilly's Grammar, after publication, was, by royal edict, imposed on unhappy English youth as the authorized text-book. In vain did really eminent teachers of the time, like Roger Ascham, protest with vehemence against this degradation of the teacher's office. In vain, long years afterwards, did a succession of philosophical educationists, like John Milton, John Locke, Samuel Johnson, Adam Smith, protest against the continuance

of such a system. By the mere force of *vis inertiae*, Lilly's Latin Grammar has survived even into our own time; a reprint was issued as late as 1817, and I believe that even now, after 360 years have passed, the rural wayfarer may catch, through the open windows of drowsy English Grammar Schools, the mournful wail of "*Propria quæ Maribus*" and "*As in præsentis*." All of this is full of instruction for us, particularly, as in Ontario we have witnessed a singularly close parallel to such despotic regulations, and as we appear to be now ripening in educational matters, for that famous statute of Henry VIII, (31 Henry VIII c. 14) entitled "An Act to abolish Diversity of Opinion." Henry had hardly passed away when the historian of the period has to note the spiritless teaching and the decline of learning at the Universities. The brilliant scholars of the Tudor Courts had been trained under a very different system, and, as they departed, accomplished Latinists became more scarce and in the later Stuart reigns, had well nigh altogether disappeared.

In Ontario the turning of the tide in favor of modern culture is strongly marked by the School Act of 1871, and the University Act of 1873. It may be unreasonable to complain that, though the new Senate has several times met, no result whatever of a practical kind has yet been reached. I wish, however, that we had even a good *hope* of the revision of the curriculum being at once proceeded with. What Kant said in the 18th century of the German schools of learning, is equally applicable to Toronto University: "We want, not slow reform, but swift revolution." It would evidently exert a most favorable effect upon the Senate, if its proceedings were fully reported. The friends of educational progress, who appear to be overmatched by the "ancient logic," the strategy, and the volubility of the reactionists, would then find themselves *inamensably*

strengthened by the sympathies of the graduates, and of the general public. Representation, when unaccompanied by an accurate report of what our representatives say and do, does certainly appear to me a merry jest. The new Act is intended to evolve all necessary academical reform out of the single principle of the representation of the graduates; it is therefore of the very essence of the question to consider whether this representative principle is being fairly administered. It does not seem to the ordinary mind absolutely essential that every street or larger lane of Toronto should have its academical interests guarded by a special spokesman in the Provincial University Senate, while the whole of outside Ontario should be represented by some two or three members. Of the Toronto representatives, some have, by their great public services—not necessarily educational—well deserved the most distinguished recognition. This remark, however, is by no means applicable to a considerable number of the Toronto representatives, and if we seek for the claims of these latter gentlemen as educationists, we shall, in several instances, be unspeakably embarrassed to discover them. It may be urged that these latter gentlemen—who so assiduously canvassed and combined for their own election—must in the very nature of things be best informed of their own merits as educationists, and that their claims to recognition would very probably have been quite overlooked but for the maternal care that the aspirants took of their own interests. I freely grant this terrible possibility, and I appreciate the full gravity of the alternative, but the reasoning does not appear to me conclusive, nor does the penalty appall me. If the Provincial University is really to enlist the sympathies of the alumni scattered through Ontario, it will be by a far different mode of procedure. The consequence of the first election has already been disastrous. Convocation has repeatedly been

dismissed for want of a quorum; and the outside graduates have already appreciated the true value of their attendance, and therefore ceased to attend.

Important changes in the University curriculum are imperatively required, if the institution is to command the hearty sympathy of educationists. The matriculation examination ought to represent, not the state of human knowledge in the days of Queen Elizabeth, but the enlarged culture of the days of Victoria; it ought to represent a good general basis of knowledge, and ought, therefore, to include a distinct recognition of English literature, and some practical acquaintance with the sciences of observation and experiment. As at present constituted, the examination appears overweighted with classics. I refer, not to the area of classical text required, but to the further exaction of pedantic rubbish, quite foreign to the general spirit of the authors, and which has the specially injurious effect of withdrawing the student's mind from the literary banquet before him. Macaulay years ago ridiculed the absurdities of this "collateral" examination, and it is in this sense Mr. Lowe is to be understood when he said, "Why, if Æschylus were to come to life again, he would be easily plucked on his own verses, by an Oxford examiner." (*Speech of Nov. 4th, 1867.*) In any philosophical system of culture, it is impossible to conceive that the ancient classics will ever be neglected, but I am persuaded that important changes are imminent in the mode and, above all, in the objects of classical study.

Among University reforms bearing on more liberal culture, we now find prominently discussed the abolition, or, at all events, the serious modification of the competitive system. It is a startling fact that, with hardly an exception, all the great leaders of scientific thought in this century have been men who have never taken a University honor. The Natural Science

Tripes at Cambridge has proved an acknowledged failure. The opinions of some of the most eminent British teachers of our time may here prove acceptable. Prof. Seeley, who was bracketed first in the classical Tripes of his year, and—what is far more important—who has since proved himself an efficient professor, thus speaks of his own University, Cambridge: "It is well known that the man who hesitates is lost; that any one who asks the question, 'Is this course of study good for me? Does it favor my real progress, my ultimate success?' is not fit for the Tripes. *Thinking* of any kind is regarded as dangerous; it is the well known saying of a Cambridge private tutor, 'If so-and-so did not think so much, he might do very well.' * * * * And again Prof. Seeley continues: "I am sure that competition is a dangerous principle, and one the working of which ought to be jealously watched. It becomes more dangerous the older the pupil is, and therefore it is most dangerous in Universities. It becomes the more dangerous, the more energetically and skillfully it is applied. At Cambridge it is wonderful to see the power with which it works, and the unlimited dominion which is given to it. And therefore, here it produces most visibly its natural effects—discontent in study, feverish and abortive industry, mechanical and spiritless teaching, and general bewilderment, both of the teacher and taught, as to the object at which they are aiming. The all-worshipped Tripes produces, in fact, what may be called a universal suspension of the work of education. Cambridge is like a country invaded by the Sphinx. To answer the monster's conundrums has become the one absorbing occupation. All other pursuits are suspended, every thing less urgent seems unimportant and fantastic; the learner ridicules the love of knowledge, and the teacher, with more or less misgiving, gradually acquiesces." (*Liberal Education in Uni-*

versities.) Prof. Seeley then proceeds to contrast the very different intellectual tone that prevails under the German University system. Mr. Todhunter, in his recent work on "The Conflict of Studies," has an evident partiality for the Mathematical Tripes, and naturally bears in mind that he was once senior wrangler himself, but he makes substantially the same admission as Prof. Seeley, as to the general effect of the system, and deprecates what he designates "the disheartening want of faith in all but the mercenary inducements to mental exertion." Mr. Quain, hardly less eminent as a teacher than as a surgeon, recounts his experience, and arrives at similar conclusions. (*On some defects in general education.*) The late Dr. Whewell, of Cambridge, vigorously denounced what he called "indirect teaching," i. e., the training of students for competitive examinations. He observes: "When a man gives his mind to any subject of study, on account of a genuine wish to understand it, he follows its reasonings with care and thought; ponders over its difficulties, and is not satisfied till it is clear to his mental vision. On the other hand, when he studies for examination only, he does not wish to understand, but to *appear to understand.*" (*On the Principles of English University Education.*) The illustrious Faraday, whose expositions of scientific principles have been equalled by perhaps those only of his distinguished pupil, Tyndall, frequently and strongly denounced the competitive system. The latest founder of American Universities—the University of Michigan—has, after the most ample investigation, deliberately excluded the system of competition; and at Harvard and the other older Colleges, the tendency of opinion is, Sir Charles Dilke informs us, strongly setting in the same direction. (*Greater Britain*, Vol. I.) If I may be permitted to record my own opinion, I regard the competitive system, found in Ontario Schools and Universities, as utterly

pernicious,* no matter whether the results of the competition are indicated by a change of places in class, or by the registration, through marks, of imaginary rewards, or by the customary rewards that Universities offer for cerebral congestion. As Dr. Whewell, some years ago pointed out, teachers and professors are easily ensnared into such a system, for it affords to the instructor a relief from mental exertion, and a substitute for spirited teaching, by providing an artificial motive for the student's attention. With Herbert Spencer, I believe that the true teacher has in himself abundant resources to make his subject interesting, as well as instructive; and that he will find it unnecessary to appeal to any other instinct than the intense craving for knowledge, which, unless, perhaps, it has been expelled by bad teaching, is found in every healthy human mind.

The School Act of 1871 was intended to open up to the youth of our High Schools the more elementary parts of practical science, as well as a good acquaintance with English literature and modern languages. Little effect is, however, yet discernible, and I have thus, under this division, to discuss, not the progress of modern culture, but the impediments to progress. The simple truth is that the High Schools of Ontario are kept in continual trepidation for their very existence; and that hitherto the masters have had to build with the trowel in one hand, and the sword in the other. It cannot be too clearly impressed on the Legislature that, before the views embodied in the Act can be realized, the High Schools must, once for all, be relieved from this incessant dread of extinction, whether the danger arises from the parsimony of municipalities, or from the ill-judged Regulations of the

Council of Public Instruction. We have just now the humiliating spectacle of certain Municipal Councils seeking, under wretched legal quibbles, to repudiate their educational obligations, and to arrest what it ought to be their greatest pride to advance—the higher education of our youth. Hardly less dangerous, however, to the High Schools have been the generally foolish, and always despotic Regulations of the Educational Council. This body has brought the school administration of Ontario to such a pass that there appear to be now but two alternatives—the simple extinction of the Council, or its complete reconstruction, on a representative basis. The policy pursued by the Educational Department, through this shadowy Council, has hitherto been the very antipodes of that which promotes healthy intellectual development—and it may, be summed up in the ominous words, *Centralization and repression*. The last few months have witnessed the most extraordinary assumption of legislative powers. It will be remembered that, in the autumn of 1872, the powers of the Council were, in the clearest manner, defined by the Attorney-General for Ontario; and were expressly stated to exclude certain acts attempted to be performed by the Council. At the last session of the Legislature, the purpose of the Council was attempted to be attained by legal enactment, but the Legislature declined to entertain a very doubtful and dangerous measure. In July of the present year, the Province was astounded to find that the Council of Public Instruction reproduced the very Regulations which, twelve months ago, were, on the authority of the highest law officer of the Crown, declared illegal, and which, four months ago, Parliament declined, from their objectionable character, to enact. It will indeed be surprising, if the Legislature permits such proceedings to pass unrebuked. Hereafter, if this precedent is established, we may expect to

* A student's acquirements may evidently be appraised by examination, and rewarded, without a resort to that personal conflict which is an essential feature of "competition." Much confusion of ideas prevails on this subject.

find our Educational Council revising the decisions of what has hitherto been popularly regarded as the High Court of Parliament.

When an intelligent Japanese envoy recently requested of the United States Government an exposition of the national policy in matters of education, the Commissioner of Education at Washington replied in these admirable words: "While seeking to unify and generalize the results of experience in the diversified systems of the country, it strives *rather to promote than to restrict their individuality*, and proposes to aid them only by pointing out what has been found most useful in the experience of others, which they *are expected to modify and adapt to their own local peculiarities*. Personal liberty, and the freedom of small communities—fundamental and most cherished elements in our Government—are believed to be in themselves great sources of improvement to the people, and to afford the means of self-education." (*Education in Japan*, p. 155.) How different from all this has been the repressive policy of our Educational Department! The avowed policy in Ontario has been to make all teachers teach in the same mechanical way, the same subjects, at the same hour of the day, and from the same text-books. It will soon be difficult to conceive why the "teacher" is so designated, for, in his case, "the whole duty of man" is held to consist in the filling up of blank class-books, or blank returns, and in the unflinching use of the authorized text books. Unless uniformity be in itself good, how injurious to the culture of this Province must be the general employment of the authorized text-books, which are almost uniformly bad! After the historical illustrations that I have supplied above, it would be incorrect to say that our Ontario system is *unprecedented*; but it will be remembered that, to find a parallel, I was compelled to go back over three centuries and a half of progress,

and search the records of Henry VIII. Such a system of repression as is now attempted in Ontario is utterly out of tune with the voice of modern culture. We find the Educational Department itself conscious of the fact, and seeking to enforce its measures by exacting from the School Inspectors, not only the public reports, intended for the eye of Parliament, but secret reports also, which meet the eye of only the Chief Superintendent, or of his Deputy. For this system I have no difficulty in finding a precedent within the present century, but I have to resort to the history of France, under the First Empire. Napoleon was accustomed to exact such reports from his secret police, and some of Fouche's reports are still extant. They were sometimes true, but much oftener fictitious, for the agent was accommodating and his master was exacting.

I may be excused for observing that a secret official school report, recently published in one of our Legislative returns, most strongly reminded me of Fouche and his highly-flavored police reports. While on this subject, I have another and more wholesome precedent derived from English practice. A few years ago, certain Inspectors of English schools laid before the Education Committee of the Privy Council reports, in which was questioned the wisdom of some particular acts of the Committee itself. The presumptuous paragraphs were struck out by the Vice President of the Committee, and the reports so mutilated were laid before Parliament. The House of Commons, however, by resolution affirmed that the Inspectors of Schools collected information, not for the benefit of any Government department, but *for the use of the Legislature*, and that their reports were public property. It is truly deplorable that we in Ontario should, at this stage of our progress, have to discuss questions of this character; and that our contest should be, not with ignorance, but

with the official representatives of education. Let us hope that a better judgment will at length prevail; and that we shall not have, in the future, to wage perpetual war with those whom we would, if we could, treat as our natural allies.

(NOTE.—At the express wish of the author we offer to our readers the above well

written article, on the sole responsibility of the writer. We do not hold ourselves bound to endorse either the views he advocates, or his strictures on the Council of Public Instruction. His well known ability as an educator entitles him to consideration, and a discriminating public can accept or reject his statements at their own discretion. EDITOR.

THE REGULATIONS OF THE COUNCIL OF PUBLIC INSTRUCTION.

BY JUNIUS, JR.

The Ontario Consolidated School Acts, among other provisions, authorize the Council of Public Instruction "To prescribe from time to time the qualifications of County, City, or Town Inspectors.

To appoint Inspectors of High Schools, prescribe their duties, and fix their remuneration.

To examine, and at its discretion, recommend or disapprove of text-books for the use of schools."

When the School Act of 1871 became law, the Council prescribed the following qualifications, as necessary to obtain the certificate of eligibility for the office of City, Town, or County Inspector, viz.

1st. Having previously held the office of Local Superintendent in any City, Town, or County for three consecutive years.

2nd. Holding a First Class Provincial Certificate, Grade A.

3rd. Being a Graduate in Arts, and holding a degree in any British or Canadian University, on writing an approved Thesis, and furnishing satisfactory proof of having taught three years.

The Council has always exhibited two very contradictory characteristics, viz. boldness even to temerity in infringing upon the provisions of the school laws, and anon, shirking responsibility, and yielding to

timid counsels, when firmness was desirable.

The latter trait was displayed in a marked manner, by qualifying those specified in classes 1st and 3rd, contrary to the judgment of the Council, it being well known that outside pressure alone produced the result.

The former was evinced in violating the 38th sec. of the School Act of 1871, by authorizing the High School Inspectors "to usurp the functions expressly reposed in the Boards of Examiners," for the admission of pupils into the High Schools. *

But though baffled for the time being, the Council, like the old Guard, "never surrendered," hence we find in the Revised Regulations of March 25th, 1873, that "certificates of eligibility for appointment to the office of County, City, or Town Inspector of Public Schools, shall hereafter be granted only to teachers of Public Schools, who have obtained, or who shall obtain First Class Provincial Certificates of Qualification of the highest Grade, (A.)

That is to say, the Council, after the mischief had been done, prevents, for the future, the appointment of those enumerated in classes 1 and 3 or, in other words,

*Vide order in Council, Sep. 26th, 1872, suspending these regulations.

re-enacts what it was reluctantly induced to yield, through lack of firmness or timid counsels.

Again, notwithstanding the Boards of High School Trustees were notified, by the Provincial Secretary, that

"His Excellency the Lieutenant-Governor has been advised, that the whole duty of examining pupils for admission to High Schools and Collegiate Institutes, including the settlement of examination questions, rests with the Board of Examiners constituted by the 38th Section of the School Act of 1871, and that the results of the examinations by the Board, upon subjects so prescribed by the regulations of the Council of Public Instruction, are conclusive, and not subject to the supervision of the High School Inspectors;" yet the Council "careth for none of these things," and has again issued instructions, (strange to say approved by his Excellency in Council, June 2nd 1873,) for a uniform entrance examination of pupils for admission to the High Schools and Collegiate Institutes, *Subject to the supervision of the High School Inspectors*

Thus, within the space of eight months, His Excellency is made to contradict himself, the variations between the suspended regulations and those now sanctioned, reminding one of the couplet,

"Strange that such difference should be
Twixt Tweedle dum and Tweedle dee."

Besides the objectionable feature of the High School Inspectors' supervision being retained, there is the equally objectionable retro-active clause for examining all pupils admitted since August, 1872. It seems unwise to turn out pupils who have been passed for over a year, and have purchased from \$15 to \$20 worth of Books, &c., necessary for their High School studies. However, as many petitions are going in on the subject from different Boards of Trustees, probably before this appears in print,

the retro-active clause may be suspended or withdrawn.

Again, the school laws provide for two kinds of Inspectors, viz: Public and High School, neither of whom, by any stretch of imagination, can enter or infringe on the domain of the other, but the Council has decided otherwise, and instructed the High School Inspectors "to visit the Public and Separate Schools in towns and cities, and to examine and report on the same. There can be no doubt of the illegality of the order, and the first complaint at Head Quarters would, no doubt, cause the suspension of the Regulation. It is, however, understood to be merely temporary in its nature, and not of permanent effect, the excuse for the ordinance being twofold. First, the incompetency of those holding the office of Town or City Inspector, whose qualifications are solely those specified in Class 1—previously described in this article—in other words, those who really are unqualified, but who were qualified by the Council for *prudential motives*. Secondly, that owing their appointments to the City or Town Boards, they report to the Education Office, only that which the Board appointing them approves, or, at least, nothing depreciatory, and consequently no trustworthy reports have been received, except in those cases where the Town or City Inspector has also been a legally qualified County Inspector, or ranked in Classes 2 or 3, as aforesaid.

Now, mark the astounding contradiction in the resolutions of the Council. They virtually decide, by the Revised Regulations of March 25th, 1873, that High School Masters are not as competent for the office of Public School Inspector, as those Public School teachers holding a First Class Provincial Certificate Grade A, and yet select the High School Inspectors from the ranks of those same High School Masters, and instruct them to examine and report on the Public Schools in cities and

towns, which, in many cases, are under the jurisdiction of P. S. Inspectors holding the very diploma (First Class Provincial Grade A) required by the aforesaid Revised Regulations.

Equally absurd and contradictory are the Regulations, requiring the higher English branches, including Natural Sciences, to be taught in our Public Schools and yet licensing the large bulk of the teachers, (3rd class) without even requiring them to be examined on the subjects.

Lastly, on the subject of text-books: So much has been written under this head, and nearly all the selections of the Council have been so universally condemned, that that august Body must feel highly flattered. We shall therefore merely bestow a passing notice by affirming that very few of the authorized text-books would be selected by any intellectual teacher. The Readers are infinitely worse than the old Irish National Series, and cost twice as much.

Davis' Grammar is beneath criticism. Hodgins' Geography is another poor affair. The new Spelling book ought to be consigned to the flames—the proper place for all spelling books. Its sole value consists in the lists of prefixes and affixes, and Saxon, Latin and Greek roots, which might all be embodied in the Readers, and thus avoid unnecessary expense. Smith's Arithmetic is not so suitable for our schools as the old Irish National; in fact, that Arithmetic is one of the best extant, and only requires a larger proportion of the problems to be in the decimal scale. By the way, one of the questions in the recent examination papers (July, 1874) involved a knowledge of logarithms, which are not to be found in the authorized text book. We should also like to know what Mr. McMurchy has to do with Barnard Smith's Arithmetic. Did he perform the arduous task of changing it from sterling to the decimal currency? and thus constitute him-

self another of the *Band of Toronto authors*, who have achieved such undying fame?

Davidson's "Animal Kingdom," and "Our Bodies," are, according to Professor Nicholson, "probably as bad works on the subjects as could possibly be selected," while the "little books" on Christian Morals and Chemistry need no encomiums, as they are very likely to be translated into every language under the sun. In fact, to be brief, the only text books authorized, that a judicious teacher would care to use, are Todhunter's Algebra, Roscoe's Chemistry, Cutter's Anatomy and Physiology, Page's Geology, Gray's Botany, Potts' or Todhunter's Euclid, Haughton's or Tomlinson's Mechanics, Keith on the Globes, and perhaps a few others.

We hope that the Council of Public Instruction will be able to sanction the use of better text-books, so soon as the *Torontonian Band of Authors* cease compiling, mutilating and mangling.

Besides, the High School Inspectors have never yet inspected their own schools. They have managed to examine some of the classes in each High School, on a few of the subjects of the programme, but nothing worthy of the name of inspection has as yet been attempted. Is the Education Department aware that it will take from two to six days (according to circumstances) to examine the Public Schools in each city or town, if the inspection is not a farce, that is to say, if each class is examined on each of the subjects specified in the programme and reported on. Toronto would require over a fortnight if properly done. It took the writer of this article three days to examine the two higher classes of a Union High and Public School, the examination, of course, being confined to the English branches, and was as expeditiously done as possible, but the H. S. Inspector examined the same classes, including Latin, Greek, French and English, and was through the job by 3 o'clock in

one day. The coal sum and one or two questions in fractions were given, then the teachers were allowed to examine—a few lines of *Cæsar* were next read, and a small amount of French was likewise listened to—then followed the usual amount of praise bestowed on the teachers, each school being pronounced the best within a certain circuit, and the Inspector hurried off, reaching the station in time for the 4 p. m. express, on his way to visit and similarly inspect another High School. It may not be amiss to mention the following as an illustration of the manner in which some of the duties devolving on the High School Inspectors are performed: In the County of Lanark the P. S. Inspector has 5 High Schools in his jurisdiction, and he furnished the same set of questions to each of the

said High Schools as the entrance examination papers for candidates proposing to enter said schools. The High School Inspector approved of the questions for the three larger High Schools, but pronounced them as “altogether too easy, absurd, &c., &c.,” for the two smaller High Schools, and quashed the result of the examination in the latter case. Be it observed that the questions approved in the one case and disapproved in the other were identical; nay, more, the pupils whose examination was thus rejected had actually passed better than those approved. In justice to the Education Department, it may be observed, that when the circumstances were brought under its notice, ample justice was rendered in the premises.

EXAMINATION QUESTIONS.

(We continue the publication of the Questions at the recent County Board Examinations.)

BOTANY AND AGRICULTURE, 1ST CLASS.

1. Give the characters of (a) the classes Exogens and Endogens; (b) the Mint and Lily families.

2. To what family do the Cedar, Clover, Mustard and Dandelion respectively belong.

3. To what families does the following description apply?

“Herbs, or sometimes shrubs, with a colourless, bitter or nauseous juice (often poisonous); alternate leaves; and regular flowers, with 5 (or in cultivated plants sometimes 6 or 7) mostly equal stamens and one pistil. Ovary with 2 or more cells, in fruit becoming a many-seeded berry or pod. Corolla plaited in the bud or valvate, *i. e.*, the lobes placed edge to edge.”

Explain the meaning of the terms “regular flowers,” “stamens,” “pistil,” “ovary,” “corolla,” “plaited in the bud.”

4. Why does a botanist consider the tuber of the potato an underground stem?

5. Give the philosophical explanation of the nature of a flower considered as to the origin and correspondences of its different parts.

6. Draw a spatulate, an obcordate, a truncate, a palmately divided and an odd-pinnate leaf.

7. Explain the constitution of a pome or apple-fruit.

8. What is the origin of the soil? Give a classification of soils based on their chemical constituents.

9. Discuss the comparative merits of under draining and surface draining.

10. What are the best soils for peas, flax and carrots?

11. Give the composition of quick lime? For what soils is it more useful than slaked lime?

EDUCATION, 1ST CLASS.

1. “Prizes, Merit Marks, Emulation, Fear of Punishment, Shame, Ridicule, are of doubtful propriety as incentives to study.” Give briefly your views on each of these incentives.

2. “The teacher should keep before him

the true objects to be attained by school recitations." What are these objects?

3. Define punishment. What rules ought to be observed in its infliction?

4. "The principal characteristics of good school management are Promptness, Steadiness, Earnestness, Geniality, Quietness. Explain.

5. Show that acquirement of every kind has two values—value as *knowledge*, and value as *discipline*.

6. In Education we should proceed from the simple to the complex. Explain and illustrate this proposition.

CHEMISTRY, 1ST CLASS.

1. Describe the preparation of Oxygen from manganese dioxide.

A gas bag has a capacity of 45 litres; how much manganese dioxide containing 70 per cent. of Mn. O₂ is required to fill it with oxygen at 15° C., and 75° mm. barometric pressure?

2. With hydrogen diffusing through a porous diaphragm under constant pressure into an atmosphere of oxygen, how many volumes of oxygen pass through the diaphragm for every two volumes of hydrogen?

3. How is ammonia gas usually prepared in the laboratory? Empress by symbols the reactions that occur. How many litres of ammonia gas of 740 mm. pressure and 15° C. temperature, are required to neutralize 100 grammes of pure sulphuric acid, and what is the weight of the salt produced?

4. Describe (giving equations) (a) the preparation of phosphorus from bones; (b) the preparation of caustic potash from potassium carbonate, (c) the extraction of metallic mercury from Cinnabar.

5. What are the sources of the white arsenic of commerce? How is it obtained?

A piece of green wall-paper is supposed to contain Arsenic, how would you determine the point? A specimen of Tartar-Emetic is supposed to contain a small quantity of Arsenic, how would you ascertain whether Arsenic is present?

6. Name the principal places where Copper is obtained.

What is the chemical constitution of its common ores, and how is it obtained from them?

A piece of bread is supposed to contain Sulphate of Copper; how would you test the bread for this impurity?

7. What are the properties of the metal platinum? How is it prepared? Name its most important salt, and state its use in the laboratory.

8. A body yields by analysis 43.75 per cent. of nitrogen, and 50 per cent. of oxygen; what is its formula and its name?

ENGLISH LITERATURE AND COMPOSITION 1ST CLASS.

1. *Literature.*

1. Sketch the literary history of the fourteenth century.

2. Write an account of the English drama before Shakespeare.

3. State briefly Wordsworth's theory of poetry.

4. Who were the authors of *The Tale of a Tub*, *Comus*, *The Dunciad*, *Thalaba*, *Vanity Fair*, *Utopia*, *Novum Organon*, *The Task*, *The Seasons*.

2. *English Composition.*

The Candidates may choose one from among the following subjects:

1. July in Canada.

2. "A little learning is a dangerous thing."

3. Dust.

4. "Rome, Rome, thou art no more
As thou hast been."

The presiding Inspector is directed to collect the answers to the questions on English Literature one hour and a quarter after the commencement of the examination, so that one hour may be left for Composition.

BOOK-KEEPING, FIRST CLASS.

1. Classify the accounts in Book-keeping by Double Entry; and define the object of each.

2. Define the Stock account. How should it be opened and closed?

3. State the distinction between a Bill of Purchase and an account current. What is meant by equating the former and averaging the latter?

4. Show the distinction between a Note and a Draft.

5. The following account is found in my Ledger; the amounts on each side are supposed to be due at their respective dates; John Sim is to have 8% on his money, and I am to receive 10% on mine; Settlement is mutually demanded on the first of

May, 1873. Required the balance and when due :

Dr.	JOHN SIM.	Cr.	
Jan. 15th To Mdse.	\$275.00	Feb. 1st By Cash on account	\$500.00
April 10th do	650.00	May 1st. Balance on account	425.00
	\$925.00		\$975.00

6. Rule paper for Cash book. Bank Book, Journal and Ledger, make the correct entries of the following transactions, balance and close the Ledger, and find total gain or loss.

1873. June 1st.—In hand mdse., \$4,000; Cash, \$1000; Bank Montreal, \$500. June 1st. James Miller owes me \$500, and I owe James King \$400. June 2nd. Received from Montreal an invoice of cotton, amounting to \$170.80, consigned by James & Co., to be sold on their account; paid cash for freight \$18.75. June 3rd. Made up on account sales, James & Co.'s consignment; total sales, \$217; charges posted, \$18.75; my commission on sales at 5%, \$10.85; lost a \$5 bill this day. June 4th. Consignment to Andrews & Co., Hamilton, to be sold on my account, mdse. \$2000 paid cash for freight, \$205.25; paid insurance, \$10.60, goods all lost at sea; received \$2000 from Insurance Co. June 5th. Bought of George & Co., Stratford, on my note at 6 months, mdse., \$634.96. June 16th. Discounted the above note, discount allowed, \$18.52; cash paid, \$616.44. June 17th. Bought in company with Sam. Smith, 5000 lbs. cotton at 25-100ths=\$1250, each to share equally in the gain or loss; for conducting the business I am to receive a commission of 5% on all goods sold; paid cash for my half, \$625; Sam. Smith paid cash for his half, \$625. June 18th. Sold for cash, 5000 lbs. cotton, 31-100ths, \$1550; paid cash for sacking, \$5.25; my commission at 5%, \$77.50. June 29th. Cash expenses this month, \$2000; Cash sales, \$5000; mdse. on hand, per inventory, \$1000.

HISTORY.

1. Give an account of Lord Durham's mission to Canada, its object and results.
2. (a) "To unite in his person the crowns of France and of England was the greatest effort of Edward's policy."

(Text Book)—What claim had Edward III. to the French crown.

(b) Describe the circumstances under which Calais fell into the possession of the English. When, and how was it regained by the French?

(c) At the death of Henry V., what progress had been made in the attempt to conquer France.

(d) In what reign did the dream of an English Empire in France end?

3. (a) "True English history begins with the reign of Henry VII." (Text Book).—On what ground is this statement made?

(b) What was the ruling principle of Henry's foreign policy? Did he on any occasion depart from it?

4. Give a sketch of Cromwell's campaign in Scotland in 1650.

5. Give an account of the circumstances under which Lord William, Algernon Sydney, and the Duke of Monmouth, respectively, were brought to the scaffold.

6. Give the history of the Reform Bill of 1832, and mention its leading features.

7. By what statesman was the policy of France directed during the reign of Louis XIII? What was his chief domestic object? What was the principal aim of his foreign policy?

8. What privilege was conceded by the Edict of Nantes? When, and by whom was the Edict issued? When, and by whom, revoked?

9. Mention, in chronological order, the principal exploits of Alexander the Great.

ANSWERS TO ARITHMETIC, 2ND CLASS.

1. Bookwork.
2. 84000.
3. Bookwork.
4. 42, 1000.
5. Book-work.
6. 88 and 79-174ths.
7. (1) 1400. (2) 7500. (3) 12. (4) 4480. 8. 1275. 9. Book-work.
10. 78 and 4-7ths.

ANSWERS TO ARITHMETIC, 3RD CLASS

1. 25-196ths.
2. 9 and 3-13ths.
3. 3-8961788070698; the last twelve figures are a repetend: 1-4710037; the last three figures are a repetend.
4. 7880 and 5-12ths.
5. \$2.21.
6. \$25.52, \$150.46 2/5.
7. 20000.
8. 275.
9. 882 and 6-17ths.
10. 384.
11. \$28.350.
12. 3000.

PROGRAMME FOR THE EXAMINATION OF PUBLIC SCHOOL TEACHERS.

(At the request of a number of our subscribers we give the Programme for the Examination of the Public School Teachers in Ontario, issued in 1871, and still in force.)

MINIMUM QUALIFICATIONS FOR THIRD CLASS CERTIFICATES.

Reading.—To be able to read any passage selected from the Authorized Reading Books intelligently, expressively, and with correct pronunciation.

Spelling.—To be able to write correctly any passage that may be dictated from the Reading book.

Etymology.—To know the prefixes and affixes (Authorized Spelling Book, pp. 154-169.)

Grammar.—To be well acquainted with the elements of English Grammar, and to be able to analyse and parse, with application of the rules of Syntax, any ordinary prose sentence (Authorized Grammars.)

Composition.—To be able to write an ordinary business letter correctly, as to form, modes of expression, &c;

Writing.—To be able to write legibly and neatly.

Geography.—To know the definitions (Lovell's General Geography), and to have a good general idea of physical and political geography, as exhibited on the maps of Canada, America generally, and Europe.

History.—To have a knowledge of the outlines of Ancient and Modern History (Collier), including the introductory part of the History of Canada, pp. 5-33 (Hodgins).

Arithmetic.—To be thoroughly acquainted with the Arithmetical Tables, Notation and Numeration, Simple and Compound Rules, Greatest Common Measure and Least Common Multiple, Vulgar and Decimal Fractions and Proportion, and to know generally the reasons of the processes employed; to be able to solve problems in said rules with accuracy and neatness; to be able to work, with rapidity and accuracy, simple problems in Mental Arithmetic (Authorized Text Book).

Education.—To have a knowledge of School Organization and the classification of pupils, and the School Law and Regulations relation to Teachers.

MINIMUM QUALIFICATIONS FOR SECOND CLASS PROVINCIAL CERTIFICATES.

Reading.—To be able to read intelligently and expressively a passage selected from any English Author.

Spelling.—To be able to write correctly a passage dictated from any English Author.

Etymology.—To know the prefixes, affixes and principal Latin and Greek roots. To be able to analyze etymologically the words of the Reading Books (Authorized Spelling Book).

Grammar.—To be thoroughly acquainted with the definitions and grammatical forms and rules of Syntax, and to be able to analyze and parse, with application of said rules, any sentence in prose or verse (Authorized Text-Books).

Composition.—To be familiar with the forms of letter writing, and to be able to write a prose composition on any simple subject, correctly as to expression, spelling and punctuation.

Writing.—To be able to write legibly and neatly a good running hand.

Geography.—To have a fair knowledge of physical and mathematical geography. To know the boundaries of the Continents; relative positions and capitals of the countries of the world, and the position &c., of the Chief Islands, Capes, Bays, Seas, Gulfs, Lakes, Straits, Mountains, Rivers and River-slopes. To know the forms of government, the religious and the natural products and manufactures of the principal countries of the world (Lovell's General Geography).

History.—To have a good knowledge of general, English and Canadian History (Collier and Hodgins.)

Education.—To be familiar with the general principles of the science of Education. To have a thorough knowledge of the ap-

proved modes of teaching Reading, Spelling Writing, Arithmetic, Grammar, Composition, Geography, History, and Object Lessons. To be well acquainted with the different methods of School Organization and Management—including School Buildings and arrangements, classification of pupils, formation of time and limit tables, modes of discipline, &c., &c. To give evidence of practical skill in teaching.

School Law.—To have a knowledge of the School Law and Official Regulations relating to Trustees and Teachers.

Music.—To know the principles of Vocal Music.

Drawing.—To understand the principles of Linear Drawing.

Book-Keeping.—To understand Book-Keeping by single and double entry.

Arithmetic.—To be thoroughly familiar with the authorized Arithmetic in theory and practice, and to be able to work problems in the various rules. To show readiness and accuracy in working problems in Mental Arithmetic.

Mensuration.—To be familiar with the principal rules for Mensuration of surfaces.

Algebra.—To be well acquainted with the subject as far as the end of section 153, page 129, of the authorized Text Book (Sangster).

Euclid.—Books I, II with problems.

NOTE.—For female Teachers only the first book of Euclid is required.

Natural Philosophy.—To be acquainted with the properties of matter and with Statics, Hydrostatics and Pneumatics, as set forth in pages 1-100, Sangster's Natural Philosophy) Part 1.

Chemistry.—To understand the elements of Chemistry, as taught in the first part of Dr. Ryerson's First Lessons in Agriculture, pages 9-76.

Botany.—To be familiar with the structure of plants, &c., and the uses of the several parts (First Lessons in Agriculture.

Human Physiology.—Cutter's First Book on Anatomy, Physiology and Hygiene.

ADDITIONAL FOR SPECIAL CERTIFICATES FOR TEACHING AGRICULTURE.

Natural History.—General view of Animal Kingdom—Characters of principal classes, orders and genera—(Gosse's Zoology for Schools,) [or Wood's Natural History].

Botany.—Vegetable, Physiology and Anatomy—Systematic Botany—Flowering Plants of Canada—(Gray's How Plants Grow).

Agricultural Chemistry.—Proximate and ultimate constituents of plants and soils—Mechanical and Chemical modes of improving soils—Rotation of Crops, Agricultural and Domestic Economy, &c. (Dr. Ryerson's First Lessons in Agriculture.

MINIMUM QUALIFICATIONS FOR FIRST CLASS PROVINCIAL CERTIFICATES.

Reading.—To be able to read intelligently and expressively a passages elected from any author.

Spelling.—To be able to write correctly a passage dictated from any English author.

Etymology.—As for Second Class Teachers.

Grammar.—To be thoroughly acquainted with the subject, as contained in the Authorized Text Books.

Composition.—As for Second Class Teachers.

English Literature.—To have a general acquaintance with the history of English Literature (Collier).

Writing.—As for Second Class Teachers

Geography.—As for Second Class Teachers, and in addition to possess a special knowledge of the Geography of British America and the United States, including the relative position of the Provinces and States, with their capitals; to understand the structure of the crust of the earth; use of the globes (Lovell's General Geography, and Keith on the Globes.)

History.—General English and Canadian (Collier and Hodgins).

Education.—As for Second Class Teachers; and, in addition, to possess a good knowledge of the elementary principles of Mental and Moral Philosophy; and to be acquainted with the methods of teaching all the branches of the Public School course.

School Law.—To be acquainted with the Law and Official Regulations relating to Trustees, Teachers, Municipal Councils, and School Inspectors.

Music.—To know the principles of Vocal Music.

Drawing.—To evince facility in making perspective and outline sketches of common objects on the blackboard.

Book-Keeping.—As for Second Class Teachers.

Arithmetic.—To know the subject as contained in the Authorized Arithmetic, in theory and practice, to be able to solve problems in arithmetical rules with accuracy, neatness and dispatch. To be ready and accurate in solving problems in Mental Arithmetic.

Mensuration.—To be familiar with rules for Mensuration of Surfaces and Solids.

Algebra.—To know the subject as contained in the Authorized Text Book completed.

Euclid.—Books I, II, III, IV, Definitions of V, and B. VI, with exercises.

NOTE.—For female Teachers, the first book only of Euclid is required. If, however, the candidate desires a certificate of eligibility as an inspector or examiner, the same examination must be passed in Euclid as is required of male Teachers.

Natural Philosophy.—As for Second Class Teachers; and, in addition, to be acquainted with Dynamics, Hydrodynamics and Acoustics, pp. 109-167 Sangster's Natural Philosophy, Part 1.

Chemical Physics.—To have a good general acquaintance with the subjects of Heat, Light and Electricity.

Chemistry.—As for Second Class Teachers, and to be familiar with the Definitions, Nomenclature, Laws of Chemical Combination, and to possess a general knowledge of the Chemistry of the Metalloids and Metals (Roscoe).

Human Physiology.—As for Second Class Teachers.

Natural History.—General view of Animal Kingdom—Characters of principal classes,

orders and genera (Gosse's Zoology for Schools) [or Wood's Natural History].

Botany.—Vegetable Physiology and Anatomy—Systematic Botany—Flowering Plants of Canada (Gray's How Plants Grow).

Agricultural Chemistry.—Proximate and ultimate constituents of plants and soils—Mechanical and Chemical modes of improving soils—Rotation of crops, &c., &c. (Dr. Ryerson's First Lessons in Agriculture).

ZOOLOGY AND PHYSIOLOGY, 1ST CLASS.

1. Define Class, Order, Genus, Species.
2. Give Cuvier's classification of the Animal Kingdom. Name and sketch examples of each of these great divisions.
3. Give the Divisions and leading characteristics of the vertebrate animals.
4. Name the orders into which Mammalia are divided, and sketch an example of each.
5. Sketch and compare the heads of the Whalebone Whale, the Dolphin, and the Porpoise.
6. Give the characteristics of the leading species of the Mollusca.
7. To what classes orders, and families do the following animals belong?—The Horse, Lion, Porpoise, Seal, Rat, Weasel, Ostrich, Sparrow.
8. Name the bones of the lower extremities. How many bones are there in the foot? Name them.
9. Name the circulatory organs.
10. Describe the structure and action of the heart.

SELECTIONS.

COMPOSITION WRITING IN COUNTRY SCHOOLS.

As we investigate the workings of our country schools, we find many of our good wide-awake teachers, that are up with the times in the teaching of almost every other branch, who are either slighting entirely or following some "old foggy" plan of conducting composition writing. We hear them make this request: "Scholars, on next

Friday afternoon I want each one to come prepared with a composition to read,"—a dose which, though his pupils *were scholars*, would be nauseous, if not revolting. Teacher, try the position yourself and see if you are not willing to make Dick's bargain with them, to say nothing about it if they will not. Composition writing as it is some-

times or generally taught in schools, is one of the driest, hardest, and most repulsive exercises imposed upon pupils. Yet by proper care and discretion in its management it may be made the easiest, the most beneficial and the most attractive and pleasing study in the curriculum for common schools. In order to teach any branch successfully, we should consider its importance, the object at which it aims, and the faculties which it will develop, and in our teaching seek to instruct in all those points.

As to the importance and practical benefit of composition exercises, we need say but little. Every person who has ever tried to pen his thoughts on any subject, or even write a friendly or business letter, feels the necessity of having practised composition-writing. The great object at which we should aim, is not so much at first to widen the child's scope of knowledge, or to give him fields of investigation, but give him the power of expressing in good language that which he already knows, thus increasing and gaining command of his vocabulary. To always use the right word in the right place is an excellency to which few attain. But to approximate to this, a child must have frequent exercise in the use of words. And that he may have this, composition writing should be made a *daily* exercise, especially among the smaller pupils, and judicious care should be exercised on the part of the teacher in selecting subjects with which they are familiar.

This we find to be no little task for the teacher, but by a few suggestions endeavor the live teacher to discover all the subjects he needs. For primary classes, have them describe the objects in the school-room, on the play-ground, along the road or at home. After the careful reading of a lesson have them lay aside their books and write all they can about what they have read, tell them a story and have them write it down. Describe the pictures in their books, the school house and yard, their homes, the work they have to do before school, after school, or on Saturdays.

And another very excellent way of arousing interest is to have them all lay aside their books and take up their slates; the teacher now tells them they are to watch very closely every thing he does, and after he gets through, they are to write it on their slates. He now goes stamping across the floor, goes to the water bucket, gets a drink,

back to the stove, stirs up the fire, then on tip toe to the black-board, writes a sentence, turns around, smiles and bows to his pupils, goes back to his desk, taps the bell, and says he will give them ten minutes to write what they can of his actions. In a moment all are at work, their heads are full, their hearts cheerful, and their hand busy, and in ten minutes the teacher will have as many compositions as he will have time to eulogize and criticise. This exercise may be varied to prevent monotony, and will be found to be full of interest. For intermediate and even advanced classes that have not already had the advantage of the drill, begin with letter writing. First a short friendship letter, either to the teacher or some friend. These having been received, let them be carefully criticised in addressing, dating, signing and folding, as well as punctuation, spelling, grammatical and logical arrangements, neatness, &c., and returned to the pupil to be rewritten with the errors corrected. The Teacher should then contrast the two and remark upon the improvement. In like manner let an answer to the first letter be written, after which business letters may be introduced, in connection with promissory notes, due bills, drafts, receipts, checks, &c., carefully drilling on forms and abbreviations.

After careful drill on letter writing and business forms, essays may be introduced, but not as they are usually done, by allowing pupils the privilege (?) of choosing their own subjects. They are not yet capable of choosing for themselves. This is one of the hardest tasks for even older and more experienced writers, so why impose it on the juvenile mind. First teach *invention*, not by overtaking and stupifying the child's mind, but by giving him something that he can accomplish. Let the teacher use careful discretion in selecting subjects; and after he has selected a subject for them let him draw on the board an outline of the course he wishes them to pursue. As a first exercise, let each pupil describe his home, following the outline on the board. Next let each one write his autobiography, after which let each describe the occupation of his father, or let him tell what he expects to be, and why. These may furnish subjects for several lessons.

After this, miscellaneous topics may be given, having only one or two writing on the same subject, such as school boy (or

(girl) plays winter evenings, sleighing skating, life in the country—or town, school life, importance of improving our time, labor, bad effects of chewing, smoking, drinking, evil companions, rashness, quick temper, laziness, idleness, late hours, &c. Dish-washing, cooking, ironing, baking, churning, scrubbing, washing day, making garden, raising chickens, ducks, geese, our barn-yard, door-yard, spring, summer, autumn, winter, holidays, imaginary trip to New York, Rocky Mountains, Niagara Falls, things I like—or dislike, and many other similar topics. These will furnish palatable and nutritious food for the young

mind in composition writing, and instead of detesting it as they generally do, they will prefer composition to any other privilege you may offer them.

For advanced classes, the teacher should have a definite course in History, Biography, and Science. But our rhetorics will help us here, and teachers find less difficulty in keeping up the interest in advanced classes than any other. However at some future time I may say more on this part of the subject, also give my method of conducting school papers. *A. L. Funk, in National Normal.*

SCATTERING SHOT.

It was *Carlyle*, who in his knotty rhetoric said, "Find mankind when thou wilt, thou findest it in living movement, in progress faster or slower; the Phoenix soars aloft, hovers with outstretched wings, filling earth with her music, or, as now, she sinks, and with spherical swan-song immolates herself in flame, that she may soar the higher, and sing the clearer." The "grim old Scotchman" was right. Man is a creature of progress. He progresses in everything. If the world is better to-day than ever before, it is also worse. We are continually squirming about, and hunting after some new thing. Civilization, though it has brought its blessings, has brought its curses. But is not the general tendency towards the higher? A kind of zigzag march does the world make, a short move backward and a long one forward. Glancing away back along the ages, we find truth cropping out here and there, and in that great wave, which I may say, started with Adam, to be Darwinian, I could say farther back, there is a deep stream of truth ever pushing forward. Pythagoras and Socrates uttered their truths, yea, even Tubal Cain rang them out of his "brass and iron," and Jubal played Progress on his "harp and organ." Pestalozzi and Richter were far in advance of many in our day as teachers. Galen was nearer the truth in medicine than many of our latest stars of physic.

It is strange how men cling to custom, deeming that right which has received the

most votes, has been the most popular. Men have always been so prone to get into ruts, loving them because they or their ancestors made them, and thus they go on, making them deeper as they go, and more difficult to get out of. Every class of men have their ideas embodied in some kind of a creed which they think they must follow. They cannot entertain a new idea without first consulting their brother of the same persuasion. The church has its thousand denominational walls. Physic has its dogmatical systems. The Scientists set themselves in order against each other, combating for a belief. Educators are no exceptions old ruts are traveled in, and new ruts are being cut which are as likely to be as persistently adhered to as the old have been. Men forget that the investigation of knowledge of to-day has all the experience of all the ages from which to draw, that he has the errors, as well as the truths of the past by which to profit. I am not denouncing systems or organizations. How true the world could not get along without a union of effort. But it is the proscriptive adherence to that which has received the sanction of many that I am talking against. All men either follow or lead, or do both. Why can they not march abreast? More independence is wanted, more originality, more searching and less copying.

Teacher, have you seen any thing yet that hits you! Don't follow a method in your teaching. If you do, you will be in a

rut, sure. I do not mean that you shall not be systematical, but originate your own system and don't be afraid to improve on it. If you have a good idea do not keep the world ignorant of it or deny yourself the benefit of it just because you never saw it applied before. Neither hesitate to apply something that you know will benefit you it makes no difference from what source it comes. The old saying, "Seize upon truth wherever found," you can make your motto. Beware of what books tell you. Books are usually general. They leave the reader to fill in the details. Common sense is a useful article for the teacher, to have and to make use of when he applies his book knowledge. But good books are dangerous when the teacher is led to rely upon them. We are so apt to be carried away by a new book, just as we are by a new method of teaching. Truth never changes nor progresses, but it keeps cropping out here and there and men progress as they see more of the right. We should tear to pieces the experience of all that have gone before us and by choosing the best blocks from the ruins build up our own edifice. What is this panorama of mental life any how, but a grand kaleidoscope which each individual turns to produce his own images. Let each one try to add some new stone to

the edifice. Though we work for others and others work for us, yet each must work for himself. Let me see a young man show his individuality. That school which sends out its pupils warped in one direction is not one of the schools of progress. We should love and cherish our Alma Maters. We should respect every thing of the past that has been ennobling, yet remember that the future is the grandest. It demands the most reverence. "Through the shadows of the globe we sweep into the younger day. Better fifty years of Europe than a cycle of Cathay." Yes, better a year of the future than ten of the past. There is too much hero worshipping. We are so apt to copy men, instead of the truth. When we copy men we copy wrong. Talk about heroes and heroines. We need not scan history's page for them. We can be heroes. In yonder little school-house you may find one, and such little school houses are on almost every cross-road in this broad land. Teacher, go on. Your work is begun here, it will never end. Do you wish it to end? No, it is your life, your pleasure, but as you go on you may see more of the fruit. In that *Other Land* you will be teachers, I hope, for I wot there is progression there. *G. Dallas Lind.*

EDUCATIONAL INTELLIGENCE.

CANADA.

—Mr. Joseph H. Donnelly, late Head Master of the Stratford Public School, having to resign his position on account of failing health, was made the recipient of an exceedingly pleasing testimonial of respect and affection, in the shape of a presentation and address from all the pupils both of the High and Public Schools of Stratford.

—Mr. Daniel Black, who has just quit teaching, was made the recipient of a handsome album, and Mrs. Black a crystal dessert set and silver butter knife, accompanied with an address, by his late pupils, S. S. No. 10, South Dorchester. This is the fifth time Mr. Black has been similarly honored in five different schools.

—We have before us the very interesting report of Robert Little Esq., Inspector of Public Schools, County of Halton. Out of the mass of valuable statistics presented, evidencing much industry, we select the following: The whole number of School Sections is 56; no. of school-houses 60, of which 4 are of concrete, 19 stone, 14 brick, and 23 frame, freehold 56, leased 2, rented 2; no. of teachers 72, of whom 46 were male, 26 female, 4 holding 1st class Provincial Certificates, and 18 2nd class Provincial Certificates, school population between 5 and 16 years 5038, between 5 and 21 years 6334; no. of children of school age attending school 5930. No. of pupils registered during the year 6341; average attendance 1st half year 2581.26, 2nd half year 2434.08. Only 3 in every 100

attended more than 200 days. Mr. Little justly complains of the two great evils of absenteeism and irregular attendance.

—Dr. Sangster proposes holding 'Teachers' Institutes as follows :

For the County of Waterloo, at Berlin, October 3rd and 4th.

For the County of Durham, at Port Hope, October 17th and 18th.

For the Counties of Lennox and Addington, at Napanee, October 24th and 25th.

For the County of Northumberland, at Colborne October 31st and November 1st.

The Council of Public Instruction, on the recommendation of the Central Committee of Examiners, have granted first class certificates as undermentioned. There were in all 27 candidates, of whom five only succeeded.

Class 1, Grade A.—John Lorenzo Davison.

Class 1, Grade B.—Robert Cochrane, Morris Johnson Fletcher, Thaddens W. McLeavitt, and Archibald Simel.

The McCabe gold medal was publicly presented by the chief superintendent to Mr. Davison (who is teacher of the fourth division of the Boys' Model School), in the theatre of the Educational Department, and in presence of the Council of Public Instruction, the Central Committee of Examiners, and many others.

Addresses were made by the Chief Superintendent, Professor Young, Mr. H. Mc Lennan, Q. C., Mr. H. M. Deroche, M. P. P., Dr. McLellan, and the Rev. Dr. Davies.

Of the five successful candidates for first-class, three were students of the Normal School, including Mr. Davison:—*Globe*.

PERTH TEACHERS' ASSOCIATION.—This Association held its usual meeting in the Town Hall, Stratford, on Friday, 19th ult. There were over 100 teachers present during the two days of meeting. Dr. Sangster was introduced by the President of the Association, Mr. Alexander, I. P. S., and occupied the forenoon from 10 a. m., in discussing the best methods of teaching Geography, and object lessons. In the afternoon he gave a most lucid explanation of his method of teaching Arithmetic, and School Organization and management.

The public lecture in the evening on "The Characteristics of Our Civilization" was well attended and called forth frequent bursts of applause. The Dr. was listened to throughout with most marked attention, having spoken seven hours and a quarter from the time he took the platform in the morning. On Saturday the Dr. called the attention of the meeting to the methods of teaching primary and advanced reading, English grammar and etymology, and a question drawer, occupying in all four hours and a quarter. Mr. Tyler, High School Teacher, St. Mary's, read an excellent paper on Science Teaching. At the close of the exercises the following motion was passed unanimously: Moved by Mr. Tyler, seconded by Mr. J. W. Laird, that the members of this Association are deeply impressed with a sense of the importance and advantage of Teachers' Institutes, and are of opinion that the immediate establishment, by the Government, of such institutions, with appropriately experienced and properly qualified instructors, will tend greatly to advance the interests of education throughout the Province. Dr. Sangster was elected honorary member of the Association, on motion, of Mr. A. C. Steel, seconded by Mr. D. A. Stewart. The President received a hearty vote of thanks for the part he had taken in the present meeting, on motion of Mr. Hay, seconded by Mr. A. C. Steel. Mr. Dearness, of Lucan, moved a resolution, asking permission of Mr. Tyler to have his essay published in the ONTARIO TEACHER. The motion was carried unanimously, and Mr. Tyler promised to give the matter most "serious consideration." It was further moved by Dr. Sangster, seconded by Rev. E. Patterson, Inspector of Stratford Schools, that a vote of thanks be given to Mr. Tyler for his able essay. Carried.

TEACHERS' INSTITUTE.—A highly successful Teachers' Institute was held by Dr. J. H. Sangster, in the M. E. Church, Strathroy, on Friday and Saturday, 26th and 27th ult. It was by far the largest gathering of teachers ever held in Ontario, there being about 300 present. The Institute was held for the benefit of the teachers of West Middlesex and the County of Lambton, but a number also attended from neighboring counties. There

were also present the following Public School Inspectors: W. H. Ross Esq., Bothwell; E. B. Harrison Esq., Kent; A. F. Büttler Esq., Elgin; S. P. Groat Esq., and J. C. Glashan Esq., Middlesex; J. Brebner Esq., and G. W. Ross Esq., M. P. Lambton. Dr. Sangster lectured for about six hours each day, taking up the following course: School Organization; Reading to Junior Classes; Mode of teaching Arithmetic; Method of teaching Object Lessons; Grammar to Junior Classes; Composition; Address to Teachers; Question Drawer; Closing Exercises. Mr. Glashan presided on Friday, and Mr. Brebner on Saturday. Any attempt to give a synopsis of Dr. Sangster's able and instructive lectures would only do them injustice; suffice it to say that they were listened to with evident pleasure and profit, and with earnest and continued attention by the large number of teachers present. Not only did the Doctor point out in his lucid and attractive style the best methods of teaching, but he made particularly clear the several successive natural and proper steps that should be taken by the teacher in the development of mind, and the process of education. His visit cannot fail to have a very beneficial effect, and to result in great improvement among our teachers. On Friday evening the church was crowded with a most intelligent audience, to hear Dr. Sangster's public Lecture on Education. Mr. Ross presided, and the lecture, full of thought and instruction, frequently rising into eloquence, was listened to with breathless silence, except when interrupted by applause. A cordial vote of thanks was tendered to the Doctor at the close, to which he made a very happy reply. We are glad to learn that he was so pleased with this, his first visit here, that he hopes to be able to repeat it on some future occasion.

BRANT COUNTY TEACHERS' INSTITUTE.
—Dr. Sangster held a most successful Teachers' Institute recently in Brantford, at which there was a very large attendance of the teachers of the County. Promptly at 10 o'clock on Friday morning the meeting was called to order by the President, Dr. Kelly, who in a few well chosen and eloquent sentences introduced the lecturer. On rising, Dr. Sangster was greeted with loud applause and forthwith proceeded to

discuss the most approved method of teaching arithmetic. Two things, he said, must be kept constantly in mind in teaching this and all branches of Education, namely, the development of the child intellectually at the same time that the mind is stored with useful, practical information. He adverted to several errors in the present mode of teaching Arithmetic in some schools. His lectures throughout were listened to with the utmost attention, and at the close of the second day the following resolutions were unanimously adopted:

Moved by James Mills Esq., M. A., seconded by William Wilkinson, Esq., M. A.:

First, that the members of the Brant County Teachers' Association and the other friends of education here assembled embrace this opportunity of testifying to J. Herbert Sangster, M. A., M. D., their very high estimate of his abilities as a teacher, author and lecturer; secondly, that they tender that gentleman their most cordial thanks for his great kindness in conducting their Teachers' Institute during the past two days; and, lastly, that, in their opinion, his lectures are of inestimable value to teachers, and his generosity in giving them gratuitously is beyond all praise.

Moved by Thomas Pearce, Esq., Inspector of Schools, Waterloo Co., seconded by Wm. Rothwell Esq.,

That the members of this Association, being fully convinced of the great benefits that must arise to the profession from Teachers' Institutes being held throughout the Province, consider it very desirable that they be established by the Government at its earliest opportunity, and that a copy of this resolution be forwarded to the Hon. the Attorney-General. Carried.

Moved by W. A. Douglas Esq., M. A., seconded by G. B. McIntosh, Esq., That the members of this Association desire to express their sincere thanks to their esteemed President, Dr. Kelly, for his untiring efforts in behalf of the Association, and especially for his success in securing the services of so able and experienced a lecturer as Dr. Sangster.

At the close Dr. Sangster was enrolled as an honorary member of the Institute.

The Association then adjourned to meet again three months from date.

UNITED STATES.

—Scribner, Armstrong & Co., of New York, have issued the long announced Physical Geography by Prof. Arnold Guyot, "the foremost geographer of the world."

—The new Trinity College buildings in Hartford are to form three contiguous quadrangles, each including a space 200 feet square, all opening eastward, and presenting a grand front of over 750 feet.

—The meeting of the National Educational Association, held in Elmira the first week of August, was a decided success. The attendance was larger than at either of the two previous meetings. The number of college presidents and professors present was unprecedented. Twenty-nine States were represented. The exercises were well sustained. Prof. S. H. White, of Peoria, Ill., was elected President of the General Association; A. P. Marble, of Worcester, Mass., Secretary; and John Hancock, of Cincinnati, Treasurer.

—It is stated that the Vienna Exposition awarded twenty-five prizes in the department of education, teaching, and instruction to United States exhibitors. The National Bureau of Education, the Smithsonian Institution, the State of Massachusetts, and the City of Boston each received a grand diploma of honor, the highest prize given; Cincinnati and Chicago each received the grand medal of progress; Cleveland and Jacksonville, Ill., diplomas of merit; and the gold medal of merit was awarded to Messrs. Wilson Hinkle & Co., of Cincinnati, as "the publishers and manufacturers of the best school-books in the world."

BRITISH AND FOREIGN.

—It is explained, on the authority of Rev. Dr. Veeder, Professor of Natural

Philosophy and Mathematics at the chief college in Yedo, who from time to time has been called upon to examine the Japanese students returning from Europe and America, that only those have been recalled who did not make the expected progress in their various branches of study. The failures are attributed by Dr. Veeder to the want of knowledge of the language of the country in which the student is educated. The Japanese Government, acting upon this, have resolved to send no more students abroad until such time as they have undergone three or four years' tuition in the home college, and can submit to a rigid examination in English, French or German.

—A correspondent of the London *Times* writes from Pavia, Italy, under date of August 16th: "There is, apparently, no national school of statesmen in Italy, and the reason is that there is, properly speaking, no real upper school of any kind in Italy. I have often adverted to the inefficiency of the 22 State Universities which are still existing in this country, and dwelt on the expediency of reducing their number. I am glad now to have my own views backed by the authority of so great a man as Michele Amari, the historian and Orientalist, who, in a report he has just published, as a member of the Council of Public Instruction, strongly recommends the suppression of many of the minor academical institutions. Such a measure is not merely dictated by economical considerations and in obedience to the necessity of relieving the over-burdened treasury, but it is also suggested in the interests of the Universities themselves; for similar establishments cannot cease to do good without being productive of much evil."

TEACHERS' DESK.

J. C. GLASHAN ESQ., EDITOR.

—We present our thanks to our correspondents for the numerous problems they have sent us during the last few weeks.

—One correspondent asks for solutions to the Arithmetic questions for second class certificates. The Publishers are not yet in a position to comply with the request. Another asks to be informed what is the best Theoretical Arithmetic. The Editor must defer answering this question till some future occasion.

—Contributors to the 'Desk' will oblige by sending answers with their questions and solutions with their problems. Attention is called to 'Young Teachers' Queries'; other questions of like practical character are solicited, as also are *essays* and *discussions* in answer. The latter should be on separate sheets from any matter intended for the 'Desk,' as they will be handed to the General Editors for insertion among "Contributions."

CORRECT ANSWERS AND SOLUTIONS RECEIVED.

40 and 41, A. G. Campbell, Durham; S. C. Smoke, Paris; Con. O'Gorman, White Lake; Wm. Coutts, Hamilton; and A. McIntosh, Pickerton, the proposer. The last also sends remarks on 'Richard, King of the Romans,' and discussions of questions 37, 38, and 39.

ANSWERS TO PROBLEMS.

36. Running the pattern across the room will require 7 widths of $10\frac{1}{2}$ reversible patterns, or of 11 non-reversible patterns, being $30\frac{1}{2}$ yds. and 32 yds. 3 inches, respectively. If the carpet be laid lengthwise of the room, there will be needed 6 widths of $12\frac{1}{2}$ reversible, or of 13 non-reversible patterns.

This problem was proposed to draw attention to the non-practical character of many of the 'Text-book' problems, and of their solutions. He who buys carpet on a 'Text-book' estimate will, twenty chances to one, find, to his cost, that he has fallen into error. There are many problems of other kinds in our common arithmetics, which, if the student understood and realized, (made *real*) he would at once perceive to be either impossible or absurd. Of the latter kind many problems in stock

in our authorized Arithmetics are notable examples.

37. We cannot discover the difficulty here. We inserted the question hoping that some of our correspondents would enlighten us, but they have neglected to do so. Hold seems to be a noun derived from the p. p. of the Anglo-Saxon *helan*, to cover, from which we also get our verb *hold*.

38. Certainly, if we could discover no difficulty connected with the former question, a like complaint cannot be made of this. Rightly to answer this question, and to prove our statements, would require a dissertation on the origin and function of the Adjective and the Adverb in English, a dissertation that ought not to be needed with the materials in works on Comparative Grammar and on the Science of Language, so plentiful in the hands of our 'Grammar Makers.' But perhaps 'tis as well these 'Grammar Makers' have not seriously attempted the work, as their idea of proof is to found a theory upon a theory, and continue the process till, like the old woman's support of the earth, the last dwindles to nothing, and needs no support. An old writer on grammar said, *If you don't know what a word is, call it an adverb.* Modern writers seem to prefer to call such words conjunctions. In Horne Tooke's time, grammarians had made thirty-nine classes of conjunctions, (rather more classes than there were conjunctions,) and the list seems since to have been increased; 'co-relative' is one of the new breed.

Not is a negative adverb, denying *only*; *only* is an adjective, limiting *he*; (perhaps the noun sentence, there may be elision;) *but* is a conjunction, from the imperative of *botan*, to add; *also* is an adverb and originally seems to have modified the imperative *bot*, however; as making an adverb modify a conjunction would horrify our self-styled grammarians, the simplest way to settle the matter is to make it modify either *was* or *present*, according to taste.

39. The G. C. M. of two or more Nos. is the greatest measure (or unit) in which two Nos. or quantities can be expressed as integer multiples of the measure (or unit). Thus, take two lines, 12 inches and 13 inches long, respectively, and the

longest line that can be found, that will measure each of the former, will be 1 inch long. Hence we say 1 is the G. C. M. of 12 and 13. Had the lines been 20 inches and 24 inches, respectively, the G. C. M. or greatest unit line would have been 4 inches long. Again, had the lines been $17\frac{1}{2}$ inches and $21\frac{1}{4}$ inches in length, respectively, the longest line that would have measured them would have been $1\frac{1}{4}$ inches long, giving 14 and 17 lengths respectively. Nos. and magnitudes that have no C. M., are called *incommensurable*, which should be, but it appears has not always been, distinguished from the term *prime*. The side and diagonal of a square are incommensurable.

"All primes together have no common measure Exceeding an ace which is all their treasure."

The Arte of Vulgar Arithmetick, Thos. Hylles, London, 1600.

"Two whole expressions are said to be prime to one another which have no common measure but unity." *Sandeman's Pelicoticks, Cambridge 1868.*

The difficulty arose from defining a *measure* of a No. to be itself a No. and then denying that unity

is a No. The same principle would deny that 6 is a multiple of 6, and therefore that 6 is the L. C. M. of 3 and 6, for it would thus not be a multiple of the latter. (See Ans. to No. 3, Curiosities.)

PROBLEMS, &c.

42. By discounting a note at 20 *per cent.*, I get interest at the rate of $22\frac{1}{2}$ *per cent.* per annum; how long does the note run? LEVI PALMER, Sutherland's Corners.

43. Analyze "But with the breath cars;" parse *fill* and *mountaineers*. Fifth Reader, p. 277. J. TAIT, Georgetown.

44. Is the corrected (!!) answer to prob. 41, page 117 of Smith and McMurchy's Elementary Arithmetic, correct? S. C. SMOKE, Paris.

45. A, who is 24 of his own steps ahead of B, makes 2 and 1-5th steps while B makes $3\frac{1}{4}$, and 3 and 1-8th of B's steps equal 5 of A's; required, the number of steps B must make to overtake A. A. G. CAMPBELL, Durham.

56. Required solution of Problem 7, Paper 6, p. 161, Advanced Arithmetic. EFFENDI, Invermay.

EDITOR'S DRAWER.

DEFERRED.—Some reviews of works received are deferred till the November No.

TO CONTRIBUTORS.—We have on hand a number of contributions awaiting insertion. They will receive attention as soon as we can find space for them.

GOING ASTRAY.—Notwithstanding we take great care to mail the TEACHER correctly and promptly, we occasionally hear of numbers going astray. In every case, when a subscriber fails to get it, on being duly notified, we cheerfully re-mail it.

TO TEACHERS.—We respectfully invite teachers to send us any *practical* hints, suggestions, or queries, which may occur to them in the every-day work of the school room. We want to make our journal a medium through which they can make known to each other the results of their experience and observation.

CAMPAIGN OF 1874.—We would direct special attention to the announcement of our Fall Campaign for 1874, in this issue. We make very liberal offers, and are determined to spare no exertion to at once secure a wide circulation, and make the TEACHER one of the indispensable aids to Education in this Province. We ought to have every

Teacher in Ontario on our Subscription List. Now is the time to subscribe!

THE TEACHER FOR NOTHING.—As an inducement to teachers to subscribe for the ONTARIO TEACHER we promise, during 1874, to publish in full the questions at the County Board Examinations. We have already published nearly all the questions at the last July Examinations. Teachers will thus see that, as the Examination questions for one year cost \$1.20, by subscribing for the TEACHER they will get all the other valuable matter in the TEACHER, during 1874, FOR NOTHING.

PRIZE ESSAY.—We are now making arrangements for the appointment of a competent Committee to examine and give their award on the Essays sent in, in response to our offer in the September No. We trust there may be a large number of competitors. Let no one give up despairingly under the impression that he, or she, has no chance of winning the prize. Go on and do the very best you can, and who knows but the prize may be yours! Even if you fail, the very effort you make in writing it will be beneficial, and all essays that merit it, even if they fail to win the prize, will be suitably acknowledged.

TEACHERS' INSTITUTES.—Dr. Sangster is now holding Teachers' Institutes in various counties in the Province, and while these gatherings of teachers have been uniformly successful in point of numbers and interest, there is no doubt they will have a very beneficial effect in leading teachers to adopt improved methods of instruction, as well as stimulating them to greater exertions. These Insti-

tutes are demonstrating practically what has so often been advocated, that the permanent establishment of County Teachers' Institutes, and their support by a liberal Government appropriation, is one of the educational wants of our country.

ERRATUM.—The questions on "Zoology and Physiology 1st Class," on page 311, should have been given under the head of Examination Questions.

THE ONTARIO TEACHER:

CAMPAIGN OF 1873-4.

The "ONTARIO TEACHER" has now nearly completed its first year of publication, and has met with a kindly reception and a gratifying measure of success. The Publishers have labored assiduously to make it worthy of the support of the friends of education; and they are now more than ever convinced that all the other agencies for educational progress require to be supplemented by a good live Teachers' Journal. They are determined to spare no effort, during 1874, to make it at once practical in the character of its selections and contributions, high in its tone, and harmonious with the wants and interests of the teaching profession.

TWO MONTHS FOR NOTHING,

Or Fourteen Months for \$1.25.

The Publishers being determined to place their Journal in the hands of every teacher, Male and Female in the Province of Ontario, offer the remainder of the year FREE to new subscribers for '74, paying one year's subscription, beginning with the November Number. Those taking advantage of this offer should notify us as soon as possible, so that a sufficiently large edition may be printed.

The Ontario Teacher for Nothing.

As an additional inducement to Teachers we propose putting in the necessary type to publish the examination papers used at the County Board Examinations, as soon as possible after each examination. Subscribers to the "TEACHER" will therefore get them FREE, thus saving the original cost of the "TEACHER" with one year's valuable reading matter in the bargain.

As we are confident all that is required to secure an immediate and very large increase in our Subscription List is that these liberal offers should be generally known, we respectfully appeal to Public School Inspectors and other friends of education to give them publicity.

All communications should be addressed to the Publishers,

ROSS & McCOLL,
STRATHROY, Ont.