L'Institut a microfilmé le meilleur exemplaire

qu'il lui a été possible de se procurer. Les détails

The Institute has attempted to obtain the best

original copy available for filming. Features of this

	12X		16X		20X		24X			28X		32X
									1			
	tem is filmed a ocument est fili		de réduct					26X			30X	
V	Additional con Commentaires		ntaires ·	Contir	iuous pag <sup>:</sup>	iation.						
	Blank leaves a appear within have been om II se peut que lors d'une rest mais, lorsque pas été filmée:	the text. Vitted from certaines pauration apcela était p	Vhenever p filming/ pages bland oparaissent	ossible, ches ajor t dans le	utées texte,		ensure ti	he best es totale es par i : été filr	poss men in fe nées	ible in t ou p uillet ( à nou	nage/ partiellen d'errata, veau de	nent une pelure facon à
	Tight binding along interior along interior distorsion le lo	margin/ ee peut cau	user de l'or	nbre ou			Only edi Seule éd Pages w slips, tis	dition di	spon r par	ible		l by errata med to
V	Bound with ot Relié avec d'au	utres docui	ments				Includes Compre					taire
	Coloured plate Planches et/ou						Quality Qualité	•			ssion	
	Coloured ink ( Encre de coule						Showth Transpa	_				
	Coloured map Cartes géogra		couleur				Pages d Pages d					
	Cover title mis Le titre de cou	_	anque			$\overline{\checkmark}$	Pages d Pages d				d or foxe les ou pi	
	Covers restore			ė <del>e</del>			_				ninated/ elliculées	
	Covers damag		•				Pages d Pages e			s		
	Coloured cove Couverture de						Coloure Pages d					
copy	which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.							bibliogi produit	aphi e, ou mét	que, q qui p hode i	ui peuvo euvent (	niques du ent modifie exiger une de filmage

# The Canada School Journal.

Vol. I.

TORONTO, DECEMBER, 1877.

No. 7.

REV. S. S. NELLES, D.D., LL.D.

Although still a comparatively young man, the subject of this sketch has been for more than a quarter of a century at the head of one of the most important educational institutions in this Province -a position which he reached before he was thirty years of age. It is impossible to give in this place any adequate idea of the services he has rendered to Victoria College since he first became connected with it. He found it with a small staff of teachers, a limited attendance of students, and defective educational appliances, and greatly hampered in its operations for want of adequate financial support. As the result to a very great extent of his admirable management, A Faculty of Medicine was added in 1854, one of Law in 1862, and

it has now a large and efficient staff of professors, a numerous and rapidly increasing body of students, greatly improved facilities for imparting instruction, and a large endowment fund, a considerable portion of which has been paid up. Be his future connection with the institution long or short, Victoria College will, as long as it endures, remain a monument of the unwearied energy, indefatigable zeal, and rare tact which he has brought to the discharge of his duties.

Dr. Nelles is a native of Ontario, his birthplace being Mount Pleasant, in the vicinity of Brantford. He was born in 1823, and resided in the same neighbourhood till he was sixteen, receiving such an education as a rural district at that time afforded. In 1889 he went to Lewiston Academy in New York, where he spent a year, and he afterwards spent other two in the Genesee Wesleyan Seminary. Meanwhile, Victoria College had been established at Cobourg

under the presidency of the Rev. Dr. Ryerson, and Dr. Nelles be. | for many years. By dint of a good deal of effort the subscriptions came one of its earliest students, spending two years in an Arts course. After a brief attendance at the University of Middletown, Connecticut, he graduated there in 1846. The next year was spent in charge of the Newburgh Academy, in the County of Lennox, and in June, 1847, he entered the Ministry of the Wesleyan Methodist Church, his first charge being Port Hope, where he spent a year. Two years in Toronto and three months in London completed the period of his ministerial labours, and in September, 1850, he was called by the Conference to take charge of Victoria College, the collegiste institution of his church. The immediate occasion of the establishment of Victoria College was the exclusive policy adopted by those who were entrusted with the management | felt in the institution for which they have already done so much

of the fund set apart by the Provincial Government for the advancement of higher education. That policy resulted eventually in the foundation of King's College, which was, until secularized by Act of Parliament, to all intents and purposes a Church of England institution. The agitation, which was carried on for many years, led to the establishment of several other colleges, of which Victoria was one. The work of building, in connection with the latter, was begun in 1832, but it was a full decade before it was ready for the reception of undergraduates. It received a Royal Charter in 1836, and in 1842 it was created a University by Act of the Canadian Parliament. The College began its work with a Faculty of Arts only, the teaching staff embracing five members.

> one of Theology in 1872. At present there is a large resident staff in Arts and Theology, the instruction in Medicine and Law being given in affiliated institutions. Nelles has from the commencement of his connection with the College been Professor of Mental and Moral Philosophy, Logic, and Apologetics; and since the institution of the Faculty of Theology he has added to these subjects Hom-

Improvements are constantly taking place in the status of the College, the two of greatest importance during recent years being the creation of an endowment fund and the erection of a new Hall of Science in connection with the institution. The first successful attempt at forming the nucleus of an endowment was made in 1868, almost immedi-

ately after the discontinuence of the Parliamentary grant which Victoria College and other denominational institutions had been in receipt of to the fund have reached over \$150,000, exclusive of what has been secured for the endowment of the Theological Faculty, and exclusive also of the sum expended in the erection of Faraday Hall. This beautiful temple of science is the result of special contributions chiefly from Cobourg and its immediate vicinity, and it is safe to say that the \$30,000 expended on it could not have been put to any better use. The physical sciences have never yet been taught as they should be in any of our colleges or universities, and it must be satisfactory to the intelligent friends of Victoria that the movement in favour of more liberal culture in this direction is not to take place everywhere else before it begins to be



(From a Photograph by Hunter & Co.)

The scientific course in Faraday Hall will embrace instruction in Chemistry, Mineralogy, Geology and Astronomy, with provision for telescopic observation.

It only remains to be added that Dr. Nelles has always been an intelligent and active promoter of the work of education outside of his own special sphere. His influence in this respect has done much to aid the work of public instruction in and around Cobourg, and not a little also in the Province at large. Amongst his students he has always been popular and respected, and though he seldom enters the pulpit, the few sermons he preaches are listened to by large and intelligent audiences. Should he be spared to the institution over which he has so long presided, it is safe to predict for it a career of greater prosperity and usefulness than it has yet experienced, the more so as it is now the most important educational institution of so large and influential a denomination as the Methodist Church of Canada.

## Gleanings.

Do Not Face the Light when at Work .- Statistics kept by oculists employed in infirmaries for eye diseases have shown that the habits of some persons in facing a window from which the light falls directly in the eye as well as on the work, injure their eyes in The best way to work is with a side light, or, if the work needs a strong illumination, so that it is necessary to have the working table before the window, the lower portion of the latter should be covered with a screen, so as to have the top light alone, which does not shine in the eyes while the head is slightly bent over and downward toward the work. In the schools in Germany this matter has already been attended to, and the rule adopted is to have all the seats and tables so arranged that the pupil never faces the windows, but only has the side lights from the left; and as a light thrown simultaneously from two sides gives interference of shadows, it has been strictly forbidden to build school rooms with windows on both sides, such illumination having also proved injurious to the eyes of the pupils. We may add to this advice not to place a lamp in front of you when at work in the evening, but a little on one side, and never to neglect the use of a shade so as to prevent the strong light shining in the eyes. This is especially to be considered at the present time when kerosene lamps, with intensely luminous flames, are becoming more and more common. Medical Journal.

Association, the other day, that not every cull recitation is to be laid to the charge of the scholar. The teacher, the school committee, the town, or some one else away out in the domain of secondary causes, may be chargeable for the failure. The teacher should be the head of the school in good spirits as well as good conduct. Let every teacher try it. Begin the school as if you had just heard good news and took pleasure in imparting it, and keep this up all day. Those whom we teach have a right to an intelligent handling of the mind in inviting it to study. The powers the mind in learning are, first, detecting differences; second, observing samenesses; and third, retaining what is seen. These, however, cannot be exercised all at once, and yet how often are the retentive powers put to work, while the observative and discriminating powers are kept standing by idle. The heedless handling of the mind is not yet all over with. I maintain the right of the taught to such a quality in the teacher's character as will command their respect. The one who is in charge of mind to lead it into knowledge will only fail if, at every turn of the way, he cannot show himself the master. If a teacher fails in trying to explain a study to his pupil, he instructs that pupil no longer. If the narrow and selfish mind is discernible, the taught see it as soon, yes, sooner than others. "Let no man despise thee" was Paul's advice to Timothy. The taught have a right to the absence of a suspicion of questionable proclivities in their teachers. How are the taught to be led into the doing, if the teacher himself balks at the alphabet of the lesson? There is a hidden truth which makes the taught perceive the worth of his teacher. Knowledge itself is an instrument merely, and as ready to serve wrong as right. What is wanted is a training that will operate upon habit. The school is emphatically a great training school of manner, in perseverance, in punctuality, in veracity. There is an ethical town in the land where the process of the school.

den force that compels the taught to own the genuine worth of the master.

—At a recent meeting in Boston of the School Committees and Superintendents of Norfolk County, one speaker said one result of the teaching in our common schools was the inability to think. Our schools are all wrong. Ask a question of a young lady in the high school, and if she has no quotation from a book on the end of her tongue, she replies that she does not know. Another member said that it is how to teach that our primary teachers want to understand, rather than what to teach. That is the main idea. He would have pupils taught by topics rather than from page to page. The quality of a teacher is regulated by the freedom which is allowed to him or her. Colonel Parker, of Quincy, attacked the A B C method, which is opposed to the science of education. Our method of teaching by text-books, also, from page to page, is false. A science is taught by steps. The first two years of primary education are the most important, and if that is wrong, there is no teacher in the universe who can eradicate the vitiation the child has received. The schools with teachers of ignorance are common. "How many stupid, ignorant teachers there are in this Commo. wealth! Don't rear your costly and magnificent reform schools, b.t let the children be sent into the wide, wide woods and by the airy shore. Do not force them to sit in the presence of so much pettice: ted and pantalooned ignorance."

—In the work of proper formation of childhood and youth, nothing is more important than clearness, accuracy, and precision, in the use of terms. A few distinctions will be drawn here for the purpose of illustration. Education, in its most practical and comprehensive sense, is growth; and in the same sense, teaching is cultivation. It promotes the growth. The childrer are the plants,—the teacher, the gardener. Instruction is feeding or furnishing forth food, and other conditions of growth. Learning is a process of growth, arising in the subject of education. It is acquiring knowledge as the plant acquires of absorbs elements of nutrition, changing them into fibre, flower, and fruit. Training is giving special direction to acquired force, fibre, growth, or power. It begets toughness and practical endurance. It also gives skill, readiness, art, wisdom. Teaching gives direction to the whole process.—John Ogden, Ohio Central Normal School.

The following words are attributed to Edward Everett, one of America's most gifted orators. "To read the English language well, to write with dispatch a neat, legible hand, and be master of the first four rules of arithmetic, so as to dispose of at once, with accuracy, every question of figures which comes up in practice—I call this a good educacion. And if you add the ability to write pure grammatica. English, I regard it as an excellent education. These are the tools. You can do much with them, but you are helpless without them. They are the foundation; and unless you begin with these all your flashy attainments, a little geology, and all other ologies and osophies are ostentatious rubbish." We are too apt to forget that these common things, as they are called, sometimes are the beginnings of education. In matters of education as in everything else the kind of foundation on which we build has much to do in determining the value of the structure.

—You visit a schoolroom filled with quiet industry. In a distant corner arises a slight disorder, so slight you hardly notice it, and the teacher, absorbed in the arithmetic recitation, seems not to observe it. A few minutes later, when the class are busy at the board, a signal no one else perceives summons the disorderly boy to the teacher's side. A talk follows, so low-toned that you do not hear a word, though you sit within a yard of teacher and pupil; you only know that the boy returns to his seat subdued, and is a model boy during the remainder of your visit. No other pupil is disturbed, not one second is taken from the working time of any but the offender. That teacher has tact.—Mary Allan West.

—Notice is given in our news items, of a call, signed by the school committee of a dozen or more towns, for the members of the same in three large counties of Massachusetts, to meet for the general discussion of the best means for increasing the efficiency of the schools under their charge. All hail the day when the muchabused school committee shall seek for more light for the better discharge of their duties. We hope that the good work thus begun will not be limited to our own State, but may extend to every town in the land where a public school exists.—New England Journal of Education.

#### EDITORIAL COMMITTEE.

J. A. McLEIJLAN, M.A., LL.D., High School Inspector. THOMAS KIRKLAND, M.A., Science Master, Normal School. JAMES HUGHES, Public School Inspector, Toronto. ALFRED BAKER, B.A., Math. Tutor University Coll., Toronto. WM. HOUSTON, M.A.

#### PROVINCIAL EDITORS.

ONTARIO.— J. M. BUCHAN, M.A., High School Inspector.
G. W. ROSS, M.P., Public School Inspector.
J. C. GLASHAN, Public School Inspector.
J. C. GLASHAN, Public School Inspector.
QUEDEC.—W. DALE, M.A., Rector High School.
S. P. ROBINS, M.A., Supt. Protostant Sch., Montreal.
New Brunswick.—J. BENNET, Ph.D., Supt. City Sch., St. John.
Nova Scotia.— F. C. SUMICHIRAST, Registrar, Univ. of Halifax.
MANITOBA.—JOHN GAMERON, B.A., Winnipeg.
BRITISH COLUMBIA.—JOHN JESSOP, Supt. of Education.
PRINCK EDWARD ISLAND.—J. HARPER, Principal Normal School,
Charlottctown, P. E. I.

# The Canada School Journal.

TORONTO, DECEMBER, 1877.

# THE CHARGES AGAINST THE CENTRAL COMMITTEE.

The various specific allegations made from time to time against members of the Central Committee of the Education Department in the newspapers, were some time ago, as our readers are already aware, gathered up by the Minister of Education, and referred for investigation under two general heads to one of the Judges of Her Majesty's Court of Appeal tor this Province. The resulting enquiry lasted for some seven days, exclusive of the time devoted to the addresses of counsel and members of the Committee. Every opportunity was afforded to those who wished to probe the charges with a view to ascertain what amount of truth they contained, and nothing could exceed the fairness, patience, and tact with which Mr. Justice Patterson conducted the investigation. The Minister of Education at the outset gave some interesting and important information respecting the origin, history, and functions of the body known as the Central Committee—a body provided for by statute as far back as 1871, and discharging from time to time some very responsible duties in addition to that of conducting the periodical examination of Public School teachers. Mr. Crooks also explained the change made by the Department in the method of dealing with the copyright question in connection with authorized text-books for Public Schools—a change in virtue of which the copyrights are now held by the publishers, while the public are protected by the fixing of a maximum retail price for the several books.

The statements and explanations of the Hon. Mr. Crooks were not, properly speaking, evidence in so far as the charges to be investigated were concerned, and it is doubtful whether they tended to facilitate the conduct of the enquiry, since they furnished a ground for mixing up questions of policy which come properly under the purview of the Legislature, with charges of wrong-doing on the part of officers of the Department. The criminatory evidence put in was very voluminous, and we do not propose to offer in our limited space even a bare synopsis of it; to comment upon it would, at this stage of the case, be in the last degree improper. The same is true of the testimony offered for the defence. It cannot be regarded as

out of place, however, to congratulate those witnesses who were examined as experts on the manner in which they acquitted themselves. Their task was neither an easy nor a pleasant one, but in spite of rigid cross-examination they were able to hold to their ground in a straightforward and thoroughly intelligent manner. Noither can it be regarded as out of place to compliment all parties to the investigation on the neverfailing good humour which prevailed throughout, or to express an earnest hope that the ultimate result will be to establish the entente cordiale where it has been broken, and in this and other ways confer a benefit on the cause of education in the Province.

## Contributions and Correspondence.

THE TEACHING OF SPELLING.

BY R. R. COCHRANE.

I.

The deficiencies of our alphabet, on the one hand, and the structure of our language, on the other, have given rise to anomalies that encompass the subject of English spelling with many perplexities and irregularities. It is these anomalies that render spelling one of the most difficult branches of public school education. To rid the language of all anomalies many eminent English educationists have, during the present year, proposed to reform the spelling of English words. The advocates of this reform propose to sweep away the present system of orthography, and replace it by a system subject to none of its irregularities, and consequently less difficult to beginners. Such a change is open to serious objections. The history and ancient associations preserved in the present spelling of most words would vanish with any change of orthography. "There is scarcely a letter of any English word but has its history; not a syllable about which an essay might not be written; not a word but has its roots far, far back in the dead generations; not one but is dear to the hundred millions who speak our tongue." Any attempt to change the present system of English orthography because boys and girls find it difficult to learn to spell would involve the historical study of words in many additional perplexities, and rob the study of English of its chief charm. But we do not require reform in our present system of spelling, so much as reform in our method of teaching it. We are called upon to teach the form of words spelt, not according to the reformed principle but according to the usages which have been gradually developing the orthography of our language for hundreds of years past. We deal with words not as they should be spelt, but as they are spelt. We should recognize the fact that our system of teaching spelling should be complementary to our method of teaching reading, and that a change in the latter necessitates a change in the former. It is the aim of the present paper to present a rational system of teaching this most important subject.

The art of spelling may be acquired either through the sense of hearing or through that of sight. There are, then, two methods of teaching spelling, and the principles upon which each are based demand examination at the outset. When spelling is made to depend upon the sense of hearing, the letters are said to be associated with the sounds in such a manner that the pronunciation of the sounds recalls the letters which represent them. This method is thus founded upon an analysis of sound. If the English language was strictly phonetic this method would have advantages

over any other, for spelling would then consist in the analysis of words into their simple sounds and the representation of these sounds by their appropriate letters. But the English language does not conform to phonetic principles. With words of the simplest orthography an analysis of their sound nover gives the names of the letters. The number of words containing silent letters is very great, while in the terminations able and ible, ant and ent, or and er, the sound gives us no assistance, and besides the character of the vowel sounds is utterly uncertain and arbitrary. Hence to acquire a correct knowledge of English spelling it is almost necessary to form a personal acquaintance with each individual word. From the nature of our language it is certain, therefore, that the ear is no guide to the correct spelling of English words. There are other reasons, not based upon the nature of our language, which should lead us to discontinue teaching exclusively by oral spelling. First, we cannot be certain that we have the undivided attention of the whole class. We can give active employment to only one pupil at the same time, and the rest may be attentive or their thoughts may be wandering off in other directions. This method fosters inattention and listlessness, and should therefore not be adopted. Secondly, as each pupil can receive only a small portion of the words of the lesson, we cannot determine exactly whether the lesson has been prepared as a whole, nor can we determine with certainty all the mistakes of each pupil -a very important point in spelling-so that the value of the lesson to the class is very much diminished. Thirdly, by teaching spelling orally we adopt a method of little practical importance to the pupils after their school days are over. Few require to spell orally more than an occasional word in actual business, so that pupils trained to spell exclusively by the method of oral spelling have no preparation for the only use to which their knowledge of orthography will be put when they leave school. For these reasons then oral spelling should hold only a subordinate place in

When spelling is made to depend upon the sense of sight we resolve the word into its several parts and express these parts. This method is founded upon an analysis of form, and the important point aimed at is to impress the form of the word upon the memory of the pupils. No attention is paid at all to the sounds of the letters composing it. The word is viewed as the picture of an idea, and its parts are studied by the pupils so that they may be able to reproduce it in writing. The pupils are taught to look upon letters as parts of whole words and not as characters representing certain sounds. The eye is trained in analysing the forms and letter-contents of words, and the hand is crained to produce them promptly and correctly. This method appears to be the more rational one. From the commencement the pupils have abundant practice in writing words; each pupil spells from forty to fifty times as many words as he would by the cral system, and at the same time by having something allotted to him to do he is prevented from being inattentive, listless, or mischievous. That better results will follow if spelling be taught from the beginning, principally by written exercises, experience has fully convinced me. It is true that this system requires better teaching and far more labor than the oral system, but the best results and not the minimum of labor to the teacher should be the aim. The course of instruction to be pursued in each class will first be pointed out in the following paragraphs, after which the method of examining and correcting errors will be discussed.

While the pupil is in the first part of the First Reader he should not be bothered with spelling at all. He is now so fully occupied in learning to read, that the introduction of spelling lessons at this stage only interferes with his progress. He requires time to gain

nounce them with facility, and as the analysis of words, with a view to secure their correct spelling, can be of no use to him in acquiring their pronunciation, it should not be attempted. Words must be recognized as wholes before an attempt is made to resolve them into their letter-contents, and hence spelling should follow reading. But if, after a few lessons have been read, the pupil be provided with slate and pencil, and be taught to print by copying from the black-board the simplest words of the lessons he can al ready read thoroughly, better results will follow. The exercise furnishes him with agreeable employment at a time when he would take very little interest in his book, and he performs the task willingly. He is led to observe more closely the forms of words by printing them again and again, and at the same time to institute for himself a comparison of words, so that when he finishes the reader he can not only spell all the words in it but has gained a power of spelling. At this stage spelling is best taught when nottaught formally.

When the pupil is promoted to Part Second he should take a step in advance. Hitherto we have helped him to the spelling of each word; we have shown him on the hoard how to print every word before asking him to print it; we have resolved every word for him into its letter-contents before requiring him to do the same. He has bitherto been dealing with single words selected for him on account of their simplicity. We now withdraw this help and require him to analyse for himself every word he meets with in his future lessons. This step is for him a difficult one. He meets with many combinations of letters new and strange to him, as well as longer and more difficult words, than before, while he has now to copy from the printed pages, of itself a difficult task for him. But we have placed him in the most favorable circumstances to accomplish the task. The work of copying from the board the words of his previous lessons has enabled him to master the mechanical difficulties of forming the letters, so that he can now print with ease. We only require him to print those lessons he has thoroughly learned to read. Further, a line or two at a time is for a while a sufficient exercise, but the work of copying this line or two must be neatly and correctly done. From the commencement the pupil must be made to understand that we do not so much wish to know how much work he can do as how well he can do it. By again and again copying out the words of his lesson, and observing their forms, he gains a mastery over the new and strange letter combinations, and gets the images of the words firmly impressed upon his memory. He gains, too as he proceeds, the power of analysing the letter-contents of words with more and more rapidity, and when he finishes this reader experiences little difficulty in doing it.

On his attaining to the Second Reader we continue to require the pupil to copy every lesson; but now the work is to be done in writing, and after he has so copied it selected words and phrases are to be dictated to him, to test whether his analysis of the words has been sufficiently exact. Every word he is unable to spell should be copied five or six times. As soon as the corrections have been made the slates should be called in and an oral drill given on the mis-spelled words. If the class be large it should be divided into two sections, one of which can be engaged in copying the assigned lesson while the other is reading. Thus when both sections have read round they will also have finished copying the lesson assigned, and then both may be tested together by written spelling in the way previously mentioned. In the cral drill which should follow every test exercise of this kind the pupil should be taught to give proper attention to the syllables, by making a pause after each. This not only costs no additional labor, but is found to diminish materially the difficulties of oral spelling, which arise such familiarity with the forms of words as will enable him to pro- from the pupil's being confused with the lengths of words. Of course a strictly accurate division of syllables need not be at first collingwood High School much the same is done, and with the insisted upon. It will also be serviceable to associate the spelling very best results. In Whitby, for many years the High School of words with their pronunciation.

### PRESTIGE IN SCHOOLS, AND ESPRIT DE CURPS.

٠,٠,٠

We often read in the lives of Englishmen of their love for the school of their boyhood, of their pride in its fame, and of their frequent and fond recollections of it when deep in the busy affairs of life, or of the pleasing thoughts of youth and freshness some chance view of the scenes of their boyhood suggests. One could easily verify this by trite quotations from Gray, Byron, Thackeray, Lamb, Coleridge and others. Schoolboy friendships often exist for life, and exert very great influence upon the characters of men educated at public schools. The equally trite instances of Walpole and Gray, Coleridge and Lamb, Hastings and Cowper, readily come to one's mind. These public schools in England have something inspiring in their history. The influence of the prestige of any one of them must be very powerful upon the susceptible character of boyhood, and this prestige is not confined to the large public schools alone. There is not a Grammar School in England but has its history of which to boast. The reputation of some of them comes out here. Sedbergh, in Yorkshire, has sent to Canada several of our best educators, and some students.

In Canada we have not many large schools-none, perhaps, corresponding to the English public schools. But those we have occupy the same relation to us that those in England do to English boys and men. The history of our schools is not very far-reaching, but that of some is honorable and inspiring. The traditions of Upper Canada College are among its most potent educating influe ices. The honor of being Head Boy of the Sixth is, perhaps, more prized in after life than that of being Medallist in the University; and what Upper Canada boy, past or present pupil, does not thrill with proud pleasure as he remembers that his name is written on the honor-boards of the College—if so fortunate as to have his name there? How often do we read in the, alas! too frequently occurring obituaries of our public men, "he received his education at Upper Canada," and think with gratitude of the great service this one training-school has done for us! And how has this prestige been secured for Upper Canada? Of course, preeminently, by its superior advantages, its central position, its long establishment. But not altogether on these accounts. To a very great extent by the careful cultivation and continuance of a spirit of brotherhood during the many years of its history. To maintain an esprit de corps, an animating feeling of reverence for the traditions of the school, belief in its pre-eminence, confidence in its future, regard for its obligations, and, hence, consideration for its everyder duties, has been the constant aim of its principals and conductors. This spirit is not confined o principal and pupils; it animates every master in the institution. And hence the results -a noble history, with a noble and worthy pride in it, possessed by every pupil and master in the college.

To single out one institution may seem partial; but we mean no partiality. We speak of what is known to all. Many other schools are animated by a similar spirit. Some have cultivated it so much that their success rivals that of Upper Canada, and their prestige, if not so ancient, is, at least, as honorable. We do not like to cite invidious instances. We speak now only of what we know; others may supply omissions if necessary. This esprit de corps is excellently maintained in Hamilton Collegiate Institute. The pupils there have a Literary Society, publish a paper in which school brotherhood is never lost sight of, and have a course of winter lectures; and in all this the masters are advisors and helpers. In

very best results. In Whitby, for many years the High School pupils held annual reunions to which old pupils came from all parts of the Province, and so renewed old acquaintanceships, and visited old haunts. At more frequent intervals lesser reunions were held, and we believe that these meetings are still kept up. No one can say that the purely educational interests have suffered from thus cultivating the amenities of fraternal intercourse, for Whitby school has always held a high place among our training institutions. In Toronto Collegiate Institute annual games have been held for some time back, and this year the meeting was unusually successful, and the prizes, which were very beautiful, were presented to the successful competitors by Miss Macdonald, who takes a deep interest in all our educational institutions. Much credit is due to that master of the school by whose labors these meetings have been made successful from year to year. Trinity College, in Port Hope, wins the admiration of its pupils by the success of its team in cricket. Old Hellmuth College boys have their annual dinners; and so on. In every instance we have taken, masters in the school are leaders. The boys rally round them, the principal aids them, and the school becomes a unit, a strongly united body, with a laudable pride in the past, and a laudable desire to do something in the present worthy of their good name and fame. Ought not this spirit of brotherhood, this esprit de corps, to be fostered by principals? If so, then the most cordial sympathy and co-operative spirit ought to exist between principals and assistants.

#### ENGLISH LITERATURE FOR THIRD-CLASS TEACHERS.

We clip from our enterprising contemporary the London Advertiser the following Examination questions on Third-class English Literature. They are prepared by Messrs. Dearness, Hands, and Houston, and will be found useful by intending candidates as guides in their reading. In publishing, from time to time, specimens of examination questions on English texts, we altogether disclaim any intention of either anticipating the precise line to be taken by the official Examiner or putting a premium on "cramming." The object in view is to afford useful aid to those candidates who are sincere in their desire to master the subject, and who will regard these questions as simply containing hints on the best methods of study. We propose to add to the series other questions prepared by competent teachers and examiners. The questions above referred to are as follows:

THE BATTLE OF WATERLOO-FIFTH BOOK, PAGE 276.

- 1. From what poem is this extract taken? To what class of poetry does it belong? Name any other of the same kind.
- 2. Name, giving also his chief work, any literary contemporary of the author.
- 8. In what respects does the poetry in this extract differ from ordinary prose composition?
  - 4. Describe the Spenserian stanza.
  - 5. What figures occur in lines 9, 18, 22, 56?
- 6. The Battle of Waterloo was fought on Sunday, the 18th of June. Give exact date and place of the ball, and of the death of Brunswick's fated chieftain."—[Note.—The Duke of Brunswick did not fall at Waterloo:]
- 7. Explain the historical reference in line 25.
- 8. Explain the allusions in "Cameron's gathering," "Albyn's Hills," "Evana, Donald's fame," "Ardennes."
- 9. Explain and derive "State," "Prophetic," "Squadron," "aught," and "noon."
  - 10. Paraphrase the last stanza.

#### LETTER OF JUNIUS TO THE DUKE OF BEDFORD.

- 1. For what purpose were the Letters of Junius written?
- 2. Who is supposed to have been their author?
- 8. "Irony consists in laughing at a man under disguise of ap-

pearing to praise or speak well of him." Sarcasm is bitter expression of scorn or contempt.

What part of this letter is chiefly ironical, and what sarcastic?
4. "If a compliment should escape me." Is "considerable," in line 14, complimentary? What compliment does escape him?

- 5. Explain "emoluments of a place," "sale of a borough," purchase of a corporation," and "balloting at the India House." 6. Justify, historically, the use of the epithet "illustrious" in line 25.
- 7. Change the grammatical construction of the sentence beginning "Whenever an important," line 58.

8. Distinguish between the different applications of "nice," "peer," "place," "minister," and "measures."

9. Describe, in your own words, the character of the Duke of Bedford as portrayed in this letter.

10. Critisise the writing of personal attacks over an assumed name.

## Mathematical Department.

Communications intended for this part of the Journal should be on separate sheets, written on only one side, and properly paged to prevent mistakes.

ALFRED BAKER, B.A., Editor.

### HOW TO TEACH NOTATION AND NUMERATION.

BY W. SCOTT, B.A.

In order to teach notation and numeration properly, the teacher requires a numeral-frame. One with ten balls on a wire is preferable to any other. If his school is not supplied with one he should provide himself with a number of marbles, peas, or pebbles.

The class being ready for the lesson, and all the balls on one side of the frame, the teacher begins the lesson by asking a pupil to put one ball over to the other side of it. Another pupil is then asked to put over another ball. The pupils are then required to state how many one ball and one ball make. Another ball is then put over, and now they are asked how many balls do two balls and one ball make, &c. This should be continued till the pupils can count readily and intelligently any small number of objects.

When the class has reached this stage it should be introduced to notation. The teacher asks a pupil to put one ball over, and then he writes on the blackboard the figure 1. Another pupil counts out two balls, and the teacher puts on the board the figure 2, &c. The nine significant figures should be taught in this manner.

To teach the notation of numbers between 10 and 99, inclusive, the teacher should use two wires of the frame, and rule two upright columns on the board. a pupil to count ten balls on the first wire, and he then puts them back and puts out one on the second wire. He tells his pupils that this one ball on the second wire is to represent the ten on the first. He also tells them that the figure representing the number of balls on the second wire is to be put in the second column. The one representing the number of balls on the second wire is then put in the second column, and the class is informed that the other column must be filled by the figure representing the number of balls on the first wire. If his instruction has been understood, he will have no difficulty in drawing from the class that he must make use of a new figure, one to represent no balls. He makes this figure and thus has the number that represents 10 balls on the board. The teacher then puts one ball on each wire, and the class will be able to tell him that they represent eleven balls. Some pupil is then required to write down the figures representing 11 in their proper columns; then he puts out one ball on the second wire and two on the first, and, as before, ascertains what these represent and how to write the figures denoting this number on the board.

When the class reaches twenty the teacher puts two balls on the second wire and none on the first, and the class will be able to tell him that they represent two groups of ten balls each, or twenty balls. The two is put into its proper column and the first one filled up as before, &c.

This exercise should be continued until the class can tell at a glance the number to be written down from seeing the number of balls on the two wires.

When the class can readily write down and read any number of two figures it is then introduced to numbers consisting of three figures. A third wire is used and another column ruled on the board. Ten balls are counted out on the second wire, and as the teacher puts them back he puts over one on the third wire and explains that this one is to represent the ten balls on the second wire. The class should now be able to tell him that this one ball stands for ten groups of ten balls each, or one hundred balls. The number 1 is now entered in the third column on the board, and the other two columns are filled as before by figures representing the number of balls on the second and first wires. The pupils should be thoroughly drilled in reading at a glance the number of balls to be represented from seeing the number of balls on each of the three wires, and at the same time they should be required to write this number down. This lesson should be repeated and rerepeated until the pupils can write down and read any number of three figures without hesitation.

It is now time to begin to teach the names of the three places. The teacher should first explain what unity is. He does this by putting out say four balls on the first wire and the class will be able to tell him that these are four ones. He then gives them the new word for one, unit. He should drill the meaning of it into the class by many examples and then proceed to the second wire: as the class already knows that each ball on this wire represents a group of ten, 8 balls will represent 8 tens. He should proceed in a similar manner with the hundreds.

As soon as the class can write down and read any number of three figures all that remains to be taught is the order of the periods, for in writing down or reading any number, however large, one has never to write down or read more than three figures at once.

In reading or writing down a large number there are three steps to be taken.

- (1.) Show the pupils the mode of dividing it into periods or groups of three figures, counting always from the right hand. This separation into groups may be effected by a comma, an upright line, or a hyphen.
- (2.) Accustom the pupils to read the figures in these periods exactly as if written by themselves: thus 871,408,072 should be read three hundred and seventy-one, four hundred and eight, seventy-two.
- (8.) When the pupils can do this well, teach them the names by which the periods are distinguished from one another. In doing this the names with the names of the periods should be put thus: millions, thousands, units.

271 | 408 | 072

The pupils should now be required to read the figures in each period as before, but now they must add the name of the reriod.

The number will now read three hundred and seventy-one millions, four hundred and eight thousands, and seventy-two units.

After some time they should be required to drop the word units, it being generally omitted. A pupil taught in this manner will be able to read or write down any number. He will have a clear perception of the use of the zero, and will have no difficulty in understanding the difference between the simple and the local value of a figure.

# Practical Education.

Queries in relation to methods of teaching, discipline, school management &c., will be answered in this department.

J. HUGHES, EDITOR.

#### ERRORS IN ARTICULATION AND HOW TO CURE THEM.

#### II.

#### LISPING.

This error consists in the substitution of th for the hissing sound in c, s,  $\infty$  or z, as

Theather for Cæsar.

Thickthty for Sixty.

Yeth, thir " Yes, sir.

Thithe " Sizo.

Causes.—It is always caused by allowing the tongue to lie too low in the mouth, or too far forward.

Remedies.—Raise the tongue completely out of the lower and front portion of the mouth, and place the end of it lightly against the gums of the upper incisor teeth while the air is being forced over it to produce the hissing sound, which is made by the air rushing past the ends of the teeth, as the whistling of the wind is produced by the sharp angles of a house in autumn. Practise the hissing whistle often indulged in by boys; do it whenever it can be done without annoying any person, until you have completely eradicated the lisp, and can easily utter a pure, sweet, birdlike hissing whistle. Then repeat the following deliberately, carefully watching your tongue in forming every hissing sound:—

Simple Simon saw sixty-six sets of steel scissors sharpened and set last Saturday at Sam Slick's, consequently he knows how to sharpen and set scissors for his sweet sister, Susan.

The Tongue should never be illowed to protrude beyond the teeth in uttering any sound.

### THICKNEE. OF VITERANCE.

Causes.—Thickness of utterance may arise from malformation, bad habits, defective control of the muscles or indolence.

Re. edies.—Malformation will require a surgical operation. The worst habits are chewing tobacco and drinking spirituous liquors. Any person who has listened to the speaking of a drunkard needs no further proof of the necessity for avoiding these habits.

Defective muscular control arises from a lack of nerve stimulus, and any person suffering from it should obtain plenty of sleep, and amusements that will interest without exciting.

In most cases, however, this error is caused solely by indolence. There is no better single test of a man's energy than his mode of articulation. If he is too indolent to lift and move his tongue properly, he is not likely to display much energy in his general actions. So direct is the connection between a man's mode of articulating and his general style, that any one who has paid much attention to the matter can almost unerringly predict his mode of utterance from his action, or describe his manner of action from his utterance. One who is quick and graceful in his movements will not be thick in his articulation; and on the other hand, one who drags his toes in walking, and allows his arms to dangle at his sides, very rarely enunciates clearly. Teachers should be especially careful to cause their pupils to stand erect, with their lower extremities firmly braced at the knees, while reading or answering orally. The very effort required to do this is similar to that required to secure distinctness of utterance.

#### OMISSION OF SOUNDS.

This is the most common of all the errors in articulation. Very few even of the most careful speakers avoid it in all its forms. Yet numerous as are the errors of this class, they may with few exceptions be traced to two sources. He who gives a full, definite sound to final consonants and unaccented vovels, will make few errors by omission.

Consonant Omissions.—The consonants most commonly ignored are, d, f, g, h, r, and t.

D.

This letter is all but universally omitted in such words as:

An' for And. Wiles Wilds. for Frons Friends. Kinely Kindly. Feels " Fields. Bline-ness " Blindness. Coldly. Colely &c.,

Cause.—It is scarcely ever omitted unless proceded by l or n, and the reason of its omission after these letters is, the tongue occupies the same position in making their final sounds, that it does in making the introductory sound of d. It is odd that d is never omitted after sounds which require an arrangement of the vocal organs differing from its own. When we have to form the whole letter we never omit it; when we have our organs placed in readiness for its formation we rarely articulate it. No one omits it after a vowel, or after r, or any consonant except those which require the tongue to be placed against the gums of the upper incisors in their formation.

Remedics.—Enunciate such a word as an, dwelling on the final sound, and carefully watching the position of the tongue at its close. Then follow with and in a similar manner. It will thus be found that in the first case the sound is completed with the tongue pressed against the front part of the roof of the mouth; and in the second, after going through precisely similar movements, the end of the tongue is pressed more strongly for an instant, so as to increase the pressure of the air, and then suddenly removed to form a slight explosion. This explosion is represented to the eye in print by d, and whenever this letter occurs the explosion ought to be distinctly heard. It is not considered good articulation to make this explosion strong enough to produce an echo, but in practising to acquire the d force I would not hesitate to do so, even prolonging it into an additional syllable. What would be improper in ordinary reading or speaking may produce excellent results as an articulation drill exercise.

Note.—D is not sounded in Wednesday or handsome.

ŢP.

This letter is frequently omitted in the word of when it is followed by a consonant. Scotchmen omit it in many phrases, as "The Land o' Cakes," but men of all nationalities often do so before the combination-th, as "Watchman, what o' the night." It is also sometimes omitted in the word twelfth.

Causes .- Haste or indoler.ce.

Remedy.—Take time to partially shut off the preceding sound by meeting the upper lip and the under teeth.

G.

Gross mistakes are made by the omissions of this letter. They occur in final ing, and in words where g is situated between n and th.

EXAMPLES.

Readin' for Reading. Singin' for Singing.
Writin' "Writing. Goin' "Going.
Len'th "Length. Stren'th "Strenjth.

Cause.—Placing the point only instead of the body of the tongue against the roof of the mouth. This may be easily shown by enunciating in and ing, as directed for an and and under D.

Remedies.—Prolong any vowel sound and suddenly close it off by placing the body of the tongue against the roof of the mouth. It will also be a good practice to say sing (as the g is never suppressed at the end of a monosyllable), and then repeat the identical ing sound of s-ing so as to form the word singing. It will be well to divide the words for sound-spelling as follows:

S-ing-ing. Br-ing-ing. Cl-ing-ing. R-ing-ing. St-ing-ing. Sw-ing-ing.

Avoid in this exercise the doubling of the first g, so as to say sing-ging for singing, &c.

The teacher should give lists of present participles frequently to be uttered by the pupils with special force on the final g.

#### DRILL IN SCHOOLS.

#### III.

#### SALUTING.

Boys should be trained to make a proper soldier's salute in passing any gentleman to whom a mark of respect is due. In passing a lady the salute should be given in a somewhat slower manner, and the hat should be raised slightly.

#### GENERAL RULE.

Always salute with the hand furthest from the person to be saluted, and begin about four paces from him.

Right hand salute.—The right hand must be brought up to the head smartly with a slight, graceful circular motion; the back of the hand should rest against the front of the hat, with the palm to the front, fingers extended. The head should be turned slightly towards the person saluted, except in class or during a general salute, when the head is not to be moved.

#### THE BALANCE STEP.

A thorough instruction in the balance-step is necessary before proceeding with the marching exercises, the object of it being to teach the free use of the legs, steadiness of the body, and perfect squareness of the shoulders to the front. To obtain these three objects no pains must be spared by the Instructor, who must be careful to prevent the pupils acquiring the habit of drooping or throwing back the shoulders on the movement of the feet. The first practice must be gone through very slowly, and will commence with the left foot in the following manner:—

Caution .-- Balance-step without gaining Ground, commencing with the left foot.

PRONT.

On the word Front, raise the left foot from the ground by slightly bending the knee, and carry it slowly to the front, straightening the knee as the foot is brought forward, the toes to be turned a little outwards, the sole of the foot to be kept parallel to the ground and about two inches from it, the left heel to be in line with the right toes.

RBAR.

When steady, on the word Rear, the left foot will be brought gently back (without a jerk), till the toe is in line with the right heel, the left knee a little bent. The left foot in this position will not be so flat as when in front; the toe will be a little derressed.

FRONT. REAR. When steady, the words Front and Rear will be repeated several times, and the motions performed as above described.

RALT.

On the word *Halt*, which should always be given when the moving foot is in rear, that foot will be brought to the ground in line with the other.

The instructor will afterwards make the pupil balance upon the left foot, carrying the right foot forward and backward.

Accustoming a pupil to stand on one leg and swing the other backward and forward without constraint, is an excellent practice.

#### 2. Gaining Ground, First Practice.

Caution .- Balance-step, gaining Ground by the word Forward.

PRONT.

On the word Front, the left foot will be carried to the front, as described in the balance-step without gaining ground.

As soon as the boys are steady in the above position, the word Forward will be given, on which the left foot will be brought to the ground at a distance of one pace from heel to heel, toes turned out at an angle of 30 degrees, and the right foot will immediately be raised, and held extended to the rear, the knee slightly bent. Great care must be taken that the knees are kept perfectly straight as long as both feet are touching the ground; that the tree remain throughout at the proper angles, that the body accompanies the leg, and that

the inside of the heel is placed on the imaginary

FORWARD.

straight line that passes through the points on which the pupil is marching; that the body remains straight, but inclining forward; that the head is creet, and turned neither to the right nor left.

FRONT. On the word Front, the right foot will be brought forward, and so on.

HALT.

On the word Halt, which should always be given when the moving foot is to the front, that foot will complete its pace, and the rear foot will be brought up in line with it.

8. Gaining Ground, Second Practice.

Caution .- Balance-step, gaining Ground on the word Front.

FRONT.

On the word Front, the pupil will take a full pace slowly with his left foot; raise his right foot and carry it to the front, heel in line with the left toe, foot turned out at an angle of 30 degrees; and then pausitill the word Front is repeated, on which the right foot will be brought to the ground a pace to the front, and the left immediately brought forward, and so on. On the word Halt, which should always be given when the moving foot is to the front, that foot will complete its pace, and the rear foot will be brought up in line with it.

HALT.

some casual object.

FRONT.

When the squad becomes steady in the practice, the word Front must be given quicker until the cadence of the slow march is attained, of which the squad must be informed, and they must continue to move on in slow time. They must then be halted as in the second practice above, and may be turned about, and directed to continue the slow march, on the command Slow March being given. The body must be kept well forward, and on no account must leaning back or swinging be allowed. The hands and arms must be kept steady at the sides, but must not be allowed to cling to the thighs, or partake in the slightest degree of the movements of the leg, neither should they be allowed to vibrate. The body must be kept erect, the eyes looking straight to the front, and each boy be taught in marching to take up a straight line to his front by fixing his eyes on some object which is in a line with the centre of his body, such as a stone, a tuft of grass, a mark on a wall, or

#### MARKING TIME AND MARCHING.

General Rules.—1. "Always step off with the LEFT foot first." If any one begins with the right foot, say "halt," and begin again.

- 2. The body must be straight but almost imperceptibly incilining forward, head erect but not thrown back, eyes straight to front, hands and arms steady, by side, and on no account must swing to and fro, or partake of the movements of the thigh. The movements must be done entirely by the legs, and the bodies must not be swayed from side to side, nor must the feet be thrust out laterally—evils which are easily contracted in a crowded school-room. Explain that the movements of the legs are exactly as in common walking. Show a boy that in walking the first natural movement is to bend the knee. Do not allow the knees to be bent too much—not high up like a full-actioned horse, but moderately, so as to carry the sole of the foot about three inches from the ground. The foot must be planted on the ground gently so as not to shake the body, and the toe not pointed upwards.
- 8. In slow marching, pupils should take 75 steps in a minute, in quick marching 116, and in double merching 165. Boys have always a tendency to step too fast.
- 4. The length of a soldier's pace is 80 inches in slow and quick time, and 88 inches in double marching. No exact rule can be laid down for boys. The teacher should impress on them that they should, in marching, step a full ordinary step, without straining.
- 5. When boys march side by side they are said to be "in line," but when, by giving the command Right (or Left) Turn, they are brought one behind another, it is called "File Marching." During the earlier stages of the drill the teacher is recommended to use the latter method mainly, as the pupils can be seen and their errors corrected more readily.
  - 6. Allow no looking down at the feet in any kind of marching.

7. As a general rule, the SLOW MARCH should be used when boys are moved about in the School Room, the QUICK MARCH when they are drilled out of doors.

#### MARKING TIME-BLOW.

Slow Mark TIME.

Commencing with the left foot, the feet will be alternately raised about three inches from the ground, by bending the knees, at the rate of 37 or 88 steps to a halfminute. The feet must be kept flat, the too not pointing downward—the bodies must be perfectly steady.

HALT.

The moving foot will complete its pace, and will then remain perfectly steady at p. of a.

Slow-MARCH.

HALT.

At word March, every boy (slightly bending his knee, keeping his too turned out at the proper angle, and not pointing upwards) will carry his left foot out and advance ore full pace; then the right foot, and so on, at the cadence with which he will alroady be familiar by having learned to mark time. Care must be taken to have the body accompany the feet in their forward movements.

The noving foot will complete its pace; the rear foot will then be brought up into p. of a.

#### STEPPING OUT.

Step-out.

When marching in slow time, on the words Step-out, the boy must be taught to lengthen his pace about 2 inches by leaning forward a little, but without altering the cadence.

This step is necessary when a temporary exertion to the front is required, and is applied both to slow and quick time; at the words Slow (or Quick) the ordinary pace will be resumed.

#### STEPPING SHORT.

Step-short.

On the words Step-short, the foot advancing will finish its pace, and afterwards each boy will take paces of ten inches until the word Forward is given, when the usual pace will be resumed.

This step is useful when a slight check is required.

#### STEPPING BACK IN SLOW TIME.

Step Back Slow-MARCH.

In stepping back, the pace will be 20 inches and the cadence the same as in the slow march. The squad must be taught to move straight to the rear, preserving their shoulders square to the front and their bodies

On the word Kalt, the foot in front must be brought HALT. back equal with the other.

When a definite number of paces is named, Halt need not be givon. Rear Rank stepping back. When it is desired to increase the distance (at the halt) between the ranks, the orders are :- Rear Rank a pace to the rear-march. And to re-form close order. Close order-march. very few steps backwards at a time only can be necessary. See that they step with left foot first

#### CHANGING FEET.

A knowledge of this is quite indispensable; for by it a boy is able, when he finds himself out of step on the march, to regain step without word of command and without halting.

To change feet. The advancing foot will complete its pace, the toe of the rear foot will then be rapidly brought up to the heel of the front foot, which then instantly makes another step forward so as not to lose the cadence. Two successive steps are, indeed, taken with the same foot.

#### THE QUICE STEP.

The cadence of the slow march having become perfectly familiar, marching in quick time will next be taught.

The time having been given by the Instructor, on Quick-MARCH. the word March, the squad will move off, particular attention being paid to the points alluded to in slow marching.

When the squad is perfectly grounded in marching in quick time, all the alterations of step laid down for the slow march must be practised

In marking time at the quick cadence the feet will be raised alternately about three inches from the ground, and the command will be Quick Mark Time.

#### THE DOUBLE MARCH.

Double-MARCH.

The time having been given by the Instructor, on the word March, the squad will step off together with the left feet, with the head kept erect, the shoulders square to the front, and the knees a little bent; the body being well thrown forward, both hands to be raised in line with the elbows, and clenched. The full pace of 22 inches must be taken, otherwise the habit of a short trot will be acquired, which will defeat the advantages of the double march.

The squad will be halted as in the slow and quick marches, and will be taught to mark time at the Double in the same manner as in quick time, only that the feet will be raised higher, and the knees be more bout. Marking time at the Double is an excellent practice for giving elasticity to the muscles of the legs.

#### THE SIDE OR CLOSING STEP.

Pupils taught the side step first by numbers, then judging their own time.

#### 1. By Numbers.

Caution .- Right close by Numbers.

On the word One, the right foot will be carried from 8 to 10 inches (for adults 12 inches) to the right, the shoulders and face being kept perfectly square to the ONE. front, and the knees straight.

On the word Two, the left foot will be closed smartly to the right foot, heels touching.

The word One being repeated, the right foot will be ONE. carried on as before described, and so on. Wher the word Halt is given, the left foot will be

Squad-HALT. closed to the right as on the word Two.

If the squad be told to close to the Right or Left a certain number of paces, the word Halt should not be given.

WHEN TO GIVE THE WORD MARCH, AND WHEN TO GIVE THE WORD FORWARD.

In moving off from the halt the order march must always be given; but if the boys be already marking time the word will be

FORWARD.

At the word the moving foot will complete its movement without gaining ground; the first step forward will be taken by the other foot, which immediately commences the march without losing the cadence.

# Examination Questions.

#### PAPERS FOR JULY, 1877.

### EUCLID.

Examiner: J. C. GLASHAN.

#### SECOND CLASS TEACHERS AND INTERMEDIATE.

N.B .- Algebraic symbols must not be used. Candidates who take Book II will om' Questions 1, 2 and 6, marked thus \*; Candidates who take only I sok I, will omit Questions 7, 8 and 9.

\*1. (a.) Which of the axioms in Euclid relate to geometrical magnitudés only ?

(b.) There are four cases in which Euclid proves two triangles to be equal in all respects. What are they? Enunciate the omitted case of equality.

\*2. To draw a straight line perpendicular to a given straight line of unlimited length from a given point without it.

A straight line drawn perpendicular to the base of an isosceles triangle through the middle point of the base, will pass through V the vertex.

3. Any two sides of a triangle are together greater than the third side.

The straight line which joins the vertex of a triangle to the middle point of the base is less than half the sum of the two sides.

4. If a straight line falling upon two other straight lines make the exterior angle equal to the interior and opposite angle upon the same side of the line, the two straight lines shall be parallel to one another.

If two straight lines be either parallel or perpendicular to two

other straight lines, each to each, the first pair make the same angles with one another as the second pair.

5. Parallelograms and triangles upon the same base and between

the same parallels are equal.

D, E, F are the middle points of the sides of a triangle ABC, and through A. B. C are drawn three parallel straight lines meeting EF, FD, DE, in a, b, c respectively: prove that the triangle ABC is double of the triangle abc, and that be passes through A, ca through B, and ab through C.

\*6. In any right-angled triangle, the square which is described on the side subtending the right angle is equal to the squares described on the sides which contain the right angle.

If upon the sides AB, AC of any triangle ABC, there be described any parallelograms ABGF and ACED, if the sides GF and ED meet in H, and HA be joined, and if finally upon the third side BC of the triangle a parallelogram BCMN be described whose side BN is equal and parallel to HA, then shall the parallelogram BCMN be equal to the parallelograms ABGF and ACED together. (Pappus.)

7. If a straight line be divided into any two parts, the squares on the whole line and on one of the parts are equal to twice the rectangle contained by the whole line and that part together with the square on the other part.

Produce a given straight line so that the sum of the squares on the given line and the part produced shall be equal to twice the rectangle contained by the whole line thus produced and the part

8. If a straight line be divided into two equal and also into two unequal parts the squares on the two unequal parts are together double of the square on half the line and of the line between the points of section.

Divide a given straight line into two parts such that the square on one of them may be double of the square on the other.

9. To divide a given straight line into two parts so that the rectangle contained by the whole line and one of the parts shall be equal to the square on the other part. (The golden section.)

To produce a given straight line to a point such that the rectangle contained by the whole line thus produced and the part produced shall be equal to the square on the given straight line.

### FIRST CLASS TEACHERS.

N.B .- Algebraic symbols must not be used.

1. The angles in the same segment of a circle are equal to one another.

If the diagonals AC, BD of the quadrilateral ABCD inscribed in a circle, the centre of which is at O, intersect at right angles in a fixed point P, prove that the feet of the perpendiculars drawn from O and P to the sides of the quadrilateral lie on a fixed circle the centre of which is at the middle point of OP.

2. To inscribe a circle in a given triangle.

If the circle inscribed in a triangle ABC, touch the sides AB, AC in the points D, E, and a straight line be drawn from A to the centre of the circle, meeting the circumference in G, show that G is the centre of the circle inscribed in the triangle ADE.

3. The sides about the equal angles of triangles which are equiangular to one another are proportionals; and those which are opposite to the equal angles are homologous sides, that is, are the antecedents or consequents of the ratios.

If perpendiculars be drawn from any point on the circumference of a circle to the sides of an inscribed quadrilateral, the rectangle under the perpendiculars on two opposite sides is equal to the rectangle under the other two perpendiculars .- (Pappus' Theorem.)

4. If four straight lines be proportionals, the rectangle contained by the extremes is equal to the rectangle contained by the means; and if the rectangle contained by the extremes be equal to the rectangle contained by the means, the four straight lines are proportionals.

To bisect a triangle by a straight line drawn through a given point .- Apollonius.

5. Similar triangles are to one another in the duplicate ratio of their homologous sides.

To bisect a triangle by a straight line drawn parallel to a given straight line.

#### NATURAL PHILOSOPHY.

T.

SECOND CLASS TEACHERS AND INTERMEDIATE.

Examiner: J. A. McLellan, LL.D.

1. State the triangle of forces.

A weight of 100 lbs. is suspended by two flexible strings, one of which is horizontal, and the other inclined at an angle of 60° to the vertical; what is the tension of each string?

2. Show how a force can be resolved into two components at

right angles to each other.

Show by a diagram how it is possible for a sailing vessel to make headway in a direction at an an angle of 60° with that of the wind.

3. What is meant by the moment of a force with respect to a given point? State the principle of moments. The whole length of each our of a boat is 10 feet, and from the hand to the rowlock the distance is 2 feet; each of your men sitting in the boat pulls his oar with a force of 60 lbs.; supposing the blades of the oar not to move through the water, find the resultant force propelling the

4. A beam, the weight of which is 120 lbs., acting at a point one-fourth of its length from the foot, is made to rest inclined at an angle of 45° against a smooth vertical wall (the other end resting on the ground) by a horizontal force applied to the foot; find this force.

5. Define centre of gravity, and show how the centre of gravity

of a body may be experimentally determined.

A uniform triangular slab of marble weighing 120 lbs. is supported by three men at its angular points: find the weight supported by each man.

6. In a system of pulleys in which each pulley hangs by a separate string, there are three pulleys of equal weight; the weight attached to the lowest is 32 lbs., and the power is 11 lbs.; find the weight of each pulley.

7. Explain the principle of virtual velocities, and apply it to find the relation between the power and the weight in a lever of the second wder.

8. Denne specific gravity. A cylinder whose s. g. is 6 floats in a fluid with 3 of its bulk below the surface: find the s. g. of the fluid.

9. Describe the forcing pump.

The forcing purp being used to raise alcohol (s. g.= 9) from a lower to a higher level, determine the number of feet which the distance between the lower valve and the surface of the fluid must not exceed, in order that the pump may act, supp. sing the barometer to stand at 30 inches and the s. g. of mercury to be 13.5.

10. Describe the syphon and explain the principle on which it

Water is flowing out of a vessel through a syphon; what would take place if the pressure of the atmosphere were removed and afterwards restored-(1) when the lower end of the syphon is immersed in water, (2) when it is not?

#### Examiner: J. C. GLASHAN.

1. Define ferce. How is it measured?

A mass of 18 oz. lies on a horizontal table. Attached to this mass, by a string passing over a pulley at the edge of the table, hangs a mass of 6 oz. Find the accelerative effect of the weight of the latter mass, assuming the table and the pulley to be perfectly smooth, the string to be weightless and perfectly flexible, and g, the accelerative effect of gravity, = 32.

2. Explain how velocity and rate of change of velocity are

measured.

A velocity of 20 yards per minute is changed uniformly in one second to a velocity of twenty-two and a half miles per hour; express numerically the rate of change in feet and seconds.

8. State Newton's Laws of Motion.

(a) What is meant by motion in the Second Law, and how is it measured?

(b) How is action measured?

From the Second Law deduce that when a body moves with uniform velocity in a circle, the force acting on the body is directed towards the centre, and is equal to the product of the mass of the body into the square of the velocity divided by the radius of the circle.

4. Deduce the parallelogram of forces from Newton's Laws of

Motion,

The resultant of forces 7, 1, 1, 8 acting from one angle of a regular pentagon towards the other angles taken in order, is  $\sqrt{71}$ .

5. What is a couple? Prove that if the moments of the forces composing a couple are taken with respect to any point in the plane, the sum is constant both in sign and magnitude.

A weight of given magnitude moves along the circumference of a circle in which are fixed two other weights. Prove that the locus of the centre of gravity of the three weights is a circle.

6. State the laws of friction, and describe some method of veri-

fying them experimentally.
Solve the rider to Quest. 1, assuming the co-efficient of friction between the first mass and the table to be 1/6, the other conditions remaining the same.

7. State the law of stability of flotation.

What weight of lead or specific gravity 11.4 attached by a fine cord to one end of a uniform rod of length 6 feet, weight 61 lbs., and specific gravity .64, will cause it to float in water, with it saxis vertical?

8. Define the measure of the elasticity of a fluid. Prove that if the elasticity is equal to the pressure, the pressure is inversely

proportional to the volume.

There are two barometers, one in perfect order in which the mercury stands at a height of 80 in., the other with an imperfect vacuum of 9 in. above 25 in. of mercury. If it were possible for the force of gravity to become less by a quarter, what would be the effect on these barometers?

#### PHYSICS.

#### FIRST CLASS TEACHERS.

Examiner: J. C. GLASHAN.

1. "The very law which moulds a tear, And bids it trickle from its source, The law preserves the earth a sphere, And guides the planets in their course."

What is the force which "moulds a tear," and what the force which "guides the planets?"

Explain how it is that a globule of mercury can float on water.

2. How can the velocity of sound in a gas be exp-rimentally

determined? How can it be determined in a short rod?

A cubic foot of air at 82° F, and a pressure of 2116.4 lbs. to the square foot, weighs .080728 lbs., the ratio of increase of elasticity on account of heat of compression is 1:404: find the velocity of sound in air at 42° F.; g = 32.17.

3. What is meant by specific heat and what by atomic heat? In exhibiting the conversion of mechanical energy into heat by hammering a metal, what metal would be the best to select for the

experiment, and why?

The specific heat of water is four and a fifth times, and its density 778 times that of air. Supposing a cubic mile of water to yield up one degree of its heat, by how many degrees would it

suffice to heat 100 cubic miles of air?

4. Describe fully some one experiment by which the mechanical

equivalent of heat has actually been ascertained.

If the heat evolved in the burning of one pound of coal is capable of raising 100 lbs. of water from 70° F. to 186° F, required the mechanical equivalent of the amount of heat evolved in the burning of one ton of such coal.

5. What is the relation between refrangibility and wave lengths? Describe the structure of an achromatic combination of lenses.

A series of concave lenses, each or focal length 81, are placed with their axes coincident, and such that the interval between the rth and the (r+1)th lenses, is equal to the distance of the focus after the rth refraction from the rth lens. If the original pencil be parallel, prove that the distance of the 5th focus from the 5th lens is 16.

6. Describe briefly the structure and use of the spectroscope. What are the lengths of the A and the H2 Fraunhofer lines? How are these lengths measured?

Which are the primary colours? How do you explain the colour of a mixture of two fine powders, one blue the other yellow?

7. Describe the Leyden jar. What is meant by the residual charge? Give an explanation of its cause.

A battery of Leyden jars was connected with a spark micro-meter, and when a certain charge had been given the battery, a spark passed between the balls at the distance of half an inch. sternness, or scolding words uttered by grating voices; but of dig-

The balls were afterwards brought to within 12 of an inch and a second spark passed. What part of the entire charge was the residual charge?

8. State Ohm's Law, and explain the terms used.

The resistance of 160 yards of iron wire of diameter :18 was found to be 2.1 Ohms. Compare the conductivity of this wire with that of pure copper.

9. Describe a Daniell's cell, the rheostat, and the tangent galvanometer.

A tangent galvanometer, a rheostat, and a Daniell's cell were joined in circuit, and by adjusting the resistance a deflection of 45° vas obtained. On introducing 30 more turns of the rheostat wire the 3-dection was reduced to 40°. A Grove's cell was then substitutea for the Daniell's, and the resistance adjusted till the deflection was 45°. To reduce the deflection to 40°, it was necessary to introduce 50 turns of the rheostat wire. Compare the electromotive forces of the Daniell and Grove cells.

10. What is the most advantageous manner of arranging 24 cells of E. M. F. 20 and resistance 12, to overcome a resistance of 18? Eight of the above questions will be counted a full paper.

### Answers to Correspondents.

To Correspondents.-All requests for information, as well as communications intended for insertion in the School Journal, should be accompanied by the name and address of the sender.

Teacher, Collingwood.—The Copy-books you refer to have doubtless formed part of an old stock, as a series, published by a Toronto firm, was at one time "authorized." No series is now authorized. School Boards are at liberty to use the Copy-books which they deem best, and it is gratifying to know that both teachers and parents are taking a much deeper interest in this subject than formerly.

Teacher.—There are three conditions, each of which must be fulfilled before a second-class certificate can be obtained: (1.) Passing the academic or non-professional examination for this grade. (2.) One year's experience in teaching. (3.) Training at the Normal School. The order in which the above conditions must be satisfied is not absolute. A student who has already obtained a certificate of satisfactory attendance at the Normal, is not compelled to return for a second term before obtaining a second-class certificate.

Teacher.-1. If a candidate fails when writing for a second-class certicate will a third-class be granted to him? If so, for how long? Yes, if in the opinion of the Examiners he is entitled to it, and does not already For three years.

2. Can third-class certificates be renewed in the County where issued? Yes, by the Minister of Education on the recommendation of the County

Examining Board.

3. Can a third-class teacher obtain a third-class certificate in another County, after teaching three years in the County where he first obtained

4 Every candidate will in future be required to be trained at a County Model School before obtaining a third-class certificate.

# Notes und News.

#### ONTARIO.

J. C. Harstone, B.A., Silver Medallist in Mathematics in the University of Toronto for 1877, has been appointed Mathematical

Master in the Port Hope High School.

At the close of the recent session of the Carleton County Model School, the Inspector, Rev. John May, delivered a brief but admirable address to the teachers of the school and the students who had just been examined. After complimenting the former he con-tinued, addressing the passed candidates:—"I regard this experiment as a most gratifying success; and if a similar remark will apply to the other Model Schools of Ontario, the Hon. the Minister of Education has substantial reason to congratulate himself on the gratifying results of this change in the school system. I confess that when the change was first mooted, I had but little faith in its success. I am converted. The value of a school like this is simply incalculable. Here, ladies and gentlemen, you have had daily before your eyes, model teachers-model in every sense, and let me beseech you to imitate their example in every particular. You have seen high discipline as the result, not of harshness, or

nity, calmness, self-possession, self-command and kindness. Nover forget this: to govern others, you must govern yourself. The teacher who loses his temper is not fit for his post. Perpetual flagellation argues atter incapacity; and yet, I am as far lowing expression of opinion: "When the late Chief Superintendent as possible from sympathy with those who would banish the rod. of Education vacated the office which he had filled so long, so It will be, to our schools, a day pregnant with disaster, when the lably, and so zealously, and the change of relation between the Legislature or the Department condemns the rod. It will open the floodgates of license and youthful riot. Let the rod remain. Give it a conspicuous place. Use it in extreme cases, with evident reluctance, but unmistakable effect. This school was a bedlam three years ago. The then teacher was hourse in his vociferous not hoarse because the school was boisterous: the school was boisterous because he was hoarse. You have here observed the best methods of teaching; you have been trained how to teach; and your admirable appearance to-day proves your diligence and devotedness. You have now had actual experience in this noble work. You have seen drilled and trained in various matters of supreme importance, for dexterity in which no provision was wont to be made in times past; such as reading, mental arithmetic, keeping the registers, and that most important factor in successful school work, the daily recording of recitations. This is the basis on which rewards ought to be distributed. Without it prizes are presents, and infinitely worse than useless; yet without rewards a school is dead. Issue weekly or monthly reports. Be punctual to the moment in opening and closing school-in beginning and ending recitations. Get a good, ringing bell on your school. Keep the premises clean and in order. Don't be afraid of fresh air. Your pupils will copy you in everything, unless indeed they see that you are not worth copying. Then be dignified in demeanor, gentle in address, neat in your person, upright as well in attitude as in character. Be firm; be true; be diligent; study every lesson; you can't teach a class in even the first book without previous study. Suppress lying and discourage the sneak. Have your boots polished; and don't forget to put on a shirt collar in the morning. I have seen muddy-booted schoolmasters—yellow-toothed-unfamiliar with the brush. In their schools, barefooted urchins with unkempt hair, and streaky faces, and mucilaginous nostrils; feet covered with mud; not the mud of the day, nor the day previous nor the week before-not modern but genuine antediluvian mud. And now it becomes my pleasing duty to announce to you the doubtless welcome fact that you have all passed—(cheers): not all alike, but all: some first-rate, some second, the others third. This Board is delighted. The masterly reports of your Principal have rendered our duties light; your excellent preparation has made them peculiarly pleasing. For the first time in six years have I been a party to the issuance of a whole batch of certificates without secret misgivings, for mere literary attainments are no guarantee of success in teaching. Go forth, then, and may God's blessing go with you. Each of you may be a centre of light in surrounding sections. The influence of one good teacher on adjacent bad ones is simply immense. have had notable instances of this in the County of Carleton. influence of Thomas Potter, for example, was felt, and its good effects were distinctly traceable in more than a dozen sections. Go and do likewise." That Mr. May here speaks the opinions of the great majority of inspectors we have the most indubitable evidence, and in his own concluding words we would say to the few who for any reason still hold aloof: "Go and do likewise."

The Board of Directors of the Education Society of Eastern On-The Board of Directors of the Education Society of Eastern Ontario have succeeded in providing an ample bill of fare for the meeting of the Society to be held in Brockville 26-28 prox. Papers are to be read by Mr. W. R. Bigg, I. P. S., County Leeds, on "Defects in the School Law;" by Mr. S. S. Robins, M.A., Montreal, on "Teaching Arithmetic;" by Mr. W. R. Riudell, B.A., B. Sc. O. N. School on "The Examination Questions;" by Mr. R. Dawson, B.A., (T.C.D.,) Belleville, on "Discipline;" by Dr. J. S. Atkinson, Model School, Prescott, on "Model School Work;" by Mr. G. D. Platt, B. A., I. P. S., County Prince Edward, on by Mr. G. D. Platt, B. A., I. P. S., County Prince Edward, on "Upbuilding of Character," and by Mr. E. D. Parlow, C. S., West Ottawa. Mr. M. Sparrow, of the Ottawa Normal School, will give practical explanations on teaching Free Hand Drawing. In addition to the above, public lectures are to be given in the evening by Prof. Robins on "Popular Misunderstanding Respecting Education;" by Prof. J. Macoun, M.A., of Albert College, on "The North-west Territories, their Climate, Topography and Resources;" and by J. G. Hodgins, LL.D., Deputy Minister of Education, on "The Centennial."

secure the presence of the Minister of Education at its last meeting. Extracts from the address to the Minister and his reply will be of interest to our readers. The former contained the tollowing expression of opinion: "When the late Chief Superintendent Head of the Department and the people was effected, we confessed that we watched the result with some degree of anxiety, fearful that politics and Education would become so inextricably interwoven that the beautiful educational fabric, which had cost the country so much, would become at last but 'the baseless struggles after order. He put the cause for the effect. He was fabric of a vision. However, since you have accepted the new portfolio, and evinced so much interest in matters pertaining to your office, and displayed such zeal in making yourself acquainted with our entire Educational system and improving it, and eschewed politics and attended strictly to educational matters, our apprehensions, and the apprehensions of the country too, have vanished." In reply to which Mr. Crooks spoke as follows: "Mr. Chairman, Ladies and Gentlemen,-I have attended many Teachers' Associations, and made it my special duty to obtain from these and all other practical sources all the information I possibly could to further improve the public education system in vogue in the Province. It is the first time that I have been in this part of the country or attended any of your associations, but I must say, that although but newly organized, you will compare favorably with those much longer established. I have been very much gratified indeed by the address presented, and if I live as long as you desire, I trust I will prove myself worthy of the confidence placed in me by you and the public generally. I have done what Î believe was right for the establishment of such Associations, and hope that the annual grant of \$50 to each County Association will be as well utilized as, I am sure, it will be appreciated. The principle on which I have endeavored to proceed in all the changes that I have introduced into our School Law and Regulations is not to propose a change for change's sake, but after a large amount of due investigation, deliberation and thoughtful prudence. It is certain that thoughtless jurisprudence in connection with our school system would be as injurious as thoughtless quackery in the treatment of disease in connection with the flesh and blood of an individual. Looking upon our school system as, in a certain sense, the flesh and blood of the Province, I have introduced no changes but such as I believe were highly beneficial to the system; and in thus acting I think I have the precedent of Dr. Ryerson, who, for thirty years of his life among us, in carrying out what appeared to be the more immediate object of his mission, did not hesitate when he considered changes beneficial. As a native-born Canadian I was not entirely ignorant of the public educative system of the Province, but before I attempted the introduction of any changes I took a long time for examination and deliberation with many of the leading friends of our school system, and as I have had no particular hobby I could go straight to work in preparation for those necessary changes demanded by the educational interests of the country.

#### QUEBEC.

The School Commissioners of Montreal have determined to introduce telegraphy into their schools.

Efforts are to be made to raise the annual income of the Diocesan (Anglican) Training College, in Montreal, to \$3,000, so as to

provide the Principal with an efficient assistant.

Complaints continue to be uttered about the want of Elementary training in Matriculating candidates. This time it is Prof. Bovey, Professor of Civil Engineering and Applied Mechanics in McGill, who makes the complaint. Various reasons may be assigned for this state of things. Among others, the Universities and Colleges themselves are not free from blame. They have taken upon themselves to supply the training usually obtained at school. It may be from necessity. In the meantime the immediate effect is to force High Schools and Academies into the position of Elementary Schools, to fill the Colleges with boys of 14 or 15 years of age, and to give these latter degrees at an age when they ought to be leaving school. The remedy would seem to lie easily within the reach of the University governing bodies, if they would but apply it. Higher education will never flourish in Quebec if the Universities continue to do the work of schools.

The Literary Convention, lately held in Ottawa on the occasion of the 25th anniversary of the foundation of the Institu Canadien, tion, on "The Centennial."

proposes as a means of developing Canadian Literaure, that the The South Grey Teachers' Association was fortunate enough to Education Department should distribute Canadian was school prizes, and that a library of Canadian authors should be established

in every township.

In a late panel of the petit jury in Montreal, out of seventeen jurors, only four could sign their own names. The Montreal Star wants to know whether our educational system is a failure? What are the results of the labours of Meilleur, Chauveau, DeBoucherville, during the last thirty years? Is this simple fact in accordance with the figures of Educational Reports, with which the count y has been so long content?

At he last meeting of the Catholic Committee of the Council of Public Instruction, Hon. Mr. Chauveau presented the report of the Committee appointed to examine candidates for Catholic Inspectorships. The Board sat for three days, examined 18 candidates, of whom five were rejected. The examiners are to receive each \$10 for each day of attendance. The Chief Superintendent, Hon. G. Onimet, read a report on the proposed subdivisions for four new Inspectorships. The Committee then proceeded to make recommendation of persons to fill the vacancies thus created. The final

appointment rests with the Government.

On the proposition of the Archbishop of Quebec, the quorum of the Committee was fixed at five members. On the proposition of the Bishop of Three Rivers, the following appropriations were recommended to the Legislature for the ensuing session: Superior Education, \$80,000; Common School, \$200,000; Poor Municipalities, \$3,000; Normal Schools, \$50,000; School Inspectors, \$30,000; Prizes, \$5,000; Journals of Education, \$4,000; Pensions, \$10,000; Schools for Deaf Mutes, \$12,000; Book Depository, \$5,000, and Contingencies, \$7,000.

#### NOVA SCOTIA.

The Convocation of Dalhousie College, Halifax, was held on the 26th October, and was, as usual, largely attended. Sir William Young, Chief Justice, President of the Board of Governors, presided in the absence of the Principal, Rev. D. Ross, D.D. G. Lawson, M.A., LL.D., delivered the opening address, in the course of which he referred to the progress of Dalhousie, and spoke in praise of the University of Halifax, whose examinations would afford the means of practically testing the value of the education given in the affiliated colleges. Rev. G. M. Grant, M.A., the new Principal of Queen's College, Kingston, also spoke at some length, and was followed by Mr. Dana, one of the American counsel attending the Fishery Commission, and Judge Foster, the American agent at the Commission. His Excellency M. Delfosse, President of the Commission, and Mr. E. H. Kellogg, the American Commissioner, were also present.

Two graduates of Dalhousie, who have distinguished themselves

in European Universities, have recently been appointed to important positions in Halifax, J. J. Mackenzie, M.A., Ph.D., succeeding James Gordon Macgregor, M.A., Ph.D., as Lecturer on Physics in Dalhousie College, and H. A. Bayne, M.A., Ph.D., have ing entered upon his duties as Teacher of Mathematics in the new High School. Mr. Macgregor has gone to England, having accepted an excellent post at Clifton College, Bristol.

Dalhousie has opened its winter session with a class of 17 matriculants; there were six competitors for the Professors' scholarships at matriculation, the successful candidates being Graham Creelman, Pictou Academy, and James S. Trueman, St. John Grammar School.

The City School Board has resolved that all teachers shall be required to attain a certain standard of efficiency, and the Committee on Teachers has been charged with the duty of fixing that

standard.

The Supervisor, B. Curren, D.C.L., and the Secretary of the Board, C. C. Vaux, have had their salaries raised to \$1,400 each.

Aldermen M. J. Power and Alexander Forsyth have been elected by the City Council to serve in the City School Board. The Council adheres to the practice of selecting its quota of Commissioners from among its own members, whether these know anything of matters scholastic or not. There was an attempt made two years ago by Alderman Harrington to induce the Council to select practical educationists for that office, but it failed; and the old system has been rigidly adhered to.

No site has yet been selected for the new High School building; the classes are at present being conducted in the old Masons

Rev. G. M. Grant, who will leave shortly to enter upon his duties at Kingston, has presented three copies of the revised edition of his work—"Ocean to Ocean"— as "scholarship prizes," to be given to the three most successful candidates, from the Principles over eighty students, while the Model School has an

pal's department in Morris street school, at the examination for

High School scholarships in January next.

The Government have appointed David Allison, LL.D., to the office of Superintendent of Education vacated by the death of Rev. A. S. Hunt. Dr. Allison is about 42 years of age, and is a native of Nova Scotia. He was educated at Middleton, Mass., taking high horors. He then joined the Wesleyan College at Sackville, N. B., with which are connected two academies, one for boys, and one for girls. He has been President of the College since 1871, and made his mark as one of the ablest educationists in the Province. He is a l'ellow of the University of Halifax, and at all meetings of the Senate has been distinguished for his zend in the cause of higher education. His appointment gives great satisfaction. The Government, it is said, have resolved to increase the Superintendent's salary to \$2,400; it was \$1,600 in Mr. Hunt's time.

At the opening of the session of 1877-8 of the Presbyterian Theological Hall, which was presided over by Rev. Dr. Burns, Bishop Fallows, of the Reformed Episcopal Church, spoke in praise of the Presbyterian Church as a patron of Education.

The Convocation of the University of Halifax has nominated the following gentlemen as candidates for the Fellowship of the University vacated by Rev. G. M. Grant :- Benjamin Russell. M.A., Barrister-at-Law, Halisax; A. W. Sawyer, D.D., President of Acadia College (Baptist), Wolfville; Stephen Tobin, B. A., Halifax. The Government select one of the three candidates for the appointment. Rev. Dr. Sawyer is by far the best of the trio. The vacancy caused in the Senate by the death of Rev. A. S. Hunt will be filled directly by the Government, but it is not yet known who will be the new Fellow.

Prince of Wales College, Charlottetown, Prince Edward Island, has been affiliated to the University of Halifax, and will send up all its students for examination in matriculation and the various

faculties.

The various affiliated colleges have been assimilating their curriculum in the different Faculties to that of the University. This is a step in the right direction.

The regulations of the University for graduation in Science were discussed at the last meeting of Senate, and will be published by the end of the year.

### PRINCE EDWARD ISLAND.

Of the Maritime Provinces, Prince Edward Island was the first to establish a system of free schools, and lately another step has been taken in advance, by the reorganization of the educational system under a new law, which was introduced as a measure dur-ing the last session of the House of Assembly by the Davies-Stewart government, and which was duly inaugurated on the 1st of July last. During the short time in which the new system has been on trial, much progress has been made, though the plan of raising the assessment has caused some little discontent in a few of the country districts. In many points the new law is similar to that in existence in Ontario, Nova Scotia, and New Brunswick; and as the teachers now receive larger salaries than heretofore, and as more money is required for the support of better school houses and modern improvements, the government found it necessary to raise a large revenue. Formerly a tax of six and eightpence was levied on every farm consisting of a hundred acres, but now a more equitable system has been adopted, by which, though some pay more than formerly, the vast majority pay very little in advance of the former levy. Those who are now taxed heavily, notwithstanding their attachment to the principle of free schools, naturally grumble at the increase in their taxes, and speak disparagingly of the government; but the breeze, in all probability, will soon blow over, and all the Islanders will then settle down to the work of making their educational system and their schools second to none in the Dominion.

The energy of the Board of School Trustees for Charlottetown meets with approbation on all sides. When they began the work of organizing the city schools, they had many difficulties to contend with. There was only one respectable building in the town which they could make use of as a school house. This was the Academy, which the Wesleyans, in a praiseworthy spirit of educational enterprise, had built at their own expense, and had conducted as a graded school for five years. This handsome building was at once rented by the Trustees; and it is now arranged into a Normal attendance of five hundred pupils. All the modern improvements have been introduced as far as has been found practicable.

The other schools of the city are arranged in temporary buildings, in groups which correspond to two other graded schools; so that when the proper buildings are erected, there will be in the city altogether three graded schools attended by about twelve hundred children. The Trustees have already ordered the preparation of plans for a new building towards the western part of the city, where they have purchased a site. The building is expected to be ready next summer.

The Christian Brothers have retired from Charlottetown, and it is rumoured that the Bishop intends to make arrangements to have St. Patrick's School opened as one of the city public schools. In this way another fine school building may be placed at the disposal

of the Board.

A new graded school has been opened at Georgetown, with every

prospect of success.

Mr. Frederick Allison, formerly of the Victoria School, St. John, has been obliged to resign his position as Head Master of the Model School, Charlottetown, on account of ill health. He is an excellent teacher, and his departure from the Island is a cause of much regret.

The schools in Summerside have been reorganized. It is proposed to build a new school building in that town, to accommodate

four hundred children.

Steps are being taken to associate the Prince of Wales College

with the University of Halifax.

The death of Mr. Hunt, Superintendent of Education, Nova Scotia, was deeply felt by his friends on the Island.

#### MANITOBA.

The question of authorized text-books has been rather unsatis factory so far. It seems there was an understanding in the Protestant section of the Board that the use of those authorized in Ontario was to be sanctioned, and arrangements were made with one of the leading booksellers to have such supplied at Ontario prices. But over a year ago a committee was appointed to prepare a list of books for teachers and schools. They began energetically and prepared a list for teachers, which was, however, so mercilessly assailed on its publication that they seem to have lost heart, and given no further attention to the matter. Meanwhile the Winnipeg schools have been introducing works before unknown in the Province, and other schools seem disposed to follow. The distance from large publishing houses makes booksellers somewhat chary of large orders, and schools are often several weeks at the disadvantage of not having an adequate supply of books. It is not easy for either teacher or trustees to estimate the number needed. Those in most general use are the Ontario series of Readers, Lovell's Geographies, Hamblin Smith's Arithmetic, Stoddard's Intellectual Arithmetic, Loudon's Algebra for Beginners, Morris' Primer of English Grammar and Morell's Larger Grammar, Edith Thompson's English History, Quackenbo's Composition and Macmillan's Primers in Physiology, Botany and some other subjects.

The Provincial Superintendent complains of irregular attendance in the rural districts. The need of a compulsory law is felt. While such a law would, no doubt, have a good effect, matters cannot mend very much so long as the present sparsity of settlement continues. The land policy for the North-west has been so liberal that every one owns a ranche; and in consequence school sections are not so readily organized nor so easily supported as in denser communities. The system of survey, too, though admissible from a mathematical point of view, is such that pupils, instead of converging to common lines on their road to school, will often have to follow long and lonely tracks to homes at all points

of the compass.

Several prominent educationists are in favor of having a Provincial Teachers' Association established, but while nearly all ex press the utmest readiness to assist others in making it a success, those upon whom the work would naturally fall are unwilling to take the initiative. The inconveniences of travel and the distance of many of the teachers from Winnipeg would make the attendance of some of them. at any convention, a matter of great difficulty. However, it is not improbable that an Association will be organized before long.

The new Senate of the new University has made considerable progress in work. The Committee on curriculum have already agreed on the pass B.A. course. The examinations recommended for this course are the "previous" and "final," the others to be

certified by some of the affiliated Colleges. It is probable that distinct examinations will be held in the departments of History and Philosophy, as the diversity of traditions of English and French Universities is such that agreement on such troublesome subjects is not to be expected between Catholic French on the one hand and Protestant English on the other. The University charter provides that candidates for degrees "shall have the benefit of the opinions of authors in Mental and Moral Philosophy and History, which authors they may have studied during their course of education.' The Committee have agreed to a common examination on all other subjects.

There has been a great lull of late in the "non-sectarian

schools" controversy.

The Unitary Method of teaching Arithmetic, which was introduced into the Winnipeg Public Schools some time ago, has met with such general favor that it will likely soon be used in the Colleges. The Bishop of Rupert's Land, Warden of St. John's College, is inquiring into its merits, with a view to its adoption.

The Presbytery of Manitoba complain of the preposal of the Dominion Government to diminish the grant to their Indian

Mission School at Roseau River.

It does not appear that any important amendments to the School Law will be brought before the Legislature this year. That body seems anxious to keep clear of such a troublesome matter until after the general election next year.

# Departmental Aotices.

#### MEMORANDUM AS TO UNION SCHOOL SECTIONS.

1. Union School Sections, strictly speaking, are such as are composed of (1) parts of one or more townships, or (2) parts of one or more townships and an adjoining town or incorporated village.

2. The amended School Act of 1877 (40 Vic. cap. 16, sec. 11) contains special provisions for the formation and also for the dissolution of such Union School Sections. These provisions came into effect on the 2nd day of March, 1877. The Act also confirms such unions as on that day existed de facto, and whether de jure or not. In my opinion, to constitute an existence de facto there must have been an acquiescence in an intended union on the part of all persons affected thereby, and that a union de facto cannot be said to have existed when such was definitely objected to, or actively resisted.

3. The provisions of the Amended Act are sufficiently specific as to the formation and dissolution of new unions established since the 2nd March, 1877, and do not, therefore, require any further interpolation

unless difficulties should occur in the practical operation.

Several questions have, however, been raised as to the application of different provisions of the Amended Act and of the Act of 1874, to unions which were in existence on the 2nd March, 1877, and these are: (1) as to any alteration of the then existing boundaries of any Union School section; (2), as to mode of dissolving; (3), as to equalizing assessments.

1. As to alterations.—An alteration involves the withdrawal from, or the addition to, one of the sections, constituting the union of any area, and this can only be legally effected by the by-law of the council of the particular municipality in which the section of the union sought to be added to or diminished is situate; but while it is discretionary with such municipal council to pass a by-law, it can only legally do so upon the petition of the majority of all the freeholders and householders of the whole section of the municipality comprised in the union. Any by-law must be in conformity with what is petitioned for by this majority, and the municipal council has no authority to do more than to pass a by-law in accordance with the petition or in their discretion to refuse to do so. The sections of the other municipalities which also constitute the union, may, through their respective municipal councils, agree or disagree with the terms upon which the municipal council of the section proposed to be altered offers to enter into with the other sections. In case of disagreement in this respect, the reference provided for by sub-section 3 of section 11 of the Act of 1877 must be resorted to.

2. As to dissolutions.—A dissolution can be only legally effected by the like proceedings, as in case of an alteration. The petition of the majority of the freeholders and householders of any one of the sections comprising the union must be for a dissolution, and the by-law of the council of the municipality in which the section is situate is requisite to give effect to the petition. The terms upon which the dissolution is to take place, in case the sections represented by their respective municipality. pal councils disagree, are to be settled by the reference provided by the Act; [but while in the case of "an alteration," it may take effect at any time prescribed by the by-law in that behalf, the by-law in case of "a dissolution" must be passed three months before the first day of January, when the dissolution is to take effect.

3. As to equalization of assessments.—This is one of the few provi-

sions of the old law which still applies to such unions as existed on the 2nd March, 1877; as to such, sec. 53 of the Act of 1874, is in force, but as to unions to be formed since the second of March last, the proportion in which the part in each municipality is to be liable to contribute for School expenditure is to be determined under the provisions of the 11th section of the Act of 1877.

5. In cases of any alteration or other changes in School sections situate within the same township, the township council has full power to deal with these under the 48th section of the Act of 1874, as amended by the 7th section of the Act of 1877. These sections will be found consolidated in the Revised Statutes, as sections 81 to 86 inclusive, and clearly express the legal requisites for any proceeding of this nature.

(Signed) ADAM CROOKS, Minister of Education.

Educational Department (Ontario), Toronto, 7th November, 1877.

#### HIGH SCHOOL PROGRAMME AND INTERMEDIATE EXAM-INATION.

An Order-in-Council was issued on the 13th of November, ratifying certain changes in the High School programme, and the regulations under which the intermediate examination is held. The following are the changes in the programme:

Lower School.—French—The Accidence and Principal Rules of Syntax; Exercises; De Fivas's Introductory French Reader; Voltaire, Chas. XII., Book VI.\*; or Souvestre, Un Philosophe sous les toits; Re-trans-

lation of easy passages into French; Rudiments of Conversation.

Latin; The Accidence and the Principal Rules of Syntax and Prosody; Exercises; Cesar, Bellum Britannieum, and Virgil, Eneid, Book II. vv. 1—317; Learning by heart selected portions of Virgil; Re-translation

into Latin of easy passages from Cesar.

English: Critical Reading of Goldsmith's "Deserted Village" and Scott's "Lady of the Lake," for the last half of 1877. Candidates will be expected to show that they have read the whole of the latter poem, but the questions will be based mainly on Cantos III. and IV. For the former half of 1878, Goldsmith's "Traveller" and "Deserted Village have been prescribed.

UPPER SCHOOL.—English Language—Critical Reading of portions of the Works of Authors of the Sixteenth and Seventeenth Centuries, to be prescribed from time to time by the Education Department. For the latter half of 1877, and the former half of 1878, Shakespeare's Tragedy of Macbeth and ten of Bacon's Essays † have been prescribed. Composition, Reading and Elecution; the subject generally, as far as required for Senior Matriculation with Honours in the University of Toronto.

Modern Languages.—(a) French; Grammar and Exercises; Souvestre, Un philosophe sous les toits; Corneille, Horace; Translation from English into French; Conversation; the other subjects required for Se-

nior Matriculation with Honours.

(b) German; Grammar and Exercises; Musaens, Stumme Liebe; Schiller; Die Burgschaft, Der Tancher, and Dor Noffe als Onkel; Translation from English into German; Conversation; the other subjects required for Senior Matriculation with Honours.

Ancient Languages.—(a) Latin; Grammar; Cicero, Pro Archia; Ovid, Fasti, Book I., exclusive of vv. 300-440; Horace, Odes, Book III.; Livy, Book IV., chaps 1-16; translation from English into Latin Prose, etc., as far as is required for Senior Matriculation with Honours.

(b) Greek; Grammar; Xenophon, Anabasis, Book I.; Homer, Iliad, Book VI., Odyssey, Book XII.; Demosthenes, Philippics I. and II.; the other subjects required for Senior Matriculation with Honours.

History and Geography.—(a) History; English, the special study of the Tudor, Stuart and Brunswick Periods; Roman, from the commencement of the Second Punic War to the death of Augustus; Grecian, from the Persian to the Peloponnesian War, both inclusive.

THE INTERMEDIATE.—At the Intermediate Examination papers will be set in English Grammar and Etymology, English Literature, Dictation, Composition, Arithmetic, Enclid, Algebra, Roman, English and Canadian History, Geography, Latin, French, German, Chemistry, Natural Philosophy and Book-keeping. No candidate must take more than one of the four optional departments referred to in IV. (2) at this examination. All candidates, whether male or female, must take Euclid.

Candidates who select Latin as their optional subject, and who may be reading Horaco, Cicero, Livy, Ovid, or some book of Casar or Virgil other than the one prescribed, with a view to a University or professional examination, need not be examined in Casar a. the Intermediate Examination, provided they satisfy the visit ng Inspector that their knowledge of Latin is sufficient to justify him in accepting their work in that subject as equivalent thereto. All classical candidates will, however, be

examined in Virgil, Latin Grammar, and translation into Latin Special stress will be laid on accuracy in Latin Grammar and Composition. No exemption granted during the previous half year will be valid unless

Although Music and Drawing will form no part of the Intermediate Examination in 1877, yet the schools in which these subjects are proporly taught will receive credit therefor in the report on results of inspection referred to in III. (c) and (d) of the above.

The subjects will be grouped in the following manner:

- [a] Arithmetic, Algebra and Euclid.
- [b] English Grammar, Composition and Dictation.
- (c) History, Geography and English Literature.
- [d] Natural Philosophy, Chemistry and Book-keeping; or Latin; or French; or German.

And candidates who obtain 40 per cent. of the total in each group, and not less than 20 per cent. in each subject, shall be considered as having passed the examination.

All the answers in each subject are to be read and the values assigned. While the passing is to be determined by these tests, the questions in each subject are to be framed by the Examiners, not with reference to any high standard for competitive examinations, but solely to show whether the pupil is qualified or not for the Upper School, having regard to his proficiency or deficiency in answering questions framed for this purpose in each test subject.

The Intermediate Examinations will be held in each year at the time fixed by the Department.

The Public School Inspectors and the persons appointed by them, with the approval of the Minister, or Deputy, to act as their substitutes in presiding at the Intermediate Examinations at High Schools, or in presiding in the additional rooms, shall be entitled to a fee of \$3 per day, and actual travelling expenses, to be paid by the High School Board. None may act as a substitute unless approved by the Minister, or Deput:

In schools where separate rooms are occupied at the examination, the Examiner, in his report to the Department, will in icate the candidates who were placed in the several rooms respectively.

Should any candidate be detected in copying from another, or allowing another to copy from him, or taking into the room any books, notes. or anything from which he might derive assistance in the examination. or in talking or whispering, it shall be the duty of the presiding Examiner, if he obtain clear evidence of the fact at the time of the occurrence, to cause such candidate at once to leave the room; neither shall such candidate be allowed to enter during the remaining part of the examination, and his name shall be struck off the list. If, however, the evidence of such a case be not clear at the time, or be obtained after the conclusion of the examination, the Examiner shall report the case to the Depart-

PROGRAMME OF EXAMINATIONS.—The examinations shall begin on Monday, Dec. 17th, 1877, and shall be conducted as follows:

Monday, December 17.

1.30 to 1.45 P.M.—Reading the Regulations.

1.45 to 4 P.M.—1. English Literature.

Tuesday, December 18.

A.M. to 12 M.-2. English Grammar and Etymology.

1.30 to 3.30 P.M.—3. Geography. 3.35 to 4.05 P.M.—4. Dictation.

Wednesday, December 19.

9 A.M. to 12 M.—5. Arithmetic. 1.30 to 4 P.M.—6. History.

Thursday, December 20.

9 to 11.30 A.M.—7. Algebra.
1.30 to 4 P.M.—8. Natural Philosophy.
1.30 to 4.30 P.M.—9. Latin, or 10. French, or 11. German.

Friday, December 21.

9 to 11.30 A.M.—12. Euclid. 11.35 A.M. to 12.50 P.M.—13. English Composition.

to 3 P.M.-14. Chemistry.

3.05 to 4.20 P.M .-- 15. Book-keeping.

N.B.—In the above-mentioned subjects the papers numbered 1, 2, 3, 4, 5, 6, 7, 8, 12, 13, 14, 15 will be identical with those for candidates for Second Class Certificates, and the examinations will be at the same

Successful candidates will be regarded as having passed the non-proessional examination prescribed for candidates for Second Class Certificates, and will be entitled to the standing of Second Class Grade B, but the standard required for Second Class Certificates Grade A will be higher than for the Intermediate.

CERTIFICATES.—Certificates will be granted by the Minister of Education or Deputy Minister, to all candidates who succeed in passing the Intermediate Examinations, according to the report of Central Committee, as approved by the Department.

<sup>\*</sup> To be discontinued after 1877.

<sup>†(</sup>ii) Of Death, (xii. Of Boldness, (xiv) Of Nobility, (xxi) Of Dela; 8, (xxvii) Of Friendship, (xxxi) Of Suspicion, (xxxviii) Of Nature in Men. (xlii) Of Youth and Age, (lii) Of Ceremonies and Bespects, (lviii) Of the Vicissitudes of Things.

### MEMORANDUM BY THE MINISTER OF EDUCATION.

The subject of the power of Township Councils organized in Algoria and other judicial districts to act in School matters was raised in the communication of Inspector Little to this Department in August last. have now given the matter consideration, and do not think there is any defect in the law as to such power. The statute which authorizes the organization of townships in the District of Algoma is now to be found

as C., 163 of the Revised Statutes.

This provides for the election of the Township Council, and section 11 (sec. 18 of 35 V., c. 37) provides that "the said Council shall have power to pass by laws for such purposes as are provided for regarding townships under the Municipal Act." There is nothing in the Municipal Act which expressly confers powers as to School matters upon ordinary Township Councils; but, so far as townships in the Algonia District are concerned, these are as much organized townships, and their Councils as fully constituted as in the case of townships in any of the counties of the Province. It is the Public School Act from whence the Township Councils derive their powers. It is that Act which confers on Township Councils certain powers and prescribes their duties; and it will be seen that that Act discriminates as to Schools in organized and unorganized townships only. Assuming that a township is organized anywhere in Ontario, or in other words possesses a Township Council, then it is comprehended in the general language of the Revised Statute, sec. 78 (sec. 46 of 37 V., cap. 28)—"It shall be the duty of every Township Council" This is further manifest by reference to sections 26 to 35 Revised Statutes (Act of 1874, secs. 39 to 41; Act of 1877, sec. 16), which makes special provisions for School Corporations in unorganized townships, to which, by reason of their very unorganization, the general provisions would be inapplicable. There is, therefore, no good legal ground for any doubt in this point.

(Signed) ADAM CROOKS, Minister of Education.

Education Department, November 3, 1877.

COPY OF AN ORDER IN COUNCIL APPROVED BY HIS HONOR THE LIEUTENANT-GOVERNOR, THE 1378 DAY OF NOVEM-BER A.D., 1877.

Upon consideration of the report of the Honorable the Minister of Education, dated the 20th day of October, 1877, the Committee of Councal advise that the printing of all "Examination Papers" be undertaken directly by the Education Department, and that a printing press and requisite material be acquired and a printer engaged for this purpose temporarily.

Certified.

(Signed)

J. G. Scott, Clerk Executive Council.

The Honorable Minister of Education. 14th November, 1877.

COPY OF AN ORDER IN COUNCIL APPROVED BY HIS HONOR THE LIEUTENANT-GOVERNOR, THE 25TH DAY OF OCTOBER, A.D. 1877.

Upon consideration of the report of the Honorable the Minister of Education, dated the 17th day of October, 1877, the Committee of Council advice that the establishment of a County Model School for the County of Renfrew, in the village of Renfrew, be sanctioned. Certified.

J. LONSDALE CAPREOL, (Signed) Ass't Clerk Executive Council, Ont.

The Honorable the Minister of Education. October 27, 1877.

### SUPERANNUATED TEACHERS.

The Deputy reports to the Minister of Education that he has carefully examined the accompanying applications of Public School Teachers, and, as they have complied with the law and regulations on the subject, respectfully recommends the applicants' superannuation, viz. :-

Name.	Religion.	Country of Birth.	Residence.	AGE.	SERVICE IN ONT.
	ļ				
William Miller.	Presbyterian.	Ireland	Morrisburgh	79	17 years.

Under 60 years of age, and disabled from teaching.

William Emslie Presbyterian Scotland ... | Clifford ... | 44 17 years Alex. Goulet ... | Methodist ... | Ontario ... | Raleigh ... | 46 | 20 | do John Ireland ... | Presbyterian ... | Ireland ... | Fergus ... | 57 | 26 | do Robert Russell ... | Do. ... | Melancthon ... | 41 | 17½ | do

The above report and recommendation were ratified by Order-in Council on the 24th of September.

The Order in Council superannuating the teachers in the following list, was passed on the 29th of October.

Nynr.	Religion.	of Birth.	Residence	Age	Service in Ontario.
Doyle, James Mills, Horatio. Scott, Thomas Spong, Geo. Nash	R Catholic. Methodist. Presbyterian Episcopal	Ireland, Scotland, England	Tp. Brudonell. " Morsea. " Howick. " Arthur.	72 64 79 64	22 years. 23 12 " 23]

UNDER 60 YEARS OF AGE, AND DISABLED FROM TEACHING.

Gamby, Hugh Preston, Robert Quinton, Andrew Presbyterian England. Episcopal. Ireland. Episcopal. Ireland. Tp. Ashfield
"Rawdon.
"Finch. Episcopal.

#### REVIEWS.

An Elementary Treatise on Mechanics. By J. B. Cherriman, M.A., Superintendent of Insurance for the Dominion of Canada; Late Fellow of St. John's College, Cambridge; and formerly Professor of Natural Philosophy in University College, Toronto. Third Edition, with an Appendix consisting of "A Collection of Problems" by Alfred Baker, B.A., Mathematical Tutor, University College, Toronto. Toronto: Copp, Clark & Co. (8vo. pp. 180.)

This is a new edition of Mr. Cherriman's book on Elementary Mechanics. There is apparently no material change in the theoretical treatment of the subject; we still find the three cases of the lever and the three systems of pulleys; but this portion of the work is so well known among the Mathematical Masters in our High Schools that nothing need be said concerning it. The peculiar feature of this edition is an Appendix by Mr. A. Baker, Mathematical Tutor, University College, Toronto. This appendix, which is in itself nearly equal in size to the original work, consists chiefly of an excellent collection of questions and exercises on Statics and Dynamics. Many of the problems have been selected from papers set in University College and Toronto University, so the sudent working them may feel confident he is going over the exact ground of his University course, and actually covering more than the ground fhr a First Class Certificate. At the end, under the modest title of Answers, is given a set of most judicious hints on the solutions of the problems. This is really a very valuable part of the book, illustrating as it does the methods of applying the principles developed in the text. The work as originally issued was intended chiefly for use in University College, but we believe the Publishers have done wisely and well in adding the Appendix, which makes the book suitable for use in High Schools and for private study. A student will never become thorough in Mechanics merely by solving problems, but on the other hand, very few students ever obtain a mastery of the principles of the science until they have, time and again, applied them to particular cases. There only remains to again, applied them to particular cases. add that the book is well printed and well bound. J. C. G.

# Bendings and Recitations.

#### THE NEW SCHOOL BOARD.

When the great question of the establishment of Public School Boards was first introduced into England, it was most strenuously opposed, as educational and social reforms generally are, by the class who knew least about it. In a Yorkshire village, and in the principal street, (for it was the only one,) was situated an oldfashioned hostelry, where nightly all the Solomons of the district used to congregate. Here they held their political discussions, and showed how Gladstone had missed it, and clearly demonstrated that had their advice been acted upon, the world would very soon have become so regenerated that soldiers, sailors, parliaments, and policemen, would be things altogether useless, and we should soon be in such a position that pleasure would be the only business of life. On the night of which I write, the conversation turned upon the question of School Boards. Old Michael, who was a great authority on the question of education, owing to his daughter being a pupil teacher, was at once appealed to for his opinion.

"Well," he said, "awve net gooan soa deeply into this matter as some things, but aw should think 'at they'res gooin to be a mistak all th' way through. If aw understand it reight, iverybody's to be eddicated to sich a pitch, wol they'll be able to tak a sitiwation awther as a clark at a bank or a clark at a chapel, an' yo know as weel as aw do 'at ther's some fowks yo connot eddicate. My dowter has tell'd me monny a time, 'at ther's a deeal o' fowk 'at's born withaat heeads. Yo may think it saands strange but aw believe it's true-they've nobbut gotten lumps, an' they're like blind boils, yo may pooltice 'em as long as yo like, an' yo can niver draw 'em to a heead, an' that bein th' case aw think 'at Forster's made a mess on it. Nah if he'd ha takken my advice, he'd ha letten it alooan until sich times as fowk had getten sense enuff to understand things."

"But Michael," said Dick Dardust, "aw must say at aw dooant agree exactly wi' all tha says, an' aw connot help thinkin 'at thy dowter may happen be mistakken abaat fowks' heeads."

"Nah, if tha'rt gooin to set thisen up as a superior to my dowter, ov coorse aw've done at once. If somdy 'at's spent son monny year i' improvin ther intellectul an' morbid sensibleness is to be questioned bi a ninkumpoop like thee, its time to drop it."

"Aw dooant want to set misen up at all, Michael, all aw have to to say is 'at th' best on us may be mistakken, an' aw've heeard a chap say, an' yo may tak his word for it, for he comes fro' London, 'at this Schooil Board an' this technical eddication is baan to revoiutionize this country."

"God forbid! 'at we should iver have ony revolution i' this country as long as aw live," said Simon o' the' Lee, who had been listening, ' for ther's been blooid enuff shed latly.'

"Nay," said Michael, "tha doesn't understand what he means, he doesn't meean wars, he meaans 'at things will ha' turned raand. Nah my dowter tells me 'at th' world's in a revolution allus, that is, it keeps turnin round ov its own axle tree from morn to neet an' niver stops."

"A'a Michael,' said Simon, aw, think thy dowter is tryin to cram thi a bit; nah did ta iver catch th' world th' wrang side up, for aw niver did, an' aw've lived a year or two?"

"Well, awm not able to argify it, all aw know is 'at awm tell'd soa. But to come to th' old point, abaat this Schooil Board, and technical eddication? nah what do yo call technical eddication? Come aat wi' it some o' yo 'at reckon to be soa weel up.'

"Wel," said Dick, technical eddication is, aw supposas, summat 'at fowk leearns to do 'em soom gooid, an' if aw understand it reight, its summat 'at fowk legarns withaat ony books or owt o' that sooart."

"Nay," said Simon, "tha'rt wrang this time,-if aw understand it, technical eddication meeans leearnin th' names o' things sich as stars an' plants and' joints o' mait, an' iverything o' that socart; isn't that it, Michael?

"Aw dooant think it is, aw think Dick's nearer th' mark nor thee, for aw believe it's as he says, yo leearn it withaat ony books; in fact it's that socart o' eddication at fowk have 'at niver went to th' schooll, it's a socart o' common sense view o' things, -- a socart o' beein able to invent a way to do owt yo want ommost. Nah, aw'll gie yo a sample o' what aw call technical eddication. My gronfayther wor booath deeaf an' dumb an' laim; aw can just recollect him, tho he deed when aw wor a lad; he wor born deeaf an' dumb but he wornt born laim, that happened after he gate to be a man. Well, he niver went to th' schooil, but yet he wor one o' th' mooast genius chaps 'at iver yo met i' yor life; he'd a way ov his own o' dooin iverything. Aw've heeard mi fayther tell 'at when he wor a lad, ther wor a family o' five on 'em, an' they all

worked at th' factory, an' as lads will, they sometimes stopt aat soa lat ov a neet 'at they fan it varry hard wark to get up next mornin; an' they had to be up at five o'clock 'coss they'd a long way to walk. Nah, mi gronfayther could nawther get up nor call aat, but ha do yo think he managed to get 'em aat o' bed? He used to allus keep abaat a barro looad o' brokken bricks at his bedside, an' th' lads used to know as sooin as they felt 'em flyin abaat ther heeads 'at it wor time to be stirrin: one used to be enuff in a general way, but th' second wor sure to do it, even if he wor a hard sleeper. Nah that's what aw call technical eddication.

"Well, if throwin bricks at a chaps heead is technical eddication, aw dooant see 'at we want a Schooil Booard to taich us that," said Jabez, "for ther's lots 'at can manage that job withaat. Nah awl tell yo what technical eddication is as yo all seem fast amang it. Technical eddication is that sooart 'at taiches 'em a trade, an' aw think its a varry sensible thing, 'an aw for one am 'i favor ov a Schooil Booard, 'an if we dooant get one up, ther's sure to be some o' them local board chaps 'at will, an' aw consider this to be a varry gooid time to consider th' subject, 'an depend on it, them 'at start it will have th' best chonce o' being vocated in members; 'an as nooan on us but Michael has ony public office, aw beg to propooas 'at we form ussen into a quorum an' mak application for a Schooll Booard, an' aw beg also to propooas 'at Michael is th' cheerman.

This last proposition was a very good hit, for he knew that if Michael had the chance to be chairman, that he would not care a farthing what the object might be,—and there are a good many like Michael in that particular.

Michael hum'd and ha'd a few times, but at last he overcame his scruples and said, "he didn't know but what it wor for th' best. and if it wornt, if it had to be done they might as weel have th' honor o' doin it as onybody else."

They held a meeting, but it would be useless for me to attempt to make you understand their arguments, for I did not, and I am pretty well convinced that they were similarly situated; but at last it was unanimously resolved that they should have a School Board, and Simon called for pen, ink, and paper to draw up a petition, and he began in a very promising manner, and proceeded very well until he came to the word technical, then he scratched his head.

"What's to do nah?" said Michael.
"Ha do yo spell technical?" said Simon, "is there a K in it?" "Ho eea! ther must be a K in it," said Dick, "let's-see, neck, peck, reck, check, deck,—hi! ther must be a K in it, ther's a K i' all words o' that socart.

"Well, but aw believe ther isn't a K in it for all that," said Simon, "but whear's ther and old newspaper, we can happen find it mentioned thear."

"Nah," he said at last, "awve fun it."

"An' ther's a K in it ov coarse," sed Michael.

"As it happens tha'rt wrang for once," said Simon, "for ther isnt."

"Then ther owt to be, that's all, but aw dooant put ony faith i' newspapers, for when aw wor wed, they put in my name Michael withaat a K."

"Well, that wor reight enough, ther isnt a K i' Michael."

"Oh, isn't ther?-varry gooid,-aw know 'at my dowter spells it wi' a K an' she's a pupil taicher, soa she owt to know," said Michael.

"Thy dowter eh! tha wants to ram thy dowter daan ivery body's throit."

"Do aw?-Awd be locath to ram her daan thy throit onyway, the it wount be sich a varry hard job, for thi meath's emmost big

"If its ony bigger accordingly nor thy nooas awl be smoored; but the con tak th' School Booard and thi dowter too for what aw care, an' mich gooid may she do thi, for awl niver be under a cheerman 'at spells Michael wi' a K."
"No more wont I," said another. "Michael has non business

allus to be draggin in his dowter if she is a school mistress. My wife's sister-i'-law had a hant 'at wor a school mistress, an' aw docant keep bringin of hur up as a hexample.'

The two indignant ones who would not stay under a cheerman that spelled Michael wi' a K left, and the meeting broke up in disorder.

Note.—The resucr may change the dislect to Cornish, etc., if not familiar with Yorkshire.

# Beatty's System

# PRACTICAL PENMANSHIP.

### NEW CANADIAN SERIES

# HEAD-LINE COPY BOOKS,

Complete in 11 numbers, systematically graded and arranged to meet the requirements of our High and Public Schools. The series is divided into an ELEMENTARY and ADVANCED COURSE. The ELEMENTARY COURSE consists of THREE books and the ADVANCED of EIGHT.

### PRICE 10 CENTS EACH.

The Penmanship is of the Latest and most Approved Style, and such as is adopted by the best Professional Penmen.

BOOK No. 1. Teaches the contracted small letters, viz., i, u, v, x, n, m, c, e, w, o, a, r, s, concluding with words formed from them by combination. The letters are introduced synthetically and are faintly printed on the surface of every page to be traced with pen and ink by pupils in primary divisions.

BOOK No. 2. Introduces the extended letters, viz., p, t,d, b, h, k,l,f, y, j, g, z,q, and the first class of capitals. It also reviews the contracted or minimum letters given in Book I, and as every alternate line is printed in shadow for tracing, the pupil is gradually introduced to independent work.

BOOK No. 3-This book introduces a method of securing uniform and correct Spacing in each letter and word, by means of ruling upon every page of the book; also, a method of exhibiting the relative proportion of the let ters in every copy, and impressing the comparative length of the letters upon the minds of pupils, by means of a self-instructing engraved scale.

BOOK No. 4. Teaches Current Capitals constructively and affords Practice upon Words. The introduction and classification of Current Capitals forms a prominent feature of the practical character of these Copy Books.

BOOES 5 AND 6, for advanced pupils, embrace the whole subject within a small space.

BOOK No. 7 consists of short Sentences in a reduced hand suitable for Ladies' Hand. It is clear, open and attractive, and as sentences are printed twice on each page, it furnishes a drill in the formation of Capitals.

Book No. 8—Forms for boys—Notes, Drafts, Receipts, etc., in a plain business hand, giving a variety of current capitals.

BOOR No. 9.—Finishing book for girls—Notes of Invitation, Answers, Forms, etc., in a neat ladies' hand.

Books 10 AND 11.-Augular hand for girls.

# This System of Penmanship is now Introduced in nearly all the principal Schools of Ontario.

After carefully examining Beatty's System of Penmanship I consider it proferable to any I have before seen, and shall introduce it in our schools at once.

D. J. Googin, Head Master Model and Public Schools, Port Hope.

I have examined Beatty's System of Penmanship and consider it excellent. I shall recommend it in preference to any other with which I am acquainted Chas. Clarkson, B.A.,
Head Master Brockville Model School.

Beatty's System of Ponmanship is just what is required in our public schools, it will meet a want long felt by Canadian teachers. I have introduced the whole series in the Model and Public schools of this place.

W. F. Spracoff,
W. F. Spracoff,

H. M. Co. Model and Public Schools, Town of Cobourg.

After having carefully examined Beatty's Copy-books, I have no besitation in saying that they are the best I have jot seen. They are graded to suit both rural and town schools, and will supply a want which I have long seen to exist.

JOHN M. MORAN, Could Direct Design the County Design County De

P. S. I South Perth.

The books are printed on good paper, well bound, and the subject matter is properly graded and arranged. I shall be glad to hear of their general use in our Canadian Schools, and shall be pleased to introduce them into the Model School here. John McFaul, H. M. Model School, Lindsay.

Boatty's Head-Line Copy Books are thoroughly practical, and have been compiled by one who fully understands the necessities of our Canadian Schools. The attached Blotter is an ingenious arrangement, and supplies a long felt want. I shall introduce them into the Model School Line at once.

A. C. OSBORNE, H. M. Co. Model School, Napanee.

I have no hesitation in saying that Boatty's Head Line Copy-books are the best I have ever seen. I shall bring them into use in our schools as soon as possible.

W. B. HARVET, Prin. Co. Model School, Barrie.

I have no hesitancy in recommending Beatty's series of Copy-books in proference to any other I have seen

P. A. BLACE,
Book keeping. Writing and Drawiz g Master,
High and Public Schools, Owen Sound.

I consider your new series of Copy-books much superior to any before introduced into our schools. I shall be pleased to hear of their general use throughout the schools of Canada. A. M. RAE, H. M. Model School, Port Perry.

Believing Mr. Beatty's System of Penmansh to be the best I have seen, I shall take great pleasure in introducing it into ...e schools under my charge at the earliest possible opportunity.

GEO. Mois, Principal St. Marys Public Schools.

I have examined Bentty's System of Penmanship, and think it is in advance of anything I have before seen. Will have it introduced in our schools as soon as possible.

S. HETMERCOTT, H. M. P. S. Mitchell.

I have carefully examined Beatty's System of Penmanship and am of opinion that it is in advance of any other system that I have heretofore examined. I would be glad to see it occupy a place in our schools, and shall earnestly recommend its introduction.

W. G. Kidd, Inspector P. S., Kingston.

Boatty's System of Penmanship is an excellent method of teaching that subject. I would recommend its trial in our schools.

Thos. Hilliard,
P. S. I. Town of Waterloo.

The author has very wisely adopted and combined with his own ideas, all the good features in the best American Copy-books. The result is that the series now before us contains a combination of the best points in the most popular of our series, and is better adapted to all grades of pupils than any of its predecessors. The books are so graded and arranged, and the instructions on the cover so clear and full, that more real practical penmanship may be learned from them in three months than from the ordinary copybooks in a whole year.—Penman's Art Journal, New York.

The series of Copy-books published by A. Miller and Co. supply a want long fet by the teachers of this Province. It is our intention to introduce them here at once.

A. Gondon,
Prin. Prince Edward Model School.

The Copies are perfect models, systematically graded, the paper of superior quality, and the instructions on the covers plain and practical, leaving not ing more to be desired. We are introducing them into the High and Public Schools of this city, and I hope soon to hear of their general adoption throughout the country, which will have the effect of establishing what is much needed in Canada—2 uniform system of penmanship.

GEO. A. SWAYZE, Teacher of Penmanship, High and Public Schools. Belleville.

I consider Boatty's System of Practical Penmanship second to no other I have seen. I have introduced in into the Public Schools of Collingwood. A. G. HERRICK, H. M. P. S. Collingwood.

A man never gets so much good out of a book as when he possesses it.—Sir Arthur Helps.

#### SELECT LIST

# POPULAR NEW BOOKS,

# Published by BELFORD BROTHERS,

60 YORK STREET, TORONTO.

FOR SALE BY ALL BOOKSELLERS.

Any book in this list sent post paid on receipt of price.

#### OCTOBER, 1877.

Nicholas Minturn, a Study in a Story. By J. G. Holland, author of "Arthur Bonni-castle," "Sevencaks," etc. 1 vol. 8vo., with full-page illustrations. Cloth, \$1.25; Paper, 75 cents.

The clucidation of the pauper and tramp question forms, in fact, a leading theme of the book; for, like Dr. Holland's other stories, this is "a novel with a purpose." A large part of the interest lies in the relations of Nicholas, the hero, to the "dead beats" of a great city and his extraordinary experiments in their reclamation.

But there are one or two love stories involved, and Dr. Holland has given his read as some characters evidently studied from life, and not from books, namely, Mr. Benson, who is the tragic figure on the scene, Mrs. Ceates, and Capt. Hanks, that hardworking and slow-saving man. "—Elfords.

"In short this is a book which will be equally welcome to the political economist who cares nothing about stories, and the hungriest novel reader who cares nothing about political economy. We can give it no higher praise."—The New Dominion.

Rainsford's Sarmons and Rible Read-

Rainsford's Sermons and Bible Readings. Cloth, with fine Cabinet Photograph, 75 cents; Paper Cover, 30 cents.

No modern preacher in Canada has captivated the affections and conquered the hearts of his hearers so completely as Mr. Rainsford. Thousands daily listened to his simple yet elequent words in St. James' Cathedral, Toronto. They will be pleased to have his Sermons and Bible Readings in a complete form; while the many thousands who only know him by reputation, will be delighted to peruse his discourses. The cabinet photographs are alone worth the price of the book.

Benner's Prophecies of Future Ups and Downs in Prices. What years to make money on pig-iron, hogs, corn, and provisions. By Samuel Benner, (an Ohio Farme). Cloth, 75 cents; Paper Cover, 50 cents.

Cacil Castlemaine's Gage. By Ouida, author of "Under Two Flags," "Ariadne," etc. Cloth, \$1.00; Paper, 75 cents.

"Cecil Castlemaine's Gage' is but one of fourteen short stories brought together in one volume. They are all as crisp as new-formed ice, and sparkling as champagne. . . Perhaps of all the stories 'The General's Match-Making' is the best. It is full of fun, intrigue, blooded horses, conching scenes on the road, and charming bits of description "—The Toronto Mall.

In a Winter City. By Ouida, author of "Ariadne," "Strathmore," "Under Two Flags," etc. Cloth, \$1.00; Paper, 75 cents.

"Keen poetic insight, an intense love of nature, a deep admiration of the beautiful in form and color, are the gifts of Ouida."—Morning Post.

Their Wedding Journey. By W. D. Howells. Cloth, 75 cents; Boards, 50 cents.

"... In 'Thoir Wodding Journey' he displays genius of a high order. The story is well told, the incidents on the way are delicately and neatly sketched, and the plan of the story is elever and piquant. The scene is mainly laid in our own

Dominion, and Montreal and Quebec are the centres of interest. Every one will like to read 'Their Wedding Journoy,' and Belford Bros. present it in an attractive shape."—St. John's Watchman.

One Summer. By Blanche Willis Howard. 16mo., Cloth, red edges, 50 ccnts; Boards, 80 cents.

"A charmingly amusing, interesting and exciting romance."—Barrie Advance.

Chance Acquaintance. By W. D. Howells. Cloth, 76 cents; Boards, 50 cents.

"The descriptions of scenery are all fresh and art! itic, and the observations of manners and people are curious and valuable."—Goderich Star.

Iy Little Love. By Marion Harland, author of "Alone," "Nemesis," etc. Cloth, \$1.00; Paper Cover, 75 cents.

"The authoress of this pleasing novel is so well known, that anything from her pen will be read with avidity. Her now story is well written, the plot is simple, yet perfect, and the manner in which it has been brought out by Messrs. Belford Bros., is equal to the high reputation of the firm."—Ottawa Citizen.

Dyspepsia and its Kindred Diseases-By W. W. Hall, M.D., author of "Health by Good Living," "How to Live Long," "Health at Home," etc. Crown 8vo. Cloth,

This is the last work of the late Dr Hall, and it is admitted, by professional judges, to be a very valuable book. It gives, in concise form, an account of how to cure, prevent and treat eneself, not alone for dyspersia, but a great many other diseases, which the Doctor claims arises from the same cause as this disease. This work should be in every house in the country. in the country.

Ocean to Ocean. By Rev. George M. Grant. New and revised edition, with map and numerous illustrations. Crown 8vo., Cloth, \$1.50.

"This is, by the universal acknowledgement of press and public, the most complete work on the Great Lone Land' of British North America, which has ever been published. The present edition has been thoroughly revised and cerrected by the author, and a new chapter has been added, which brings down to the latest nument the official and other information bearing upon the vast territory so graphically and fully treated of. The illustrations have all been newly executed. It is a book of rare value."

The Bastonnais: A Tale of the American Invasion of Canada in 1775-76. By John Lesperance. Crown 8vo. Cloth \$1.00; Paper Covers, 75 cents.

This is a story whose main events centre around one of the most thrilling and interesting periods of Canadian history. It is written by the editor of the Canadian Hinstrated News, and as it passed through the pages of that journal from week to week, attracted a great deal of interest. It is an admirable contribution to our yet nascent Canadian literature.

The Prince of Wales in India. By F. Drew Gay. Profusely illustrated. Crown 8vo. Cloth, gold and black, \$1.50; Paper, 75 cents.

"A lasting memorial of an interesting journey."— Daily Telegraph.
"Will no doubt find an extensive public, and be read by them with interest."—Now informist.

Home Cook Book. By the Ladies of Toronto. Cr. 8vo. Cloth, 1.50; Board Covers, \$1.

The receipts contained in this book are supplied by the ladies, and none have been given by them except such as have stood the test of experience in their own households. Unquestionably it is one of he most valuable Cook Books ever published.

Getting on in the World. By Prof. William Mathews, LLD. Crown 8vo. Cloth, \$1.00; Paper, 75 cents; Half Calf, \$2.00.

Worth any day ten times its cost for the tenth part it contains. A book full of sensible sense and sounder soundness we have not seen for a long day."

—S. Times, Philadelphia.

"A book in which there is abundant matter of great interest."—From Rev. Noah Porter, D.D., LL.D., President of Yale College.

"It will give heart and hope to many a struggling young man."—Rev. M. B. Anderson, D.D., LL.D., President of Rochester University, N.Y.

"What wealth of illustration he brings in from English poets, dramatists, divines, lawyers, and jurists!"—Edwin P. Whipple, the distinguished critic.

Hours with Men and Books. By Prof. William Mathews, LL.D., anther of "Getting on in the World." One handsome volume, Cloth, \$1.00; Paper Covers, 75 cents; Half Calf, \$2.00.

"Professor Mathews has achieved remarkable success as an author."—Boston Transcript.
"His style is brilliant and captivating, and his myriads of illustrative anecdotes are invariably happily chosen and judiciously used."—Liverpool Albion, England.

How to Study. By the Rev. John Schulte, D.D., Ph.D., author of "Roman Catholicism." Cloth, 50 cents.

Cloth, 50 cents.

"As a practical treatise for students, I know of none, of the same compass, more valuable than this. I have carefully read it over, and would or daily recommend it to all students—beginners in our High Schools and Colleges. There is no subject, in regard to vich students are so entirely ignorant and often misinformed as that of how best to master particular branches of learning. They have no correct idea of how to study, and hence precious time is wasted, and desultery habits are formed which are never got rid of. As the result, inaccuracy, uncertainty and ropotition are characteristic of the student's performance; and trully the 'much' useless' study' caused by such a system is indeed a 'weariness of the fiesh.' Dr. Schulte's treatise is well adapted to correct these bad habits, or to prevent their formation where the student is a beginner. The entire work is eminently practical, but esp cially chapters vii-ix, and to them I would particularly direct the attention of the young student."—J. George Hodgins, Deputy Minister of Education.

For sale by all Booksellers, or mailed post paid, on receipt of price, by

# GRAMMAR EXERCISE BLANKS For Teaching Analysis and Parsing.

BY H. W. DAVIES, D.D., PRINCIPAL NORMAL SCHOOL, TORONTO.

# IN FOUR

Nos. 1 and 2, " 3 and 4, 10 cents each.

From Rev. George Bell, B.A., LL.D., Inspector of Public Schools, Walker

"The Exercise Books are well got up, and perfectly adapted to the object intended, namely, teaching a correct analysis of the English Language; and they will greatly facilitate the acquisition of Grammatical knowledge. The system of correcting, for which directions are given, is an admirable one."

#### From J. M. PLATT, M.D., I P.S., Picton.

"I shall speedily introduce this work into schools under my superintendence. Next to "Hughes' Composition" it is the handlest, neatest and most valuable "assistant" that can be procured for the same money."

From J. HARE, M A., Principal Ontario Ladies' College.

"Your Exercise Books for Grammatical Analysis are executively neat, cheap and convenient. Wherever introduced they cannot fail to give satisfaction. Intend to use the entire series in our college classes."

From J. S. ATKINSON, M.D., Head Master Prescott County Model School. " I shall take pleasure in introducing them into our schools."

From C. W. HARRISON, B.A., H. M. Dunville High School. "We are using I vies Exercise Books for Grammatical Analysis," and find them to be a valuable aid.

From A. Morton, Principal Brampton Model School.

"I have now had a short trial of your 'Grammatical Forms,'and have much pleasure in testifying to the benefits derived from their use, tending to fester neatness, promoting preparation, as well as knowledge of "Analysis." The teachers of the other departments of our Public Schools express equally favorable countons able opinions

From H. M. HICKS, B.A., H. M. High School, Trenton.

"I have examined Dr. Davies' Exercise Books for Grammatical Analysis.
The paper is of excellent quality. I am specially pleased with Nos. 1 and 4.

"I consider them a means of saving time and labor, and shall introduce them into my School."

From George Wallace, B.A., T.C.D., High School, Weston. "The whole plan is eminently suited for young scholars—an excellent exercise book that was much required."

From A. SINCLAIR, M.A., Head Master, Windsor High School.

"The Exercise Books for Grammatical Analysis are admirable for their simplicity and for their completeness."

From J. S. Carson, Inspector, West Middlesox.

"Should meet a warm reception from all ambitious schools."

From J. Krno, M.A., LL.D., Prin. Caledonia H. S.
GENTLEMEN,—I have examined your Grammar Exercise Blanks, and believe they will greatly facilitate the work of the teacher, as well as economize much valuable time.

From John E. BRYANT, B.A., Clinton.

"The Grammar Analysis Blanks are excellently prepared, and I have no doubt they could be very effectively used by teachers of Grammar."

From Inwin Stuart, B.A., Head Master High School, Morrisburgh.
"The Analysis Books cannot fail to be of great service in promoting neatness, accuracy and systematic workin that subject."

From GEO. W. JOHNSON, Head Master Model School, Hamilton. "The Exercise Books for Grammatical Analysis are admirably calculated to make a pleasant school exercise still more pleasing and profitable."

From James Smith, M.A., Head Master High School, Cornwall.

"They are admirably suited to supply a long-felt want, and will save teachers a large amount of trouble with beginners. I have already ordered their introduction. Other teachers to whom I have shown thom are unstinted in their praises."

From D. LicDiarmid, M.D., I. P. S., Glengarry.

"I consider the introduction of your really excellent series of Blank Exercise Books for Grammatical Analysis will fill a want felt by teachers, as often grammatical exercises have been handed in, written in a slovenly manner, on slips of paper of various sizes. When these are preserved in books, liable to be inspected by school visitors, naatness and g.eater accuracy in the work will be the result."

From J. Machillan, B.A., Ottawa Collegiate Institute.
"I have carefully examined your series of Exercise Books for Grammatical Analyses, and find them in every way suited to aid pupils in acquiring a thorough knowledge of that important subject. They should be in the hands of all such pupils of our Public Schools that are studying English Grammer."

From C. A. Barnes, Inspector of Public Schools, Division No. 1, Lambton "I consider them well adapted for use in our public schools. They wil supply a want which has been long felt by teachers."

From W. C. Middleton, M.A., Head Master Amprior High School.
"The introduction of your" Grammatical Analysis will tend to promote neatness and method in the properation of exercises."

## CANADIAN SPELLING BLANKS.

In Three Numbers.-No. 1, Words; No. 2, Words and Definitions; No. 3, Words, Definitions, and Sentences. Price, 10c. each.

From the Montreal Witness.

The plan is such as greatly to facilitate the work of the teacher, and at the same time to enable the pupil to mark the progress which he is

From Rov. Robt. Torrance, P. S. Inspector, Guelph.

\* • • • Such Exercise Books were needed; those are well adapted to serve the purpose for which they have been prepared."

From J A. McLoughlin, P S. Inspector, District of Bedford, Quebec.
"I think trem admirably adapted to assist the teather in giving the pupil a thorough drill in Spelling, Defining, and Sontence-making."

From J. H. KNIGHT, P. S. Inspector, E. Victoria.

"I highly approve of the system adopted in these publications, and feel satisfied they will prove of great service in teaching a most important branch, viz. . Spelling.

From THOMAS PEARCE, P. S. Inspector, Co. Waterloo. "The Spelling and Composition Exercise Books published by Messes. Adam Miller & Co., Toronto, meet with my entire approval."

From J. W. Connor, B.A., Head Master High School, Berlin.
"I have examined the Spelling and Composition Blanks published by
Messrs. Adam Miller & Co., and highly approve of them, especially the latter."

From WM. SCOTT, B.A., Head Master Model School, Toronto.

"They cannot fail to supply a want long felt by many of our best teachers. Besides serving as Spelling Books, the use of Nos. 2 and 3 will train the pupil in an essential part of composition, and will enable him to test his knowledge of the meaning and use of each word he spells."

From W. Mackintosh, P. S. Inspector, North Hastings.

\* • • They supply a want that I have long felt.

ADAM MILLER & CO., Publishers, Toronto.

# TRINITY MEDICAL SCHOOL

Incorporated by Act of Parliament.

IN AFFILIATION WITH THE UNIVERSITY OF TRINITY COLLEGE, THE UNIVERSITY OF TORONTO, AND THE UNIVERSITY OF HALIFAX;

RECOGNIZED BY THE SEVERAL ROYAL COLLEGES OF PHYSICIANS AND SURGEONS IN GREAT BRITAIN.

Full information respecting Lectures, Fees, Gold and Silver Modals, Scholarships, Cortificates of Horor, Graduates, etc., will be given in the annual announcement, for which apply to

E. M. HODDER, Dean, or W. B. GEKIE, Secretary.

# CANADIAN DIARIES--1878.

### Over 90 Different Styles.

Unsurpassed by any made, and cheapest in the market. Published by

### BROWN BROTHERS,

Manufacturing and Importing Stationers, Wallet and Pocket Book Makers, Bookbinders &c.

66 AND 68 KING STREET EAST, TORONTO.

# M. T. HEMSWORTH,

## BOOKSELLER AND STATIONER. BRANTFORD.

School Books promptly mailed at Ten per cent. less than regular price.

Agent for the Canada School Journal.

### LAURIE'S KENSINGTON SERIES.

### SCHOOL MANAGEMENT AND TEACHING.

# THE PRINCIPLES AND PRACTICE OF COMMON SCHOOL EDUCATION. By the Rev. James Current, A.M., Principal of the Church of Scriband Training College, Edinburgh Pp. 504,

"The work is complete and exhaustive. No aspect of the subject is overlooked; every difficulty that the teacher may encounter is auticipated. From the first page to the last, the book is a monument of method—of careful, intelligent, conscientious work."

—Museum.

By the same Author,

# THE PRINCIPLES AND PRACTICE OF EARLY AND INFANT SCHOOL EDUCATION. With an appendix of Hymns and Sourwith Appropriate Moledies. Pp. 310. Price 4s.

"One of the mest sensible, talented, and practical treatises that have yet issued from the English press on the subject of education—Rev. Canon Cronwell, Principal of St. Mary's Training College, Chelsea.

# THE PRACTICAL HANDBOOK OF SCHOOL MANAGEMENT AND TEACHING. For Teachers, Pupil-Teachers, and Students. By F. E. HARDING, St. John's National Schools, Clerk-onwe'l. Cloth, price 2s. Interleaved.

enwell. Cloth, price 2s. Interleaved.

"Nothing can be better than the various shrowd and practical hints here furnished on the best and easiest methods of toaching spelling, reading, arithmetic, grammar, geography, and history. The introduction discusses the internal organization and arrangement of the schoolroom, and supplies some valuable notes on punishment, drill, discipline, and the division of time by time-tables."—School Board

THOMAS LAURIE, EDINBURGH.

## ROLPH, SMITH & CO.,

Engravers, Lithographers, Die Sinkers and Embossers.

All kinds of Debentures engraved or lithographed. Estimates furnished.

Monograms, Crests, Arms, Book Plates, Visiting, Wedding and Invitation Cards a Specialty.

Soals and prosses. Arms and crests found and engraved or painted.

36 WELLINGTON ST. EAST, TORONTO

COUNTY OF SIMCOE.

#### TEACHERS! TEACHERS!

E. H. EDWARDS, "The Bookstore." Barrio, Aug., 1877.

# THE ONTARIO SCHOOL Desk & Folding

This pattern Desk and Sont has been adopted by

Normal & Model Schools of Toronto & Ottawa, and also by the City School Board as being the best for School purposes.

Sond for circular.

C. POTTER, Maker.

9 King St. E., Toronto.

SCHOOL FURNITURE of all kinds and every desirable quality manufac-

R. HAY & Co., TORONTO, ONT.

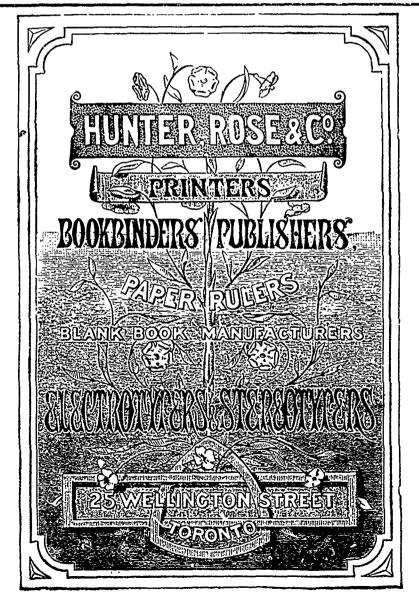
OFFICE AND SALESROOMS:

Nos. 19 and 21 King Street West.

Factory—Cor. Front and Bay Sts.

Trustees about to furnish Public, or County Model Schools will find it to their advantage to write for our illustrated descriptive catalogue, giving cuts and full information respecting the latest and most approved styles of school desks.





# Perry & Co's Illustrated List

STATIONERS



# SUNDRIES.



# ÇÇOKTHODACTYLIC PENHOLDER

The object of this Penholder is to make Children hold the Pen correctly; i. c., to keep their fingers in a correct position, so us to prevent them from forming a habit of holding the Pen in an improper manner, and consequently spoiling their hand for life. Its name is derived from Greek Terms, it licating the holding of the singers (dactyli) in a correct (orthos) position.

### ALUMINUM GOLD PENCILS.

= mine 1	DITEST.
No. 5002 Small Engine-turned 5003 Ditto, ditto, Sliding Point 5004 Engine-turned, Sliding, with Seal 5005 2122 Ditto, Pen and Pencil 4 either end 5008 Small, Engine-turned, with Ring. 5009 Small, Engine-turned, with Ring, Sliding, with Seal	4 20 9 60 8 00 4 20
OPEN PATINIZIEM SO CONDON	}
ZHOT	

	-				
5020	Spiral Motion,	Engine-tur.	ned, with Reserve	86	00
8020	Do.	do.,	2nd quality	3	60
8021	Do.	do.,	with Reservo		

5023 Small	1 Telescopic \$	6 CO

5024 Pen and Pencil, Engine-turned	\$12 00
5025 Cross Pattern, ditto	12 00
Also Spiral Motion with Ring, Pen and Pencil, Telescopic,	Tooth-
pick, Engine-turned do., Gold Pick, Pen, Pencil and Knife,	Secret
Motion, &c., &c.	

#### ELASTIC WEBBING BANDS



No.				Per G	ross.
3050 on	Cards of	2 dozen		🐉	2 40
3060	Ditto,	ditto,			4 80
3090	Ditto,	ditto,		'	7 20
3069	Ditto,	11 dozer	n.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	!	9 00
3070	Ditto,	11 do.		10	0 80

# PERRY & COS INSTANTANEOUS

# Sealing



# Wax.

City of London Red, pe	er lb.	\$1.05	Commercial Superfine Red,	or. It	. 45c.
" " Black	"	75	Fine Red	•	45c.
Vermillion	"	75	Parcel Wax, Red	4.6	30c.
Mercantile		60	" Brown	4.4	20c.

### PERRY & CO'S SUPERIOR PENS.

	Extra Hard for the Counting House.										
No.	305	Triangular Slit,	Med. or Fine		Per Gross,	450					
• •	306	Oval Šlit,	Ditto,			45c					
**	307	Circular Slit,	Ditto,		4.6	45c					
	بيهسد					_					



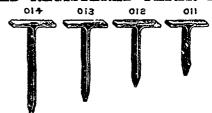
					~~~	-		
No.	21	General Purposo,	B.M	F., E.F.	 	.Per	Gross,	30c
46							"	30c
44	23	Ditto,					66	30c
"							44	30c
**	25	Small Ladies', E.	itra F	ine	 		44	30c
		Elastic, B., M., F					"	30o
					_			

	-	the second or the second of the second of the			
No	. JI	Mercantile, M., F		Per Gross,	45c
"	33	Ditto, B.M., F., E.F		**	45c
"	34	Ditto, M.F		44	45c
"	36	Classical, B., M., F., E.F		**	45c
		Spear-Pointed, Balance Sp			45c
"	330	Commercial, Super Extra	Fine	44	45c
		Broad, Medium, Fine, or I			45c
"	871	The Boz Pen, B., M., F.,	E.F	**	45c
		Ditto, ditto,			45c

#### CHEAP SERIES OF PENS.

ο.	4	Bright 3 Hole, Fine, or E. FinePer	Gross,	20c
•		Henry, Medium, Fine, or E. Fine	44	20c
•	6	Emanuel ditto,	46	20c
•	7	Bronze 3 Hole, ditto,	4.6	15c
ı	8	Shoulder, Medium, Fine, or E. Fine	44	20c
•	9	Broad Spear ditto,	44	183
•	181	Shell Fish Pen, M., F., E.F	64	20c
•	1001	Shoulder Pee B.M. F. E.F.	44	10c

### IMPROVED REGISTERED PAPER BINDERS.



The head or top of these Binders being arched, they are much stronger than, and superior to, any others.

In Gross or Half Gross Boxes, at Lowest Rates.

# WORKS-Lancaster St., and Graham Street, Birmingham.

OFFICES:

LONDON. 91 and 20 Holborn Viaduct, and 3 Cheapside, E.C. NEW YORK. William Street. BRUSSELS. Rue Du Musee. FRANKFORD, C./M. Crosso Sandcosse.

AMSTERDAM-Kalverstraat.

# NOW READY

# OUR NEW CATALOGUE OF Authorized Prize & Library Books

FOR PUBLIC AND HIGH SCHOOLS.

Books are selected from the latest and best publications of English and American Publishers. Catalogue sent an application.

Teachers should see our catalogue before ordering Prize Books.

ADAM MILLER & Co., Publishers.

# Richard

(LATE DOVELL & EASY,)

Manufactory established in London, 1815. Many years manufacturer to The British Government, The East India Company, and the Bank of England.

MANUFACTURER OF

## WRITING INKS & FLUIDS, SEALING WAX, MUCILAGE, WAFERS, &c., &c.

I beg to call attention to my removal to the new and commodious Factory, Nos. 117 and 119 R.R. Ave, Nowark, N.J., where I shall carry a complete stock of Writing luks, Fluids, &c., &c.
And I desire to call particular attention to my CARMINE INK, WRITING and COPYING FLUIDS, and MUCILAGE.

The CARMINE ontering into the manufacture of the Ink is the best and purest to be obtained, and produces a brilliant, uniform and permanent color.

The FLUIDS are equal to any made; they flow freely, dry rapidly, turn to a deep, permanent black, will not mold, and afford a good copy.

The MUCILAGE is made of pure GUM ARABIC, is extra thick, will not SOUR or MOULD, and is fully warranted.

My INES and FLUIDS have been in use many years, and have received the unqualified endorsement of business men and thers.

#### Extra Pure Mucilage.

4	oz.	Fluted I Pear Sh	Bottl	0,	Green	Glass,	Motal	Brush		er gro		
4	**	Octagon		"		44	**	44				) 66 ) 66
9	"	46.	••	46	Flint	. "	**	**	******************************	14	12	00
4	**	Pear	**	41	44	**	44	41		**	12	00
4	**	Fint	**	"		"	**	16	***************************************	**	19	00
8	**	Cone	**	"	**	**	**	"	*** **** ******************************	"	30	00
P	int	Bottle,								ner de	z. 4	00
Quart "								- 6	7	00		
On Draught										"	2	50
The second secon												

#### Dovell's New Patent Mucilage Fountain.

A very handsome and ornamental Muchago Cup for the desk, filled with our best declage, with extra file Cap and Brush.

No. 1, Patent Fountain Muchage per gro. \$24 00 No. 2, " 48 00

Post Office Address, Box 1,403, New York. RICHARD B. DOVELLS' SON.

Factory at Newark, New Jersey.

NON-CORROSIVE

# BLACK

This Ink has been in general use in Canada for the last ten years, and to day commands the largest sale of any Ink in the country.

At all Exhibitions where it has been shown it has received the Highest Awards.

For a Free Flowing, Non-Corrosive Ink this has no Superior.

Our Five Cent Bottle is the largest and Cheapest Bottle in the Market, being nearly twice as large as some bottles sold for the same money.

WE ALSO MANUFACTURE

# Carmine, Blue and Purple Inks.

FOR SALE by ALL DEALERS THROUGHOUT the DOMINION. Stationers or School's supplied by Gal. or Barrel.

Address all orders to

F. F. DALLEY & CO., Hamilton, Ont.

# STEPHENS'

# WRITING

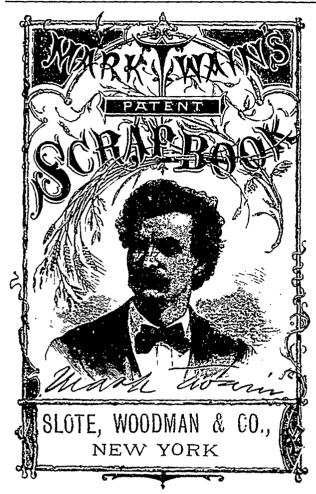
Have received the highest awards every time they have been exhibited. PARIS, 1807, HAVRE, 1808, AMSTERDAM, 1809, LYONS, 1872, VIENNA, 1873, PHILADELITHIA, 1876. They embrace the higher qualities of Writing and Copying Inks, and each possesses some special character adapted to the many different requirements of Correspondence and Counting House. These distinctive features, and their general excellence, make their preferable to, and more widely useful than, the ordinary class of manufactures.

STEPHENS' BLUE BLACK WRITING FLUID. STEPHENS' BLUE BLACK COPYING INK. STEPHENS' SCARLET INK FOR STEEL PENS.

The above, with every description of WRITING and COPYING INE, GUM MUCHAGE, to resist Fermentation in hot climates, QUILLS and SEALING WAX, are manufactured by

C. STEPHENS, CHEMIST,

Proprietor of Stephens' and of H. C. Stephens' Labels and Trade Marks, 171 Aldersgate Street, LONDON, E.C. Sold by all Booksollers and Stationers throughout the World.



# Mark Twain's

SELF-PASTING

the only convenient Scrap Book made.

Adapted to meet the wants of

The Author.

The Olergy.

The Editor. The Housewife.

The Lawyer.

The Merchant.

The Statesman,

The Speculator,

The Teacher.

and no home is complete without it.

DIFFICULTIES OF THE OLD STYLE SCRAP BOOK



MARK TWAIN'S DESCRIPTION OF HIS INVENTION:

HARTFORD, Menday Evening.

Madrone, Mendsy Evening.

My Draft Slote -1 have invented and patented a new Scap Book, not to make money out of it, but to economise the profamity of this country. You know that when the average man wants to put something in his serap book he cant find his paste-then he average, of if he finds it, it is died so hard that it is only fit to eat-then he average, if he laces mucliage it mingles with the ink, and next year he cant read his scrap—the result is harries and larvies of profamity. This can all be naved and devoted to other irritating things, where it will do more real and lasting rood, simply by substituting my self-pasting Scrap Book for the old fashfoned one.

If Mensar, Slote, Woodman & Co. wish to publish this Scrap Book of mine, I shall be willing. You see by the above paragraph that it is a sound moral work, and this will commend it to editors and elergy neen, and in fact to all right fiching people. If you want testimodate I wan get them and of the best soft and from the best people. One of the most refined and cultivated young laddes in Hartford daughter of a clergyman word me herself, with grateful tears standing in her eyes, that since she began using my Strap Book she has not sworn a single oath.

Truly yours,

MARK TWAIN.

Truly yours,

THE

# Childs' Scrap Book 출 趣

affords instruction and unusement for the children.

Always ready for use, and dispenses with the annoying preparations required in the use of all other Scrap Books.

Adam Miller & Co 🗟

AGENTS. TORONTO



ADVANTAGES OF THE NEW STYLE SCRAP BOOK

# DODD, MEAD & COMPANY'S

# JUVENILE

AUTUMN OF 1877.

The Morning Glory Stories.

By Jennie Harrison Chromo side. Printed on tinted paper. Over 100 illustrations.
Elmer's Morming Glory
A White Rese. Autumn Leaves. Little Buds Uncle Jerry's Blossom. Wayside Flower.

The Rose Library.

Chromo side, black and gold brck. On tinted paper. 30 illustrations. Clara and Amy. Rose and Kate. Across the Ocean. Summer Stories. Guy and Dolly.

Land and Son Library.

200 illustrations. Printed on tinted paper, etc.
The Frozen North. Ancient Egypt. The Ocean.
India. The Builders of the Sea.

The Dorotby Library.

By the author of The Amy Books and the Kitty Books. Chromo side of novel design, and beautifully printed on tinted paper. 30 illustrations.

Dorothy's Adventure.

Guy's Self-Will.

Vas book contains Full interest.

Kate Thornton's Motto. Guy's Self-Will. Kinte Lind Each book contains Eight pictures.

The Wayside Library.

On tinted paper, with nearly 100 illustrations. Chromo side. Howard and Nettie. Sam and Charlie. Elimer and Fred. A Brace of Christimas Uncle Jerry. [Stories.

Pioturo Pago Library.

A picture at every opening Chrome side. 165 illus. Tinted paper. Dick and Grace. The Fisher Boy. A Long Day.

Bobby Shafto. Jack Greene.

In producing these Juvenile Books, the publishers have endeavored to make them a decided advance on anything hitherto offered. The illustrations have been prepared with unusual care. The books are printed on a fine tinted paper, and bindings are of fresh and novel designs. They will be found the most elegant books in the market.

DODD, MEAD & COMP'Y, PUBLISHERS, NEW YORK 6-11

# CANADIAN RECITERS.

### THE PROHIBITION RECITER.

A COLLECTION OF

New Dialogues, Readings and Recitations

for Temperance organizations, social gatherings, and literary entertainments

BY JAMES HUGHES, Esq., Inspector Public Schools, Toronto.

PRICE. - 30c.

## THE CANADIAN SPEAKER and ELOCUTION-ARY READER.

A choice collection of Orations, Dialogues and Poetry, suitable for School and College Recitations, and Public and Soc al Readings, with introductory remarks on the Principles of Elecution.

BY EDWARD HARTLEY DEWART.

326 Pages, Cleth, 40e

### THE CANADIAN HUMOROUS RECITER.

A collection of the very best American, Scotch and Irish Readings, Recitations and Dialogues, for School Exhibitions, Social Gatherings, and Literary Entertainments.

BY JAMES HUGHES, Esq., Inspector Public Schools, Toronto.

PRICE 30 CENTS.

Publishers. Miller & Co.,

FOR SALE BY ALL BOOKSELLERS.