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# The Canada School Journal.

Vol. V.

TORONTO, OCTOBER, 1880.

No. 41.

## The Canada School Journal

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CANADA SCHOOL JOURNAL HAS RECEIVED

*An Honorable Mention at Paris Exhibition, 1878.*

*Recommended by the Minister of Education for Ontario.*

*Recommended by the Council of Public Instruction, Quebec.*

*Recommended by Chief Superintendent of Education, New Brunswick.*

*Recommended by Chief Superintendent of Education, Nova Scotia.*

*Recommended by Chief Superintendent of Education, British Columbia.*

*Recommended by Chief Superintendent of Education, Manitoba.*

The Publishers frequently receive letters from their friends complaining of the non-receipt of the JOURNAL. In explanation they would state, as subscriptions are necessarily payable in advance, the mailing clerks have instructions to discontinue the paper when a subscription expires. The clerks are, of course, unable to make any distinction in a list containing names from all parts of the United States and Canada.

### THE TEACHERS' SALARY QUESTION.

In a book of gossipy satire on American school "systems," by Gail Hamilton, she depicts in graphic language the chronic state of war between the ordinary school ratepayer and the teacher in the matter of salary. Of course very little of the details of this warfare reaches the public ear, but one can scarcely read in the newspapers the reports of trustee school meetings on this subject, without being impressed with this fact, that the majority of the trustees are under some invisible pressure which compels many of them to try either to reduce present salaries, or to employ what are called "cheap" teachers. Some Boards, too, even in large towns ambitious of the title and dignity of cities, systematically employ a number of third-class teachers, more or less, and even those with "extensions" and "permits," when they can be obtained, so as to avoid the necessity of giving good salaries.

It would be interesting, and doubtless curious, if not profitable, to analyze the causes which lead to such a state of things in towns and cities. In rural places such things do not excite the same wonder as in cities and towns, because and chiefly from the fact that salaries of all kinds are small in country places; and farmers generally look upon city and town salaries as ruinously extravagant. Dwellers in cities and towns, however, know full well from personal experience that the cost of living there justifies, if it does not make absolutely necessary, salaries much larger than would be required in a farming community. Why is it then that as in rural places, so in towns and villages especially, there is so frequently a chronic state of war, although not personally, between the ordinary ratepayer and the teacher on the question of salary? There are at least two reasons for this state of things, apart from the universal one of an outcry against taxation generally. The first and most general reason is that a teacher, as a person to be paid a salary, ought not to receive more than any other ordinary official or person in an inferior position—that is to

say, that all such salaries should in some way be "equalized." Gail Hamilton, in her spicy book on "Our [American] Common School System," quotes a specimen opinion on this subject which exhibits the average intelligence of such writers on the question of "equalizing wages." She says:

"If the question of salary were left to a vote of the people, the pedagogues, instead of getting more, would be obliged to be satisfied with less. To be plain, they are made of the very same material as laborers, and do not require any more to sustain life; nor are they a whit more deserving; nor should they get a cent more for their time and services. And as to female teachers, it would be hard to make most people believe that they should receive for their services and time so much more than their equally-deserving and hard-worked sisters, the tailoress and work-girls of the various work-shops and factories in our midst, who are obliged to work, and diligently too, from early morn till dewy eve, for about one-half what the school teachers get for only four or five hours."

Gail Hamilton devotes a chapter in her book to pouring vials of wrath on a writer of such ignorance—but, as she says, "ignorance votes, ignorance pays taxes, and ignorance has rights;" therefore, ignorance should be heard and answered.

The second, and probably most practical reason, why there is generally such a wrangle about teachers' salaries, is that few if any of the objectors really know what the teacher has to do—what tact, judgment, mental labour and responsibility are necessary, and are exercised by the conscientious teacher. They rarely if ever visit the school-house—have little personal knowledge of, or sympathy with, the teacher—seldom hear of him, or her, except by way of complaint on the part of idle, careless or vicious scholars, and have a vague sort of idea that the teacher has little or nothing of any importance to do, except to sit at his desk and either hear the alphabet or "twice one is two," or "John (or Tom, or Ned) is a common substantive." Whether this latter, rattled off, parrot-fashion, by the party so named, is, or is not, an insinuation touching the dignity or respectability of John, Tom or Ned, is never clearly settled in the mind of the parent, but it has nevertheless awakened in his mind some vague idea of hostility, which takes more or less definite form whenever the question of his salary comes up.

As a general rule, the wear and tear of a teacher's life, mental and physical, is never taken into account. Nor is the daily drudgery of an unvarying routine, and the depression and languor caused by a stifling atmosphere in a school-room which makes no pretensions to ventilation. These things, with others equally important, never enter into the mind of the ordinary ratepayer and objector; and hence the thoughtless injustice which is so frequently done to the comparatively defenceless, but nevertheless laborious and conscientious teacher.

### INDUSTRIAL EDUCATION IN PUBLIC SCHOOLS.

Industrial training is at present chiefly carried out in our prisons and reformatories. In the Kingston Penitentiary, that

afforded by the various workshops is a valuable reforming influence, as many of the discharged convicts are then enabled to earn an honest living, several instances of which have come under our observation lately in Toronto. But the great subdivision of labor necessary to make one of those workshops pay the contractor who hires convict labor, tends to prevent any one convict from learning the complete work of a trade; he usually masters but one department of it. And in the Report of the Inspector of Prisons in Ontario, in 1879, we find that out of 200 boys confined in the Provincial Reformatory, Penetanguishene, only 92 are employed as carpenters, shoemakers, tailors, at the turning-lathe, as bakers, and, curiously, only four on the farm; the remainder being engaged in work on the premises. In the Andrew Mercer Reformatory and Refuge, the Superintendent reports in favor of industrial employments, such as cane-seating, shoemaking, paper-box making, tailoring, and sewing of all kinds. Still, this is, in all these cases, industrial *employment*, rather than *education*, being carried on for the purpose of making money by sales, rather than for that of teaching a trade. And were the latter attempted, it may be doubtful whether society would not do better to begin a stage earlier, and supply a rudimentary industrial training to the classes of children who are *not* criminal. This might do something to thin the influx into our reformatories and prisons. It is plain enough that mere ordinary school education does not effect this. We find by the Report before us, that out of 567 prisoners in the Central Prison of Ontario in 1879, no less a number than 414 could read and write, while 85 could read, but not write; the remainder, 68 only, could neither read nor write! We contend that if, instead of the industrial teaching being given in the reformatory, it were given in the Public School, many a boy might be diverted to honest industry who now matriculates at the street corners, and graduates in prison.

And we contend that the need of industrial training is imperative, quite apart from consideration of "the bad boys" of society. As it is, boys and girls are educated on a uniform method, their thoughts directed into the same channels, little scope being given for that differentiation towards the various trades and employments which ought surely to precede the adoption of any life-long pursuit. A boy is left to take up a trade at hap-hazard, under the mere force of circumstances; without trying his power of manual dexterity, of skill, of constructiveness, in other directions, he strikes out, by accident, his vein metal, and is compelled to work at that one vein for a life-time.

What we contend for is, not that trades should be taught in the public schools, but that there should be a few such rudimentary workshops in connection with each large school as might test for each boy the kind of work best suited to his tastes and powers. At least, a carpenter's shop and turning lathes might be provided, the latter to be worked by a small steam engine, in the use and manipulation of which those whose tastes led them in the direction of mechanical engineering might be instructed. Governments in modern times have recognized the duty of providing free education of the best obtainable kind for the children of all classes—it is but a further development of the same principle, that it should also provide the children in the public schools with the means of test-

ing their abilities and tastes. Besides, in a country like ours, a young man should be able to turn his hand to many things. With us it is not as in England, where everything works in time-worn grooves, and each trade is a caste. How great an advantage that each boy should have some practical knowledge of carpentering, of house-building, of plastering, of the practical application of mathematics to land-surveying. A most excellent proposal is now under consideration for providing some means of instruction in scientific agriculture for our public schools through the counties, or perhaps still better in our County Model Schools. With regard to rudimentary industrial training, the experiment might be tried first in the city schools, the instructor to visit each in turn daily, and each workshop to be open for an hour. This would give a welcome break to the uniformity of purely mental study. With regard to girls, instruction in knitting and sewing is already given at our best schools. But this might well be done more systematically, and might extend to the different kinds of sewing, cutting out and tailoring; the aim being less to encourage showy fancy work, than to teach those useful acquirements which will be invaluable all through life.

#### THE HIGH SCHOOL GRANTS.

The New England *Journal of Education* for Sept. 10th contains an admirable leading article under the heading "Stand Up for the Children," directed against the anticipated attempt next winter, on the part of certain of the manufacturers and monied classes, to induce the New England Legislatures "to modify their beneficent system of laws" for the support of public education. Our contemporary is no doubt justified in the proud confidence which it fearlessly asserts that "the mass of level-headed working people in New England are the hearty friends of these laws, fully comprehend their scope, and will support the public men who stand between the children of the poor and their enemies." Indications are not wanting in the Province of Ontario of a similar feeling on the part of certain class interests against the grant given in aid of our High Schools. It will probably be urged that these schools exist for the benefit of a class who are well able to undertake their support. But to say this is to ignore the fact that the High School is an integral part of our public school system—providing a sphere of promotion for the purpose of higher education. The new blood there introduced by competition is of great benefit to those sons of the richer classes who form the staple of the High School, as the culture and better intellectual tone resulting from the High School work all over the Province is a benefit to those very persons whose short-sighted parsimony would oppose the comparatively small sums expended in attaining these results. But this hostility to the High School does not stand by itself. It is part of a dislike to our entire system of schools and public education, which has hardly the courage of its opinions, but shows its animus when it best can on such a point as the High School grant, or some other matter of detail in the working of the Ontario Education Department, in which class interests, local prejudices, and personal *amour propre* furnish ground for agitation and attack.

But, as in the case of the New England people, so with our countrymen of Ontario. We are confident that the great body of the people have learned to value that long-tried Education System which secures to all the inestimable blessing of knowledge, which opens a graduated scale of promotion to the poorest child, from the Public School to the University, which protects the selfish monied interests who rail against it from their own worst enemies, pauperism and crime.

Our system is no new notion invented by the present Education Department. It is the work of years, of men well versed in the requirements of our people, and the conditions under which schools can be carried on, and teachers trained. It is not now for the first time on its trial. A responsible Minister is at its head, who can be called to account for any alleged mis carriage in details, at the proper place and time, and by those to whom the people has delegated the right of so doing. Least of all do we believe that any appreciable fraction of the public will be influenced against our High Schools by penny-wise and pound-foolish economists, or against our Education Department and the Central Committee by a few noisy sore-heads, who fancy their own superabundant merits slighted, or even by one respectable journal, which makes the mistake of trying to get political capital out of questions with which political animus ought to have nothing to do.

#### THE SMALLER VS. THE LARGER HIGH SCHOOLS.

We would regret exceedingly if the partial statistics published in the last number of the JOURNAL with regard to the numbers passed by the Collegiate Institutes and High Schools, should mislead any intending to be students. As we stated at the time, several things must be taken into consideration before a fair comparison can be made regarding the real character of the work done in these schools. It should be known, 1st, whether all who wrote were actually pupils, or whether they merely came in for examination; 2nd, how long the students had been in attendance at the schools, in order to decide whether the school which *passes* a candidate deserves the credit for *training him*;—3rd, the number of candidates who wrote at each school should be compared with the number who passed. If these tests were applied, it would be found that in some of the Institutes the teaching done must be really vastly inferior to that done in many of the smaller and less pretentious High Schools.

The Hamilton Collegiate Institute furnishes a good illustration of this fact. The whole public school system of that city has been made subservient to the Collegiate Institute. After the death of the late estimable Inspector, Mr. Macallum, the Head Master of the Institute, secured control of the public schools also, so that the people of Hamilton may now be said to have no public schools at all. They have a Collegiate Institute with several preparatory forms in different parts of the city, whose function is to keep up the supply at head-quarters. How the intelligent citizens of the "Ambitious City" have so long mistaken advertising, for advancement; boasting, for progress; and mere coaching for examina-

tions, for philosophical teaching, is a mystery. We recommend them to direct their attention to the careful consideration of the working and results of their peculiar school system. They should certainly have little difficulty in arriving at a just conclusion. No other city in Ontario can test its school system so easily.

In other places the school has varied aims, and performs numerous functions; in Hamilton there is but one goal for the teachers to reach. From the primary classes upward, all forces are used in constructing one narrow staircase, up which as many pupils as possible must be driven to reach the "Intermediate" chamber at the top. And what is the result? Surely with such a concentration of effort, and with the advantage of having a goodly number of the brightest students from outside, large numbers must reach the upper chamber. Can it be that the total outcome of a year's work—and the Hamilton teachers work hard—is the passing of the Intermediate Examination by three dozen students, only a part of whom belong to Hamilton itself?

We mention these matters in order to put young teachers, and others who intend to go from home to study, on their guard. The highest interests of education will not be served by building up a few large and showy institutions at the expense of the High Schools generally. One of the best features of the system is, that it diffuses the advantages of a higher education, and enables the children of rich and poor alike to obtain the best possible training at home. Those students who are caught by the deceptive logic of the number passed, and who rush to one or other of the schools of "unequaled attractions," forget that they are helping to magnify these institutions at the expense of the smaller and probably better schools in their own vicinity. They forget, also, that where there is the largest number of *passes* there is also the greatest number of *failures*. At the last examination in Hamilton 87 passed, but about twice that number *failed*. We have no doubt but that among the latter number are some who would have passed if they had gone to the humbler high school at home, where the numbers in attendance would not be so great as to prevent their receiving that amount of individual attention so necessary to their progress.

We hope to see the gulf between the High Schools and Collegiate Institutes narrowed, and the influence of the JOURNAL will be cheerfully given to secure this result.

#### EDUCATIONAL VANDALS.

The *New England Journal of Education* describes the men who oppose the free school system in the United States as follows:—"It is still true that men do not always die when the brains are out. There is still, even in New England, a pother against the free school system which has very little to do with reason, and less with knowledge. A considerable number of ecclesiastics, experts, scientific and otherwise, apostles of pessimistic social science, hard-headed millionaires and close-fisted grangers, zealous leaders of trade-unions, high-joint gentlemen and ladies in drawing-rooms, municipal economists, and

political sore-heads sometimes abuse the schools, the teachers, and those who support them, without rhyme or reason."

We have samples of the various classes above named in Canada. They have remained in a torpid condition during the past twenty years, but are now, in Ontario at least, beginning to show signs of awakening. Teachers and friends of the schools should remember that serpents do not lose their venomous tendencies during their annual sleep. The indications of a struggle against the growth and permanence of the State system of education in its best forms are numerous and definite. Already the enemy has taken advantage of a slumbering profession, and secured the breaking open of what Dr. Ryerson rightly named the "Sampson lock" of the school system; the right of Trustees to procure the funds to provide the necessary accommodation for the children resident in their section or municipality. Emboldened by their success in gaining possession of the outer trenches, they are now agitating for restrictions on the ordinary expenditures of School Boards, and they will never rest satisfied, or be quiet, until they have secured the destruction of all that is essential to the complete success of the system of free education, or until the friends of education arise in their might, and drive them into their torpid state again. To do this will require vigilance on the part of all departments of the teaching profession, active sympathy and co-operation from the supporters of the schools, and decision on the part of the Minister of Education.

Nothing inspires an army so much as a general who is always at the head of his men when there is danger, and who would surrender his position rather than parley for a compromise with an inveterate enemy.

We are very glad that the Ontario Teachers' Association has appointed a Legislative Committee, as recommended in the August number of THE JOURNAL. The Hon. Mr. Crooks has intimated his desire to learn the views of the profession throughout the Province, and if he will lead the van the Philistines will speedily be routed.

#### EDUCATIONAL CONGRESS AT BRUSSELS.

An interesting report of the meeting of this important Congress appears in *The Schoolmaster* (London, Eng.) for Sept. 4. It was on the very largest scale, being attended by members of the teaching profession from all parts of the world. Many of the subjects discussed, such as the co-education of the sexes and the conflict of education laws with those of the Church, are to us dead issues. On the subject of *Kindergarten* and the methods of Froebel, there was quite a warm discussion, generally favorable to the system chiefly among the lady speakers. M. Emile Frelet, of Paris, read a valuable paper on School Hygiene, and Dr. Jarvel on Short-sightedness, or Myopia, which he found by an experience of twelve years very rare in infancy, being generally produced at school—prevailing especially in Germany, on account of the practice of reading at night with an imperfect light. As to Emulation as a means of school discipline, the Congress had a divided opinion, but on the whole the balance of papers read was against the distribution of prizes, the general effect of which was thought injurious. The Congress closed after a week of earnest labor and discussion, carried on with the utmost good humor.

—A teacher wrote to Professor Kennedy, one of the Institute Conductors of New York State, bewailing the fact that he was not supplied with apparatus, and asking for advice. The reply of Professor Kennedy is eminently sensible and practical, and we commend it to the large class of teachers who are paralyzed because they have "nothing with which to teach," who cannot have object lessons without a costly cabinet of prepared specimens, &c. Few are in a worse condition than the correspondent of the Professor, whose full supply of apparatus consisted of "one water-pail, one small drinking cup, and  $\frac{1}{2}$  of a broom." The following is the reply of Professor Kennedy:

I am pleased to acknowledge your favor of the 80th ult. You have my sympathy in your struggle against ignorance and indifference. The state of things as you describe them is simply shameful, and I am sorry to say it is not a solitary example of the way our children are despoiled of their rights and comforts. But our duty becomes only the more sacred and imperative under such circumstances. We cannot teach without facilities; we must have them—if not of the elegant sort, then of the primitive sort.

A newspaper over the window does not look as well as a Venetian blind, but it will save the eyes of the children. A croquet ball is not as finished a piece of apparatus as a tellurian, and yet it can be made to illustrate the whole of geography. Kernels of corn are not as professional as a numeral frame, and yet they are real units. Splinters, chips and fragments of ribbon may be made to furnish a complete apparatus for kindergarten work, geometrical forms, colors, inventive drawing and language lessons. Slated paper is less imposing than a wall slate, and yet it can serve all the purposes of blackboard surface.

Some bold crayon marks in different colors, on white paper, can be made to serve the purpose of outline wall maps.

We can work, you see, if we must, with very primitive apparatus. These things test one's fertility of resource. I hope you will distinguish yourself by your ability to improvise apparatus. You have scholarship, intelligence and purpose; such elements will win under any circumstances. Let us show that school work can go on in spite of vicious economy. If you cannot find sympathy and co-operation in official circles, seek it among the children; make them enterprising, and they will move their stolid parents. Very respectfully,  
JOHN KENNEDY.

—The London School Board has an annual competition in drill between the male pupils of the schools under its control. The examiner this year was Col. J. P. Battersby, of the Royal Military Asylum, Chelsea. As an appendix to his report he made the following recommendations:

"I would venture to recommend that the short time allotted for drill be chiefly spent in the 'setting up' of the children—that is, in the development of the frame and the position of the body standing in the ranks, and while marching, more than in teaching them to turn and march to the front, and to a flank in 'rank entire,' 'files,' and 'fours.' If these movements are executed with precision, the time has been well spent.

"In testing the merits of a school in this respect, I think the master should be called upon to drill the boys. It can thus be ascertained what control over them he has acquired, and his method of exercising it. If this is good, the influence is felt not alone on parade, but during school hours; and I do not hesitate to say that the best drilled school will be the most easily managed, and that more instruction will be imparted in a given time, and with less expenditure of the master's power, where he has been able to enforce a prompt and accurate compliance with his orders on the drill ground."

The work recommended by Col. Battersby is almost precisely the same as that prescribed for the public schools of Ontario. If taught by the regular teachers in all the schools, there would be less complaint about "cramming." The physical has as much need for direction in its development as the mental has.

## Contributions and Correspondence.

## UNIVERSITY COLLEGE.

THE RECENT APPOINTMENTS.—LETTER FROM DR. WILSON,  
PRESIDENT OF THE COLLEGE, TO HON. MR. HARDY.

SIR, — I have the honor to acknowledge your letter of the 27th inst., in which you ask for a report on the recent appointments of a Professor of Classical Literature and a Classical Tutor and Dean, in University College.

1. Mr. Maurice Hutton, the newly appointed Classical Professor, was elected to an open scholarship at Worcester College, Oxford, in 1874, and his whole subsequent career has been one of uninterrupted success. He obtained a First-Class in the First Public Examination, and took the same rank in the Final Honor School of Literæ Humaniores. Soon after taking his degree he was elected to an open Fellowship at Merton College, Oxford; and on the authorities of Firth College, Sheffield, referring the choice of a Professor of Classics to the heads of Colleges at Oxford, he was selected from a list of candidates of high academic distinction to fill the chair.

It is almost superfluous to add that at Oxford I received gratifying assurances that, in Mr. Hutton, University College obtains a Classical Professor of the highest university training, and one who had, in various ways, given unusual evidence of capacity and sound scholarship. I confidently anticipate that this appointment will be found to give the highest satisfaction to all who take an interest in the prosperity of our Provincial University and College. Mr. Hutton assumes the duties of Professor, with no other office attached thereto.

2. Mr. F. A. Vines is the gentleman selected as Dean and Classical Tutor. In every previous appointment of a tutor the harmonious co-operation of the professor and his assistant has been recognized as so essential that, alike in the departments of Classics and Mathematics, the choice has practically rested with the Professor. Nevertheless, when the Minister of Education referred the subject to me, while fully recognizing the weight which was due to the judgment of the newly-appointed professor in the selection of the classical tutor, I specially invited the attention both of Professor Hutton and of the Minister of Education to the qualifications of one of our own Canadian graduates. I have since learned that the position which he already occupied had greater attractions.

Of Mr. Vines, the gentleman finally selected, I learn from Mr. Evelyn Abbott, Fellow and Tutor of Balliol College, as well as from Professor Hutton, that, owing to over-exertion, both physical and mental, Mr. Vines' health broke down during his undergraduate course at Oxford, insomuch that in preparing for moderations, "the latter part of it was carried on in bed; and he was not permitted to read for honors in the final schools." Hence his academic ranking very inadequately represents his qualifications. The Vice-Provost of St. Mary's writes of him: "As a Balliol man, your tutor has received the highest culture which Oxford can give. His early success in gaining a scholarship at Pembroke, and an open exhibition at Balliol, shows that he must have a thoroughly sound basis of classical knowledge." Professor Hutton, from the conviction he had of Mr. Vines' acquirements and personal fitness, gave him the preference over others of higher academic standing in the school lists.

3. It was desirable, alike for economic and other reasons, to continue in the same person the joint offices rendered vacant by the retirement of the late Dean and Classical Tutor. With a new President entering on his duties, the transference of the College Registrarship to a stranger would have proved peculiarly embarrassing. Had, indeed, Mr. Baker, who holds that office, along with the Mathematical Tutorship, been appointed Dean, the zeal and efficiency with which he has fulfilled every duty

hitherto entrusted to him, justify the belief that he would have satisfactorily filled that responsible post. But, apart from the inconveniences which his transfer to that office must have involved, I fully anticipate carrying out arrangements in connection with his present duties which will prove at once more acceptable to himself, and better calculated to promote the true interests of the College.

5. In approving of Mr. Vines as Dean of Residence, the special requirements of that office have been kept fully in view. It is, indeed, one of the most difficult offices in the College to fill satisfactorily; and great as the responsibilities of the President are, he must rely, to a large extent, on the wise prudence and judgment of the Dean for the successful working of the college residence. It may, perhaps, suffice now to say that it was not till after considerable correspondence, very careful enquiries, and personal intercourse with Mr. Vines, that I satisfied myself that the College Council might rely upon him as one possessing the energy, tact, and judicious union of firmness and kindly social amenity which must command the respect and good-will of those placed under his care. I received no less satisfactory testimony that in him the College acquires as its Dean, a thoroughly high-minded man, impressed with the responsibilities involved in undertaking the oversight of the resident students; and conscientiously desiring to use his influence in guiding them wisely at the most critical period of their lives.

It is perhaps necessary that I should add that the salary payable to Mr. Vines for the joint duties of Dean and Tutor is less than that which his predecessor received when holding the same offices.

I have the honor to be, Sir,  
Your most obedient servant,  
DANIEL WILSON.

University College, Toronto, 28th Sept., 1880.

To the Hon. A. S. Hardy, Provincial Secretary.

To the Editor of the Canada School Journal.

SIR,—The Rev. D. H. MacVicar, LL.D., S.L.P., Principal, Presbyterian College, Montreal, made certain remarks against the Catholic Church, before the Ontario Teachers' Association in Toronto, which appeared last October in your columns. As I am convinced the "Canada School Journal" will be kept free in future from the reproduction of all such matter, I forego for the present my clear right to be heard in reply to his attack, and this all the more readily as the press in both provinces are giving me a full and fair hearing.

Yours truly,  
M. STAFFORD, P. P.

Lindsay, Sept. 22nd 1880.

## THE SUBJUNCTIVE AND POTENTIAL MOODS.

BY C. P. MASON, B.A., F.C.P. AUTHOR OF MASON'S ENGLISH GRAMMAR, &c.

The account of the Subjunctive Mood given in my English Grammar involves nothing which will be found new or strange by any one acquainted with what has been said on the subject by such grammarians as Becker, Matner, Madvig, Kuhner, Key, Roby, Peile, &c. The statements found in most of our current English Grammars are quite worthless.

The following considerations are important:

1. It is absolutely necessary to keep clearly in view what it is that we are talking about. There is a wonderful amount of confusion on this point. The 'Indicative Mood' and the 'Subjunctive Mood' are not certain *modes of using verbs*, but certain *groups of verbal forms*. Such forms as *sum, est, amo, monebo, audivi, &c.*, in Latin; *bin, hast, liebt, sprach, &c.*, in German; *was, has, am, is, &c.*, in English, belong to the Indicative group, and are *Indicative*, whatever may be the construction in which they are found. Such forms as *sim, esset, amem, audiverim, &c.*, in Latin; *sey, wäre,*

*habest, spräche, &c.*, in German; [*he*] *be*, [*I*] *were*, [*thou*] *have*, and certain compound tenses, made up of subjunctive forms of the auxiliary verbs, *may, might, should, and would*, in English, belong to the Subjunctive group. *Verb-forms* may belong to one or the other of these groups, but cannot possibly belong to both. 'To talk of an 'Indicative-Subjunctive form,' is like talking of a 'round-square hole.' The 'force of dulness' could hardly 'go further' than setting down 'if I am,' 'if I was,' &c., as the Subjunctive Mood of the verb to be. Yet the absurdity will be found perpetrated in not a few English Grammars.

2. The account given of the Subjunctive Mood must be such as to apply to the earlier forms and usages of the language as well as later. The group of forms which belong to the Subjunctive Mood are more sparingly used now than they used to be; but as regards their nature and functions they have never changed.

8. In ascertaining the true force and function of the Subjunctive Mood, we are not only permitted, but bound to take account of the usages of German, Latin, and other languages of the Aryan family. The fundamental ideas upon which the distinctions of mood are based (like those which relate to the functions of the parts of speech, of numbers, persons, voices, tenses, cases, &c.), are common to English and Latin, and as March observes (*Anglo-Saxon Grammar*, § 421), "The Teutonic Subjunctive has the general range of the Latin Subjunctive."

4. The ascertainment of the functions of the group of forms called 'Subjunctive' can only be effected by examination and comparison of instances of their actual use. We are not in the slightest degree bound by the signification of the name which these forms happen to bear. That name, like many other grammatical terms in use, is nothing more than a record of the attempts of the early Greek and Roman grammarians to classify and explain the forms that they met with. These attempts were rarely very successful. They were based upon a very imperfect knowledge of the facts of language, and were often clumsy and capricious. The name *Subjunctive* was a particularly unfortunate one. It does not in the least degree explain what the force of this particular group of forms is, which makes them proper for use in certain kinds of subjoined clauses, while it has betrayed many into the ridiculous mistake of supposing that we get (or at least ought to get) a *Subjunctive Mood* whenever we have a verb used in a *subjoined clause*.

5. The learner must bear in mind that a word or a grammatical form hardly ever expresses the whole of the signification which is attached to it in each of its different uses, but only something much wider and vaguer. To this vague sense that underlies all the uses, the intelligence of the speaker or hearer, guided by the sense of the connection in which the word or form occurs, attaches in each special case various *accessory notions*, by which the general sense is differentiated into its particular applications. We shall go entirely wrong if we attempt to regard the whole sense that is attached to a word or form in one use as essential to it in every use.

6. It will be found stated in the great majority of English Grammars that the function of the Subjunctive Mood is to express uncertainty, or to state an action conditionally. The learner must disabuse his mind of the idea that the Subjunctive Mood is necessary for either of these purposes, or always effects them. Both *uncertainty* and *conditionality* may be expressed by means of the Indicative Mood, when the *uncertainty* or the *condition* has reference to *actual facts*. When I say "The man deserves to be hanged," I make an *unconditional* statement. When I say "If the man is guilty he deserves to be hanged," I make a *conditional* (or *conditional*) assertion, i.e., an assertion made *subject to the previous admission* of another proposition, of the truth of which I am *uncertain*. The case is precisely the same with such Latin sentences as "Tute scis si modo meministi, me tibi tum dixisse," &c., 'You know, if only you remember,' &c. (Cic. *Att.* xii. 18); or "Ego si bonam famam mihi servasso, sat ero dives," 'I shall be rich enough, if only I preserve my good name' (Plaut. *Most.* 228); or "Aequitas tollitur omnis, si habere suum cuique non licet," 'All justice is abolished, if it is not permitted to each to have his own' (Cic. *Off.* ii. 22). Examples of this kind may be multiplied *ad libitum*. They effectually dispose of the assertion that the Subjunctive is necessary to express *conditionality* or *uncertainty*.

Of course everybody knows that the Subjunctive Mood is employed in some sorts of conditional statements. Thus, "If he were wise, he would act differently"; "Wenn er reicher wäre, wäre er nicht glücklicher" ('If he were richer, he would not be happier'); "Tu si hic sis aliter sentias" (Terence. 'If you were in my place, you would think differently'); "Si scissem in quo periculo esses, statim ad te advolassem" ('If I had known in what danger you

were, I would have flown to you at once'). Here we have a set of conditional propositions expressed by means of the Subjunctive Mood. They differ from those in which the Indicative was used in this respect, they do not involve a supposition respecting some *matter of fact* of which we are uncertain, but what is supposed is dealt with merely as a *matter of conception*. In some cases the supposition is obviously at variance with the known fact.

It is of prime importance to have it clearly understood that the Subjunctive Mood is not essential to the expression of a hypothesis or condition, but that the Indicative is the proper mood for a conditional statement when the subject dealt with belongs to the sphere of actual fact, independent of the thought of the speaker, while the Subjunctive is the proper mood for a conditional statement when the subject dealt with is matter of conception, because many grammars of repute abound with incorrect statements on this point, and no advance towards a correct understanding of the matter can be made till the misconception referred to has been cleared away. When, however, we have gained a perception of the true import of the Indicative and Subjunctive Moods respectively, we are able to deal with a great variety of constructions about which writers who make the mistake referred to find it convenient to say nothing.

Thus in Latin *quod* (because) is followed by the Indicative when the actual reason of an action or event is described, but by the Subjunctive when the writer (or speaker) states a reason which is only thought of by him, either because it was not the real reason, or because he brings it forward as *somebody else's reason*. Thus "Successui ei magis quod me consilii sui certiorum non fecerat quam quod consilium ipsum invisisset" (Cicero): 'I blamed him more because he had not informed me of his design (real reason), than because he had entered upon the design itself' (reason denied, and therefore only thought of). "Laudat Panaetius, Africanum quod fuerit abstinent" (Cicero): 'Panaetius praises Africanus for being abstinent' (a reason which, though real to Panaetius, is not vouched for by Cicero, and therefore is to him a *matter of conception* only).

Another instructive illustration is given by constructions with *antequam* and *priusquam* (before) or *donec* (until). When the object is to state that of two actual facts one precedes, or lasts up to the other, the Indicative is used. "Antequam tuas legi literas, hominem ire cupiebam" (Cicero). "Haud desinam donec perfecero" (Terence). But if a certain event has only a *conceived* relation of priority to some other, which may or may not happen according to circumstances, the Subjunctive is used. Thus "Numidae priusquam ex castris subveniretur in proximos colles decedunt" (Sallust), 'The Numidians withdrew unto the nearest hills before reinforcements should come from the camp' (an event which possibly might not happen at all, and therefore is only thought of).

It is obvious directly why the Subjunctive is used to express purpose. An action that is intended is necessarily, in that aspect, one that is only thought of. In Latin, consequence was also expressed by means of the Subjunctive, the result being treated merely in its *conceived consequential relation* to the antecedent event, without taking its actual occurrence into account, just as when we say in English "He was so exhausted as to be unable to stand," where the actual fact that he was unable to stand is not asserted, but is left to be inferred (see Roby, *Lat. Gr.* § 1499).

Another remarkable illustration of the true function of the Subjunctive is seen when it is used in a subordinate clause to give a general statement of some circumstance or condition connected with an event, without asserting definite instances of the actual occurrence of the circumstance or condition in question. Thus "Bonus signior fit ubi negligas" (Sallust), 'The good man becomes more supine when you neglect him.' The Indicative *neglegis* would have implied that the 'you' in question was some individual actually addressed by the writer, and that there were certain definite, actual instances on his part of the neglect in question. So when the Indicative follows a relative pronoun, the clause makes a statement of actual fact respecting some definite person or persons whom the relative represents, but when the Subjunctive is used, the clause becomes the general description of a type. Thus "Hoc non erat ejus qui innumerabiles mundos mente peragravisset" (Cicero), 'This was not becoming to one who had traversed innumerable worlds in thought.' Here the statement is made, not of a single individual, but generally of any one who might answer to the description. The Indicative would have tied down the statement to a particular individual, as a matter of actual fact. So in "Abiit consul ut quem nemo metueret," the writer describes a type. *Metuebat* would have restricted the clause to a definite individual, of whom (as a matter of fact) nobody was afraid. Instances of this sort must not be con-

founded with universal assertions, in which definite matter of fact is asserted of each and all of a certain class.

In Anglo-Saxon, as in Latin, the Subjunctive mood was used when the purpose of an action had to be stated. Thus "Dá sende he hine to his tuno pæt he heolde hys swyn" (*Luke xv.*) 'Then sent he him to his farm that he should keep his swine.' It is also used (as in Latin) to express consequence.

The use of this mood in conditional clauses corresponds to the Latin usage. Thus "Gif mec hild mine (*Beowulf* 452), 'In case battle should take me.' "Gif þu wær hær næro min brðdor deað" (*John xi. 32*), 'If thou hadst been here, my brother would not have been dead.'

The use of the Subjunctive in Anglo-Saxon is even wider than in Latin. It is employed not only in dependent questions, but also in a reported statement of fact or opinion, for which the reporter does not vouch. Thus "He sægde pæt Sarra his sweostor wære," 'He said that Sarra was (*were*) his sister' (*Cædmon*). But if the reporter vouches for the fact reported, the Indicative is used, as "pá he gehyrde pæt he se ðe wæs," "When he heard that he was sick" (*John xi. 6*).

The Subjunctive is used in Anglo-Saxon, as in Latin, to describe a potential class, that is, one which is merely constituted by the definition (as something thought of), and not by relation to some actual fact. Thus: "Se þe hæbbe earan to gehyrnanne gehyre," 'Whoso hath (*have*) ears to hear, let him hear' (*Mark iv. 9*). The usage is similar in Chaucer as Whoso wole my juggement withseie" (*Prolog. 805*); But it were any person obstinat,, 'What so he were of high or lowe estat" (521).

The nominal use of the Subjunctive which has been described above has been subjected to two contrary tendencies.

1. Our earlier writers often employ the Subjunctive in hypothetical statements when the Indicative would have been strictly proper, there being a natural temptation to treat all hypotheses as dealing with matters of conception. Thus we sometimes find it used not only in putting a general case, when it is strictly correct (as in "But if he be a robber, if he *have* eaten upon the mountains, if he *have* oppressed the poor and needy, *have* spoiled by violence, *have* not restored the pledge . . . shall he live?"—*Ezek. xviii.*), but even in treating of actual fact in an individual instance. Thus, "If the young gentleman *have* done offence, I take . . . fault on me" (*Shaksp. Tw. N. iii. iv. 843*). So also the priority of one fact to another is often treated in its *conceptive* instead of in its *real* aspect. Thus "Ic wæs ær þam þe Abraham wære," 'I was before Abraham *were*' (*John viii. 58*). So in Chaucer, 'Er it were day' (*Kn. T. 182*). But

2. The tendency of modern usage is all in the opposite direction. We have grown impatient of the subtle distinction involved in the use of the Subjunctive Mood, and have substituted the Indicative for the Subjunctive in many constructions in which the latter was once usual, and certainly more correct. Instead of 'He that *have* ears to hear,' we say 'He that *hath* ears to hear'; instead of 'He said that he *were* sorry,' we say 'He said that he *was* sorry', instead of 'If it *be* fine to-morrow,' we say 'If it *is* fine,' and so on. Some even use such expressions as 'If it *was* possible I would grant your request.' It is to be hoped that their example will not be widely imitated. The point to be observed is that all this is not simply the disuse of a superfluous set of forms. It is a partial disregard of a certain delicate distinction between two types of predication, and the consequent disuse of the varieties of form by which the distinction is marked. In so far as we have ceased to use Subjunctive forms it has been because we have ceased to take the trouble to form the ideas which the Subjunctive Mood expresses. But though we now use the mood more sparingly than formerly, when it is used its function is just the same as ever. There are writers, however, who jumble together sentences of the old type with sentences of the modern type, and treat them as though both these different forms or expressions were intended to represent precisely the same form of thought.

It is necessary to caution the learner that the Subjunctive Mood has not disappeared from our language to so great an extent as is sometimes represented. In the Preterite tense of most verbs, it is true, there is now no difference of form between the Indicative and the Subjunctive. But this is not because the Subjunctive forms have been assimilated to the Indicative forms, but because the distinctive marks of *both* have vanished. It is rather arbitrary to assign what is left to the Indicative Mood exclusively, and to say that the other mood has disappeared. The converse process would be just as reasonable. We still preserve a clear sense of the differ-

ence of function. If we compare 'I *could* not do it when I *tried*,' and 'I *could* not do it if 'tried,' our consciousness of the difference in import is brought out the moment we attempt to substitute equivalents that differ in form. *Could* in the first means *was not able*. We see instantly that we cannot substitute this in the second. This makes us aware that *could* is not the same word in the second sentence as in the first.

Another point that the learner must keep in mind is, that in modern English complex forms made up of *may*, *might*, *should* and *would*, have superseded the old simple forms (see the text of the Grammar, § 192). But he must beware of supposing that he has got a Subjunctive Mood whenever he has got one of these complex forms. Very often the mood is the Indicative. Thus: "You may leave off work." = 'You are permitted,' &c. "That *may* be so." = 'It is possible that that is so.' "He would not open the door when I knocked," = 'It was not his will to open the door,' &c. "He said that I might come in," = 'That it was permitted to me to come in.' It is only when the auxiliary verb is itself in the Subjunctive Mood, and has lost its notional significance, that we get a Subjunctive complex tense.

#### THE POTENTIAL MOOD.

The so-called Potential Mood is the product of a series of blunders and misconceptions, and has been discarded by all the best authorities. "I can write" or "I must write" is not a mood at all in the sense in which 'I write,' 'I should write,' or 'Write [thou],' is a mood. If you take a subject (say 'John'), and a verb (say 'write'), when the Indicative, Subjunctive, or Imperative Mood is used, the act of writing is predicated of John in some manner, affirmatively or negatively, as a matter of fact, as matter of conception, or as matter of volition. But if we say 'John can write,' or 'John must write,' we predicate of John not writing, but the *ability* to write, or the *obligation* to write, which is a totally different affair. Nobody thinks of giving the name 'Potential Mood' to such combinations as 'Scribere possum,' γράφειν δύναμαι, 'Ich kann schreiben, or 'Je puis écrire.' Its retention in English grammar is anomalous and absurd.

The history of its introduction may be clearly traced. The Greek grammarians led the way by setting down the Optative as a mood distinct from the Subjunctive. The Subjunctive and Optative of Greek grammar really differ from each other merely as *faciam* and *facerem* differ in Latin. They are the verbal forms forceptive predication associated respectively with present time and with past time, and do not really constitute different moods at all. Priscian and other Latin grammarians thought they must follow the Greeks in the use of these two names, although both the present and the past forms of the Subjunctive in Latin may be used to express a wish, and accordingly they set down *Modus Optativus*, as well as a *Modus Subjunctivus*; but in doing this they merely gave two names to identically the same set of forms, one to be applied when these forms served one purpose, the other when they served other purposes. The Greeks were at least free from this blunder, for they gave their two names to two distinct groups of forms. Lily and his followers, who made our old Latin grammars for us, made confusion worse confounded by giving three names (*Optative*, *Potential*, and *Subjunctive*) to the same set of forms, according to the mode in which they were employed. The term 'Potential,' however, was simply one of the *aliases* of the Latin Subjunctive.

The early writers of English grammars did little more than adapt Lily's system with as little change as possible to English, and so our forms forceptive predication inherited the same *aliases* that were current in the Latin grammars. Some persons, indeed, did not find three names enough for them. Thus Mattaire, after stating that there are three finite moods in English, the 'Indicative,' the 'Imperative,' and the 'Potential,' goes on to say: "The Potential is named sometimes 'Subjunctive' or 'Conjunctive,' because it is joined to another sentence by some word or particle, sometimes 'Optative,' sometimes 'Dubitative.'" But the point to be observed is that the terms 'Potential' and 'Subjunctive' denoted not different sets of forms, but different uses of the same set of forms.

Unhappily some wiseacre or other, finding that English had two classes of forms for expressingceptive predication, the older simple forms, and the later forms made with auxiliaries, and that two names for these were in use—Subjunctive and Potential—hit upon the bright idea of calling the simple forms 'Subjunctive,' and the compound forms 'Potential,' and setting them down as distinct moods; and this was followed by the monstrous blunder of extending the name Potential to all combinations of the verbs

may, can, must, shall, &c., even though these verbs were used in the Indicative Mood, and with their full notional sense. When we say, 'I can swim,' 'He must wait,' 'He would not come when I called him,' 'He could not do it when he tried,' 'You may leave off work,' we have direct statements of fact, and can, must, would, could, may are in the Indicative Mood. These verbs help to make up a subjunctive or conceptive form only when they are themselves in the Subjunctive Mood, as was long ago pointed out by Lowth in his English Grammar.

The whole history of the Potential Mood illustrates what has been termed 'the gigantic power of impregnable stupidity,' and justifies the sarcasm of Scaliger: "Grammaticis nullus finis ineptiendi."

### PRINCIPAL POINTS IN HYGIENE TO BE TAUGHT IN SCHOOLS.

READ BEFORE THE TORONTO TEACHERS' ASSOCIATION BY DR. PLAYTER,  
AUTHOR OF PLAYTER'S PHYSIOLOGY.

The teacher has much to do with the moulding of the mind, with the building up of the brain of his pupils, and upon the brain of the growing school children of the present day depends, not only the future good or evil of the individual men and women which these children soon become, but the future greatness or otherwise of our country, with which is bound up largely our own happiness and well being. Hence the responsibility of the teacher is great, and it will be well for him to bear in mind that, while aiding in the structure of that delicate organ, the most wonderful structure in the entire universe, the human brain, a little too much pressure may cause irreparable injury; a little overwork may cause such defects in the delicate highly wrought organ as neither time nor even eternity may efface.

You doubtless all know how largely the development and perfection of the brain structure, and consequently of the mind, depend upon the food consumed and the air breathed; in short, depend upon the general physical health. And you all know how large a proportion of the cases of sickness which afflict the human family, and of the premature deaths which bring, alas! too often, such terrible grief and desolation to our hearths and hearts, come from want of knowledge of the simple laws of health. You all will, therefore, I do not doubt, readily concede that the whole subject of hygiene—*every part of it*, forms one great, one principal point, which should be much more universally taught in the public schools than it is at the present time.

You will not probably differ from me when I say, it is much more essential for the future happiness and well-being of the child to acquire a knowledge of the vital actions which are constantly going on in his own body, and of the common and wide-spread causes of disease and premature deaths, and of the means of avoiding these causes, than to have impressed upon his young mind the names of the longest rivers and the highest mountains in the world, or of the principal cities, rivers and bays of foreign countries; or to learn of the doings of the Emperor Nero, or of King Henry VIII. and their subjects. In short, and I think you will all agree with me when I say that, after a child has once learned to read, and write, and figure a little, he cannot begin too soon, indeed it is of the first importance that he should begin, to learn something about how to take care of one of the noblest works of the Creator—his own body, the temple of the spirit of God. And I feel it to be my duty, whatever your opinions may chance to be regarding my motives, to appeal to you here, teachers in this metropolis, this centre of the foremost province of Canada, to lend your influence in every possible way towards bringing to a more prominent place—to its proper place and position—as a subject to be constantly and universally taught in the public schools of this

country, a country for which we all, I doubt not, anticipate a glorious future, this very important one of hygiene. Depend upon it, by so doing you will then aid most in the development of such future.

But in teaching hygiene in schools, there are doubtless some points of it, especially now, and until the whole subject assumes its proper place in the minds of teachers, and perhaps of the public generally, to which more attention is due than to other points. And now we come to the subject of this paper, the "Principal points in Hygiene to be taught in School," which I have been requested to take up. It appears to me that the subject of hygiene may be best taught under the heads of what we find to be the essentials of life and health. We are provided with life, and the necessaries with which we may preserve and prolong that life, and as it is our bounden duty to make the most of our life, health is a talent for which we must all give an account, so it is our bounden duty to make the most intelligent use and application of these essentials of life. They are air, water, food, exercise, rest and sleep, sunlight, clothing, bathing.

#### AIR AND HEALTH.

Air is the first essential of life and health, and the Creator has provided an absolutely unlimited supply for the use of His creatures. Water, which may be regarded as the next essential, is very abundant, but less so than air: while food is much less plentifully supplied. It may be because of its very abundance that man so commonly overlooks or disregards the great value of air; and in the higher civilization which he creates, and which carries him onward and upward, he neglects frequently to seek, in the first place, localities in which it is naturally most pure, and most favorable to health and life; or by surrounding himself with elegant but almost impervious walls, he shuts out the pure air and breathes over and over again the small measure he has so closely imprisoned; or he makes foul that near his dwelling, by waste excremental matters, chiefly from his own body, or by the products or refuse of the occupations by which he lives.

That most eminent sanitarian, Dr. Parkes, says. "It might be inferred from the physiological evidence of the paramount importance of proper aeration of the blood, that the breathing of air, rendered impure from any cause, is hurtful, and that the highest degree of health is only possible when to the other conditions is added that of proper supply of pure air.

The subject of air in its relations to health and life is a very wide one, and constitutes indeed a very large proportion of the subject of hygiene. It involves the consideration of climatology, locality, drainage, and the situation and general construction of dwellings and all buildings intended for habitations, of ventilation and warming, the removal or disposal of all waste or excremental matters—sewage, etc., disinfection, and the isolation of those affected with contagious diseases, who dangerously poison the air. The discussion of these also applies to the important essentials, water and food; for by imperfect sewerage, or removal far away from us of all excrete waste matters, the water may be rendered foul, and by impure air foods are rendered impure.

The habitations and works of man furnish the most important impurities in the air: such as the products of respiration and perspiration, and of lighting and warming, effluvia from excremental waste matters—sewer gases—and emanations from work in various shops and factories.

Connected with the subject of air, or, indeed, with the whole subject of hygiene, no point, I think, in our present mode of living, of housing ourselves, is of so much importance as that of *ventilation*—the changing and renewing of the air around us, or in our dwellings. It is more than probable that the breathing of air

vitiated by the products of respiration and perspiration—in dwellings, schools, shops, from want of free ventilation—gives rise to more cases of serious sickness than any other cause of disease. Next to this, probably, comes air rendered foul by emanations from decomposing, waste excremental matters near habitations. The evil effects of breathing again air which has been once breathed, and thus taking into the body again the waste excreta of the body, are constantly becoming more and more manifest. The rebreathing of breathed air undoubtedly gives rise to a poisoned, or, as it is called, putrid, condition of the blood, just in proportion to the amount inhaled. Baudelocque, a celebrated French physician, asserted long ago, that the repeated breathing of the same atmosphere is a primary and efficient cause of scrofula, consumption being one of its most common forms, and that hereditary predisposition, uncleanness, want of proper food and clothing, cold and humid air, are by themselves non-effective. He says that invariably it will be found, on examination, that a truly scrofulous disease is caused by breathing air vitiated by respiration, and that it is not always necessary that there should be a prolonged stay in such atmosphere. Often, a few hours each day is sufficient; as sitting in a close school-room, or sleeping in a confined bed-room. You all know that with every breath, every child, and the child in a larger relative proportion than the adult, gives off a quantity of poisonous organic matter, which is believed to be carbo-ammoniacal in its composition. This poison hangs about a room like tobacco smoke, and it is but slowly oxidised and destroyed. It soon taints meat and sours milk when exposed to it, and renders water through which it is passed very offensive. It is this substance which causes the mischief—the putrid condition of the blood, the scrofula, consumption and general illness to which rebreathing breathed air gives rise, and not the carbon-dioxide, or carbonic acid gas; as some works on hygiene erroneously teach. The carbon dioxide in itself, in considerable quantities, is not particularly injurious to breathe, even in the proportion of 2 per 1000 volumes of air; but it serves as an infallible guide to the amount of organic impurity in breathed air.

In a lecture before the students of the College of Physicians and Surgeons of New York, Dr. Willard Parker, the lecturer, used the following suggestive illustration of the manner in which the air becomes contaminated by respiration: "If, gentlemen, instead of air, you suppose this room to be filled with pure, clear water, and that, instead of air, you were exhaling twenty times a minute a pint of milk, you can see how soon the water, at first sparkling, would become hazy and finally opaque, the milk diffusing itself rapidly through the water. You will thus be able to appreciate, also, how at each fresh inspiration you would be taking in a fluid that grew momentarily more impure. Were we able to see the air as we are the water, we could at once appreciate how thoroughly we are contaminating it, and that, unless there be some vent for the air thus vitiating, and some opening large enough to admit a free supply of this valuable material, we will be momentarily poisoning ourselves as surely as if we were taking sewage matter into our stomachs."

It is then of the first importance that children be impressed with the absolute necessity of always securing for themselves, under all circumstances, a supply of pure fresh air, in school-rooms, in bed-rooms, everywhere.

I would endeavor to persuade the children to get somewhat accustomed to draughts of fresh air, and not to fear them. We face for hours and days while riding out, strong gusts and draughts of wind without fear, without receiving injury therefrom. Why should we so fear draughts within doors? It is bad, to be sure, to get chilled by a draught outdoors or in.

The children should be taught to have sufficient fresh air coming

into their sleeping room during the night to thoroughly prevent the air in the room in the morning giving the slightest closeness or disagreeable smell to one entering it from the fresh outer air; and this might serve as a fair test which any youth might apply practically to his own bedroom. Let him go out for a few minutes in the fresh air and return and test the air in his room. If this gives, on careful sniffing, a smell in the least degree unpleasant or close, he has been during the night as surely poisoning his blood as if he had been taking small doses of arsenic; and if he wishes to keep well he should provide a larger opening for the admission of fresh air the next night. Teach them not to fear abundance of night air, as it is called, flowing into their rooms constantly from an open window; providing the head of the bed be not opposite nor near to the window. In cold weather, it is true, more fuel or more bed clothing will necessarily be required, but for perfect health the demand for fresh air is imperative. In this connection I may refer to personal cleanliness. I have been in school rooms in this city, when it occurred to me at once that if all the pupils had been well washed, and their clothes well washed and changed often, the air would be less unpleasant, less impure. Some children carry around with them on their skin and in their clothes, for days and perhaps for weeks, the excreta of the skin, which is diffused more or less in the air around them, wherever they happen to be. With not a few children perhaps this one of personal cleanliness may be regarded as one of the principal points of hygiene. A maximum degree of this personal uncleanness, which arises often from overcrowding, is believed to give rise to typhus fever. I join therefore upon pupils the importance of frequent changing and washing and airing of the underclothing, and personal cleanliness—the frequent washing and indeed scrubbing of the surface of the body. It will be necessary to impress upon children the high value to be placed upon that essential of life and health, *sunlight*. Without sunlight there can be no good development, no good health.

A very important point I will briefly refer to, though it is more correctly a question of public health than of individual hygiene, is that of removing far away all excrete waste matter, even house or kitchen refuse and slops. Let children be taught that these things must not be put nor left in the back yard—one of the abominations of civilization—but put far away from reach of the sense of smell at least.

In this connection too I will refer to the subject of avoiding contagion. Much sickness and many deaths arise from contagious diseases, and these are very frequently spread through thoughtlessness. Children should be warned not to go near any one suffering, or who had been, within a period of two or three weeks' time, suffering from any contagious disease; and also not to spread such disease by themselves, when they are, or have recently been, suffering from such disease, going near others who are well.

On the subject of water, in teaching hygiene in schools, you cannot well do more than impress upon pupils the great importance of drinking only pure water; and that, when this is at all suspected, of drinking it only after it has been boiled and allowed to stand for a few minutes that impurities may subside.

There are several important points which come under the head of foods: The principal of these is, I think, that of *eating very slowly*, and masticating the food thoroughly. Teachers might explain the importance of these, and why they are absolutely indispensable to good digestion, and, consequently, to good health; and the necessity for dividing the food by the teeth into fine particles, and the thorough mixing of these with the saliva, which thus aids greatly the juices of the stomach in the digestion of the starchy principles, especially, of which vegetable foods largely consist. I might place as the principal point to be noticed under the head of foods, that of *over-eating*, were it not that slow eating and

thorough mastication help so greatly to prevent over-eating. Many are receiving the opinion that we all eat too much. Perhaps you all know the celebrated Dr. Abernethy's opinion on this:—that, on an average, of the food most people eat, one-fourth nourishes the body and the other three-fourths are taken at the risk of health and life. I have no doubt that the majority of people eat at least twice as much food as they require, and if they only eat half the usual amount they would have better health. Obviously it is only what is *digested* and *absorbed* and becomes a part of the circulating blood, and not necessarily what is eaten, which nourishes the body. What one eats over and above what the stomach will dissolve thoroughly, and the absorbents take up and carry into the nutrient blood, but over-taxes the excretory organs and injures the whole organism. The excess commonly gives rise to fermentations and acidity, and causes general illness. Medical men know very well that a large proportion of the cases of sickness in children is caused by stuffing.

But it must be borne in mind that it is not safe to at all suddenly reduce the quantity of food habitually consumed. The organs have become so accustomed, almost from birth, to dissolve and appropriate *only a portion of the nutriment from the food* which has been eaten, that they continue to use only a portion of the nutriment from the reduced quantity of food eaten, and hence too little nourishment is obtained. The quantity of food eaten must therefore be reduced slowly and gradually. And nothing helps more to secure moderation in eating, and the taking of only what is required by the system, than slow eating, and with this careful attention to the first feeling of *satisfaction*, not of satiety, while the thorough grinding of the food by the teeth, and the mixing with it of abundance of the saliva aids greatly the digestive functions. More food may thereby be thoroughly digested, and the organism is thereby soon better nourished;—much better than if more food were eaten and only partially digested. To teach the value and consequences of eating slowly is therefore probably of the first importance in this connection. It is said that recently a well-to-do lady of leisure went to consult a celebrated London physician about her health: he looked at her furred tongue and observed other symptoms of *dyspepsia from over-feeding*, and said, "you must eat slower." She asked what he could do for her, if anything, and waited for a prescription. He simply looked very profound, made a gesture with his hand that he was done with her, and said, "eat slower." All she could do was to pay her two guineas for the two words, and to depart and profit by them—it is to be hoped she did so. One common cause of immoderation in eating is the too great variety of dishes served and partaken of at each meal. The smaller the number of dishes served at a meal the better. Variety may best be obtained by changes at the different meals.

There are a few who hardly eat enough food. From eating improper food or eating too fast, their digestive powers have become weak and imperfect, and they are badly nourished.

It is important that children be taught to eat only of plainly but well cooked and sound foods.

Of physical exercise I shall not here say much. It has been ordained that we must exercise to obtain food. Most children get exercise enough; but the physical organization requires *systematic training* as well as the mind. I think an erect, graceful position should be enforced in school, in order to prevent unsymmetrical figures; and some light gymnastic exercises are necessary. I am not clear as to what extent bodily position in schools receives attention.

I believe over-exertion is sometimes a consequence of rope jumping, running and leaping, etc.; and these exercises should receive the teacher's attention. Another point in this connection, which demands notice, is that of cooling off too fast after exercise.

Children not unfrequently get chilled and get an attack of inflammation in this way; indeed it is a common cause of inflammation. One should never sit down, or sit for more than a few moments, not long enough to get even cool, after getting warmed by brisk exercise; but move about a little and put on a woollen shawl or extra coat and get cooled gradually, and so prevent chilliness. This point is of much practical value.

Abundance of sleep is one of the most indispensable conditions of health, and it is probable that ambitious boys, and girls too, sometimes deprive themselves of it in order to take a leading part in their class. It is necessary to warn any such of the evil consequences of such a course. It is impossible to build up a good physical constitution and a good brain without sufficient sleep for the repair and renewal of the waste which has taken place during the exercise of the brain. It is only, you will bear in mind, during sleep that the brain gets rest and can be renewed. Nine or ten hours sleep is usually little enough for a growing school-boy or girl between nine or ten and fourteen years of age. Children should be taught to go to bed at an early hour in a well-ventilated room, and, with very few exceptions, be allowed to sleep as long as they are inclined to, or until they waken of themselves.

In reference to clothing, I believe it is almost if not quite universally conceded that woollen clothing is best at all seasons in our Canadian climate. More especially is woollen of the greatest value as an article to wear next the skin, though I know of some who cannot wear even the finest textures of it next the skin, on account of the irritation it produces, and are obliged to wear instead fine cotton, and woollen over it.

The underclothing, as I have said, should be frequently changed, as it collects and retains the excreta, or waste matters, given off by the skin; which soon become offensive to the sense of smell. It is not necessary that flannel underclothing be frequently washed; frequent shaking and hanging in the sun and air with less frequent washing is sufficient. I am convinced it is better not to wear the flannel next the skin at night; certainly the same garment should not be so worn that is worn during the day. If teachers would be a little more outspoken to their pupils on these points, I believe the air in school rooms would be less disagreeable than it sometimes is.

The practice of unequal clothing, so common, is obviously injurious, and should be discouraged. The muffing of the neck and throat with large clouds and shawls is undoubtedly bad.

The wearing of tight clothing on any part, you all know, interferes with the function of the part, and is decidedly injurious and must be opposed.

Personal cleanliness and bathing, the last essential to health to be referred to, is not least in importance; and I have drawn attention to it in a somewhat indirect way in an earlier part of this paper, indeed more than once. Besides the frequent washing of the clothing, especially the underclothing, it is indispensable to give attention to the state of the skin and to urge the importance of a daily bath of some sort, in order to remove from the skin the excreta which is being constantly given off by it; clogging the pores and preventing the escape of impure waste matters from the blood. Get the pupils to thoroughly understand the necessity for perfect cleanliness in this regard—get them to practise daily bathing for a time, and I am sure the amount of comfort they will derive will be so great that there will be only a few who will not take kindly to it, and continue it. With a good warm water bath, with perhaps mild soap, once a week, a daily wash over the entire body with the hands, just as one washes the face, with brisk rubbing with a rather coarse towel after, is sufficient for the purpose of cleanliness, and should be religiously enjoined upon every pupil. I have now, I think, gone over the main points in hygiene which at the present

time are most essential to be taught in schools. In order, however, to make them more clear, I will briefly recapitulate.

First in importance is pure fresh air, always, at all times—to not once in a while—to go out and get the fresh air, but *always*, indoors, if the health is to be good. In order to get this, free ventilation is absolutely necessary; in the *schools* and in *bed-rooms* especially. Allay any fears as to light draughts of fresh air. They will do less harm by far than still foul air. Decidedly stronger cold draughts should be avoided. It is possible to ventilate without perceptible or disagreeable draughts when sufficient cubic space per pupil is allowed, but with the present construction of most school rooms it is necessary to open windows or breathe poisoned air. With perfect personal cleanliness, the air is less rapidly fouled, remember, and sunlight assists in purifying it. Enjoin the necessity of a removal to a safe distance of all waste excremental matters; and the avoidance of all persons affected with any contagious disease. Likewise, it is very important to impress upon pupils the necessity of themselves being thoroughly disinfected, by baths, &c., after being ill of any contagious disease, before mixing with others, in order that they may not communicate the disease to others.

Impress upon pupils the importance of drinking only pure water. The drinking of impure water, especially water from city wells, as a rule, is always attended with danger.

Encourage a practice of moderation in eating; which practice may be best acquired by eating very slowly and grinding the food well with the teeth, and by partaking, at each meal, of only one or two dishes—not much of a variety at each meal; while the food at the different meals may be varied to the taste, ever teaching pupils to bear in mind that it is what is digested and absorbed into the blood, and not necessarily what is eaten, which nourishes the body. I may observe here too that slow eating, after being practised for a little time, affords the greatest pleasure in eating. The pleasures of the table are thereby unquestionably increased rather than diminished.

*Systematic* exercise is necessary to good health, and good physical development. After active exercise or work, when the body is considerably heated, it is very important, very necessary, to put on an extra garment, or to move about moderately for a time, or both, in order to avoid chilliness; from which there is danger.

Full and sufficient rest, and abundant sleep, that there may be time for complete repair of all the organs of the body, especially of the brain, is very essential. It is only during *rest* that repairs take place; it is only during *sleep* that the brain gets rest.

Children should be taught not to wear tight-clothing, nor unequal clothing; to change, and wash or expose to air and sunlight, underclothing frequently, and not to wear the same garment next the skin at night which is worn during the day. And finally they must be taught to "wash and be clean."

#### THE ADDITIONAL GRANT TO COLLEGIATE INSTITUTES.

The following paper on the above subject was read by Mr. A. Purslow, M.A., LL.B. Head Master of Port Hope High School, before the Head Masters' Section at the recent meeting of the Provincial Association.

The subject of which I gave notice at the meeting of this section last Convention was not, as has been advertised, "Legislative aid to Secondary Education," but "The Additional Grant to Collegiate Institutes;" and although I think that this section owes it to itself, and to that field of secondary education which it represents, not to separate this year without taking up and discussing and giving forth no uncertain sound on the question of the maintenance of Upper Canada College out of Provincial funds, which in all justice

and common sense should be distributed among the High Schools of the whole province; I nevertheless wish on the present occasion to confine your attention, as I shall my own, strictly to the subject of which I gave notice, and which was, as I have said, the additional grant of \$750 annually to each Collegiate Institute.

You are doubtless as familiar as myself with the provisions of that rider to the High School Amendment Act of 1871 according to which this additional grant is *legally* made, yet for the sake of explicitness I venture to read them:

##### 1. COLLEGIATE INSTITUTES AUTHORIZED.

98. And whereas it is desirable to encourage the establishment of superior classical schools, it shall be lawful for the Lieutenant-Governor to confer upon any High School in which not less than four masters are fully employed in teaching the subjects of the prescribed curriculum, and in which the daily average of male pupils studying the Latin or Greek language shall not be less than sixty, the name Collegiate Institute.

(a) Towards the support of such Collegiate Institute it shall be lawful for the Lieutenant-Governor to authorize the payment of an additional sum, at the rate of and not exceeding seven hundred and fifty dollars per annum, out of moneys granted for this purpose.

(b) If in any year the daily average of pupils above described shall fall below sixty, or the number of masters be not less than four, the additional grant shall cease for that year.

(c) If the average shall continue to be less than sixty, or the number of masters less than four, for two successive years, the Institution shall forfeit the name and privileges of a Collegiate Institute, until restored by the Lieutenant-Governor under the conditions provided by this section. 34 V., c. 33, s. 41.

(d) The provisions of this Act relating to High Schools shall apply to Collegiate Institutes. 36 V., s. 74.

Let us examine the provisions of the section just cited. In the first place, according to it, of all the subjects taught in our High Schools, Latin and Greek are singled out and especially fostered. The question arises, why should these two be thus honored?

It is my humble opinion, that a system which singles out and fosters Latin and Greek, by paying out of the public funds, in addition to the ordinary grant, \$750 annually to some high schools for teaching these subjects to a given number of boys, is only justifiable on the assumption that these particular branches of higher education are more valuable to the Province, *i.e.*, are more conducive to the intellectual or material welfare of the people, than any other branches of the High School programme. There are now thirteen such Collegiate Institutes, drawing collectively \$9,750 annually. Will any one have the hardihood to aver that the Latin and Greek taught in these, *additional, mind you, to what they would teach as simple High Schools*, is worth nearly \$10,000 a year to the Province! But it is preposterous that nearly one-ninth of the whole Legislative grant given in aid of 105 High Schools, should, for work such as this, be appropriated to thirteen of them.

In the second place, Latin must be taught to boys.

It will be conceded that the percentage of those who learn Latin or Greek for professional purposes is very small. These subjects are taught in schools, because of their supposed educational value. Now, on the assumption that the Province is benefited by having a knowledge of Latin and Greek disseminated, for purposes of intellectual training, among the population, it must be granted that it is equally benefited when this knowledge is imparted to girls as when imparted to boys. Where is the sense then of distinction in favor of boys?

In the third place, Latin must be taught to not less than 60 boys. On the assumption that for a High School to teach Latin to 60 boys is worth to the Province \$750 a year, it must be worth a proportionate sum to the Province if Latin is taught to a less number than 60. Hence, unless there is some magic in this particular number, it follows that a High School which teaches Latin to thirty, forty or fifty, is as much entitled to an additional grant for the

amount of work of this sort which it does, as are Collegiate Institutes for teaching Latin to sixty or more.

In the fourth place, a High School Board, in order to secure the additional \$750, must employ four masters. This is in keeping with the aforementioned preference shown to boys, it is not in keeping with the fact that a very large proportion,  $\frac{7}{8}$ ths of high school pupils, are girls. Every one will allow that for imparting to these a refinement of manner—springing from refinement of feeling—for inculcating by daily example that modesty and delicacy of thought and sentiment which are the greatest charm and ornament of the feminine character, a "mistress" is much better fitted than a "master." It will be allowed, too, that many lady teachers are the equals if not the superiors of "masters" in teaching several of the subjects of the High School programme. Then, surely, those High Board which, recognizing these facts, secure lady teachers thoroughly competent in both the respects mentioned, by paying as high salaries to them as Coll. Inst. Boards pay to some of their masters—such Boards we say should be deemed equally deserving of additional assistance. And yet a school which employs three masters and a lady teacher is not looked upon as providing what is requisite to obtain the additional grant; and this—though the three masters may be all graduates and the lady teacher booked a First A., while of the four masters which the law requires, three may hold only 3rd-class certificates. It must be owned by every one that the justice, common sense, and gallantry of this arrangement are all equally scant.

It may be said in answer to what I have advanced so far, that the Legislature is supreme and has a right to make what laws it likes. But I say that the Legislature has no right to make any law the working of which shall be attended with injustice; and I now proceed to show the injustice of this law to the other High Schools concerned. I have already adverted to the fact that 13 high schools receive for the special service of having taught an indefinite and undefined amount of Latin to 60 boys \$9,750 annually, or nearly  $\frac{1}{2}$  of the total grant or fund, but not satisfied with this, the Legislature allows these favored schools to come back and take the lion's share of what remains; that is, these schools are first given a lump sum of nearly the average for each high school, and then with the advantage this gift has conferred, they are allowed to compete with other high schools for the remainder. The bonus of \$750 is the salary of an additional master. Is there any fairness, I ask, is there not the rankest injustice in giving to some schools the start of an additional Master, in appointing to other High Schools, and to them the carrying out of the self-same programme, and then to gauge the work of these favored schools by the same measure, and to pay for it on the same basis as is applied to the schools that are not so favored and that have not this start? The fact that these Institutes are almost without exception situated in populous centres, itself confers upon them an immense advantage in their competition with other schools, without the additional one of having a master given them by the Government. Other schools in less populous places are already heavily handicapped in the race by the more limited area from which they can draw pupils, and often by the less advanced attainments of these pupils when they enter. I am not blaming—I do not blame the Trustees or Head Master of Collegiate Institutes for availing themselves of this provision of the law, and for taking the money since they can get it; but as no good can come of perpetuating an injustice, would it not be better for them to be willing to throw this sum into the general fund, and for all High School authorities to unite in a vigorous petition to the Legislature for such an addition to the yearly appropriation for High School purposes as shall bear some proportion to the labor and expense they have of late years thrown off their worn shoulders on to those of High Schools.

After a discussion occupying the greater part of the morning, this question, as well as the wider one, "Legislative Aid to Secondary Education," was referred to a committee consisting of Messrs. Purslow, McMurchy, Oliver, Seath, Strang, Fessenden and McHenry, who were empowered to consider the matter and bring their united views to the notice of the Minister before the meeting of the Legislative Assembly.

## RECENT GEOGRAPHICAL NOTES.

BY A "F.R.G.S."

From the last annual address of the Earl of Northbrook, President of the Royal Geographical Society, we learn to what extent geographical science and discovery have advanced during the last year. From this address we glean some interesting information which we now summarize.

The most important geographical event of the year was the discovery of the North East Passage along the coast of Europe to the Arctic Sea, by the Swedish explorer, Prof. (now Baron) Norden-skiöld, in the ship *Vega*. The detail of this notable discovery was given in the April number of this *Journal*, page 7. Its commercial value will be the opening up of communication with the mouths of the Obi, Yenisei, and Lena Rivers, and thus greatly increase the facilities for commerce with Siberia and the northern part of Central Asia.

The next most interesting and important geographical explorations are those prosecuted in Africa with so much ardour by several European Governments. This activity dates back ten years, to the time when expeditions in search of the heroic Livingstone were undertaken. During the last year, England, France, Germany, Portugal and Belgium have either sent out or maintained exploring expeditions on this vast continent. Since Stanley's famous journey across the continent, no expedition has been more notable than the one conducted by Mr. Thompson, a young geologist, after the unexpected and lamented death of its youthful leader, Mr. Keith Johnston, and one undertaken through the same region by Mr. James Stewart, of the Livingstonian expedition mission on Lake Nyassa.

These expeditions traversed a hitherto unknown country, lying between the two great lakes of Nyassa and Tanganyika. After the death of Mr. Johnston, the first expedition penetrated four hundred miles further into the interior, until it reached the great central plateau in the heart of Africa, 6,700 feet high. The second started from a point on Lake Nyassa, twenty or thirty miles further south than that undertaken by Mr. Thompson, and reached Lake Tanganyika only a day after him. On the shore of this lake, Mr. Stewart secured fifteen sets of lunar observations. The value of these observations may be stated to be that they will enable geographers to fix the longitude of this important point in Central Africa, and greatly add to our exact geographical knowledge of the whole region of this hitherto *terra incognita*.

The object which the Belgian expedition has had in view is the establishment of centres of civilizing influences and commerce at various points in the African interior. One incidental advantage to science gained by this expedition is the preparation, by Dr. Dutrieux, of an excellent treatise on the endemic diseases of Eastern Africa, and the acclimation of Europeans in that region.

Energetic efforts are being made by the French Government to found a civilizing station at some favorable point in the western interior of the continent, in co-operation with the Belgian International Society.

Rev. Mr. Hare, of the London Missionary Society, has reported upon a district of great fertility and beauty, and well watered.

It has an inland sea, named Lukuga, stretching 400 miles in length, from north to south, through the heart of Africa. The Rev. C. T. Wilson, of the Church Missionary Society, has with his party made a remarkable journey from the noted Victoria Nyanza inland sea to Egypt, and has been enabled to aid in settling the vexed question of this inland sea being the principal source of the Nile. He found great obstacles in his passage down the river, owing to the dense growth of aquatic vegetation.

The interesting journey of Major Minto (the distinguished Portuguese traveller) across South-Central Africa, from Benguela to Natal, was completed last year, and promises to add largely to our stock of geographical and astronomical knowledge of that region. Nor are the labors of Mr. H. M. Stanley and various English and German missionaries to increase our knowledge of the "dark continent" less active than formerly. Their explorations and adventures are full of interest and value to the geographical world.

**Mathematical Department.**

Communications intended for this part of the JOURNAL should be on separate sheets, written on one side only, and properly paged to prevent mistakes. They must be received on or before the 20th of the month to secure notice in the succeeding issue, and must be accompanied by the correspondents' names and addresses.

**EXAMINATION PAPERS.**

The following Algebra paper will be found of about the same difficulty as those ordinarily set at the Intermediate and Second Class Teachers' Examinations:

1. If  $(a+b+c+d)(a-b-c+d) = (a+b-c-d)(a-b+c-d)$ , shew that  $(a+b)d = (c+d)b$ .

2. Simplify the expression

$$\frac{\sqrt{a+b} + \sqrt{a-b}}{\sqrt{a+b} - \sqrt{a-b}} - \frac{\sqrt{a+b} - \sqrt{a-b}}{\sqrt{a+b} + \sqrt{a-b}}$$

Divide  $a^3 - b^3 - c^3 - 2bc$  by  $\frac{a+b+c}{a+b-c}$ .

Find the sum of

$$\frac{x}{x^2-1} + \frac{x^2+x-1}{x^3-x^2+x-1} + \frac{x^2-x-1}{x^3+x^2+x+1} - \frac{x^3}{x^4-1}$$

From your result infer the value of

$$\frac{a}{a^2-b^2} + \frac{a^2+ab-b^2}{a^3-a^2b+ab^2-b^3} + \frac{a^2-ab-b^2}{a^3+a^2b+ab^2+b^3} - \frac{a^3}{a^4-b^4}$$

8. Two numbers whose sum is  $2a^3$  are in the ratio of  $a+b - \frac{ab}{a+b} : a-b + \frac{ab}{a-b}$  to each other. Find them.

4. If  $k = x\sqrt{1+y^2} + y\sqrt{1+x^2}$ , prove that  $\sqrt{1+k^2} = xy + \sqrt{1+x^2}\sqrt{1+y^2}$ .

5. Solve the equations—

(1)  $\frac{3+2x}{1+2x} - \frac{5+2x}{7+2x} = 1 - \frac{4x^2-2}{4x^2+16x+7}$

(2)  $\sqrt{x^2-2x+81} + (x-4)^2 = 5$ .

(3)  $\frac{xy}{x+y} = \frac{1}{3}, \frac{yz}{x+z} = 1, \frac{yz}{y+z} = -1$ .

6. Find all pairs of values of  $x$  and  $y$  that will make both expressions  $x^2+xy-(a-b)^2, xy+y^2-4ab$  vanish.

7. Out of a cask containing 860 quarts of pure alcohol, a quantity is drawn off and replaced by water. Of the mixture a second quantity, 84 quarts more than the first, is drawn off and replaced by water. The cask now contains as much water as alcohol.

Find how many quarts were taken out the first time. Show that the problem has only one solution.

8. (1) Given  $a$  the sum of two quantities, and  $b$  their product, shew that  $\theta$  in  $\theta^2 - a\theta + b = 0$ , represents either of the quantities.

(2) From  $x^2+ax+b=0$  and  $x'^2+a'x+b'=0$ ,  $x$  being the same in both, obtain an expression not involving  $x$ .

Find the condition that the equations

$$x^3+ax^2+bx+c=0$$

$$x^3+ax+\beta=0$$

may have a root in common.

9. (1) If  $\frac{a}{b}, \frac{c}{d}, \frac{e}{f}$  be in descending order of magnitude, shew that

$$\frac{a+c+e}{b+d+f} > \frac{e}{f} \text{ and } < \frac{a}{b}.$$

(2) If  $a, b$  and  $x$  be positive quantities, and  $a > b$ , prove that

$$\frac{x+a}{\sqrt{x^2+a^2}} > \frac{x+b}{\sqrt{x^2+b^2}}, \text{ according as } x \begin{cases} > \\ < \end{cases} \sqrt{ab}.$$

What if  $a < b$ ?

The following, as far as it goes in the subject, is of the standard required in Honor Algebra from candidates for First Class Certificates:

1. (1) Find the whole number of permutations of  $n$  things, when each may occur once, twice, ... up to  $r$  times.

(2) There is a polygon of  $n$  sides, and such that a circle may be described to pass through any four consecutive points; how many different circles may be described, each of which passes through four angular points of the figure?

2. (1) If  $n$  be a positive integer, prove that

$$0 = (n+1) - n.n + \frac{n(n-1)}{2} - (n-2) \cdot \frac{n(n-1)(n-2)}{3} + \dots$$

(2) Find the coefficient of  $x^5$  in

$$(1-2x+3x^2-4x^3)^{-\frac{1}{2}}$$

3. Establish the Exponential Theorem.

$$\text{Deduce } \log_e(1+x) = x - \frac{x^2}{2} + \frac{x^3}{3} - \dots$$

By expanding  $2 \log_e(1-8x)$ , and  $\log_e(1-6x+9x^2)$ ,

Prove

$$\frac{1}{n \cdot 2^{n-1}} = \frac{1}{n} - \frac{1}{2^2} + \frac{n-3}{2^4} - \frac{(n-4)(n-5)}{2^6} + \dots$$

4. Find the present value of an annuity to continue for  $n$  years, compound interest.

Find an expression for the monthly instalment to repay a loan of \$1,000 in ten years, interest 8 per cent. per annum, payable half-yearly.

5. A building society has a mortgage to be paid off by a quarterly instalment of \$100, which has 6 years and 5 months to run; obtain an expression for estimating its present value, interest 8 per cent. per annum, payable half-yearly.

6. (1) Any convergent is nearer to the continued fraction than any other fraction which has a smaller denominator than the convergent has.

(2) Prove

$$e = 2 + \frac{2}{2+} \frac{3}{3+} \frac{4}{4+}$$

7. Shew that a solution of  $ax-by=c$  in positive integers can always be obtained, and thence obtain the general solution.



## Practical Department.

## HOW CHILDREN SHOULD BE TAUGHT TO READ.

MR. EDITOR,—Believing that no subject is so badly taught in the schools of Ontario as reading, I propose, with your permission, to conduct a discussion in your columns on the methods of teaching it with a view of learning which of them is the simplest and most philosophical. During the past two years I have had the honor of advocating at the Provincial Teachers' Convention, and at several County Conventions, a *self-consistent phonic system*; that is, a system which gives the child the *sounds and powers* of the letters at once, and at first gives it but **ONE SOUND FOR EACH**. During the past year, Professor Meiklejohn, of the University of St. Andrews, has published a little work, advocating precisely the same system. This *One Sound System* I purpose to expound and defend.

With reference to other systems of teaching reading, my position will be friendly to the various phonetic methods; respectful to a sentence method as an *introduction* to the process of learning to read; indifferent to the alphabetic method (if there can be such a thing), and decidedly antagonistic to the word method as understood and taught in Ontario.

I hope that every statement I make may be fairly criticized, and if necessary corrected. I desire to reach the truth, and I am quite willing to be hurt a little while climbing.

JAMES L. HUGHES, P. S. Inspector.

## ARTICLE II.

## ADDITIONAL OBJECTIONS TO THE PHONIC SYSTEM.

A correspondent has called my attention to what some authors of prominence regard as a fatal objection to the Phonic method. The authors named are Mr. Currie and Mr. Gill. The works of these gentlemen are too well known to need commendation from me. Did they need it, I am quite prepared to give it without stint. The positions held by these gentlemen, the former being Principal of the Church of Scotland Training School, Edinburgh, and the latter Professor in the Normal College, Cheltenham, prove them to be men of unusual ability and experience. But, however able their writings and exalted their positions, it must be remembered that no single head can contain all knowledge, and that no one man can so fully investigate all departments of school work as to be able to speak authoritatively in regard to each. In the case in point, it is perfectly clear that the opinion of neither gentleman should have any weight, as neither understands the first principle of the system he condemns. Their remarks fully prove this to be the case. Mr. Currie, after stating the objection, to which I replied in my last, that "the English Alphabet is irregular and confusing," goes on to say, "But to the extent to which the alphabet is regular, the Phonic method is liable to an objection of the same nature as that so often urged against the common (or Alphabetic) method, viz.: that the aggregate of the sounds of the letters in a word does not naturally suggest the sound of the word itself; an objection which, though not of much weight against a method not pretending to be phonic, is fatal in the case of one which does. According to the method in question, the pupil is expected to arrive at the sound of the word *bat*, for example, through this analysis: bē-ā-tē (the two consonants being uttered upon a sound here denoted by ē, but which is in reality something like the *e* in French, or the *u* in *but*.) This threefold sound may be a nearer approach to the single sound *bat*, than the threefold bē-ā-tē of the alphabetic method; but it certainly does not constitute that sound. It fact it cannot:

in the very first step of its attempt, it gives a distinct sound to the consonant *b*, a letter whose essential feature is that by itself it has no sound at all."

Mr. Gill, speaking of the phonic method, says, "Now it may be shown that such a method is nothing but a variety of the alphabetic method with other names to the letters. Accordingly we find, in the so-called phonic method, another vowel sound is attached to the consonant instead of the one when its name is given. Take the word *mat*; on the *name* method (alphabetic) this is em-a-tee; on the *phonic* it becomes um-ā-tē: *bat* becomes bē-ā-tē, or more frequently, bū-ā-tā. Allowing, however, that these new names are a nearer approach to the sounds than the ordinary names, still there remains an objection fatal to its peculiar claims, namely, that it does not accomplish what it professes."

Now, there could be no fault found with the reasoning or the conclusions of the writers quoted, if there were any correctness in their premises. This is not the case, however. They have "called upon their imaginations for their facts." There could be no clearer case of misrepresenting a system in order to attack it. The misrepresentation in this case undoubtedly arises from a misconception of the real nature of the Phonic system. No teacher who knows anything of phonic analysis would teach his class to sound the elements in *mat* or *bat* as represented above. The three elements in each case would be uttered individually, so that when brought into one word and sounded in uninterrupted succession they would form the word required. It is incorrect to sound *b*, bē or bū; *m* um: or t, tē or tū, *In forming b and m with the vocal organs, no sound whatever should escape from the lips after they are opened. In both cases the lips are closed and a sound is formed which in the case of b continues only for an instant, and in the case of m flows out through the nostrils so long as the lips are kept closed. No sound of m or b escapes through the lips, hence it is simply ridiculous to represent these letters, as done by Mr. Currie and Mr. Gill. It is a bad mistake to sound b with any vowel sound following the opening of the lips; it is a greater error to sound m with any vowel sound preceding the closing of the lips. This may be incomprehensible to those who do not fully understand the vast difference between naming and sounding the consonants. In the case of t, it is utterly inexcusable to associate any vowel sound whatever with it in giving its power, or in what is technically called sounding it. It modifies breath unvocalized, and has by itself no sound.*

There is a remarkable similarity in the quotations made above. In fact, so striking is their agreement that I am forced to the conclusion that one author must have accepted the conclusions of the other. Two men may be led to think out the same great truth independently; it is not often that two men independently discover the same great error, and dignify it with the garb of truth.

## ADVANTAGES OF THE SELF-CONSISTENT PHONIC SYSTEM.

1. *Children are more intensely interested in what things do than in what they are called.* Young children care comparatively little about the names of animals. They name them according to the sounds they make. They call a dog *bow-wow*, a cat *meow*, and all the domestic animals by what they say instead of by their names.

Can this instinctive interest in what things do or say be utilized in teaching to read? It can be and is used in teaching by the phonic method. The teacher at once makes the distinction between what the letters say and what they are named. The late Professor Monroe justly regarded this as a most important distinction. He would begin by asking pupils about to be introduced to the alphabet: Have you a dog at home? Yes, sir. What is his name? Watch. What does he say when he speaks to you? Bow-

wow. Have you a cat? Yes, sir. What is its name? Tom. What does it say? Meow. So he would proceed with other illustrations to show his pupils clearly the distinction between the name of a thing and what it says. He would drill his class quickly for some time thus, His name is—? He says—? Its name is—? It says—? &c.

Who, the teacher has led his pupils to make this distinction he is ready to proceed to the letters. He places the letter P for instance on the blackboard, and says "This little fellow" has a name, pee. This information will interest them very little. What do they care about a mere mark which does not represent to them any thing or any principle, in which they naturally take an interest? They have been making gigantic strides in learning before coming to school; they have learned the names, properties, and relationships, of nearly everything they have ever seen, and without apparent effort. Why? Because everything interested them personally, and was linked to their nature either because it was a living, saying or growing thing; or because they could use it in some way or other for their amusement or benefit. What is there in that mark on the board to interest or attract them? They like to make marks, but every mark must represent to them a "form of life," that is, some real object. They make a row of marks and call them men; they draw a few crooked lines and call them a horse, or a house, or a tree. Adults may see no likeness to the object, but they do, and their imaginations give these rude marks reality and life. So if the marks which we call letters are to have any depth of interest to children, they must have associated with them a definite idea of life, or utility. Both these ideas are connected with the letters by the Phonic method. Having incidentally remarked that the name of the letter is pee, the teacher should tell his class that the "little fellow" always says the same thing, namely, what they do when blowing pieces of paper off their hands, if they close their lips before blowing.

In a similar way the names and powers of all the letters should be given. The names should be mentioned incidentally, the chief attention being given to the powers and sounds, or what the letters say. It is important that this form of phraseology be adopted, so that the saying may be associated with each letter, in order to give it a sort of personality in the mind of the child.

Some writers argue that it is monstrous to set poor little children practising at the sounds of the 26 letters, because they have never heard and never will hear such peculiar sounds outside the school-room. To this, two answers may be given: 1. Novelty may be very desirable, and most school-rooms would be improved by it; certainly the child's interest in learning the sounds will be much greater on account of the novelty; 2. If the idea of saying be associated with each letter, the pupils will learn both the sounds and names more rapidly than the names alone. Why is it that a child who learns the names of 26 fellow-pupils in a single day, will require months to learn the names of an equal number of letters? "Oh, it is so much easier to remember names of children than names of letters," many will answer. This reply is totally incorrect. The pupils' names are more difficult to remember than those of the letters, but they are remembered because the pupil learns them in a natural way. He came in contact with 26 living, moving, speaking, shouting, playing things in whom he was intensely interested, and whose names were learned incidentally and not as a set lesson. So the teacher should, as above stated, direct special attention to what the letters say, and give the names in passing. It was in this way that the pupil learned names at home, and he knew before entering school the names of nearly everything animate or inanimate which he had ever seen, without ever having a single set lesson on names. The absurdity of giving

lessons on names is reserved for the school-room. There the deadening process is practised to a frightful extent; and let it be remembered that the naming of lists of words is only slightly less ridiculous than the naming of lists of letters.

There will doubtless be many, both of the advocates and opponents of the Phonic system, who will object to allowing the pupils to learn the names of the letters at all until they have learned their powers—until, in fact, they require to know them for oral spelling. This I believe to be a mistake, both for the sake of expediency and principle, because (1) many children have already learned the names of the letters before coming to school; (2) there is really no effort required to remember the names of things when they are learned practically in conjunction with their uses; (3) the names will be useful to the teacher in calling attention to particular letters after the pupils have left their self-consistent primers and entered upon the irregularities of the language.

There is no danger of any confusion arising in the minds of the pupils in regard to the names and sounds of the letters if the sound has been given in each case as what the letter says. The name of a thing is clearly distinguished from its use even by children.

2. It makes the pupil an independent worker in the process of learning to read. From the very first the pupil can make out the words for himself. If the tablets and primer are properly arranged, he never needs to be told the name of a single word. The teacher merely gives him the tools with which he is to work his way through the book. The alphabet learned phonically is a universal key which unlocks every difficulty for him. Step by step he marches on, growing stronger every day. He is not a mere imitator, while learning to recognize words; he does not simply repeat the name of a certain combination of letters after his teacher in a parrot-like way until he remembers it; he discovers for himself the sound of every new word he meets. This makes learning to read an intensely interesting work, in which the pupil is constantly passing from triumph to triumph. He learns to depend on himself and to use the powers which the school ought to develop, but which by its improper methods it so often dwarfs.

8. Knowledge is used as soon as it is acquired. The day has gone past, when it would be regarded as good teaching to compel pupils to learn the whole multiplication table before putting any part of it to practical use. The same is true of the antiquated methods of teaching all the rules in grammar, or all the definitions in geography before proceeding to the real, objective parts of these studies. It is almost incomprehensible that so many men and women yet teach the names of twenty-six letters before giving their pupils the slightest reason to believe that they can ever be anything to them but so many useless black marks. Thousands of pupils are stupefied every year by this blighting process, who never recover fully the acuteness and activity of their faculties. The phonic system, properly taught, gives the powers of only two letters before the child is set to form words from them. Thus two of the most important of the fundamental principles of education are satisfied: (1) The child applies his knowledge as soon as he gains it, instead of merely stowing it away in a garret; (2) He learns by doing. An apprentice learns how to use a tool by using it, and a pupil learns the function of a letter by combining it, and sounding it when in combination. Thus the seeds of knowledge acquired are made to germinate and produce greater knowledge. Too often they are placed in a granary and allowed to remain there.

It may be claimed that the look and say method utilizes knowledge as soon as it is obtained. This is true to a limited extent, and with this essential difference. The look and say method uses knowledge for recognition of known words when they are repeated,

the phonic uses what has been learned in the acquisition of additional knowledge. The one is a simple effort of recognition, the other is a productive, and developing exercise of power guided by experience.

4. *The pupil uses his reasoning and constructive faculties in learning to read by this method.* He does this in addition to using all the faculties called into action by any other system. The importance of this can not be over-estimated, as it renders the work of learning to read a developing process. The mind is enlarged by the "productive activity" required of it while deciding the names of new words.

5. *Pupils learn to spell better than if taught by other systems.* There are two reasons for this: 1. The ear is associated with the eye, and is of service so far as the irregularities will allow. Of course this is only to a limited extent. 2. The Phonic, more than any other system, secures accurate inspection of words while reading. Concentrated attention to the literal formation of words when reading, is the only means by which good spelling can be absolutely acquired.

6. *It secures distinct articulation.* Clearness of speech results from giving to each of the letters, especially the consonants, their full sound or power. The Phonic system is the only one which pretends to give the pupil any assistance in obtaining a clear utterance in addition to what he may gain by imitation. It is quite true that if pupils always have good models they will unconsciously imitate them, but the ear training of the Phonic system greatly aids the pupils in detecting the nice points of articulation. The great majority of men and women do not perceive the fact, when they hear a word pronounced in a manner entirely different from the way in which they are accustomed to pronounce it themselves. They continue to mispronounce words which they hear pronounced correctly every day, because they lack ear cultivation.

7. *It aids in removing provincialisms.* Every teacher who has tried to make an English pupil use *h* correctly knows how he will continue to misplace it, however clearly the teacher may speak words for him. "Say *oats* and *hay*," says the teacher for the fiftieth time; "*hoais* and *'ay*," blandly responds the pupil. This is a fair illustration of the results of attempts to cure provincialisms by imitation alone. There must be systematic ear cultivation and careful practice in the proper arrangement of the vocal organs in order to secure purity of speech. These requisites are secured by the Phonic system alone.

#### PRACTICAL WORK OF THE SCHOOL-ROOM.

1. *Should a teacher make special preparation of the lesson for each recitation?* Unless the teacher is perfectly familiar with the lesson and its bearings, so far as they ought to be presented to the class, and beyond that he should make special preparation for each recitation; I say beyond that, because to teach a lesson well one should know a good deal more of it than the lesson contains. He ought to have a reserve fund of information on it. A teacher should be so well prepared with each lesson, that were he called upon to recite it he would be able to do so better than the best pupil in the class. He should make such special preparation for the following reasons:

It will inspire him with self-confidence; and that is essential here as it is in every undertaking. It will enable him to "know what he knows, and to know what he doesn't know." A lack of confidence on the part of the teacher will beget a corresponding lack of confidence in him on the part of the pupils. He should feel and prove himself to be master of the occasion—always and without any airs or attempts at display. It is possible, and even probable, for a teacher to be confident of his ability to teach a lesson and yet not be able to do so; but such ill-grounded confidence will soon be discovered, and result disastrously to the teacher.

If the teacher is well prepared, the pupils will have confidence in his ability as a teacher and scholar, and *vice versa*. A teacher's

promptness and accuracy will be a rebuke to indifference on the part of the pupils. If a teacher fails to make this impression, fails to give his pupils good reasons for believing and trusting in his superior wisdom, he fails utterly. Should he hesitate too frequently, or fail to answer a question, or solve a problem contained in the lesson, the pupils may put the worst possible construction upon it; and thus, by want of proper preparation, the teacher falls in the estimation of his pupils.

It saves time. When a teacher has the lesson on the end of his tongue, he can give his whole attention to the management of the recitation. Our periods of recitation vary from ten to thirty minutes, and we find this rather too short than too long. This time belongs to the class. Facts, illustrations, apparatus for experiments, should all be at hand when the recitation begins, so that the teacher need not spend from one to ten minutes in a "still hunt" for an answer to a question, or in thinking out a problem, or in looking up apparatus. The thinking must be done before the recitation hour arrives. The most unfavorable place and time for a teacher to study is in the presence of his class during a recitation. Those who put it off until then, do so at their peril. Besides, if the teacher is prepared, he wastes no time in circumlocution, and there is no time lost in guessing and in senseless debate by the class.

He should make special preparation to avoid teaching errors. I have known teachers to teach positive errors, errors of facts, errors of inflexion, errors of pronunciation, etc., just because they neglected to prepare the lesson. Sometimes teachers will take a false position in reference to something in the lesson, and, unwilling to yield to the criticism of the class, will maintain that position, even in the teeth of the text. This is very unfortunate, and would be avoided by special preparation.

The teacher's example should be an inspiration to his pupils. We would do well to keep in mind this old-fashioned maxim, that we teach by example, green to our memories. Pupils, knowingly or otherwise, learn to do, to a great extent, as their teacher does. If the teacher is habitually ready, accurate and careful in expression, some of his pupils will want to be so too. Show me a class habitually inaccurate, unready, and slovenly in expression, and I will show you a teacher who makes no special effort to train them.

A teacher should make special preparation for his own profit. We are forming *habits* of study. As we do from day to day, so will we get into the habit of doing. Habit, noiselessly and unconsciously, is forging her chain around us. Before we are aware of it we are in her iron grasp. By carefully preparing each lesson, a correct habit of study is formed, then the tighter and stronger the chain the better. This habit established, knowledge becomes more available, and the teacher is enabled to make constant advances in the attractive and ever-widening areas of thought and knowledge.

2. *Should this preparation include the method of conducting it?* I think that the teacher should decide upon the plan before the recitation begins. Where there is but one method of recitation, where the plan is unalterably fixed, there is no necessity for any preparatory thought as to method. The pupils know just *what* will come, *how* it will come, and when their turn will come, and what's the use in breaking in upon such delightful uniformity? But it ought not to be so. No one method should be exclusively adhered to, because it begets monotony and indifference. Methods should change too, to suit the lesson. Some lessons can be taught better by one method than another. The catechetical method is sometimes to be preferred to the topical, the written sometimes to the oral, etc. Since methods should change, the plan to be pursued at any recitation should be determined beforehand. The method having been selected, the teacher knows just what apparatus to get ready, what to tell his pupils to do in the way of preparation, so that there will be no bother at the time of recitation about pens, paper, books, slates, pencils, etc.

3. *To what extent should a teacher use a text-book in recitation?* The principle is, to use the text-book as little as possible. It would be better, were it possible, to use no book at all during recitation. The text-book hampers the teacher in proportion to his dependence upon it. The manuscript hinders the speaker. I could speak with more ease to myself, and probably with more satisfaction to you, could I dispense with this manuscript; but most teachers have neither the time nor the talent to memorize everything they have to communicate. There is, therefore, to be some use made of helps, in the shape of text-books or their equivalents.

I find it difficult to make a general rule on this subject, but I should think that the text-book is to be used by the teacher during recitation, in those branches in which it is necessary for the exact

words of the text to be repeated by the teacher or pupil. But even this is to be so limited as to exclude the text-book for definitions and principles, as they ordinarily occur in teaching. To be more precise, the teacher should use the text-book for the "exercises," in the application of the principles in the various branches taught; for mathematical problems (not geometrical theorems), map questions in geography, orthography, etymology, so far as the words are concerned, and in reading, whether English or some other language.

I do not wish to be understood either as limiting the teacher to the use of the text in any branch of study, or of attempting to exhaust the text on every subject. But teachers, like men in the other professions, do not always control circumstances, and hence cannot always be thoroughly prepared with every lesson, and so, sometimes, like the others referred to, when the crucial moment comes, the vision is obscured, and the memory a blank. In such cases I should fly for refuge to the text-book. Is it not better for the teacher to use text-books than to fizzle, or blunder, or fail outright? Above all, teachers should be accurate, and therefore, while the use of the text-books should be reduced to the minimum, they should be at hand for an emergency.—*Pennsylvania School Journal*.

### THE GEOGRAPHY CLASS.

Two leaders are chosen, who each select in turn until all the players are taken, and are formed in two lines facing each other, a chair for each being placed behind him. The leader on one side calls out some letter, and says, "Sea," or mentions some other body of water. The leader on the other side immediately names one beginning with the letter, and each one on his side gives another in rapid succession. If there is a pause, the leader of side No. 1 counts ten rapidly, and calls "Next;" the player who stands next answers, and the one who missed takes his seat. If a mistake is made by giving a wrong name to the piece of water called for, as by calling a river by the name of a sea or isthmus, or by giving the wrong letter as its first one, and it is not corrected by some member of the same side before the leader of the opposite side calls out "Miss," then all of side No. 2 must take their seats, which counts two for side No. 1.

The leader of side No. 2 requests all on his side to again stand in line, with the exception of those who missed, and calls out some piece of land, as mountain, State, county, etc., and a letter, which the opposite answer in the same way, and if every one succeeds in answering to the call, and each one gives a correct reply without mistake, they score three for their own side. The game is won by the side that first scores ten; and as all who have missed must keep their seats until the end of the play, they have abundant opportunity for laughing at the mistakes which are made by their friends. If it should happen that the leader of one side has no one to call upon to stand in line, he is obliged to answer alone; and if he also fails, the victory belongs to the other, even if they have not scored ten.

Another game of geography is played by each person taking pencil and paper, and in a given time—say, five minutes—writing as many geographical names, beginning with a certain letter, as he can remember. When "time" is called, a player reads his list, and any name that he has, and the others have not, counts as many for him as there are players besides himself. Each then reads his list in turn, and the one who scores the greatest number, when all have read, wins the game. If during the reading any name is challenged, and the writer is unable to describe it, if it be a river, sea, bay, etc., or locate it if it is a city, town or cape, every other player counts one.—*Harper's Young People*.

### MORAL TRAINING.

John Bright heartily believes—like every other good and manly man—that moral teaching is as much a part of education as the three R's. "Education," he said the other day, "is not even classics and mathematics, of which in my day, when I was young, I knew nothing, and of which I have not acquired any knowledge since. I regard what are called classics, that is, the ancient languages of Greece and Rome, as rather luxuries than anything else. I do not myself believe that there is anything in the way of wis-

dom which is to be attained in any of the books of the old languages which at this moment may not be equally attained in books of our own literature. Therefore, I think a man may be as great, as good, and as wise a man, knowing only his own language and the wisdom that is enshrined in it, as if he knew all the Latin and Greek books that have ever been written. I think, with regard to teachers, that they have two entirely different branches of labor. They have that of instructing their pupils from books, and they have that of instructing them from their own conduct and their own manners. You want to teach a child to be gentle—and I must say that is better than book learning—no, that gentleness that is weakness, for there is perfect gentleness which is combined with great force. You want gentleness, you want humanity. Humanity to animals is one point. If I were a teacher of a school I would make it a very important part of my business to imbue every boy and girl with the duty of being kind to all animals. It is impossible to say how much evil there is in the world from the barbarity and unkindness which people show to what we call the inferior creatures. Then there is the quality of unselfishness. Selfishness in families is the cause of misery and the cause of great injustice. Unselfishness and a love of justice—these are qualities which come if you offer them to the young person's mind. Their very nature makes them that they cannot receive it except with liking and approbation. And I have no doubt that it is possible for the teachers in the elementary schools of Birmingham, during the next ten years or so, during which they will have two or three generations of children under their care, so to impress their minds on these subjects that twenty years hence it will be seen and felt over the whole town that there is an improvement in these respects in the general population. (Applause.) These are things which I think it behooves the teachers in these schools to bear in mind. They cannot possibly have too high a sense of the responsibilities of their position and of their duties."—*Tribune*.

JUNE EXAMINATION, 1880.

ADMISSION TO HIGH SCHOOLS.

ARITHMETIC.

TIME—Two Hours.

Examiner—J. A. McLELLAN, LL.D.

Values.

- 10 1. Multiply one hundred and seventy-four millions five hundred and fifty thousand six hundred and thirteen by six hundred thousand four hundred and seventeen. Explain why each partial product is removed one place to the left.
- 10 2. Define *measure*, *common measure*, and *greatest common measure*.  
Find the G. C. M. of 158517 and 7889501522.
- 10 3. Shew that  $\frac{2}{3} = \frac{4}{6}$ .  
Simplify  $\frac{4\frac{1}{2} \text{ of } \frac{1}{2} \text{ of } 7\frac{3}{4}}{12\frac{1}{2} - 2\frac{1}{2}} + \frac{2\frac{1}{2} + 1\frac{3}{4}}{9\frac{1}{2} - 3\frac{1}{2}} - \frac{12854}{12855}$
- 10 4. A brick wall is to be built 90 feet long, 17 feet high, and 4 feet thick; each brick is 9 inches long, 4½ inches wide and 2½ inches thick. How many bricks will be required?
- 10 5. A merchant received a case of goods invoiced as follows:—  
12 pieces of silk, each 48 yards, at 5s. 8d. per yard.  
15 " cotton, each 60 yards, at 6½d. "  
20 " " each 56 yards, at 4½d. "  
14 " Irish linen, each 40 yards, at 1s. 8½d. per yd.  
Supposing the shilling to be worth 24½ cents, find the amount of the above bill of goods.
- 10 6. Divide 76.891955 by nine hundred and twenty thousand three hundred and eighty-five *ten-billionths*.
- 10 7. D. D. Wilson, of Seaforth, exported last year 8860 barrels of eggs, each containing the same number. He received an average price of 14.85 cents per dozen. Allowing the cost (including packing, &c.) to have been 18.5 cents per

dozen, and the entire profit to have been \$7900.20, find the number of eggs packed in each barrel.

- 10 8. The dimensions of the *Globe* newspaper are 50 inches by 82 inches, and the daily issue is about 24,000 copies, how many miles of Yonge street, which is about 70 feet wide, might be covered with ten weeks' issue?
- 10 9. A flagstaff 120 feet high was broken off by the wind, and it was found that  $\frac{7}{10}$  of the longer part was  $\frac{2}{5}$  of  $9\frac{1}{2}$  times the shorter part. Find the length of each part.
- 10 A and B together can do a piece of work in  $\frac{3}{4}$  of a day, B and C in  $\frac{1}{2}$  of a day, and C and A in  $\frac{1}{3}$  of a day. In what time could all working together do the work?

ENGLISH GRAMMAR.

TIME—TWO HOURS.

Examiner—JAMES HUGHES.

Values.

- 42 1. Parse—"The stranger trod upon alabaster slabs, each bearing an inscription recording the titles, genealogy, and achievements of the great king."
- 12 2. Analyze—"He who entered them might thus read the history, and learn the glory and triumphs of the nation."
- 12 3. (a) Define four classes of Pronouns, and give an example of each class.  
(b) Decline *He* in both numbers.
- 8+4 15 4. Correct the following, if necessary, giving your reasons for making the changes :—  
(a) It could not have been her.  
(b) You are stronger than me.  
(c) I cannot work like you.  
(d) My friends approve my decision, especially them who are best acquainted with the circumstances.  
(e) I do not know neither how it was done nor who done it.
- 10 5. (a) What nouns form their plural by adding *es* to the  
4+6 singular.  
(b) Write the possessive plural of *lady*, *orphan*, *mechanic*.
- 9 6. Write the *third singular* form of *to see* in each tense in the indicative mood.

GEOGRAPHY.

TIME—ONE HOUR AND A HALF.

Examiner—J. J. TILLEY.

Values.

- 8 Define Watershed, Frith, Delta, Horizon, Axis of the Earth, Polar Circles, Ecliptic, First Meridian.
- 9 2. (a) Why are the days longer in Summer than they are in Winter in the Northern Hemisphere?  
(b) What causes the change of seasons?  
(c) Why does the sun appear to rise in the East?
- 15 3. Trace the following rivers from their rise to their outlet, and name the principal cities on their banks :—Danube, Rhine, Ganges, St. Lawrence, Mississippi.
- 9 4. Name the cities of Ontario, and give the situation of each.
- 10 5. Over what railroads would you pass in going (i.) from Hamilton to Peterboro'; (ii.) from Collingwood to London?
- 12 6. What are the chief natural productions of Manitoba, Nova Scotia, Southern States of America, France, China?
- 9 7. Where are the following :—Islands—Malta, Anticosti, Ceylon? Capes—Verde, Comorin, La Hogue? Bays—Verte, All Saints, Table?

COMPOSITION.

TIME—ONE HOUR AND A QUARTER.

Examiner—J. O. GLASHAN.

Values:

- 12 1. Insert the necessary punctuation marks and correct the spelling in—

A little way below the great fall the river is comparatively speaking so tranquil that a ferry-boat plies between the Canada and American shores for the convenience of travellers when I first crossed the heaving flood tossed about the skiff with a violence that seemed very alarming but as soon as we gained the middle of the river my attention was altogether engaged by the surpassing grandeur of the scene before me I was now within the area of a semi-circle of cataracts more than three thousand feet in extent and floated on the surface of a gulf raging fathomless and interminable majestic cliffs splendid rainbows lofty trees and columns of spray were the gorgeous decorations of this theatre of wonders.

- 18 2. Render into good English—

The owl conceals itself by day in the recesses of ivy-clad ruins. He conceals itself in the hollows of old trees. It conceals itself in barns. It conceals itself in haylofts. Towards twilight it quits its perch. Towards twilight it takes a regular circuit around the fields. It skims along the ground in quest of mice. It skims along in quest of moles, shrews, and large insects. It seizes its prey. It returns with it in its claws. The owl is of great utility. It destroys an enormous quantity of mice. It destroys an enormous quantity of other vermin. These would otherwise do incredible damage.

- 9x4 3. Improve the following sentences :—

Napoleon gained a great lot of battles before his career was finished.

I shall be much obliged if you would do so.

We arrived about the middle of the day in Toronto.

You are not the boy whom I promised to give it to.

A virtuous and pious life will prove the best preparation for immortality and death.

All the money was spent by my brother which you gave me.

18. 4. Write at least twelve lines on *The Magna Charta*.

Outline.—The tyranny and rapacity of John; the Barons determine to vindicate their rights; Magna Charta drawn up; its chief provisions; John refuses to grant it; London is seized by the nobles; the King reluctantly signs the document; persuades the Pope to annul the charter; traverses the kingdom with hired mercenaries, laying it waste with fire and sword; his sudden death relieves the nation.

Notes and News.

ONTARIO.

The Degree of Bachelor in Divinity has been conferred on the Rev. Cyrian W. Pinkham, Chief Superintendent of Education (Protestant), Manitoba.

Professor Hutton, recently appointed Professor in Classics, and Mr. Vines, Classical Tutor, have commenced their respective duties in Toronto University.

No better appointment has ever been made in this country in connection with educational work than the recent elevation of Dr. Daniel Wilson to the Presidency of the University College, Toronto.

The Public School Board at Port Hope are about to introduce the half-time system into their schools for a while, to give an opportunity of testing its merits.

In the Collingwood Collegiate Institute fifty-nine candidates passed at the recent Intermediate examination—not thirty-six, as previously reported. Of these, four passed in grade A., twenty-three in grade B., and thirty-two in grade C. Of the second-class candidates only one had previously passed, who now has obtained a-C.

Vienna High School passed five candidates, namely, one in grade A. and four in B.

One pupil passed in Omeme High School and obtained grade A. In the Newcastle High School four candidates were successful; one secured grade A., two took grade B., and one Intermediate.

Twenty-eight candidates were sent up from Elora High School. Of these, fifteen passed, one in grade A., ten in grade B., and four Intermediates.

In the Strathroy High School twenty-two candidates passed the July Intermediate examination. One student from this school passed a very creditable examination at the junior matriculation, Toronto University, this year; one obtained second-class honors in Mathematics, and one second-class in English, on first year examination. In third year examination, one student won a scholarship in modern languages; and in fourth year examination, Victoria University, one student won two scholarships.

Beamsville High School was successful in passing five candidates, namely, two in A., two in B, and two Intermediate. They were all pupils of the school.

NOTE.—An old subscriber is anxious to obtain the numbers of the CANADA SCHOOL JOURNAL for July 1877 and January 1878. He will pay a moderate sum. Any of our readers who can spare them will please communicate with us.

The Chatham District Teachers' Association has an attractive programme for Friday and Saturday, 8th and 9th inst. A literary entertainment, consisting of readings and short addresses by several members of the Association, and other friends of education, will be held in the Town Hall on Friday evening. All interested in the advancement of education are cordially invited to attend the meetings of the Association. The subjects to be brought forward are to be open to general discussion.

Last week, when visiting the High School, Port Hope, we noticed that an excellent plan is adopted, and one that commends itself for adoption in similar schools, namely, having on the walls, neatly painted, the names of those students who have graduated from the school, taking honors in some of the Universities. Among those we observed to occupy high positions in the list were the names of some of our most prominent business and professional men in Toronto, and, heading the list, we particularly noticed the names of T. Dixon Craig, Merchant, and Prof. Galbraith of the School of Technology.

The semi-annual meeting of the South Grey Teachers' Association is to be held in Durham on Thursday and Friday, 7th and 8th inst. The programme shows that some good, practical subjects will be presented; besides which, the best methods of teaching arithmetic, reading, and geography will be illustrated with classes, by Misses Corry and Armstrong, and Messrs. Jones and Blagbourne. On Thursday evening a suitable entertainment will be provided.

The programme for East Kent Teachers' Association, to be held in Ridgeway on Friday and Saturday, 15th and 16th inst., presents many good features. A re-union will be given on Friday evening, at which readings, essays, vocal and instrumental music, will form part of the entertainment.

At the Grenville Teachers' Association, to be held in the High School, Prescott, on Thursday and Friday, 14th and 15th inst., Dr. J. A. McLellan, M.A., will be present, and contribute a paper on "Arithmetic" the first day, and lecture same evening in the Town Hall on "Education." The next day he will take up the subject "Algebra" or "Euclid," and give an address to teachers. The other subjects in the programme are extremely interesting.

Dr. McLellan also takes part in the proceedings of the Prince Edward Convention, which meets at Picton, on 29th and 30th inst., and will deliver a lecture on "National Education" in the Town Hall, the evening of the 29th. Friends of education are cordially invited.

G. W. Ross, Esq., M.P., has signified his intention of taking part in the exercises of the West Huron Teachers' Association, to meet at Goderich on the 8th and 9th inst.; and also to give an address at the public meeting to be held in the Temperance Hall, on the evening of the first day of meeting.

From the Lucknow Public School, three candidates passed at the late Intermediate Examination, two of whom obtained Grade A, and one B.

It pays to get the best teachers to take charge of our schools; for example. In consequence of the admirable system of classification and the thoroughness with which the pupils are prepared in the public schools of Port Hope, under the charge of Mr. Goggin, one form is dispensed with in the High School, thus doing more efficient school work, and saving the expense of an additional teacher in the High School.

On the 15th and 16th inst. the Wentworth Teachers' Association meets at Hamilton. G. W. Ross Esq., M. P. will attend and give an address the first evening, and examine a Model School class the next day. Vocal and instrumental music will be furnished to enliven the proceedings.

A. Napanea, on the 15th and 16th inst., the Teachers' Association

of Lennox and Addington will meet. The programme is well filled with very practical subjects, and on the evening of the first day of meeting, Professor G. W. S. Wright, M.A., of Albert College, Belleville, will lecture on History. Music will enliven the proceedings.

The Wellington District Methodist Church has founded a scholarship worth \$25.

In the Galt Coll. Inst., Mr R. Murray, of Rodgerville, has been appointed assistant teacher.

It is stated that an effort was made to discontinue the Model School, Stratford; but public feeling being adverse to the matter, the school continues.

The hon. the Minister of Education formally opened the new High School, Listowel, a short time since.

Two ladies who have gone through the regular school course and won high honors, applied for matriculation at the recent examination, New Brunswick University.

The prize of \$100 offered by Archbishop Lynch to the first person of the R. C. faith who should obtain a first class, grade A, certificate, has been won by Miss Catharine Ballantine, a teacher in Stratford. She also secures a supplementary prize of \$100 offered by Rev. Father Stafford, Lindsay.

Mr. T. A. Riddell has been appointed Principal of the Public School, Prescott.

The Chair of Political Economy and English Literature in Acadia College, Halifax, N. S., has been filled by Dr. Sherman.

The accommodation of the Ottawa Model School is not sufficient for the numbers who are applying for admission.

One of the successful candidates in the class lists of Cambridge University, England, this year, is Miss Helen Gladstone, daughter of the Premier.

A singular Convention has recently been held in Cincinnati. It is that of deaf mutes, of whom there has been a fair attendance from different parts of the United States, and even from Canada. Of course, their proceedings were carried on by writing and signs. It has not transpired whether any present were distinguished for their display of "silent eloquence."

In connection with several of the schools in England, the system of penny savings banks has been established with much success. The project has worked with great advantage on the Continent, where it seems to influence the national character in producing thrifty, frugal habits.

#### NOVA SCOTIA.

The Teachers' Association for the counties of King's and Hants (Inspectional District No. 5.) met at Kentville, King's County, on the 23rd ult., under the presidency of Inspector Roscoe. U. G. Parsons Esq., A.B., was elected Vice-President, G. F. Miller, Esq., Secretary, and Messrs. H. Elliott, F. Rand, Thomas and Newcourt, committee of management. About ninety teachers were present, and the proceedings of the Association, which attracted the friends of education in goodly numbers, were characterized throughout by great earnestness. The President's opening remarks gave an excellent tone to the Association. The first paper, on "The Teacher's Duties," by Mr. C. F. Rockwell, was well received and its subject heartily discussed by Messrs. Robinson, Rand, Parsons, Sanford, Pines, Shafner, Griffin, and the President. Mr. Miller (Secretary) followed with a very suggestive treatment of the theme "Prizes and Punishments." The discussion which ensued was exceedingly spirited, having been participated in by Messrs. Young, F. Rand, Sanford, Pines, Shafner, Parsons, A. S. McDonald, McKittrick, Patterson (of Acadia Villa Seminary), and the Superintendent of Education, who was present at the opening of the second session. The next paper, on the "Art of Teaching," by Mr. W. G. Parsons, attracted great attention by its brilliant style and philosophic presentation of great principles. At a subsequent stage Mr. Parsons was requested to authorize its publication in the CANADA SCHOOL JOURNAL. In immediate sequence to Mr. Parsons' paper, Mr. W. H. Magee read a thoughtful essay on "School Lessons."

The evening session of Thursday took the form of a public educational meeting in Scotia Hall. This was well attended, considering that the village was astir with preparations for the Provincial Exhibition to come off in a few days. Addresses were delivered by the Rev. A. W. Sawyer, D.D., President of Acadia College, Dr. Allison, Superintendent of Education, A. McNult Patterson, Esq., A.M., and Professor Eaton, of the Provincial Normal School.

The exercises of Friday morning's session began with an instructive lesson on "Circulating Decimals," by Mr. H. Elliott, which was highly appreciated by the mathematicians present. This

was followed by an illustrative lesson in grammar by Mr. Parsons. A general conversation ensued, in which reference was made to the preceding papers not already noted as discussed. Mr. Munro, of Annapolis county, disclosed his methods of teaching grammar. The Superintendent of Education spoke highly of the meritoriousness of Mr. Parsons' paper on "the Art of Teaching," and emphasized some of its points. The President thought that there were other important considerations besides making everything easy for the child. Mr. W. P. Shafner gave an outline lesson in "History." He warmly commended the diagraphic method. Messrs. Parsons, Pines, and Elliott followed with brief remarks. Mr. F. I. Kinsman, B.A., concluded the formal exercises of the Association with a vigorous arraignment of the system of Public School examinations as at present conducted. His views were partially endorsed by some, but were energetically combated by Mr. Elliott and others. Short closing addresses were delivered by the Rev. Mr. Logan, the Superintendent of Education, and Professor Eaton. The next meeting of the Association is to be held at Windsor, Hants Co.

Egbert M. Chesley, Esq., A.M., has been appointed Principal of the Yarmouth Seminary.

A meeting of the Senate of the University of Halifax was held in the Legislative Assembly Room, Halifax, on the 22nd of September. The reports of Examiners in the Arts and Science courses were received. The business transacted was chiefly formal. Several notices of important motions to be brought forward at the annual meeting in December were given. In the afternoon of the same day, the public ceremony of conferring degrees and presenting prizes took place. At the termination of the ceremonial part of the programme, the Reverend Chancellor spoke encouragingly of the progress and prospects of the University, and dwelt at length and with great eloquence on the question of higher education in Nova Scotia. In response to calls, the Rev. Principal McKnight and Dr. Allison delivered brief addresses. The following are the Pass and Prize lists:—

FIRST B.A. EXAMINATION.

(Arranged in order of proficiency.)

First Division.—1. W. Morely Tweed, Mount Allison College; 2. H. R. McKeown, do.; 3. John Harper, Private Study; 4. J. W. Webster, Mount Allison College; 5. Harriet S. Stewart, do. Prizes.—First Prize, W. Morely Tweed, Second do., H. R. McKeown; Third do., John Harper; Fourth do., J. W. Webster.

B.A. EXAMINATIONS.

First Division.—S. Duncan Scott, Mount Allison College. Prize.—First Prize, not awarded; Second do., S. Duncan Scott.

MATRICULATION EXAMINATION.

Pass List.—(Arranged in order of proficiency.) 1. Isaac Gammell, Picton Academy; 2. N. T. Lynskey, St. Mary's College; 3. Ada L. Brownrigg, Picton Academy; 4. Thomas Stewart, Private study; 5. Adams Archibald McKay, Picton Academy; 6. John Howard McKay, Picton Academy; 7. Alex. W. Duff, St. John N. B. Grammar School; 8. John McKay Baillie, Picton Academy; 9. Charles Nurman Jeffrey, Mount Allison Academy. The matriculation prizes were as follows. First, Chancellor's Gold Medal, Isaac Gammell; Second, N. T. Lynskey; Third, Ada L. Brownrigg.

NEW BRUNSWICK.

The Board of Education has given all due consideration to the suggestions made by the Educational Institute through the Chief Superintendent with reference to the prescribed course of instruction, and has adopted substantially the amendments proposed. A revised edition of the Course has been published, to take effect November 1, 1880. There are no "sweeping changes": the curriculum as a whole remains as it was. The few slight improvements made, as the result of a year's experience, will render it still more acceptable to teachers.

Many teachers and school officers will be pleased to learn that a new and revised edition of the "Manual of the School Law and Regulations" is in course of publication, and will appear this autumn. The former edition was exhausted some time ago.

The "Educational Circular," No. 11, issued about the last of July, contains, in addition to the usual official notices, examination papers, etc., a valuable paper by James Fowler, M.A., late instructor in the Normal School. This paper embraces a large number of additions to the list of New Brunswick plants previously published, and also a dissertation on "The Advantages resulting from a Knowledge of the Flora of our Province." There is also an admirable article on "Teaching Reading in Public Schools," by E.

Melville Bell, F.E.I.S., well worthy of an attentive perusal by every teacher.

The closing exercises of the Provincial Normal School took place on Friday, the 17th of September, in the presence of the Chief Superintendent, the President of the University, and a number of other visitors. About six hours were devoted to the examination of classes, illustrative lessons by student-teachers, recitations, reading of essays, etc. At the close the Principal announced that the successful competitor for the Lorne Silver medal, awarded for highest professional standing, was Mr. Melvin L. Young, of Charlotte county.

Both Principal Crocket and Dr. Rand referred in feeling terms to the loss the institution was about to sustain in the removal of Mr. Fowler to another and a higher sphere of labor. They eulogized his scholarly attainments, and the character of the work he had done during his connection with the Normal School, and said he would carry with him the good-will of all who had known him in this Province.

It may be mentioned here that, on the day preceding his departure, at an informal meeting of the staff of instructors in the library of the Normal School, Mr. Fowler was agreeably surprised by the presentation of a handsome gold pen and pencil, as a token of esteem from his late colleagues. In a few well chosen words, Mr. Crocket expressed to him, on behalf of his fellow-teachers, the feelings of respect and of mingled pleasure and regret which prompted them to ask his acceptance of this gift. Mr. Fowler replied in appropriate terms.

The anticipated change in the length of the Normal School Sessions has been decided upon, and will take effect the coming winter. By an order of the Board of Education, made on the 30th of August last, section 1st of regulation 37, relating to the Provincial Normal School, is repealed, and the following provisions are substituted therefor:

1. There is to be but one session in each school year, beginning on the first Wednesday in November, and closing on the last Friday in July.

2. In order to qualify any candidate for examination for license of the third or second class, a full session's attendance at the Normal School will be required.

3. Until otherwise ordered, holders of provincial license of the second or first class, desiring to obtain further instruction (previous to examination for advance of class or otherwise), may be admitted on the first Wednesday in May.

4. Until otherwise ordered, applicants for admission to the French preparatory department shall be admitted on the first Wednesdays in November, February or May; licenses of the third class valid for a period of three years from the close of the school term in which they are granted, shall be issued at the close of each quarter to such students of the French department as shall be found qualified to receive the same. Such license shall also admit the holder to enrolment without examination as a regular student of the Normal School.

The fall term of the Provincial University opened September 16th, with the usual gathering of students and friends of the college. Words of welcome to the undergraduates and of hopefulness in reference to the year's work were spoken by Dr. Jack, Dr. Harrison and Prof. Rivet. During the vacation, extensive repairs and improvements have been made in and about the college premises.

No less than nine of the graduates of 1880 were among the candidates for Grammar School License at the recent examination, the most of whom attended professional classes at the Normal School for some weeks previously. At least two of these have already been appointed to good positions,—Mr. A. W. Wilkinson to the Principalship of the St. Andrew's Grammar School, and Mr. J. W. McCreedy, to the charge of the schools at St. Mary's (in the large new building recently erected).

At the examination for license, held at Fredericton on the 21st of September and following days, there were 134 candidates, divided as follows:

	M.	F.	Total.
Grammar School .....	10	0	10
First Class .....	8	4	12
Second Class .....	38	58	91
Third Class.....	4	17	21
	55	79	134

The Normal School classes furnished 113 of the number. In addition to these, about twenty were examined at St. John and

Chatham, and five from the French Preparatory Department would receive Third Class License.

The Albert County Teachers' Institute held its third annual meeting at Harvey, on the 2nd and 3rd of Sept., with the following officers, elected at the first session, viz. Mr. N. Duffy, President, Mr. Joshua Thompson, Vice President, Mr. Wm. Jones, Secretary-Treasurer, Miss Ada Russel and Miss Maud Charters, additional members of managing committee. C. A. Peck, Esq., was elected an honorary member of the Institute. The papers read at the several sessions were as follows:—"The aim of common school education," by Miss S. E. Brewster, "The Importance of Intellectual Training for Teachers" by the President. (Both of these were read a second time by request); "How to teach writing," by Mr. Chipman Bishop, "The Discouragements of Teachers," by Miss Moore; "How to Teach History," by Mr. Jones; "The Teaching of Grammar," by Mr. Beverly Nobles. Dr. Rand was present and participated in the discussions on some of the papers and on other topics. A considerable part of two sessions was occupied in the consideration of a variety of questions relating to the Course of Instruction, the Inspectorial Regulations and other matters. Questions on these subjects were freely put to the Chief Superintendent by members of the Institute, who received much light from the Doctor's ready answers, and must have found not a few real or imaginary difficulties removed. On the evening of the first day, Dr. Rand delivered a public lecture on certain phases of educational work in this Province, a lecture which was listened to with great pleasure and profit by a large audience, the President of the Institute occupying the chair. At the closing session of the Institute there was a pleasing variation from the usual "question-box." The lady-teachers took the part of questioners, and the gentlemen did their best to furnish satisfactory replies. Another good thing introduced here was calling the roll of districts represented, as well as of teachers. The proceedings closed with a resolution of thanks to Dr. Rand for information given and sympathy shown to the teachers in their work.

At the Teachers' Institute for Sunbury County, held at Oromocto simultaneously with the above, the officers and committee chosen for the year were Mr. A. L. Belyea, President, Miss Bessie Bridges, Vice President, Mr. C. S. McCutcheon, Secretary-Treasurer, Mr. G. H. V. Belyea and Miss Ida Barkor. Papers were read by Mr. Belyea, on "Written Examinations—their Use"; by Mr. McCutcheon on "Physical and Vocal Culture," and another on "How to secure Perfect Order in School"; by the President on the question "How to promote the Co-operation of Teachers and render Institutes increasingly successful." There were discussions on these subjects and on county educational matters.

We have no account of the Restigouche County Institute.

#### QUEBEC.

The introductory lecture of the Ladies' Educational Association, Montreal, for the present year, was given in Synod Hall, by President Wilson, LL.D., of Toronto University. Dr. Dawson, Principal of McGill University, occupied the Chair, and on the platform were the Rev. Dr. Jenkins, the Rev. Prof. Murray, LL.D., Dr. Wilson and Prof. Moyses. The hall was filled with a large audience composed almost entirely of ladies. Dr. Wilson, in the course of an admirable lecture, showed how important is the sphere of womanhood, and how she was gradually raised in the social scale by the advance of civilization, and more especially by the spread of Christianity. The Rev. Dr. Jenkins, in moving a vote of thanks to the lecturer, congratulated him on the high and honourable position to which he had lately attained as President of the Toronto University.

The opening ceremonies for the ensuing term of the Diocesan College, Montreal, took place lately in the rooms of the College at Synod Hall. The Chair was occupied by his Lordship the Bishop of Montreal, and addresses were delivered by Bishop Alford and the Rev. Dr. Bell.

Mr. John Harper, B.A., was recently appointed Rector of the High School, Quebec, in the room of Mr. Mitchel who has resigned that position. Mr. Harper, till his present appointment, was Rector of the Normal School and one of the Professors of the Prince of Wales College, Charlottetown, Prince Edward Island. He had previously, for a series of years, been Rector of the High School, St. John, New Brunswick. In all of these positions his record as a teacher and administrator in school management, and as a scholar, is of the highest order. It is expected that from his experience, his previous success, and tact in the conduct of numerous attended

schools, that Quebec High School will attain to a high position among the classical institutions of the country.

In the High School, Montreal, Mr. Nelson Power, B.A., Oxon., takes the place of Mr. Roodie, whose resignation was accepted previously to the closing of the schools for the summer vacation.

The great event of the month in an educational point of view, is the laying the corner stone of the new Museum, McGill University. The Museum building about to be erected is a gift to the University, made by Peter Redpath, Esq., and it is said that when completed it will cost over a hundred thousand dollars. His Excellency, the Governor General laid the corner stone in the presence of the members of the Convocation of McGill College, and a large number of invited guests, as well as of many others whom so interesting an occasion attracted to the place. An opening prayer, appropriate to the occasion, was read by the Venerable Archdeacon Leach. Principal Dawson then addressed the Convention, and after expressing the gratitude of the University to the liberal donor of the new museum, proceeded to explain the nature and utility of the gift. He said—

A university museum is not merely a place for exhibiting specimens. It is an institution for teaching and for general research; hence the new building will have commodious class-rooms and laboratories, and will accommodate the classes in geology and biology, as well as special students. It will send forth men, and, I hope, women also, trained to interrogate nature, and to discover the hidden treasures of our country, and to ward off, by the aid of science, injuries that may threaten our industries. From it will emanate new discoveries creditable to Canada, and tending to the advancement of science. It will enable instruction to be given under the most favorable conditions, not merely to University students, but to special students and to the public generally. It will be a centre of information to which all interested in the aspects of nature in this country, and in the development of our resources will resort for aid and guidance. Nor will it be without its influence in the highest interests of humanity. The testimony of nature to the power and divinity of its author may sometimes be obscured by the imperfect or inaccurate teachings of man, but it cannot be suppressed; and one of the ways in which it is most profoundly impressed on the mind, is by the study of well arranged specimens of natural objects. The gift comes at a most suitable time, when our collections have outgrown the space for their exhibitions, when we require the rooms they occupy for other uses, and when the only national collection in Canada, that of the Geological Survey, is about to be removed from our city. The speaker then referred to the ample provisions made for such objects in other countries, while in Canada we were as yet only following at a distance, and expressed the hope that the present great benefaction, the largest in amount since the original endowment by McGill, would lead to similar provision being made for other wants of the University.

The Principal's remarks were received with much applause, and thereafter Mr. Peter Redpath came forward and addressed the members of Convocation as follows:

*Mr. Chancellor and Gentlemen of Convocation:*

A desire to aid the McGill University in the educational work which it is carrying on, and which, notwithstanding its very limited means, it is endeavoring to extend, has prompted me to supply one of its many wants by the erection of a museum on the grounds of the University. The utmost space which can in the existing buildings be devoted to museum purposes is altogether inadequate, even for the exhibition of specimens already belonging to the University, not to mention the extensive geological collections which the Principal proposes to present when sufficient accommodation shall be provided. This building is therefore intended as a place of deposit and study of specimens in geology, mineralogy, palaeontology, zoology, botany and archæology, and it will probably more than meet all the immediate requirements of the University in that direction. It is intended that the use of the Museum and its contents shall be in the first place for the professors and students of McGill College and University, and secondly for all students of natural science and for the public, under such regulations as may from time to time be enacted by the corporation of the University, with the approval of the Board of Governors. When the undertaking was commenced, I did not anticipate any such ceremony as that which has brought this assembly together to-day. I am deeply sensible of the honor conferred by His Excellency the Governor-General in taking a part in it, and I desire for myself to thank His Excellency for his presence on the occasion.

Mr. Redpath then requested His Excellency to lay the corner stone.

His Excellency, after duly performing the ceremony of laying the corner stone, delivered a very excellent and appropriate address, dwelling on the munificence of the gift—its great utility to the University and scientific research. At the same time he passed a high and well-merited eulogium on the learned Principal and his valuable scientific works and investigations. All honour to Mr. Redpath for his princely and munificent contribution to learning and science. Let us hope that his noble example will soon be followed by many others whom God has blest with ample means, and that this is only the beginning of still greater contributions to the cause of science and learning in Canada.

A meeting of the Protestant Committee of the Council of Public Instruction is to be held on the 6th of October next, for the appropriation of the grants from the Superior Education Fund, and the conduct of other important business connected with Protestant Education in the Province of Quebec.

### Teachers' Associations.

The publishers of the JOURNAL will be obliged to Inspectors and Secretaries of Teachers' Associations if they will send for publication programmes of meetings to be held, and brief accounts of meetings held.

**GLENGARRY TEACHERS' ASSOCIATION.**—The regular meeting of the Glengarry Teachers' Association was held in Alexandria on September 9th and 10th. About seventy-five teachers, at present in charge of schools, were in attendance. Nearly every subject taught in the common schools was discussed, but prominence was given to arithmetic and English composition. The following were the addresses given and papers read:—Arithmetic, particularly the solution of difficult type questions; English Literature, Reading, Euclid, Electricity, English Composition, Botany, Origin of the English Nation, Departmental Regulations, Geography, and Recitations. The meeting then adjourned till the first Thursday and Friday of February, 1881.

**WATERLOO COUNTY TEACHERS' ASSOCIATION.**—The Waterloo County Teachers' Association held its half-yearly meeting at Berlin, on Friday and Saturday, September 10th and 11th. About 80 teachers were in attendance. The President, Mr. W. F. Chapman, occupied the chair. After the formal business was disposed of, Mr. G. A. McIntyre took up his subject, Arithmetic, which was followed by an animated and lengthy discussion. On motion, a committee was appointed to draw up rules and regulations for the conducting of the next Uniform Promotion Examination. Mr. D. K. Erb then gave a very practical discourse on teaching reading to a second class. Mr. Thos. Pearce, I. P. S., gave some very interesting and valuable hints on teaching history. Miss C. A. Jones kindly treated the Association to an unusually excellent essay on Reading. Mr. Geo. Sharman explained his method of teaching Grammar from the beginning. Mr. S. S. Herner, delegate to the Provincial Teachers' Association, gave a very complete report of the proceedings of the last meeting of that body. An entertainment, to consist of a debate, &c., was arranged to take place at the next session of the Association. Second day.—After the meeting was formally opened, Mr. Groh introduced his subject, "How to Teach Vocal Music;" after which Mr. Wm. Scott, B.A., head master Toronto Model School, was introduced to the Association. During the day he addressed the meeting on "How to deal with Indolent Pupils," and "Memory, How to train it." His addresses were listened to with the closest interest, and loudly applauded. Moved by Mr. R. Alexander, seconded by Mr. S. S. Herner, "That in the opinion of the Waterloo County Teachers' Association, the retention of the apparatus part of the depositary be recommended." Mr. J. Suddaby reported, on behalf of the Kindergarten Committee, what particular phases of the Kindergarten could be profitably introduced into the public schools. The programme for next session, as prepared by the Managing Committee, was then presented, after which the Association adjourned till the last Friday of January, 1881.

**A SUMMARY FOR OCTOBER.**—North Essex, at Windsor, 7th and 8th, South Grey, at Durham, 7th and 8th, Prescott, Vankleek Hill, 8th and 9th, West Huron, at Goderich, 8th and 9th; Chatham D., at Chatham, 8th and 9th; Grenville, at Prescott, 14th and 15th; E. Kent, at Ridgetown, 15th and 16th, Lambton, at Forest, 14th and 15th; E. Kent, at Ridgetown, 15th and 16th, Lanark, at P. rth, 15th and 16th; Lennox and Addington, at Napanee, 15th and 16th; Wentworth, at Hamilton, 15th and 16th; Oxford, at Hamilton, 21st and 22nd; E. Middlesex, at London (7, 22nd and 23rd, North Perth, at Stratford, 22nd and 23rd, S. Simcoe, at Barrie, 22nd and 23rd, North Perth, at Stratford, 22nd and 23rd; Northumberland, at Cobourg, 23th and 29th; Frontenac, at Kingston, 28th and 29th; Halton, at Oakville, 28th, 29th, and 30th; Prince Edward, at Picton, 29th and 30th.

**SOUTH GREY.**—The semi-annual meeting of South Grey Teachers' Association will be held in Durham on Thursday and Friday, 7th and 8th October, 1880. 1. President's address; 2. Joseph Reid, B.A.—Algebra to Beginners; 3. Mr. M. N. Armstrong—Recitation; 4. Mr. W. J. Galbraith—Geonetry to Beginners; 5. Mr. H. Walker—Some Methods of Reward and Punishment; 6. Mr. Dixon—Teaching Writing to Juniors; 7. Mr. Charles Ramage—Teaching Reading to Juniors; 8. Mr. Leonard—Mistakes in Teaching; 9. Mr. D. Allan—Report from Provincial Association; 10. Mr. W. K. Reid—Music in schools; 11. Mr. Jenkins—Drawing with Illustrations; 12. Mr. S. Acheson—Natural Philosophy; 13. Mr. M. P. McMaster—Teacher's Duty Outside Schoolroom. The best methods of teaching Arithmetic, Reading and Geography will be illustrated with classes, by Misses Corry and Armstrong, and Messrs. Jones and Blagbourne. A suitable entertainment will be provided for Thursday evening. It is to be hoped that all Teachers in the district will consider it their duty to be present.  
WM. FRASER, I. P. S., President. J. C. BAIN, Secretary.

**WEST HURON TEACHERS' ASSOCIATION.**—The semi-annual meeting of this Association will be held in the High School, Goderich on Friday and Saturday, Oct. 8th and 9th, 1880, commencing each day at 9 o'clock a.m. G. W. Ross, M.P., has promised to be present and take part in the exercises. **PROGRAMME.** President's Address—Mr. H. I. Strang, B.A.; Report of Committee on Promotion Examinations—Mr. G. Baird; How to Teach Reading, Mr. G. W. Ross; Mensuration—Mr. J. W. Morgan; School Routine—Mr. J. R. Miller, I.P.S.; Hygiene for Teachers—Mr. T. F. McLean, M.D.; Difficulties in Analysis and Parsing—Mr. H. I. Strang, B.A.; School Management—Mr. G. W. Ross, Composition—Mr. A. J. Moore, B.A.; Treasurer's Report—Mr. W. R. Miller; Election of Officers. On Friday evening a Public Meeting will be held in the Temperance Hall. A Programme, consisting of Music and Reading, and short Addresses by G. W. Ross, Esq. and others, will be provided.  
H. I. STRANG, B.A., President. W. R. MILLER, Sec.-Treas.

**CHATHAM DISTRICT.**—The Chatham District Teachers' Association will meet at the Central School, Chatham, on Friday and Saturday, 8th and 9th Oct. 1880. **Friday.**—10.00 to 10.15 a.m., Reading Minutes and Correspondence; 10.15 to 11.15 a.m.—English Literature, D. S. Paterson, B.A., High School Master; 11.15 to 12 m.—Composition, Miss E. S. E. Dawson; 1.30 to 2.30 p.m.—Orthoepy, W. M. Nichols, B.A., I.P.S.; 2.30 to 3.30 p.m.—Public School Diplomas, J. Donovan, Esq.; 3.30 to 4.30 p.m.—Music: The Sol-Fa Notation Explained, F. B. Stewart, Esq. **Saturday.**—9 to 10 a.m.—Arithmetic; 2nd Class Paper, Mr. McGillivray, Ridgetown; 10 to 11 a.m.—Algebra, D. F. Wilkins, B.A.; 11 to 12 a.m.—Answers to the Question Drawer, and New Business. The persons introducing the subjects are expected to allow a reasonable portion of time for General Discussion, in which all are expected to engage.  
REV. A. MCCOLL, President. J. DONOVAN, Secretary.

**GRANVILLE TEACHERS' ASSOCIATION.**—The next regular meeting will be held in the High School, Prescott, on Thursday and Friday, Oct. 14th and 15th, 1880. **THURSDAY** 9 to 12 a.m. and 2 to 5 p.m.—Opening address by the Vice-President, Reading of minutes and report of Committee on Library; Appointment of Officers; Discussion on School Journal; Arithmetic, Dr. McLellan; Be Accurate, J. A. Carman, B.A.; Grammar, Mr. Conarty; Text-Books, M. Accurate, J. A. Carman, B.A.; The Reading Lesson the Best Object Lesson, Rev. Geo. McPherson, M.A.; The Reading Lesson in Town Hall by J. A. McLellan, M.A., LL.D., High School Inspector, Subject: "Education." **FRIDAY** 9 to 12 a.m., and 1.30 to 4 p.m.—Algebra, or Euclid, Dr. McLellan; English Literature, T. H. Redditt, B.A., The Law of Progress, Mr. McCullough, The Electric Telegraph and the Telephone, with experiments, Rev. Geo. Blair; Address to Teachers, Dr. McLellan; Questions for Mutual Information. October 14th and 15th will be allowed as visiting days to those only who attend the Association in good faith.  
ALEX. McDONALD, Vice-President. GEO. BLAIR, I.P.S., Sec'y.

**EAST KENT.**—The Semi-Annual Meeting of the E. K. Teachers' Association will be held in Ridgetown on Friday and Saturday, Oct. 15th and 16th, 1880. **PROGRAMME.**—**Friday.**—1 to 11, Literat. re for 5th and 6th classes, J. W. Lamoreaux; 2 to 11 to 12, Mensuration, G. W. Sheldon; 3.1.50 to 2. Business; 4. 2 to 3, Mental Philosophy as an Aid in Teaching, E. Masales; 5. 2 to 4, Method of Teaching History, A. J. Cadman; 6. 4 to 5, English Composition, W. S. McBrayne. **Saturday.**—7. 9.30 to 10.30, Arithmetic to 1st and 2nd classes, R. A. McConnell; 8. 10.30 to 11.30, Marking and Reports, T. A. Edward. A re-union will be given on Friday evening, at which Readings, Essays, Vocal and Instrumental Music will form part of the evening's entertainment.  
E. MASALES, President. W. S. McBRAYNE, Secretary.

**LENNOX AND ADDINGTON.**—The next meeting of the Teachers' Association will be held in the Napanee Model School on Friday and Saturday, the 15th and 16th of October next, commencing at 10 a.m. on the 15th. **Friday, 15th.**—How to teach Simple Multiplication, Division and Reduction, Mr. Sangster; How to teach Reading, Mr. Tilley; How to keep School Records, Mr. Bowerman; How to teach Physical Geography, Mr. Burrows of Bath; How to teach Notation and Numeration, Simple Addition and Simple Subtraction, Mr. McNabb; How to teach Reading to Beginners, illustrated by a class of children, Miss Aylesworth; How to teach Composition, Mr. A. Embury, in the Town Hall commencing at 7.30 p.m.—A Paper on School Discipline, by Mr. Chantler, Callisthenics, by Misses Fraser and VanDyck; A Paper on Home Work by Mr. Kimmerly; Lecture on History, by Prof. G. W. S. Wright, M.A., of Albert College, Belleville. **Saturday, 16th.**—How to teach Spelling, Mr. N. S. Asselton; How to teach the Verb, Mr. Matheson; How to teach Writing, Mr. Black; How to teach Object Lessons, The President; The Question Drawer. Music will be furnished during the proceedings of the Association, and at the Town Hall in the evening. A cordial invitation to attend, and to take part in the proceedings is extended to all who desire the advancement of our Schools.  
WM. TILLEY, Secretary. FRED. BURROWS, President.

**WENTWORTH TEACHERS' ASSOCIATION.**—The next regular meeting of this Association will be held in the Collegiate Institute, Hamilton, on Friday and Saturday, the 15th and 16th of October, 1880. **PROGRAMME.**—**Friday.**—Forenoon Session.—10 to 12. Routine Business, Appointment of Committees, Discussion of Recent Regulations. **Afternoon Session.**—1.30 to 4.30 (a) Geography, A. Scott Cruikshank; (b) Reading, junior classes, J. H. Smith; (c) Schools of Germany, Dr. Hare; (d) History, G. W. Johnson, Evening Session.—An address by G. W. Ross, Esq., M.P. **Saturday.**—Forenoon Session.—9 to 12.50—(a) Model School Class examined by G. W. Ross, Esq., M.P.; (b) Teaching Composition, Discussion; (c) Length of School Hours, Discussion. **Friday** will be considered a visiting day. The proceedings will be enlivened by Vocal and Instrumental Music. All the teachers are expected to attend the meeting of this Association. Trustees are cordially invited to be present.  
C. J. ATKINSON, Secretary, J. H. SMITH, P. S. Inspector, W. H. BALLARD, President.

PRINCE EDWARD TEACHERS' ASSOCIATION.—Semi-annual convention, Picton, October 23th and 30th. 1. School Discipline, T. F. Spafford; 2. Junior Reading, W. T. Kinney; 3. General Instructives, E. A. Blakely; 4. Simple rules of Arithmetic, W. J. Osborne; 5. Writing—with specimens, H. A. Powers; 6. Railways of Ontario, B. Rowwell; 7. Islands of the Pacific, S. B. Nethery; 8. Educational Notes, T. J. Park, G. D. Platt; 9. Algebra, or Euclid, Dr. McLellan; 10. English Composition, R. Dobson, B.A.; 11. Measurement of Angles, W. R. Bowerin; 12. The Teacher and His Work, Dr. McLellan; 13. National Education, a lecture in the Town Hall, Friday, 7.30 p.m., Dr. McLellan. Sessions: 9 to 12 and 2 to 5.

Every Teacher is expected to attend both days. Note will be taken of absentees.

Friends of Education cordially invited.

G. D. PLATT, Reg.

### REVIEWS.

ELEMENTARY COURSE IN NATURAL PHILOSOPHY. For use in High Schools and Academies. By Le Roy C. Cooley, Ph. D., Professor of Physics and Chemistry in Vassar College. New York: Scribner's Sons, 743 and 745 Broadway. The feature in this work is the prominence given to the principle of energy. In the first three chapters, Matter and Motion are taken up; in the fourth, Energy, and in the remaining chapters is exhibited the part Energy plays in the phenomena of sound, heat, light and electricity. In the hands of an intelligent teacher, this will be found an excellent book.

MATHEW'S, SERIES OF ARITHMETICAL TEST CARDS. Moffatt & Paige, No. 28 Warwick Lane, E. C., London. Price 1s. per Packet. Each packet contains fifty cards, and each card has from four to six questions. Throughout the same packet the sets of questions are of the same degree in difficulty. Would doubtless be found handy things in a school-room,—each pupil could be working at a different set of examples, and yet the total work of each would be of the same value.

AMERICAN JOURNAL OF MATHEMATICS. Vol. iii. No. 1. Contents: Regular figures in n-dimensional space, by W. T. Stringham, Fellow of the John Hopkins University.

On the Algebra of Logic, by C. S. Peirce. On certain Ternary Cubic-form Equations, by J. J. Sylvester. On the General Equations of Electro Magnetic Action with Application to a New Theory of Magnetic Attractions, and to the Theory of the Magnetic Rotation of the Plane of Polarization of Light. By H. A. Rowland, Professor of Physics in the John Hopkins University.

Subscription price \$5.00 a volume, single numbers \$1.50. Communications and subscriptions addressed to W. E. Storey, John Hopkins University, Baltimore, Ind.

THE MATHEMATICAL VISITOR for July has been received. As usual, it contains a large number of interesting problems of all degrees of difficulty. The solutions furnished are instructive. We commend it to our Canadian mathematical readers. Single numbers 50c each. Address, Artemas Martin, M.A., Erie, Pa.

THE SCHOOL VISITOR, devoted to the Study of Mathematics and English Grammar. Published by J. S. Royer, Ansonia, Ohio. Published monthly at 60c a year. It contains good collections of problems in elementary mathematics, with solutions. The notes and queries in grammar are worthy of attention.

THE SCHOOL AND UNIVERSITY MAGAZINE.—A journal of intercommunication for London University Students, Students under the Intermediate Education Act (Ireland), and Students under the Science and Art Department, South Kensington. London: W. Stewart & Co., Holborn Viaduct Steps, E.C. Price, fourpence for single copies. It contains examination papers on various subjects, with modern answers.

### MAGAZINES.

We beg to acknowledge the receipt of the *Contemporary Review* from Strahan & Company, which contains the following articles:—1. The Vanity of Nature by the Duke of Argyll; 2. Heinrich Hines, by Chas. Grant; 3. The Future of the Canadian Dominion, by George Anderson, M.P.; 4. The Eleusinian Mysteries, a Study of Religious History, by Friemormant; The Last Phase of the Afghan War, by Lieut. Col. R. D. Osborn; 6. The Sunset in England, by Jas. Ashcroft Noble; The Apprenticeship of the Future, by Prof. Silvanus P. Thompson; 8. Fiji: Notes of a Vacation Tour, by Chief Justice Gorrie; 9. The Impending Crisis in Turkey, by an Eastern Statesman. The Homeric Question; A reply to Prof. Blackie, by Prof. Geddes.

We have also received from the Leonard Scott Publishing Co., *Blackwood's Edinburgh Magazine*, containing the following articles. 1. The Pillars of the State; 2. Dr. Wortle's School, Part V.; 3. The Bayard of the East; 4. A Week in Athens; 4. A Lasting Memory; Bush Life in Queensland, Part X.; New Novels.

From D. Appleton & Company, New York, the *Journal of Speculative Philosophy* for the month of October has now been received. It contains the following:—1. Criticism of Kant's *Main Principles*, by J. H. Stirling; 2. Kant's *Principles of Judgment*, by John Watson, *Philosophic Outlines*, by H. K. Jones; *Notes and Discussions*, The *Philosophical Element* in Shelby.

The September No. of this Magazine has not been received.

The September and October numbers of *The Western* has been received from Henry W. Jameson, St. Louis. The contents are as follows:—1. *Francisca Evelyn*, by E. F. M.; 2. *Napoleon Bonaparte*, by S. W. McCall; 3. *The Rose*, by L. J. Block; 4. *John McCullough*, by G. Bloede; 5. *Genius and Labor*, by E. H. Crosby; 6. *Holbein and his Time*, by Laura Hinckman; 7. *Falstaff*, by Sophia F. Grubb; 8. *Laura Doon*, by Paul Pastnor; 9. *Romance of Doubt*, by Chas. H. Brittan; 10. *Current Notes*; 11. *Book Reviews*.

### Official Department.

#### INTERMEDIATE EXAMINATION OF JULY, 1881.

The works prescribed in English Literature for the Intermediate Examination in July, 1881, are "Scott's *Lady of the Lake*," with special reference to Canto V. and VI., and "Addison's *Sir Roger de Coverley*."

Latin: The Accidence and the Principal Rules of Syntax and Prosody; Exercises: Cicero in Cutilianum. II., III., IV., and Virgil, *Æneid*, B. I., 1-306; Learning by heart selected portions of Virgil; Re-translation into Latin of easy passages from Cicero.

French: The Accidence and Principal Rules of Syntax; Exercises; Do Fivas' Introductory French Reader, pp. 49 to end; Bonnechose, *Lazare Hoche*; Re-translation of easy passages into French; Rudiments of Conversation.

German: The Accidence and the Principal Rules in Syntax; Exercises; Adler's Reader, 1st, 2nd and 3rd Parts, *Der Gang nach dem Eisenhammer*; (Schiller); *Die Kranke des Ibycus* (Schiller); Re-translation of easy passages, into German; Rudiments of Conversation.

The other subjects as before.

Toronto, July, 1880.

### Publishers' Department.

Subscribers will please notify this Office at once of the non-receipt of the CANADA SCHOOL JOURNAL. It is mailed regularly to all, but from complaints that reach us, it is feared, from some unknown cause which needs investigation, it frequently fails to arrive. Subscribers will also be good enough to inform us at once when they change their addresses.

We desire to thank those kind friends who have sent us the information respecting the Teachers' Conventions which appears in our columns this month. We are pleased to state that in many of the counties the CANADA SCHOOL JOURNAL is subscribed to largely by the Teachers' Associations, and in some the advisability of taking it similarly is to be discussed at the ensuing Conventions. The present number plainly shows that no better educational periodical could be in the hands of the teacher—a fact which is admitted on all sides, and of which we constantly receive the evidence of teachers in this country and the United States. We will continue to use every effort to make it a really valuable "teacher's aid," and therefore we shall expect that the profession will not only subscribe for it themselves, but recommend it to trustees, parents, and others who are interested in school work. We shall be glad to hear from the secretaries of the several associations what action has been taken in this matter.

A teacher in Missouri, U.S., writes, "I love the CANADA SCHOOL JOURNAL; it is the best educational journal in Canada and the United States; I read about a dozen of them, and am prepared to judge. I will get some subscribers."

Another teacher states: "I find the JOURNAL of great service to me, particularly in the mathematical department. It is one dollar well spent."

A third (about leaving the profession) writes, "I cannot give up our paper, which has had such marked success, and which deserves our heartiest support. In short, it is the best educational journal I have ever subscribed for. I shall always be ready to speak a kind word for it and help its circulation."

N.B.—Our Correspondents and Subscribers will please bear in mind that communications connected with the CANADA SCHOOL JOURNAL are not to be written on the same sheet with business orders for the firm. They may, however, be enclosed in the one envelope. Considerable trouble and confusion will thus be prevented.