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THE CANADA
EDUCATIONAL MONTHLY
AND SCHOOL MAGAZINE.

OCTOBER, 1883.

PROFESSIONAL TRAINING OF HIGH SCHOOL TEACHERS.*

BY PRINCIPAL M'HENRY, COBOURG COLL. INST.

THE reasons given by the Minister of Education and his advisers for the proposed regulations touching this question, are substantially the following :

1. No untrained Public School teacher can any longer obtain even a third class certificate, and the almost universally-accepted principle involved in this law applies to the work of High School teachers as well as to that of Public School teachers.

2. The character of the teaching in many of our High Schools is such that, in the interests of secondary education, a course of preparatory training should be absolutely required of all High School teachers.

We have herein recognized the general principle which underlies all Normal School training, and certain facts urged in support of a measure intended to give practical effect to this principle.

The reports of the High School

Inspectors for 1880-81, in referring to this subject, perfectly agree, both as to the general principle above stated, and the alleged character of the teaching in our High Schools. The Inspectors, for example, agree in such statements as these :—

“Teachers *naturally* gifted (*i.e.*, who need no training) are found only now and then in a generation. Therefore, as a rule, training is necessary,”

“A university degree is no guarantee of ability to teach.”

“The elements of true manhood are developed only by the personal contact and influence of *the true teacher* upon the scholar.”

“Public School teachers now receive their training and ideas from the teachers in High Schools. The latter should therefore be trained for their work.”

“Young teachers are sure to follow hurtful methods, and become good only after a succession of experiments and failures.”

“The supply of skilled teaching in

* Published by the request of the H. S. Section, Ontario Teachers' Association.

the High Schools of Ontario is not equal to the demand."

"There are many who, from lack of training, are unable to do work of a really high character."

"Misdirected energy, faulty discipline, empirical, capricious and changeable methods, waste of time, neglect of foundation work, hazy and pointless and inconsequential presentation of subject-matter, may be specified as among the most prominent faults in those who have not made the art of teaching a distinct study."

The Inspectors, in accordance with the principle referred to, and in view of the facts cited, urge upon the Minister the necessity of at once providing the means whereby an improved state of things may be brought about.

The Minister admits the force of these representations, their suggestions meet his approval, and, after due consideration, he takes steps to give them practical effect. The first definite proposal is to utilize Upper Canada College for the purposes of a Model High School. This idea is apparently abandoned, and, instead, it is proposed to establish at the Education Department, Toronto, a course of lectures on professional subjects for first class teachers and High School masters. A Regulation is framed accordingly, and, in July, 1882, is approved by Order in Council. This Regulation, however, is subsequently suspended, the reasons for which have not yet been officially stated.

The question evidently has not reached a definite settlement, and hence it may not be deemed inappropriate for us to discuss it, and, if it be thought advisable, formulate our views thereon.

Before expressing an opinion myself, or leaving the question with you for discussion, it may be well to notice some of the objections urged against the Regulation. For convenience they may be classified as follows:—

I. Objections offered professedly in the interests of those who are usually appointed assistant masters in High Schools; for example—

(a) "This Regulation would prove a serious obstacle to many deserving young men, and prevent their ever taking a university degree. Many of these work their way through college by teaching in High Schools for a year or two; and it would unreasonably interfere with their course to require them to spend the additional time necessary to take a special course at the Education Department or Normal School."

(b) "It would be rather lowering to university graduates to have to attend a Normal School after going through college, and take up a course intended for Public School teachers."

II. Objections which in effect condemn Normal School methods as essentially defective:—

(a) "The training which is proposed would not be materially beneficial. Necessarily formal and mechanical, the course would tend to produce a *dead uniformity* in our High School teaching."

(b) "It will also fail to furnish these young men with that inspiration for their work which they can receive by associating with their college professors. In the latter case 'the contact of mind with mind' will supply both a knowledge of the subjects to be taught, and that superior inspiration which will qualify them to impart the knowledge to others."

(c) "These young men do not really require such a course, for they have already been associated, not only with college professors, but previously with High School masters, whose methods they have observed."

(d) "Some of our best High School masters never attended a Normal School."

(e) "If a High School is furnished with a first-rate teacher as head master, there need be very little import-

ance attached to the skilled acquirements of his assistants."

III. Objections which arise evidently from a fear lest graduates and undergraduates of denominational colleges may be required to attend lectures on certain subjects in Toronto University.

Now if it can be shown that the objections of either class are valid, the proposal of the Minister could not and ought not to be favourably received. If the real interests of High School masters are to be sacrificed; if the principles commonly supposed to underlie normal methods are radically defective; or if the Regulation can be shown to operate solely in the interests of *one* university, then, of course, it should be opposed by every High School teacher—in fact by every educationist in the country.

If, on the other hand, it be found that the proposed regulation will really benefit these teachers, by greatly improving the character of their teaching; if the friends of the measure can satisfy us that the special course will give a thorough training in the theory and practice of teaching, in harmony with the generally-accepted principles of good Normal Schools; and if the outlying universities are assured that their interests are in no way to be interfered with—no true friend of education, certainly no intelligent teacher, will be found to oppose the measure.

After carefully examining the question, I am of opinion that the reasons assigned for introducing this Regulation are such as fully to warrant the Minister in requiring a suitable professional training of all who teach in High Schools, as in the case of those who teach in Public Schools; that most, if not all of the objections enumerated can be satisfactorily answered; and that we, as a section, after full and fair discussion, will conclude that at least the principle on

which the Regulation is based is indisputably correct.

Taking these objections in order, permit me briefly to refer to each of them.

I. In the *first* class may be placed about the only form of opposition that has appeared in the newspapers—a defence of the supposed interests of those who are or are to be masters in our High Schools. And the sole plea for perpetuating the existing state of things is, in effect, that by the new rule an old and well-worn stepping-stone to other callings is likely to be removed, or rendered less accessible. The question, of paramount importance, how we can best secure the highest attainable efficiency in our High Schools, is almost entirely overlooked, in the plea for those whose quiet enjoyment of a special privilege is likely to be disturbed. I think it can be shown that some such regulation as the one proposed would ultimately benefit not only the High Schools, but also the temporary teachers in these schools.

That well-trained, experienced teachers are preferable to novices in any class of schools, no one can doubt. As Goldwin Smith remarks, "Of all matters, public education most needs stability, and shrinks most from the touch of 'prentice hands.'" To object to a regulation which aims at gradually displacing inexperienced teachers and filling their places with well-trained teachers, appears to put a premium on mediocrity and inefficiency, and to regard the temporary advantage of certain individuals as of greater importance than the status of our secondary schools. In other words, to say that we *cannot* greatly improve in our teaching, would indicate on our part great ignorance of what good teaching is, and of the actual state of our schools at the present time. To admit that we *can* improve in our teaching, and yet to

oppose a measure which will soon provide a supply of good teachers, indicates a deplorable lack of interest in higher education, if not a willingness to sacrifice *the school* for the sake of *the teacher*.

I think it devolves upon those who are opposed to any change to show that, contrary to the united testimony of the Inspectors, the teaching in our High Schools is on the whole satisfactory; and that if the two hundred and thirty assistant teachers now employed (to say nothing of Head Masters) had *all* received a good professional training, the work would not be of a much higher order. I say it devolves upon such objectors to show cause; for, from what we know of the work of well-trained Public School teachers, we have a right to assume, what every true educationist will admit, that well-trained High School teachers would produce results far superior to those of novices, many of whom begin their experimenting on High School classes.

But if it be admitted that the interests of our High Schools would be promoted by employing in them none but those who are proved capable of properly doing the work required, then it simply becomes a question of High School interests *versus* the personal interests of inexperienced temporary teachers.

I submit, however, that to leave the masterships of our High Schools accessible to inexperienced and therefore comparatively inefficient persons, merely because they desire to work their way through college, or for any similar reason, is both unreasonable and unjustifiable.

Surely no one will contend that those who frame our school laws can be expected to provide temporary employment for any class of persons, if it can be shown that by so doing they are imperilling the educational interests of the country.

Why not distribute the operations of this transitory, temporary system of experimenting over all the leading professions? Is there any good reason why an inexperienced person should be permitted to minister to the wants of a child's *mind* in its education, and prevented from administering to the wants of its *body* in case of disease? We do not find our Medical Council and Law Society charged with heartlessly "throwing obstacles in the way of young men," because they require a certain amount of *experience* in all whom they allow to practise. It appears to be left to the teacher's occupation to supply the means which in many cases ought to be obtained from such other employments as can safely be undertaken with little or no preparatory training.

The great fallacy lies in assuming that the teaching profession is a common thoroughfare along which any person may pass, with no other preparation than a knowledge of the subjects to be taught. Under such circumstances, "The teacher gains access to the sanctuary of the mind without difficulty, and the most tender interests for both worlds are entrusted to his guidance, even when he makes pretension to no higher motive than that of filling up a few months of time not otherwise appropriated, and to no qualifications but those attained by accident."

Why it should be considered an improper thing for a university graduate to spend a few weeks with First Class Candidates in a special course at the Education Department, is not easy to understand. Possibly some misapprehension exists in regard to what is actually intended. Some there are who suppose that the Regulation requires attendance for a full session on lectures by Toronto Normal School teachers; others, that a few dry lectures by specialists are to be given, without any practical work.

The announcement of fuller particulars will no doubt remove such apprehensions and make it clear to every young graduate worthy to teach in a High School that the course proposed, instead of humiliating him, will rather tend to confer upon him that dignity which is felt only by those conscious of being fairly prepared for their work.

I can, therefore, see nothing unkind or unjust to our young men in the course proposed. Those intending to make teaching their life-work will not be slow to avail themselves of the advantages arising from a good preparatory course of professional training; and it is but just that those who merely desire to make their position a stepping-stone to some other calling be required also to fit themselves for discharging the high trust they thus undertake to fulfil.

If there is any injustice at all, it lies in the injury done to *permanent* teachers by persons who press into ranks already full, thereby cutting down salaries and displacing men who, in view of teaching as a life-work, have duly prepared for it. I would suggest that if "obstacles could be thrown in the way" of some young men *at this point*, it would be only an act of justice to many honest toilers in our schools, who, by reason of such supplanters, "stand in jeopardy every hour."

I contend, moreover, that the Regulation, instead of operating against temporary teachers, would ultimately benefit them. Those who thus make one position a step to another very naturally have constantly before them their future calling. To fit themselves for their life-work, they employ their best energies; their special studies lie in this path; while temporary employment often degenerates into formal routine, destitute of high motive or real enthusiasm. In fact no one can long occupy such a position without convincing proof of inefficiency—not necessarily a want of

knowledge of the subjects taught, but inability properly to impart this knowledge to others. To this may be added the difficulties in government and discipline which usually beset all beginners. This it is which I think must prove anything but helpful to one preparing for other work. As compared with an assurance of success, this feeling of failure is very depressing to any young man of spirit, and must unfit him for calmly pursuing his course of private reading. On the other hand, success in temporary employment leads to success in future fields of labour. Hence I say that if everyone wishing thus to spend one or two years in High School teaching were first to learn the practical details of his work, he would reap the benefit not only while teaching, but also when exclusively devoted to his chosen vocation.

It seems but fair, then, to all concerned that a special course of professional training form an essential part of the outfit of all our teachers.

All this may be said, and is intended, without generally condemning the work now done by temporary teachers; but when, to the concurrent testimony of the Inspectors and the opinions of many experienced Head Masters, we add the frank admission of a large proportion of these young men themselves, I think we must conclude that under the present system, in case of inexperienced teachers, comparative inefficiency is the rule, and first-class teaching the exception.

II. To discuss fully the *second* class of objections would open up questions of an extent quite beyond our present limits. These objections, briefly stated, are: *Teaching cannot be taught*; there is no *philosophy* of teaching; no such thing as a *science* of education. This antiquated notion is less frequently entertained now than before the relative superiority of well-trained teachers was fully established. It is

now generally admitted that, while teachers who have not been normally trained reach their level—stop growing—on an average at the end of three years of service, good Normal School teachers continue to improve throughout their entire career. Can any one give a good reason why such should not be the case? This fact is now *practically recognized* in all countries that rank high in popular education. The precedent found in Germany, with her forty or fifty lectures on Pedagogy and Didactics each semester, by university professors; the examples furnished in universities of Great Britain, suggestive and encouraging results in France, Italy, Austria, Switzerland, the United States, and elsewhere, ought surely to dispel any doubts which exist in regard to the increasing importance attached to skilled labour in education.

I do not share in the fear lest a *dead uniformity* be the result. The condition most to be feared is a *lifeless mediocrity* resulting from the aimless, desultory experimenting of novices, left free to invent their own methods. Intelligent, well-trained teachers may adopt similar methods of treating given subjects, and yet have scope for originality. They are not necessarily servile imitators; but, mentally appropriating the principles of a good system, retaining meanwhile their own personality, they reproduce them in their own way. That is, the adoption of scientific principles in teaching, need not conflict with a judicious employment of original methods.

The *untrained* teacher, on the other hand, not having been taught at the outset *how to avail himself of the practical experience of the best educators*, must blindly follow his own empirical methods, with those results which are admittedly characteristic of the average beginner.

Let us welcome, then, any measure

that will lift our teaching wholly from this condition of empiricism, and give it a settled scientific status. Not until this take place will our work rise to the dignity of a profession, nor will teachers receive the consideration which appertains to the professional character.

Whether the average college professor will impart enthusiasm to be compared in kind or degree with that which may be created by persons likely to be selected for the special course proposed, is very questionable indeed. Besides, at present many become High School teachers without ever entering college, and a large proportion of our assistant masters first accepted their positions when *undergraduates*. It should not be forgotten, moreover, that any assistance received by those who do attend college is altogether incidental, since no provision is made in our universities for lectures on Pedagogics, such as are given at Harvard, etc., to say nothing of German and other European universities. If such chairs were established, well-directed enthusiasm there received would count for something. At present, however, it is to be feared that our universities furnish no superabundance of helpful inspiration. Professors are supposed to be interested in their several departments, and students in whatever will aid them in their course. But to suppose that by a few hours' intercourse per week with an enthusiast in Classics or Science, a student will unconsciously absorb anything that will re-appear to aid him on the occasion of his first facing a class in a High School, is in the highest degree unwarrantable. What young men get from such professors, in addition to an acquaintance with the subject, is at most a love for study; possibly an ambition for a post-graduate course. What they need, as prospective teachers, but do not get, is practical instruction in the best

methods of imparting knowledge. For a young teacher to attempt to imitate his professor's usual style of lecturing, however good in its place, would indicate a serious want of tact and power of adaptation. Some conspicuous failures may be traced to this practice, of half-unconsciously imitating a style inappropriate to High School work. And it is as unreasonable to hold college professors responsible for the early efforts of such graduates, as it is to claim for them the requisite ability to supply our High Schools with teachers *who can teach*, without first being *trained*.

Then it is said that our graduates and undergraduates, when preparing for college, had ample opportunity in High Schools to see how classes are there conducted. Granted; but who can guarantee that the young men who this year, for example, entered our colleges, have been taught by methods which it is desirable to perpetuate? Those most familiar with our teaching as a whole, while giving high rank to many teachers, are frank enough to condemn in unmistakable terms the work of many others. Besides, as our more experienced teachers drop out of the ranks, and their places are in this manner supplied by inexperienced men, it is easy to see what the average teacher will be a few years hence—certainly not an improvement on the present. Is this result desirable? Would we apply such a rule to Public Schools? Why not? Public School teachers, too, are now prepared in High Schools. Why trouble *them* with a professional course? Are the subjects of the High School curriculum of less importance than that of the Public Schools? Or are we to believe that the principles which lie at the basis of all successful teaching in elementary work may be disregarded in advanced subjects?

It may be a somewhat humiliating admission, but I candidly believe that the average teaching in our leading

town and city Public Schools is superior (in methods employed) to that in many High Schools. The inference is quite natural, that as these Public Schools have advanced from the position they occupied years ago when many of them were in the hands of untrained teachers, so in like manner would the teaching of our High Schools advance, if none but experienced teachers taught in them. And this is precisely the result sought by the Regulation we are considering.

Doubtless some will say that we have many excellent teachers who have never received a professional training of any kind. This no one can deny; but they have risen to eminence only after years of experimenting, whereas, if previously trained, they would have much sooner attained this eminence, and avoided the more serious errors characteristic of such experimenting. The children upon whom their early trials were made are children no longer; they are beyond the reach of those who would now be glad to correct the mistakes of early teachings. They have gone forth, too many, alas, to bear for life the impress left by unskilled hands. Every honest teacher, in thoughtful moments, with the scenes of his first efforts and facts, such as I have referred to, before his mind, cannot fail to find cause for serious reflection. And the question arises, cannot this first chapter be omitted hereafter? Why not have this *trial-teaching* at a time when such errors can be detected, criticized, and corrected?

Specific training is as much needed for teachers as for physicians. Careful preparation and varied experience are as valuable in the school-room as in the sick-room; and he who knowingly employs an incompetent person in the first case cannot consistently refuse to do so in the second. Let us, therefore, do all in our power to give proper form and full effect to any measure which will likely place well-

trained teachers in every High School in Ontario.

The proposal to apprentice untried assistants to Head Masters is absurd. To begin with, Head Masters have enough to attend to, without nursing a number of inexperienced teachers, even supposing the former capable of the task, and the latter of a teachable spirit. There are schools where for years some such plan has prevailed. They have been made a kind of practising-ground for raw recruits, who put in their experimenting drill for two or three years, and then retire, to make room for a new set. Inspectors may complain of frequent changes of teachers; parents may protest against the unsettled and disturbing character of the teaching; trustees may grow impatient of being called on to accept resignations and make appointments; and the Head Masters, the drill-sergeants even, may grow weary and disheartened under special burdens; but, until the door is closed to untrained teachers, the solemn farce will continue. Who can suggest any other remedy? Young men who have not taught must learn how to teach, in some way, either after they are appointed as assistants, or before. In the name of common sense, why not *before*—imperatively before?

The blundering of substitutes for regular telegraph operators is amusing and insignificant, compared with the operations of educational empirics. The former they rectify by "repeats," but repetition with the latter generally repeats the mischief. No; instead of making Head Masters responsible for the troubles and failures of inefficient assistants, let these come to their classes prepared like men to do their work efficiently and bear their own responsibilities.

THE COURSE OF TRAINING REQUIRED.

Since we have our County Model Schools and Provincial Normal

Schools, if a Model High School could be established, it would give symmetry to the system. This was Dr. Ryerson's idea over twenty years ago. The nearest approach to it was the proposal to utilize Upper Canada College for the purpose. In favour of a Model High School much might be said. Theoretically, it is just what is needed. With a carefully-selected staff of teachers, a good supply of pupils, a central locality, suitable accommodations, and a liberal endowment, such a school ought to prove successful; provided, of course, that it be made the one entrance through which all must pass who begin to teach in High Schools. That there are practical difficulties in the way is not disputed; that they are insuperable perhaps few are prepared to believe.

If Upper Canada College could be *transformed* into such a school—not merely utilized for the purpose—it would have the two-fold advantage of furnishing an acceptable *raison d'être* for the continued existence of that institution, and, on the score of economy, of rendering unnecessary the erection of new buildings. Probably such a transformation was not intended by the Minister of Education in his proposal. At all events, this plan is now laid aside for the recent Regulation—a course of lectures on professional subjects at the Education Department.

This enterprise seems to be waiting, like many others, until "the requisite funds are supplied by the Legislative Assembly." It is to be regretted that fuller information has not been furnished concerning this proposed special session. Much prejudice might have been prevented, and general confidence gained for the proposal. As it is, we are left mostly to conjecture, and can only pronounce opinion conditionally. I think to be acceptable the scheme should at least meet the following requirements:—

1. A thoroughly efficient staff of lec-

turers. 2. Professional course (theory) to be supplemented by practical work with classes in certain High School subjects; 3. A thorough test in theory and practice, before granting diplomas; 4. No direct connection with any university; 5. Such a gradual enforcement of the Regulation as will cause no serious inconvenience to present teachers. Some such arrangement would doubtless command the confidence of teachers, and soon win its way to general favour.

Whatever plan may be adopted, the training required pre-supposes academic training and builds upon it. If it be found that this order cannot be observed, the literary and the professional preparation may go hand in hand, following the German method, where lectures on Pedagogy and Didactics are delivered in certain universities, sometimes by professors who have made these subjects an exclusive speciality; in most cases, however, by lecturers on philosophy, who adopt this method of giving variety to their work. In several of the English universities courses of lectures are given by able men on special aspects of the subject, and one or two permanent professorships have been established. In France and Italy also such lectures are given; coming nearer home, we find them at Harvard, Ann Arbor, and other American universities. Nor should this be thought strange, for a university is historically a teacher of teachers, as the old title "doctor" plainly indicates. If, therefore, a Model High School cannot be established, and if the special course be found inadequate, we can at least have theoretical Pedagogy, or Didactics, well taught in our universities. At present they furnish nothing sufficiently definite to meet this want, though the necessity for such a provision has been admitted. Probably the only obstacles would be the difficulty of securing suitable men as regu-

lar lecturers, and the lack of funds to pay them.

Such a lecturer should himself be an experienced teacher, thoroughly familiar with our school system. He should also have seen and studied with care the best schools of various grades in other lands; be competent clearly to impart a knowledge of the history of education, and show a perfect familiarity with Ethics and Psychology. This at least would be expected in an ideal lecturer—one not content with dealing in dry latitudes, dignifying commonplaces, distilling his own mediocrity and reproducing it in his students. It is hardly necessary that he be imported from abroad, to give imaginary *prestige* to the position. It would say very little for the past forty years' educational work in Ontario if it were necessary to entrust the training of our High School teachers to men who would naturally conform to English standards; or those who would urge upon us the acceptance of Teutonic ideas, under the impelling motive that all wisdom will surely die with that singularly gifted people. Nor could a lecturer rigidly cast in *any* foreign mould readily adapt himself to the situation. That desirable men could be secured is not improbable. As soon as the real necessity for this special talent is apparent, no doubt both *men* and *means* will be forthcoming.

To the collegiate method of training teachers there is the one serious objection, that it would furnish no *practical* instruction, unless each university could make local arrangements to meet this want. If Toronto University were to establish such a chair, and if all desiring to qualify as High School teachers were compelled to attend lectures there, the other universities would have just ground of complaint. If, however, the Government were also to prescribe in general terms a course of professional work

for High School teachers. leaving it optional with the other colleges thus to supply their students also with the requisite instruction, no unfairness would appear.

The desire of these colleges to provide for their own men would soon suggest a way to meet the emergency. Then, as now, a healthy emulation would exist in turning out competent candidates for masterships. Some common test could be applied to all, and all receive final recognition by a Departmental certificate. Among the advantages of this plan would be—(1) The broadening and popularizing of our university curricula; (2) Comparative inexpensiveness to the country; (3) Rendering unnecessary any sweeping changes in our present system.

The universities ought to be deeply interested in any plan for giving increased efficiency to our High School teachers. The kind of preparation matriculants receive largely determines both the work that must be done for them at college, and their final standing at graduation.

Conversely, the graduates sent back

to the High Schools as teachers either reflect honour or bring discredit on the colleges that sent them.

It is to be hoped that this interaction is not being lost sight of by our university senates.

Since we, as a section, have taken up this important subject, our opinion will be looked for, both on the general question and the several plans proposed. That we shall express our sympathy with the object sought to be obtained, I have no doubt. I trust that our suggestions as to the means by which increased efficiency shall be made hereafter to characterize even the youngest teacher in our High Schools, may be marked by wisdom and unselfish devotion to our calling.

It was moved by Mr. McHenry and seconded by Mr. Merchant, "That in the opinion of this section the interests of secondary education in Ontario would be greatly promoted if a suitable theoretical and practical course of professional training were provided for and required of all our High School teachers." Carried.

USE OF TEXT BOOKS.—There should be a reaction against the improper use of text-books, though it would be unfortunate if, during this reaction, the books themselves gave way to a loose, inaccurate, and superficial method of instruction, whether oral or otherwise. What, then, is that improper use, and how are we to avoid it? An improper use of a book is its exclusive employment in a narrow, literal sense, in which the spirit of the work is sacrificed to the letter, and an acquaintance with its text accepted without an adequate appreciation of its meaning. This is a danger in the other extreme from that first mentioned. It would be impossible to decide which were worse for a scholar—to inhale his education through the medium of a superficially-informed teacher, or to cramp and dwarf his mind forever by a

memoriter acquisition of facts without principles, and words without meaning. There remains a golden mean in the use of oral instruction, by which the old-fashioned memoriter way of recitation and misunderstanding may be corrected. By a correct system of oral instruction, I understand the emancipation of the teacher from the thralldom of the text-book which she may be obliged to use. In this way the teacher calls into service whatever may apply to the matter in hand, wherever it may be found; she is limited to no book in elucidating the text of what she is teaching, in order that her instruction may be as broad as her requirements will make it. Oral instruction, then, does not supplant, but supplements the text-book.—*S. Arthur Bent, Supt. of Schools, Nashua, N. H.*

THREE WEEKS IN DAKOTA.

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“WHAT do you think of Dakota?” is the question frequently put to me since my recent travels through that territory. To this question my reply has been “I think a great many things of it, so many that it would require a long time to tell all my thoughts about it. It is a territory of vast extent—about two and one half times the size of New York State—and, as may be supposed, it possesses great variety in its soil and climate. It is neither an elysium nor a pandemonium. When considering accounts or reports of it we should not forget ‘*Veritas in mediis*’—truth lies between the extremes.” For the benefit of the readers of the EDUCATIONAL MONTHLY it is my purpose to give a fuller reply to the question asked, by furnishing a few details about Dakota as it appeared to me during a visit of three weeks’ duration. These remarks, I may say, are intended to apply chiefly to the northern and eastern portions, my information of south-western Dakota, a mountainous and sandy country, being largely drawn from conversation with other travellers.

After having spent a short time in the respectable and busy city of St. Paul, pleasantly situated on the high banks of the “Father of Waters,” I took a passing look at the beautiful and fashionable watering-place, Lake Minnetonka, and arrived at Fargo, Dakota, a city of ten thousand inhabitants, on the 29th of June, of this year. I have travelled in the Eastern, Central and Northern United States, but in none of them have I met such

a scene as that which lay open to my wondering gaze in the prairie region of western Minnesota and eastern Dakota early on the morning of June 29th, as we approached the country contiguous to the Red River, a

“ Full-fed river winding slow
By herds upon an endless plain.”

Hills, trees, shrubs and fences, so conspicuous in the east, are here almost entirely wanting; and the unsettled and unbroken prairie presents the appearance of a limitless ocean of grass. In the inhabited portions, however, the farm-houses and towns speedily dispel this illusion; and, when one comes within thirty or forty miles of a river, the heavy belt of green woods with which it is bordered shows at once that the prairie ocean does possess limits.

To the botanist or even the non-scientific lover of nature the prairies of the West offer great attractions in the presence of numerous herbs, many of which are exceedingly beautiful to the eye, and regaling to the olfactory sense. During my stay I observed in bloom, among many others, myriads of pretty harebells, lilies, asters, calystegias, vetchlings, fringed orchids and sweet-scented roses. The grasses upon the prairies, contrary to my expectation, are comparatively short—on an average not more than a foot in length. The dense woods lining the banks of the river vary from a few rods to half a mile or even a mile in width, and consist mostly of graceful elms, stately oaks, and quivering aspens, together with herbs and shrubs

similar to many of those that are found in the woods of Ontario, for example, Columbine (*Aquilegia Canadensis*), Cow-parsnip (*Heracleum lanatum*), and Poison Ivy (*Rhus toxicodendron*). There are also lindens, willows, and ash-leaved maples. The last named is the *Negundo aceroides*, and is sometimes termed "box-elder." It is a handsome shade tree, twenty-five or thirty feet high, is of the same family as the maple and horse-chestnut—viz., *Sapindacee*—and differs from the well-known sugar maple (*Acer saccharinum*) of this Province in shape of the leaf and fruit, as well as in its flowers and the aspect of its bark. Each leaf is compound, and consists of three or five ovate, acuminate leaflets with a pinnate arrangement, the older ones showing an unequal trilobation or else a dentation. The fruit is a double samara, possessing incurved and greatly dilated wings. The flowers are greenish, the pistillate ones having racemose inflorescence, while the staminate ones are corymbose. The bark of the entire young plant, and of the young branches of the adult plant, is quite smooth and yellowish green; and never, even in a very old tree, does it become as rough as the bark of the sugar maple.

For the zoologist this region is likewise invested with deep interest. Here exist numerous species of molluscs, fishes, insects and birds. Amongst the birds we find sweet-singing, harmless and destructive ones, the so-called "wheat-bird," which steals the new-sown grains of wheat, being, in all probability, the one of all the birds whose presence is least desired by farmers. Of mammals, besides the badger and fox, I observed two species of the inoffensive and useful "gopher" (*Spermophilus Franklinoi* and *S. tridecemlineatus*), both of which burrow in the earth, and by this action pulverize and mix the soil. Seldom is a live

buffalo seen now-a-days; but the great number of bleached buffalo skeletons that lie scattered over the prairies gives proof that Dakota has, not long ago, been one of the favourite haunts of this roving animal.

In the prairie region proper, the soil is composed of from one to two and a half feet of dark-coloured matters, underlaid by heavy gray and white clays. A new well, which I saw at Kensington, exhibited layers, first of black soil, second of grayish-white clay, next blue clay, and then, about eight feet from the top, another layer of black soil one foot thick, and exactly resembling the surface layer. This lower stratum of black matters was in turn followed by underlying strata of gray and white clays. When the black surface soil is wet by a shower of rain or otherwise moistened, it becomes excessively and provokingly adhesive. On account of a drought prevailing in some localities throughout June and the early part of July, I experienced the gluey properties of the soil for only a day or two. Towards the sources of the rivers, and therefore in higher grounds, we find the land to be undulating and hilly, and the surface soil to possess more sand and clay than in the lower localities, and thus to form a soil altogether better balanced and proportioned in all the elements necessary for the sustenance and growth of a variety of crops. In the Pembina Mountain district, from which spring the four tributaries of the Park River, in addition to wheat and oats, I saw carrots, beets, cabbages, onions, potatoes, and peas growing and thriving well. With addition of straw and barn-yard manure, in the careful and proper cultivation of the soil, nearly, if not quite, all the land in the eastern and northern counties of Dakota must eventually prove highly productive. The black muck and loam of low-lying lands, as well as the "alkaline" deposits of some districts imperatively de-

mand the silica of straw and the ammonia compounds of stables and barn-yards in order to render them fit for yielding an abundance of the cereals. They cannot afford to part with any of the sand or other siliceous substance which they possess in so small a quantity. Indeed, if more silica than that contained in the straw of cereals were added to the low lands they would thereby undoubtedly be much improved. I had an opportunity of observing the results of experiments of the kind indicated. In one instance wheat straw had been spread over a field and afterwards ploughed in, and in another instance the straw had been burnt upon the land, and both of these experiments were attended with good results. It may here be remarked that the evident origin of the "alkaline" deposits referred to as occurring on some low-lying farms is to be found in the occasional overflow of the rivers, the waters of which often contain the same mineral salts in about the same proportions as they occur in the soil. They may also in some places have been deposited ages ago by the waters of a great salt sea, of whose existence there appear to be numerous and ample proofs. Whatever their origin, their presence calls for the most serious consideration of the scientist and farmer. I think a convenient and ready way of getting rid of the evil effects of these mineral salts, is that mentioned above, by a liberal use of ordinary barn-yard manures, instead of keeping no stock and burning all the straw in one heap, or of dumping the manure into the river; practices far too common in that country.

The water, like the soil, differs greatly in different localities. That of the rivers near their mouths is generally heavily laden with common salt, epsom salts, and chloride of potassium; while that of the same rivers near their sources, carries but little of these mineral substances, and is often

quite palatable. Many wells of ordinary depth, say twelve to twenty feet, in the prairie proper, yield a water so strongly charged with sodium chloride and magnesium sulphate as to be disagreeably saline to the taste, and to possess cathartic qualities in a slight degree. Several artesian wells have been sunk in this district, some of them giving forth a flowing spring of saline waters, others yielding water pleasing to the palate and entirely free from sodium and magnesium salts. Again, near the heads of Forest and Park rivers I found good drinking water. This, obtained from ordinary wells and from natural spring, was altogether devoid of a salty or other unpleasant taste. Melted ice procured from Salt Lake in Walsh county, and from Red River, proved very good indeed; and, as frost is not of rare occurrence in this country, perhaps there is no easier and more satisfactory method of purifying the water than that of allowing it to freeze. Two freezings would probably make it absolutely pure, while one freezing would make it sufficiently pure for ordinary use.

For ten or fifteen miles from their sources the Dakota rivers are easily forded; in fact fording is the common mode of crossing them, their beds being of gravel of very firm consistence. Red River is navigable by steamers of moderate magnitude for two hundred miles south of the northern boundary of the territory. Forest River, because of its rapid current, provides the towns and villages along its banks with good drainage facilities. Most of the country also possesses useful means of drainage in the form of "*coulées*." A *coulée* is (not a Chinese or East Indian labourer, but) a long, straight or winding, shallow ravine, a few yards, or it may be, a few perches in width, and often opening into a river or lake. It has neither trees nor shubbery in or about

it, is six or eight feet deep, and in the majority of cases is dried up for some months in summer. But some *coulées* are much deeper, and retain a considerable quantity of water the year round.

Another word, *marais*, likewise borrowed from the French, is made use of there, as in France, to designate a low, wet, marshy piece of ground.

Nothing is more refreshing and enjoyable than a carriage ride over the level, smooth roads of the prairie. Somewhat monotonous, it may prove to be; but then there are no stones, no stumps and no hills to wear and tear the carriage and harness, and to jar and fatigue the horses and passengers. A drive of fifty-five miles, with an exhilarating breeze playing upon me, produced less weariness than one of thirty miles over the ordinary hilly roads of eastern Canada and the United States. It would be better, of course, if there were a few stones on

the prairie, as on the Pembina Mountains, where, now and then, a farm may be met with possessed of enough stone for a well, a root-house, and the foundations of a barn and a dwelling-house. However, it must not be supposed that Dakota is dependent upon other States for her needed building stone; for, there is at the town of Sioux Falls, in southern Dakota, one of the largest and finest stone quarries in America. The stone, which is of a light-red colour, when first taken out is soft and can be readily cut and polished; but, on exposure to the air, it becomes exceedingly hard and well-suited for building and paving material. The city of Omaha, Nebraska, has, recently, for the pavement of her streets, ordered many thousand dollars' worth of this stone from Sioux Falls quarries. Good brick is manufactured in the brick-yards of Minto, Grand Forks and other towns.

(To be continued.)

THE LICENSING OF TEACHERS.*

BY J. DEARNESS, PUBLIC SCHOOL INSPECTOR, EAST MIDDLESEX.

[In opening the paper the speaker established the proposition that the instructor should be conversant with the subjects he undertakes to teach.]

DOES some one ask, why waste time arguing a proposition universally accepted? If it is universally accepted, it is not universally practised. To be convinced of this, compare the curricula for teachers' certificates and the examination papers with the course of study prescribed to be taught in our Public Schools. Teachers are possibly ignorant of those subjects

upon which they are not examined. This year many teachers will be licensed whose certificates will show that they have been examined on grammar, literature, composition, spelling, arithmetic, geometry, botany, history, geography and French, physiology, including hygiene, and reading. Three of these subjects are not prescribed to be taught in the Public Schools, but trustees may, by law, require these same teachers to teach writing, algebra, music, business forms (of book-keeping), elementary physics, and the principles of agriculture. It might be reasonably expected that a teacher's certificate would show, at least, his standing in the three R's,

* Portion of a paper read at the Provincial Teachers' Association, August, 1883.

but strange to say there is no examination in writing either at the literary or the so-called professional examination. No wonder, then, that teachers are fast becoming proverbial for bad penmanship. It is indisputable that subjects not having a place on the curriculum of examination are ignored in the course of preparation. Is there any other country than Ontario where persons may obtain national and life certificates without any knowledge of algebra? Still worse, a candidate may obtain a certificate without the least knowledge of natural science. Another anomaly, candidates for Third Class Provincial Certificates need to get a minimum of only 20 per cent. on the important subjects, such as composition, arithmetic, grammar and spelling; but on the additional subjects, French, Latin, history, or music, they must obtain at least 30 per cent.

* * * *

While our County Model Schools have done much good, yet six years' experience proves that they do but inadequately meet the purpose for which they were established. The teacher-in-training does not gain that grasp of methods which enables him to reproduce them according to his own individuality with adaptation to the varying circumstances in which he finds himself placed. One of the reasons why the County Model School effects so little lasting benefit is the shortness of the session. Just think of it: the acquirement of the principles of a difficult art and skill in the practice of their application in one quarter! Young people pretending to learn the principles of education, the art of school management, organization and discipline, and the particular methods of teaching a dozen or more subjects as well as the common underlying principles—all in three months! Austria, with 120 years' experience, now re-

quires her teachers to spend four years in the training school; and Prussia, the first country in the world to establish Normal Schools, prescribes a three years' course. But in Ontario one short session at the Model School is but partly devoted to the study of didactics. Can any one tell why the study of reading, elocution, mental arithmetic, school law and physiology—more than enough to occupy the whole time—should be crowded into those three months? These subjects could be taught as conveniently in the High School as in the Model School, and such an arrangement would tax the Model School masters less severely, and not cram and worry the students so much as the existing plan. The value of the Model School to the teacher-in-training would be greatly enhanced, and the efficiency of our teachers increased, if the Education Department were to establish an Entrance Examination, to be conducted by the County Boards, who would examine candidates on the subjects which they might be required to teach and which they did not take at the Intermediate, and on subjects peculiar to the teaching profession, such as school law. Then those few precious weeks could be earnestly devoted to real professional work, and not frittered away on those who had not yet learned reading or mental arithmetic.

* * * *

A recent Regulation requires a teacher to hold a Non-professional Third for at least a year before he enters for his Non-professional Second. This revives what proved to be the most, perhaps the only, mischievous feature of the Bill of 1871. It will be found again, as from 1871 to 1877, that the majority of those successful at the Non-professional Third Class Examination, and of the required age, will enter the Model School, teach three

years, and then, rusty and unwilling to go again over the whole Non-professional field, will either importune for extensions or forsake the profession. Instead of being driven out of the profession or harassed while in it, they should be encouraged or required to accomplish the minimum amount of literary work necessary for a life certificate before entering on teaching. The grades of the lower certificate should indicate the advancement made in professional acquirements, and the higher class certificate reward additional literary and professional effort.

It is unfortunate that Third Class Certificates were made Provincial before the standards upon which the same are granted were made uniform. There was never greater disparity in this respect in any examination in Ontario than at present exists in the final examination at the County Model Schools. In some counties where there was a scarcity of teachers every Model School student received a certificate in order that all the schools might be supplied; in other counties only those were awarded certificates who actually merited them. It is a manifest injustice to the schools of the latter counties, and to the rejected candidates in them, that persons of inferior qualifications may come from other counties and obtain immediate employment.

At least one-tenth of our schools are held by teachers possessing but extensions of Third Class Certificates, hence it is worth inquiring upon what terms these are granted. It would seem from the number of such extensions granted in different counties that the measure of indulgence enjoyed by holders of expired Third Class Certificates is variable. In five counties there was an average in each of thirty-five extensions granted last year, while in seventeen other counties there were less than ten exten-

sions granted. Some Inspectors commend but few extensions, and only in very special or peculiar cases. They argue (1st) that the teacher is encouraged to inactivity if he is led to hope for an extension at the expiration of his "Third;" (2nd) public interest demands that the teacher should, as soon as possible, make himself a more efficient instructor by attending the institutions provided by the public for that purpose; and (3rd) that to grant extensions indiscriminately is unjust to those teachers who, too independent, ambitious, or conscientious to crave extensions, sacrifice time and money to qualify themselves more fully for their chosen work, but returning find the schools filled, or salaries reduced, by those who eked out extensions in their absence. Other Inspectors make it a rule to recommend extensions only when the trustees' application accompanies that of the teacher. A third class of Inspectors, it is alleged, recommend extensions to all-comers. Extensions of Third Class Certificates, I submit, should be granted sparingly, and on some kind of re-examination, and that by the County Boards.

There are a few persons who formerly held certificates and proved themselves possessed of excellent natural qualifications for teaching, but who are unable to attain the present standard required in mathematics or, it may be, some other part of the literary examination. It would be in the interest of public education to empower County Boards to grant such persons assistants' certificates qualifying them to be engaged as assistant teachers but not to take sole charge of a school.

Three years' teaching prior to 1877, which now gives exemption from Professional Examination, is not worth so much on the average as three years' teaching since that date; be-

cause all who commenced in or before 1874 had not the advantage of even the County Model School training. It is wrong to give the higher value to the inferior article. It is alleged that this discrimination is an act of justice to the claims of individuals who, if they had passed before 1877, would not have been obliged to go to the Normal School. The public expects much of the Normal Schools (their cost justifies the expectation), and it has a right to demand that every teacher, in order to do his best work, shall attend one of these training institutions.

The following is a recapitulation of the conclusions arrived at in this paper:—1st. Teachers' certificates should bear evidence that their holders have been examined in the subjects that they may be legally required to teach in the Public Schools at the time such certificates are granted. 2nd. The maximum and minimum values assigned different subjects should be in some degree proportioned relatively to their importance. 3rd.

All work not strictly professional, and any other work that can be done as well, or nearly as well, in the High School, or elsewhere out of the Model School, should be eliminated from the Model School course. 4th. Intending candidates for teachers' certificates should be required to accomplish the minimum amount of non-professional work required for a life certificate before they are licensed to take sole charge of a school. 5th. Every certificate should be limited to the territorial jurisdiction of the body that grants it. 6th. Extensions should be granted only in exceptional cases, and that by the County Board on some kind of re-examination. 7th. In certain cases certificates might be granted permitting the recipients to be appointed as assistants, but not to take sole charge of a school. 8th. The immunity from attendance at the Normal School now enjoyed by those who taught three years prior to 1877 should cease, at least after a year's notice to that effect.

THE EDUCATION OF WOMEN.

BY GEORGE CARY EGGLESTON.

SCARCELY any subject has occupied a larger place in the attention of the public during the last twenty years than the education of women, and yet there is nothing like a definite general agreement concerning any point involved in the discussion. We have clamorous cries for the identical education of women and men, for co-education, and for the higher education of women, whatever that may mean; we have discussions of the comparative intellectual capacities of men and women, and of the physical fitness or unfitness of girls for university work; now and then we

have graphic pen-pictures of the domestic misery produced by the education of girls out of the intellectual plane occupied by their fathers and mothers, and tirades, innumerable as vague, against the frivolity of the education given to girls in fashionable schools. But with all this discussion the public is still divided in opinion upon that question of supreme importance, What training and what teaching ought we to give to the girls who are to be the wives of our boys, and who are to bring up the next generation of Americans?

Perhaps the absurd notion that there

is, somehow, antagonism between the interests of the sexes or the dignity of the sexes in this matter has had much to do with our failure to come to an agreement; but a more serious obstacle has been the common neglect of the debaters to inquire particularly into the fundamental relations of education to life. The definite statement of a few elementary principles may help us here, although the principles are so commonplace and obvious that their formal statement seems almost absurdly unnecessary.

The purpose of education, whether we hold what are called utilitarian views or not, is to fit its recipient for life. Education which does not fit its recipient for life, or which does so imperfectly, is to that extent defective, misdirected, useless.

In the education of every human being, therefore, distinct reference should be had to the conditions and requirements, general and particular, of the life which that being is likely to lead, and the education should include due provision for such contingencies as are probable or easily possible, though not certain.

All discussion of educational problems, to be profitable, must be founded upon a proper recognition of these fundamental principles.

"I utterly loathe and detest the kind of education you have received," wrote the late Horace Greeley to a young Oxford graduate who had applied to him for employment, "because it has unfitted you for life, and has given you no means of taking care of yourself, or of making yourself useful in your generation." I quote from memory a letter which was brought to me to read eight or ten years ago, and except in the first clause of it I can pretend to give only the substance, not the exact words; but the substance is the soundest philosophy, and in this country we recognize the principle on which it rests, to a

certain extent at least, though we are apt to misapply it in the direction of material utilitarianism and in a contempt for scholastic acquirements, as Mr. Greeley did in the latter part of the letter, where he wrote, "I thank God that I was graduated from a New England very common school!"

The principle is that which has been enunciated above, and it is fundamental, as we have said, to all profitable discussion of education. The purpose of the present paper is to inquire whether its application to the question of women's education leads. By this test, what teaching, what knowledge, what skill, and what intellectual and physical discipline do our daughters need? This is a question of the highest moment.

Upon the answer which this generation gives to it will depend the happiness and the welfare of generations to come. No man or woman who has daughters to bring to womanhood or sons to be mated with the young women of the future can afford to treat the theme lightly or in a spirit of perversity.

Before we can decide what education our daughters need we must know what their lives are likely to be, and what demands life is likely to make upon them. Luckily we know in the main, and the contingencies are such that we may provide against them. So large a proportion of our girls will become wives and mothers that our only safety lies in giving all of them proper preparation for the life of wives and mothers.

For such a life they will need, first of all, good physical health. So certain and so imperative is this need, and so surely must neglect of it result in wretchedness, that inattention to this matter may fairly be called criminal. Yet in no other particular, perhaps, is the education of girls more generally neglected or more frequently misdirected. There is not only too

little systematic effort made to educate girls' bodies into supple robustness, and to give stamina and buoyancy to their constitutions, but there is, too commonly, positive education in ill health given to them. Very much that is most carefully done for girls is directly productive of ill health, weakness, and want of stamina. The care given to the complexion, for example, by which too many mothers mean only the whiteness of the skin, commonly consists of restraints which break down the nervous system, impair vitality, and invite invalidism. This is not a lecture on hygiene, and it is no part of our purpose to suggest the proper hygienic governance of girls' lives. We seek only to emphasize the importance of proper physical training as a necessary part of the education of girls.

As wives and mothers our girls are to be, in Addison's phrase, "the cement of society." Without their purity and grace, and intelligence and good temper, society would crumble to pieces. It will be their task to keep the world sweet and wholesome; to create, regulate, and maintain social intercourse of a graceful, profitable kind; to make life worth living. It will be theirs to make homes with the material means which men furnish; to turn mere dwelling-houses into centres of attractive domestic life. Upon them chiefly will fall the duty of ornamenting life, cultivating the world's taste, keeping its moral nature alive, and inspiring the men of their generation with high and worthy conceptions of purity and duty. It will be theirs to entertain the world, too, and to amuse it in profitable ways; to minister in all womanliness to its moral, physical, and intellectual health and comfort. Women only can create that sweet and wholesome atmosphere in which domestic life springs into existence and grows. Above all and beyond all in importance, these girls

whom we are educating must bear and rear the next generation of men and women, and upon their fitness to discharge this task well the character of the future men and women of America depends.

Our civilization is founded absolutely and wholly upon the family, and the wife and mother determines the character and life of the family. Is it not worth our while, therefore—nay, is it not our highest and most imperative duty—to take care that our girls, upon whose shoulders such tasks as these are presently to fall, shall be fitted by every means in our power for the due and happy discharge of functions so important? Is it not criminal folly for us to treat their education as nothing more than a preparation for the frivolous life of the ball-room? And is it any whit wiser for us to push them into wearing competition with men in university work, to the neglect of aught that belongs by right of life's need to their own proper education?

As a preparation for such duties as we have outlined above, girls need both moral and intellectual culture of a kind which neither any fashionable girls' school nor any university in the land provides or can provide. They need, above all, the training of home life and home influences—this far more than scholastic discipline, far more than what we term accomplishments.

We do not complain that either the fashionable schools or the universities teach girls more than is good for them in either of these directions, but that they neglect to teach much that is of greater necessity as a preparation for life than anything that they do teach.

The woman who is to be happy and useful as the maker and mistress of a home must know the art of home making and home ruling. Yet how very small a place is given to the teaching of these arts in our schemes

of education for girls! We should call that man a fool who hoped to see his son successful as a merchant or banker but neglected to have him instructed in the principles of arithmetic and book-keeping. But thousands of girls are married every year who do not know how to make a loaf of bread, or to set a table, or to iron a napkin, or to make a bed becomingly. Is it expected that servants shall do these things? So the young man who is to be made into a merchant or banker will have his book-keepers to write out his accounts and make his arithmetical calculations for him, but he must understand these processes for himself, or he will be at the mercy of his servants. Moreover, in the woman's case, there may not always be servants or the means with which to command their services, and their incompetence at best needs the supervision of a mistress skilled in all their arts. This seems a homely matter, doubtless, to those persons who see the complete salvation of women in university education, but it is a matter which touches the happiness of women themselves, and closely concerns the well-being of a world whose whole life centres in and is founded upon the home. It is not too much to say that no girl ought ever to come to maturity without having acquired both skill and taste in every art of the household, or that no woman deficient in this particular can marry without serious risk to her own happiness and to that of the persons about her. It does nobody any harm for the mistress of a household to know how to calculate an eclipse, but it is disastrous for her to be herself eclipsed by her Bridget.

For the proper ordering of a household every woman needs a cultivated taste, and her education should include very careful attention to this point. It is one of the duties of women to beautify, to ornament the world, and

especially their own homes and their own persons; and the woman whose taste does not enable her to dress herself becomingly, to arrange the furniture and ornaments of her rooms tastefully, and generally to give a touch of seemliness to that part of the world with which she has to do, misses and fails in a part of her work, to her own loss and that of all other persons with whom she comes in contact. It is not necessary that our girls shall become artists, but it is important that they shall have a trained appreciation of beauty and fair skill in producing it.

The study of music, and especially the acquirement of practical skill in the making of music, is sufficiently well recognized as a necessary part of a girl's education; but some question has been raised on this subject by the very persons who have most loudly complained of the defectiveness of women's education in scholastic studies. It is frequently said that only those girls who have marked ability in music, and who therefore are likely to excel in it, should be required to give time to its study. We do not argue in that way respecting the education of boys. We make all our boys study arithmetic, those who have not as well as those who have a natural aptitude for mathematics. When we reflect upon the value of musical skill to a woman as a resource for her own entertainment, as a means of adding to the attractiveness of her home, and, more than all, as a refining, softening influence upon children, it is scarcely an exaggeration to say that a knowledge of music is as necessary to a girl as acquaintance with arithmetic is to a boy; and as no boy not an idiot is incapable of acquiring a knowledge of arithmetic, so no girl with hands and ordinary mental capacity is incapable of acquiring fair skill in music.

Most important of all a woman's ac-

accomplishments, however, is the ability to maintain an intelligent, vivacious conversation with family friends and guests. A woman who is a good talker, and who can talk equally well whatever the character of her guests may be, is a blessing, a boon to the world. By nature all women are fitted to acquire this accomplishment. All women talk much; that all of them do not talk well is mainly the fault of those who have educated them.

They have not been provided with subjects of conversation, and their minds have not been trained to that alertness and that catholicity of intellectual sympathy which are necessary conditions of conversational success in varied company. This need can and should be provided for in the education of girls. In order to talk well a woman must be well informed upon a great variety of subjects. She must know what is going on in the world, and must be interested in it—the great world of life, not the wretched, narrow little world of gossip which is called society. She must be interested in the world's great interests and its minor concerns. She must know something of the drama, of art, of music, of the news of the day, and of current literature, and she must be interested in these things. So equipped, she need never make a remark about the weather, or fall to discussing the depravity of servants—a depravity which is lacking in the variety necessary to make it an interesting theme of conversation. Training may so equip her by awakening her interest in these things, and by giving her the necessary general acquaintance with them. Another need of women's lives, a sore one, the neglect of which is a fruitful source of misery, is the means of self-entertainment. Every woman must necessarily pass many hours alone in her own home, and the torture of loneliness is inevitable, un-

less the woman is capable of being sufficient company for herself. It is incapacity in this direction which makes gadabouts of some women, and melancholy-manics of others. That a condition so certain to exist is not provided for in education is a grievous wrong and cruelty. In the training already suggested as a means of giving women skill in conversation, we have the chief conditions of escape from ennui. The woman who reads her newspaper every day, and the magazines every month, and who maintains her acquaintance with books and her love for them, is not apt to find time dragging heavily on her hands. If to this she adds an intelligent interest in the affairs of the world, in education, charity, and those great political questions which involve the welfare of the race, or of classes and nations, she will always have occupation enough for her mind and heart, and will always be the best of company for herself, or for any other intelligent human being.

In our scheme of education for girls, therefore, we would make everything subordinate to the one purpose of fitting them to lead the lives of women contentedly in happiness and usefulness and all grace; we would seek first of all to make women of them, women capable of doing the duties of a woman's life becomingly and well, and of enjoying that life. To that end we would make it a first care to give them good health and strong constitutions; secondly, to train them thoroughly in all domestic arts; thirdly, to cultivate the æsthetic side of their natures, in order that they may know how to minister to beauty; fourthly, to train them to right ethical principles and impulses, and cultivate in them a genuine love of home and its duties; finally, we would cultivate in every girl such sympathies and tastes as are necessary to the healthful occupation of her

mind and the development of her conversational powers; that is to say, we would lead her to a love of letters, of music and art, and to a reasonable interest in the affairs of mankind.

Such, we think, is, in outline and substance, the education which common-sense must prompt us to give to our girls by way of preparation for that matronly life which each of them will most probably lead. If to this preparation for life any girl chooses and is able to add scholastic attainments, there can be no objection; but these are the educational necessities of life, while scholastic attainments are life's refinements. To neglect necessary preparation for happy and useful life in order to acquire unnecessary scholastic training is simply folly of a suicidal sort. As a matter of fact the great majority of women, for lack of time, or means, or inclination, cannot become scholars in the university sense, in any case, and to set up such a standard as a common one for girls to strive to attain, seems little less than a waste of the world's most precious commodity—good womanly women. The woman is of greater worth to the world than the scholar.

In addition to this preparation for the life which each woman is most likely to lead, there should be in every case some preparation made for a contingency which may become a fact in any woman's life—the contingency, namely, of impoverished self-dependence. No one will dispute the abstract assertion that any given girl may some day have herself and perhaps her family to support; and yet our schemes of education for girls are framed precisely as if this were not and could not be true. As a rule, no provision whatever is made for such a contingency in the education of girls, no recognition whatever is given to the fact that the chance exists.

We shut our eyes to the danger; we hope that the ill may never come, and we put the thought of it away from us. In brief, we trust to luck; and that is a most unwise—I was about to say an idiotic—thing to do.

Each one of us has known women to whom this mischance has happened, and each one of us knows that it may happen to the daughter whom we tenderly cherish, yet we put no arms in her hands with which to fight this danger; we equip her for every need except this sorest of all needs; we leave her at the mercy of chance, knowing that the time may come when she whom we have not taught to do any bread-winning work will have need of bread, and will know no way in which to get it except through dependence, beggary, or worse. She can teach? Yes, if she can find some politician to secure an appointment for her. She can prick back poverty with the point of her needle? Yes, at the rate of seventy-five cents a week, or, if she is a skilful needle-woman, at twice or thrice that pittance.

Is it not beyond comprehension that intelligent and affectionate fathers, knowing the dreadful possibilities that lie before daughters whom they love with fondest indulgence, should neglect to take simplest precaution in their behalf? We are a dull, blind, precedent-loving set of animals, we human beings. We neglect this plain duty, at this terrible risk, simply because such has been the custom. Some few of us have made our minds to set this cruel custom at defiance, and to give our girls the means of escape from this danger. It is our creed that every education is fatally defective which does not include definite skill in some art or handicraft or knowledge with which bread and shelter may be certainly won in case of need. If the necessity for putting such skill to use never arises, no harm is done, but good rather, even in that

case, because the consciousness of ability to do battle with poverty frees it possessor from apprehension, and adds to that confident sense of security without which contentment is impossible. All men recognize this fact in the case of boys; its recognition in

the case of girls is not one whit less necessary. It seems to me at least that every girl is grievously wronged who is suffered to grow up to womanhood and to enter the world without some marketable skill.—*Harper's New Monthly Magazine.*

A BOY'S BOOKS, THEN AND NOW.—XV.

BY HENRY SCADDING, D.D., TORONTO.

[CONCLUDED.]

(Continued from page 338.)

(g) *Johnson.*

JOHNSON'S Dictionary is a book so well known, at least by repute, that a very few words will suffice for a notice of my two-volume quarto copy, dated 1785; one year after Johnson's decease. It has happened to Johnson as to Walker, to have his work enlarged, improved, and re-edited so often, that the books now circulating under his name are scarcely to be identified with the original work. In 1818 Todd's Johnson appeared, swollen to five volumes quarto; and since then, Latham has added largely to Todd.

At the foot of the title page of this 1785 edition, it is again pleasant to notice the names—household words many of them!—of the London booksellers concerned in its publication: J. F. and C. Rivington, L. Davis, T. Payne and Son, W. Owen, T. Longman, B. Law, J. Dodsley, C. Dilly, W. Lowndes, G. G. J. and J. Robinson, T. Cadell, Jo. Johnson, J. Robinson, W. Richardson, J. Nichols, R. Baldwin, W. Goldsmith, J. Murray, W. Stuart, P. Elmsley, W. Fox, S. Hayes, A. Strahan, W. Bent, T. and J. Egerton, and M. Newbery.

Johnson's original dictionary was by no means a mere alphabetical reg-

ister of definitions and derivations. It was a volume interesting to read, *ad aperturam*, on account of the numerous selections from English authors given in illustration of the use and meaning of each word. In these quotations the compiler was studious that there should be likewise a certain moral drift. "When first I engaged in this work," Johnson tells us in his Preface, "I resolved to leave neither words nor things unexamined, and pleased myself with a prospect of the hours which I should revel away in feasts of literature, the obscure recesses of northern learning which I should enter and ransack, the treasures with which I expected every search into those neglected mines to reward my labour; and the triumph with which I should display my acquisitions to mankind. When I had thus enquired into the original of words, I resolved to show likewise my attention to things, to pierce deep into every science, . . . that my book might be in place of all other dictionaries whether appellative or technical." This was his ideal. After labouring hard to make it a reality, the writer is constrained to avow that he has fallen short of what he had hoped to effect. "These were the dreams

of a poet," he says, "doomed at last to wake a lexicographer." He discouraged would be critics, however, by classing them beforehand with fools and blockheads. "A few wild blunders and risible absurdities, from which no work of such multiplicity was ever free, may," he said, "for a time furnish folly with laughter and harden ignorance in contempt;" but what the final verdict of the public on his book would be, he felt pretty sure. "Useful diligence will at last prevail," he says "and there never can be wanting some who distinguish desert." To have fulfilled his design as completely as he did, single-handed, in the space of seven years, was a great feat. "When I took the first survey of my undertaking," Johnson writes, "I found our speech copious without order, and energetic without rules. Wherever I turned my view, there was perplexity to be disentangled, and confusion to be regulated; choice was to be made out of boundless variety, without any established principle of selection: adulterations were to be detected without a settled test of purity, and modes of expression to be rejected or received, without the suffrages of any writers of classical reputation or acknowledged authority."

On revising his work for the fourth edition, Johnson candidly wrote as follows: "I will not deny that I found many parts requiring emendation, and many more capable of improvement. Many faults I corrected; some superfluities I have taken away; some deficiencies I have supplied. . . For negligence or deficiency," however, he added, "I have perhaps not need of more apology than the nature of the work will furnish. I have left that inaccurate which was never made exact, and that imperfect which was never completed." "He that undertakes to compile a Dictionary," he had previously remarked, "undertakes that, if it comprehends the full extent

of his design, he knows himself unable to perform. Yet his labours, though deficient, may be useful, and with the hope of this inferior praise he must incite his activity, and solace his weariness."

Johnson lived a few years too soon to profit by the studies of Sir William Jones and others in Sanskrit, which have led to the modern science of Comparative Philology; but he did a good work in devising a luminous method for an English Dictionary, which has been virtually adopted by most subsequent English lexicographers. The same remark applies to the English Grammar which precedes the Dictionary. Its analysis of the elements and forms of English speech is lucid, and for the period when it was offered to the world, masterly, and not out of harmony with later theories. Again, it will be seen that in the History of the English Language prefixed to the Dictionary, Johnson has given large extracts from King Alfred's translation of "Boethius," in the Anglo-Saxon language and character, with samples, similarly printed, of the Anglo-Saxon Gospels, Anglo-Saxon verse in various metres, and Anglo-Saxon prose, beginning at length to be affected by Norman French: then follow copious specimens of our mixed Saxon Norman English, in chronological order, down to Elizabeth's time. In all this, Johnson initiated that study of Early English which has led to such fruitful results in England and the United States and among ourselves. He, in effect, thus suggested the movement which in our day has led to the careful editing and republication of nearly every one of those numerous pieces of ancient English literature which had almost wholly fallen out of memory with Englishmen, but which throw so much light on the history and structure of their language.

On turning over the title-page of

Johnson's famous work, no Dedication meets the eye. The celebrated Plan or Prospectus of a Dictionary, circulated before its inception, and still to be seen in Johnson's collected works, was addressed in dignified language to Philip, Lord Chesterfield, by permission; and, doubtless, had the Earl, who, by the way, was Secretary of State at the time, come up to the mark in point of substantial patronage, a grandiose inscription to him would have met the eye in the Folio. But this was not to be. What Johnson expected Lord Chesterfield to do can only be conjectured. By dwelling so much as he afterwards did, in his talk and correspondence and in the preface to the Folio when it finally appeared, on the supposed slight shown him by the Earl, Johnson betrayed, to a greater extent than he had need to have done, the morbidness of mind to which he was unfortunately subject. It would seem that in reality, Chesterfield did take a considerable interest in the projected dictionary, and offered suggestions which were quietly adopted.

We are all of us more or less familiar with the appearance and form of Dr. Johnson. Some of us, perhaps, could easily persuade ourselves that we had seen him personally; that we had been in his company; that we had noted with our own eyes the nervous twitches and jerks of the ponderous shape as it moved restlessly about. In the fine engraving of Sir Joshua Reynolds' counterfeit presentation of him, prefixed to this quarto of 1785, we have him again restored to us. Here we see once more the *Doctor Formidabilis* of the latter portion of the eighteenth century; his dread form and its habiliments: the wig, the collarless coat, the large round buttons, the half-shut, short-sighted eyes; the full, unclosed mouth just pre- and to utter the combative, authoritative, "No! Sir."

About the time of Johnson's decease, it had become so customary to speak of his labours in clearing the study of the English language of its difficulties, as Herculean, that at last, in 1796, the metaphorical expression took a solid shape; and to this day the visitor to St. Paul's Cathedral in London, is astounded to behold in a Christian temple, looking down on him from a lofty pedestal, a semi-nude, colossal Hercules in white marble, which he learns from a Latin inscription below, is the memorial erected by friends and literary associates to the honour of the great Lexicographer.

It is somewhat singular that in the fourth edition so many of Johnson's splenetic definitions should still be allowed to appear. We still read here that "Excise is a hateful tax levied upon commodities, and adjudged, not by the common judges of property, but wretches hired by those to whom excise is paid." The Attorney-General, Mr. Murray (afterwards Lord Mansfield), held this to be actionable, and the Excise Commissioners were about to proceed against Johnson; but they were advised afterwards simply to accept a withdrawal of the offensive language. (In the "Rambler," also, Johnson classes together, as "the two lowest of all human beings," "a scribbler for a party and a commissioner of Excise.") Under "renegado" in the original MS.—after "one who deserts to the enemy; a revolter,"—there was added, "as we say, a Gower." Lord Gower had recently forsaken the Jacobite interests. This was struck out by Miller, Johnson's employer. Strange that the rest should have passed muster. "Pensioner" still continued to be "a slave of State, hired by a stipend to obey his master;" and a "pension" is said "in England generally understood to mean pay given to a State-hireling for treason to his country;"

and "patron" is "commonly a wretch who supports with insolence, and is repaid with flattery." "Whig" is "the name of a faction." "Tory" is "a cant term, derived from an Irish word signifying a savage." "Oats" are still "a grain which in England is generally given to horses, but in Scotland supports the people." The formerly famous definition of "net work" does not strike the educated ear now as much out of the way: "anything reticulated or decussated at equal distances, with interstices between the intersections." "Pastern," it is to be observed, has been corrected. A lady asked Johnson how he came to define "pastern" in the original folio to be "the knee of a horse." Instead of an elaborate defence, as she expected to hear, the reply at once was: "Ignorance, madam; pure ignorance." The story about the omission of the word "ocean" probably arose from a vague recollection of what Johnson had said about "sea" in his preface. He had at first, by an oversight, he tells us, left "sea" unexemplified by quotations. To the gentleman who professed to have discovered the omission of "ocean," Johnson observed, as he triumphantly placed his finger on the word in a copy of the dictionary near at hand, "Perhaps, sir, you spell ocean with a *t*." In "lexicographer" he indulges in a little dry humour at his own expense. A lexicographer is "a writer of dictionaries; a harmless drudge that busies himself in tracing the original and detailing the signification of words." And again: under "Grub-street." This, he tells us, is "the name of a street in Moorfields in London, much inhabited by writers of small histories, dictionaries, and temporary poems; whence any mean production is called Grub-street." To a certain Greek passage which he gives apropos of this mention of Grub-street, he has

appended no author's name. It was doubtless his own manufacture, out of a reminiscence of the *Odyssey*, where, I think, it is not to be found. He therein likens himself to Ulysses beholding again his rugged island home after a ten-years' absence, and exclaims:

"My Ithaca! from Fortune's knocks full sore
And Life's sharp thrusts, with joy I touch
thy shore."

With these remarks on Johnson and the old quarto edition of his famous dictionary here before us, I conclude my notes on our early dictionaries, Greek, Latin, and English. I have simply aimed to give an idea of the oracles which a youth of linguistic proclivities was aforesaid bidden to consult. Happily now, the question of language in general is beset with fewer difficulties than it was half a century ago. The knotted mass has been shaken loose. The threads are now to a great extent separated and rendered individually traceable. The student of English in the present day, is furnished with manuals which, thanks to Johnson, approximate somewhat closely to Johnson's ideal. Richardson's two quartos are richer than Johnson's book in chronological quotation from English writers, making it possible for every one to learn for himself the history and true meaning of a word; while the philological principles of Richardson are philosophical enough, being drawn from primeval elements of speech. For ordinary and less critical purposes, they have in England Ogilvie's *Imperial Dictionary*, re-edited by Annandale, and lately issued in an improved and augmented state; whilst here, for the same uses, we turn over by night and by day the pages of Worcester and Webster. The latter compiler originally styled his book an *American Dictionary of the English Language*, and by confusing the minds

of the young and others in regard to established English orthography, he has done much mischief throughout the length and breadth of this Continent. It is patent to all that Worcester represents the use of the mother-country much more accurately than Webster does; and it is superfluous to say that it is English use—and not the enforced peculiarities of an outlying province that we Anglo-Canadians of British North America are proud to cultivate. Webster's definitions are terse and to the point, and will always retain their value: but there are signs which render it probable that the orthographical peculiarities of Webster will die out in the United States as the daily increasing intercourse with Great Britain goes on. Already in the modern editions of Webster, the orthographic Americanisms, though still given, are not pressed, and by their side the customary renderings of the mother-country reappear. It is likewise noticeable that since the Messrs. Harper, of New York, have found it to their advantage to enter the English market with their *Monthly Magazine*, that the Websterisms once so carefully nursed in that periodical, have been dropped therein, and the English usage resumed. I say resumed, for in books printed by the Harpers in 1833, as for example in Verplanck's Discourses and Addresses, now before me, the English orthography obtains. Henceforward, therefore, when we buy a reprint of an English author emanating from the Harpers' press, we may hope to escape the annoyance of having the text presented to us in a disfigured state. The Boston and Philadelphia republications have, I think, for the most part, avoided this blemish. The Messrs. Scribner, like the Messrs. Harper, are vigorously pushing the circulation of their monthly periodical, *The Century*, in Great Britain and

here. I have no doubt that with the educated classes, the disagreeable niters, miters, fibers, sabers, theaters, specters, revelers, cavilers, etc., that offend the eye in the otherwise magnificently printed pages of that periodical, will be a source of disfavour; and will lead in due course, it is hoped, to a further abandonment of Webster's doctrines.

In the great living community of England, instinct with every element of spiritual insight and intellect, the English language will without doubt continue to modify itself wisely and well, generation after generation, and to grow, rendering supplements to its dictionaries periodically necessary. Augmentations to the language and improvements, arising thus, will be duly respected throughout the English-speaking world. It will be our wisdom, as Anglo-Canadians simply, to await and watch for such developments of our speech as these when they emerge in the mother-land, and let them have their natural course amongst us. In the meantime, let little or no heed be given to petty local propositions of change. They are sure in the long run to amount to very little. Especially, let all reforms of the "phoneticuz" order be religiously eschewed.

The English Dictionary of the future, when it shall appear, will be that of the Philological Society of England, so many years in preparation. No language is now studied as an isolated thing. Each tongue is regarded as one of the numerous ramifications of human speech, all more or less cognate, and reciprocally throwing light on one another. Dictionaries hereafter will recognize this on a wide scale, and be constructed accordingly. In the new English Dictionary of the Philological Society, English will of course be treated in this comprehensive way, in its origin, descent and connections.

In the meantime we have the Etymological Dictionary of the English Language by Walter Skeat, published so lately as 1882, simultaneously in England and the United States, to occupy our attention. Some of Mr. Skeat's positions will of course be controverted, but the modern student of

English cannot do better than make himself acquainted with Mr. Skeat's book, now cheaply obtainable everywhere; mastering especially its twenty pages of preliminary matter, wherein the facts and principles of Comparative Philology are concisely set forth.

UNIVERSITY WORK.

MATHEMATICS.

ACHIBRALD MACMURCHY, M.A., TORONTO,
EDITOR.

ARITHMETICAL PROBLEMS.

By L. B. Davidson, Head Master P. S.,
Glenallan.

1. (a) Upon what principle does the "comparison of fractions" depend? Prove the truth of this principle by means of an example.

(b) Simplify

$$\left\{ \frac{13\frac{1}{2}}{2.857142 - 2\frac{8}{11}} \times 1\frac{4}{7} \right. \\ \left. - \frac{13\frac{1}{2}}{(2\frac{7}{8} - 2.72) \times 1.571428} \right\} \\ \div \left(13\frac{1}{2} \div 2\frac{6}{7} - 2\frac{8}{11} \times 1\frac{4}{7} \right) \text{ of } \frac{\text{£.25}}{1 \text{ guinea.}}$$

Ans. = 60.

2. A person buys 12 yards flannel at 1s. 6d. per yard, 37 yards calico at 1s. 0½d. per yard, 21 yards muslin at 2s. 4½d. per yard, 18 yards linen at 2s. 6¾d. per yard. He hands the merchant a \$50 bill worth only ⅔ its face value. How much change should he receive?
Ans. \$13.40.

3. A boy standing at the foot of a hill whose slope is 175 yards long, shoots an arrow which lights 125 yards down the slope on the opposite side. He gets his arrow and returns to the top of the hill in 4¼ mins. Find his rate down the hill, his rate up the hill being 3 miles per hour.

Ans. 5 miles.

4. A speculator buys ⅔ of a property which rises ⅓ in value. He then sells ½ - ⅓ × ½ - ⅓ ÷ 4½ of his share for \$1295. Find the value of the property at first.

Ans. \$4000.

5. A merchant buys a barrel of sugar for \$30. By marking it at an advance of ¼ on its prime cost and then using a false scale in selling it, he gains \$8.40. Find the weight of his "pound"
Ans. 15oz.

6. A school is divided into I., II., III., and IV. grades, of which the III. grade contains ⅓ of the whole number of pupils. At the close of an examination the teacher promotes 5 pupils from I. to II. grade; 15 from II. to III. grade; and 10 from III. to IV. The divisions are then all equal. Find the number of pupils in the school.

Ans. 100.

7. A tree 90 ft. 6 in. high broke into 3 pieces in falling. The top piece lacked 2 ft. 6 in. being ½ as long as the bottom piece, which was 6 in. less than the other two pieces together. Find the length of each piece.
Ans. 45 ft.; 25 ft. 6 in.; 20 ft.

8. The hind wheel of a waggon is 4 yds. 2½ in. in circumference, and makes ⅓ times as many revolutions in going 5 miles as the front one. Find the circumference of the front wheel.
Ans. 10 ft.

9. A wine merchant buys 5 hds. of wine at \$2.50 per gal. He pays 5c. per gal. for freight, and ¼ of its prime cost for duty. After receiving it he finds he has lost ¼ of the original amount by leakage, and conse-

quently determines to use a gallon measure $\frac{1}{2}$ pint too small in selling it. When he has the wine sold he finds he has lost \$10.35. Find his selling price per gal.

Ans. \$3.30.

10. A farmer has a field 40 rods long by $34\frac{1}{2}$ rods wide, which he wishes to enclose by means of a straight rail fence, 6 rails high, the rails to be of equal length and the longest that can be used without cutting. Allowing 414 rails for stakes, etc., find the cost of the rails at \$30 per 1000.

Ans. \$49.50.

11. A P. S. Inspector is offered a salary of \$1500 in a city where the income tax is $12\frac{1}{2}$ mills on \$1 on all his salary over \$400. But he desires to have \$85 more than this after the tax has been paid. How much should he receive?

Ans. \$1600.

12. A farmer sold 2180 lbs. of grain consisting of wheat and oats for \$32.75, receiving 50 cts. per bush. more for the former than for the latter. Supposing he had $\frac{1}{2}$ as many bushels of oats as he had of wheat, find the selling price of each per bush.

Ans. 45c., 95c.

13. A and B run a 100-yard race and A wins by 2 yards; B and C run a 125-yard race and B wins by $2\frac{1}{2}$ yards; A and C then run a 500-yard race for \$5 a side, A agreeing to give C a start of 20 yards. Which wins?

Ans. C.

14. A teacher accustomed to walk from his residence to the school in 15 minutes is detained beyond his usual time of starting. He consequently increases his rate by $\frac{1}{4}$ his general speed, but arrives at the school 2 minutes too late. How long is he detained?

Ans. 5 mins.

15. A has \$2.50, B has 16 francs. How much must A give to B in Canadian currency that he may have $\frac{1}{2}$ as many francs as B? (1 franc = $9\frac{3}{4}$ d.)

Ans. 80c.

16. The standard gold coins of Great Britain are made of gold 22 carats fine, and 1 lb. Troy of this metal makes 46.725 sovereigns. Find the weight of pure gold in coins worth £373. 16s.

Ans. 7 lbs. 4 oz.

17. Suppose the case of a watch to contain $1.8\frac{3}{4}$ oz. of gold 16 carats fine, find, by using the previous question, how many of such cases would be equal in value to 623 guineas?

Ans. 126.

18. Three horses trot around a circular ring $146\frac{1}{2}$ yds. long in 10 sec., 12 sec., and 14 sec., respectively. They start together in the same direction. How many circuits will each have made before they are all together again, and how much will the fastest horse really be ahead of the slowest one?

Ans. 42, 35, $30\frac{1}{2}$ mile.

19. A man spends \$8.25 in potatoes at 45c., and apples at 75c., buying in all 15 bushels. How many bushels of apples did he buy?

Ans. 5.

\$182.50. September 3, 1883.

20. Three months after date I promise to pay to the Canadian Bank of Commerce at Toronto, or bearer, the sum of one hundred and eighty-two dollars and fifty cents, with interest at 6 per cent. per annum, value received.

JNO. SMITH.

How much must Jno. Smith pay to discharge this note when due?

Ans. \$185.23.

21. It costs \$35.04 $\frac{1}{2}$ to paper the walls of a room 22 ft. 6 in. long with paper 18 in. wide at 12c. per yd., allowing the work to cost $\frac{1}{4}$ as much as the material. The height of the room is $\frac{2}{3}$ of its length, and it contains 2 doors each 7 ft. 6 in. by 4 ft., and 4 windows each 5 ft. by 3 ft. 3 in. Find the width of the room.

Ans. 20 ft.

22. Find the value of fencing a square school-yard containing $2\frac{1}{2}$ acres with a board fence, using 6 boards for each panel, viz.: one board 12 in. wide, one 10 in., one 8 in., and three 6 in.; the posts to be placed 6 ft. apart and 5 ft. above the ground, and faced with a board 6 in. wide. Posts are worth \$8 per C.; lumber, \$12 per M.; and the labour $\frac{1}{2}$ as much as material.

Ans. \$109.45.

23. Find how many trees there are in a wood $\frac{1}{2}$ mile long by $\frac{1}{4}$ mile wide, supposing on an average 4 trees grow on each square chain.

Ans. 3200.

24. A reservoir is 24 ft. 8 in. long, and 10 ft. 8 in. wide. Find how many inches the surface will sink if 2466 $\frac{3}{4}$ gals. of water be drawn off. (1 cub. ft. of water = 1000 oz., 1 gal. = 10 lbs.) *Ans.* 18 in.

25. Find how many bricks of which the length, breadth and thickness are 9 in., 4 $\frac{1}{2}$ in., 3 in., will be required to build a wall of which the length, height and thickness are 72 ft., 8 ft., and 1 $\frac{1}{2}$ ft., respectively, allowing that the mortar increases the bulk of each brick by 8 $\frac{1}{2}$ per cent. *Ans.* 11264.

UNIVERSITY OF TORONTO.

SUPPLEMENTAL EXAMINATIONS, 1883.

Senior Matriculation.

ARITHMETIC AND ALGEBRA.

Examiner—W. Fitzgerald, M.A.

1. Find accurately to three places of decimals the cube root of 78836421.

2. If 10 men and 3 women, working 8 hours a day, perform a piece of work in 12 days, how many days would be required for 8 men and 5 women, working 9 hours a day, to perform the same work, supposing 3 women to do as much work in a given length of time as 2 men?

3. Reduce 1 pound 5 ounces and 3 drams to the decimal of a hundredweight.

4. The area of the base of a cylinder is 2 square feet and its height 30 inches, find the height of a cylinder the solid content of which is three times as great, but whose diameter is only two-thirds that of the given one.

5. A person borrows \$540 which he agrees to pay in yearly payments of \$90 each, together with interest at the rate of 8 per cent., payable annually, the borrower having the privilege of paying a greater sum than \$90 on account of principal annually if he choose to do so, the lender agreeing to allow him interest at 7 per cent. upon all principal money paid in excess of \$90 per year. The borrower makes three annual payments of \$150 each, and pays the value of his indebtedness at the end of the fourth year. Find the amount of the last payment.

6. Solve the equations:

$$(1) \begin{cases} 7x + 3y = 23 \\ 4y + 3z = 32 \\ 2x + 8z = 36 \end{cases}$$

$$(2) \frac{x+1}{x-1} - \frac{x-3}{x+3} = \frac{8x}{(x+1)(x-3)}$$

$$(3) x + \sqrt{x-a} = (a+b).$$

7. Find the n th term and the sum of n terms of a geometrical series.

Find the limit of the sum of the series $2 - 1 + \frac{1}{2} - \frac{1}{4}$ etc.

8. When are 4 quantities said to be proportionals?

When 4 magnitudes are proportionals show that if any equi-multiples be taken of the 1st and 3rd, and any whatever of the 2nd and 4th, then if the multiple of the 1st be $>$ or $<$ that of the 2nd, the multiple of the 3rd shall be $>$ or $<$ that of the 4th.

Find a fourth proportional to $\frac{2}{3}$, $\frac{3}{4}$ and $\frac{1}{2}$, and a mean proportional to 3 and $1\frac{1}{4}$.

9. The plate of a mirror is 36 inches by 24, and is to be framed with a frame of uniform width, whose area is to be equal to half that of the glass. Find the width of the frame.

10. The diameter of the hind wheel of a carriage is 1 foot greater than that of the fore wheel, and in a journey of 7 miles the fore wheel makes 420 revolutions more than the hind wheel; find the diameter of each wheel, assuming the ratio of the diameter to the circumference of a circle to be as 7 to 22.

ALGEBRA AND TRIGONOMETRY—HONORS.

1. Prove the binomial theorem when the index is fractional or negative.

Write down the fifth term of the expansion of $(a+ax^2)^{-\frac{3}{2}}$.

2. Show how to express any proposed number in a given scale.

Express the common number 1883 in the nonary scale.

3. If one solution of the equation $ax \pm by = c$ be given, show how all other solutions may be found.

Find the positive integral solutions of $29x + 4y = 150$.

4. From a given continued fraction show how to obtain the converging fractions, and prove that the successive convergents approach more and more nearly to the true value of the continued fraction.

Obtain the converging fractions to the value of $\sqrt{23}$; $\sqrt{17}$; $\frac{48}{235}$; $\frac{41}{70}$.

5. Find the present value of an annuity of "A" pounds to commence n years hence and continue (1) for p years, (2) forever.

6. Find the area of a quadrilateral whose opposite angles are supplementary.

7. State and prove De Moivre's theorem. Find the seven values of

$$(\cos. \theta + \sqrt{-1} \sin \theta)^{\frac{1}{n}}$$

8. State and prove Machin's series, and calculate the value of π accurately to four places of decimals.

9. Express $\cos n\theta$ in descending powers of $\cos \theta$ when n is a positive integer.

10. Find the radius of the inscribed circle of a triangle.

If a circle be inscribed in a triangle and between it and the three angular points of the triangle three other circles be described each touching the first mentioned circle and also two of the sides of the triangle, find the radii of these three last mentioned circles.

CLASSICS.

G. H. ROBINSON, M.A., TORONTO, EDITOR.

UNIVERSITY OF TORONTO.

SUPPLEMENTAL EXAMINATION: 1883.

Junior Matriculation: Arts and Medicine.

LATIN.

Examiner: Adam Johnston, B.A., LL.B.

I.

Translate:

Toto hoc in genere pugnae, cum sub oculis omnium ac pro castris dimicaretur, intellectum est, nostros propter gravitatem armorum, quod neque insequi cedentes possent neque ab signis discedere audent, minus aptos esse ad huius generis hostem, equites autem magno cum periculo proelio dimicare, propterea quod illi etiam consulto plerumque cederent

et, cum paullulum ab legionibus nostros removissent, ex essedis desilirent et pedibus dispari proelio contenderent. Equestris autem proelii ratio et cedentibus et insequentibus par atque idem periculum inferebat. Accedebat huc, ut numquam conferti, sed rari magnisque intervallis proeliarentur stationesque dispositas haberent, atque alios alii deinceps exciperent integrique et recentes defatigatis succederent.—CÆSAR, *de Bello Gallico*, B. V.

1. Parse *genere, castris, dimicaretur, insequi, possent, audent, desilirent, inferebat, haberent, exciperent.*

2. Mark the quantity of the penult of *genere, armorum, insequi, audent, cederent, essedis, desilirent, dispari, inferebat.*

3. *Paullulum.* Explain the formation.

4. Give the dates of the birth and death of Cæsar, and of the principal events of his life.

II.

Translate:

Ergo illi alienum. quia poeta fuit, post mortem etiam expetunt, nos hunc vivum, qui et voluntate et legibus noster est repudiamus? praesertim quum omne olim studium atque ingenium contulerit Archias ad populi Romani gloriam laudemque celebrandam? Nam et Cimbricas res adolescens attigit, et ipsi illi C. Mario, qui durior ad haec studia videbatur, jucundus fuit. Neque enim quisquam est tam aversus a Musis, qui non mandari versibus aeternum suorum laborum facile praeconium patiat. Themistoclem illum, summum Athenis virum, dixisse aiunt, quum ex eo quaeretur, quod acroama aut cuius vocem libentissime audiret:—ejus, a quo sua virtus optime praedicaretur. Itaque ille Marius item eximie L. Plotium dilexit, cuius ingenio putabat ea, quae gesserat, posse celebrari. Mithridaticum vero bellum, magnum atque difficile et in multa varietate terra marique versatum, totum ab hoc expressum est: qui libri non modo Lucillum, fortissimum et clarissimum virum, verum etiam populi Romani nomen illustrent.—CICERO, *pro Archia*, ch. IX.

1. *Illi, alienum, hunc vivum.* Who are severally meant?

2. Write short notes on *Cimbrias res*, *C. Mario*, *Mithridaticum bellum*, *I. Lucullo*.

3. Explain the syntax of *contuleris*, *celebrandam*, *mandari*, *patiatur*, *quaerretur*, *audiret*.

4. Parse *expetunt*, *suntate*, *attigit*, *Athenis*, *divisse*, *dilexit*, *gesserat*, *expressum*.

5. The *nistoclem illum*. Explain the use of *illum*.

III.

Translate :

Tum satus Anclusa, cunctis ex more vocatis,
Victorem magna praeconis voce Cloanthum
Declarat, viridique advelat tempora lauro;
Muneraque in naves ternos optare juvencos
Vinaque, et argenti magnum dat ferre talentum.

Ipsis praecipuos ductoribus addit honores:
Victori chlamydem auratum, quam plurima
circum

Purpura Maendro duplici Meliboea cucurrit;
Intextusque puer frondosa regius Ida
Veloces jaculo cervos cursuque fatigat

Acer, anhelanti similis, quem praepes ab Ida
Sublimem pedibus rapuit Jovis armiger uncis.
Longaevi palmas nequidquam ad sidera tendunt

Custodes; saevitque canum latratus in auras.
—VIRGIL, *Aeneid*, B. V.

1. Scan the first four lines, marking the quantity of each syllable.

2. *Puer, regius*. Who is meant?

3. *Optare, ferre*. What would be the construction in prose?

4. Give the names of the commanders in the rowing race, and of the Roman families said by Virgil to be descended from them; also the names of their ships.

IV.

Translate :

Nunc tibi conveniunt quae te per aperta
sequantur

Aequora, legitimos destituantque toros.

At cum pauper eras armentaue pastor agebas,

Nulla nisi Oenone pauperis uxor erat.

Non ego miror opes, nec me tua regia tangit,

Nec de tot Priami dicar ut una narus.

Non tamen ut Priamus nymphae socer esse
recuset,

Aut Hecubae fuerim dissimulanda nurus.

Dignaque sum et cupio fieri matrona potentis:

Sunt mihi, quas possint sceptrata decere,
manus.

Nec me, faginea quod tecum fronde jacebam,
Despice; purpureo sum magis apta toro.

Denique tutus amor meus est tibi; nulla
parantur

Bella, nec ultrices advehit unda rates.

Tyndaris infestis fugitiva reposcitur armis:

Hac veni in thalamos dote superba tuos

Quae si sit Danais reddenda, vel Hectora
fratrem.

Vel cum Deiphobo Polydamanta roga.

Quid gravis Antenor, Priamus quid suadeat
ipse.

Consule, quis aetas longa magistra fuit.

Turpe rudimentum, patriae praeponere rap-
tam.

Causa pudenda tua est; justa vir arma
movet.

Nec tibi, si sapias, filiam promitte Laeoenam,

Quae sit in amplexus tam cito versa tuos.

—OVID, *Heroides*, Ep. V.

1. What is the verse called? Explain the structure of it. Scan the first four lines.

2. *Tyndaris*. Who? Why so called?

3. Explain the construction of: *sequantur*, *possint*, *conseat*.

4. Give the derivation of: *armenta*, *pastor*, *ultrices*, *infestis*, *aetas*, *amplexus*.

5. Give a list of the works of Ovid. Name his chief literary contemporaries.

LATIN GRAMMAR.

1. Explain the forms: *paterfamilias*, *aulai*, *deabus*, *filii* (from *filius*), *Romae* (at Rome), *cujus* (how formed from *quis*?), *amarunt*, *potiundus*, *forent*.

2. Give neuter endings of the 3rd declension with the principal exceptions.

3. Write the genitive singular of the following, marking the quantity of the penult where doubtful: *Apollo*, *praedo*, *nectar*, *iter*, *robur*, *paries*, *custos*, *nepos*, *bos*, *scelus*, *tellus*, *auceps*, *supellex*, *conjux*, *armiger*.

4. Give a list of words with a different meaning in the singular and plural.

5. Compare: *humilis*, *posterus*, *benevolus*, *multus*, *dives*, *nequam*.

6. What is meant by Frequentative, Inchoative, Desiderative and Diminutive Verbs, and how are they severally formed?

7. What verbs govern two accusatives?

8. What is the difference between the *Objective* and *Subjective Genitive*? Illustrate by examples.

9. Give the lists of prepositions according to the cases they govern.

10. Explain the difference in meaning between the Imperfect and Perfect Indicative.

11. Explain the difference between the Gerund and Gerundive.

12. Explain the meaning of *Zeugma*, *Synesis*, *Anacoluthon*, *Tmesis*, *Litotes*

LATIN PROSE.

Pass and Honor.

Examiner: Adam Carruthers, B.A.

NOTE.—*Pass* Candidates to take first piece only; *Honor* Candidates to take both.

I.

To these demands Cæsar replied just as it seemed best to him; but the conclusion of his speech was "That there could be no friendly relations between him and them if they remained in Gaul; and that it was not reasonable that they who had not been able to protect their own territories should seize those of others; nor were there any lands in Gaul unoccupied which could be granted without injury, especially to so great a multitude; but they might, if they wished, settle in the territory of the Ubii, whose delegates were with him and were complaining of injuries from the Suevi and seeking assistance from him; that he would exact this of the Ubii."

II.

They who look upon Liberty as having accomplished her mission when she has abolished hereditary privileges and given men the ballot, who think of her as having no further relations to the every-day affairs of life, have not seen her real grandeur—to them the poets who have sung of her must seem rhapsodists, and her martyrs fools! As the sun is the lord of life as well as of light; as his beams not merely pierce the clouds, but support all growth, supply all motion and call forth from what would otherwise be a cold and inert mass, all the infinite diversities of being and beauty, so is Liberty to mankind. It is not for an abstraction that men have toiled and died; that in every age the witnesses of Liberty have stood forth, and the martyrs of Liberty have suffered.

MODERN LANGUAGES.

JOHN KATH, B.A., ST. CATHARINES, EDITOR.

NOTE. The Editor of this Department will feel obliged if teachers and others send him a statement of such difficulties in English, History, or Moderns, as they may wish to see discussed. He will also be glad to receive Examination Papers in the work of the current year.

ENGLISH.

[Answers to previous papers will appear next month.—Ed.]

UNIVERSITY OF LONDON.

MATRICULATION EXAMINATIONS.

JUNE, 1883.

ENGLISH LANGUAGE.

Examiners—Prof. John W. Hales, M.A., and Prof. Henry Morley, LL.D.

1. Write out and punctuate the passage read by the Examiner.

2. With what languages of Europe is English in origin most closely connected? What exactly is its relation to Latin? What to French?

3. Explain the term Anglo-Saxon. What objections are there to it? What terms have been proposed in its stead? Give reasons for its retention.

4. Mention any words that have been added to our vocabulary in the present century.

5. What exactly is meant by the phrase "Part of Speech"? What by the term "parse"? Classify the words *pen*, *petition*, *long*, *that*, *wire*.

6. Discuss the plural form *children*. Write down some nouns that have no special form to express plurality. Is it correct to speak of "a two-foot rule"?

7. Point out the grammatical difference between *the* in such a phrase as "he did his duty, and was the happier for it," and *the* in "he was the happier of them."

8. Examine the forms *lesser*, *worse*, *foremost*, *elder*, *farther*. Derive *next*, *last*, *best*, *further*, *rather*.

9. Explain the terms "strong" and "weak" as applied to verbs; also the term *conjugation*. To which conjugation do you

assign *teach, fight, work, do, fly, swim, flee, till, tell, toll.*

10. Mention some verbs that, being originally preterites, have come to be used as presents. Can you account for such a usage?

11. What is the force of *run* in such a phrase as "to run wild," of *wear* in "the day wears," of *give* in "the shoe gives," of *obtain* in "this doctrine obtained," of *take* in "take offence"? Mention any noticeable uses of *to taste, ring, sit, stand, go.*

12. Point out and discuss anything grammatically questionable in these sentences:—

(a) The threatened assault was met by Buckingham by a counter attack on the Earl of Bristol, whom he knew would be the chief witness against him.

(b) They were desirous of removing those abuses which the Stuart kings had introduced into the Government, and which overlaid the constitution.

(c) And many a holy text around she strews
That teach the rustic moralist to die.

(d) This view has been maintained by one of the greatest writers that has appeared in this country.

(e) The administration of so many various interests, and of districts so remote, demand no common capacity and vigour.

13. Give examples of verbs that are used both as "complete" and as "incomplete predicates;" and explain these terms.

14. Analyse these sentences:—

(a) What is this?

(b) I had rather not go.

(c) Who is he, to behave in such a manner?

(d) There were readers in multitudes; but their money went for other purposes, as their admiration was fixed elsewhere.

(e) His answers were such as to win unqualified praise.

15. Describe the metre of the following stanza:—

We look before and after,
And pine for what is not;
Our sincerest laughter
With some pain is fraught;

Our sweetest songs are those that tell of
saddest thought.

ENGLISH HISTORY AND MODERN
GEOGRAPHY.

Examiners—Professor John W. Hales, M.A.,
and Professor Henry Morley, LL.D.

History.

1. What was the Saxon Heptarchy?

2. Give the date of the Battle of Hastings, and relate the incidents that led to it.

3. What is meant by the word "feudal"? What were the chief features of the Feudal System, and over what period in English history did it extend?

4. Who was Stephen Langton? Tell the events in English history with which his name is associated.

5. What were the Provisions of Oxford? Associate with your answer some account of the rise of the English Parliament.

6. Tell what you know of any statutes made before the reign of Henry VIII. for restraining the power of the Pope in England.

7. Name the successive wives of Henry VIII., and describe as nearly as you can from the king's point of view the manner of his severance from each of them.

8. Give some details as to the time, cause, and manner of the dissolution of the Monasteries in Henry VIII.'s reign.

9. Explain the relations between England and Spain that led to the equipment of the Spanish Armada. Add an account of the defeat of the Armada.

10. Tell briefly the history of the period of twelve years between the Third and Fourth Parliaments of Charles I.

11. What was the date of the Fire of London? What were in that year the relations between England and other European powers?

12. Illustrate by reference to events of his reign the home policy of James II.

13. What events led most directly to the Revolution of 1688? Why was William III. made king?

14. Give as clear an account as you can of the conditions associated with the settlement of the English Crown on William and Mary.

Geography

15. Where are Lewes, Evesham, Halidon Hill, Neville's Cross, Otterburn, St. Alban's, Louton, Tewkesbury, Bosworth, Flodden?

16. Name each of the United States of America, and show by a rough outline map their relative positions.

17. Of each of the following counties, say to what province of Ireland it belongs: - Dublin, Cavan, Kilkenny, Cork, Meath, Tipperary, Down, Galway, Wicklow, Donegal, Sligo, Wexford, Waterford, Mayo, Londonderry.

18. Describe the physical geography of the land west of the Andes.

SCHOOL WORK.

DAVID BOYLE, FLORA, EDITOR.

QUEEN'S (BRITISH) SCHOLARSHIP EXAMINATIONS.

Female Candidates.

SCHOOL MANAGEMENT.

1. Write full notes of a lesson on *one* of the following subjects:—(1) A cape; (2) an introductory lesson on short division; (3) Moods of verbs.

2. Explain generally how headaches and faintness may be caused by a vitiated atmosphere, and state in what part of the school-room a thermometer should be placed for a proper test of the atmosphere.

3. Show the advantages of gallery teaching for lessons on objects. For what other lessons is a gallery useful? Give your reasons.

4. Point out the difficulties of identifying nouns and verbs in the following sentences, and show how you would obviate these difficulties for children acquainted with those parts of speech only?

"He cast one *look* behind. She said, *Look* at me."

"How do you *form* your letters? That letter has a curious *form*."

"He did it without *help*. Do not *help* him."

"The *cold* is severe in winter. It has been a *cold* season. Do not catch *cold*."

5. Give explanations of any unusual words or grammatical difficulties which are italicized in the following passage, in language suitable for a class in Standard V. or VI.:—

When red have set the *beamless* sun,
Through heavy vapours dark and *dun*;
When the tired ploughman, dry and warm,
Hears, *half* asleep, the rising storm
Hurling the hail and *sleeted* rain
Against the casement's *tinkling* pane;
The *sounds* that drive wild deer and fox
To shelter in the *brake* and rocks.

6. What preparatory observations as to difficulties of spelling should be made before proceeding to write from dictation the following passages?

The watery dykes display luxuriant verdure; bulrushes and water-flags have attained their freshness; willows are rich with foliage in sylvan nooks; agreeably hidden in a leafy arbour, you may catch glimpses of the shier denizens of the more secluded labyrinths of the forest.

7. Explain how diagrams, models, and other visible illustrations may be usefully employed in teaching the notation of tens and hundreds.

8. Write out the rule for converting a pure circulating decimal to a vulgar fraction, and work an easy example in such a way as to show the reason of the rule.

9. Name the qualities you would select in giving an object lesson to infants on "steel;" and state the experiments or illustrations by which you would elicit the ideas, before giving the names of the qualities.

10. Detail some of the geometrical properties that may be taught to young children by folding square or rectangular pieces of paper, and give illustrative diagrams.

11. Detail the apparatus required for lessons on a coal mine and on the seasons, and draw the diagrams required for the latter.

12. Make a table showing all the principal parts of a simple sentence, and give a short sketch of your method of teaching the term "predicate."

13. Give briefly, with examples, the rules of concord of the verb with its subject, when they are connected by disjunctive conjunctions in the order in which they would naturally arise.

14. Write out the chief topics to be selected for a lesson on the reign of one of the Kings of England, and expand one of those topics into brief notes of a lesson.

15. Explain the purpose of using different coloured cottons in teaching young children to sew, and give the proper measurements for the parts of a child's pinafore.

16. What are the chief points to be attended to in correcting the composition, *e.g.*, a letter of an older class.

Male Candidates.

ARITHMETIC.

1. (a) Write out the rule for division of decimals when the number of decimal places in the divisor exceeds the number of decimal places in the dividend.

(b) In dividing a number by 315, if I divide the number consecutively by 5, 7, 9, and obtain remainders 3, 2, 1, what is the complete remainder?

(c) Show that the ratio of two numbers may be expressed by a fraction.

(d) Make a diagram showing how a line or a cube may be divided in such a way as to prove the truth of the proposition $\frac{1}{2} - \frac{1}{8} = \frac{3}{8}$.

(e) Work a sum in simple interest by the method of proportion, so as to show the truth of the shortened process which is commonly employed.

(f) Explain clearly in what sense 1.3 is represented by $1\frac{3}{10}$.

2. A chest containing 350 oranges is bought at Naples for 42 pence, and the cost of carriage is 10 per cent. additional; the oranges

are retailed in London at the rate of ten for threepence; find the profit upon 100 oranges.

3. If $\frac{1}{4}$ of a ship is worth £101 os. 1d., what share can be bought for £313i 2s. 7d.?

4. Simplify

$$\left(7\frac{1}{2} - \frac{5\frac{1}{2} + 11\frac{1}{2}}{7\frac{1}{2}}\right)^{\frac{2}{3}} \text{ of } £1 \text{ } 3s. \text{ } 4d.$$

5. What decimal of one pound multiplied by $3\frac{1}{2}$ is equal to £1 7s.?

6. The inhabited house duty at ninepence in the pound on the rent of a house is £3 10s. more than the income tax at sixpence in the pound. Find the annual rent of the house.

7. What principal will amount to £42998.1696 in eight years at 20 per cent. compound interest per annum?

8. If the ratio of threepenny to fourpenny pieces in a given sum which consists entirely of those coins were altered from 3:7 to 7:3 the sum would be diminished by £20. Find the sum.

9. Find the square root of 89820.09; find also the cube root of $16\frac{2}{3}\frac{2}{3}$.

10. The rainfall for the first four weeks of the year was 1.08, .95, 3.15, 1.72 respectively; and the average was 1.25 higher than the average of the first four weeks of the previous year. Find the average of the two years together.

11. A floor is half as long again as it is broad, and contains 13,824 square feet. Find the length of the shorter side, and the cost of flooring at $4\frac{1}{2}$ d. per square yard.

12. A man makes 15 per cent. profit by selling 700 tons of coal for £1006 5s. What would have been his profit per cent. and per ton if he had sold them for £936 5s.?

13. The three per cents. are at $101\frac{1}{2}$; the four per cents. at $121\frac{1}{2}$. Find the gain in income obtained by transferring £10,000 stock from the three per cents. to the four per cents.

14. A sum of £3070 3s. 3d. has to be divided between A, B and C, so that A may have $\frac{1}{3}$ of $\frac{1}{3}$ of B's share, B $\frac{1}{3}$ of A's and C's together. Find their respective shares.

15. A tax of 5d. in the pound is paid on a certain sum, and a further tax of $1\frac{1}{2}$ per cent. on the remainder. The sum now remaining is £31 2s. 9d. Find the original sum.

THE BOY'S COMPLAINT.

HERE are questions in physics and grammar
That would puzzle you somewhat, I know;
Can you tell what is meant by inertia?
Can you clearly define rain and snow?

Do you know there's a valve in the bellows?
Can you tell why your clock is too slow?
Why the pendulum needs looking after?
Perhaps it is swinging too low.

"They was going up town in the evening;"
Do you call that bad grammar, I say?
I'm sure Mary Jones and her mother
Say worse things than that every day.

But I s'pose "was" should be in the plural,
To agree with its old subject "they,"
According to rule,—my! I've lost it,
There's two per cent. gone right away.

And now, only look at the parsing,
And it will surely take in every rule,
And, down at the end, more false syntax,
With authorities given "in full."

Arithmetic? my! how I hate it,
I'm stupid at that in the class;
So, how in the name of creation,
Can I be expected to pass?

Here's a ten-acre lot to be fenced in,
Here is a duty to fid on some tea,
Here's a problem in old alligation,
And a monstrous square-root one I see.

Can you tell who defeated the Indians?
Do you know who was killed in a duel?
Do you know what the first tax was raised on?
And how some just thought it was cruel?

Perhaps I may pass on an average:
If three-fourths are right I'll get through;
But my teacher calls such things shabby,
So what is a poor boy to do?

—*Buffalo Express.*

"SAVE THE CHILDREN."

B. all means. In the *Toronto Globe* of September 8th there is a suggestive and useful article under this head, with which we agree, excepting one sentence, this:—"that the medical profession is not wholly free from blame" in that there is so large a mortality amongst children. "The medical profession could do much," it is stated, "in enlightening mothers," etc. The profession could, and do, do much. They are more

than blameless. As stated by the chairman, the Editor of this Journal, at the meeting at Kingston last week, at which a Sanitary Association for the Dominion was organized, the history of the world has not afforded another exhibition at once so singular, so philanthropic, and so unselfish as those, which have of late years frequently taken place, of medical practitioners (who in this country earn a livelihood solely, with less than half a dozen exceptions, by attending to the sick) consulting together, puzzling their brains, spending their time and money, in devising ways and means for preventing the development of disease. As the *Globe* admits, "many physicians are in the habit of giving valuable and timely advice," for which indeed we add they are never remunerated, and rarely is it appreciated. If every physician in Canada were to advise the mothers with whom they come in contact to invest a dollar or even twenty-five cents in a book on the management of children and to study it, how many mothers would act upon this advice? probably not one in a hundred. No, the public alone are to blame. They must learn to place more value upon preventive measures—less upon curative. The medical profession are already doing more, much more, than ought to be expected of its members.—*Toronto Sanitary Journal.*

"WERE the schoolmaster," says Prof. David Swing, "as noisy as a politician, or as visible as an orator, or as charming as an artist in a studio, the public would hasten to crown with laurels at least all those great in this calling; but they live and die in a world where those who lay the mighty foundations of a cathedral are forgotten, compared with those who carve its columns or design its colour-glass." It is true that the teacher is not a Queen Anne structure, planted by the roadside, gabled and painted and stained to attract the gaze of the passers-by. He is back in the groves of the academy, rarely seen, doing contentedly his divine work. Applause is very poor nutriment to a noble soul; so the teacher should find no fault even if he be not famous.

CONTEMPORARY LITERATURE.

REPORT OF THE MINISTER OF EDUCATION
FOR ONTARIO, FOR THE YEAR 1882.*(Third notice.)*

OUR attention has been called to an error in that part of our review of the Report of the Minister of Education which deals with the Provincial Normal Schools, and we avail ourselves of the first opportunity to correct it. The statistics that are given in the Report on pp. 69 and 73, though distinctly stated to be for 1882, are for the first two sessions only. The reason assigned for the omission of statistics for the third session is that it extended into January, 1883. A good reason no doubt, but it is one that throws all the responsibility of the error on the Department, to which by carelessness of phraseology has led us to do an apparent injustice to the Normal Schools. By the courtesy of Mr. Marling, the Secretary of the Education Department, we are now enabled to give the correct statistics for the whole of 1882.

| | Admitted. | | | | Certificates Granted. | | | |
|----------|-------------------|--------------------|-------------------|--------|--------------------------|--------------------|-------------------|--------|
| | First Session. | Second Session. | Third Session. | Total. | First Session. | Second Session. | Third Session. | Total. |
| Toronto. | 96 | 74 | 106 | 276 | 77 | 47 | 80 | 204 |
| Ottawa. | 55 | 35 | 63 | 153 | 37 | 22 | 50 | 109 |
| | 151 | 109 | 169 | 429 | 114 | 69 | 130 | 313 |

From these figures we find that 429 students were admitted to both Normal Schools in 1882, of whom 313, or seventy-three per cent. obtained certificates—seventy-four per cent. in Toronto, and seventy-one per cent. in Ottawa. Referring to the statistics of expenditure in these two institutions that are found on page 355 of THE MONTHLY for September, we find that each second class certificate cost the country \$99; not \$170

as is there stated. At Toronto the cost was \$82, instead of \$135; while at Ottawa it was \$132, instead of \$244. These figures, when compared with those we gave in estimating the cost of Third Class Professional Certificates, show that the cost of each Second Class Certificate at Toronto was four and one-half instead of seven times that of a Third, while at Ottawa it was a little over seven instead of thirteen times the cost.

HOW TO DRAW A SIMPLE WILL; with special information for Clergymen and Doctors, and instructions for Executors in ordinary cases. By D. A. O'Sullivan, M.A., LL.B., of Osgoode Hall, Barrister-at-law. Toronto: Moore & Co., Publishers.

THIS valuable little work will be found to satisfy a long-felt want. The cases are numerous where people have neglected to make their wills, until, perhaps, they find their last hour near at hand, and then the services of the attending physician or clergyman are called into requisition for that purpose, with the result that wills thus drawn are very often the subjects of long-contested and costly litigation, through the draughtsman having incautiously made use of some technical legal terms, which, though perfectly clear to the mind of a lawyer, are not so to others, and convey a different meaning from that intended. The object of the work under review is to guard against the difficulties which generally occur in such cases. It commences with an epitome of the history of the law as to wills, and then proceeds with a reference to the law of this Province. The laws with regard to the capacity or incapacity of persons to make a will; the effect of undue influence or fraud in the making of a will; the property that can be devised or bequeathed; the devises and bequests that can be made, are all treated in a clear and concise manner. The eighth chapter, under the head-

ing "How to Draw a Simple Will," gives forms, and lays down rules for the guidance of persons drawing a will, and contains ample instructions as to the mode of execution. It strongly impresses on them the necessity of using simple language, and avoiding all technical terms which they do not fully understand. There are added two appendices, which will be found both interesting and valuable: one relating to the different views of lawyers and medical men with regard to insanity; the other to the admissibility and value of the evidence of professional witnesses. To compress the law on such a vast subject as that of wills into a small volume in such a manner as to instruct, without confusing, an unprofessional reader, is an extremely difficult task, but a perusal of the present work will enable one to see that the author has successfully accomplished such an undertaking. Not only does he give the law where it has been clearly defined, but he has also called the attention of the reader to those cases where it is not yet in a settled state. The book throughout is written in an admirable style, the law being stated briefly and pointedly, and in language impossible to be misunderstood. The result is a work which may be looked on as a safe guide to the subject of which it treats, and one which will uphold the reputation the author has already acquired as a valued writer of legal text-books.

THE ILLIAD OF HOMER, BOOKS I-VI. With an Introduction and Notes, by Robert P. Keep. Boston: John Allyn, 1883. [Sample copy to teachers, 90 cents.]

THIS is one of the most beautiful and scholarly editions of a favourite bit of the Classics that we have seen for many a day. It is a book of a thousand. In paper, type and binding, it takes rank with the most beautiful of gift books. As for the contents we shall merely enumerate them, and leave the book to win its way, which it will surely do.

Frontispiece: *Fac-simile* of a page of *Codex Venetus*. Text and *Scholia*. No other book published in America furnishes so

instructive an example of an ancient manuscript. 1. Introduction, which may fairly dispute the palm with that of Merry's *Odyssey*. 2. A capital essay on Homeric verse, with some clever specimens of rendering into English Hexameters. 3. The chief peculiarities of the Homeric dialect. 4. Text. 5. List of books of reference on Homer and the *Iliad*. 6. A fine corpus of notes. 7. A novel and most useful appendix. Contents of *Iliad*, i.-vi., distributed with reference to rapid reading. Appendix B: Explanation of *fac-simile*. 8. Grammatical references to Goodwin and Hadley. 9. Indexes.

When we mention to classical scholars that the editor is Professor Keep, of Autenrieth's Homeric Dictionary fame, we have said enough.

THE CLASSIC SERIES: Lay of the Last Minstrel, Marmion and the Lady of the Lake; by Sir Walter Scott. Boston: Roberts Bros., 1883.

THIS is a very neat and handy edition of three poems, two of which at least are very well known to the present generation of Ontario masters and schoolboys. It is not designed for the class room, if we may judge from the paucity of notes. The absence of borrowed learning will not, however, interfere with the pleasure of schoolboy or gray-beard. These stirring poems, in their present shape, are just the book to cheat the one of an hour of play, and to relieve the other of an hour of weariness.

A COMPEND OF PHONOGRAPHY: presenting a Table of all Alphabetic Combinations, Hooks, Circles, Loops, etc., at one view; also complete lists of Word-Signs and contracted Word-Forms, with rules for contracting words. For the use of Writers of all Styles of Phonography. By Elias Longley. Cincinnati: Robert Clarke & Co.

THIS is a manual of 32pp., likely to prove extremely useful to students of Pitman's Phonography according to Longley, but only partly so to "Writers of all Styles of Phonography." The list of Word-Forms and of Contracted Words are admirably arranged, and the impressions of the phonographic

characters are as distinct as those of the ordinary type. To some of the "Irregular Combinations" we take decided exception, e.g., to those for *tw*, *dw*, *kw*, *gʷ*, *wr*, *whr*, and *whl*. Every student of Phonography, however, may glean many valuable hints and suggestions from the pages of Mr. Longley's Compend. The price is only twenty-five cents.

MODERN SPANISH READINGS; with Text, Notes, and an Etymological Vocabulary. By Prof. W. J. Knapp, Yale College. Boston: Ginn, Heath & Co., 1883.

WE have in this book a handsome volume of 450 pages. The text embraces 208 pages, while the remaining space is taken up by some thirty pages of notes and a copious Spanish-English vocabulary. The mechanical part of the book is all that could be desired. The clearest type liberally spaced, tinted paper, with double-ledged type in notes and vocabulary, and a strong, handsome binding, make up a volume at once elegant and well adapted to class-room use or private study. The notes are not too copious, but appear to be well chosen, while those upon grammatical points refer to the sections of the Grammar by the same author published a short time ago.

We think the compiler has hit upon the right plan in arranging the Readings, when, as he observes in the preface, he chooses extracts containing language "such as one hears in actual life, in good society, or may read in the journal, the review, and the latest work of fiction." To us it has always seemed a great mistake to put into the hands of young persons or learners, as a means of acquiring the language, the classical works of that language and particularly the classics of a preceding age. In the first place, it is a sort of sacrilege to subject the classics to the cruel vivisection of inexperienced hands; and in the second place, the language of the classics is sure to be so largely abstract as to be both difficult of comprehension and retention to untrained minds. To acquire a language thus is like mastering mathematical theorems without understanding the processes of reasoning by which the conclusions have

been arrived at. Too much importance cannot be attached to this point. The learner, to obtain a lasting knowledge, must proceed through all the steps of concrete language, as well as idiomatic conversation and even colloquial speech. To begin at the other end of the ladder, as is, we regret to say, usually done, is to produce a knowledge which will be not only superficial but evanescent. The selection of articles embraced in the Reader is intended to lead the learner through the necessary steps to a knowledge of Spanish, which would enable him to begin with advantage the reading of the older classics. They are selected so as to give variety, and include the story, the essay, the history, and the formal lecture. The Etymological Vocabulary is a good feature, and is especially valuable in these days of comparative philology.

We should like to see more attention paid to the Spanish language. It is not only valuable for its literature, but especially from a scientific point of view, as completing with French and Italian the circle of the Romance languages. We heartily recommend Prof. Knapp's Spanish Readings to those who intend to cultivate the language of Cervantes and Castelar.

CANADA LAND LAW AMENDMENT ASSOCIATION.—PROSPECTUS AND CONSTITUTION. President, J. Herbert Mason; Secretary, Beverley Jones. Toronto, 1883.

IN every department of society it is manifest that this is an age of restless activity and progress. We are not content to zoave in certain grooves merely because our fathers so moved. The world of thought is pushing, aggressive, and full of inquiry, delving in the earth, searching the sky, stripping the cobwebs of age from many a venerated custom, and bringing everything under the strong fierce light of this nineteenth century. In nothing is this more noticeable than in our system of Jurisprudence.

It is but two years since the passage of the Ontario Judicature Act, whereby the old Courts of Chancery, Queen's Bench, and Common Pleas, with their dual character, were fused

into the present High Court of Justice, exercising both legal and equitable jurisdiction and administering complete justice in one action in respect of all rights in question between the parties. And now an Association called the "Canada Land Law Amendment Association" has been formed, having for its objects the revolutionizing of the system of land transfer and the law of descent now in vogue in this Province. It is a point worthy of note in this movement that its principal promoters appear to be lawyers, though an examination of the prospectus of the Association before us leads to the belief that the adoption of the changes proposed by the Association will be a serious blow to the income they now derive from the examination of title required on every transfer of land, as every man of intelligence will then be enabled to complete a sale of his property at a very trifling expense and without legal aid.

The scheme advocated proposes to register a man's *title* and not simply his deeds, so that on every transfer the effect and meaning of the instrument is finally and conclusively determined at the time of its registration, and there is once and for all an end of all questions as to its validity. The purchaser on registration of his deed obtains from the Registrar a certificate which is made equivalent to a grant from the Crown, so that he may rest assured that his title is an unimpeachable one; and in case he sells, all he needs to produce in order to show his title is one concise instrument, thus doing away with the necessity of tracing title through a long list of purchasers, and by means of deeds, many of which on inspection may prove to be defective. The result of the adoption of the proposed system will be that land may be transferred as easily as chattels.

Changes fully as radical as proposed in the present law of descent. It is proposed to abolish dower, and give the widow an absolute estate in a certain portion of her husband's lands, as she now has in his personal property, in lieu of her present precarious life estate, generally of little tangible value to her; to sweep out of existence estate tail, with their numerous preplexing concomitants, the statute of uses, remainders,

springing uses, shifting uses, executory devises, etc. etc.; and to make land pass to an executor or administrator in the same manner that goods now do.

The result of the system, known as the Torren's System, is not mere conjecture, as it has been adopted with the utmost success in all of the five Australian Colonies, Tasmania, New Zealand, Fiji Islands and British Columbia, in some of which places it has been in operation for over twenty years.

We believe the objects of the Association are highly commendable, and we hope they will be successful in their efforts to abolish the present slow, cumbrous, and expensive system of dealing with land, and substitute for it a simple, expeditious, and inexpensive one. We commend to those of our readers, who wish fuller information as to the proposed changes than we can give in a notice necessarily limited, the perusal of the pamphlet issued by the Association, which is distributed gratis to any person desiring a copy.

CHECK LIST OF INSECTS OF THE DOMINION OF CANADA, compiled by the Natural History Society of Toronto.

LABEL LIST OF INSECTS OF THE DOMINION OF CANADA, compiled by the Natural History Society of Toronto. Toronto: C. Blackett Robinson, 1883.

THESE little books, the results of the most patient industry and wide observation, albeit unheralded by any announcement, will be most welcome to all lovers of Natural History, not merely in Canada, but everywhere. They mark a new era in entomological research, or rather they establish an epoch from which all progress in the science in Canada must henceforth date. The compilers, Messrs. W. Brodie and Dr. White, of Toronto, are well known as most enthusiastic investigators, and it is not too much to state that their labours in connection with the Natural History Society of Toronto are unsurpassed in value or extent by those of any other native workers in the same field. To our non-scientific readers and to students who have not yet turned their attention to the fascinating subject of entomology—a branch of science of immense importance to

agriculture and kindred arts—we may say that the design of the writers is to furnish a register of Canadian Insects and a reliable exchange list for the convenience of students and collectors. The Label List is for cabinet specimens, and is complete to date.

It is not inopportune here to state that the activity of the Natural History Society of Toronto contrasts most favourably with the apathy and supineness of the Entomological Society of Ontario. The latter society, although in receipt of \$1,000 annually from the Province, has of late done very little in original research. To be sure they annually supply to the Agricultural Blue Book a report, but three-fourths of it is made up of papers read at meetings of entomologists in the United States. The native productions are of the most elementary character, and are for the most part of no value to the scientific observer. It is scarcely a question if the provincial subsidy might not now be safely diverted to the Natural History Society of Toronto, whose members have given such genuine proofs of the true scientific spirit as the founding of a first-rate museum, the organization of regular meetings for discussion and research, and the publication of these splendid examples of industry and knowledge.

It is not inopportune also to call the attention of the Education Department of Ontario to the efforts now made by the Education Department of Nova Scotia to cultivate science in the Public Schools. The Acadian Scientists' Club, of which the President is Dr. Colville, Instructor in Natural Science, Acadia College, N.S., and of which nearly every teacher in the Province is a member, is doing a wonderful work. The Club is organized upon a simple, but comprehensive and effective plan, and the results are said to be most satisfactory. Could not something of the kind be attempted here? In this direction the Natural History Society of Toronto could render most valuable assistance.

EXERCISES IN FALSE SYNTAX AND OTHER FORMS OF BAD ENGLISH, by H. I. Strang, B.A., Head Master of Goderich High School. Copp, Clark & Co., Toronto.

As we go to press this neat little volume is laid on our table. A rapid run through it convinces us that this is just the work to fill a long-felt want in our High and Public Schools. We have no doubt it will leap at once into general favour.

EDITORIAL NOTES.

SALUTATORY.

IN taking the helm of *THE MONTHLY* we are fortunate in finding our duties made easy for us owing to the talents, experience and judgment of our predecessor in office, and his cheery, hearty speech in giving up the command of the ship. We are not called upon to construct, launch, and equip a new literary venture. This has been done for us. The keel was well and truly laid, the lines were drawn by a master hand, the officers and crew are picked and loyal men, the sails are filled with a favouring breeze, and with a chart before us on which every shoal and reef

is marked, the voyage need not be feared. Although our ship is iron clad and well armed, our mission is peace, progress and discovery. We do not sail under sealed orders. We wage no war except upon the buccaneers and pirates that infest the sea.

A TRIBUTE to the memory of the late lamented Mr. W. J. Rattray, B.A., from the pen of Mr. G. M. Adam, will appear in our November number.

A COMMUNICATION, "Cribbing at University and Teachers' Examination," is this month refused insertion in our columns on

account of the grave charges it makes against certain Inspectors. As the charge has been made in the daily press we shall at present leave the matter to the consideration of the University and Education Office authorities, and await developments.

MEDICAL SCHOOLS FOR WOMEN.

THIS year the re-opening of the college halls has been signalized by the inauguration of two Ladies' Medical Colleges—the one in Toronto the other in Kingston—under what must be regarded as most favourable auspices. The experiment of co-education in medicine having, after a fair trial, proved unsuccessful, has been gracefully abandoned. So strong, however, has the movement for affording women the same facilities for professional education become, and so many women have signified their intention of prosecuting the study of medicine either with a view to practise at home or to find employment in the mission field, that two university cities have felt justified in establishing schools for the exclusive training of women. To Kingston belongs the credit of making the first efforts in this direction in Canada. Her good example has no doubt had an influence in stimulating Toronto to do her part in this most necessary and most enlightened work. It is gratifying to observe that men of wealth and influence, and ladies of the highest social position in both cities are taking the warmest interest in the movement. With so much earnestness, liberality and benevolence as have characterized the inception of these undertakings, there can be no fear as to the result. Hippocrates and Galen are mere mortals: Hygeia and Panacea are veritable goddesses.

THE PLEA FOR CO-EDUCATION IN UNIVERSITY COLLEGE.

THE recent demand made by five young ladies upon the Council of University College for admission to the college classes has given a very practical turn to the question of the desirability of co-education. The whole matter is once more under discussion, and

both sides are furnishing up their armour for the wordy fray.

The young ladies have a grievance. They are desirous of completing their studies, and they have exhausted the facilities afforded by the secondary schools. They naturally turn to the Provincial College, but are told by the President there is no room for them, and that for himself, he would not admit them even if there was room. And he gives his reasons in a well considered reply to their request.

We have no difficulty in agreeing with President Wilson. Co-education at University College is not possible nor yet desirable. These students enjoy a very large measure of freedom, and are under no very direct pressure to engage in study. The presence in the class-room of ladies, albeit most sober and demure, would not, we fear, be very conducive to study. There are very few young people quite indifferent to the presence of the opposite sex. Besides, there is room to fear that the bloom of womanhood, the fine grace of retirement, the enchantment of distance, would disappear in the daily contact with the inevitable accompaniments of college halls. It is in vain to adduce the success of the experiment in the High Schools and Collegiate Institutes. The experiment even there has not been uniformly successful. Moreover, in these schools the discipline more nearly approaches the parental, is more ubiquitous, is better defined and enforced than is possible in any college. The conditions are not the same, and could not be made equal.

There are, notwithstanding all mere theorizing upon the subject, very few parents that would really wish their daughters to make the experiment. Most mothers, and most young ladies themselves, unless under the pressure of necessity, would shrink from it. The experiment, doubtless, could be made in individual instances with perfect safety, but there is not the slightest guarantee that the movement upon a large scale would not be attended with irretrievable disaster. College dons may be bothered now: they would be bewildered then. But practically the experiment is out of the question. There is

no room. *Place aux dames!* is cried in vain.

What, then, is to be done? It is not to be tolerated that ladies should live under disabilities. The country is bound to provide facilities for all who may desire higher education. There ought now to be no disability of sex. The Government should at once take the question in hand. The plan of building an Annex, as has been suggested, at a suitable distance from University College, and of utilizing the staff of the College, and of supplementing it by such extern aid as may be necessary, seems both practicable and satisfactory. There need be no insurmountable difficulty in carrying out this scheme. If only the effort were made in the right direction, the Legislature would willingly provide funds either by a direct vote of money or by the diversion of an endowment already in existence

PRESENTATION TO MR. G. MERCER ADAM.

To the following account, as found in the daily press, of the complimentary presentation on the 1st ult. to Mr. G. Mercer Adam, the founder and late editor of the CANADA EDUCATIONAL MONTHLY, we shall add but very few words. The publishers of THE MONTHLY, we need not assure our readers, received his resignation as Editor with extreme regret and accepted it only through necessity. They deplore his departure from Canada. They one and all repeat here the sentiments of the address, and await with impatience the time of his return. Meantime, as friend to friend in ancient days, we say,

*"Reddas incolumem, precor,
Et serves animæ dimidium meæ."*

[Adapted from the *Globe* and the *World*.]

When it became known a few days ago to some of the more intimate friends of Mr. G. M. Adam that he was about to take his departure for New York to enter into the service of a publishing house there, a movement was set on foot to present him with a testimonial of some kind as a recognition of his disinterested labours in the cause of

Canadian Literature. Owing to the shortness of the time at their disposal the committee who had the matter in charge were able to call upon only a few of his friends and well-wishers, but in spite of this obstacle they were able yesterday afternoon to present him with a purse of \$300.

The presentation took place in the parlour of the National Club in the presence of a number of gentlemen, amongst whom were Messrs. C. Blackett Robinson, of *The Presbyterian*; W. Houston, of *The Globe*; W. Williamson, of Willing & Williamson; Thos. Maclear, of Maclear & Co.; W. D. Taylor, of James Campbell & Son; D. Rose and D. A. Rose, of Hunter, Rose & Co.; A. G. Watson, of the Methodist Book Room; J. Hornibrooke, of Brown Bros.; A. MacMurchy, M.A.; J. E. Collins; and G. H. Robinson, M.A. Mr. C. B. Robinson, as chairman of the committee, read the following address:

To G. Mercer Adam, Esq.:

Having learnt with a great deal of regret that you are about to sever your connection with us, and to take up your abode, at least for a time, in New York, we cannot let you go without giving expression in some feeble way to our feelings at your departure, and our appreciation of the loss that will be sustained by the community among whom you have spent the past twenty-five years.

If Canadian Literature could assume the human form then would she be found Chief Mourner among those who assemble to bid you good-bye; for to her have you been as Publisher, Essayist, Editor and Educationist, as well as in your connection with our foremost Book Houses, a skilled champion and a faithful friend. When others who loved our Literature have turned away from the struggle with the courage gone out of their hearts, we have seen you loyally and resolutely stemming the tide; and if you did not conquer you have placed Canadian letters, and those you leave behind you who cling to the pen, under enduring obligation. Had you turned long ago, as others did, from the high duty you had set before you—from the brunt and disappointments of the day—to consult your own interests, you might not now be taking your pen to New York; but it is only a small acknowledgment when we tell you, now at your departure, that what has been your pecuniary loss has been our very great literary gain.

Nor is it the Literature of Canada, alone, that has reason to regret your departure; but, as well the community at large, to whom you have been known so long for your integrity of character, your kindness of disposition, and your courtesy of bearing.

Trusting that your removal from our midst may be fruitful of fortune and happiness to yourself and your family—though we should not wish to regard your separation from us as permanent—we beg to present you with the accompanying purse as a small token of our esteem and good wishes.

On behalf of the Committee

C. BLACKETT ROBINSON,
Chairman.

DAN. A. ROSE,
Secretary.

Toronto, Aug. 31st, 1883.

Mr. Adam make the following reply, which was afterwards supplemented by a few extempore remarks giving some information about the work on which he was about to enter:—

Mr. Robinson and Gentlemen.—Very few and, I fear, inadequate words must suffice to thank you for the honour you have done me in this gathering; for your more than kind, indeed most flattering address; and for the substantial evidence of your favour and goodwill which accompanies it.

At the present moment it would be difficult for me to say how sensible I am of your thoughtful consideration and courtesy, and I confess to being utterly unable to express to you how deeply I am touched at this leaving-taking. Whatever modest service I have been able to render to Canadian literature, I assure you, is amply repaid in the kind and graceful act which has called me to meet you.

It has been well said (it is an epigram of *Bystander*,) that "good-will, not hatred, is the law of the world," and happy is he who is its object, for to the worker there is scarcely a greater stimulus than goodwill, and as a talisman it is well-nigh all-powerful.

You will note, gentlemen, that I do not unreservedly extol the value of goodwill, for goodwill while it may boil the pot cannot always be trusted to fill it. This, frankly, is why I have decided, for a time at least, to take my pen and my services to a market where one can readily convert them, and thus enable me to exchange a somewhat precarious income for an assured one.

This remark I do not, of course, intend as any reflection upon Canada, for I have not lived five and twenty years in the country without knowing its limitations, and without

making, as you have hinted, some sacrifices to be content in it.

At present the Canadian people, it appears to me, are not in their noblest mood; the wave of national aspiration, despite the Royal Society and other factitious stimulants, seems to be receding rather than advancing, and interest in Canadian literature is with it on the ebb-tide. The reason of this, in some degree at least, is not far to seek.

Politics, as you well know, is, in great measure, the game of the people, and our public men are either absorbed in its service or in the equally engrossing pursuit of wealth. Hence, at no time has the intellectual life of Canada been very vigorous, and of late it has gone hard with Canadian periodicals. We have few men who take literature by the hand, and the party leaders and their organs chiefly use it for lampooning one another. Had our public men more of what the poets call vision—that is, penetration, foresight, and that inspiring force which looks to the future weal of a nation rather than to the immediate objects of personal ambition—the aspect of Canadian literature would be brighter and its future more encouraging. Until party politics in Canada shall have become an extinct vice, it would be vain to look for a more active national sentiment, or to expect increasing interest in the national literature.

A leading Reform politician remarked to me the other day, in speaking of the administration of education in the Province, that both political parties were rotten to the core. Were I a party man and an opponent, I would have replied, that, speaking for his friends, he no doubt delivered himself of an honest judgment. As he knew I was not, I infer that with regard to both parties he told me the truth, and did neither of them an injustice, for he had seen much of the inner workings of the machinery of faction. Here, as elsewhere, the politician is the product of his breed; and in too many instances he cares for little else than party wire-pulling, and is indifferent to the wooings of literature and its elevating influence on the national character.

But there is another and an equally serious obstacle to literary development in Canada, which, unless removed, will continue to handicap its publishing industries, and dwarf the young sapling of native literature. I refer to the anomaly of the Copyright Law, which, while it admits American reprints of English copyrights into the Dominion, and gives the publishers of the United States the *entire* to our markets for their unauthorized reprints, prohibits the Canadian, under the heaviest penalties, from sharing in the trade, except under conditions wholly nugatory. The perpetuation of restrictions of this sort, it should

not be forgotten, not only fetters our own trade but prevents justice being done to the English author. The situation is a signal instance of the folly of allowing national sentiment to override national reason.

It may be that the day will come, however, when this country in the affair of copyright, as well perhaps as in other things, shall be sufficient unto itself; when our people shall lose the sense of dependence in literary matters on the nation to the south; when our publishers shall no longer be compelled to fold their hands and look on while a neighbour supplies the market; when, in short, we shall be free, as it has been phrased, to act with our own full weight in our own concerns. Until then we must be content to be under great disadvantages, and try to control our impatience at the country being restrained from rising to the true measure of its greatness.

You have been good enough to refer, in what I am sure are sincere terms, to my departure from Canada, and have said pleasant things of my connection with its literary enterprises and its publishing life. Believe me, I appreciate your kindness, though there is admonition in your words, for one's aims ever sadly outrun fulfilment. But what I have failed to do, that and more I have yet hope will soon be accomplished, for I leave many willing workers behind, and, of course, I have no notion that because of the defection of a single pen from the ranks of native writers, Canadian literature is going straightway to doom. Only remember, now and then, that your writers need recognition and encouragement, and that there are services which may be rendered to literature higher than those of a scuffer in politics. My friends of the Press will here, I trust, not misunderstand me. I make no attack upon them, but rather upon the system which makes political journalism a trade.

To step across the line, now that the two countries are drawn commercially so close together, involves, I need hardly say, no want of loyalty to Canada or of affection for the Motherland. You will therefore not consider me, in spirit at least, a deserter from the flag. That New York should draw from Toronto is as natural as that London should draw from my native city—the Scottish metropolis. On this continent the manufacturing centre for literature is not here; and to the manufacturing centre trade, and those engaged in it, will go whatever artificial barriers are in the way. If your market is for hogs you go to Chicago or Cincinnati; if literature, you go to New York or Boston; for it is the rule of the tanner, you know, that the tail goes with the hide.

But while I thus resign myself to the situa-

tion, I am far from feeling at ease in the prospect of quitting Canada. Here has been my field of work, here are my friends, and here the ties of blood. That I shall for many years be absent from Toronto, I hardly think likely; meantime I accept my exile, and will look back with longing eyes and a warm heart on Canada and on those whom I love.

Need I add that I shall miss the faces I see before me, and the kind greetings of those with whom I have for many years come in contact? But separated as we shall soon be, my heart will know no estrangement, for I go hence with your good wishes, and, thanks to your golden gift, may come again without fear of the constable.

Again thanking you, gentlemen, for your exceeding kindness, I bid you for a while good-bye.

Of the many tributes in the press to Mr. Adam's abilities and qualities, and expressions of regret at his departure from Canada, we shall quote but one—that of the *Bystander* of October:

The *Bystander* mourns the departure of Mr. G. Mercer Adam, who, after giving the best years of his life to the service of literature and the high class book-trade in Canada, has, like other men whom we could ill spare, accepted an invitation to New York, where he joins Mr. Lovell, the enterprising publisher, who is also an exile from Canada. We cannot wonder at these secessions. How is literature, how is the high-class book-trade to flourish here, under the present conditions? A Canadian writer can have no copyright of any value on his own continent, while, in his case, copyright in England is a name. The Canadian book-trade is cut off from its natural centres of distribution, to which it cannot resort without paying double duty. At the same time both writer and trade are exposed to the overwhelming influx of American reprints from English works, with which the Imperial copyright forbids the colony to compete. The literary calling in this country if it exists at all must exist almost apart from any hope of remuneration. Against such disadvantages what can vice-regal patronage avail?

COMPULSORY EDUCATION IN NEW YORK.

SECULAR education does not *per se* secure high moral attainments; but it appears to be almost a specific against juvenile crime in the large cities. An interesting experiment has

been made in New York city which illustrates this. In 1875 a Compulsory Education Law was enacted. Notwithstanding the strenuous efforts of mission churches and societies, specially organized to deal with vicious children, the number of juvenile delinquents arrested had steadily increased from year to year. In the period from 1870 to 1875 6,105 such arrests were made, being 1,221 per year. When the compulsory law came into effect twelve truant officers were employed, and there was an immediate increase in the average attendance of the public schools, and a decrease in the number of arrests. The average number during the past five years has been 868—last year only 717. This, taking the increase of the population of the city into account, is reckoned to show a decrease in juvenile crime of 36 per cent. It is stated that "a single agent has last year, by direct arrest of Italian truants, and by his moral influence in inducing others of them to go to school, without arrest, added 1,100 to the attendance in that class of children alone." It is not pretended that there has been a *rigorous* enforcement of the Compulsory Education Law. If so enforced, as with the above happy experience of its effects it probably will be, juvenile crime would be reduced to a minimum.

MR. A. K. ISBISTER, M.A., LL.B.

THE *Globe and Mail*, in editorial paragraphs, have recently chronicled the death, in London, England, on the 28th of May last, of Mr. Alex. Kennedy Isbister, a native and old-time resident of Red River settlement, and a gentleman who had for many years taken a lively interest in the colonization of the North-West. But neither of our contemporaries makes any reference to the

fact that the deceased gentleman was an able and industrious writer of text-books in Classics and Mathematics, and that he had spent a lifetime in educational work. Mr. Isbister held the position of Dean of the College of Preceptors, Bloomsbury, London, and for twenty years was the editor of the *Educational Times*, the organ of the college, and the most scholarly of the educational journals of Britain. The deceased was born, we believe, near Selkirk, Manitoba, in 1823, and received his education in Scotland, graduating at Edinburgh University and taking an LL.B. at the University of London. For some time he filled the Headmastership of the Stationers' Company's Grammar School, London, a position which, though it imposed upon Mr. Isbister arduous and responsible duties, left him leisure to write a long list of important text-books which have been largely introduced into English schools. For many years his familiarity with the affairs of our North-West enabled him to be of much service to the English Colonial Office, in connection with the negotiations which resulted in the emancipation of the Red River territory and the great North-West from the rule of the Hudson Bay Company and their transfer to the Dominion. Mr. Isbister's death is a serious loss to education in England, and it deprives the College of Preceptors of an able and active officer, and this country of a true and hearty friend. The College of Manitoba, we believe, has also reason to mourn Mr. Isbister's death, for he was a good friend and benefactor of that thriving institution, and took a hearty interest in the educational progress of the North-West.

[The above, though in type for several months, has been hitherto crowded out of our columns.—ED. C. E. M.]

THE HEROIC TREATMENT.—Until more teachers know what teaching is and what books are for, it would be better to omit rules and definitions from these books and thereby throw teachers on their own resources. At any rate we would then have better teachers, because we *must* have them; definitions would be evolved intelligently and

when needed, and rules would be taught and learned as laws, not as directions. Let the old delusion that knowledge is power, a counterfeit that has passed current so long that it is now looked upon as genuine, die a quick death. Mind that knowledge *may* be power, and only when it is of the proper kind and obtained in the proper way.—*Ex.*

TO OUR READERS.

1. Matters connected with the literary management of THE MONTHLY should be addressed to The Editor, P. O. Box 2675. Subscriptions and communications of a business nature should go to The Treasurer, Mr. Samuel McAllister, 59 Maitland Street, Toronto.

2. The Magazine will be published not later than the 20th of each month. Parties desiring a change in their address will please send both the old and the new address to Mr. McAllister not later than the 15th of the month. Subscribers failing to receive the magazine after the 25th of each month, should communicate at once with him.

3. The Editor will be glad to receive school and college news, notices of meetings, and concise accounts of conventions.

4. Correspondence on all questions relating to education is solicited. No notice will be taken of anonymous communications.

5. Subscription, \$1.50 per annum, post paid. Club rates—Five copies per year at \$1.25 each; ten copies at \$1; twenty copies at 85 cents, net, post paid.

6. The publishers are desirous of obtaining copies of THE MONTHLY for the years 1879 and 1880. Any one returning the vols. of these years may obtain complete vols. of 1882 and 1883, bound in paper. Parties having copies of 1879 and 1880, or portions of them, to dispose of will please communicate with Mr. McAllister.

7. Circulars respecting THE MONTHLY may be had on application to the Publishers.

8. The Editor may be found in his office, Room 17, Union Loan Buildings, 28 and 30 Toronto Street, Toronto, from 11.30 a.m. to 1.30 p.m.

Our readers in quest of new or second-hand books will have no difficulty in being suited at the shops of the well-known Yonge Street dealers, Messrs. Sutherland Bros., and Vannevar & Co. See their advertisements. It is pleasant to pay the stalls of these gentlemen a visit. Charles Lamb himself could not pass them by.

The *Spencerian Pen* is now a household word. This admirable pen is made in so many styles that everybody from Sam Weller to Du Maurier may be satisfied. The College, the Counting-house, the Commercial, the School, the Bank, the Official and the Artistic are some of the best. They all have the merit of being good and cheap. See the advertisement of Messrs. Ivison, Blakeman, Taylor & Co.

The Ontario Business College of Belleville is a model of its kind. It has had a very large measure of success, and its record is believed to be unsurpassed in Canada. The text-books issued by this institution are unrivalled. Young men who are casting about for some commercial college should certainly communicate with Messrs. Robinson & Johnson. For particulars see their advertisement.

The School Apparatus Depository at King Street East, is a first-rate place—perhaps the only place in

Ontario now that the Departmental Depository is closed—to obtain apparatus. Science masters especially should see the fine chemical outfit and laboratory equipment to be found there. There is no need to send to the States for school apparatus when we have equally good of native manufacture at home.

THE 'VARSITY, Toronto, is the first to arrive of the college papers, for the year 1883-4. Its face is as the face of a familiar friend, and its strewth pleasant memories. It promises well for the new volume.

TEACHERS who desire some more school journal literature than this Province affords, may find something to suit them from the following list: *The Schoolmaster* (London, Eng.); *The Educational Times* (London, Eng.); *New England Journal of Education* (weekly), \$2.50; *The American Teacher* (monthly), \$1.00; *Education* (bi-m.), \$4.00; *Pennsylvania School Journal* (m.), \$1.60; *Ohio Educational Monthly*, \$1.50; *Indiana Educational Weekly*, \$2.00; *The Schoolmaster*, Ill. (s. m.), \$1.50; *Ill. School Journal* (m.), \$1.50; *Practical Teacher*, Ill. (s. m.), \$1.25; *American Journal of Education*, Mo. (m.), \$1.00; *Normal Teacher*, Ind. (m.), \$1.00; *Pacific School Journal*, Cal. (m.), \$2.00; *Teacher*, Pa., (m.), 50c.; *Wisconsin Journal of Education* (m.), \$1.00; *Central School Journal*, Va. (m.), \$1.00; *Common School Teacher*, Ind. (m.), \$1.00; *Present Age*, Ill. (m.), \$2.00; *School Education*, Minn. (m.), \$1.00; *Journal of Education*, La. (m.), \$1.00; *Michigan School Moderator* (w.), \$2.00; *Journal de l'Instruction Publique*, Montreal (m.), \$1.00.

THE ATLANTIC for October is at hand, and is as fresh and inviting as ever. The contents are: 1. *A Roman Singer*, VII., VIII., by F. Marion Crawford. 2. *Heredity*, by Henry W. Holland, a very striking and suggestive paper. 3. *En Province*, VI., by Henry James. 4. *Persepolis*, Frances L. Mace. 5. *Cream-White and Crow-Black*, by E. M. De Jarrette. 6. *Newport*, VIII., IX., Geo. Parsons Lathrop. 7. *Two Emigrants*, Barbara Heaton. 8. *Manadism in Religion*, Elizabeth Robins. 9. *Pere Antoine*, Davida Coit. 10. *Recollections of Rome during the Italian Revolution*, I., Wm. Chauncy Langdon. 11. *Volcano Studies*, Horace D. Warner. 12. *Knowledge*. 13. *Mutilation of Ancient Texts*. 14. *Amiability: A Philosophical Tragedy*, an exceedingly clever article, by Edward Irenzeus Stevenson. 15. *Historic Notes of Life and Letters in Massachusetts*, Ralph Waldo Emerson, a paper that instantly arrests the attention. 16. *A-Playin' of Old Sledge at the Settlement*, by Chas. Egbert Craddock. 17. *The Voyage of the Jeanette*. 18. *Mr. White on Shakespeare and Sheridan*. 19. *Lodge's Webster*. 20. *The Contributors' Club*. 21. *Books of the Month*.

LIPPINCOTT'S MAGAZINE (yearly subscription, \$3.00), for October is rich in articles of travel, taking us from the Hebrides to the Osage Indians, then to the Highlands of North Carolina, and then for an interesting trip to ill-fated Ischia. Mr. Carpenter comes to the conclusion that there is no such thing as a free trader in the United States. *In the Hands of the Mob* tells of a thrilling scene in the early days of San Francisco. *The White-Fish of the Great Lakes*, by G. Archie Stockwell, is of especial interest to our Ontario readers.

CONVENTIONS TO BE HELD.—West Kent: Chatham, Oct. 25th and 26th. Stormont: Cornwall, Oct. 25th and 26th. Perth: Stratford, Nov. 8th and 9th. Oxford: Woodstock, Oct. 18th and 19th. West Durham: Bowmanville, Oct. 19th and 20th. North Huron: Brussels, Oct. 25th and 26th. Essex: Essex Centre, Oct. 18th and 19th. East: Victoria; Lindsay, Nov. 2nd and 3rd. North Hastings: Madoc, Oct. 18th and 19th. Ontario: Fort Perry, Nov. 2nd and 3rd. Lanark: Perth, Oct. 26th and 27th.