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JOHN GEORGE HODGINS, M.A., LL.D., F.R.G.S.

With the single exception of Dr. Ryerson there is no other who has had as much to do with the development of the educational systems of Ontario as Dr. Hodgins. For nearly forty years he has been at the helm of the educational ship, and, while all agree (and none more heartily than the subject of this sketch) that to his great captain, Dr. Ryerson, the credit is mainly due, it is certain that the perseverance, the faithfulness, and especially the administrative ability of Dr. Hodgins, contributed very largely to the triumphant success which they so harmoniously accomplished.

Dr. Hodgins was born in Dublin in 1821, and came to Canada when twelve years of age. He was educated, therefore, chiefly in this Province, and few of her sons, either by birth or adoption, have so well repaid the debt which they owe her. He attended the Upper Canada Academy, and Victoria College, Cobourg. He received the degree of M.A. from Victoria University. Although his duties were very onerous, he found time to graduate in the faculty of Law in Toronto University, from which he received the degrees of LL.B. in 1860, and of LL.D. in 1870. He was called to the Bar of Ontario in the year 1870.

His connection with the Education Department began in 1844, when he was appointed senior clerk. In 1846 he became Secretary of the Board of Education for Upper Canada, afterwards called the Council of Public Instruction. He was elevated to his present responsible position in 1855, and has filled it for nearly a quarter of a century with very much credit. He left nothing undone which he could possibly do to fit himself fully for the performance of the duties of his office. He spent a year at his own expense in Dublin after his appointment in familiarizing himself with the details of the management of the office of the National Board of Education in Ireland, and in learning the working of the Normal and Model Schools under their charge. Such zeal could only have one result. This result in the case of Dr. Hodgins is best expressed in the language of Dr. Ryerson in his letter to Hon. Edward Blake on his resignation of the position of Chief Superintendent of Education: "In the practical administration of the Education Department an abler, more judicious, and reliable man cannot be found than Dr. Hodgins. * * He is the most thoroughly trained man in all Canada for the Education Department; and is the ablest and most thorough ad-

ministrator of a public department with whom I have met." This tribute from a man under whom he had labored for thirty years, briefly summarizes the history of a record of which any man might justly be proud.

Dr. Hodgins is the author of several works, chiefly text-books, which have been very extensively used in the Public and High Schools of Canada. Those best known are Lovell's General Geography, Easy Lessons in General Geography, First Steps in General Geography, School History of Canada, and of the other British North American Provinces. He also published the Canadian School Speaker and Reciter, the School Manual, Lectures on School Law, Sketches and Anecdotes of the Queen, and The School House. One of the most important of his publications is

the Report of the Educational Features of the Centennial Exhibition at Philadelphia. This is a most exhaustive and able work, and it received on its publication the most flattering testimonials both in America and Europe.

Besides these he has written very largely for the periodical press on educational, historical, commercial, and social questions. He was editor of the *Journal of Education* during the whole of the long period of its issue, first as the associate of Dr. Ryerson, and afterwards as sole editor. All his works give evidence of great care, correct taste, and wide research.

In social life Dr. Hodgins is well known to be a kind-hearted, genial, and cultured man. He has always taken a very active interest in many schemes of practical benevolence and Christian work, and has been frequently called upon to occupy honorable and responsible positions in connection with them. He has been for many years Hon. Secretary of the Bible and Tract Societies, and of the Anglican Synod of the Diocese of Toronto. He is frequently called upon by his *Alma Mater* to occupy positions of honor and responsibility, and on all occasions performs his duties with ability and courtesy. He has permanently connected his name with Victoria University by founding the Ryerson, Webster, and Hodgins Prizes, and he has also graven it on the history of his adopted country by his long career of honorable labor. When the history of the educational progress of Ontario is written, the name of Dr. Hodgins must occupy a prominent position in it. His legal knowledge was of good service in arranging a school law which is the basis of the whole system, and he will merit the gratitude of posterity for aiding to establish the magnificent art museum of Toronto, and for his successful efforts in disseminating literature so widely through the agency of the People's Depository.



Gleanings.

HOW TO REFORM THE SCHOOLS.

There is a cry abroad in the land for a reform in the public schools. True, much of the howling about abuses is senseless and idiotic, but even this is better than the deafness of apathy. The following suggestions are offered for the benefit of "reformers" who are burning to distinguish themselves by a raid on the schools.

1. *Don't go to the Legislature with a bill.*

There are some things that even Legislatures cannot do: They cannot make people temperate, virtuous, or industrious. They cannot legislate about what people shall eat, drink, or wear; about what they shall say, or how they shall think. For these pseudo-reformers whose panacea is "law," a study of Herbert Spencer and John Stuart Mill is recommended as a specific remedy.

2. *Begin by reforming the school in your own district.*

The loudest grumblers about the failure of our public schools are those who never visit one, and who know nothing about them except from hearsay. See that your trustees employ a good teacher. Visit the schools and suggest to the teacher some of your "reforms." Look after the school library. Talk to the children. Get your neighbors to visit the school. Are you a stranger? Suggest to the teacher a course of oral instruction on things relating to farming, horticulture, and botany. Start a school cabinet of minerals, woods, grains, pressed flowers, etc. Help the teacher to ornament the school-room with pictures. Question your own children about what they are doing in school.

Many country schools are almost worthless on account of the utter indifference of the "reformers." *No school can be made to rise very high above the average culture of the community which environs it.*

There is a country district in this State where a "Normal graduate" taught once on a time. A "trustee" visited him one day as he was giving an exercise in *vowel sounds*. The trustee didn't like the method. It was a now-fangled notion. It wasn't the way he had been "brought up." So he waxed wroth, took off his coat and dared the pedagogue to come outside and fight it out. He was a "reformer" willing to fight for the faith that was in him.

3. *See that your neighbors elect the best men in the district for trustees.*

If you take no interest in the annual school election, the Legislature cannot prevent the election of incompetent officers. If you are wild with "reform," run for the office yourself.

4. *Try to keep a good teacher when you get one.*

5. *Offer a fair salary and the chances are that you will get and keep a competent teacher.*

If you have to employ a teacher without experience, engage one that has had a full course of Normal School training. *Verb. sat-sap.* ("A word to the wise," etc.)

6. *Don't expect to reform schools by abolishing text-books.*

They are necessary evils. Good text-books rank next in value to good teachers. The Chinese have had a uniform series of text-books unchanged for 3,000 years.

Are their schools better than ours? If you believe that the school books in use are worthless, go to work and make something better.

If you are an old sandstone fossil, and have never examined a school book during the last thirty years, you undoubtedly believe that there is nothing better than Webster's Speller; that in Murray's Grammar, the art of writing culminated; that Pike's Arithmetic is the best the world ever saw; and that Morse's Geography, A. D. 1807, is better than modern trash. The Chinaman does better: he believes in books republished B. C. 1500.

7. *Don't imagine that you, or the teacher, or the legislature, or reformers, can overdo the laws of hereditary descent, and make all children good scholars, or industrious, temperate, frugal law-abiding citizens.*

You believe, perhaps, that it is the duty of the State to teach every boy a trade, and then find him employment. This comes to you from a past age, when men believed that kings were gods; or you believe in curtailing the studies in school to reading, writing, arithmetic, and geography.

You will find the hard common sense of the American people is stronger than your conservatism.

Neither you, nor President Eliot of Harvard, with his imitators, nor the enemies of free schools, nor the friends of religious schools, can stem the mighty current that has set in for *free higher education, and for technical and industrial education.*

The instincts of the masses are sound.—*John Swett, in Pennsylvania School Journal.*

WHY NOT SPEAK PROPERLY?

The careless, slipshod manner in which people who deem themselves educated use common English words in their every-day speech is scarcely short of amazing. If appearances deceive in any particular, it is certainly in this; for if we were to infer the degree of culture possessed by the men and women we meet daily from the character of their verbal expression, we should set it, in most cases, at a point much below their claims. Every word in the English language has its peculiar significance and application, just as would be rationally thought, and the cross uses and false applications so common in ordinary parlance are totally unwarranted.

Society has fallen into a vicious habit in the use of terms, and it is time that a strong effort was made to eradicate it if we would preserve the English tongue in its purity and simplicity. The little volume, "The Right Word in the Right Place;" and Mr. R. G. White's larger book on "Words and their Uses," are excellent monitors for popular reading, and show clearly the errors we are constantly committing without a thought of their glaring absurdities.

"*Aggravate.* This word should never be employed in reference to persons, as it means merely to add weight to—make evil more oppressive, injury is aggravated by insult. It is sometimes improperly used in the sense of irritate, as 'I was much aggravated by his conduct.'

"*Balance,* in the sense of rest, remainder, residue, remnant, is an abomination. Balance is the difference between two sides of an account—the amount which is necessary to make one equal to the other. . . . Yet we continually hear of the balance of this or that thing; even the balances of a congregation—of an army.

"*Bountiful* is applicable only to persons. A giver may be bountiful, but his gift can not—it should be plentiful, or large. 'A bountiful slice' is absurd.

"*Fetch* expresses a double motion; first from and then toward the speaker. It is exactly equivalent to 'go and bring,' and ought not to be used in the sense of 'bring' alone.

"*Calculate,* besides its sectional misuse for think, or suppose, or suspect, is sometimes in the principal form—calculated—put for likely, or apt: 'That nomination is calculated to injure the party.' It is calculated (designed) to do no such thing, though it may be likely to.

"*Couple* applies to two things which are bound together or united in some way. 'A couple of apples' is incorrect; two apples is meant.

"*Dirt* means filth, and is not synonymous with earth or soil. Yet people sometimes speak of a dirt road, or of packing dirt around the roots of trees they are setting. They mean *earth*.

"*Expect* looks always to the future. You cannot expect that anything has happened or is happening, but only that it will happen.

"*Get* means to obtain, not to possess. 'He has got all the numbers of the *Christian Instructor*.' 'Have you got good molasses?' 'They have got bad manners.' Why will people persist in introducing the word in such sentences as these, where it is so evidently superfluous?

"*Help meet.* An abusive use of these two words, as if they, together, were the name of one thing—a wife—is too common. The sentence in Genesis is: 'I will make him a help meet for him; that is, a help fit for him. There is no such word as helpmeet.

"*Lie—Lay.* Persons not grossly ignorant sometimes say they will lay (meaning lie) down, that they have laid (lain) an hour, or that the hammer is laying (lying) by the tacks. Lie means to recline; its past tense lay—'I lay there all night;' its participles, lying and lain. Lay (used of present time) means to put something down—one lays a carpet; its past is laid—'I was interrupted while laying it, and it was not laid until night.'

"*Love* rules the heart, not the stomach. You love your wife, or ought to; but favorite articles of food you *like*.

"*Observe* should not be used for say, as in the oft-heard sentence: 'What did you observe?'

"*Sit,* often mispronounced set, is occasionally written so; but it is to be hoped rarely."

EDUCATION AND CRIME.

Rev. A. S. Fisk, in his report on "The Relation of Education to Crime in New England," summarized these five significant facts:

1. That at least eighty per cent. of the crime in New England is committed by those who have no education, or none sufficient to serve them a valuable purpose in life.

2. That, as through the country so through New England, from eighty to ninety per cent. of criminals have never learned any trade or mastered any skilled labor.

3. That not far from seventy-five per cent. of New England crime is committed by persons of foreign extraction—that is, by persons who were born in other countries, or one or both of whose parents were.

4. That from eighty to ninety per cent. of our criminals connect their causes of crime with intemperance.

5. That according to the unanimous judgment of all officers of juvenile reformatories, ninety-five per cent. of these offenders come from idle, ignorant, vicious, and drunken homes. Almost all children of this class are truants from school at the time of committal; almost all of them have been long in petty vices and crimes; and almost the entire number are the children of ignorant and besotted parents.

The responsibility of the teacher is great, but the responsibility of the parent is greater. The parent can do most—does do most—towards fixing the character of his children, and that responsibility cannot be transferred to others. The home comes before the school, and nothing is more needed in this country than well-regulated homes. They are of more importance than the schools, because they determine the character of the schools.

If the preachers throughout the country would lay aside, for one year, all doctrinal and dogmatic subjects, and devote themselves to instructing the people how to rear children, and how to make home what God intended it to be, they would, in our humble opinion, be serving their Heavenly Master in the most acceptable manner. How to influence, how to instruct, how to amuse, how to furnish, how to form the habits and characters of children at home, are great unsolved problems, worthy the attention of the ablest philanthropists.—*Indiana School Journal*.

THE WEAKNESS OF PUBLIC SCHOOLS.—An enthusiastic writer on the kindergarten instruction, in the October number of *The Galaxy*, has some rather severe strictures upon the present methods of teaching in our common schools and their effects. We present below an extract from the article. How much truth is there in it?

"The question arises, for a thousand children of all classes from each system of education, which has given them the best preparation for earning a living in the world as it is, the present public school system of America or the no-school system? How many has the public school system provided with a living? The answer is very easy. In a thousand boys ten take to teaching other boys, while they are studying law or medicine. Two of these remain teachers all their lives. Fifty go into bookkeepers' places, where ten remain. The rest disperse to business of all kinds, trades and shopkeeping, all of which have to be learned, and in which the school education is of little use, save indirectly and by its general cultivation of the intelligence. Of the thousand girls fifty go to teaching. The rest forget all they ever learned. Of knowledge useful to them as mothers they have acquired nothing; of house-keeping duties less.

"This is the dark side of modern education. There is of course a bright one. Take a hundred workmen, brought up to any given handicraft, especially one requiring intelligence. The men who can read and write, and who have enjoyed the benefits of an English education, are more likely to rise in the world, to improve their position, than those who have never known anything but one routine of work from their earliest years. To become a skilled workman, indeed, education is absolutely necessary. The question remains—what sort of education is most likely to help them, one wholly theoretical, or one in which practice and theory are joined? The answer is obvious. It is found in the great and increasing popularity of industrial schools, wherever such have been established by private philanthropy. These are, so far, the only institutions of an educational nature, public or private, with whose benefits no injury has been found to mingle. The only objection to their universal establishment is found in their expense, owing to the vast variety of mechanical employments. These at present render a complete scheme of industrial schools as a national under-

taking, too difficult for practical adoption. Ideally such a system would be the most perfect education yet devised. It would at once train the rising generation into useful citizens and true wealth producers. Failing that, let us see what can be done with present systems to attain this desirable end. We find that the common schools tend to produce school teachers, lawyers, doctors, politicians, newspaper men, booksellers, clerks, brokers, and all that class of men who live by their wits. Of artisans, artists and agriculturists, capable of developing the wealth of a new country, they produce none. These come from outside."

A BAD POLICY.—To retain a pupil after school hours as a practice, hoping to create a new interest in the pupil by asking him to confine his attention for a longer time to the incomplete study, is an unwise measure. And if he is kept as a punishment, the teacher is more punished than the pupil; for the two are looking at each other with no kind feeling. Each is tired, nervous, and exhausted. Besides, there is physical incapacity in the case, oftentimes. So long a time the mind can be confined, and no longer, to one subject, or to similar subjects. Let the pupil go home, or at least go into the fresh air. If the teacher could meet his to-be-punished pupils after the lapse of an hour, and that hour be spent by each in the open air, some good might result.—*N. Y. School Journal*

PRIMARY.—Accustom a child, as soon as he can speak, to narrate his little experience, his chapter of accidents, his griefs, his fears, his hopes; to communicate what he has noticed in the world without, and what he feels struggling in the world within. Anxious to have something to narrate, he will be induced to give attention to objects around him, and what is passing in the sphere of his observation, and to observe and note events will become one of his first pleasures; and this is the groundwork of the thoughtful character.—*Ex.*

HOW TO STIMULATE PUPILS TO READ.—One way to stimulate pupils to read is this: Every Friday afternoon, in connection with other literary exercises, call upon each scholar to tell to the school something that will be worth listening to and remembering. In this way a skilful teacher will soon have a reading school. And what is read in this way will be remembered, as we always remember what we read to tell to somebody else. This exercise has nearly all the arguments in its favor that can be used in behalf of declamation or recitation, and some important additional ones. It encourages general reading, and it gives pupils practice in expressing thoughts in their own language—two very important points. A teacher cannot spend a part of his time more profitably than in stimulating his pupils to read. A young man who makes good books his friends and companions is on the high road to general intelligence, and is in little danger from the allurements of vice.—*Ex.*

TEACHERS AND EDUCATIONAL JOURNALS.—There are teachers who say they are too poor to subscribe for an educational periodical. If this is true, they are too poor to teach, and should quit the profession. Indeed, such a statement suggests, whether properly or not, that such teachers are poor in two senses. "Where there is a will there is a way." Poverty is too often urged to cover up the want of a strong inclination. When a teacher is determined to rise in his profession he will, in spite of his meagre pay, find some way to supply himself with educational food. There are some teachers in this country whose pockets are, for months at a time, free from the touch of money, that never fail to keep up their subscriptions to school journals; while there are others whose pockets are never entirely empty, that never subscribe at all for school journals. It is certainly a sad commentary on the profession of teaching to say, that of the 250,000 teachers in the United States, the names of probably less than 50,000 are on the subscription-books of the educational periodicals of the country.—*Ohio Educational Monthly*.

—The best results of education ensue not from trying to put something called knowledge into our scholars, not simply from stowing away in compartments of the brain so much history here, so much arithmetic there, and so much geography in another, like the calico, crockery, and fancy goods in the store, but rather from illustrating that better and more literal meaning of the word education, the drawing out of the faculties of the mind, rousing them into activity, giving them strength, directness, and precision of effort, energy, and capacity for work.—*School Com. of South Scituate, Mass.*

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The Canada School Journal.

Recommended by the Minister of Education for Ontario.
Recommended by the Council of Public Instruction in Quebec.
Recommended by the Chief Supt. of Education for New Brunswick.
Recommended by the Chief Supt. of Education, British Columbia.

TORONTO, JULY, 1878.

UNIVERSITY CONSOLIDATION.

A short time ago the Rev. Principal Grant, of Queen's College, Kingston, in the course of a public address in this city, alluded to the question of University consolidation in such a way as to leave the impression that the authorities of that institution would be prepared to consider any reasonable scheme that might be proposed for the fusion of all the Universities of the Province into one degree-conferring corporation. We do not propose to discuss the question here as a measure of public policy, though it might very well bear discussion from that point of view. Our present object is simply to point out its bearing on the work of the High Schools and the desirability of promoting it on the ground of the benefit it would confer on these institutions.

Hitherto, the great difficulty the High School masters have had to encounter, has been the diversity of the studies pursued by the pupils. Many of them take simply a commercial or English course, which they can now do and still pass the Intermediate Examination. Others attend for the purpose of preparing for matriculation in the College of Physicians and Surgeons of Ontario. Some intend to matriculate in the Law Society. Others purpose entering one or other of our Universities; while a very large number are intending candidates for Public School Teachers' certificates. This diversity of aims leads to excessive subdivision of classes, and adds greatly to the work and worry of the teachers. Matters are not quite so bad in this respect since the Intermediate has been accepted, as a substitute for third-class non-professional certificates, and also for those of both grades of the second-class. The Law Society has also made a movement in the right direction by assimilating its matriculation work to that of the Provincial University, while the work for the Intermediate has been so arranged as to be almost identical with both. The Medical Council, still holds out, however, and each University has still its own distinct curriculum for matriculation. If complete consolidation cannot be effected, it would surely be possible to harmonize the entrance examinations in such a way as to

make them, to a great extent, correspond, the Intermediate being the basis of them all, as it now is of the Junior Matriculation in the University of Toronto. It is difficult to estimate fully the amount of benefit which such a consolidation would confer upon secondary education in this Province, and the amount of relief the teachers would experience as the result of it.

Recent indications go to show that if some such scheme is not carried out, the Provincial University will have a virtual monopoly of the intending University students now in training at the High Schools. At the Junior Matriculation this year, one hundred and twenty-nine candidates presented themselves; the largest number ever before sent up being about seventy-five. This extraordinary increase looks abnormal, but it is really not so, as a moment's observation will show. During the past two years the Intermediate High School work has been practically identical, so far as it goes, with the work now prescribed for matriculation, and the sudden increase is due to the fact that so many High School pupils, girls as well as boys, now find themselves at the Intermediate stage able to go up for matriculation with a reasonable hope of being able to pass. We predicted such a result long ago; and if other Universities do not follow the example of the Senate of Toronto University, and frame their entrance examinations with a view to the utilization of the Intermediate, they will find themselves, however amply endowed, practically without either students or undergraduates.

PROFESSIONAL TRAINING OF TEACHERS.

There are those in Canada, even in the teaching profession, who think that it would be unnecessary to adopt the suggestion made in the last number of the JOURNAL, relative to the teaching of Psychology in our Normal Schools. They think it would be going ahead too fast. It is somewhat singular that some of these same teachers hold the opinion that Canada is ahead of the world in educational matters. Ontario was ahead of the world in its educational exhibit at the Centennial Exposition, so far as educational appliances were concerned; but not many Canadians were highly elated after comparing the actual school work of their own and other countries. Our tools were most excellent; the specimens of work done with them were small in number, and comparatively—to put it mildly—anything but satisfactory to the intelligent and impartial Canadian. It is true that the highest results of a good system of education cannot be fully shown on paper, but it is also true that they can thus be shown to a very great extent, at least to experts.

The first international exhibition convinced intelligent Englishmen that in the department of arts and manufactures they were a long way behind some other European countries. The result was a great awakening, and the awakening led to prompt and decided action. Technical education received so much attention and encouragement, that in less than a quarter of a century England was able to take her position at the head of the world in her own department of work.

Canadians ought to profit by the lessons of the Centennial, and cease to be contented with what they are doing in educational matters, until they are fully abreast with other nations. We are fully up with the times in the matter of school furniture and apparatus, thanks to the care of the Education Department since it was founded. We are not up with either America or Europe in the professional training of teachers—that is, in the higher departments of the work. In the last JOURNAL, it was stated that the Normal Schools in the United States taught Psychology, and that a movement was on foot to establish an educational chair in certain universities. This has already been accomplished in Great Britain, in some of the universities, as well as in the teacher-training institutions. But this does not satisfy British teachers. They wish to advance still another step. At a late meeting of the Council of the College of Preceptors, a memorial to the Senate of the University of London, for the institution of Professional Examinations of Teachers, and the granting of Educational Degrees, was adopted. The following quotation from it will serve to show to a certain extent where we stand relatively on the question in Canada :

“One of the recognized wants of the present day is some means of distinguishing between the qualified and unqualified educator, especially among the middle classes. The Council are of opinion that the institution of a distinctive Educational Degree would not only go a long way towards supplying this want, but assist in securing an object of scarcely less importance—the recognition of the claims of Education to rank on a par with the other learned professions, to which it is in no way inferior, either in the knowledge necessary for its successful pursuit, or in importance to the community. The Council are aware of the objection which has been sometimes brought against such a proposal, that the Science of Education is too restricted in its extent, and too special in its character, to afford a sufficient basis for an academical degree. But this objection appears to them rather to arise from the limited views of those who make it than to rest upon any foundation of fact. Their own experience, extending over more than a quarter of a century, in the examination of teachers for their diplomas (the scheme of which I enclose), has led them to a different conclusion, and has satisfied them that the range of knowledge and independent reflection that might fairly be included in an examination for an Educational Degree is quite equal to that required for degrees in Medicine and Law; while the amount of intellectual effort required for a mastery of the subjects coming within its scope is certainly not inferior. The Council are confirmed in this view by the great and increasing interest which is now felt in the whole subject of Training and Examination of Teachers for our secondary and higher schools, and they are glad to observe that this interest is extending to some of our leading Universities, which are taking practical steps to provide Teachers with better means of studying their profession, and of obtaining such guarantees as the public requires, and the teachers themselves desire, of their fitness for their responsible duties. Special professional Chairs, with courses of Lectures on the “History, Science, and Art of Education,” have been founded within the last two years in the Universities of Edinburgh and St. Andrew’s, and a Memorial from this College and from the Conference of Head Masters of First Grade Schools is now under the consideration of the Universities of Oxford and Cambridge, with the view of establishing similar Chairs at those ancient and time-honored seats of learning. The logical and necessary corollary of those and other movements with the same object elsewhere, is the institution of a Degree in Education, which will gather to and give unity and consistency to various independent lines of preparatory study, and at the same time, by giving it an academical stamp, impart a new aspect to the Teacher’s calling, and endow it with fresh claims to public recognition and respect.

“The Council venture to hope that a question bearing so directly on the improvement of general education will not be without interest to the Senate of the University of London, which has led the way in so many valuable educational reforms; and it will give

the Council sincere pleasure if the experience they have acquired in the conduct of similar examinations can in any way aid in securing an object of such importance to the profession they represent.”

THE NEW SCHOOL INSPECTORS IN WELLINGTON.—Amongst the many improvements in our Educational system during the past ten years, none has contributed so much to its present high state of perfection as the appointment of Public School Inspectors. With but few exceptions, they have been men of high scholarly attainments as well as eminent practical educationalists. The two recently appointed in Wellington will not detract from the high standing of their profession.

MR. GEO. A. SOMERVILLE.—Mr. Somerville was formerly a pupil of the St. Mary’s High School, under the able management of Mr. Tytler, now Head Master of the Guelph High School. During the two years of his attendance at that School he carried off several of the Mathematical prizes. He entered the Normal School in 1871, and greatly distinguished himself both in Mathematics and Natural Science, obtaining a thorough practical knowledge of the latter subject in the Laboratory. At the final examination by the Central Committee he obtained First-class A. standing highest in his year. He was soon afterwards appointed first assistant in the Whitby High School. While there he prepared himself for matriculating in the Toronto University, in which he obtained a general proficiency scholarship, and, at the same time, the first scholarship in Mathematics. He shortly afterwards accepted the more lucrative situation of Mathematical Master in the Guelph High School, with his former master, Mr. Tytler. While ably discharging the onerous duties of that position he prepared himself for the first year’s examination in the University, and obtained the second Mathematical scholarship, with a high standing in other subjects. We cannot but sympathise with the Guelph High School in the loss which it has sustained, but we heartily congratulate the County on the gain. The Schools under Mr. Somerville’s superintendence will soon be distinguished for good scholarship and good management.

MR. D. P. CLAPP, B.A.—Mr. Clapp has been appointed Inspector of the North Riding. His career has shown him to possess in an eminent degree the qualities necessary to render him a most efficient Inspector. Mr. Clapp, when only thirteen years of age, carried off the Ontario College Scholarship—his competitors being all the pupils attending the public schools of Prince Edward County. After two years spent in the Ontario College he went to the Normal School, where he obtained a First B. certificate, and shortly afterwards was one of the few who obtained a First A. He afterwards entered Queen’s College and won the Mowat Scholarship, and in his second year carried off the Catarqui Scholarship. He graduated in Toronto University in 1877, taking First-class honors, and since has been employed as High School teacher in Stratford. He has always been successful in his profession. He

attempts nothing without throwing all his energies into his work. His new sphere will give him enlarged opportunities for his abilities, which he will not be slow to use.

—The people of Wellington are certainly to be congratulated on securing two such capable and energetic young men to take the supervision of their Schools. There is no doubt that the interest in educational matters in the County will be greatly increased by their appointment.

MR. D. A. MAXWELL.—Mr. Maxwell has recently been appointed to the position of Public School Inspector in the County of Essex, rendered vacant by the resignation of Mr. Bell. Mr. Maxwell's ability and training fit him well for the honorable position he has been called upon to occupy. He is thirty-two years of age, so that for many years, should he be spared, he will be gaining experience while he retains vigor enough to enable him to make a good use of it. He has taught in Ontario for twelve and one-half years. He began with a third class Certificate, and worked his way steadily upward until in 1871 he obtained a first class Certificate, grade A. Since that time he has successfully taught in Cornwall, Wallaceburg, Chatham and Strathroy, changing his position every time for a better one. When the County Model Schools were established, Mr. Maxwell, at that time Mathematical Master of the Strathroy High School, was appointed Model School Master in the same town. He gave great satisfaction in the position to all with whom he came in contact. He has always been very popular with his pupils, and he will no doubt be equally so with the teachers who are fortunate enough to have him for their Inspector.

Contributions and Correspondence.

CLASSICAL TEACHING.

BY AN EX-HEAD MASTER.

During the past few years education in Ontario has made great progress. The establishment of the Intermediate Examination has infused new life into the High Schools. Public School Inspectors and Teachers' Associations have done the same for the Public Schools. There used to be stationary Schools, there are few now; new methods of teaching are earnestly sought after, and good methods eagerly adopted. Arithmetic has been revolutionized by the unitary method. Algebra has ceased to puzzle over conundrums about horses and saddles, and is beginning to assume a form more likely to aid the student in his future studies. Even old conservative Geometry has felt the impulse of the age. The old lady has cast aside her antique dress, and in the new suit furnished by Hamblin Smith she looks as if she really belonged to the present age. Has Classics shared in the onward movement? Not unless the oral teaching is infinitely better than the introductory text-books. Our Grammars are too long, and constructed on a principle radically bad. Darcy W. Thompson says he could put the essentials of Latin Grammar in them on four pages. An Elementary Grammar should be short and simple. It should con-

tain no more than the declensions and conjugations. Nor should these be committed to memory as a preparation for the study of the language, but should be used as a reference in connection with the teacher's instruction. To learn a language the pupil must have a language before him. He must see specimens of the material on which he is called upon to exercise the faculties of observation, judgment and memory. The pupil should not be required to commit the general forms and examples of the Grammar before he has frequently met with particular instances in his reading, and has been led to observe the advantage of comparing, and arranging them for the purpose of aiding the memory. The grammatical forms required to read, say Latin authors, are few. Perhaps some teachers may not have observed that a pupil may read the whole first book of Cæsar without knowing any other part of a verb except the third person singular and plural. Why then spend months committing what will be forgotten before there is an opportunity of using it? Why should the method of teaching Latin be altogether different from the method pursued in teaching other subjects? In Arithmetic or Algebra, for example, no good teacher would now give the rule first and the illustrations and examples afterwards. The illustrations and examples always come first and lead up to the rule. Knowledge consists of facts observed, arranged and remembered. The chief value of it often lies in the habit formed in acquiring it. For these reasons Syntax should be taught from observation. Each example as it occurs should be explained, and the pupil should be asked to discover and collect similar instances for himself. Instead of requiring a rule to confirm a case of particular usage, it will be found far more useful to ask the pupil to produce from his own reading one or more similar examples. No set of rules committed to memory and applied to books will either form a sound scholar, or, what is infinitely more important, induce habits of patient observation and just judgment. A man might be acquainted with many enquiries in physics and chemistry, he might take them on credit and act as if he believed them to be true; but his understanding would remain uncultivated. If the knowledge of all facts and conclusions of all research could be poured into a man's mind without any labor on his part, he would be really less wise than he who has been properly trained to work vulgar fractions.

We find the tenses of such a verb as *ago*, viz., *ag-ebam*, *eg-i*, *egeram*, *ag-am*, are all arranged in our Grammars, as well as the tenses of the subjunctive and infinitive; and of course all carefully committed to memory. But these tenses are really new words, which have their precise signification determined by their suffixes, and they are of infinitely less use for the pupil than a knowledge of many other words containing the same element, *ag*. Thus we have *ac-tus*, *ac-tor*, *ac-tis*, *ag-men*, *ag-ilis*, and others, not only of frequent occurrence, but belonging to classes which contain as many examples as the tenses of the verb do. Of the class of *ag-ilis*, we have *fac-ilis*, *hab-ilis*, *hum-ilis*, *ut-ilis*, &c., and similarly for the others. And yet this subject is hardly touched upon in our Elementary Grammars. It is of the utmost importance that a boy should be taught early, very early, to compare words, and to classify them, for the purpose of aiding the memory, improving the understanding, and learning the language more expeditiously and completely.

With respect to Latin prose, we hope that Arnold's unattractive manual has been relegated to the limbo of the past. The only work on composition needed is the lesson for the day. Let English sentences be selected which contain examples of the peculiar idioms found in each day's lesson. The student will not then be obliged to have recourse to the grammar and dictionary, but will obtain all the information he requires from a careful study of the

author which he is translating. The benefits of this method are obvious. It leads to a more careful study of the author, and enables the pupil to learn translation and composition at the same time. We intended calling attention to many other points, but space forbids. In conclusion, we hope that the important subject of teaching classics, which we have only touched upon, may be taken up and developed by other hands.

GRAMMAR.

BY J. A. MACABE, M.A., PRINCIPAL NORMAL SCHOOL, OTTAWA.

(Continued.)

After the pupil has floundered through the definitions of the various "parts" of grammar, and is told, in language not the most intelligible, what a letter is, he is introduced, in the majority of grammars, to that apparently endless division and subdivision of letters, vowels, consonants, mutes, semivowels, liquids, sibilants, surds, sharps, flats, labials, &c., &c.

I have often thought that, even in "advanced" grammars, the introduction of this part of the subject, at this stage, is perfectly useless. To know, simply, that letters are divided into vowels and consonants is quite enough for any pupil until he has gone through "Etymology" and "Syntax." When he has done this, a knowledge of "Prosody," including those matters referred to above, will be useful, but not before. Certainly a proper undertaking of "Etymology" and "Syntax," which make up the real grammar of any language, does not require all this preparatory trouble over elocutionary sounds and the characters which represent them.

Some of the definitions used in connection with this part of the subject come under the censure announced in last paper. I remember being very much puzzled as to what was the real difference between the mutes and the other consonants, as set forth in two definitions which I shall give here. "A consonant is a letter which cannot be sounded without the aid of a vowel;" and again, "a mute cannot be sounded at all without the aid of a vowel." Here are the exact words of the definitions. The only difference between them is in the additions of the words "at all" to the second. A consonant *cannot be sounded*; a mute *cannot be sounded at all*, without the aid of a vowel. What the force of the additional words, I never could understand. If a thing *cannot* be done, why, there is an end of the whole matter—there are no degrees in *cannot*.

I would therefore repeat that, until what I have laid down as the real grammar of the language is studied, the division called "Orthography" should be glanced at very slightly; and that its proper place for full treatment is in connection with Prosody.

The very commendable rule that the words of a definition should be plainer than those naming the thing defined, is frequently broken in attempts to define *word* and *syllable*. I will not take up any time with this part of the subject, however, as more important things now claim attention.

The next difficulty occurs when we come to settle the number of "Parts of Speech." By a comparison of the best English Grammars, it will be found that a large amount of authority is in favor of *nine* parts of speech; nearly an equal amount in favor of *eight*; and an inferior, but very respectable proportion, in favor of *ten*.

Let us see what grammarians of ancient days in England did in this matter. Gill, who wrote a work on English Grammar some time during the reign of James I., distinguishes the parts of speech into noun, verb, and consignification (a long word, but, as

we shall see, very significant). He included the adjective and the pronoun in the noun class; and in that named by the very long word just give he included the article, adjective, preposition, conjunction, and interjection. A very ingenious division, putting in one class all words which make *significance with others*. Butler, who wrote about 1633, made four classes—noun, verb, preposition, and adverb, including, as Gill does, the adjective and the pronoun with the noun, and the conjunction he considers a sort of adverb. Ben Jonson classes the article with the pronoun, the adjective with the noun, the interjection and the preposition with the adverb, and distributes the conjunctions under several heads.

We see, therefore, that from the earliest times of writing English Grammars, this was a difficulty.

At the present day, however, the so-called *article* and the so-called *participle* are the troublesome children of the family of words. We do not know whether to "set them up on their own account," or to keep them under one or other of the friendly roofs of the adjective, the verb, and the noun.

But there is another member of the family—a member which gets but scant courtesy in some quarters. He has certainly a habitation of his own, but hear what is said of him:—"The brutish, inarticulate interjection, that has nothing to do with speech, and is only the miserable refuge of the speechless, is reckoned amongst the parts of it. The neighing of a horse, the lowing of a cow, the barking of a dog, the purring of a cat; sneezing, coughing, groaning, shrieking, and every other involuntary convulsion with oral sound, have almost as good a title to be called parts of speech as interjections have."

I think we can safely come to the conclusion that *eight* parts of speech will answer every purpose of grammar—simple or intellectual—and I believe the practice of all modern grammarians is to adopt this view of the subject.

I now come to the first real difficulty in grammar, one of the greatest difficulties, and one which, I must confess, I have not yet seen cleared up properly by any author with whose work I am acquainted—and that is, what Number, Gender, Person, and Case really are—whether they are *forms*, or *changes*, or *distinctions*, or *properties*, or *cases*, or *sorts*, or *accidents*, for they have been called by all these names and by a good many more.

NOTES ON EDUCATION IN GERMANY.

THE ABITURIENTEN-EXAMEN.

BY H. A. BAYNE, M.A., PH.D., HALIFAX HIGH SCHOOL.

(Continued.)

The important position which the instruction of the German Gymnasium occupies in the educational system of the country may be better realized when it is known that upon the final examination of this institution depends admission to the universities, to the higher special schools, and to all posts in the civil and military service of the State. An access to the practice of law or medicine and to the positions of pastor or professor, all depend upon a University course; so, in reality, none of those professions are open in Germany to the young man who has not passed the final examination of the Gymnasium. The examination test fixes a barrier which only those can pass who have spent a certain number of years under the soundest training.

The so-called *Abiturienten-Examen*, or leaving examination, is held at the Gymnasium, and conducted by a council, of whom the director and the teacher of the highest grade in the Gymnasium form members. The State is represented on the board by a delegate from the Provincial School-Council. The candidate must

have spent two years in *prima*. The examination is of the nature of the work done in *prima*, but is not such as may be prepared for by any amount of cramming beforehand. It is of a character adapted to test the actual knowledge which the candidate possesses of the subjects of the course. Passages hitherto not read in the studies of the class are set in Latin, Greek and French, and an off-hand translation and criticism is demanded. Exercises in German, mathematics, physics, geography and history, are also assigned, and short essays in Latin and German, composed impromptu, are expected of the candidates. A candidate who has shown himself qualified to pass is awarded a certificate of maturity; he who falls short of the average demanded receives also a certificate, but one which testifies to his immaturity or unfitness for University studies. He may indeed proceed to the University, and be admitted, but only as an irregular student, the time which he spends at the University previous to obtaining his maturity-certificate not being reckoned to him.

The certificate, signed by the individual members of the Examining Commission, is awarded with much ceremony at a public meeting held in the large *Aula* of the Gymnasium, at the close of the semester. This is a grand occasion in the history of the Gymnasium, and is rendered especially momentous to the pupils by the important issues which are at stake for the graduating class. In presence of a large number of school dignitaries a learned essay is read by the rector, or one of the professors in *prima*. This is followed by speeches and a public announcement of the results of the examination and a distribution of the certificates. Any one who has been so unfortunate as not to obtain the *Geugniss der Reife, i. e., Certificate of Qualification for the Studies of the University*, is advanced according to the character of his previous career, either to continue in attendance at the Gymnasium for another period of six months, and then make a fresh attempt to pass, or to abandon altogether his intention of proceeding to the University.

Much the same is true, *mutatis mutandis*, of the final examinations at the *Realschule*. The leaving certificate here obtained is of less value as a pass to higher positions. It admits to certain posts in the public service, and for business positions it is now almost indispensable as a qualification. One of the chief uses of the school certificate, however, is that it entitles the holder to shorter military service. The ordinary German peasant, and all who have not taken advantage of a full Gymnasium or Real school course, are obliged to devote three entire years to military service. Young men, however, holding a *certificate of maturity*, and volunteering besides to provide themselves with arms and regimentals, are admitted to the single-year service, besides enjoying certain other considerations as to time and place of service not usually granted to those discharging their military obligations.

It is found in practice the number of boys completing the Gymnasium is much larger than that of those who go through the entire course of the Real school. The great mass of those who go into commercial or industrial pursuits leave the Real school in *secunda* or even in *tertia*, certificates being granted also at those stages of advancement—which are accepted for business positions. Those who complete the course have generally in view in so doing the application for a post in the public service.

CURRENT MISTAKES IN TEACHING ENGLISH GRAMMAR

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

(Continued.)

Let me, in passing, call attention to another exceedingly common mistake. Learners are often incautiously told that a transi-

sitive verb must always have an object,—the very important condition of its being in the active voice being lost sight of. Of course, a transitive verb may be in the passive voice, and then there is no grammatical object of the verb, though of course the subject stands for the real object of the action. When I have given a list of verbs to be classed as transitive and intransitive respectively, I have usually found three candidates out of four put all passives among the intransitives. In the last list that I gave, there happened to be only one transitive verb (*lay*) in the active voice. A candidate pounced upon this, and informed me that *lay* was the only transitive verb in the list, "because you can lay an egg."

I must give you one other illustration of the all-pervading confusion between words and things, which I have been trying to expose. In parsing the words, "full many a flower is born to blush unseen," a candidate recently wrote, "is a preposition, showing the relation between *flower* and *born*." Could anything be more preposterously wrong? Hold, however; perhaps he was only making a strictly logical application of the definition that he had learnt. Very likely he had used one of our commonest school grammars, which says that "a preposition is a word which shows the relation of a noun or pronoun to some other word in the sentence." Well, does not *is* show (in a sort of way) the relation of *flower* to *born*? Then, according to the definition, it is a preposition. If not, why not? Why, because the ordinary definitions of a preposition are totally wrong. Everybody admits that prepositions show relations of some kind. Of what kind? Here, again, there is absolutely no dispute. Primarily, relations in space, rest in, motion to, motion from—*in, at, to, towards, from, &c.* Secondly, relations of time—*at, before, after, &c.* Thirdly, by a metaphorical use, the relations of cause, effect, &c. Now, I put it to any one's common sense, do these relations subsist between the words of a sentence? If I talk of a bird in a cage, is the word *bird* inside the word *cage*? Of course not. The preposition *in* shows the relation in space of one thing to another. Can any one point out any conceivable relation between the word *bird* and the word *cage*, which is expressed by *in*? Yet a grammar, which bears a very distinguished name on the title-page, lays down broadly that "a preposition is a word which shows the relation of one noun to another." But these writers cannot even be consistent with themselves. In the same book we read, a few lines further on, that, "when a preposition connects noun with noun, the relation is between one object and another." Both statements cannot be correct. Still, when a man has made a blunder, it is better to correct it than to stick to it; and nothing could be more accurate than the statement just quoted, and what the writer goes on to say, "when it (*i. e., the preposition*) connects a noun with an adjective, the relation is between an object and the quality expressed by the adjective (as *red* with *weeping*); when it connects a noun with a verb, the relation is between an object and an action (as *broken* with *storms*)." But a paragraph like this is a veritable *rara avis* in those sections of English grammars which treat of prepositions. The definition which is given by three examiners out of four is the thoroughly erroneous one that I quoted before, namely, that "the preposition is a word which shows the relation of a noun or pronoun to some other word in the sentence," to which the writer adds a paragraph which for confusion of thought is perhaps unrivalled. He says, "Sometimes the preposition shows the relation of one substantive to another, as, 'the wisdom of Solomon is renowned'; sometimes it shows the relation of some person or thing to a given action, as 'he fell against the wall'; sometimes it shows the relation of a substantive to some quality, as 'bread is good for food.' The facts may be thus expressed: 'prepositions relate nouns or pronouns to other nouns or pronouns, to verbs, or

to adjectives.' I presume that "to relate one noun to another" is meant to express the same idea as "to show the relation of the one noun to the other." If not, the second definition contradicts the first. But look, I pray you, at that intervening expository paragraph. It contains three different and absolutely inconsistent accounts of the functions of the preposition. First, the preposition shows the relation of one substantive to another, *i. e.*, of a word to a word. This is the old story—the word *bird* inside the word *cage*. Next, the preposition shows the relation of a person or thing to an action,—no longer of one word to another. Here the writer has accidentally deviated into sense, but it is only for a moment. In the next sentence he goes more ingeniously wrong than ever; for now he mixes the two contradictory notions together, and speaks of the preposition showing the relation of a substantive, not to an adjective—as we might expect, and as he actually says in the sentence that follows,—but to a quality. So in *good for food*, 'for' expresses the relation of the word *food* to the quality of goodness that exists in the thing 'bread.' Is it to be wondered at that learners whose heads have been muddled with this sort of thing, when they come to parse a sentence make the wildest confusion with their prepositions? You have seen it called a preposition. Repeatedly, I have seen *cannot* called a preposition, *suddenly* a preposition, *full* a preposition, *many* a preposition, *that* a preposition, as a preposition, and so forth.

I am greatly mistaken if by this time I have not succeeded in showing that a very large amount of the grammar teaching that is current in our schools is radically vitiated by the neglect of a distinction so simple and obvious that to mention it is to secure assent for it. The primary definitions, upon which everything in the shape of syntax or the explanation of constructions must be based, are in consequence confused, illogical, and misleading,—absolutely worthless for any purpose, whether practical or scientific.

Matters are improving, however. Not so very long ago there was not a single English grammar for schools which did not contain all, or nearly all, the mistakes I have just been pointing out, along with a good many more. Now there are several which are nearly, or altogether, free from them. Even the Potential Mood is dying out, though, like other creatures of low vital power, it takes a good deal of killing. Is it not marvellous that teachers who, in their Latin classes, never dream of telling their pupils that *possum scribere* is the potential mood of *scribo*; and when they give a German lesson, never insist that *ich kann schreiben* is a potential mood of *schreiben* or the Greek, that *γράφω δύναμαι* is a potential mood of *γράφω*; or in French, that, *je puis écrire* is a potential mood of *écrire*,—still hanker after that blessed potential mood in English? Be consistent. Have it in all the above languages, or have it in none. Besides, if *I can sing* makes a potential mood, surely *I may sing* makes a permissive mood, *I will sing* makes a volitional mood, *I must sing* makes a necessitarian mood, *I ought to sing* makes a morally obligatory mood. What right has *can* to this pre-eminence of modality? If you take one, you must take all. We used to be told that of a man was a genitive case, to a man a dative case, by a man an ablative case, and so on. Horne Tooke long ago pointed out that, if you went to work in that way, you must have as many cases as there are prepositions. I think it will be hard to show that it is not just the same with the moods.

I now ask your patient attention to a few remarks in which I shall endeavour to remove some very prevalent and mischievous misconceptions as to some other moods—a task the more necessary and the more difficult, because some very eminent names have lent weight to the views that I have to combat. In doing so, I shall have to appeal to other languages, such as German and Latin.

I insist on the right to do so, because, whatever may be the differences in details between, say, Latin and English, there is an identity in the cardinal grammatical ideas on which each language is based. Number, person, case, voice, mood, tense, are based upon the same fundamental conceptions in both languages. If you look at the pronoun, for example, you will see that we have come to assign to one case—the dative—the functions that were originally, even in English, distributed amongst three—the dative, the accusative, and the instrumental. Here is an important piece of difference in detail,—we have not so many cases as the Latins had. For all that, it still remains true that the fundamental functions of case-endings are common to both Latin and English. In like manner, though there are differences of usage, a subjunctive mood is fundamentally the same thing in English, German, and Latin, and no definition of it is valid for English which will not apply to the other languages.

First let us emancipate ourselves from the tyranny of names. Our common grammatical terms are very insufficient, and often quite misleading. They have come down to us from times when grammar was most imperfectly understood, through Latin writers, who added blunders of their own to the imperfections that they found. Witness their translating *πρός γενεήν* by 'casus genitivus,' (from *genitus*, instead of *genus*). Nothing of value is to be got out of the mere etymological meaning of a grammatical term. "Accusative" is a very stupid name for the case of the direct object; and *ablative* is still worse for that which denotes an instrument or an attendant circumstance. So you will never get to know what a subjunctive mood is by merely translating the word *subjunctive*. But unfortunately the name has led many to suppose that there is some essential and invariable connection between *subjunctive* and *subjoined*; and, more and worse than this, to confound a *subjoined clause* with a *verb in the subjunctive mood*. You may have a verb in the subjunctive mood in a principal clause, (as in "If 'twere done, when 'tis done, then it were well it were done quickly,") and you may have an indicative in a subjoined clause, as after *ubi* or *when*, or any relative in Latin or English.

Now the first point that I insist upon is this,—that a verb in the subjunctive mood is not simply a verb employed in a subjoined clause, but a particular kind of verbal form, such as *sim*, *sis*, *sit*, in Latin; *sey* or *wäre*, in German; *I were*, *he were*, in English; and that the forms *sun*, *bin*, *am*, *est*, *ist*, *is*, are indicative wherever they are found. You may find Latin sentences by the score in which *est* follows *si*: but *si est* is not a subjunctive mood; the conjunction is not part of the mood. *Est* is indicative wherever you find it. Yet I have seen a school grammar in which *if I am* is deliberately set down as the subjunctive of *to be*; and matters are not much mended when such combinations are termed (as by Dr. Abbott) *indicative-subjunctive* forms. A 'horse-marine' is nothing in comparison with this wonderful compound, for a marine might bestride a horse; but by no possibility can an indicative ever be any kind of subjunctive. You might as well talk of a genitive-accusative!

I next proceed to consider how far there is any essential connection between the idea of conditionality and the subjunctive mood. Let me ask your attention to the following quotation from Professor Bain. He says:—"Some circumstances in the manner of an action have also been embodied in the changes made in the root verb. For example, when an action is stated not absolutely, but conditionally, the verb is differently modified, and a series of tenses is formed, for present, past, future, complete, and incomplete, of the conditional verb. This is the *Subjunctive Mood* which exists in full force in the old languages, but is a mere remnant in ours. The machinery is too great for the occasion; We find that

conditionality can be given by a conjunction, *if* or *though*, and need not be repeated in the verb."

If language means anything, this passage means that a special form or mood—the Subjunctive—was invented to express conditionality; that it is the appropriate form for the purpose; and that in the old languages (Latin, for example) it was regularly employed ("exists in full force"), but has been almost entirely dispensed with in our language, because we have found that we can get on without it.

Dr. Abbott, in his "How to Parse," echoes Mr. Bain's statement. He says—"Every verb has a certain mode of mood for expressing condition. This mood is called the subjoined, or Subjunctive." But Dr. Abbott goes further than Mr. Bain. The latter seems to be under the hallucination that the Subjunctive regularly follows *si* in Latin. On that point one must simply refer him to his Latin grammar. Still he allows that clauses in which *if* or *though* is followed by the Indicative mood are conditional clauses; though he evidently thinks that it is the proper function of the Subjunctive to express conditionality, and that it might be rightly used in all cases, only we have found out that we can manage to get on without it, and so content ourselves with the Indicative. But Dr. Abbott is too good a scholar not to know that the Indicative is as common as possible after *si* in Latin, just as it is after *wenn* in German and *if* in English. Nevertheless, he stands to it that "every verb has a certain mood for expressing condition, called the subjoined or subjunctive." "Yes, but the facts are against you; a palpable Indicative is often found in conditional clauses." "So much the worse for the facts. The clauses are not conditional." There is a sort of cheerful courage about this way of going to work which is quite refreshing. "If," says Dr. Abbott, "is sometimes used, not in its ordinary conditional sense, nor, on the other hand, exactly like *since*, but rather in the sense of 'assuming as a fact.' In such cases it is followed by a true Indicative, as, 'If he says that, he is more ignorant than I supposed.' This must not be confounded with the true Subjunctive."

Here at last we come to close quarters. I reply that to assume something as a fact before making some other assertion, is to make a conditional assertion. When I say, "The man deserves to be hanged," I make an absolute, unconditioned assertion. When I say, "If the man is guilty, he deserves to be hanged," it is incomprehensible to me how anyone can deny that I make a *conditioned* assertion—an assertion under conditions, depending for its truth upon something else about which I am uncertain. I assert that the man deserves to be hanged only on the assumption that he is guilty; and if the clause expressing this assumption, which is the condition of my making the assertion in the main clause, is not a conditional clause, the word conditional must be derived, not from condition, but from some other word with which I am unacquainted. The fact is, it is entirely erroneous to suppose that conditionality and the Subjunctive mood are essentially connected. Conditional assertions may be made with equal propriety with the use of each mood according to circumstances. The difference depends upon the point which Professor Bain appears to me not to see at all, but which I fancy Dr. Abbott had in his mind, though unconsciously, in making the statements that I am criticising. It is this. The old talk about mood expressing the mode or manner of an action is all rubbish. When I say, "John, shut the door," what in the world has the Imperative mood got to do with the "manner of the action"? Every proposition in every finite mood, Indicative, Subjunctive, and Imperative, involves the connection in our minds of a predicative idea with that denoted by the subject. The mood expresses the attitude of our minds in relation to this predicative connection. When, in making it, we have in our mind the idea that the connection established relates, actually or possibly,

either as assertion or as hypothesis, to something actual, outside our thought about it, we use the Indicative. When we express our will that the connection made in thought should be realised in the actual and objective world, we use the Imperative. But when the prediction remains a mere matter of conception, without being contemplated (so far, at least, as the purpose in hand is concerned) as corresponding, actually or possibly, to what exists outside our thought, we use the Subjunctive; we thus get the Indicative as the mood of reality, or of objective predication; the Subjunctive as the mood of conception, or of merely subjunctive predication; and the Imperative as the mood of volitional predication.

We have now got a definition which is free from the shackles imposed on us by the words "subjunctive" and "conditional," and shall be able to see how, amongst others, conditional sentences are related to the Indicative and the Subjunctive respectively. "Nisi hec est, frustra laboramus," "If this is not the case (actually and really), we are troubling ourselves to no purpose." Here, in both clauses, we are dealing with external realities. "Tu si hic sis, aliter sentias," "If you were in my position, you would think differently;" obviously a mere matter of conception. I do not set before myself, as an alternative, that you either will or will not be in my position; and this, please to observe, is not the same thing as denying that you either will or will not be in my position. Only I do not go so far as to contemplate either alternative in its actuality. The matter goes no further than being matter of conception. Accordingly the Subjunctive mood is employed. Again, "Si epistolam ad eum scripseras, ad te rescribere eum oportuit," "If you (actually) wrote to him, it was his duty to write back to you" (Indicative). But "Si scissem in quo periculo esses, statim ad te advolassem," "If I had known in what danger you were, I would have flown to you." A mere matter of conception; I did not know, and did not fly to you. Now, too, we see how absurd the name *Subjunctive* is. The mood thus called is as appropriate in the main clause as in a subjoined clause, provided the predication has the merely conceptive character that I referred to. It would require a special lecture to discuss this subject at full length. I shall not attempt that task now. I will simply say that you will find the explanation of constructions in which the Subjunctive appears wonderfully simplified by carrying the question at once to the fundamental conception denoted by the class of forms that bears this unfortunate name. Thus, for example, this primary characteristic of the mood shows why it is the proper one in Latin and English to express purpose. A purpose, as such, cannot possibly be anything more than a conception. The Romans also used this mood to denote consequence, even in cases where in Greek, German, or English we should have the Indicative. They took simply a conceptive view of the relation of cause and effect, just as in English instead of saying "He was so famished that he gnawed his boots," we may stop short of asserting the actual fact by saying, "He was so famished as to gnaw his boots," where, you will observe, the form of the expression gives merely a conceptive relation between the ideas, just as is the case in "He was too grieved to speak." I have not time to pursue the matter in detail, but you will find that most of the difficulties in the use of the Subjunctive in Latin vanish when we get rid of the effete old notion of its being governed by conjunctions or relatives, or being the mood for expressing condition, and deal with it on its own proper footing, as the mood of merely conceptive predication. To take a single illustration. Most beginners are puzzled to tell when to use an Indicative mood after *quod* or *quo* (meaning "because"), and when the Subjunctive. The principle is simple. If the writer is alleging what he regards as an actual reason, use the Indicative. If the reason is not avouched by him as matter of fact, but brought forward only as matter of conception, use the

Subjunctive. Here is a sentence that illustrates both uses. 'Succensui ei magis quod me consilii sui certiore non fecerat, quam quod consilium ipsum inivisset,' "I blamed him more because he did not inform me of his design (real reason—Indicative) than because he formed the design itself (imaginary—because rejected—reason—Subjunctive.)"

The view that I have just set before you in outline is nothing new or strange. It is enforced by all the best German grammarians. You will find it in Madvig's or Roby's, or the Public Schools' Latin Grammar, in Mütznier's "Englische Grammatik," and elsewhere.

I must somehow have failed to make myself understood, if I have not carried your judgment with me as to these points.—1. That the verb in a subjoined clause is not, as a matter of course, in the Subjunctive mood; while, on the other hand, a Subjunctive mood may be found in the main clause of a sentence. 2. That we may speak about that of which we are uncertain by means of the Indicative mood ("If he is at home," "If the prisoner is guilty, *Si hoc est,*" &c.) 3. That we may use the Subjunctive when we are speaking of that of which we are quite certain (*Si scissem in quo periculo esses ad te advolassem*—there is not the slightest doubt that I did not know, and did not fly). 4. That the Subjunctive mood is not essential for the expression of a condition, and that therefore *conditional* is a bad name for it. The fact is that *certain* and *uncertain*, *absolute* and *conditional*, have been confounded with *actual* and *conceptive*. I recommend you to examine, in the light of these ideas, the deliverances of some of our common grammars on the functions of the Subjunctive mood. If you find them definite, full, satisfactory, or philosophical, all I can say is that you show a remarkable aptitude for being thankful for small mercies. Be pleased also to bear in mind that I have not attempted to deal with more than the broad outlines of the subject, and that I have not had time to show how the view I have given you of the *fundamental* functions of the Subjunctive mood is not invalidated by the fact that anomalies have been introduced by two opposing tendencies. On the one hand, there is a very natural tendency to speak of contingent or uncertain *future* events as though they were merely matters of subjective conception, so that in English we say (or rather used to say), "If it rain to-morrow," "If he come in time," (where a Latin writer would have used the future indicative,)—and even to extend the usage to what is merely *uncertain*, a tendency which must not be confounded with that strictly proper use of the Subjunctive, when the supposition we are making is put, not as a possible *individual fact*, but as a *general case*. On the other hand, there is a tendency to discard fine grammatical distinctions, and use the Indicative mood where the Subjunctive would be more correct. Now-a-days one often has the skin taken off one's ears by hearing such sentences as "If he was wise," instead of "If he were wise." But an Indicative so used is not an Indicative-Subjunctive, but merely an Indicative used where a Subjunctive ought to have been used. It is not a "false Subjunctive," because, although subjoined, it does not pretend to be a Subjunctive at all, but simply intrudes its honest face where it has no business.

There is something to be said for those who would use the name Conjunctive instead of Subjunctive. From the very nature of their primary function, those forms which are called "subjunctive" are incapable of being used in a *simple* declarative or interrogative sentence. A predication made in thought only is meaningless, except as related in thought to some other predication. It follows that, if we except optative sentences, which may be treated either as expressing volitional predication, or as being elliptical, subjunctive forms can only be used in *complex* sentences, that is, in sentences where there are more than one clause joined together. But there

still remains the objection that the name is misleading, because conjoined clauses may have their verbs in the Indicative mood.

This brings me to a point which I would gladly have discussed at greater length. I maintain that the Subjunctive has not disappeared so thoroughly as some suppose. The obliteration of distinguishing marks is not quite the same thing as the annihilation of the difference which the marks once denoted. Identity of form is not identity of function. There are those who say that in such a sentence as "If I had a shilling, I would give it to you," *had* is in the Indicative mood, because it is the same in form as in "I had a long walk yesterday," who yet have no hesitation, when parsing "I went," in saying that *went* is in the singular number, and in parsing "*we went,*" that it is in the plural; and speak of some nouns being in the nominative and others in the objective case, though they are alike in form. You do not say that *regnum*, in Latin, has lost two of its cases, because the nom., acc., and voc. are alike. And this is right, because the distinctions are maintained elsewhere. So in English. So long as we distinguish "If I was" and "If I were," we are entitled to treat *had* in "If I had" as being sometimes in the Indicative and sometimes in the Subjunctive.

I know very well that to secure accuracy and clearness in what is learnt costs a good deal of trouble, and takes a good deal of time; but it does not consume one quarter of the time that is wasted over the profitless slip-slop work that often occupies school-hours. There is no real difficulty if teachers will only go on slowly. But the average boy can take in very little at a time of what requires accurate thought. If you hurry him, his mind becomes a chaos of muddle and confusion. I have known teachers take a class of beginners, and set them to learn the definitions of all the parts of speech for a single lesson. Naturally when they brought it up they were apt to say that prepositions denoted the qualities of nouns, and that verbs denoted anything that had a real independent existence, and so on. Pupils taught in this fashion may be kept at grammar for six years, and will know little more at the end of the time than they did at the beginning. But let each step be made sure before the next is taken; let the pupils, if necessary, spend a month in learning what a noun is, a month in mastering gender, another over number, and another over case, and let them go through all the parts of speech at the same rate. In two years they will be masters of the essentials of English grammar, and have more to show for the labour expended than vast numbers ever acquire in the whole of their school course.

Let me make one other practical suggestion on a point of detail. When you ask questions, always insist upon it that the answer shall be a complete sentence, and in grammatical sequence to the question. For instance, if the question be "What is the objective case?" do not allow such an answer as "Transitive verbs and prepositions govern the objective case"; but require the answer to be "The objective case is the case in which a noun or pronoun is put when it is governed by a transitive verb or a preposition;" and so on.

Now, I am quite unaware whether in any of my remarks I have been treading on anybody's grammatical corns. If, however, any one present has an uneasy misgiving that, through going on without due heed in a certain rut, he has inadvertently suffered his pupils to waste their time in learning what is wrong, I can only wish him a fit of deep penitence, while I remind him of the words of a little "moral song" which he probably learnt when he was a small boy:

" 'Tis not enough to say
We're sorry and repent,
And still go on from day to day,
Just as we always went."

DEFECTIVE VISION IN SCHOOLS—DUE TO ERRORS OF REFRACTION IN THE SCHOLAR'S EYE.

ABSTRACT OF A LECTURE DELIVERED AT PORT HOPE, ONT., BEFORE THE COUNTY OF DURHAM TEACHERS' ASSOCIATION, 8TH JUNE, 1878, BY A. HAMILTON, M.A., M.D.

The subject, as enunciated and limited, means, not defective-vision in its entirety, but that due only to something abnormal in the mechanism of the eye structural or functional, or both, which does not allow of an image of *average distinctness* to be formed on the retina or natural screen on which images are received. It excludes all such defective vision as may be due to other causes, e. g., squint, drooping lid, the damaging effects of inflammation, accidents, etc. At the outset, understand clearly that where there is something abnormal in refraction there is necessarily some diminution in the power of vision; the converse is not true, viz., given defective vision, its cause is refractive error only. It may be due to many other causes, to discuss which is out of my province just now. Be careful to avoid this mistake, otherwise you may work harm instead of intended benefit to your pupils.

PRACTICAL IMPORTANCE AND BEARING.

Within about five years much attention has been given to the subject, beginning in Breslau, Germany, where some 10,400 school children had their eyes examined by an oculist. The results show that in some schools as high as 51 per cent. of the children are more or less short-sighted. Germans are noted for their having much more frequently short sight than we. Fully one-third of the students at a German University wear spectacles. At least such is my observation. It is found also that the higher the grade of the school the greater the percentage. Prolonged school life there has the tendency to both produce and develop shortsightedness into a higher degree when already existing. These results have been verified in the larger cities of the United States, as New York, Philadelphia, Boston, Buffalo, and others. The percentage of such is much less in America than in Germany. The results and inferences otherwise are the same. In consequence, quite a proportion of scholars are unable to do school work as well as their fellows. They are scolded, punished as indolent, and otherwise abused and maltreated, their tutor having no sympathy for their infirmity because hitherto not aware of its existence. The suffering scholar himself does not know it, but strives to emulate and cope with his more favored fellow until he either becomes disgusted by repeated failures, and shuns and abominates school life, or if successful, irreparably injures his eyes in the prolonged but unequal struggle. The boy is hence largely unfitted for occupations requiring much close vision, as watch-making, book-keeping, or prolonged study; the girl, for the work of seamstress, reading, and so on; upon doing which a livelihood may depend.

REFRACTION BY LENSES.

Recall one or two principles of elementary optics: If rays, parallel or nearly so, fall upon a convex lens in a direction approximately parallel to its axis, they *converge* after refraction; if on a concave lens, they *diverge*.

MALFORMATIONS OF THE EYE.

Three of these concern us: (1) that called astigmatism, (2) short-sight, (3) oversight. Remember that the transparent window of the eye in front is called the *cornea*. The rays then pass through the *aqueous humor*, which fills the space between the cornea and the little opaque curtain called the *iris*, which gives the eye its color, as blue, grey, or black; thence through the *pupil*, the circular opening in the iris, on to be refracted, convergingly, of course, by the *crystalline lens*, nature's biconvex lens, to come to a focus five-eighths of an inch behind the lens on the *retina*, or screen on

which images are thrown, to be conveyed by the optic nerve to the brain. This five-eighths of an inch is filled by the *vitreous humor*. If **ASTIGMATISM** (α , priv., $\sigma\tau\iota\gamma\mu\alpha$, point) exist, the curvature in different meridians of the cornea, or crystalline lens, or both, varies. The consequence is, that the rays from an illuminated point after refraction through the media of the eye in one meridian, come to a focus at a point which is not the same for each meridian. The lighted point has an image in several focal points, a confused general image resulting, but no single point (which explains the derivation of the term astigmatism) as its image. Nearly all eyes have a little astigmatism. When considerable in degree, it constitutes our first form of defective vision. Its remedy is manifestly to correct, as far as possible, the varying curvature and consequent error of refraction by a suitable lens.

SHORTSIGHTEDNESS depends chiefly on the eye-ball being more elongated than in the normal eye. Hence the retina is behind the place to which the refracting media of the eye bring parallel rays to a focus. In such case, the image is formed in the vitreous humor, and not on the retina. If the rays are sufficiently divergent on entering the eye, instead of being parallel, they will not be brought to a focus so far forward. In that case, the image may fall upon the retina. Then the shortsighted person has distinct vision. The question then is, how he can render the rays divergent. For near objects he has already learned to do this by bringing the object, as a book, closer to the eye—to the end of his nose even in the higher degrees. The rays received by the eye from a near object are more divergent than from a distant one. For near objects, then, experience has taught him a remedy. For distant objects, that remedy is inapplicable. What shall it be for distance? Manifestly, if we place a concave lens before each eye, we render the rays divergent on entering it. The problem is then solved when we have adjusted a pair of lenses of suitable power, commonly called a pair of spectacles. The image now falls exactly upon the retina.

OVERSIGHTEDNESS consists chiefly in the axis of the eyeball being shorter than usual, and is in so far the reverse of shortsightedness. Then the rays, converging as they pass through the vitreous humor, strike the retina before they are brought to a focus. The retina is in advance of its usual position. Images are blurred. Their borders are not distinct. The indication is to render the rays more convergent before entering the eye, and they will the sooner come to a focus. The direction given them, if just enough, brings the image again exactly on the retina. What means to accomplish this? Manifestly, the use of a pair of convex spectacles.

There is a popular prejudice against the use of spectacles which often takes the erroneous, prejudicial, and ill-advised aphorism, "Don't wear glasses as long as you can possibly avoid them." The teacher should be intelligent enough not to subscribe to such nonsense. What harm? what but good can result from giving the rays such a direction before they enter the eye, in the space between the glass and the cornea, that they shall be adapted to its infirmity, and save it from destructive wear? As little as in adapting our food by previous preparation to the requirements of our digestive system, instead of abusing that system.

TEST TYPE.

Results as precise as those in astronomy may be obtained by the use of precise methods of testing. A desideratum is some means of testing (1) *average normal vision*, and (2) how far a given scholar comes below the standard. If normal acuteness of vision exist, objects in a well-lighted room are distinctly seen if they subtend an angle of five minutes at the observer's eye. Accordingly these large block capital letters three-eighths of an inch high should be seen *distinctly* at twenty feet. If larger letters only are seen we infer diminution of vision, varying according to the size of

letter seen. If letters so large as to subtend an angle of, say, ten minutes be seen, and no smaller seen accurately, we infer vision is only one-half what it should be; if fifteen, one-third; and so on. Armed with a graded set of such letters, for both distance and reading, statistics may be collected. Those for New York city were given by Dr. Webster at the meeting of the Social Science Congress at Detroit, in May, 1874. In New York a high pressure school system exists, and hence higher percentages were found than would be verified in smaller cities and towns. As a corollary to what has been said about excessive use of the eye, both aggravating and educing its defects, it might be inferred that these defects will not be noticed in the illiterate so much, nor in rural districts where sight is chiefly required for large objects. The inference is borne out by observation. What proportion exists in smaller towns may be inferred from the results of 200 scholars chosen at random in Port Hope. Seventeen, or 8½ per cent. of them, had notable diminution of vision, due to refractive errors only. This excludes minor degrees of defective vision, the degree and proportion being mentioned directly. But five or six of the seventeen were noted among their fellows or known by their teachers to have defective vision. The balance suffered and suffer in silence. 104 scholars of the Public School furnished nine, 96 of the High School gave the other eight. Of those in the Public School five had vision only one-half of normal, four only two-sevenths. In the High School, three had two-fifths, one had one-fifth, and one only one-fiftieth of normal! In the Public School, one was over-sighted and eight short-sighted. Of these latter eight, one had her short-sightedness combined with a high degree of astigmatism, and it is highly probable that the two were combined in considerable but varying degree in six others. This is only *probable*, for the calculation and examination of an astigmatic eye is so tedious that a complete result was forbidden by lack of time. In the High School, two were over-sighted and six short-sighted.

SYMPTOMS.

The Astigmatic eye commonly fails for distances, or, in the language of the school-room, for black-board use. Near at hand, or for reading, he seldom complains unless in very high degrees. The short-sighted fails at the black-board, but by holding the book close sees clearly near by; his eyes ache considerably and he is inclined to call them "weak." The over-sighted fails at the black-board only when his defect is present in high degree; commonly he sees the black-board well enough, his chief trouble being in the preparation of his lessons in school, especially at home. Then his eyes ache, water, and compel him to desist from using them. In general the short-sighted eye complains for distance most; the over-sighted, for reading. This might have been known *a priori* by consideration of facts already given in explaining the nature of the defects.

DETECTION OF DEFECTIVE VISION.

In the absence of complete means of testing vision, any teacher may get approximate results by measuring the angle of distinct vision at the scholar's eye, and comparing it with the standard angle of five minutes. In a well-lighted room, hold before a given scholar a hand-bill, or better, isolated letters, not forming a word. The letters should be large, broad, and on a white ground. Let him approach until they are seen distinctly and named promptly. His eye may be taken as the centre of a circle whose radius, r , is the distance of his eye from the letters, which are in the circumference. The circumference is $2\pi r$, subtending an angle of 360° at the centre. A simple proportion gives the angle of vision. Example: Suppose he sees letters three-fourths inch high at fifteen feet. Then $2 \times \frac{3}{4} \times 15 \text{ ft.} : \frac{3}{4} \text{ inch} :: 360^\circ : 14\frac{1}{2} \text{ minutes}$. Hence his vision is $\frac{1}{14\frac{1}{2}} = \frac{1}{15.5}$ approximately. This being known, it

is the place of the intelligent teacher aware of its importance, to remedy the defect by appropriate

TREATMENT,

namely, glasses. Where these cannot or will not be got, the case may be in part met by trying to distinguish the forms as best he can, a task not always easy for him, and to place his astigmatic and shortsighted pupils with seats convenient to black-board, maps, etc., seen at a distance, and to humanely remember the infirmity of the over-sighted, and not compel them to work to their prejudice. These malformations of the eye do not constitute a moral fault. Just as noses, ears, mouths, etc., vary in shape, so with eyes. A high or over civilization, requiring application and prolonged use of the eye, brings out prominently even small defects in this extremely delicate and much-abused organ.

This subject, so interesting, important, and not threadbare, common alike to the educator and the oculist, is worthy of much attention by every teacher.

Mathematical Department.

Communications intended for this part of the JOURNAL should be on separate sheets, written on only one side, and properly paged to prevent mistakes. ALFRED BAKER, B.A., EDITOR.

SOME PROPOSITIONS IN INTEREST.

1. If r be the rate of interest per unit, and $R = 1 + r$, then R is the amount of \$1 in one year; and, therefore, $R \times R = R^2$ is the amount of \$1 for two years, &c.; and R^n is the amount of \$1 for n year. Hence, if A be the amount of P dollars in n years, $A = PR^n$; and, if P be the present worth of A dollars due n years hence, $P = AR^{-n}$.

2. In the above formulas n may be fractional as well as integral.

Thus, the amount of \$1 in the p^{th} part of a year is $R^{\frac{1}{p}}$, and the rate of interest for the p^{th} part of a year is $R^{\frac{1}{p}} - 1$. Hence, if s be the rate per cent. per annum,

- The rate per half-year is $(1.08)^{\frac{1}{2}} - 1$
- " " quarter " $(1.08)^{\frac{1}{4}} - 1$
- " " month " $(1.08)^{\frac{1}{12}} - 1$.

Interest is usually payable half-yearly. When we speak of 10 per cent., payable half-yearly, 10 is merely the *nominal* rate, the true rate being 5 per cent. per half-year, or $(1.05)^2 - 1 = .1025$ per unit per year, i.e., 10½ per cent. per year.

In general, if r be merely the nominal rate per unit, and the interest be payable p times during the year, the amount of \$1 in 1 year will be $\left(1 + \frac{r}{p}\right)^p$ and the actual rate per unit per annum

$$\left(1 + \frac{r}{p}\right)^p - 1,$$

- The actual rate per half-year $\left(1 + \frac{r}{p}\right)^{\frac{p}{2}} - 1$
- " " quarter $\left(1 + \frac{r}{p}\right)^{\frac{p}{4}} - 1$
- " " month $\left(1 + \frac{r}{p}\right)^{\frac{p}{12}} - 1$

Examples:—Verify the following, interest being 9 per cent. per annum, payable half yearly:

Nominal Rate of Interest: 9 per cent. per annum payable half-yearly; 8'9008 per cent. per annum payable quarterly; 8'8856 per cent. per annum payable monthly.

Actual rate: 9'2025 per cent. per annum; 4'5 per cent. per half-year; 2'2252 per cent. per quarter; .7868 per cent. per month.

3. Money loaned is frequently repaid at equal intervals of time and in equal instalments. The following proposition determines the amount of such instalments:

Let A represent the money loaned, I the instalment (to be determined), n the number of intervals to which r the rate per unit has reference. Let the instalments be paid p times in the year, or rather in the interval to which r has reference; and let $1 + r = R$. Then A should be equal to the sum of the present values of all the instalments.

Hence

$$A = IR^{-\frac{1}{p}} + IR^{-\frac{2}{p}} + \dots \text{to } np \text{ terms, there being } np \text{ instalments.}$$

$$= IR^{-\frac{1}{p}} \frac{\left(R^{-\frac{1}{p}}\right)^{np} - 1}{R^{-\frac{1}{p}} - 1},$$

$$= I \frac{R^{-n} - 1}{1 - R^{-\frac{1}{p}}},$$

$$\therefore I = A \frac{R^{\frac{1}{p}} - 1}{1 - R^{-n}}$$

Example.—Required the monthly instalments to repay a loan of \$1,000 in 6 years, interest 10 per cent. per annum, payable half-yearly.

Here the interest is 5 per cent. per half year. There are 12 half years, in each of which the instalment is paid 6 times.

$$\therefore I = 1000 \frac{(1.05)^{\frac{1}{2}} - 1}{1 - (1.05)^{-12}}$$

Let $x = (1.05)^{\frac{1}{2}}$, $\log x = \frac{1}{2} \log 1.05 = \frac{1}{2} (.0211893) = .01059465$.

$\therefore x = 1.008165$. Let $y = (1.05)^{-12}$, $\log y = -.2542716 = \bar{1}.7457284$, $\therefore y = .556837$.

$$\therefore I = 1000 \frac{.008165}{.443163} = \frac{8.165}{.443163} = \$18.42+$$

The following table may be verified as an exercise:

Interest 10 per cent. per annum, payable half-yearly. Instalments to repay a loan of \$1,000, in the named number of years payable:

Years.	Yearly.	Half-Yearly.	Quarterly.	Monthly.
2	578.13	282.02	139.29	46.06
3	403.89	197.02	97.31	32.18
4	317.18	154.73	76.42	25.27
5	265.49	129.51	63.97	21.15

The instalments are given exact to the nearest cent above the true value, the table being constructed in the interest of the loan societies.

The above formula will apply to find the sum required annually as a sinking fund to redeem a given debt in a given time, a problem whose solution is frequently required by Municipalities. In this case if the money be compounded half-yearly while the payments are made yearly the formula will be

$$\text{Annual payment} = \text{Amt. of debt} \times \frac{R^2 - 1}{1 - R^{-2n}}$$

Thus, to redeem a debt of \$20,000 in 20 years, interest at 6 per cent., payable half-yearly, we shall require an annual deposit of

$$20,000 \times \frac{(1.03)^2 - 1}{1 - (1.03)^{-40}}$$

4. The formula

$$A = I \frac{R^{-n} - 1}{1 - R^{-\frac{1}{p}}}$$

is to be employed in finding the present value of a mortgage which

is liquidated by equal payments at equal intervals. It would be used by a building society in taking its assets. The mortgage would often have to run for a number of intervals and a broken interval. In such cases the broken interval is at the beginning of the whole time, and we might find the present value for the whole number of intervals next less than the given time; discount this for the broken interval, and add the present value of the instalment payable at the end of the broken interval. Or we might find the present value for the whole number of intervals next greater than the given time, and find the amount of this for an interval less the broken interval.

Thus, if a yearly instalment, I has n years and m months to run, its present value by the former method is expressed by

$$I \frac{1 - R^{-n}}{R - 1} \times R^{-\frac{m}{12}} + IR^{-\frac{m}{12}} \text{ (where } R = 1 + \text{rate per annum per unit);}$$

by the latter:

$$I \frac{1 - R^{-(n+\frac{m}{12})}}{R - 1} \times R^{\frac{1 - m}{12}}$$

and these are identical.

EXAMPLE: Find the present value of a quarterly instalment of \$50 which has 4 years and 4 months to run, interest 10 per cent. per annum, payable half-yearly.

Here one of the instalments is payable in a month; its present value will be $50(1.05)^{-\frac{1}{2}}$. The value of the rest of the instalments at the end of this month will be (there being $8\frac{1}{2}$ of the periods to which 1.05 has reference), $50 \frac{1 - (1.05)^{-8\frac{1}{2}}}{(1.05)^{\frac{1}{2}} - 1}$.

And the present value of this for the month is $\frac{1 - (1.05)^{-8\frac{1}{2}}}{(1.05)^{\frac{1}{2}} - 1} \times (1.05)^{-\frac{1}{2}}$, adding the $50(1.05)^{-\frac{1}{2}}$ to this we obtain the result required.

Our subscribers may work the following examples;

1. An instalment of \$100 is payable at end of every month for three years. Find its present value; interest 8 per cent. per annum, payable half-yearly.
2. A yearly instalment of \$200 has 4 years and 11 months to run. Find its present value; interest 10 per cent. per annum, payable half-yearly.
3. A quarterly instalment of \$250 has 6 years and 5 months to run. Find its present value; interest 10 per cent. per annum, payable half-yearly.
4. Interest 12 per cent. per annum, payable half-yearly. Find what quarterly instalment a building society will require to repay a loan of \$5,000 in 10 years.
5. A municipality has borrowed \$750,000 dollars to be repaid in 20 years. Its total assessment is 50 millions of dollars. Find the annual tax on the dollar that will be required to provide a sinking fund for this loan; interest 6 per cent. per annum, payable half-yearly.

SOLUTIONS OF PROBLEMS IN JUNE NUMBER.

1. "Mac," of Goderich High School, gives the following: Join EC, FD, BG . Let FG, ED cut in O . If we prove triangle $BEG =$ triangle ECG , then will EG be parallel to BC . ED is parallel to FC , and BD to FG . Suppose triangle $BEG =$ triangle ECG , then prove by analysis thus:

$$\begin{aligned} \therefore BEG &= ECG, \\ \text{and } \therefore BEG &= EFG + BFG, \text{ and } ECG = EGD + EDC, \\ \therefore EFG + BFG &= EDC + EGD. \\ \text{And } \therefore BFG &= FGD, \text{ and } EDC = EFD, \\ \therefore EFG + FGD &= EFD + EGD.* \end{aligned}$$

* Why not say $EFG + FGD = EFD + EGD$, + or - according as F and D fall or not between B and E , and C and G , respectively; and is not the proof complete here?

And $\therefore DFG = DOG + DOF$, and $EGD = EOG + OGD$,
 $\therefore EFG + DOG + DOF = EFD + EOG + OGD$;
 take DOG from both sides,
 $\therefore EFG + DOF = EFD + EOG$.

And $\therefore EFG = EOG + EOF$, and $EFD = EOF + OFD$,
 $\therefore EOG + EOF + DOF = EOG + EOF + DOF$.

2. "Mac" also gives following solution of problem 2:

Let $ABCD$ be the quadrilateral. Join DB , and through A draw AE parallel to DB , and meeting CB produced in E . Join DE . Bisect CE in G . Join DG ; it shall be the bisecting line. Triangle $DGC =$ triangle DGE . But DGE is made up of the figure $DFBG$ and triangle FEB ; and $FEB = AFD$ (For $ADB = EBD$, and take FDB from both). $\therefore DGC = AFD$ and figure $DFBG$, i. e. $= DAG$; $\therefore DG$ bisects the quadrilateral.

If G fall between B and E , "Mac" would direct us to draw through C , CE parallel to DB , meeting AB produced in E , to bisect AE in G , and to proceed as before.

3. Solutions of this, slightly differing from one another, were given by "Mac," Messrs. A. B. McDonald, Lochiel; W. Thompson, St. Thomas, and J. Anderson, Mimico.

Let unity represent the gross proceeds of the sale of the lumber. Then $\frac{1}{2} \times \frac{3}{8} =$ agent's first commission; and $\frac{1}{2} \times \frac{2}{3} =$ net proceeds of sale. $\frac{1}{4} \times \frac{1}{2} \times \frac{3}{8} = \frac{1}{2} \times \frac{2}{3} =$ agent's second commission. $\therefore \frac{1}{2} \times \frac{3}{8} + \frac{1}{2} \times \frac{2}{3} =$ agent's total commission $= \$136\frac{1}{2}$, whence unity, or value of lumber $= \$1,352$. Value of salt $= \frac{1}{10} \times \frac{1}{2} \times \frac{3}{8} \times \frac{1.352}{1} = \$1,215.50$.

4. Messrs. W. Thompson, of St. Thomas, and J. Anderson, Mimico, gave solutions.

Let 1 lb. be amount bought. Then $\frac{9}{10}$ is amount left after weighing. $\$1.15 =$ buying price per lb. $\therefore \frac{1}{10} \times \frac{1}{10} =$ cost including duty, carriage, &c. Since he has only $\frac{9}{10}$ as much to sell, he must get $\frac{1}{10}$ as much for it, in order neither to gain nor lose. $\therefore \frac{1}{10} \times \frac{1}{10} \times \frac{1}{9} =$ what he must get to neither gain nor lose. He wishes to gain 25 per cent. on this. $\therefore \frac{1}{10} \times \frac{1}{10} \times \frac{1}{9} \times \frac{100}{25} =$ what would be selling price were it not for 12 per cent. of sales being bad debts. \therefore selling price $= \frac{1}{10} \times \frac{1}{10} \times \frac{1}{9} \times \frac{100}{25} \times \frac{100}{8} = \$2.09 \frac{1}{8} \frac{6}{8}$ Ans.

In the June number of the JOURNAL we admitted as correct a solution by Mr. Hay of problem 5. Mr. Campbell, of Ottawa, the proposer of the problem, draws our attention to a condition that was omitted, viz., that Euc. Bk. VI. B. gives $CD^2 + 6(CD - 11) = AC \cdot CB$. We admit Mr. Campbell's correction—the solution of the problem is impossible.

Mr. Glashan suggests that Mr. Hay, in the solution he offered for problem 3, should have added to "In the above equation we may put $x = a$, then $R = f(a) = 0$," the condition if $Q(x-a) = 0$." We think, however, that Mr. Hay was here merely desirous of recalling to the minds of his readers the usual proposition. Throughout he simply wished to show that, in a particular instance, the theorem might fail, and this was all Mr. Glashan's mode of putting the question called for. Again, Mr. Glashan asserts that Mr. Hay falls into error in saying "we may not assume $x = a$," and that he should have said "we may not assume $f(x)$ is of the form $Q(x-a) + R$ in which R is independent of x ." We think Mr. Hay understood perfectly well what he was saying. Mr. Hay expected his readers to fill in the sentence in some such way as this, "We may not assume $x = a$, and be sure that such assumption will not affect the remainder." A writer must leave something to the intelligence of his readers, and we think he is perfectly safe in doing so if his readers be such as Mr. Glashan.

In reference to problem 1, Mr. Glashan adds to our own reference the following interesting notes:

Euler held that the particle would fall into the centre of attraction and would then stop there.

Laplace and Plana held that the particle would pass through the centre to a distance equal to the original position, and continue thus to oscillate.

Cayley holds that the particle would reach the centre, then move back to its original position, and thus on.

There would seem to be no doubt that Prof. Cayley's is the correct solution of the usual analytical statement of the problem, but is that statement correct? Our text-books accept that statement, but inconsistently give Laplace's result.

PROBLEMS FOR SOLUTION.

1. If h_1, h_2, h_3 , be the heights of the sights of a rifle when set for ranges of r_1, r_2, r_3 , yards respectively, show that
 $r_1 r_2 h_3 (h_1^2 - h_2^2) + r_2 r_3 h_1 (h_2^2 - h_3^2) + r_3 r_1 h_2 (h_3^2 - h_1^2) = 0$.

2. Find x from $x^x = a$.

J. G. GLASHAN.

3. It is required to cut off one-quarter of a circle—

(1) By a straight line.

(2) By taking a centre in circumference, and a circle cutting off one-quarter.

(3) By taking a centre outside of circle.

4. Also give method by which any part of a circle may be cut off in above forms without employing Trigonometry.

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5. If the same values of x, y, z , other than zero, satisfy the 3 equations $ax + by + cz = 0, \frac{x}{a} + \frac{y}{b} + \frac{z}{c} = 0, x + y + z = 0$, show that $a = b = c$.

S. N.

6. Detect the fallacy in the following argument:

"If $f(a) = a(b-c) + b(c-a) + c(a-b), f(b) = 0, \therefore a(b-c) + b(c-a) + c(a-b)$ is divisible by $a-b$; similarly, it is divisible by $b-c$ and $c-a$, and \therefore by $(a-b)(b-c)(c-a)$."

S. N.

R. R. C.—Your communication is held over.

J. W.—Have not had time to look at your problems.

Practical Department.

PENMANSHIP IN PUBLIC SCHOOLS.

IV.

BY W. B. ROBINSON, ONTARIO BUSINESS COLLEGE, BELLEVILLE.

ORGANIZING CLASSES.

The method adopted in large, graded city schools must be entirely different from that of ungraded country schools. In the former, a well-graded series of headline copy books should be adopted and written in regular order of advancement. All pupils in the same room should use the same grade of book, and write the same copy at the same time.

Ungraded schools, where the teacher has under his supervision pupils ranging from the primer classes up to candidates for teachers' certificates, present a problem far more difficult of solution. Such schools may advantageously be divided into three writing classes. Those learning the formation of letters should be put in a class by themselves, and as previously described, required to write on slates at a special time set apart for their lesson. An arithmetic class, or some other that will not require individual attention, may be attended to at the same time.

The rest of the school should be graded in two classes—junior and senior. Pass round slips of paper, dictate a sentence to be written on it, with name of pupil and date. Examine the work,

and place the poorest writers in the junior class and the best in the senior. Select such number of copy-book for each class as is best adapted to the greatest number of pupils in it.

While distributing and collecting books, pens, etc., teaching position, penholding, and practising movement exercises, the two classes may be instructed together; but when the regular copy is taught, each class must, so far as black-board instruction is concerned, be proceeded with separately. The copy for the junior class should be explained on the black-board first, and senior pupils required to give their attention to it and to answer any questions that cannot be answered by the juniors. The junior lesson will thus serve as a review for the senior class. After the junior copy has been fully explained and the class instructed how to practise it, explain the copy to the senior class, and after they have been started at writing, proceed to inspect the work of the juniors, and after pointing out the errors they are running into, give attention to the senior class, and thus proceed, keeping both classes engaged at the same time.

METHOD OF INSTRUCTION.

Good penmanship is the combined result of a cultivated eye to perceive the proper form and relations of letters, a cultivated taste in selecting and arranging them, and a careful training of the hand and muscles of the arm in order to bring them under the direction of the will. No well-devised scheme; no newly invented system; no successful teacher can accomplish this end. It must be done by earnest, well-directed application on the part of the pupil. The way cannot be found by a shorter road than the right one, and the teacher who can simplify the communication of knowledge, point out the many stumbling blocks, remove the obstacles which impede progress, and inspire an interest and enthusiasm in his pupils, does all that the best system can effect.

PREPARATION FOR LESSONS.

The teacher should make special preparation for each lesson. He must himself know what is to be done, and how to do it. The best way to learn this is to take the book the pupils are to use and write the copies over in advance of them, studying the directions and explanations on the cover at the same time. A lively appreciation will thus be obtained of the minute points requiring attention, the best means of overcoming obstacles in the way learned, and the exercise will not only prepare the teacher for his work, but will improve his own penmanship.

When Dr. Arnold, of Rugby, was asked why he always studied at night the lessons already familiar to him, which he was to teach next day, he replied: "Because I prefer that my pupils should drink from a running brook rather than from a stagnant pool."

PRIMARY OBJECT.

The primary object of the teacher should be to train the hand to obey the will, so that whatever form is fixed upon the mind may be readily reproduced by the hand. This training can be accomplished most easily by teaching thoroughly penholding, position and the several movements already described, and then giving such exercises as will lead to their speedy attainment. When an engraver takes an apprentice, he first teaches him how to hold and use the implements of his art. He then trains him till he can use them with some degree of dexterity, so that, when work is given him that requires skill and care, he may not have to think of the manner of holding and using his tools. So it should be in writing; position, movement, and ease should be of first importance. But as the mechanic, though skilful in the use of his tools, must also have a perfect idea of the work that he is to do, so the pupil, though trained to the correct position and movement, must also have a complete knowledge of the letters and forms to be written.

To give the pupil a complete mental conception of the letters to

be written, they should be analyzed, so that he may know exactly what principles are used in their formation—whether lines are straight or curved, whether the curves are slight or intense, whether the lines unite in a turn or at a point, and whether the turns are broad or narrow.

PERSONALS.

Professor Kemp, of Brantford, has been appointed Principal of Ottawa Ladies' College.

Mr. McIntyre, Principal of the High School, Ingersoll, takes Mr. Kemp's place as Principal of Brantford Ladies' College.

Brother Tobias, lately appointed director of the Separate Schools of Toronto, is working energetically to improve the schools in his charge.

Professor Dupuis has been re-elected President of the Frontenac Teachers' Association.

Thos. Kirkland, M.A., Science Master, Toronto Normal School, has gone to the Paris Exposition.

Mr. Gage, of the firm of Adam Miller & Co., Toronto, has presented an annual prize of \$25 to the Whitby Ladies' College.

Inspector Slack has been elected President of the Lanark Teachers' Association.

Mr. D. A. Maxwell has been appointed Public School Inspector in Kent.

Mr. George Somerville and David P. Clapp, B.A. have been appointed Inspectors for the County of Wellington.

Notes and News.

ONTARIO.

Perth Board of Education is opened and closed with prayer. Strathroy has 724 names enrolled on the Public School registers. The average attendance is 606.

There is a strong feeling in Peterborough in favor of separating the High and Public School Boards.

A convention of the R. C. Separate School Teachers of Ontario will be held at Hamilton on the 23rd of July next.

The *Welland Tribune* says that the trustees of the High School of that place are just about commencing a building, which, for architectural beauty and internal accommodation, will have few, if any, superiors in the Province.

Rev. Dr. Cochrane, the President of the Ladies' College, presented its report at the meeting of the Presbyterian Assembly, in Hamilton. Among other things it states that the College, which has been in operation four years, will have graduated at the close of the present session fifty-eight young ladies, who have finished the curriculum and passed the requisite examinations, namely, in 1876, 22; in 1877, 13; in 1878, 23. Many of these graduates are already occupying positions of influence and usefulness in different parts of our land.

Summer Lectures in Experimental Chemistry and Determinative Mineralogy, with Blowpipe Analysis, are given in Victoria University, Cobourg, by Professor Haanel, commencing on the first Wednesday of July, and continuing five weeks. The fee for the Course in Chemistry is thirty dollars, and for that in Mineralogy twenty-five dollars, in addition to charges for minerals used. These Summer Lectures are specially adapted to meet the wants of High School Teachers and others, who are unable to attend during the regular session.

The following statistics concerning the Presbyterian Colleges of the Dominion were presented to the late Assembly in Hamilton:—Dr. Topp presented that of Knox College, Toronto: 180 students; receipts for the year, \$12,402.65; expenditure, \$13,426. Principal Grant presented the report of Queen's College, Kingston: 106 students. Dr. Morice that of the Montreal College: 72 students. And Dr. McGregor that of the Halifax College: 18 students. Prof. Bryce presented the claims of Manitoba College. The number of students was 42; the local receipts had been \$2,005.97, the expenditure \$2,402.36.

The St. Mary's Journal says: "At the last meeting of the County Council a communication from Mr. J. M. Moran, Public School Inspector, South Perth, was read, to the effect that the Minister of Education had expressed his willingness to constitute the St. Mary's Public School a Model School, and grant the usual sum towards its maintenance if the County Council express a desire for such action, and grant a like sum (\$100) in support of such Model School. The matter was referred to the Committee of Education, where no doubt the scheme will be quietly strangled, as the county would rather injure than assist us. We have since learned that the County Council have refused the grant of \$100."

A grand friendly Athletic and Gymnastic contest between Napanee Academy Athletic Sports Association, and a similar society in connection with the Kingston Collegiate Institute, came off on Friday last. Although the afternoon was unfavorable, quite a large number, including several ladies, were in attendance on the Crystal Palace grounds in the afternoon to see the athletic part of the programme. The judges were Messrs. J. L. Morrison, of Kingston, and A. McNeil, of Napanee; time-keepers, Messrs. W. H. Goodwin, of Kingston, and W. Tilley, of Napanee; starter, T. Trimble; referee, Judge Wilkinson. The utmost unanimity prevailed throughout the day, and all expressed themselves satisfied with the proceedings. A very considerable amount of skill, agility, muscular power, and coolness of nerve was manifested in all these exercises, and there is no doubt that such a physical training, admirably adapted as it is to the developing of the muscles and the expansion of the chest, will not only insure increased vitality, but will enable the boys thus trained to bear a longer and severer mental strain than those who have not had much exercise at all. Napanee won 11 out of 14 prizes awarded. At the close of the exercises the Napanee Club entertained their guests from Kingston to supper in the Campbell House. After supper some pleasant speeches were made, and the company separated with the expectation that this was but the first of a series of friendly contests of a similar character.—Express.

The County of Durham Teachers' Association held its first meeting in Port Hope on Friday and Saturday, June 7th and 8th. The attendance of teachers from all parts of the County was good and the interest manifested in the proceedings lively. On Friday the Association was organized by appointing the following officers: A. Purslow, B.A., LL.B., Pres.; W. E. Tilley, M.A., 1st Vice; P. N. Davey, 2nd Vice; Jno. Squar, Sec.; J. R. Wightman, M.A., and Geo. Glass, Advising Committee.

HALDIMAND Co.—Clarke Moses, P. S. Inspector.—During the year 1877 there were 96 teachers employed, of whom 43 were male and 53 female. Their qualifications are as follows:—Provincial certificates, first-class, 6; second-class, 17; third-class, 65; old County Board, first-class, 6; interim, 2. The highest salary paid a male teacher was \$700, the lowest \$300. Average salary of male teacher \$410, of female \$250. Mr. Moses summarizes the advantages of the Township Board System as follows:—1st. Equal taxation. 2nd. Simpler, dispensing with a large number of School officers. 3rd. Secure better teachers. 4th. The position of teacher would be more permanent. 5th. Better school-houses. 6th. More thorough inspection and supervision. 7th. Prevent quarrels about sundry laws. 8th. Equal advantages and privileges to every rate-payer or citizen. 9th. It would allow the child to attend any school he wished, subject to the regulations. 10th. Do away with nepotism. 11th. Secure more reliable statistics.

PRESCOTT Co.—T. O. Steele, P. S. Inspector.—"The past year has been one of very satisfactory educational progress, both as regards an increasing interest in the matter generally, and the special manifestation of that interest in several localities, in providing better school accommodation. The amount expended for 1877 for buildings and sites very far exceeds that of any previous year, being as follows:—L'Original, for Public School, \$5,000; Hawkesbury Village, \$4,400; Vankleek Hill, \$2,350; Alfred, \$600; East Hawkesbury, \$400; L'Original and Longueuil, for High School Building, \$1,500,—making a total expenditure of \$14,250, and an addition of 16 class-rooms, with seating for about 1,000 pupils. Such an increase in the expenditure for school accommodation, considering the 'hard times,' speaks volumes in proof of the strong hold that the cause of education is taking upon the people of this county. There was not much increase in the salaries of teachers in 1877, probably owing to the 'hard times.' The highest salary paid to male teacher was \$600, lowest \$170, average \$282; highest salary paid to female teacher \$250, lowest \$100, average \$160. Teachers:—Male 16, increase 7; female 54, decrease 3. Certifi-

ates:—1st Class Provincial, 1; 2nd Class Provincial, 2; 3rd Class New C. B., 35; 1st Class, O. C. B., 7; 2nd Class O. C. B., 2; Province of Quebec, 4; Interim, 19. Of the 19 Interim certificates, 15 are held by the teachers in the French and mixed schools, thus showing the necessity of some special means for the training of French teachers. Total number of schools supplied with maps during the year, 17; prizes, 12; value of maps and prizes, \$340." Mr. Steele closes his report with the following practical advice to his teachers:—"Teachers,—You are requested to faithfully and diligently discharge your duties; to open school punctually, and to teach all of the prescribed hours, unless otherwise instructed by the trustees; to avoid being absent during the days allotted to teaching; to follow the programme on back of Daily Register as nearly as possible; to be firm and judicious in the management of your pupils—being patient with the dull, showing partiality to none; to avoid tale-bearing and tale-bearers—turning a deaf ear to those who would seek to prejudice you against any of the parents or pupils; and even when injured by the parents, visit not their sins upon their children. Impress upon the minds of your pupils, both by precept and example, the great moral principles of Truth, Honesty and Benevolence. Attend, if possible, all meetings of the Teachers' Association and Teachers' Institutes, and improve your knowledge of educational matters, and better fit you for your duties, by taking and reading some good school journal. You are expected to keep the Daily, General and Class Registers correctly and neatly, and to take proper measures in reference to their safety, and hand them over to the Trustees at the close of your engagement; to fill out the Annual and Semi-annual Reports correctly, so far as lies in your province; to see that as little injury as possible is done to the school-house and furniture by the pupils; to call upon the Trustees for school requisites, and insist upon them being provided, and report non-compliance with your request to Inspector; to see that all the pupils are supplied with school requisites, and to allow no pupil to continue in school without them, always notifying the parents of what their children need. In cases of difficulty and doubt, apply to the Inspector, who will be found always ready to assist you to the full extent of his abilities."

WATERLOO Co.—Thomas Pearce, P. S. Inspector. Pupils.—The total number of children in the County between the ages of 5 and 16 years, was 11,277—decrease, 20. The total number of registered pupils was 10,759—decrease, 250. Of these 5,881 were boys, and 4,878 girls; 10,520 between the ages of 5 and 16 years, and 239 of other ages. Attendance.—During the year the average attendance was 52 per cent. of the number of pupils enrolled, being an increase of 3 per cent. over that of 1876, of 6 per cent. over 1875, and 11 per cent. over 1874. The number of pupils in the First Class at the end of the year was 3,686; in the Second, 2,369; in the Third, 3,621; in the Fourth, 758; in the Fifth, 235; and in the Sixth, 90. Promotions into fourth, fifth and sixth classes are made by the Inspector, in other classes by the teachers. The number of teachers and assistants in the County at the end of the year was 150—males, 83; females, 67. Of the males, 73 were masters and 10 assistants; of the females, 19 were mistresses and 48 assistants. Salaries.—(Rural Sections).—The advance in salaries over 1876 was very slight. The average salary paid to masters was, in North Dumfries, \$473; in Woolwich, \$460; in Waterloo township, \$455; in Wilmot, \$449; and in Wellesley, \$421. The average salary paid to mistresses was \$320. The highest salary paid a master was \$600, the lowest \$320. The highest salary paid a mistress was \$400, the lowest \$191. Qualifications.—The following shows the qualifications of teachers for the last six years:—

	1872.	1873.	1874.	1875.	1876.	1877.
First Class Provincial Certificates.....	10	7	9	4	4	3
Second " " " " " " " " " " " "	26	26	31	35	35	41
First Class County " " " " " " " " " "	20	19	14	15	14	11
Second " " " " " " " " " " " "	5	—	—	—	—	—
Third " " " " " " " " " " " "	58	72	80	80	79	79
Assistants' and Interim " " " " " " " " " "	12	8	4	10	10	12
Religious Order	2	2	2	2	4	4
	133	135	140	146	146	150

LENNOX AND ADDINGTON.—F. Burrows, P. S. Inspector. Total number of Schools in operation, 111; total amount raised for school purposes, \$38,371.19; amount paid teachers, \$26,987.16; paid for building and repairs, \$2,931.15; for libraries and apparatus, \$116.53; for other expenses, \$5,546.04. Total number of teachers employed, 121; of these 35 were males and 86 females. Their qualifications were as follows: first class provincial certificate,

1; second ditto 9; first-class Old Country Board, 9; second ditto, 18; third class, new Board, 66; permits and special certificates, 18; the last mentioned being held chiefly by teachers in the rear townships. Several of those ranked as third class hold intermediate certificates, and have, therefore, the literary qualifications of second class provincial teachers. The highest salary paid a male was \$600, and the lowest \$216. The average salary paid for male teachers was \$378, and for female teachers \$215. Altogether fifty new school houses have been built since I became Inspector. The regulations regarding our school premises have been very generally observed. In the matter of equipment we are tolerably well supplied, there being in almost every school house suitable desks, seats, blackboards, maps, &c. Altogether there are 681 maps (most, y new), 93 globes, 78 sets of object and tablet lessons, and 28 public school libraries containing 2,074 well-selected volumes. In 1871 there was but one public school library in the county, in No. 2, Ernestown (Mill Haven). It is to be regretted that more of our Trustees do not avail themselves of the great facilities provided by the Education Department for supplying the schools with entertaining and instructive books—books that would cultivate a taste for useful reading—and in this way save our youth from the pernicious effects of that vile literature which is far too abundant, and to which access is so readily found.

The public school inspector of the North Riding of Perth submitted his seventh annual report. In 1877 there were 64 school sections in the Riding; no new schools were now required; 67 teachers were employed—47 male and 20 female. The North Riding commenced 1878 with 73 teachers—an increase of 8 over last report. The amount received for public school purposes in 1877 was \$48,000—an increase of \$4,000; payments, \$35,000—an increase of nearly \$4,000. For building new schoolhouses \$7,500 were paid, 5 schools—three brick and two frame—having been erected. For teachers' salaries \$23,500 were disbursed, an increase of \$2,000. The highest salary was \$500. The average of male teachers was \$412; female teachers \$278. 20 teachers held second, and 47 third-class certificates. The number of children attending school was 6,628; increase 83. Average attendance—first half 3,012, increase 68; second half 2,587, increase 147. The accommodation was considerably in excess of the minimum prescribed by law. The promotion examinations were very successful, and had a most beneficial effect on the schools.—*Stratford Beacon*.

The Provincial Model School in Toronto closed on Thursday, June 27th. As usual, the closing exercises were of a very pleasing character, and were attended by a large and intelligent audience. The following is the programme of exercises for the afternoon:—Part I. 1. Song, "Battle of the Nile," School Boys. 2. Recitation, from "Ingoldsby Legends," E. W. R. Madison, 2nd Div. 3. Trio, "The World is full of beauty," Girls of 1st and 2nd Div., Boys of 2nd Div. 4. Recitation, "Trouble your head with your own affairs," Lena Johnson, 2nd Div. 5. Song, "The Poppy," Girls and Boys 4th Div. 6. Recitation, "Barbara Frietchie," G. Crean, 3rd Div. 7. Song, "The Shepherd's Call," 3rd Div. Girls. 8. Recitation, "The American Forest Girl," Jessie Fraser, 1st Div. 9. Song, "Come to the Greenwood," 1st and 2nd Div. Girls; Chorus, school. 10. Recitation, "A wet sheet and a flowing sea," D. Baldwin, 4th Div. Boys. 11. Song, "Drill, Boys, Drill," School Boys. Intermission of ten minutes. Part II.—12. Song, "Onward to Battle," School Boys. 13. Concerted Piece, "Cinderella," Cinderella, Gracie Walker; Prince, Louis Merrick. 14. Song, "Eileen Alanna," O. Stanton, 2nd Div. 15. Recitation, "The Nine Digits," Girls of 4th Div. 16. Trio, "Springtide," Girls of 1st and 2nd Div., Boys of 2nd Div. 17. Recitation, "Edinburgh after Flodden," W. Dickie and W. Hutton, 1st Div. 18. Song, "All Good Night," 1st, 2nd and 3rd Div. Girls. Distribution of prizes. God save the Queen.

QUEBEC.

On the 21st of May the new High Schools were opened in Montreal. Both boys and girls will attend, although they will be taught in distinct class rooms. About 600 persons were present in the large Audience Hall. The building is novel in character. The plan is that of an Amphitheatre. The central semicircle is at the back, forming two large rooms on each of the middle stories, with a large Audience Hall on the third story, the building being three stories high with a basement. These semicircular rooms are lighted from the outside by means of a number of hardwood reflectors, on the principle of the Venetian blinds—the light being all on the backs of the pupils and in the eyes of the Master every time he looks up at his amphitheatrical audience. The remaining rooms

are in the square portion of the building, which is constructed to accommodate 600 pupils. At present the boys' High School has 431 pupils and 16 masters; the girls' High School has 227 pupils and 15 teachers. At the opening the Chair was taken by the Rev. Dr. Jenkins, Chairman of the Protestant Board of School Commissioners. On one side of him was seated His Worship Mayor Beaudry and on the other the Hon. G. Ommet, Superintendent of Education. Representatives of the various educational institutions and of the different Protestant churches were on the platform. The Chairman in his address defended the High School system against the attacks of those who consider High Schools a useless and expensive luxury, of which class there are many among the commercial population of Quebec. This is unfortunate for the Province, since almost the entire wealth and influence of Quebec is commercial. The consequence is that Higher Education in Quebec has to struggle against enormous odds. Many of the wealthiest merchants consider the merest smattering of writing and arithmetic as sufficient educational equipment for their sons. The effect of all this is well pointed out by the writer of a recent article in a British magazine on Canada, viz. "that the men who are most influential on account of their wealth, are totally unfit, on account of their ignorance, to take part in public affairs with any advantage to the country." Dr. Jenkins dwelt on the insignificant cost to the city of their High Schools; while Dr. Dawson pointed out that the High Schools were the connecting link between the Elementary Schools and the University.

The Protestant Committee of the Council of Public Instruction met on the 29th ult. The reports of the various Boards of Examiners were received. No business of moment was transacted. The Committees of the Council, the Roman Catholic Committee even more than the Protestant Committee, are open to the same criticisms as the old Council in Ontario. What is wanted chiefly is an efficient Committee of practical educationists who are acquainted by experience with the wants of the schools.

At the recent school examinations held by McGill College, 62 candidates presented themselves. 47 candidates were passed—27 boys and 20 girls. Twenty-nine received the degree of A.A., (Associate in Arts) and eighteen obtained certificates. Of the number passed eighteen were from Hamilton Collegiate Institute, and one from the Newmarket High School. The remainder were mainly from the schools in Montreal. These school examinations are calculated to do great good. They correspond somewhat to the Ontario Intermediate Examination.

At the closing of the Wesleyan College in Montreal, the Hon. G. Ommet distributed the prizes to the successful competitors. The College has had a most prosperous session. The annual reunion was held the same evening.

In the Quebec High School the Governor-General's silver medal for Classics and Mathematics has been carried off by A. A. Thibaudeau; the bronze medal by W. H. Davidson; the Fry medal for English Language and Literature by H. Bignell.

NOVA SCOTIA.

During the past month of June, the various colleges in this Province have been engaged in celebrating their eucennias, anniversaries, and commencements—in plain English, have closed for the session, and dismissed professors and students to the welcome rest of the long vacation. The celebration at Acadia College, Wolfville, was more interesting than usual on account of the College having attained its fiftieth year; the recent destruction of the buildings by fire, and the efforts made by the Baptist denomination to raise the funds for erecting improved buildings, contributed to mark the occasion as an unusual one. There was a very large gathering of friends and visitors, and the semi-centennial exercises began by a procession of the Governors, the Faculty and the students, from the college to the church. There the proceedings were regularly opened: Rev. Dr. Cramp delivered a most interesting address, in which he sketched the rise and progress of the Baptist denomination in Acadia. Rev. Drs. Crawley and Tupper, and Rev. S. W. DeBlois also addressed the assemblage, speaking with justifiable pride of the work done by the College. The degree of B.A. was conferred upon the following: M. R. Tuttle, B. W. Lockhart, W. O. Wright, R. Bishop, T. Bishop, P. Colwell, and F. A. Faulkner. The Alumni Society held their annual meeting the evening before the closing day, and had their annual dinner immediately after the celebration in the church. They elected Mr. B. Colwell to the Presidency, Rev. G. O. Gates to the Vice-Presidency, and appointed Mr. B. H. Eaton, Secretary. The Alumni oration was delivered by a graduate of the class of '58, Rev. Chas.

Corey. The Governors of the College held a meeting also, and opened the tenders sent in for the erection of the new college buildings; they varied between \$33,000 and \$54,000; finally, the tenders of Messrs. Currie and Rhodes, Amherst, for \$34,500, were accepted, and building operations ordered to be begun at once.

Mount Allison Wesleyan College also closed its session at about the same time, and here the chief point of interest was the leave-taking of Dr. Allison, who resigned the Presidency on finally assuming the duties of Superintendent of Education of this Province. He was presented with more than one flattering address and testimonial. It is evident that the Wesleys are well aware that in losing him they lose one of the best presidents a college ever had. He is succeeded in the presidential chair by Professor J. R. Inch, M.D., Fellow of the University of Halifax, and hitherto Principal of the Mount Allison Ladies' Academy. Under his charge the college is sure to prosper, for he is an able scholar and a first-rate teacher. Professor D. Kennedy, who had charge of the Male Academy, is promoted to the Principalship of the Ladies' Academy, vice President Inch.

The Technological Institute has closed its first session. It was a brief one—only three months long—but a wonderfully successful one. That such a school was desirable most persons acknowledged, but few, if any, had the slightest idea it was really as much wanted as the rush of students proved it to be. The classes were filled as soon as opened, and every course was well attended. The venerable Chief Justice, Sir Wm. Young, who has taken a warm interest in the Institute, presided at the closing meeting. Rev. G. W. Hill, D.C.L., Chancellor of the University of Halifax, Vice-Chancellor Stairs, and several other distinguished gentlemen were present. Professor G. Lawson, Ph.D., LL.D., delivered an address, in which he defined the nature of the work done, and proposed to be done. Dr. H. A. Bayne, Secretary, announced the following as the programme for next session.—*Mathematics*.—Mr. John Jack, of Morris Street School. *Physics*.—J. J. Mackenzie, M.A., Ph.D. *Mechanical Engineering; Geometrical and Mechanical Drawing*.—Mr. Emil Vossnack, C.E. *Drawing*.—Mr. Forshaw Day. *Modern Languages*.—Prof. Leichti. *English*.—Prof. DeMill. *Agricultural Chemistry*.—Prof. Lawson. *Industrial Chemistry*.—H. A. Bayne, M.A., Ph.D. *Zoology*.—John Somers, M.D. *Geology, Paleontology and Mineralogy*.—Rev. D. Honeyman, D.C.L. *Mining and Mining Engineering*.—Mr. Henry Poole, F.G.S., and Mr. John Ruthersford, M.E. *Assaying*.—Edwin Gilpin, M.E., F.G.S. *Civil Engineering and Surveying*.—Mr. E. H. Keating, C.E. *Architecture*.—Mr. Andrew Dewar. The total number of students in attendance last session was 57. Of these 34 attended the Mechanical Drawing class; 18 the Free Hand Drawing; 40 the Agricultural; 10 the Modern Languages, and 2 Mr. Gilpin's class. Chancellor Hill made an eloquent address on the object and aims of the Institute, and referred to its importance in connection with the fisheries, ship-building, mining and agriculture. He expected great benefits to flow from the establishment of the institution and the vigorous prosecution of its work. Dr. Hill's address was an eminently practical one. Short and appropriate speeches were made by Mayor Richey, Rev. Dr. Burns, Dr. Allison, Superintendent of Education, and Vice-Chancellor Stairs, all of whom expressed their warm interest in the Institute, and bespoke for it the hearty encouragement and support of the citizens. They anticipated valuable results to flow from the prosecution of its work. Sir Wm. Young, in closing the meeting, referred to the important place occupied by Technological Institutes in Great Britain, Germany and France, in connection with the development of the natural resources and mechanical industries of those nations, and expressed the belief that the Halifax Technological Institute would in time occupy a similar important position with relation to Nova Scotian industries.

The Senate of the University of Halifax met on the 18th June, and had a short but very satisfactory business meeting. Applications for local examinations were received from Mount Allison Wesleyan College, Sackville, N. B.; Liverpool, N. S., and Montreal, P. Q., all of which were granted. Mr. Michael McKinnon, M.A., of St. Francis Xavier's College, was admitted *ad eundem gradum*, as were the following M.D.'s: Benjamin G. Page, Halifax; Charles W. Hiltz, Chester; and George Law Sinclair, Halifax.

Mr. W. J. Stairs was unanimously re-elected Vice-Chancellor, and Mr. F. C. Sumichrast was also unanimously re-elected Registrar.

The Government have appointed Rev. David Honeyman, D.C.L., F.G.S., to be a Fellow of the University, vice Rev. G. M. Grant, resigned, and Rev. T. A. Higgins, M.A., to be a Fellow, nominated by convocation, in the room of the late Rev. A. S. Hunt, M.A.

The examinations of the City of Halifax Public Schools are to begin on July 1, Dominion Day, and extend over a week. Mr. W. Ackhurst has been appointed to the Board of School Commissioners, vice Mr. John Silver, resigned. As Mr. Silver was also chairman, this office has been filled by the appointment of the Vice-chairman, Mr. J. S. D. Thompson, M.P.P.

Mr. Sumichrast, Registrar of the University, and Rev. T. J. Daly, have been appointed local sub-examiners for the Gilchrist Scholarship examination.

Professors Johnston and Macdonald, of Dalhousie College, have left for Europe to spend the long vacation.

BRITISH COLUMBIA.

The removal of the Principal of the High School in Victoria, by the Board of Education, for alleged intemperate habits and neglect of duty, seems to have given rise to no small amount of newspaper warfare. The Board evidently endeavored to spare the feelings of the party implicated as much as possible, by quietly effecting a change in the management of this important institution; but these good intentions were rendered abortive by the papers taking up the matter *pro et con*. A new Head Master is advertised for—in the meantime the High School pupils take their summer vacation.

Annual Teachers' Examination is to be held in New Westminster, commencing on the 11th inst.

In Manamie a wing of a new school house has just been put under contract, in order to relieve the overcrowded building erected a few years ago, which when completed will accommodate between 600 and 700 children.

Examinations for entrance to High School have been held in all the Public Schools on the mainland, where pupils were far enough advanced to take the work. The results are far in advance of last year, both as to the number passed and the proficiency attained.

The second High School for the Province will be established in New Westminster at the commencement of next term in August.

It is expected that a large majority of teachers will attend the Annual Convention, which is to be held in New Westminster during Examination week, as matters of great importance to teachers and the Public Schools will receive attention.

A new school was opened in May on the delta of the Fraser, and another last month on Denman Island, opposite a newly opened coal mine on Baquass Sound, Vancouver Island.

Readings and Recitations.

SOMEBODY'S MOTHER.

The woman was old and ragged and grey,
And bent with the chill of a winter's day;

The street was wet with a recent snow,
And the woman's feet were aged and slow.

She stood at the crossing and waited long,
Alone, uncared for, amid the throng

Of human beings who passed her by,
Nor heeded the glance of her anxious eye.

Down the street with laughter and shout,
Glad in the freedom of school let out,

Came the boys like a flock of sheep,
Hoiling the snow piled white and deep.

Past the woman so old and grey,
Hastened the children on their way,

Nor offered a helping hand to her,
So meek, so timid, afraid to stir

Lest the carriage wheels or horses' feet
Should crowd her down on the slippery street.

At last came one of the merry troop—
The gayest laddie of all the group;

He paused beside her and whispered low,
"I'll help you cross if you wish to go."

Her aged hand on his strong, young arm
She placed, and so, without hurt or harm,

He guided the trembling feet along,
Proud that his own were firm and strong.

Then back again to his friends he went,
His young heart happy and well content.

"She's somebody's mother, boys, you know,
For all she's old, and poor and slow;

"And I hope some fellow will lend a hand
To help my mother, you understand,

"If ever she's poor and old and grey,
When her own dear boy is far away."

And "somebody's mother" bowed low her head
In her home that night, and the prayer she said

Was: "God, be kind to the noble boy,
Who is somebody's son and pride and joy!"

—Harper's Weekly.

THE BOY'S COMPLAINT

"Oh, never mind! they're only boys,"
'Tis thus the people say,
And they hustle us and jostle us,
And drive us out the way."

They never give us half our rights;
I know that this is so;
Aint I a boy? and can't I see
The way that these things go?

The little girls are potted all,
Called "honey," "dear," and "sweet,"
But boys are cuffed at home and school,
And knocked about the street.

My sister has her rags and dolls
Strown all about the floor,
While old dog Crowler dares not put
His nose inside the door.

And if I go on the porch
In hopes to have a play,
Some one calls out, "Hallo, young chap,
Take that noisy dog away!"

My hoop is used to build a fire,
My ball is thrown aside;
And mother let the baby have
My top, because it cried.

If company should come at night,
The boys can't sit up late;
And if they come to dinner, then
The boys, of course, must wait.

If anything is raw or burned
It falls to us, no doubt;
And if the cake or pudding's short,
We have to go without.

If there are fireworks, we can't get
A place to see at all;
And when the soldiers come along,
We're crowded to the wall.

Whoever wants an errand done,
We always have to scud;
Whoever wants the sidewalk, we
Are crowded in the mud.

'Tis hurry-scurry, here and there,
Without a moment's rest,
And we scarcely get a "Thank you," if
We do our very best.

But never mind, boys—we will be
The grown men by and by;
Then I suppose 'twill be our turn
To snub the smaller boy.

LITTLE FELLOW'S DECLAMATION.

They thought I couldn't make a speech,
I'm such a little tot!
I'll show them whether I can do
A thing or two, or not.

Don't be afraid to fight the Wrong,
Or stand up for the Right,
And when you've nothing else to say,
Be sure you say,—*Good Night!*

—Emily H. Miller.

Teachers' Associations.

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

EASTERN ONTARIO.

The Annual Meeting of the Educational Society of Eastern Ontario will be held at Kingston, July 22, 23, and 24, 1878. Programme: Monday, July 22, 3 p.m., Opening Exercises, reading of Minutes and Reports, 4:30 p.m., President's Inaugural Address—W. R. Riddell, B.A., LL.B., Normal School, Ottawa. Tuesday, July 23, 10 a.m., Secondary Education—A. P. Knight, M.A., Collegiate Institute, Kingston, 2-4 p.m., Schools and Schoolmasters—J. A. MacCabe, M.A., Principal Normal School, Ottawa; 4-6 p.m., Miscellaneous Business; 7:30 p.m., Public Address, Hon. A. Crooks, Minister of Education. Wednesday, July 24, 10 a.m., University Consolidation—D. C. McHenry, M.A., Collegiate Institute, Cobourg, 2-4 p.m., Election of Officers and Selection of Time and Place of next Annual Meeting; 4-6 p.m., The Model School System—F. Burrows, Esq., I.P.S., Lennox and Addington; 7:30 p.m., Public Lecture, "Some Popular Delusions"—W. R. Riddell, B.A., LL.B., Normal School, Ottawa.
W. R. Riddell, President J. McMillan, Cor. Sec.

THE ANNUAL CONVENTION OF THE TEACHERS' ASSOCIATION OF ONTARIO.—The Eighteenth Annual Convention of the Ontario Teachers' Association will be held in the Examination Hall of the Normal School Buildings, Toronto, on Tuesday, the 14th day of August next, at ten o'clock in the forenoon, and continue in session three days.

Tickets of Membership can be procured by communicating with the Secretary. The Annual Fee is fifty cents to those who are members of Branch Associations, and one dollar to others. Ladies engaged in teaching, free. Most of the Railway companies have agreed to grant Return Tickets to Members attending the Convention, for one and a third fare, on the presentation of certificates, at the beginning of the journey. Any Member can obtain a Pass from the Inspector of his District.

The Order of Business will be as under:
10 a.m. Tuesday, Treasurer's Report—Samuel McAllister Esq., 10:30 a.m., Section work, 2:05 p.m., Professional Training of Teachers—Win Macintosh, Esq., P.S.I.; 7:30 p.m., Address by the President—James A. McLellan, M.A., LL.D., H.S.I.; Reception of Delegates, 2 p.m. Wednesday, Non-professional Training of Teachers—George Dickson, B.A., of Hamilton; 3:30 p.m., Biology in Elementary Education—Professor Ramsay Wright, U. Coll.; 7:30 p.m., What Recognition can be given to Religion in our Public Schools?—J.M. Buchan, M.A., H.S.I., Reception of Delegates, 2 p.m. Thursday, Nomination of Officers; 2:15 p.m., The work of the Association, and how best to do it—James Hughes, Esq., P.S.I.; 7:30 p.m., Educational Tendencies of the Age—Dr. Kelly, P.S.I. *Public School Section:* 1. "Representation on Central Committee" J. Suddaby, Principal, Berlin, P.S.; 2. "Model School Work"—D. J. Goggin, Principal, Port Hope P.S.; 3. Subdivision of the Examination work of Public School Teachers W. Rennie, Principal, Newmarket P.S. *High School Section:* (1) University Consolidation; (2) High School Support; (3) The mode of distributing the High School Grant.

ARCHIBALD McMURCHY, Secretary.

Collegiate Institute, Toronto, June, 1878.

PRESBURY.—A very successful meeting of the Teachers' Association of the County of Prescott was held at Hawkesbury on the 7th and 8th of June ult. About fifty teachers were present. The officers elected were, T. O. Steele, I. P. S., President; James Hay, Esq., Vice-President; and Henry Gray, Esq., Secy.-Treas. The subjects in the Public School programme were fully discussed by Messrs. Maxwell, Cron, Shannon, Hay, Gray and Bourns. Able addresses were delivered by Rev. J. Fairlie, Rev. J. O. Routhel, and the President.

DURHAM.—The Teachers' Association for the County of Durham met at Port Hope June 7th and 8th. The subjects discussed on the 7th, were: "Preparation of Lessons by Teachers," introduced by J. J. Tilley, Co. Inspector. "Literature for entrance to High Schools, and for 3rd class Certificates," by D. J. Goggin; and "Algebra," by Dr. McLellan, High School Inspector. These subjects were discussed in the able manner which might be expected from the well-known abilities of the gentlemen named. In the evening a public meeting was held in the Town Hall, the President in the chair, at which addresses on Educational matters were delivered by Dr. McLellan, High School Inspector, and Mr. Brown, Public School Inspector of Peterboro', also some choice readings by Mr. Lewis, of Toronto, Professor of Education. On the 8th, in the forenoon, the time was taken up by a lecture on "Reading" by Prof. Lewis, who delighted the Association for an hour and a half by an exposition and illustration of his eminently rational and practical system of teaching the much neglected but important subject of reading. Wherever Mr. Lewis goes we are sure he will be welcome. Dr. Hamilton of Port Hope delivered a lecture on "Vision." The errors of refraction found among schools he pointed out, as well as the means of detecting and remedying them. In the afternoon Mr. John Brown, of Whitby High School, took the subject of "Drawing to Junior Classes," which he handled in a manner creditable to himself and instructive to the Association. Dr. McLellan then took "Arithmetic," and W. Oliver, B.A., of Bowmanville High School, "Composition," both of which were treated in a way worthy of the importance of the subjects and abilities of the gentlemen who introduced them.

COUNTY OF FRONTENAC AND CITY OF KINGSTON.—The Association met

at the Court House, Kingston, on Thursday, June 13th, at 11 a.m., Prof. Dupuis, Queen's College, President, in the chair; on account of the small attendance, an adjournment took place till the afternoon, at 1:30 p.m.

In the afternoon, the first subject taken up was Spelling and Dictation, introduced by Mr. McIntyre, Principal P. S., Cataraqui. Mr. D. Robb, of Pittsburg, then read a paper on Geometry, advocating a preparatory course before taking up Euclid. Mr. Robb illustrated his paper by means of prepared cardboard diagrams, showing how the principal propositions of the First Book may be proved to ocular demonstration. Dr. Palmer, of the Deaf and Dumb Institute, Belleville, was then introduced, and, after a few remarks, proceeded to give an exhibition with some of his pupils, much to the admiration of those present. A cordial vote of thanks was given to the doctor at the close. Prof. Macoun, of Belleville, then gave a highly interesting address on the Geography of the North-West.

In the evening, Prof. Macoun gave a Public Lecture on "The North-West of our Dominion." The audience, though small, was appreciative, and tendered Prof. Macoun a hearty vote of thanks.

On Friday, the 14th, Mr. Wood, Wellington St. School, Kingston, read a paper on Reading—a subject, as the Essayist remarked, sadly neglected in our Public Schools.

The election of Officers for the ensuing year then took place, resulting as follows: Prof. Dupuis, re-elected President; Dr. Agnew, I. P. S., Vice-President; and Mr. J. W. Henstridge, Secretary-Treasurer. The subject of Penmanship was then introduced by Mr. Henstridge, Portsmouth P. S.; after which, Irregular Attendance was brought up by Mr. Raymore, No. 2, Kingston, and discussed; but no practical remedy was suggested for this crying evil.

In the afternoon, Mr. S. Woods, M.A., Kingston, gave an address on teaching grammar to beginners. Afterwards, Mr. W. offered to answer, to the best of his ability, any question in grammar that might be proposed to him; and, for upwards of an hour, he continued to solve knotty questions in Analysis and Parsing in a manner which showed him to be a perfect master of the science. This exercise was highly appreciated by those present. Prof. Macoun then gave an address on Botany in his best style, and was tendered a vote of thanks at the close.

LANARK.—The Teachers' Institute under the auspices of the County of Lanark Teachers' Association on the 31st May and 1st June was very successful. The Institute met in the Convocation Hall of the High School, about one hundred teachers being present during the greater part of the proceedings. The officers elected for the current year are as follows:—Pres., Mr. H. L. Slack; Vice-Pres., Mr. P. C. McGregor; Secy.-Treas., Mr. Jas. H. Stewart; committee of management, Miss Horsburg, and Messrs. Raine, Orr, Hannah, and Robertson.

Mr. Slack delivered an admirable inaugural address. He urged his teachers to do more than merely cultivate the minds of their pupils. Their *tastes, manners, and morals* should receive constant attention in the schoolroom. He also strongly recommended more attention to *Drill*. Much has been done in this respect by many teachers, but there are yet many schools whose general tone and discipline could be greatly improved by attention to this part of education.

J. M. Buchan, M.A., High School Inspector, gave an address on "The Teaching of English." He showed that through attending too much to minute distinctions there was a danger of overlooking great beauties of construction and sentiment. He pointed out that grammar resembles the physical sciences in regard to two great methods of enquiry—those of experiment and observation. He advised his listeners not to follow too closely the laws of grammar, since they are not arbitrary. He recommended attention to historical grammar, as an important agent in enlarging the student's view of language.

Mr. Raine read a paper on "Hindrances to our Educational Progress." In the evening a platform meeting was held in the Town Hall, when addresses on educational topics were delivered by Messrs. Bigg, I.P.S., Brockville; Buchan, High School Inspector; Glashan I.P.S., Ottawa; and the Rev. J. M. May, I.P.S., Carlton.

On Friday, Mr. Bigg lectured on Elementary Statics, Mr. Glashan gave an address on Teaching Arithmetic to Junior Classes, and Mr. Clarkson, H. M. Model School, Brockville, read an excellent paper on Mathematical Training, and gave a Blackboard Exercise in Algebra.

Mr. Slack spoke favorably of the CANADA SCHOOL JOURNAL, and urgently advised every teacher to become a subscriber, and also to secure a subscription from the trustees.

Publishers' Department.

By an unfortunate oversight on the part of one of our clerks' a list of subscribers kindly sent us by Mr. Johnston, of Lower Woodstock, N.B., was omitted from our books. We have mailed JOURNALS to those on Mr. Johnston's list, and we hope in future they will promptly receive their papers.

Messrs. Slack and Scarlett, the able and energetic Inspectors of

Lanark and Northumberland, have kindly forwarded us copies of circulars addressed by them to the teachers and trustees in their respective counties. The earnest interest in the cause of education indicated by the efforts of these gentlemen to place the SCHOOL JOURNAL in the hands of the teachers and trustees, is worthy of all praise, and we trust will meet with a warm response. With such Inspectors, and with Trustees reading a live educational paper, Lanark and Northumberland will have few hireling teachers. Copies of circulars are here appended:

Cobourg, June 22, 1878.

I am anxious to see the CANADA SCHOOL JOURNAL, published by Adam Miller & Co., in the hands of every teacher; the amount of monthly information on educational subjects contained in it is of great importance to those in charge of schools. I respectfully advise you to become a subscriber. Price one dollar.

E. SCARLETT,

P. S. I., Northumberland.

Perth, July 1st, 1878.

SPECIAL NOTICE.—I wish to call your special attention to the fact that the CANADA SCHOOL JOURNAL has superseded the *Journal of Education*, formerly published by the Department. It is the leading Journal of Education in the Dominion; full of articles on practical teaching, suggestions and useful hints from successful teachers everywhere, making it invaluable and indispensable to all teachers who wish to be successful. Trustees, and others interested in educational matters, find it of great value and interest, as it contains sketches of the leading educationalists in the Dominion, also articles on school progress in all parts. It is decidedly the best journal we have ever had in Ontario. No Trustee, Corporation, or School Teacher should be without it. Subscription \$1.00 per annum.

H. I. SLACK,

I. P. S., Co. Lanark.

A Voice from the West.—MESSRS. ADAM MILLER & CO., Toronto. Gentlemen,—I enclose one dollar in greenbacks as subscription for the CANADA SCHOOL JOURNAL for another year, beginning with Vol. III. No. 1. I presume greenbacks are at par in Toronto as well as in Cal. Your JOURNAL I consider invaluable, and can no more dispense with it than I can with our *Cal. School and Home Journal*.

Yours respectfully,

WM. W. ANDERSON,

Santa Cruz, Cal., June 11th, 1878.

Prin. Public Schools.

—The attention of our readers is directed to the advertisement of *The Toronto School of Medicine*, which appears on the last page of this number. This School is so well known throughout the Dominion that it is unnecessary to do more than call attention to the advertisement, and to the additional facilities and inducements which the enterprise of the Faculty has this year provided.

NEW ENGLAND CONSERVATORY OF MUSIC, BOSTON.—This famous Music School—the largest institution of its kind in the world—gives no less than 125 hours' instruction at the low rate price of \$15. It employs 72 of the best instructors in America, and offers advantages such as no other school can possibly command. It places a thorough musical education within the reach of all.

—The publishers are much gratified to learn that many P. S. Inspectors' at their Teachers' Associations, strongly recommend the JOURNAL to their teachers. Every teacher who wishes to keep up with the times should have it. Inspectors will please accept the thanks of the publishers for their kindness. It will be an additional inducement to them to persevere in their efforts to make the JOURNAL equal to any educational journal issued.

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"The best English writers and the most particular American writers use WORCESTER as their authority."—New York Herald.

"After our recent strike we made the change to WORCESTER as our authority in spelling, chiefly to bring ourselves into conformity with the accepted usage, as well as to gratify the desire of most of our staff, including such gentlemen as Mr. Bayard Taylor, Mr. Geo. W. Smalley, and John R. C. Hassard."—New York Tribune.

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