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The Canada School Journal.

Vol. VI.

TORONTO, AUGUST, 1881.

No. 51.

ROBERT ALEXANDER,
PRESIDENT, ONTARIO TEACHERS' ASSOCIATION.

Mr. Robert Alexander, Principal of the Public Schools of Galt, Ontario, and President of the Ontario Association for the Advancement of Education, whose portrait we are able to present to our readers this month, was born in Glasgow on the last day of 1833; and, with his father's family, he settled in this country in 1848. Part of his early education and part, too, of his educational enthusiasm he received from Prof. McVicar, late of Potsdam Normal School, N. Y. Having, by a born instinct, chosen teaching as his profession, he entered the Toronto Normal School in 1854, and again, after six months' teaching, in 1855. He completed his creditable course there by retiring next spring with a First-class Provincial Certificate. To his diligence and success, both as a student and a teacher, T. J. Robertson and A. McCallum, head masters of the Normal and Model Schools respectively, bore unequivocal and unstinted testimony; and, had not Mr Alexander's trustees in the township of York that year found out his value as a teacher and held him to his conscientious engagement, he would have filled an offered place on the Model School staff before its close.

Of his career as a public school teacher we can only speak briefly. When, on his own motion and will, Mr.

Alexander left St. Thomas for the Normal School, York for Milton, and Milton for Newmarket, the respect, attachment and confidence of the entire communities where he had laboured, though for only limited periods, found expression in resolutions and testimonials, which must have proved highly gratifying, as time has proved them to have been justly deserved.

His course at Newmarket, by no means at first an easy one, alone entitles Mr Alexander to the position he holds in Ontario as a teacher of the first class. Carefully studying and quickly grasping the situation, he formed his plan, wisely, as the sequel proved, to make the Central School second to none in a place in circumstances similar to those of Newmarket. With the

patience begotten of the conscious justice, wisdom and benevolence of that plan, he set himself to work; and with the persistence of his race and the skill of training and experience, his hands grew strong and his difficulties grew weak, till his authority became as unquestioned as it was benign. We believe his road to the supremacy he wielded for fifteen years was opened, not through weak-kneed schemes for pleasing, but feeling that obedience was wholesome sweet and to children, he required obedience. Believing that real work brings real enjoyment, he required real work in reasonable and regular measure. Believing that sympathy and co-operation are the compound key to

young hearts and old, he gave and secured both in sincerity and fulness. In sympathy also with all that helped and elevated character and happiness, his position in the place received, at the end of ten years' service, the very tangible recognition of an elegant gold watch and chain. During the sixteenth and seventeenth years of his stay in Newmarket he filled, with equal efficiency, the position of assistant in the High School, and when chosen to fill the more honourable, more responsible, and more lucrative position of Principal in Galt, nearly seven years ago, he left, universally esteemed and regretted.

In Galt Mr. Alexander has laboured assiduously and successfully in all departments of his work. Chiefly, however, will his reputation there be linked with the inaugura-

tion of a system unique, so far as we know, but destined to solve a formidable and difficult educational problem in Canada.—The Galt Half-time System. Under this, children under nine are confined to the school-room and to close work for only half of each half-day, and during the other half are under the care of a skilful teacher who, in the school-yard, play-hall or singing-gallery, leads them in developing the physical and mental powers in a natural and attractive manner by teaching calisthenics, object lessons, music, games, &c., after the kindergarten methods. We must, however, reserve further information on this subject for some future occasion.

Whilst his honourable career as a public school teacher en-



titles Mr. Alexander to the notice our portrait gives him, it is more particularly due to his efforts in promoting the Association of the Teaching Profession of Ontario, under regular organization for self-improvement and the advancement of educational interests, that we delight to do him honour.

While heartily working in such an organization in North York, and foremost in bearing its burdens, he was essentially the Pioneer of the Provincial Association which, after twenty years of ever widening influence and broadening views, has, at two successive conventions, set him in the President's chair.

The efforts of teachers working alone, without recognition, sympathy, or help from fellow teachers, are but like random shots of advanced guards as compared with the well directed volleys of a united and trained army. The collating of experiences, the defining of duties and privileges, the broadening of views and the division of labour, which the association of any craft can promote, set the members of that association on vantage ground far above the scattered, isolated workers, however well qualified otherwise.

In his faithful labours, his anxious devices, his unflagging zeal for the success of his work and of his profession, by his reading, his intercourse with fellow workers, Mr. Alexander realized the hiatus and at once set to work with indomitable will to bridge the chasm. Assisted in North York by veterans such as Geo. Rose and R. W. Doan, and out of it by such men as the late A. McCallum and W. Watson, the preliminary meeting was held in Toronto, in January, 1861, at which the Teachers' Association of Canada West, was formed. Of the hard labour and discouragements to be encountered at the inauguration of so imperfectly appreciated an organization, no one who has not had the experience can form an adequate idea. For years the up-hill struggle was severe enough, but the men for the occasion were on hand; and, inspired by the good judgment, prudence, courage, and perseverance of Mr. Alexander, the result was hardly doubtful, even during the trying years of the Association's infancy and tutelage. Now that it has reached its majority, all its friends, especially Mr. Alexander, may be congratulated on its robust, well-developed manhood. That it has accomplished much for teachers, and much in the interests of liberal education for the country, no one half acquainted with its past history can for a moment question; even at its inception it gave evidence of latent powers of a high order, and fully have the hopes awakened been realized. At the first convention, a resolution was passed inviting the attention of the Chief Superintendent of Education to the advantages of inter-visitation among teachers, and to the necessity of a central committee of examiners, who should grant certificates of equal duration and value as those given by him to Normal trained teachers. In 1864, a resolution complaining of the evils arising from irregularities connected with the working of County Boards of Examiners, and suggesting their abolition, was carried.

But we cannot further enter into details. Suffice it to say that the history of this Association, now composed of the Public School Teachers, the High School Teachers, and the Inspectors of the Province, runs parallel to, but in advance of the leading reforms and adaptations of the educational system of Ontario during the past twenty years. It has suggested and

vigorously advocated liberal measures, measures often in advance of public opinion, but frequently adopted even sooner than their advocates hoped. It holds a position of influence in the country alike gratifying and surprising, considering the time it has been in existence; so that it commands both respect and admiration through its success and usefulness. Long may Mr. Alexander live to share in the satisfaction its gratifying career begets, as to him very largely this career is due.

—The *Daily Ontario* says:—"The CANADA SCHOOL JOURNAL for June is an excellent number of this most excellent publication. The JOURNAL must be a necessity among teachers. It contains a great deal of information that would interest and instruct the general reader."

SCHOOL SAVINGS' BANKS.

—We have already referred to the fact that in Germany, France, Belgium, and other foreign countries, a systematized arrangement had been made to encourage habits of thrift in the schools, and that the plan had produced good effects in promoting domestic frugality and national financial prudence. The subject has now been made practical in the English schools, and considered of such importance as to cause action to be taken thereon by the Education Department, who have issued a circular of instructions dated July 1st 1881, addressed to school managers and teachers, in which the Lords Commissioners commence by stating:—

"The attention of my lords has been directed to the importance of thrift, and to the exceptional facilities possessed by elementary schools for the encouragement of this practice in early life.

"Experience has shown that many of the evils which weigh most seriously on the industrial classes in this country are the results of improvidence and waste. But some of these evils admit, at least, of partial remedy. To learn how to economise slender resources, how to resist temptation to needless expense, and how to make reasonable provision for future contingencies, is an important part of education. Such knowledge is calculated to protect its possessor from much trouble and humiliation, and to help him greatly in leading an honourable and independent life.

"In mature years, it is often found difficult to acquire this knowledge, and still more difficult to apply it in practice. But in a school much may be done to render its acquisition easy to children, and to show to them the advantages of economy and foresight. Simple lessons on money, on the conditions which affect the rate of wages, on the relations of skill, prudence and knowledge to industrial success, and on right ways of spending and saving, may be made very intelligible and interesting to the young. Economy, however, is a habit; and is to be learned, like other habits, rather by practising it than by listening to demonstrations of its importance. During the school life of a child there arise many temptations to the heedless and wasteful expenditure of small sums; and many occasions on which, if the opportunity were offered, such sums might be usefully and wisely saved. The child who is helped to deny himself some trifling present gratification, who is encouraged to save by degrees a few shillings, and who finds this sum available for the purchase of necessaries, for helping his parents at a time of family misfortune, or ultimately for his own equipment on leaving school for work, has received a practical lesson in forethought and self-restraint which will probably abide with him for life.

"The value of such a lesson is not to be measured solely by its effect on the scholar's own character and welfare. The possession of even a small reserve, or capital, places it in the power of the workman gradually to acquire the ownership of his house or a piece of land, to take a share in an industrial partnership, or to enter on a small business, which, although at the outset it may only employ himself and his family, may, by his economy, industry and skill, become the means of employment to many others, and so contribute

to the general prosperity. Thrift and temperance are very nearly allied; each is helpful to the other; and, having regard to the enormous national waste caused by intemperance, there can be little doubt that if the people of these islands were more temperate and thrifty, our home trade, and the profitable employment of our people therein, would be very greatly increased.

"The well-known thrift of the peasantry and artisans of France had had a large influence in developing the commerce and manufactures of that country, and has also enabled her people to recover, with extraordinary rapidity, from the effects of a great national calamity."

It is thus considered with all the importance of a national matter, and justly so, because the training of the nation is carried on in the schools of the country, and on the effects of the education imparted therein, whether of mind or of habit, will depend the future tone and character of the people who compose the nation.

It may be asked how do the scholars obtain money in sufficient quantity to make it worth while to establish a School Savings' Bank. One source is mentioned in the circular:—

"In some schools, in which it has been the practice to give small money premiums for special proficiency, industry, or good conduct, these prizes have taken the form of a deposit in the savings bank in the scholar's name, so that, on leaving school, he has been presented with a bank book, and a substantial nucleus for future saving. In Art. 19 E. of the Code there is a special provision for the payment of a sum of 40s., or 60s., to the managers of a school in respect of each pupil-teacher who, at the annual examination, passes fairly or well. There is a further direction that this sum shall be divided, in such proportions as the managers may determine, between the pupil-teacher and the master or mistress by whom he has been trained. The sum thus assigned to the pupil-teacher may often, with great advantage, be placed in the savings bank, and reserved until the completion of his apprenticeship, to meet the expenses necessarily attendant on his admission into a training college."

As another source, it is well known that children are frequently supplied with coins by their friends and relatives, which are disposed of too frequently in objectionable ways. Dime novels, chewing-gum, toy pistols and gunpowder, fireworks, crude fruit, cheap candies, *et hoc genus omne*, are the pernicious wares that attract the juveniles of this country; and it is most likely the children of Great Britain are possessed of similar degenerate proclivities.

To our mind the most important idea is that children may be early taught and trained to assist their parents with these savings, and thus be inculcated with one of the noblest motives that could be implanted in the breast of a child. In cases where parents do not need this help, the money might be used to fit out the youth on entering into business, assist a young bride in adding comforts to her home, or be generally available for the proverbial "rainy day."

Now comes the practical part of the arrangement:—

"My Lords have no wish to interfere with any existing plans which are found to work well; but they desire to direct the special attention of school managers and teachers to the facilities which are now offered by the Post Office for the establishment of penny banks in schools. Such banks, when formed, may readily be placed in connection with the local post office savings bank, and persons proposing to establish them should apply to the controller of the Post Office savings bank department, General Post Office, London, when all needful information will at once be given. Small books for the use of the children have been prepared, and are issued gratuitously by the savings bank department, and the necessary rules, which are few and simple, will be found printed in each of these books. Suitable ledgers for keeping the accounts of the school bank in a simple form can also be obtained at a small price. Deposits of small sums should be entered in the scholar's book and

in the school ledger, and as soon as the sum paid by any depositor reaches a sufficient amount, he should be assisted to open a separate account in his own name in the post office savings bank, and he will thus be able, if he wish it, to make his subsequent payments direct to the post office. As, however, no deposit of less than 1s. is received at the post office bank, he may continue to pay into the school bank as before."

It may be thought that the teacher has quite sufficient to attend to in the performance of his scholastic duties, without being hampered with banking work of such a petty nature. True, and "my lords" think so too, for they offer as a suggestion, that

"Two or three managers or friends of a school may act as trustees of the school bank, and may open an account with the nearest post office savings bank. It should be arranged that, on one or two mornings in the week, one of the number should be present to receive deposits, and to conduct the simple business connected with the withdrawal of money or its transfer to the post office bank."

The teacher's countenance, aid and good will are, however, relied on, and we are sure that every teacher who is not a mere "knowledge machine," and who is possessed of the requisite amount of "the milk of human kindness," which teachers, of all others, should possess, will lend their assistance in carrying into effect a project calculated, as this is, to have such a beneficial influence on social science.

—There has been a good deal of discussion on Mr. Blake's speech at the recent Convention of the University of Toronto. The *Mail* charges Mr. Blake with deliberately belittling the denominational colleges, and virtually insulting the denominations; the *Globe* indignantly repels the imputation, affirming that only the ingenuity of political malice could put such an interpretation on his remarks; while the *Christian Guardian*, disclaiming all political bias, declares that some of his remarks may fairly be considered as calculated to injure the denominational colleges in the estimation of those who are not familiar with the quality and quantity of the work actually done in these institutions. It seems to us that the *Mail*, in its eagerness to make capital against an eminent political opponent, has made most of certain inadvertent expressions, and misrepresented Mr. Blake's real attitude towards the denominational colleges. No one who knows anything of Mr. Blake's high sense of justice and thoroughly liberal sentiments, will, for a moment, accuse him of hostility to these institutions. But besides this, Mr. Blake is not an imbecile—he, the leader of a great party, whose aim is to lead that party to a brilliant victory, would hardly pursue the infatuated course of insulting the great Methodist and Presbyterian bodies by an unjust and groundless attack on their cherished institutions. On the other hand we can hardly agree with the *Globe* that none of Mr. Blake's remarks could be fairly thought objectionable by friends of the denominational colleges. We rather agree with the *Guardian*; and, while acquitting Mr. Blake of any intention to belittle the denominational colleges, venture to say that some of his expressions were at once extremely infelicitous and calculated to produce erroneous impressions on the minds of those not conversant with the facts. His statement, for example, that "Victoria College, at Cobourg, would naturally take up a very considerable portion of the youth of that town," is certainly open to criticism.

We may reasonably say of the High school at Cobourg that "it would naturally take up a very considerable portion of the youth of the town," in its work of preparing students for the University. But what does the remark mean when applied to a university that is doing a noble work in higher education and whose students are drawn from every quarter of Ontario, not to say of the Dominion? Mr. Blake says he wished merely to account for the fact that as compared with the western portion of Ontario, the eastern supplied the University of Toronto with comparatively few students. Then the inference plainly is that if "Victoria College at Cobourg" did *not* "take up a very considerable portion of the youth of the town," there would be a much larger attendance of students from the east at the Provincial University. But how a town of 5,000 inhabitants could so materially affect the attendance of the University, the "deponent sayeth not." The assumption speaks volumes for Cobourg; but not much for the rest of eastern Ontario. The fact is that, as a contemporary remarks, Mr. Blake's speech was hardly worthy of his acknowledged ability. He spoke, it would seem, on a subject on which he was not thoroughly conversant; a "brief," we suppose, was put into his hands and he did his best with it. Under the circumstances it was, perhaps, hardly fair that all his little slips of tongue should be

"Observ'd,
Set in a note-book, learned and conn'd by rote,
To cast into his teeth."

—At the recent examination for matriculation in the University of Toronto there were no less than 141 candidates for honours in the various departments. There were 11 candidates for honours in classics only; 26 for honours in mathematics only, and 38 for honours in "moderns." There were 9 candidates for honours in classics and mathematics; 6 for honours in classics and "moderns," and 24 for honours in mathematics and "moderns." There were no fewer than 27 for honours in the *three* departments, classics, mathematics and "moderns." It will be observed that of the 141 candidates for honours, 86 wrote for honours in mathematics, and that of these 86, 33 were candidates for honours in *one* additional department, and 27 were candidates for honours in *two* additional departments. It thus appears that of the 86 candidates for honours in mathematics, *sixty* had prepared the honour-work in at least one additional department. It would seem to be a fair inference from these figures that, notwithstanding the allegations of certain fault-finders, the students of the High School are not over-weighted with a disproportionate amount of mathematics. If it be true, as some have alleged, that the greater part of the student's school life is devoted to the study of mathematics, he plainly must make excellent use of the remaining and smaller part. It is not improbable that the logical discipline resulting from the study of this subject enables the student to master, with greater facility, the honour-work prescribed in any other department.

—In Mr. Blake's now famous convocation speech he expressed a fear that there was a tendency to give mathematics an undue prominence in the high schools of the country. This fear arose, it appears, from the alarming fact that, according to the Report of the

Minister of Education, there are "nearly 100 per cent. of the pupils in these schools studying mathematics, while not more than 50 or 60 per cent. are learning classics." But perhaps Mr. Blake's feeling of regret will be greatly toned down when he learns that every pupil learning arithmetic is classed among those studying "mathematics." We should like Mr. Blake to explain his argument in this connection. Does he regret that so many pupils are learning arithmetic in comparison with the number in Greek and Latin? Would he reverse the order of things, and have 100 per cent. in classics and only 50 or 60 per cent. in arithmetic? In fact this statement and inference afford another example of the fact that Mr. Blake had not thoroughly mastered his brief. He seems to have been furnished with certain conclusions, and left to search for the necessary premises. It must be confessed that he has not been very successful in his search.

—"A little knowledge is a dangerous thing." The *Montreal Daily Star* says that it is not generally known that a dangerous gas is evolved from ice. We admit our ignorance.

—"In the higher classes of our public schools it is thought necessary that a lad who is destined to be a mechanic should be drilled in Latin and Euclid."—*The Toronto Mail*, July 22.

Will *The Mail* have the goodness to substantiate this statement?

—"Ohio is going to have a Medical Commission appointed to enquire into the conditions under which scholars in public schools work. The two points most insisted on by those urging an investigation are the alarming increase of myopia, or defective sight, and the impaired nervous condition of the pupils who have passed through all the stages of public school education. These troubles are not confined to Ohio, but prevail in Ontario. One of the reasons is the attempt to teach too many subjects."—*The Mail*, July 22.

Far more important in this connection than the number of studies is the number of school hours. In nearly every town in the Northern States and Canada hosts of little children are compelled to sit still for five or six hours every school day in a vitiated atmosphere. During the very period of their lives when they should be placed in conditions favourable to the development of healthy bodies they are subjected to the reverse. The evil is not so seriously felt in the country parts, because there the attendance is less regular, and abundant fresh air and exercise counteract the ill effects of long school hours. But we have need of a medical commission to open the eyes of our urban population to the injury that is unintentionally being done in their midst.

—Mr. Sylvanus Phillips, B.A., who for the past two years has filled with integrity, efficiency and zeal, the Mathematical Mastership of Whitby Collegiate Institute, has been appointed to the more onerous and responsible position of Head Master of Elora High School. We sincerely wish him every success and prosperity in his new sphere. Previous to his departure the pupils of the Institute presented him with a handsome and valuable silver ice-pitcher, accompanied with an address, in which the kindest feelings and best wishes were expressed.

—The annual meeting in connection with the Tonic Sol-Fa College, was held on the 30th May, at Exeter Hall; Sir H. Cole, K.C.B., in the chair. From the report which was submitted by the Secretary, it appears that the College, which has been incorporated six years, is now nearly self-sustaining. During the past year 10,936 certificates have been granted, and it is computed that in the winter months 200,000 pupils receive instruction in the Tonic Sol-Fa method. The chairman, in addressing the meeting, said that the Tonic Sol-Fa system was by far the best method for introducing music into the United Kingdom, and he prophesied that it would be used universally in the schools of the country, and that its introduction would be the first step in the national cultivation of music.

—The Corporation of Trinity College, Toronto, appointed a commission to select a provost to succeed the late Rev. G. Whitaker. The field in the Dominion was too limited apparently, and the commission proceeded to the mother-country, where they succeeded in engaging the Rev. C. Body, M.A., a Cambridge man, member of St. John's College, sixth wrangler, Bell's Scholar, and Tyrwhit Hebrew Scholar. Mr. Body's personal qualities are highly spoken of.

—In Galt Collegiate Institute, Mr. Bryant the Principal, takes the mathematical subjects; Mr. Thomas Carscadden, M.A., gold medallist of Toronto University, late Head Master of Richmond Hill High School, and formerly Principal of the Wesleyan Academy, Charlottetown, P. E. I., has been appointed English master. To the classical mastership has been appointed Mr. D. Sieveright Smith, M.A., late Classical Lecturer in Bishops' College, Lennoxville, and formerly of Aberdeen Academy. Mr. Noah Quance, B.A., Scholar and Honour man of the University of Toronto, has been appointed to the Modern Language Mastership. The Institute will now admit girls; they formerly having been excluded.

—Mr. C. A. Barnes, P. S. Inspector of East Lambton, after having passed a very successful examination at Albert University, Belleville, has had the B.A. degree conferred on him. Mr. Barnes has a large inspectoral district to attend to, in which his labours have invariably met with approval; and it tells well for his indefatigable energy, that he has found time to read up for a trying examination, and to pass with honour and credit.

The bulk of the world's writing is done with steel pens. Eastbrooks can be procured from any stationer, and at wholesale from Brown Bros., Toronto.

ONTARIO TEACHERS' ASSOCIATION.

The twenty-first Annual Convention for the Advancement of Education will be held in the Public Hall of the Education Department, Toronto, August 9th, 10th and 11th, 1881.

PROGRAMME.
Tuesday, 9th.

10.45 a.m.—Treasurer's report and general business.
2 p.m.—Report of Committees.

3.30 p.m.—Agricultural Education in Schools. James Mills, M.A., Principal, Agricultural College, Guelph.
8 p.m.—President's Address. Mr. R. Alexandor, Galt.

Wednesday, 10th.

2 p.m.—Industrial Drawing as taught in the Public Schools, Toronto, with an exhibition of drawings made therein. Mr. James L. Hughes, I.P.S., Toronto.

4 p.m.—Physical Education. Mr. A. H. Morrison, Galt.

8 p.m.—The Morbid Results of Physical Overwork. Dr. Joseph Workman, Toronto.

Thursday, 11th.

2 p.m.—Election of Officers.

2.30 p.m.—Religious Education in the Public Schools. Daniel Wilson, LL.D., President, University College.

3.30 p.m.—Uniformity of Text-Books. Mr. S. S. Herner, Strassburg.

8 p.m.—The Relation of the Will to the Intellect in Education. S. P. Robins, LL.D., Montreal.

The sections will meet during the forenoon of each day.

Public School Section.

Over Supply of Teachers. Mr. S. McAllister, Toronto.

Representation at the Provincial Association. Mr. Robert McQueen, Kirkwall.

Model Schools and Model School Work. Mr. James Duncan, Windsor.

Entrance work to High Schools.

High School Section.

First Day.—Discussion of the Report of the Executive Committee on Mr. Crooks' memorandum.

Second Day.—Discussion of the Report of the Committee relative to Collegiate Institutes and High Schools.

Public School Inspectors' Section.

First Day.—How to make Teachers' Associations effective.

Second Day.—A day's work in a Public School.

Extension and endorsement of certificates.

Third Day.—How can we best help teachers in their schools?

ROBERT ALEXANDER, President. ROBERT W. DOAN, Secretary.

Examination Questions.

INTERMEDIATE EXAMINATIONS, JULY, 1881.

ARITHMETIC.

TIME—THREE HOURS.

Examiner.—J. C. GLASHAN.

1. Find the L.C.M. of 545, 26487, 1853, 11421.

One kind of brick is $4\frac{1}{2}$ inches long, and $2\frac{3}{4}$ high; another 5 inches long and $3\frac{1}{2}$ high. What is the size of the least piece of wall, height being same as length, that can be constructed of either kind of brick?

2. Define the numerator and denominator of a fraction, and from your definitions prove that

$$\frac{3}{4} \times 5 = 1\frac{3}{4}, \quad \frac{3}{4} \times \frac{5}{7} = \frac{15}{28}.$$

3. Simplify $\left\{ \frac{\frac{1}{2} \text{ of } 11\frac{1}{2} + \frac{2}{7} \text{ of } 7\frac{7}{8}}{33\frac{3}{4} - 6\frac{1}{2}} + 8\frac{7}{16} \right\} \div \left\{ \frac{\frac{1}{2} \text{ of } 6\frac{3}{4} - 2\frac{1}{8}}{25 + \frac{1}{2} \text{ of } 3\frac{1}{2}} \right\}$

Add together $\frac{3}{4}$ of 1 wk. 2 days. 17 hrs., $\frac{1}{2}$ of 17 hrs. 23 min. 26 secs., and $\frac{1}{4}$ of 2 days.

(Accuracy of result essential in preceding fractions.)

4. Describe briefly the metric system of measures.

If a gallon contain 277 cub. in., and a dekalitre contain 17'6077 pints, express a metre in inches.

5. If A walk 7 hours a day, and B 6 hours a day, and if, under like conditions, B can walk 6 miles while A is walking 5, how many

days will A be walking down hill a distance which B accomplished up hill in 3 days; supposing that a man's rate of walking is increased by one-third in going down hill, and decreased by one fourth in going up.

6. If 1000 men can excavate a square basin whose side is 1600 yds., and which is 30 yds. deep, in 9 months, how many will be required to excavate a square basin whose side is 2000 yds., and which is 40 yds. deep, in twelve months?

7. The hands of a clock move irregularly, the hour hand moving 5 per cent. too fast, and the minute hand 10 per cent. too slow. In 15' (true time) they will be together; how many minutes, measured on the face of the clock, are they apart now?

8. A money lender has \$1500 out at 8 per cent., \$1200 at 7½, and \$1000 at 6; find the percentage he receives on the average.

9. A mortgage for \$1000, paying 7 per cent. per annum, payable yearly, has two years to run; what should a loan society give for the mortgage that it may receive 8 per cent. on its investment, it being assumed that all monies received by the society can be lent out at 8 per cent.?

Values—1, 5+9; 2, 2+6+6; 3, 6+6; 4, 6+8; 5, 10; 6, 7; 7, 10; 8, 7; 9, 12.

ALGEBRA.

TIME—TWO HOURS AND A HALF.

Examiner—ALFRED BAKER, M.A.

1. Factor $x^3 + y^3$; and $x^3 + y^3 + z^3 - 3xyz$.
Utilize your results to show that

(1) $(x+z)^2 + (y-z)^2 - (x+y)(x-y+2z)^2$

(2) $(a^2 - bc)^2 + (b^2 - ca)^2 + (c^2 - ab)^2 - 3(a^2 - bc)(b^2 - ca)(c^2 - ab) = (a^2 + b^2 + c^2 - 3abc)^2$

2. If $a^2 - bc = b^2 - ca$, and a be not equal to b , then $a(b^2 + bc + c^2) + b(c^2 + ca + a^2) + c(a^2 + ab + b^2) = 0$.

3. Show how to find the L.C.M. of two Algebraic expressions. Find the conditions that $x^2 + ax^2 + b$ and $x^3 + cx + d$ may have a L.C.M. of the form $x^4 + px^3 + qx^2 + rx + s$.

4. Simplify $\frac{(x+y)z^2}{(y-z)(z-x)} + \frac{(y+z)x^2}{(z-x)(x-y)} + \frac{(z+x)y^2}{(x-y)(y-z)}$

5. Extract the square root of
(1) $2\left(1 - \frac{b^2 + c^2 - a^2}{2bc}\right)\left(1 - \frac{c^2 + a^2 - b^2}{2ca}\right)\left(1 - \frac{a^2 + b^2 - c^2}{2ab}\right)$.

(2) $x^4 + x^3 + 2x^2 + 3x + 4$.
6. Find the value of x in $(x+a)(b-c) + (x+b)(c-a) + (x+c)(a-b) = 0$.

7. Find an expression for k in terms of a, b, c , that will make $\frac{b^2 - c^2}{k-a} + \frac{c^2 - a^2}{k-b} + \frac{a^2 - b^2}{k-c}$ vanish.

8. If for every \$3.00 of income A has, B has \$2.00; for every \$12.00 A spends, B spends \$1.00; and for every \$4.00 A saves, B saves \$5.00; find the proportion of his income that A saves.

9. Solve the equations
(1) $\frac{x+1}{5} + x(x-1) = (x-1)^2$.
(2) $\frac{1}{x-a} - \frac{1}{x-2a} = \frac{1}{x-3a} - \frac{1}{x-4a}$.
(3) $\frac{2x^3 + 2x^2 + 3x + 1}{x^2 + x + 1} = \frac{x^2 - x + 1}{x-1} + \frac{x^4 - x + 1}{x^3 - 1}$.
(4) $\begin{cases} x^2 + xy + y = 25 \\ x + xy + y^2 = 31 \end{cases}$

Values—1, 1+3+4+7; 2, 6; 3, 6+8; 4, 6; 5, 5+4; 6, 7; 7, 7; 8, 7; 9, 4+7+8+10.

EUCLID.

TIME—TWO HOURS AND A HALF.

Examiner—ALFRED BAKER, M.A.

(All intelligible abbreviations permitted).

1. Show clearly that in Book I. Euclid proves that if the three sides of a triangle be given, or two sides and the contained angle, then the triangle is determinate. (The proofs of the propositions in which this is made out are not required.)

Is there any other case in which Euclid shows that if certain parts be given the triangle is determinate?

2. If two parallel lines be also equal, the lines joining their ends are either parallel and equal or else they bisect one another. State converses of these propositions, and prove one of such converses.

3. If a parallelogram be on the same base with a triangle, and both have the same altitude, the former is double the latter.

4. Show that the square on the hypotenuse of a right-angled triangle is equal to the sum of the squares on the sides.

5. ABCD is a quadrilateral having AD parallel to BC; show that if E be the bisection of AB, the triangle EOD is half the quadrilateral.

Show also that if F be the bisection of AD, and FBC be half the quadrilateral, then the quadrilateral is a parallelogram.

6. ABCD is a quadrilateral having the sides DA, DC respectively greater than BA, BC; prove that if BA, CD meet, when produced, toward A and D, then will DA, CB meet, when produced, towards A and B.

7. Show how to divide a straight line into two parts such that the rectangle contained by the whole line and one part may be equal to the square on the other part.

Show how to produce AB to C, so that the rectangle contained by AC, CB may be equal to the square on AB.

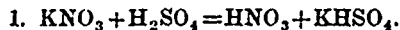
8. Construct a square equal to a given rectangle.

Values.—1, 8+3; 2, 5+5+3+3+6; 3, 6; 4, 9; 5, 9+9; 6, 9; 7, 10+7; 8, 8.

CHEMISTRY.

TIME—ONE HOUR AND A HALF.

Examiner—E. HAANEL, Ph. Dr.



(i.) Give, first, the names of the compounds entering into the reaction represented by above equation, and, second, the names of the elements, with their combining weights, entering into the constitution of these compounds.

(ii.) Represent, by diagram, the necessary apparatus for conducting the experiment indicated by the equation.

(iii.) What effect would H_2SO_4 , HNO_3 and KNO_3 , each have upon a solution of blue litmus?

2. It is required to make 3½ pounds of HNO_3 by experiment.

1. (ii.) How much H_2SO_4 is required?

3. Explain the principle of Davy's safety lamp.

4. It is required to prepare the elements hydrogen and nitrogen for class purposes:

(i.) Describe the apparatus and name the substances needed for the preparation of each of the elements.

(ii.) Write out the equations representing the reactions occurring in their elimination.

(iii.) Describe the experiments you would perform to demonstrate their distinguishing properties.

5. Assign reasons for assuming that charcoal, graphite and diamond are different modifications of the same element.

6. Complete the following equations:
 $CaCO_3 + 2(HCl) =$
 $Na + H_2O =$
 $2(NaCl) + 2(H_2SO_4) + MnO_2 =$
 $P_2O_5 + 3(H_2O) =$

7. Coal gas and phosphorus burn with a luminous sulphur and hydrogen with a non-luminous flame. Account for this difference.

8. A certain quantity of zinc furnished, when treated with sulphuric acid, 3½ pounds of zinc sulphate. How much zinc was employed? $Zn = 65$.

Values—1, 4+8+10+6; 2, 12; 3, 8; 4, 8+5+7; 5, 10; 6, 2+4+2; 7, 10; 8, 12.

NATURAL PHILOSOPHY.

TIME—TWO HOURS AND A HALF.

Examiner—J. C. GLASHAN.

1. Define Force, Weight, Mass.

How are they respectively measured?

Is the weight of a body the same at all points of the earth's surface? How can any difference be detected?

2. Enunciate the Parallelogram of Forces. Show that as the angle between the forces is increased the resultant is diminished. If each force be increased by a force of the same magnitude, how will the direction of the resultant be affected; and how if the forces be increased in the same ratio.

3. A weight of 100 lbs. is carried on a square board, supposed without weight, by four men, one at each corner. Construct for the position of the weight that they may support respectively 10, 20, 30, 40 lbs.

4. The arms of a balance are *a* and *b* inches in length respectively. What fractional part of his goods would a dealer gain or lose, who, in selling 10 lbs., for example, balances the 5 lb. weight first in one pan and then in the other?

5. AB is an inclined plane, AC horizontal, BC vertical, and the angle BAC is 30°. A weight of 12 lbs. is kept at the middle point of AB by a string passing through the plane and attached to C; find the tension of the string and the reaction of the plane. To what points in AC could the string, supposed tenses, be fastened so that equilibrium would be possible?

6. A triangle ABC, whose angles are 30°, 60° and 90°, rests with its hypotenuse AB horizontal, and on the sides CA, CB weights support each other by being attached to a string that passes over C. Find the ratio of the weights. If, the triangle remaining in the same position, the string be horizontal, what is the ratio of the weights?

7. A cylindrical vessel is partly filled with water; examine accurately the cause and nature of the changes in the pressures on the sides and bottom of the vessel and on the table supporting the vessel, owing to a piece of wood being placed in the water.

If a vacuum were in some way created within the fluid, owing to which it rose in the containing vessel, would any change take place in the pressure on the table?

8. What changes would take place in the mercurial column of a barometer, if within a diving bell, as the bell rose or sank? What if in the upper part of a pump, as the water rose in the pipe below? Explain.

9. In the common pump find the resultant pressure on a piston 6 inches in diameter, the water in the pipe below standing 12 feet above the surface of the water in the cistern, and the pressure of the air being 15 lbs. to the square inch. A cubic foot of water weighs 1,000 ounces.

Values.—1, 3+6+4; 2, 4+4+4+3; 3, 13; 4, 13; 5, 16; 6, 16; 7, 13; 8, 8; 9, 13.

ENGLISH GRAMMAR.

TIME—THREE HOURS.

Examiner.—J. M. BUCHAN, M.A.

1. "My own *Enone*,
Beautiful-brow'd *Enone*, my own soul,
Behold this fruit, whose gleaming rind *ingrav'n*
'For the most fair,' would seem to *award it thine*,
As lovelier than whatever *Oread* haunt
The knolls of *Ida*, loveliest in all grace
Of movement and the charm of married brows."
—Tennyson.

- (i). Analyze fully.
 - (ii). Parse the italicized words.
2. Correct the literary form of the following selections:
"This method is rather difficult for young pupils, but by combining this method with the Look and Say method I think it forms a very good method."
"One method is to teach the words in the order they are in the lesson, the fault of this is that the pupils soon learn the words by rote, to say them even without a book."
"Another is to pronounce each word after having spelt it first, the same letter having different sounds in different words confuses the child."

"The method of teaching reading, by first pointing out words and having them pronounced properly, and then the teacher reading the sentence as it should be read, and the pupils read afterwards, trying to imitate the teacher as much as possible, is to be commended."

"In the Look and Say method the word is taught as a whole which is most natural, the words should be printed on the board and pointed out to the child until its picture is familiar to his eye he

will then be able to name the word whenever he sees it."

"We may then show that this may be done by inverting the divisor and then proceed according to multiplication."

"Afterwards question the class individually upon that part that you will be sure they all know."

"First, present one object to the pupils, and ask the name of the object; they will answer an apple (or whatever name the object is) write the word 'apple' on the black-board, and tell them that the word 'apple' stands for only one object."

"By this method children * * * are not confused by the difference of the sound of the letters when pronounced alone and their sound when combined to form a word."

"A transitive verb is a verb that the action passes from the actor to the object."

"Being there was such a number there he was afraid to proceed."

"Sir I have just received word from the Secretary that I failed to pass the examination in Chemistry and that 'I will have to satisfy the Examiners hereafter as to my knowledge of that subject.'"

As you was the Examiner in that subject I would like to know what must I do in order to pass in it.

I have now been to * * * twice attending the Normal there and if it were possible to pass without having to go again I would like it very much.

If you would be kind enough to inform me of what is the best course to pursue I would be greatly obliged."

- 3. (i). Does equation rhyme with relation or occasion?
- (ii). Does rind rhyme with signed or sinned?
- (iii). Distinguish ay and aye as to pronunciation and meaning.
- (iv). Accentuate complaisant, sonorous, peremptory.

4. Distinguish between
Wait on and wait for.
He entered the literary profession and He entered a literary profession.
Inva'lid and invalid.

5. Punctuate the following sentence in two ways:—
John says William is both an able and a good man.

6. Correct, or justify—
The auxiliaries may, can, and must are by some regarded as principal verbs.

Cornaro had become very corpulent previous to the adoption of his temperate habits.

Neither I nor he live anywheres in the neighbourhood.
7. Parse the italicized words in the following sentence:—
"The results which God has connected with actions will inevitably occur, all the created power in the universe to the contrary notwithstanding."—Wayland.

8. The verb agrees with its nominative in number and person. Show how this rule applies in the various cases in which a verb is preceded by two or more nominatives.

9. Write sixteen words derived from the Latin verb *vello*.
Values.—1, 10+42; 2, 48; 3, 2+2+6+3; 4, 12; 5, 2; 6, 12; 7, 9; 8, 16; 9, 16.

ENGLISH LITERATURE.

TIME—TWO HOURS AND A QUARTER.

Examiner.—J. M. BUCHAN.

SIR ROGER DE COVERLEY.

- 1. Sketch the character of the Chaplain.
- 2. "The court was sat before Sir Roger came; but notwithstanding all the justices had taken their places upon the bench, they made room for the old knight at the head of them; who, for his reputation in the country, took occasion to whisper in the judge's ear that he was glad his lordship had met with so much good weather in his circuit."

- (i). What court was this?
 - (ii). Who are meant by 'the justices'?
 - (iii). For his reputation in the country. Explain the force of 'for.'
3. How did the *Spectator* differ from a modern newspaper?

THE LADY OF THE LAKE.

- 4. Give an account of the gathering of the clans, introducing quotations where you can.
- 5. "But hark! what blithe and jolly peal
Makes the Franciscan steeple reel?
And see! upon the crowded street,
In motley groups what masquers meet!"

Banner and pageant, pipe and drum,
And merry morrice-dancers come.
I guess, by all this quaint array,
The burghers hold their sports to-day.
James will be there; he loves such show,
Where the good yeoman bends his bow,
And the tough wrestler foils his foe,
As well as where, in proud career,
The high-born tilter shivers spear."

- (i). Who utters these words?
 - (ii). Write explanatory notes on 'Franciscan,' 'morrice-dancers,' 'James.'
 - (iii). Explain the meaning of 'motley,' 'quaint,' 'yeoman.'
 - (iv). Where was it customary for 'the high-born tilter' to shiver spear?
 - (v). Write notes on peculiarities in the versification of this passage.
6. In what connection do the following passages occur:
- (i). "By artists form'd, who deem'd it shame
And sin to give their work a name."
 - (ii). "Crag, knolls, and mounds confusedly hurl'd,
The fragments of an earlier world."
 - (iii). "Who ever reck'd where, how, or when,
The prowling fox was trapp'd or slain!"
 - (iv). "And the stern joy which warriors feel
In foemen worthy of their steel."
7. Quote the description of the end of the combat between Fitz-James and Roderick, beginning with the lines,
"Like adder darting from his coil,
Like wolf that dashes through the toil."
8. State the principal differences which distinguish the poets of the age of Scott from those of the age of Addison.
Values.—1, 6; 2, 2+2+2; 3, 6; 4, 8; 5, 2+6+6+2+4; 6, 8; 7, 6; 8, 7.

HISTORY.

TIME—TWO HOURS AND A HALF.

Examiner—JOHN WATSON, M.A., LL.D.

1. Describe fully the social condition of the Anglo-Saxons.
2. What were the chief public acts of William I? Give some idea of the Feudal System; describe the way of living of the Normans, and estimate their influence on the English tongue.
3. Explain the causes which gave rise to the Civil War, and sketch the history of England under the Commonwealth.
4. When was the British North American Act passed? Explain its provisions, and state the duties assigned by it to the Dominion and Provincial Legislatures respectively.
5. Give an account of the Second Punic War, and of the struggle of the Plebeians for political rights.
6. What was the Quebec Act of 1774, and how was it received?
Values.—1, 18; 2, 18; 3, 18; 4, 18; 5, 18; 6, 10.

GEOGRAPHY.

TIME—TWO HOURS.

Examiner—S. ARTHUR MARLING, M.A.

1. What are the natural divisions of South America? What the political?
2. State the principal causes which modify the climate of a country, and give examples.
3. How are the frontiers between Austro-Hungary and Turkey, and between Greece and Turkey, marked out?
4. Sketch the Atlantic coast line of the United States, marking the position of the chief capes, and of the inlets with the cities thereon.
5. Show how the latitude of a place is determined, and give the latitude of New York, Toronto, Montreal, Florence, the Cape of Good Hope.
6. Describe (by a diagram if you can, the proposed route of the Canadian Pacific Railway, and show how it connects, through Canadian territory, with the Atlantic seaboard.
7. State the geographical position and the political relation of Candahar, Herat, Natal, Zanzibar, Hong-Kong, Corsica, Alsace.
8. State the form of government, religion and chief products of Egypt, Brazil, Cuba, Bengal, Switzerland and Cyprus.

9. What rivers flow from the St. Gothard Pass in Switzerland, and what are their respective courses?
Values.—1, 9; 2, 9; 3, 9; 4, 16; 5, 13; 6, 11; 7, 13; 8, 13; 9, 7.

BOOK-KEEPING.

TIME—ONE HOUR AND A QUARTER.

Examiner—J. C. GLASHAN.

1. What is the difference between *Single Entry* and *Double Entry*? What are the advantages of *Double Entry*?
2. How are the following accounts opened, conducted and closed:—(a) Stock, (b) Merchandise, (c) Bills Payable, (d) Interest?
3. What is the order of closing the Ledger?
4. On 4th July, 1881, A. B., of Toronto, gave Y. Z. his note for the sum of \$125, payable three months after date. Draw the note so that it may be negotiable *without* endorsement. What change would make it negotiable only on endorsement?
5. Journalize the following:—
(a). I commence business with Cash in the Bank of British North America, \$3000; Mdse., \$8740; a note by A. B., in favour of O. Q. Y., \$400. I also owe M. N. \$97.50 on account.
(b). Bought Mdse., amounting to \$1,300, for which I gave Cash \$125, Cheque on the Bank of Commerce for \$625, my note at 90 days for the balance.
(c). Had L. M.'s note for \$100, due 1st September, discounted at the Bank of Toronto, net proceeds \$98.75.
(d). Accepted F. G.'s draft at 10 days for the amount of their invoice of 10th July, \$1724.85.
(e). Received a draft on the Ontario Bank for \$2,375 net proceeds of legacy left me by C. G. Deposited the amount to my credit.
Values.—1, 16; 2, 20; 3, 8; 4, 12; 5, 24.

COMPOSITION.

TIME—ONE HOUR AND A QUARTER.

Examiner—JOHN WATSON, M.A., LL.D.

(Only One Question to be attempted).

1. Tell the incidents in any one of Sir Walter Scott's novels or poems.
2. Write a life of any distinguished man of letters.
3. Discuss, from your own point of view, the question as to the Protection of Native Industries.
4. Give a summary of Tennyson's *Princess*, or explain the meaning of his *Palace of Art*.

DICTATION.

TIME—THIRTY MINUTES.

Examiner—S. ARTHUR MARLING, M.A.

Note for the Presiding Examiner.—This paper is not to be seen by the candidates. It is to be read to them *three times*—*first*, at the ordinary rate of reading, they simply paying attention, to catch the drift of the passage, *second*, slowly, the candidates writing; *third*, for review.

It was not only by the efficiency of the restraints imposed on the royal prerogative that England was advantageously distinguished from most of the neighbouring countries. A peculiarity equally important was the relation in which the nobility stood here to the commonalty. There was a strong hereditary aristocracy, but it was least insolent and exclusive. It had none of the invidious character of a caste. The dignity of knighthood was not beyond the reach of any man who could, by diligence and thrift, realize a good estate, or who could attract notice by his valour in a battle or a siege. It was no disparagement for the daughter of a duke, nay, of a royal duke, to espouse a distinguished commoner. Thus Sir John Howard married the daughter of Thomas Mowbray, duke of Norfolk. Sir Richard Pole married the Countess of Salisbury, daughter of George, Duke of Clarence. Between good blood and the privileges of peerage there was, fortunately for our country, no necessary connection. Pedigrees as long, and scutcheons as old, were to be found out of the House of Lords as in it. There was therefore, here, no line like that which, in some other countries, divided the patrician from the plebeian.

Contributions.

EDUCATION OF THE PEOPLE

BY FIRMAN M'CLURE, TRURO, N. S.

Within the past century every science has been made to assume a new aspect; inventions and appliances of art have been as numberless as they are striking; almost every portion of the earth has been the theatre of a new and strange activity. But, after all, the most striking feature of this movement—an element pregnant with wide-spread and far-reaching consequences—is the development of the power of the people—the masses, and the revelation of that power to themselves.

In all past ages the chasm that separated between the fortunate few and the toiling masses was so broad and deep that there was little intercommunication or sympathy between them; but the time has now arrived when the masses are recognized as forming a constituent part of humanity—when their rights are acknowledged, their voice heard, and their influence felt. The great natural law of human equality—everywhere recorded in the volume of nature, everywhere revealed in religion, though overlooked and neglected through so many ages, though hunted and persecuted with the fagot and the torch, the rack and the halter of despotism, has at last obtained a voice through which to speak, not only in the ear of despots, but to the wide, wide world itself.

This element of power is now moving among the nations and upon the face of human society as the Spirit of God once moved on the face of the mighty deep. Despotism may enquire how it may be smothered and destroyed, but humanity will enquire how it may be guided, how it may obtain and cleave pure and safe development. Smothered it may not be—you may as well attempt to smother the heaving fires of Vesuvius. It is the upheaving of this mighty element that has convulsed Europe during the past few years, and, if we mistake not, the signs of the times are destined to convulse it more and more, until the establishment of universal freedom.

The only thing that can give tone and elevation, a right direction and useful result to this recognition and exercise of the rights and powers of the mass, is education—wide-spread, universal education. Along with the knowledge of their power must be imparted to the people the equally important knowledge of its proper use. There is no species of despotism so much to be dreaded as that of the multitude, conscious of their strength, but ignorant of its proper use. The French people furnish a striking illustration to this point. The world has no page in its history of so terrific a character, when the very foundations of civil government were swept away and the very framework of the social organization was dissolved, as that which records the conflicts, the sacrifices, and the fearful madness of the people in their first struggles for liberty. It was blind Samson bowing himself on the pillars of the Philistines' temple and bringing ruin and death on all beneath. And even in her more recent struggles behold the upheaving of power, untempered and unguided by light. At one moment, rising in their night, the people wept away every vestige of the throne; they then shout "Long live the Republic," and the next moment rush into the arms of despotism.

As we have said, education should be universal, the endowment of mind—I mean native, pure, bright, hopeful intellect is not a thing to be monopolized. Are the children of the rich, the learned, the powerful any more likely to be favoured with it than those of the virtuous and industrious poor? Is nature partial or even parsimonious in the bestowal of this gift? Nay! go into the by-ways of life, sequestered glen, the rugged steep of the mountain side, where

the poor cottager has erected his hovel, you pity its ragged homeliness, its poverty-stricken plainness, its want of those things which men are disposed to consider indispensable to comfort. But look upon the little flock gathered within that rude fold,—their well-developed, active limbs, their ruddy cheeks, their bright eyes, their sparkling countenances, their merry laugh, their gleesome gambols all tell us that the majesty and beauty of intellect is there—intellect whose waters bubble and gush up from their native fountains in spite of the frozen incrustation about the surface; intellect, perhaps, such as soared in the philosophy of a Newton, the verse of a Milton, or burst forth in the eloquence of a Demosthenes. Who can say that the future history of some in that family may not be interwoven with that of their country. And prouder may that father be of those heaven-endowed sons; prouder may that mother be of those blooming daughters, than of wealth, of place or power in all their efforts to bury stolid imbecility beneath a costly garb or a dashing equipage.

And if God crowns the most oppressed child of poverty with mind and intellect capable of the broadest development and the loftiest conceptions; if God crowns them with such endowments, let man beware how he would check their development or stifle their aspirations.

Defeat and scorn and shame
Be his who strives to blind
The restless, leaping waves of thought,
The free tide of the mind."

We shall hail with gladness the dawning of that day in our country when the highest university shall be free as the common school, and both shall be free as the air we breathe or the water we drink.

But, lest we should be misapprehended, we urge no Utopian system of education that aims at converting the great mass of mankind into philosophers, poets, or statesmen. Till man can satisfy his appetite for food upon the abstractions of logic or grow fat upon mathematics, such a project, were it effected, would only produce famine and want. Education should not only be universal but practical; not unfitting for labour, but fitting to act with intelligence; not to smooth and wither the hand, but give nerve and power to the head, not regarding so much the exterior polish as the mental strength. We would have the people so educated that habits of reading and reflection, and above all of independent thought, will be formed. We would have them educated with direct reference to the manly avocations of life, and the responsibility that will devolve upon them as members of society. By true education we mean the development of the individuality of each person, so that he may recognize himself as disintegrated from the great mass of humanity and possessed of personal responsibilities and of personal aspirations. The want of this individuality is at once the characteristic and the curse of Mohammedan nations of the east. There society is reduced to a dead level—all are alike ignorant. The beggar might as well be the prince, the prince the beggar, as far as any intellectual fitness for their different positions is concerned. It is, indeed, one form of equality that is here exhibited, but it is not an equality that has any necessary connection with liberty. Where this individuality is not developed each person looks upon himself as not belonging to himself, but to the state. A singular and ludicrous instance of this abnegation of self-ownership is the law said still to be in force among some Tartar tribes which punishes most severely any one who dares to pull the tuft of hair upon another man's head, not because it injures the wearer of that precious ornament, but because all tufts belong to the state. This is just such ownership as some men concede to political parties now-a-days—intellect, conscience, nay, the very tufts of hair upon their heads, belong to political demagogues, and they may plait them into any fantastic shape they please without the least murmur of complaint on the part of the poor

sufferers. And why not? The very souls of such men confess a higher allegiance to party than to God, and it is only fitting that party should make them as mean in practice as they have made themselves in principle. Just conceive of a whole nation whose subjects regarded themselves their intellect and passions, their bones and sinews, heads and hands, and the very tufts of hair upon their heads - not as their own, but as the absolute property and under the absolute control of a grand, central despot as ignorant, beastly, and mean as themselves, and you can readily imagine the dead level to which the minds, hearts and energies of such a people must inevitably sink.

What we want among our people; what we want as a nation, and what we must have if we are to become truly great is an expansion of individual life. This is the only sure foundation of liberty. Its absence means ignorance, and ignorance is sure to give rise to tyranny. The hugest tyranny on the face of the earth has its foundation stones imbedded in the ignorance and intellectual imbecility of the people. When Nicholas of Russia ascended the throne of the Czar there was some little commotion among the people and in the army. The cry of "Long live the Constitution" was raised, and the army responded "Hurrah for the Constitution." But, alas, so little did they know of the guardian angel of liberty, the constitution, that they believed themselves to be simply cheering the wife of the Emperor. On another occasion when a popular officer addressed his soldiers and wound up by saying, "My children, let us cry 'Long live the Republic,'" the soldiers, scared at the unknown word, were afraid to repeat it. An old grenadier, however, acting as spokesman for the army, said, "We are willing to cry 'Long live the Republic' since your excellency desires it, but we would like to know first who is to be Czar." "There will be no more czars," replied the officer. "Oh, in that case, your honour, it can't be in Russia."

This great question of the education of the people, and *how* they shall be educated, is one of vast moment to us as a nation. A mighty tide of emigration must soon be expected to set in upon our shores. It will sweep across the broad extent of our territory and dash its spray to the very base of the Rocky Mountains, it will sweep along our rivers and lakes; it will spread out over the glorious expanse of our prairies; it will permeate the fastnesses of our primeval forests; along the line of every railroad and canal, delving in the darkness of every mine; amidst the bustle of every manufactory, and giving form and character to every rising village, it will be, and is already found.

Wide will be the diversity of their character and origin, many of them ignorant, besotted, brutal. They come here to be free men, to live among us, to act and re-act upon society. They come to sway a political influence, to stand at the ballot box and yield in common with us the power that is to determine the destiny of our country.

What is to be the result of all this? The statesman forecasting with deep concern asks, What will be the result upon the institutions of the country? The philanthropist, What will be its influence upon the conditions of the people? What shall the end of all these things be?

This anxiety is not without cause. Let these confluent streams of humanity flow in upon us, and they will be like the streams that flow into the Dead Sea, the pure to become corrupt and the impure to become more vile, till deadly disease and fever are exhaled from the whole surface and impregnate the entire atmosphere. What then? Shall we say to this inflowing tide of human life, 'Hold back thy waves?' Nay 'this we cannot do, and dare not if we could.

Ours is the safest, almost the only safe, asylum for oppressed humanity on the face of the earth. We have sent forth our invitation to the oppressed everywhere to come with us and be free. Our

invitation has imparted new life to those that were well-nigh perished, and on they come, and on they will come; you might as well put forth your hand to stop the avalanche. What, then, is our hope? Our hope as an intelligent and virtuous people, as a free nation whose citizens are not the abject serfs of despotic domination, nor yet the mean foot-balls of political demagogues, is in the universal diffusion of the conservative and saving elements of education and religion. This will mould into one character, our whole people, however wide may be their origin or diverse their character. We have reached a great crisis in our history, and by our present conduct we decide our future destiny.

"The crisis passes on as face to face with us it stands,
With solemn lips of question like the Sphinx on Egypt's sands.
This day we fashion destiny, our web of fate we spin,
This day for all hereafter choose we holiness or sin,
Even now from starry Gerizim, or Ebal's cloudy crown,
We call the dews of blessing or the bolts of cursing down.

"By the future that awaits us, by all the hopes that cast,
Their faint and trembling beams across the blackness of the past;
And by the blessed thought of Him, who for earth's freedom died,
Oh, my people! Oh, my brothers! let us choose the righteous side.

So shall the northern pioneer go joyful on his way,
To wed Columbia's waters, to calm Chebucto bay.
To make the rugged places smooth, to sow the vales with grain,
And bar with liberty and love, the Bible in his train,
The mighty West shall bless the East, and sea shall answer sea,
And mountain unto mountain call.

PRAYSE GOD, FOR WE ARE FREE!"

Selections.

CORPORAL PUNISHMENT.

Thomas Hunter, now President of the Normal College, when Principal of No. 35, wrote: "In my succession to the Principalship of No. 35, I inherited the rod precisely the same as a king inherits his father's sceptre. I wielded my baton of power for years, without a thought that there was anything improper in it, until one day I whipped two boys whom I discovered, five minutes afterwards, to have been innocent. No words can paint the grief and vexation I felt. I asked the boys to inflict the same amount of punishment on me; but they refused. I then told them I would remit the punishment the next time they deserved it. But still the idea haunted me that I had done the boys great wrong. It was little use my saying I meant it for their good; I thought I was right at the time, etc. I kept repeating—a blow inflicted cannot be recalled. If I had given ten, twenty, fifty demerits, I could have remedied the injustice or mistake in a moment. Well, this made me so cautious that sometimes for a whole month I would not use the rod at all. The subordinate teachers found me so particular in investigating and demanding the most direct demonstration of guilt that many of them ceased to report for punishment. They were thus thrown on their own resources. I observed these classes; I examined them, and discovered that they were the best classes in school. In short, I came to measure the success or non-success of a teacher by the amount of corporal punishment inflicted. The best teachers had none; the worst had the most. At last the rod was limited to the sustaining of new teachers. So that I shall oppose the appointment of those who cannot succeed without the rod. Fifty immortal beings must not be brutalized to make one teacher succeed as a disciplinarian. My school averaged \$76 for the past year. It had a daily attendance of 1,000 boys. The classes contained youths from fourteen to twenty-one years of age. The order and effectiveness of the school were much superior to the same when corporal punishment was used. But, above all, the "esprit du corps" was infinitely higher. I might go on and expatiate upon this subject *con amore*; but it will suffice

to state that I could not be paid to take charge of a school in which I was obliged to use the rod. It is a relic of *medieval barbarism*, when study was a penance, and a student an ascetic. It has been abolished in the army and navy. It must be ultimately abolished in schools. * * Since the abolition of corporal punishment, which was purely voluntary on my part, the attendance has increased and the grade of scholarship advanced; *the moral standard of the pupils* has become higher, and the views of the teachers more liberal and advanced. By removing the rod, fear, the father of falsehood, disappears, and a nobler and manlier spirit is created throughout the whole school. A sense of honour is cultivated among the pupils; and the teachers, thrown upon their own resources, quickly acquire the tact and discretion, the judgment and self-command, necessary to enable them to govern with ease and effect. Thus, instead of ruling as the Russians do in Poland, by sheer force of terror, the scholars are instructed to govern themselves; and order, instead of proceeding from the teacher, flows in pure and healthy currents from within their own minds. *I am amazed upon reflection, that I ever degraded my pupils, myself and my calling, by raising my arm to strike a child into whose nostrils God had breathed the breath of life; in whose mind and heart he had planted faculties and feelings susceptible to the slightest touch of kindness.* Every blow inflicted was a public impeachment of my fitness for the position to which I had been called. Experience teaches that even the lowest of humanity are not utterly depraved, and that the better and holier feelings of human nature, particularly in the young, are not dead, but dormant. The rod kills; kindness awakens corresponding feelings; and what duty in life can be more exalted than to take charge of these poor, ignorant, neglected waifs of society, and teach them the difference between right and wrong, to love the one and to hate the other? It is impossible to whip them into a sense of duty. They must be kindly led into the beautiful paths of righteousness. The mean and the cowardly may appear reformed while the rod is suspended in *terrorem*, over them; but remove it—and it must be removed sooner or later—and behold the liars, the cheats, the swindlers, and the pests of society! But nine out of ten boys are neither mean nor cowardly; they are high-spirited and courageous; and whipping for acts merely mischievous, for failure to recite correctly, or to maintain discipline, is ruinous in the extreme, arousing evil passions and all that is desperate and wicked in human nature. One simple act influenced me more than all else to abandon corporal punishment, namely, able and experienced teachers never required the aid of the rod, while inefficient and apprentice teachers could not maintain good discipline without it. Why, I have often asked myself, punish boys for the shortcomings of their instructors? Is it right? Is it just? Certainly not, was the inevitable reply. Many a time I felt that the teacher was more to blame than the scholar. The substitution of a moral suasion for corporal punishment has produced even better results upon the children of the poor and ignorant than upon the children of the rich and educated; for the contrast between the kicking and cuffing at home, and the gentle kindness and uniform discipline at school, exerts the most beneficial influence upon their minds and hearts. His father beats him in anger, and the child sees and remembers it; for a similar offence, his teacher, firmly, kindly and gently reproves him, appealing to his reason and his feelings. Does the boy not realize the difference? He would be lower in the scale of animals than a dog or a horse if he did not. The very fact that all these physical punishments at home have failed to make good boys, but on the contrary have made them so bad that teachers are obliged to resort to similar means to keep them in subordination in school, destroys the argument in favour of corporal punishment most completely. They have been whipped by their parents, and they are bad; therefore we must whip them at school to make them good. A most lame and impotent conclusion."—*Teachers' Institute.*

THE HUMAN BRAIN AND MIND.

The brain has evidently been a great mystery to the physiological world. Some assert that it is the dwelling place of the mind, the earthly home of the spirit, the busy house of the inventive soul, from which all science and art emanate; the classic hall from which all poetry, dramas and fictions leave the mind of the writer, and are presented to the world as specimens and proof of the delicacy and power of the human mind. But we arrive at the question which many ask, "What is the real use of the brain?" It is said to use one-fifth the blood of the human system, and to take to itself one-fifth the nourishment of the body. Then, surely, it must have some office to fulfil. What, then, is it? Can we deny that it is for the use of mind? Surely this has been proven to us. Yet, should we ask *how* mind acts upon the brain, echo would be our only answer, for the wise proverb of old Solomon "Know thyself," has never been fulfilled. Man may study the laws of machinery; may count, calculate and name with respect to the distant orbs that send to us their feeble, because far-away, light. He may go into the bosom of the earth in geological research, read ages by her fossils and rocks, trace rivers to their distant sources, classify animals and plants, yet say to him, "Know thyself," and his own mind will pause, appalled at the knowledge of how little he knows, and he realizes that there is a mystery connected with the working of the human brain, which the mind of man has never penetrated. Of all the subjects of philosophy, that which pertains to the mind of man is undoubtedly the most interesting and important. Every discovery, therefore, in this imperfectly explored region—every fresh ray of light cast upon this clouded tract—should be hailed with joy by every votary of science and every friend of man.

Phrenologists tell us that the whole brain does not have to move for each faculty—they each have their own and permanent seat in the brain. Here we find that if one part of the brain is deficient, is small, we can put it to use, and by constant application it will increase in size and strength. It may really acquire the strength and activity of other portions of the brain. How careful we should be to self-examine and learn our weaker organs, and by this means be enabled to discover "the discordant notes in the mental anthem which we are every day chanting, and the key instruments of our souls in perfect harmony."

These different faculties of the mind and their cultivation is what brings to us the different geniuses of our race—the poet, painter, sculptor, orator, novelist or statesmen. There is a faculty in the mind of the poet which causes him to look out upon a different world from that which the practical man views. "There is the sublime poetry of his mind—those splendid flights and burning feelings, the wildest, loftiest, the grandest views, the lightning thoughts that wrap in a blaze of glory the canopy of his soul." He listens to the music of his own nature, as it takes the form of the ocean's surging waves against the mighty breakers, from the gentle sighing of the summer breeze to the fierce howling of the midnight storm, from the golden sunset to the lowering tempest, from the mellow twilight to the lightning glare, from the rupture of love to the torture of hate—his mind grasps all these as it soars afar on the wings of poetical fancy. In studying the mind we feel that we are in the sanctuary of the soul, that we sit in meditation in the room where all freaks of fancy are portrayed, where passion writes its burning words, where anger thunders its threats, where love whispers its silvery notes; from whence arise all ardent aspirations and lofty thoughts—in fact, the home of genius. Ah the restless brain! Were it not for its startling power where now would be our travelling facilities, darting from one commercial centre to another; where the ponderous steamship that hurries over the vast deep, and the message that flashes along the wire? They are all the result of

the most intense brain labour. Every discovery in science emanates from labour of the mind. Whence comes our knowledge of the vast number of distant worlds and planetary systems that roll in universal harmony? Are we not forever indebted to the master mind of Pythagoras, Copernicus and Galileo; also, to Kepler, who, in his own day, won the title of "the legislator of the heavens?" With what sublime contempt must the mind of Galileo have received his sentence as a "dangerous heretic," deserving punishment because he taught the Copernican system, and demonstrated that the earth revolves around the sun! Centuries have rolled up their rich floods of discovery to aid in rearing to its present growth the science of astronomy. Every specimen of classic literature is the result of brain labour. View Goldsmith's "Traveller." Ten years elapsed before its completion. Tennyson wrote "Come into the Garden, Maud," fifty times before it pleased him. The beginning of Plato's "Republic," it is said, was found in an old tablet, written all over in a variety of ways, showing what brain labour had wrought.

We turn no way but what we meet with some evidence of the powerful, restless human mind, the constant work and just success of an energetic brain. Tupper says: "The mind is not like merchandise, which decrease in the using," and so we agree. Using the mind only increases it, and, by following its best inclinations, we are lifted above the grosser part of our nature. Mind has by some been styled the breath of God. It is that part of us which touches nearest divinity. It knows no idle vacuity. At night, after the weariness of the day, the body sleeps and is refreshed, but the mental vision is awake, restless and reasoning, even in dreams.

Do we not, in reading Dante, Milton, Plutarch and Byron find, like we find a fossil imbedded in a rock, the mind that penned the lines? Truly, it is embalmed in their writings. Even so do the symbolized thoughts tell of a departed soul. How we look back at the winding vista of the past, and see some whose names are rendered immortal by the stars of mind which once glittered upon their brows with unearthly lustre. Old Homer still brings to our mental vision the Trojan war, where it can rage at our bidding in narrowest walls, and we seem to see the marvellous beauty of "The fair Helen of Troy."

Yes, we are indebted to those who have gone before us—those who have toiled, many of them in penury and sorrow, while their minds soared above the wants of clay, and gleaned for us treasures of knowledge. But there is yet work for desiring minds; there are fields unexplored, worlds undiscovered. There are honours not yet won, and laurel wreaths waiting in unseen hands to crown the one whose mind will conquer all obstacles, and whose new ideas will flow from new springs to enrich the treasury of knowledge.—*Texas Educational Journal*.

SCHOOL MUSEUMS.

It seems singular, indeed, that not more teachers in public schools have the idea that they, as well as their colleagues in higher institutions, may also have a museum of natural history for their schools. Might we not find in each public school a collection of various kinds of wood, tree-barks, seeds, seed-pods, fruits that can be preserved dry, interesting pieces of stone, coal, broken up pebbles, lime (burned and unburned), pieces of iron (bent, broken and twisted to show the construction), joints from the necks of domestic birds, or the vertebra of a pig, sheep, &c., skulls and skeletons of small animals, fishes and reptiles, shells of snails and river slugs, and similar things which can be obtained without any cost, with only a little good will.

Ferns are not to be found in every locality, but it would be easy to obtain some and preserve them in the school museum.

Farther, should it be so difficult to obtain a good picture of a lion, a camel, a palm or any other foreign produce of nature. Foreign products are not so difficult to obtain, at least not those which

come into consideration in the public school. We may only think of the various spices. Every grocer is willing to let you have a few coffee-pods in which both beans are yet united, whenever he finds some in his coffee.

With a good will on the part of the teacher, much can be done, and if the pupil sees a diligent use of the school museum, and the instruction made interesting thereby, then the interest of the pupil will soon show itself by an eager collection of specimens. The teacher soon will have a plentiful supply for the museum, so that he can select that which is worth preserving, replace what has been spoiled by new objects, less characteristic by better ones.

Thus the pupils will learn to see and to observe. They will see in open nature things which the school does not tell them, they will ask for information, and if to this is added, animated by the teacher, a meaning and comparison of the objects found, then the practical demands of life are materially furthered.

An occupation with nature as indicated will also help to develop some manual skill and dexterity, which will be a benefit to the scholar in after life, especially to the mechanic and farmer.

Above I have already indicated the scope of such a collection. In the first place, a scrap-book may be obtained, in which to preserve pictures of animals, plants and noted scenery. This collection may consist of lithographs, wood cuts clipped from illustrated newspapers, and photographs neatly pasted to the leaves. The scrap-book may be either bought cheaply or made of light Manila paper.

In connection with this I may say that stereoscopes and stereoscopic views may be cheaply bought. Geographical instructions may be enlivened and made interesting by views of noted places and interesting scenes. Objects of natural history can be obtained nearly without any expense. Perhaps the only expense which may be incurred, but not necessarily, are a few simple instruments for collection, which can be mostly home-made, and for a little alcohol. For collecting geological specimens, all that is needed is a riveting hammer and cold chisel, or a small stone-hammer with a cutting edge, such as stonemasons use, which can be obtained anywhere. A cold chisel is easily made from an old heavy flat file, which any blacksmith can sharpen and temper. Excavations, quarries and mines should be examined for rocks, earths and fossils. Ask the workmen to look for such things as are desirable, and which look queer to them. A kind word to the workmen will do wonders in assisting the collector.

For pebbles and fossils search also the banks of streams; very interesting specimens are found here. In cutting fossils from rocks care must be taken not to injure them. Rocks should be cut as much as possible in square pieces of about six inches thick. A little practice will soon help. The botanical collection may contain the plants of the neighbourhood, at least the rarer smaller plants, especially those poisonous specimens of wood and bark; leaves, blossoms and fruits of trees; of the latter, those which can be preserved in a dry state, lichens, mosses, ferns, etc. Smaller plants are to be taken up with the roots, and, if possible, with flowers and seeds. Of larger ones, branches with some leaves near the roots will suffice. The specimens should be placed between soft unsized paper; the poorest printing paper or grocers' tea-paper is excellent.

They should be dried as rapidly as possible, between as much paper as will absorb their moisture, then laid under a board weighted by some heavy bodies, as stones; the pressure should be so as not to crush the delicate part.

To prevent moulding, the paper should be changed often. After drying, place the plants in a herbarium, fasten the specimens by means of small gummed paper slips to the sheet, and write in the lower right hand corner, or on a label pasted on the sheet, the generic and specific, and common English name, locality where found, date of collections and colour of flower, with other remarks. If the name of the plant is unknown mark it by a number or some other sign till the name can be ascertained, then place it in stiff covers which are to contain all the plants of the genus.

Leaves of trees are to be preserved in the same manner.

Dry fruits may be kept in small tin or pasteboard boxes or trays. Specimens of wood may be cut in blocks of about four by four inches high, the bark to be left on, and one side to be smoothed with a plane, the other sides left as they are split out. All the implements necessary for collecting plants is a strong knife to take up plants and to cut away wooden branches. Lichens do not need any preparation.—ED. A. KILLIAN in *American Journal of Education*.

HEALTH THROUGH EDUCATION.

BENJAMIN WARD RICHARDSON.

Address delivered at the Conference on Education, held in the Rooms of the Society of Arts, January 15, 1880.

In this address I propose to consider the question of "Health through Education," that is to say, the study of those methods of education by which the mind, during the whole period of its work, may be maintained in a healthy and properly balanced condition, its powers usefully employed, and its natural tendencies allowed full and natural scope and development.

Up to the present time the progress of science for the promotion of health has had reference, almost exclusively, to the physical health in education, to the state of the school-room, to the diet of the scholar, to the clothing, to the training and exercise of the body, to the position of the scholar at the desk, and to such-like purely physical considerations. These considerations can scarcely be over-estimated. I have had the happiness to associate with the most earnest and energetic of the sanitary leaders who, in our generation, have striven to force them on the attention of a public not always too willing to listen to them, and I regret that I should have to put them somewhat aside for the present hour. But I feel there is another subject even of more pressing moment, and therefore I turn to it. The purely physical study has made its way to some extent: the subject I have now before me has made, practically, no way at all, although its importance can hardly be exaggerated.

Men engaged steadily and systematically in taking different views of the same object are led to see differently and to express themselves differently. I cannot, therefore, conceal that I approach the argument I would set forth with a perfect knowledge of the fact that I must speak what is, or what may seem to be, contrary to the opinions which are entertained by many who are deeply interested in the work of education, and who, in most respects, are masters or mistresses of the argument on its practical, scholastic side. Those who are engaged in the actual labour of teaching from day to day may entertain views very different in kind from mine. Those who are anxious and over-anxious for the education of their children may entertain views of a very different character from mine, and may, indeed, be far more likely than the teachers of their children to differ from me. The teachers will, I think, in their hearts, be in most respects with me altogether.

When I say that the physical side of the health question is not a part of my present programme, I do not quite state the whole truth, for the physical side of the question is, in one direction, admitted in it. There is always in progress a reaction of the mind on the body which, when it is clearly understood, is seen to be momentous in its results. The amount of physical disease that is dependent on mental influence is large beyond any accepted present conception of it. I am almost afraid to express what I know on this point, lest I should appear to be putting forward what is speculative instead of what is real. And yet I may venture to say that a good fourth of the deaths of adults who die in their prime from what are called natural diseases are due to diseased conditions of body that have been induced by mental influences. The actual and immediate cause of the demise, the killing blow, may be outside the body, may be independent of the body, may be very subtle and seemingly very slight, may admit of no correct scientific exposition at this present stage of science, may be some unknown or obscure meteorological influence; and yet the conditions leading up to the point when slight causes take effect may all the while have been in steady progress, and may all the while have been mental—mental from the first in the persons affected. Thus men in the prime of life often die suddenly from some slight external influence of a physical nature which has acted upon them fatally, and which gets the whole of the blame; but the conditions of the body which have rendered that external influence effective have been long in operation; have been, in the strictest form of expression, mental influences modifying the physical structures, and making those structures susceptible of destructive change from slight external shocks or vibrations. Thus, again, hereditary tendencies, originally formed from mental action, are often transmitted in the character of hereditary physical disease, under which, from some slight external influence, death may occur.

Impressions traversing the senses into the organ of the mind afford the most striking illustrations of physical derangements and of degenerations from mental action in which the mental and the physical most intimately blend. They give rise, in fact, to a term which is as distinctly physical as any that would describe a mechani-

cal concussion or blow—the term, most correct in its application, of "mental shock;" a shock or blow received by the body through the mind, and producing physical action in the body; a transmutation of an unknown force—which we have only named, so far, by metaphysical names, such as fear, anger, hate, love—into a strictly physical force and a resultant effect; a vibration through the senses, yet not of mere sound, not of mere light, but of something more of which sound or sight are but the modes of conveyance, modes of conveyance into the nervous atmosphere or ether, to be changed there into some new state of motion or into a new physical condition that is inimical to continuance of life.

Let me explain by one example.

A little boy was once brought to me by a medical friend under the following painful circumstances. The boy was the son of a carpenter, and his father sent him occasionally to a neighbouring timber-yard to give orders for wood. The keeper of the timber-yard, a modified type of Mr. Quilp, had a morbid delight in frightening children. He had bought a large ugly and savage dog, and he tied the dog closely up in a recess in the passage leading to the timber-yard. The little boy I speak of, knowing nothing of this new and terrible importation, was proceeding, as usual, down to the yard, when the dog flew at him. The dog could not reach the boy, but the little fellow was so affrighted that he stood motionless for two or three minutes, and at last fell to the earth. He was picked up by some kind passer-by and taken home, and from that moment was stricken by the fatal disease called diabetes, of which in time he died. In this instance there was the direct physico-mental shock followed by physical change, in line. There was the metaphysical vibration of fear transmitted by sight and sound into the body; there was the nervous storm engendered in the body; there was the resultant in a modification of chemical action, by which, in continuous new conditions, a part of the food taken into the body was changed into glucose or grape-sugar; and, on the formation of this sugar in excess, there followed a new series of other organic changes, ending in destruction of the unity of functions which makes up what we call life. I need scarcely say that the illustration above supplied is one in which a mental impression, made through the mind upon the body, was exceptionally severe in its physical effects. But such severe effects have to be seen before the great and primary truths they teach can be recognised.

I was myself many years in practice as a physician before I fully recognised these physical changes wrought through the windows of the mind. It is true I had read of those who were almost bechilled to jelly by the act of fear, but then I looked upon such sayings as mere flights of poetic genius, and in medical literature proper I discovered no clue for guidance in this beat of observation. At last such facts as the one I have stated arrested my attention, and since it has been so arrested I have been daily studying the subject with increasing interest. I could, indeed, fill this essay and many essays with details of observed phenomena of physical disease from mental action.

Indeed, in so many forms do the mental impressions tell on the bodily organisation, that mental health in education becomes a new branch of science which all persons should begin to learn. By the assistance of this learning our successors will formulate a new world of thought, and will in no small degree fashion, physically, a new world of women and men, having the garb of their souls structurally finer, stronger, and more tenacious of life, from whom shall come a new evolution of species, and a new living earth.

On this inviting theme I must not longer dwell. It is my desire now to treat on those bad mental influences in education which undo the mental and physical health, and on the modes by which these injurious influences may be removed.

Suppose we had before us in our schools a body of children all of whom were typical specimens of health. It would then be a momentous fact to know that we could, by our methods of feeding the children with knowledge, make them all specimens of good or bad health. But the truth is that, when we have before us a class of children, we have probably not one before us who is a typical specimen of perfect health. It is a solemn thing to say, and yet it is as truthful as it is solemn, that I have never in my whole professional life seen a perfectly healthy child, and I doubt if one exists in the land. The birthday of health is not yet in the almanac. As a rule, in the majority of children of every class, there is some prepared mode of departure from health inborn in its members. In many of its members the bad health is not merely inborn, but it is in actual existence, easily detectable under scientific research. How important, then, that in the modes of training the mind such modes only should be selected as shall lead to the better development of both body and

mind! How vastly important that all modes shall be avoided which shall lead to a lower development of the mind, and of the body through the mind! If, indeed, it could be that the mind could be elevated while the body was degraded, I, for my part, should doubt the wisdom of education. And if it be really impossible, as I should maintain it is, to elevate either mind or body alone, and absolutely impossible to make one great and the other little, how wide a problem lies before us in respect to education in this age!

What, then, are the modes to be followed in education by which the mental training may be made conducive to both mental and physical development and regeneration? May we think of such modes? I am sure we may, and practice them also. At the same time, the thought as well as the practice requires to be considered from new points of view of an educational kind.

Let me proceed to indicate what seem to be some of the basic changes that must be made in education in order to found a system of mental and physical health on education. I cannot pretend to do more than touch on a few of these changes, the more prominent to my own mind, but far from a complete list.

In the first place, there is, I venture to think, too much friction of mind in education, and, as a consequence, much injury, mental and physical, from cross, nervous vibration, owing to the plan which now prevails of treating every boy and girl as if every boy and girl had the same nervous construction and mental aptitude.

As it seems to me, there are as distinctly two grand divisions of mental aptitudes as there are two grand divisions of sex, and any attempt to convert one into the other is a certain failure. The two divisions I refer to are the analytical and the synthetical, or, in other words, the examining and the constructive types of mind.

In our common conversation on living men with whom we are conversant in life we are constantly observing upon them in respect to these two qualities of mind. We say of one man that he has no idea or plan of looking into details; he cannot calculate accurately; he cannot be intrusted with any minute labour of details; but he can construct anything. Give him the tools and materials for work, and he will build a house; but if he had to collect and assort the tools and materials, he would never construct at all. We say of another man that he is admirable at details, and can be intrusted with any work requiring minute definition, but he has no idea of putting anything together so as to produce a new result or effect.

Moreover, we assign to these different men distinctive services in the world. We understand them perfectly, and by an unwritten and, I may almost say, by a spontaneous estimate we reckon them up and give them their precise place in the affairs of life with which they are connected. It is as if by design of nature these classes of men, and it may be of women also, exist as pure types of intellectual form, have always existed and are always being repeated. In other words, it is as if they are definite families, and that out of them, as out of a dual nature, that human organisation of thought, which we call history, is educed.

The elements of the analytical and synthetical minds appear on a large scale in the pursuits which men follow. The mathematician is analytical, and he, in whatever science his powers are called forth, is always working on the analytical line. He may be an astronomer, a chemist, a navigator, an engineer, an architect, a physician, a painter; but whatever he is, all his work is by analysis. We often wonder at his labour, at his accuracy, at his fidelity. We may say of him that he approaches nature herself in the magnitude and perfection of his results, but we never say of him that he is inventive or constructive. From him much that is quite new comes forth, but it is always something that he has hauled out of the dark recesses: he lays his treasures at our feet, and we are content to admire and wonder. We may be entranced with our view of the produce of this man, but he very rarely kindles our enthusiasm for him as a man, and very often we find that no credit has been given to him as himself deserving of it. We praise only his industry. The poet is, as a rule, synthetical. This does not always follow, but it usually does, and I think we may fairly say that every man of a purely constructive mind is a poet, albeit we may not be able to say that every poet is constructive. But in whatever particular phrase of life and action he exists he shows his synthesis distinctively. His tendency is naturally to drift into such labours as are inventive and constructive. Frequently he avails himself of the labours of the analyst whom he unconsciously follows believing meantime in himself alone. He makes for us romance in literature; mechanical instruments in handicraft; pictures in art; tunes and melodies in music; plays and epics and songs in poetry; strategies in war; laws in parliament; speculations in commerce; methods in science.

The two orders of men are often as distinct in feeling as they are in work. They do not love each other, and they admire each other little. Jealousy does not separate them, but innate repulsion. The analytical looks on the synthetical scholar as wild, untrustworthy, presuming, hasty, dangerous. The synthetical looks on the analytical with pity, or it may be contempt, as on one narrow, conceited, and so cautious as to be helpless; a bird that has never been fledged, or, being fledged, has not dared to stretch out his wings to fly.

It has in rarest instances happened that the two natures have been combined in one and the same person. It is, I think, probable that this combination has been the reason for the appearance of the six or seven greatest of mankind. As a general fact, however, the combination has not been fortunate. It has most frequently produced startling mediocrities, whose claims to greatness have been sources of disputation rather than instances of acknowledged excellence.

These orders of mind, distinctive of the distinct, are in their primitive forms so essential to the course of progress, that it is difficult to assign priority of value to either. The analytical mind seems to be most industrious and soundest in practice; the synthetical, the most brilliant, and when on the right track the most astounding, in the effects it produces. The analytical is the first parent of knowledge, the synthetical the second—both necessary.

To apply this reasoning to our present argument, I maintain that, as the child is the father of the man, so in every child there is always to be detected, if it be a child of any parts at all, the type of mind. I will undertake to say that every experienced teacher could divide his school into these two great analytical and synthetical classes. He might have a few who combine both powers, and he would no doubt have a residuum, a true *caput mortuum*, that had no distinctive powers at all; but he would have the two distinctives. He would have the scholars who could analyse as easily as they could run or walk, and to whom the mathematical problem and all that may be called analytical is as easy as play, but who have little inventive or constructive power. He would have the scholars whose minds are ever open to impressions from outer natural phenomena, who have quick original ideas, who have, it may be, the true poetic sentiment, but who cannot grasp the analytical and detailed departments of learning at all. The illustrious William Harvey was a scholar of this latter type. It is related of him that late in his life he was discovered studying Oughtred's "*Clavis Mathematica*," and he remarked then that the simplicity of the propositions—their obviousness, as it were—had formerly been an obstacle in his way. Harvey was simply a pure type of a most original, and I may go so far as to say mechanical, mind, which, abashed in youth before mathematical problems, in later life, when the reasoning faculty—the wise faculty—was brought to bear upon the difficulties, looked on the understanding of them as difficulties merely from their self-obviousness and simplicity.

The moral that I draw from these outlines of natural fact is that in teaching it is injury of mind, and thereby injury of body, to try to force analytical minds into synthetical grooves, or to try to force synthetical minds into analytical. I have an instance under my own observation at this time in which a worthy, a most earnest, and I may add most practical, mathematical master is trying to teach a boy, whose mind is all for construction, the details of the science of details. He had better try to get a third chemical element out of water by chemical process, for that task, hard as it might be, could possibly be a success. But this boy, bright of brightness when the lines on which he can tread are before him, is hopeless here. The master may be angry or perplexed, the parents disappointed;—the thing cannot be done. If fifty masters could be employed in the effort, or if the ability of fifty masters could be forced into one master, the thing could not be done. By a mere act of temporary cram, the thing might be carried out in what we may call a treacherous manner; but it could not be carried out in an honest and reliable education of that youthful mind. Meanwhile, the injury that is being inflicted on the youthful organism is incalculable. Time that could be usefully expended is ruthlessly cast away. Then, the mind itself is rendered irritable and obtuse with each lesson, and the hope deferred makes the heart sick in the truest sense of the term. The failure of each lesson tells on the heart, making that organ irritable and uncertain—making its owner, in fact, "sick at heart." This tells in turn on the stomach, causing persistent dyspepsia, and soon there follow the trains of sensations of disappointment, fears of failure in other things, anger at sight of the success of other minds, and all those troubles which lead to the perversion of feeling which so easily becomes the promoter of universal doubt and the opener of despair.

Teachers of youthful scholars will recognize so readily and fully the facts I name, that they will perhaps wonder that I should relate them. Let them pardon me for the sake of the object I have in view. They know, and I know, that these natural differences exist, but the fathers and mothers of children of such differing capacities do not know. The parents look upon all children as alike, and expect all to be turned out of the same brand. If the children are not turned out of the same brand the fault, of course, is the master's, and the master or mistress is thought to be very conceited or overbearing if he or she presumes to state the truth. Perhaps, therefore, it is best for me, who am not a master, to dare to speak the truth in all its nakedness. I am only one of the public, and can bear, without harm, any amount of chastisement for my temerity.

As a practical outcome of this part of my argument I should suggest to the public that the members of the scholastic profession should be duly encouraged to try and discriminate, in the case of all their scholars, what is the natural bent of the mind of each scholar, and that, having found this out satisfactorily, they should be further encouraged to train the scholar according to his bent of mind, in order to make him what he really can be as distinct from what he never can be made by any forced attempt at producing the impossible.

To be continued.

A PLEA FOR THE SPELLING BOOK.

The object of the present article is to say a word or two on the all-important and much-neglected subject of English orthography. Perhaps there is no more apparent outcome of the high-pressure style of education than this same lack. The old spelling-books and oral spelling and the spelling school accomplished much, but there was one evident lack in it all. Many a hero of the spelling school was immediately floored on a monosyllable when he came to put his knowledge into the only possible practice, viz: that of writing a simple business or friendly letter. From this the conclusion was immediately drawn that the spelling book was at fault, and it was cast aside in many instances, and the subject pursued in a haphazard fashion, from the Readers or from the general work of the school-room.

Now it is evident to the thoughtful mind that the golden mean between these two extremes should be sought. There is, perhaps, no one subject that is attracting so much worthy attention at the present time as this. The speller undoubtedly should be used. Spelling should undoubtedly be taught as a primary duty, and not as a secondary exercise, as it must necessarily become when it is taken as an adjunct and afterclap of the reading lesson. In reading the primary attention is given to it and the mind is occupied with the reading, and spelling must of necessity become a secondary and neglected matter. One great mistake of the old spelling book oral spelling was that special attention was paid to catch words and those of infrequent use, while the common, necessary words of the language were only given a secondary attention. The demands of the time are for practicability, and the argument is decidedly against the person who would hold that a real achievement had been attained by the pupil who could glibly spell "belles lettres" or "abracadabra" so long as such words as "judgment" and "separate" and "recommend" are chronically missed. The only use that can by any possible means be made of spelling is in writing, therefore words should be learned as they are to be used. Short sentences should be constructed in which these common words occur, concise rules should be constructed which cover the general principles of the subject, pupils should be taught to understand that they may be adepts in penmanship, may be like Latin and Greek students and great mathematicians, and still have it all go for naught if they are not good in English orthography. In other words, the fact should be impressed that it is an absolute, educational crime in a cultured person to be a poor speller of his mother-tongue.

I believe that much of the neglect in the matter of spelling has come about through the incessant talk about reformed orthography. We may pray and work with religious fervour for a reform, but until that reform comes we have nothing left but to teach according to the present standard, and, in so teaching, I believe a good book is absolutely essential to the achievement of satisfactory results.—*Ohio Educational Monthly.*

AMATEUR TEACHING.

There is too much of it in the profession, far too much of it; but the question is, how shall we rid ourselves of it. Every year scores of young men and women enter the ranks of the profession with no love for it, no conception of its noble nature, its grave responsibilities, its lofty possibilities. All they know or care about it is, that through its channel they will gain a certain number of dollars per month. If they are men, they expect to use these dollars in fitting themselves for a more lucrative profession than that of the pedagogue, or in opening a path for themselves into the golden halls of commerce; if they are women they will use their small portion of wealth in decorating their persons, so as to render themselves more ready of sale in the matrimonial market. We wot of a certain large city, which we shall not name, from whose high-school there graduate annually two or three score of young ladies, daughters of citizens of various grades, from that of the hod-carrier to the judge. The majority of these damsels supplement their school course by a few years in teaching, for, novices that they are, they can rely upon parental political influence—even the hod-carrier may have a dozen votes in his pocket, you know—to appoint them in preference to old and well-trained teachers from other places. The average duration of their pedagogical life is one and one-fourth years. "We understand the case," said a cynical director, who was so indifferent to his political preferment as to object to this mode of recruiting the ranks of teachers—"these young ladies regard the teachers' position as the most convenient stepping-stone to the altar. Many of them avow that they only teach for the sake of securing the desired *trousseau* to consummate an engagement made during their school-days."

Now, no arrangement could be more desirable and convenient for the young ladies, we admit. And, in addition to its convenience, it probably did them a great deal of good. Very likely they learned more in that one year's practice in teaching, than in two years work in the high school. But what about the schools given up to this plan of amateur teaching? Well, they were just such schools as a plan of this sort could secure anywhere, backward in their studies, unruly and turbulent.

We never saw but one very striking example of the evil of amateur teaching, but we have no doubt many others exist. And it is high time that some effective effort was made to diminish the number of amateurs in the ranks of teachers. If parents or school officers will make no such effort, it must be inaugurated by those teachers who are not amateurs. Indeed, we wonder that the instinct of self-preservation has not long ago forced good teachers into an anti-amateur movement. For these know well that it is the amateurs that keep down the rate of wages in the profession, and drag down its standard. They not only add to it nothing that can be desired, but they rob it of the honour and emoluments which are its just due, and which, but for the existence of amateurs, it might long ere this have received.

Practical Department.

THE SCHOOL-ROOM.

THEORY AND PRINCIPLES OF TEACHING.

Teach but one new thing at a time, and always in connection with what the child already knows, that each fact learned may be an additional link in his chain of information.

Give occasionally one minute to the prompt utterance of the sounds of the letters; one to drawing map of the township, county or state, one to repeating maxims, verses, or choice selections in concert.

Let singing have some time each day, and have physical exercises occasionally.

Cultivate the voice, eye, ear, and hand, avoid loud, harsh speaking or singing.

Let about half the spelling in the different classes be in writing.

Give the falling inflection when pronouncing words for spelling, have pupils lower the voice when spelling.

Have pupils rely on themselves when studying and reciting, don't hear a lesson unless it has been well studied, primary classes may be excepted from this rule. *Always give short lessons.*

Give object lessons frequently to your schools; use objects often

when teaching arithmetic, and sometimes use them in geography and grammar classes.

Give instructions frequently in morals and manners; use the dictionary, school apparatus, etc.

Avoid reciting for a pupil or class; it will do the pupil no more good than to eat his dinner for him.

Teach your pupils how to study and to think systematically and connectedly.

In orthography, teach the elementary sounds and their representatives. One cause of so many poor spellers is a lack of familiarity with the sounds of the language, and the principles and rules of orthography. Teach the pupils to spell phonetically; call especial attention to substitutes, as *e* for *a* prey, they, etc.; to silent letters and syllabication.

In reading, the teacher should have a variety of methods; he should not sit as a judge merely, but as a teacher, that the pupil's voice, understanding, and perception may be cultivated and developed; that the gems of thought, the beauties of language, and the golden truths of the authors may not pass unnoticed or unappreciated. In no branch of study is a teacher more needed than in reading. One sentence well read is better than any number of pages read without regard to the natural tones of the voice, to emphasis, inflections, and modulation.

In arithmetic, the principles should be distinctly stated, and problems selected as illustrations, remembering that one principle well understood will be of more value to the class than a hundred problems solved without reference to principles. Drill the class, if possible, on each principle, both by the oral and written methods, and often take for illustrations examples other than those found in the regular text-books.

In teaching geography, begin at home, and as you widen the field teach less in detail. Care should be taken to get the locality of every place well fixed in the mind. Map drawing, topical recitations, historical events, are prominent points for the teacher's consideration.

In grammar, commence with language lessons, sentence building, and changing sentences and expressions. The art should precede, or at least be taught with, the science of language.

The theory taught should be supplemented by actual practice. Much drill in writing sentences and original productions, with thorough criticism, is indispensable to the pupil who acquires ability in the correct use of language.

The topical method of teaching history is considered the best. Draw an outline map on the board and write the principal events and dates, connect geography and history as much as possible. Teach the connection that one event has with others, and if possible get at the reason.

In teaching physiology, begin as a carpenter does to build a house, with the frame (skeleton) and build upon that the different systems, as the muscular system, the nervous system, and detail the members of the class, as a master builder would his assistants, to explain and discuss appropriate parts.

To teach is to impart knowledge—to exhibit impressively. Teaching is more than merely telling or communicating. It means to inculcate, to impress by frequent repetition, to urge on the mind, to lead out and develop.

The true teacher in any branch of study or with any class will observe the following statements:

1. See that the lessons are properly assigned.
2. See that pupils in reciting or discussing a subject use proper language.
3. See that the recitations are as nearly perfect as possible under existing circumstances.
4. Teaching pupils to draw their own conclusions properly stands above almost any other consideration.
5. Be thoroughly in earnest, and your energy and spirit will cause interest and enthusiasm in the class.
6. Grade your school, for by it you will be able to reduce the number of recitations, give more time to each recitation, favour more thorough work, systematize the operations of the school, and improve the discipline.
7. Classify according to scholarship, natural ability, and age. Make reading and arithmetic the basis of your classification.
8. Use school records to furnish a history of the school and of each individual, to indicate to the teacher when he should put forth greater effort, to furnish information to parents, and to furnish educational statistics.

In making your records, mark only absentees, by making a dot

in the left upper corner of square, for tardiness in the forenoon, and in right upper corner, for afternoon.

We cannot do better than to give the principles of the art of teaching, as found in the didactics, by Prof. J. H. Thompson, in the course of study for institutes for 1878.

Principles to be thoroughly understood by every teacher:

1. Activity is the law of childhood, accustom the child to do, and educate the hand.
2. Cultivate the faculties in their natural order, first *form* the mind, then *furnish* it.
3. Begin with the senses, and never tell a child what he can be led to discover readily for himself.
4. Reduce every subject to its elements, one difficulty at a time is enough for a child.
5. Proceed step by step, be thorough; the measure of information is not what the teacher can give, but what the pupil can receive.
6. Let every lesson have a point, either immediate or remote.
7. Develop the idea, then give the term, cultivate language.
8. Proceed from the known to the unknown, from the particular to the general, from the concrete to the abstract, from the simple to the difficult.
9. First synthesis, then analysis, not the order of the subject, but the order of nature.
10. Fasten every principle by frequent repetition.

The *objects of recitation* are, to find the daily standing of the pupil, to create self-dependence, to estimate the daily progress of the pupil, to direct the pupil's mode of thought and study, to keep proper incentives before the pupil, to aid in discipline, to add new matter, to impart moral truth, and, in primary classes, to instruct, to drill, and to test.

Questions should be varied, logical, be given to pupils in a promiscuous order, be put rapidly, and should not hint the answer.

Moral teaching should not be neglected. Direct instruction may be given in a few set lectures, anecdotes or biographies of the great and good, at recitation time, in reading lessons, etc., or from books on morals and manners. Indirect instruction is given by the personal influence of the pupils on each other.—*From Iowa Course of Study.*

ADVICE TO TEACHERS.

Superintendent A. B. Stutzman, of Illinois, made the following suggestions to his corps of teachers at the teachers' meeting on Monday evening, Jan. 10, and commented upon and explained each of them:

1. All exercises should begin and conclude promptly on time.
2. Each teacher should write the order of exercises on the board and adhere to it strictly.
3. Teachers should be uniform in their discipline from day to day. Teachers that are very strict sometimes and rather indifferent at other times will not succeed as well as though they were uniform and constant.
4. Teachers should discriminate carefully between firmness and severity. Firmness promotes good order, while undue severity thwarts it. Penalties and punishments should always be commensurate with the offence.
5. Teachers should acquaint themselves, so far as possible, with the influences that surround pupils while out of school.
6. Teachers should have proper regard for the wishes and suggestions of the parents.
7. Teachers should see to it that their rooms are properly ventilated and warmed, under no circumstances should pupils be exposed to currents of cold air or otherwise be exposed.
8. Teachers should, under all circumstances, protect the rights of each pupil; promptly attend to all misdemeanors or other irregularities; they should be careful that pupils do not violate the laws of health while under their care; they should endeavour to inculcate habits of industry, obedience, regularity and sound morality—in short, they should spare no efforts to develop good characters.
9. As a rule pupils should not be detained at recess and after the close of the afternoon session. The detentions should be rare exceptions to the rule. Pupils should be detained after the close of the forenoon session.
10. Teachers should aim at thoroughness in all their instruction. They should carefully attend to the individual wants of pupils so far as possible.
11. Teachers should honestly discharge all their duties and not worry over the past; they should be constant students; always make thorough preparation for each day's work.

12. Teachers determine the manner or way of study of the pupils by their manner or way of hearing recitations.

13. Teachers should always have a definite end in view in hearing a recitation, and they should spare no effort or preparation necessary to bring about such end or result. They should instruct pupils how to study and prepare their lessons, and never rest satisfied unless the pupils thoroughly understand the subject matter of the lesson.

14. Teachers should take special pains to encourage and brace up the diffident and easily embarrassed pupils, and restrain pupils that are too forward.

15. Teachers that are thoroughly in earnest rarely find time or occasion to occupy the chair while in charge of the school.

16. As teaching produces constant strain on the nervous system, it is highly important that teachers have plenty of sleep. Rest soothes the nerves, invites cheerfulness, improves the disposition, promotes patience, and is absolutely essential to good health. On the other hand, sleeplessness or the want of the required amount of rest tends to make one irritable, impatient, easily annoyed, and unfits one to do good work in the school-room.

17. In conclusion, allow me to express the hope that we may all realize the responsibility resting upon us as individual teachers. May we all be kind, generous, firm, faithful, honest and true to those who receive instruction from us. Let us all carefully study self, and thus improve ourselves and become better qualified for the discharge of our duties. Let us thoroughly acquaint ourselves with the subject matter to be taught. And, furthermore, it is essential that we constantly study human nature, that we learn to appreciate the varied wants of children and the difficulties with which they have to contend. If we do this faithfully, it will increase our sympathy and kindly feelings toward them, and enable us better to become real helpers to those who are dependent upon us.—*American Educator.*

WHAT SHALL WE DO WITH OUR SONS?

An article has been going the rounds of the papers for some time, entitled: "What Shall We Do With Our Daughters?" while nothing is said of the rearing of our sons. It could be inferred that no rules are necessary, but not so. The following seem to be silently acknowledged as the rules for the present generation:

Teach them to look upon a trade as a disgrace.

Teach them that poor clothes, honestly obtained, are to be scorned.

Teach them that they are to consider themselves above any kind of manual labor.

Teach them the art of loafing in all its perfection; smoking, impudent staring, etc.

Teach them how to get in debt at the tailor's and leave their parents to pay. Do not let them consider the expense and sacrifices necessarily made for their college course.

Teach them to forget their manners while at home. Let them be cross and surly to home folks, extremely polite to company.

Talk to their sisters about expenses; meanwhile teach them to seek the company of expensively dressed girls, and when their bills come in for tobacco, and other little vices, pay them without a word; finally, let them marry, and live in style at their mother-in-law's.—*Exchange.*

EXCESSIVE ORDER—Excessive good order is a feature of many of our public schools. This does not proceed from efficiency, but from the lack of it in the principal or teacher. A man or woman of ability can afford to unbend occasionally, but a stupid person must assume a mysterious air and repress all exhibitions of human feelings in himself, his assistants, and his pupils. A man not secure in his position, not confident of his own power, is obliged to check the freedom of intercourse from his subordinates, lest a spontaneous interchange of views lead to a criticism and disparagement of his ability and methods. A strong man can afford to be easy, but a weak one, in self-defence, must be tyrannical. The effect of such repression is an icy gloom in the school incompatible with natural developments and enthusiastic progress. Mind attempting to grow in such an atmosphere, is like a potato-vine in a cellar. Sunshine is the inspiration of health, and honesty is the sunshine of mind upon mind. There can be no honesty in a small, weak mind, which has usurped the position of a large, strong one. The muscular arm can handle with vigor and safety what would be shattered by the grasp of distrust or palsy. As honesty is the sunshine, so good nature is the warmth of the mind, and it is only a good, strong mind that can shed both on the sensitive, responsive, and fruitful capabilities of the school.—*National Journal of Education.*

DRAWING.

DESIGN.

The object of this Exercise is—

To give practice in the arrangement of units alternating about a centre, or practice in vertical repetition, or in repetition to cover a surface.

In teaching original designing, one of the first principles to explain is that the opposite parts of a pattern correspond; that if any element in a pattern be selected another will be found exactly like it by going *across the centre*, to the similar position on the other side. Whatever the pupil draws in one corner of a pattern, he must draw in the corresponding corner on the other side, across the centre.

Alternation around a centre should not be used unless the enclosing form has at least six axes of symmetry. For example, it would not be well to draw simply the diagonals or simply the diameters of a square, and alternate units around the centre on these lines. Neither would it be well for a beginner to alternate units in a circle on only two diameters at right angles to each other.

In the annexed illustrations, three examples of rosettes with units alternating about the centre are given as suggestions to the teacher for the illustration of alternation. Note the characteristics of the three rosettes. In Fig. 2, the enclosing form, a square on its diagonals, and the alternating units, are rectilinear, and the central form is curvilinear. In Fig. 5, the enclosing forms and the alternating units are curvilinear, while the central form is rectilinear. In Fig. 8, the enclosing form is rectilinear, the central form is curvilinear, and the alternating units are made up of both straight and curved lines. These similarities are pointed out to show that variety in design may be attained not alone by the use of entirely new elements, but also by a new arrangement or by a slight variation of forms previously used.

DIRECTIONS.—*Fig. 2.* Draw a square on its diagonals. Draw its diameters. Connect the ends of these diameters to form a second square. Quadrisect the sides of the first square. Connect the points of quadrisection nearest the left end of the horizontal diagonal by a vertical line. Connect the ends of this vertical with the centre of the square by oblique lines. Quadrisect the vertical and complete the unit. On the other semi-diagonals as axes, draw similar units.

Quadrisect the sides of the second square. Connect the outer points of quadrisection on each side of the square with the centre of the figure. Bisect the semi-diameters of the second square. Through the points of bisection draw a circle. Bisect the radii of this circle and draw a second circle through the points of bisection. Draw an enclosing square about the figure.

Fig. 5. Draw a vertical and a horizontal line, equal in length and intersecting at their centres. With these as diameters, draw a circle. Connect the ends of the diameters to form a square on its diagonals. Draw the diameters of the square. Connect the ends of the diameters to form a second square. On each side of this square as a base, draw a semicircle curving outward. On each diagonal of the first square, mark off a short distance from each end. Draw four semicircles, passing through the centre of the circle and terminating in the points just made.

Divide the sides of the first square into three parts, making the two outer parts equal and longer than the central part. From these points draw oblique lines to meet on the semi-diameters of the first square, at a very short distance from the centre of the figure. Trisect each semi-diameter of the first square, and draw the curves of the smaller units to intersect on the semi-diameter a little nearer the centre of the figure than the outer point of trisection. Bisect the semi-diameters of the second square and connect the points, forming a third square. On the diagonals of this square, mark a distance from each end a little less than half a semi-diagonal. Connect the points, making a fourth square. Draw an enclosing circle

about the figure.

Fig. 8. Draw a square, its diagonals and diameters. Extend its semi-diameters until they are equal in length to the semi-diagonals. Connect the outer ends of the extended semi-diameters to form a second square,—a square on its diagonals. Quadrisection the semi-diagonals of the second square. Bisect the outer fourth of each semi-diagonal and connect the points of bisection by oblique lines, forming a third square. Bisect the second outer fourth of each semi-diagonal of the second square and through the points of bisection draw horizontal and vertical lines to make a fourth square.

From the points of intersection of the third and fourth squares draw curves concave to the semi-diagonal and meeting on it near the centre of the figure, thus making the larger units.

Place points on the sides of the fourth square a short distance outside the intersections of the third and fourth squares, and from these points draw the curves of the smaller units, not quite parallel to the curves of the larger units. Draw a central circle, having a radius equal to one fourth the semi-diagonal of the second square. Draw an enclosing line about the figure.

DIRECTIONS. — *Vertical Borders.* In drawing a vertical border on the board, draw first two indefinite vertical lines, about one foot apart. Connect the upper lines by a horizontal. Draw horizontals dividing the space into squares. After having thus obtained as many squares as desired, erase what remains of the vertical lines below the squares. Complete the borders by adding outer vertical lines, one on each side. The directions which follow are for one square in each border except those for Fig. 9.

Fig. 1. The unit of the figure covers two squares, but directions for one square will be sufficient. Draw the vertical diameter. Connect the upper angles of the square with the lower end of the vertical diameter of curves convex to the diameter. Divide the lower side of the square into three parts, making the outer parts equal and slightly shorter than the central part. Connect the upper angles of the square with the points of division by curves convex to the vertical sides of the square. Connect the lower angles of the square with the points of division by curves concave to the lower side of the square.

Fig. 3. Draw the diagonals and diameters of the square. Through the ends of the diameters draw a circle. Trisect each half of the vertical diameter and of the upper and lower sides of the square. From the upper points on the vertical diameter, draw oblique lines to the nearest point on the upper side of the square. From the lower point on the vertical diameter, draw oblique lines to the nearest points on the lower side of the square. On the

remaining part of the vertical diameter as an axis, draw the unit of repetition.

Fig. 4. Draw the diagonals and diameters of the square. Divide the semi-diameters into three parts, making the central part a little longer than the outer parts which should be equal. Set off the same distances from the centre of the square on each of the semi-diagonals. Connect the outer points by curves concave to the centre of the square, similar to those of the copy. Through the inner points draw a circle. Within this draw a second circle, having a radius one-third that of the outer circle.

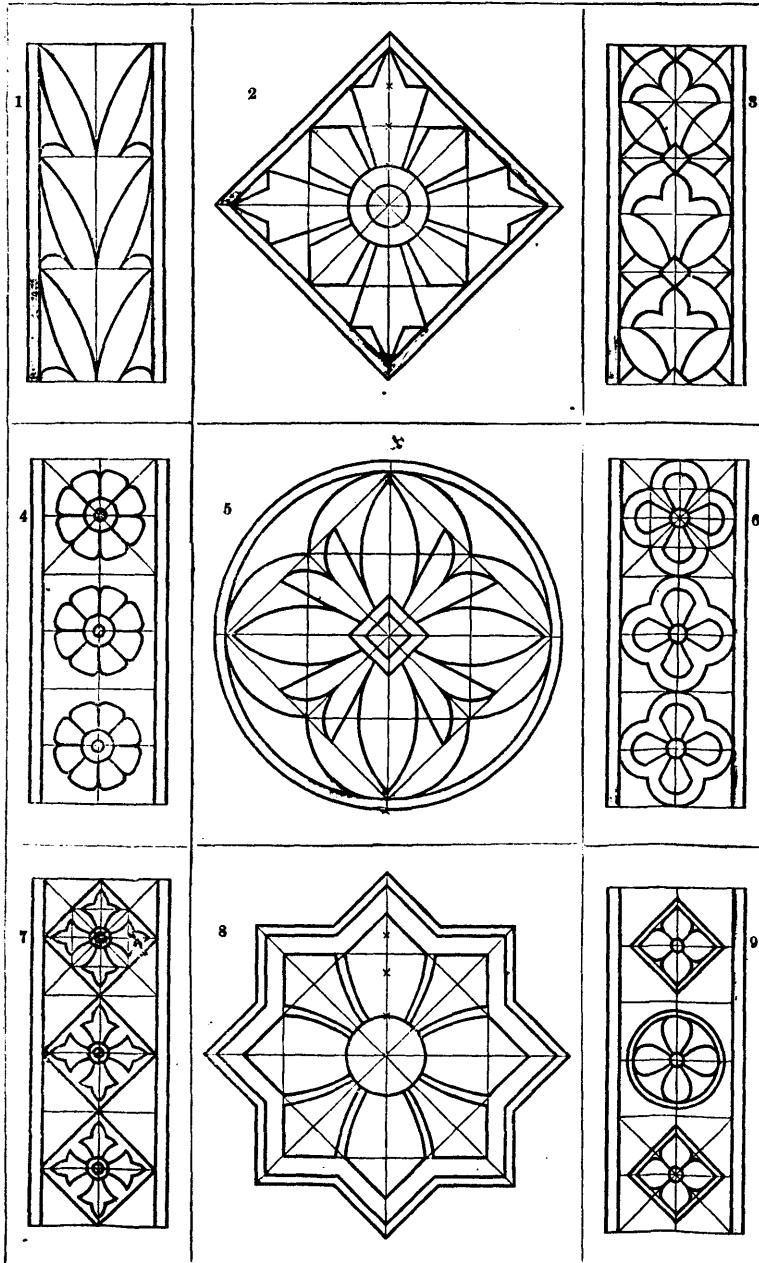


Fig. 6. Draw the diagonals and diameters of the square. Bisect the semi-diagonals and connect the points of bisection to form a second square. On each side of the second square as a base, draw a semicircle curving outward. Quadrisection the sides of the second square, and from the two outer points of quadrisection on each side of the square, draw oblique lines to the centre of the figure. Connect the two outer points of quadrisection on each side of the square by the curve of a semicircle curving outward. Trisect the diameters of the second square, and through the points of trisection draw a circle.

Fig. 7. Draw the diameters and diagonals of the square. Connect the ends of the diameters to form a square on its diagonals. Connect the ends of the diameters of the second square, forming a third square. On each semi-diagonal of the second square, draw the unit of repetition, noting that it should not touch the square. Trisect the diameters of the third square, and through the points of trisection draw a circle. Within this draw a second circle, having a radius one-half that of the first.

Fig. 9. First Square.— Draw the diagonals and diameters of the square. On the diameters, mark off a short distance from the ends and connect the points, making a second square,—a square on its diagonals. On the diagonals of the second square mark off a short distance from the ends and connect the points, making a third square. Trisect the sides of the third square. Quadrisection the sides of the third square. From the points of trisection draw curves concave to the diagonals, and meeting on the diameters at the outer points of quadrisection. Through the points of quadrisection nearest the centre, draw a circle.

Second Square. Draw the diameters of the square. Mark points on the diameters a short distance from the ends. Draw a circle through these points. Within this draw a second circle having a slightly shorter radius. On each semi-diameter of the second circle as an axis, draw the ovoid unit. Draw a central circle having the same radius as that of the circle in the first square of the border.—*Teachers' Manual, L. Prang & Co.*

Notes and News.

ONTARIO.

Those interested in educational work in Milton are agitating for the establishment of a High School in that town.

A Teachers' Association has been formed in the County of Dufferin, and the following officers for the ensuing year have been appointed:—Mr. N. Gordon, P.S.I., President; Mr. A. Steele, B.A., Vice-President; and Mr. F. B. Denton, Shelburne, Secretary-Treasurer. The Association was organized on the 25th of June, and the first regular meeting will be held in October next.

Mr. J. Dearness, P.S.I., of E. Middlesex, states in his report to the School Board:—"It will be gratifying to the rate-payers that I am able to report that, without decrease in the means of public education or in the efficiency of their use, the total expenditure for all school purposes shows a reduction for the year 1880 of \$1,852.90."

At the Perth Union Teachers' Convention, it was announced by Mr. Moir that arrangements had been effected by which teachers and members of the Association could procure return tickets to any place on the Grand Trunk Railway during holidays at one and one-third rates.

An attractive and imitative feature has been introduced into the Renfrow Model School during the last year under Mr. E. A. Stevens, Principal. About fifty frames consisting of mottoes, chronos, anti-tobacco pledges, etc., decorate the walls of the building, while a summer house 30 ft. long, 16 ft. wide, has been erected for the girls. Among the mottoes may be mentioned the following as being particularly appropriate: Labor has sure Reward, Peace be unto this House, Do Right and Fear Not, Knowledge is Power, Well Begun is Half Done, Learn to do Good, The Lord will Provide, With Joy We Greet You, Kind Words can Never Die. The first motto that arrests the visitor's eye on entering any of the departments is Welcome, while the last one on taking his exit is, Call Again. At the recent Public Examination the visitors were amazingly surprised to find the ceilings of the several departments ornamented with hanging baskets of artificial flowers, while the windows and teachers' desks were abundantly furnished with numerous pots of growing flowers, tastefully arranged. Some of the mothers expressed their willingness to return if possible to their school days in case they could attend such a school. The pupils during the recitations performed their parts readily and praiseworthy. Marked harmony seemed to exist between teachers and pupils, due no doubt, in part at least, to the improvements in the surroundings. This is a push in the right direction. Children require pleasant school rooms as well as attractive homes to encourage them in their youthful efforts, and to make their first difficulties less arduous. All these things please the youthful eye, and cultivate a taste for the beautiful in nature and art. The highest credit is due to Mr. Stevens, Head Master, for initiating a movement which may be imitated with pleasure and profit in the schools of every class in the Dominion.

MANITOBA.

The Council of the University of Manitoba met Tuesday, June 21st, at 4 p.m., in the city hall, for the purpose of conferring degrees, presenting medals, and otherwise publicly honouring those students who had been successful in their efforts to acquire the right to such distinction. His Honour the Lieutenant-Governor was present. On his arrival at the door, accompanied by his aide-de-camp, he was met by the Chancellor of the University and other members of the Council, who conducted him to his seat on the platform, to the right of the Chancellor. Around him were seated His Grace the Archbishop of St. Boniface, Hon. Joseph Royal, M.P., Mr. Justice Dubuc, the professors of St. Boniface College, Rev. W. Cyprian Pinkham, Rev. James Robertson, Consul Taylor and others, including the candidates for degrees. On the Chancellor's left were seated Hon. A. G. B. Bannatyne, Dr. Cowan, Mr. D. Macarthur, Rev. Canon O'Meara, and Rev. Mr. Matheson, of St. John's College, Rev. O. Fortin, Ven. Archdeacon Cowley and others including the candidates for *ad eundem* degrees. In the audience were observed a considerable number of prominent citizens, the ladies interested in the cause of higher education being also well represented.

The Chancellor of the University, the Most Reverend the Metropolitan of Rupert's Land, took the chair, and addressed His Honour, the Lieutenant Governor in an eloquent speech in which he dwelt on the rapid and substantial improvement in the work of the University, the high standard of the examinations, consisting of eighty-one sets of papers and the success which the students, thirty three in number,

achieved; the large proportion of those examined who have succeeded and were entitled to degrees with honours; and the inestimable value of denominational colleges, furnishing residence and supervision to the students. He spoke in terms of profound regret of Professor Forget, late director of St. Boniface college, whose lamented death left a blank in their chief workers. He urged the friends of the University to exert themselves to procure a grant of land from the Dominion government to aid their increasing demands, and he hoped the young University might grow with the growth of this great country, and be able to draw around it the confidence and regard of the people. His Honour, the Lieutenant Governor made an appropriate and cheerful reply in English and French, which was heartily applauded. The registrar, Mr. Rice M. Howard, then read the report of the recent examinations as adopted by the Council of the University, and announced the names of the successful candidates for degrees, medals and other honours.

The names of Messrs. McLennan and Kennedy, of St. John's College, having been announced, these gentlemen came forward and were formally presented to the Chancellor, by Rev. Canon O'Meara as being entitled to receive the degree of B.A. with classic honours, whereupon they knelt in turn before the Chancellor, who, according to the prescribed Latin form, conferred upon them the distinction named.

Messrs. N. Betournay and Haverty, of St. Boniface College, were next presented by Rev. Dr. Lavoie, and received the degree of B.A. with honours in Moral and Mental Science.

Mr. Polworth, of Manitoba College, received the degree of B.A. with Natural Science honours. He was presented to the Chancellor by the Rev. Mr. Robertson.

Mr. Munro, of Manitoba College, was presented by Rev. Mr. Robertson and admitted to the ordinary degree of B.A.

The following gentlemen, graduates of other colleges were then admitted to *ad eundem* degrees:—A. M. Sutherland, B.A., University of Toronto; A. C. Killam, B.A., University of Toronto; N. Agnew, M.D., Victoria University; W. R. Sutherland, M.D., Victoria University; Heber Archibald, B.A., University of Toronto; T. S. Kennedy, B.A., University of Trinity College, Toronto; W. H. Culver, B.A., Victoria University; J. M. Macdonnell, B.A., University of Queen's College; J. A. M. Aikins, M.A., University of Toronto; P. A. Macdonald, B.A., University of Queen's College.

The following gentlemen being unavoidably absent, were admitted to *ad eundem* degrees by proclamation of the Chancellor.—R. Bourne, M.A., Trinity College, Dublin; A. W. Ross, B.A., University of Toronto.

Mr. Fawcett (non-collegiate student) also received the degree of B.A., with natural science honours, by proclamation of the Chancellor.

Mr. N. Betournay, of St. Boniface College, received the Governor-General's silver medal for moral and mental science honours. The Chancellor in complimenting him upon his success referred to the fact of his having received the same distinction last year.

Mr. McLennan, of St. John's College, received the honor of the University silver medal, and Mr. Kennedy, of the same college, the University bronze medal for classical honours.

Mr. Polworth, of Manitoba College, received the distinction of the silver medal for natural science honours.

Mr. Bird, of St. John's College, as being first in the combined subjects of mathematics and botany, and also first-class in all the subjects, received the Governor-General's bronze medal.

The Chancellor then pronounced the council adjourned.

The Council of the University of Manitoba has recently sustained a very severe loss, through the death of one of its most prominent members, the Rev. Professor Forget Despatis, director of Manitoba College. The deceased gentleman, who was a general favorite, was Chairman of the Board of Studies. At the meeting of Council, held shortly after his death, the Chancellor referred in touching language to the loss, and proposed the following minute, which was unanimously adopted, viz. "That the council in giving expression to the deep regret with which it has heard of the death of the Rev. Professor Forget Despatis, Director of St. Boniface College, desires to bear testimony to the great services Professor Forget rendered to the University from its foundation, not only by his unwearied and disinterested efforts on its behalf as a member of the council, a member of the board of studies, and a member of the board of examiners, but also by having largely promoted harmony and united action by his kind and courteous manners. The council desires to record its deep sense of the great loss the University has suffered in his re-

moval." His Grace the Archbishop of St. Boniface, who was visibly affected, thanked the council for this mark of its esteem.

The Rev. Professor A. A. Cherrier, has just been appointed director.

The work on the new Manitoba College is being pushed forward with great vigor.

An addition is being put to St. John's College, and the work of enlarging the public schools of Winnipeg has begun.

The St. John's College Ladies' School is to re-open on the 8th of August. Miss Spencer, who has made a splendid reputation as a public school teacher, has accepted a position on the College staff.

A movement is on foot in Winnipeg to establish a school of art and design for the Province. Mr. Leggo, Master in Equity of the Court of Queen's Bench—an active sympathiser with every form of popular education, brought the matter before the public. A meeting was held a day or two ago, at which the Rev. W. C. Pinkham, Supt. of Education, and Messrs. Leggo, Biggs, Rowan, and Neison were appointed a Committee, to get the matter into shape, and up to the present time they have received a great deal of encouragement. The Board of Protestant school trustees, of the city of Winnipeg, are likely to take the question up, and materially help to solve it.

The first term in the public schools has just closed. Almost everywhere there is the most gratifying progress observable; and, throughout the province, there is a general feeling of pride in, and satisfaction with our public school system, the benefit of which is being extended as fast as possible to those portions of the North West Territories which have lately been taken into Manitoba. The examination of teachers commences on Tuesday, August 2nd.

At a meeting of the Board of Education, held yesterday, the following resolutions were adopted on the suggestion of the Supt., viz:

1st. "That first-class certificates granted in the Province of Ontario, under the new regulations relating thereto, and such other certificates, obtained elsewhere, as the Board many consider equivalent, may be permanently endorsed by the superintendent, in which case they shall entitle the owners to all the rights and privileges enjoyed by the holders of first class provincial certificates."

2nd. "That every graduate of the University of Manitoba who furnishes to the Board satisfactory evidence of his knowledge of the science of education and art of teaching, and of the management and discipline of schools, shall be entitled to a first-class certificate (if an honor man, grade A; if a passman, grade B), and every undergraduate of the said University who has passed the previous examination, and who, being eighteen years of age, furnishes to the Board satisfactory evidence of his knowledge of the art of teaching, and of the management and discipline of schools, shall be entitled to a second-class certificate (if an honor man, grade A; if a passman grade B); provided always, that these certificates shall be provisional, until the parties receiving them can show that they have taught with success for three years, and one year, respectively, and provided also, that the usual certificate of good moral character has been furnished."

NOVA SCOTIA.

The closing exercises, technically known as the Eucenia, of the University of King's College, were held at Windsor, on the 30th of June, and attracted more than usual interest. The annual University Sermon was preached at 10 a.m., in the Parish Church by the Rev. L. Ambrose, A.M., Rector of Digby. The sermon was a somewhat severe arraignment of the alleged secular and materialistic tendencies of the age.

Among the visitors present at the Eucenia in the College Hall were His Lordship Bishop Binney, Visitor of the University, His Excellency Vice-Admiral McClintock, the Governor of the College, Dr. Allison, Supt. of Education, the Rev. T. J. Daly, A.M., Provincial Examiner, and other prominent educationists. The Eucenial oration of the President, Dr. Dart, has secured more general notice than ordinarily falls to the lot of the formal deliverances of university presidents. It was a calm, temperate, comprehensive discussion of the College question in Nova Scotia, and in particular of the condition and prospects of King's College. Even those who question the accuracy of some of the learned president's conclusions, commend the candour and thoroughness of his treatment.

The following scholarships and prizes were announced:

Cogswell Scholarship, Rev. F. W. Vroom, B.A.; *Binney Exhibition*, H. M. Stamer; *McCawley Hebrew Prize*, Rev. F. W. Vroom, B.A.; *Bishop's Prize*, W. B. King; *Divinity Prize*, N. R. Raven; *Almon Welsford Testimonial*, F. W. Nicolson; *General Williams*

Prize, H. S. Hensley; *Stevenson Scholarship*, F. W. Frith, E. A. Harris.

Messrs. E. A. Harris, F. W. Frith, L. H. Morris and T. F. Draper (students) then acted a part of Aristophanes' play, *The Acharnians*, the language and costumes being the same as that of the old Greek stage. The rendition was highly creditable to the actors, and immensely amusing to the audience. Mr. W. B. King, of Charlottetown, then delivered the valedictory.

The Principal announced that Richmond County would be the County for the history of which the Akins Historical Prize would be given for the coming year. The following degrees were then conferred, with appropriate ceremonies:—

D. C. L.—On Vice-Admiral Sir Leopold M'Clintock. M. A.—On Rev. John Padfield, and Rev. O. M. Grindon (absent.) D. D.—On Rev. D. W. Fitzgerald (of Charlottetown.) B. A.—On Messrs. W. B. King (Charlottetown), A. Curry (Windsor), Rev. Geo. Butler (Chester), A. E. Silver (Halifax) and Rufus Curry (Brooklyn.)

Speeches appropriate to the occasion were delivered by Vice-Admiral McClintock, Hon. Senator Almon, His Lordship Bishop Binney, and the Superintendent of Education. An elegant collation concluded the exercises of the day.

The Associated Alumni of King's College decided by a vote of 8 to 7 not to discuss the Consolidation question with the Alumni of sister colleges.

The second annual meeting of the Teachers' Association of District No. 7, was held at North Sydney on Thursday and Friday, June 30th and July 1st. The President, M. J. T. McNeil, Esq., Inspector of Schools opened the meeting with a short and highly appropriate address. After the calling of the roll the Secretary read the minutes of the last meeting, which were confirmed. The following are the officers for the current year:—President, M. J. T. McNeil, Inspector; Vice-President, D. R. McLellan; Sec. and Treas., B. McKittrick; Executive Committee, E. T. McKeen, W. Haggarty, Miss S. F. Brown, Miss B. M. Ormond, with the officers of the Association. The name of the Association was changed to the "Teachers' Association of District No. 7." Mr. T. S. McGregor gave an illustrative lesson on Algebra, detailing some excellent methods of dealing with difficult surds. Mr. M. Matheson's paper on "Parent, Child and Teacher," by its suggestiveness elicited an animated discussion, participated in by Messrs. Kennedy, McKinnon, and Miss Simpson; Miss B. Ormond's paper on "Geography for Beginners," Mr. J. D. McNeil's on "The Successful Teacher," Mr. D. K. McGillis on "Physical Culture," Miss L. A. McKenna's on "School Rewards," Mr. E. T. McKeen's on "Practical Education," Mr. Haggarty's on "Text Books," and Mr. J. W. McLellan's on "Like Teacher, like School," were all good, and all drew forth many practical remarks. A number of ladies and gentlemen honoured the Association with their presence. A telegram was read from the Superintendent of Education, expressing regret that pressing duties prevented him from attending. This is one of the most vigorous Associations in Nova Scotia.

The closing exercises of the Provincial Normal School, at Truro, took place on the 12th of July. As the Provincial Educational Association was to convene on the following day, the audience embraced large numbers of Inspectors and Teachers not generally present on such occasions. The Hon. S. Creelman, Commissioner of Mines and Public Works, represented the Provincial Government, and Dr. Allison, Superintendent of Education, the Central Educational Department. Among distinguished strangers noticed present was the Rev. Dr. Kemp, Principal of the Ladies' College, Ottawa. The appointed exercises consisted chiefly of lessons taught by pupil teachers, among whom were Misses Faulkner, Robbins, McKenna, Coleman, Martell, Findlay, and Mr. H. H. Eaton. The Governor-General's silver medal was won by Mr. W. L. B. Hart, of Guysboro, and the bronze medal by Miss Clara Calkin, of Kentville. The diplomas issued embrace six of Superior rank, fifty-two Good, and thirty Fair. The winners of the first were Miss Martell, of Cape Breton County; Mr. Eaton, and Miss Calkin, of King's; Misses Faulkner and Kirkpatrick, of Colchester; and Miss Robbins, of Yarmouth. The total number of enrolled pupil-teachers has been one hundred and forty-two. Addresses were delivered by the Principal, Mr. Calkin, who announced certain revisions of the regulations of the Institution, the Commissioner of Mines, and the Superintendent of Education. The work of the past year has been in a high degree successful.

The second annual session of the Provincial Educational Association was convened by the Superintendent of Education at Truro, on Wednesday, the 13th of July. A. McKay, Esq., Professor of

Mathematics and Science in the Halifax High School, was re-elected Secretary, and B. McKittrick, Esq., B.A., Principal of the Sydney Academy, Assistant Secretary. The Executive Committee was elected as follows:—Inspector Condon, Principal McKay (Picton) the Secretary, Professors Hall and Eaton, and Misses Logan and Russell. Next month's notes will contain a detailed report of proceedings.

Mr. L. N. Archibald has resigned the principalship of the Albro Street School, Halifax, to engage in mercantile life. Mr. Archibald's success as a teacher has been very marked.

Visitors at the Provincial Normal School have been most favourably impressed with the progress made in industrial drawing under the faithful and skilful instruction of Miss O. M. Smith.

The recently published Calendar of Dalhousie College, offers for competition at the ensuing Matriculation Examination, five exhibitions and thirteen bursaries, all tenable for two years; the exhibitions being of the value of \$200 per annum, and the bursaries \$150. These are among the gifts to Dalhousie of George Munro, Esq., of New York.

Mr. H. S. Bridges, Head Master of the St. John, N. B., Crammar School, has been selected by the Senate of the University of New Brunswick, to fill the chair of Classical Professor, rendered vacant by the removal of Prof. Fletcher to another Province.

Readings and Recitations.

JACK CHIDDY.

A TRUE INCIDENT OF THE RAIL.

Bravo Jack Chiddy! Oh, well you may sneer,
For the name isn't one that sounds nice in the ear,
But a name is a sound—nothing more—deeds are best,
And Jack had the soul of a man in his breast.

But the story? you say. Well, I'm coming to that,
Though I wander a little—now, where was I at?
Let me see. Can you catch, shining round and clear,
The mouth of the Breslington tunnel from here?

You see it? Well, right on the bank at the top,
When stacking some blocks, all at once, down the slope
A huge slab of stone from the rest shore its way,
And fell down on the up line of metals and lay.

One sharp cry of terror burst forth from us all,
As we saw the huge mass topple over and fall.
We stood as if bound to the spot, dumb of speech,
Reading horror and doubt in the faces of each.

Then one of our mates snatched a glance at his watch,
Gave a start and a look that made each of us catch
At our breath, then a cry, that thrill'd our hearts through—
"My God! the 'Flying Dutchman' is overdue!"

Hark, straight from over the hill we could hear
A dull, dead sound coming faint to the ear,
Then a short, sharp whistle that told with its blast
That the "Dutchman" was into the tunnel at last.

And there on the rail lay that huge mass of stone,
And the "Dutchman" behind coming thundering on:
In a minute or less he would come with a dash,
And a hundred lives would be lost in the crash.

"Now, for your life, Jack!" for Chiddy had flown
Down the bank, and three leaps brought him close to the stone.
Not of his own life, for wife and child's sake,
Thought he, but the hundreds that now were at stake.

'Twas the work of a moment. With terrible strength
And a heave of the shoulder the slab moved at length
Slipp'd clear of the rail when, half muffled in smoke,
From the mouth of the tunnel the "Dutchman" broke.

There was one sharp whistle, a roar, and a crash
Of wheels ringing clear on the rail, and a flash
Of coiling smoke, and a glitter and gleam
Of iron and steel, and then down fell the steam.

Not a breath could we draw, but stood blank with dismay,
As the train tore along, making up for delay;

Till at last from us all burst a shout and a cheer,
When we knew that the "Dutchman" had pass'd and was clear.

And Chiddy? Ah me! you will pardon these tears,
For he was my mate on the rails many years.
When we found him, one look was enough to reveal
That Jack's life-blood was red on the engine-wheel.

Bravo Jack Chiddy! Now you don't sneer
At the name which I own is but harsh to the ear;
But a name is a sound—nothing more—deeds are best,
And Jack had the soul of a man in his breast.

Good Words.

ALEXANDER ANDERSON.

A PICTURE OF LIFE.

DECLAMATION.

Life is like an extensive country, dotted with beautiful rivers and flourishing cities. Youth's village situated upon the flower clad banks of Vanity River, is the most interesting town. The most celebrated city is called Venerable. Two trains leave Youthville in the morning, and arrive at Venerable City at dusk in the evening.

Persons desiring to take the industry train can find tickets at any station on the road. There is no express running to Wealth City, as there are many deep tunnels and dangerous bridges along the way, so that slow progress is made.

If any passengers are thrown out at Mercantile Bridge, they generally foot it to Agricultural City, and sometimes take the train again. The darkest tunnel is Opposition. If you pass through it successfully, you are perfectly secure. The train passes through the following places: Honesty Town, Enterprise, Wealth, Prosperity, Energy.

Now as to the other train. The Idleton train leaves Youthville at the same time. It is an Express after you leave Leafertown until you reach Beggarstown. Here the travellers have to plod their way through Dismal Swamp and across Pauper Desert. Those who don't like this rule, may cross over in stages and make connection with the Industrial train on its way to Wealth city. The stations are as follows: Lazyville, Leafertown, Beggarstown, Gambling City, Fighton, Tippleton, and the last station is Destruction.

The two ways are plainly mapped out: which will you take?

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.

STORMONT.—At a special meeting of the Stormont Teachers Association, convened for the consideration of the proposed changes in the Superannuated Teachers' Fund, the following resolution was passed.—That the law relating to the Fund remain as it is, with the following amendments, viz. that an annual payment of \$2 into the Fund by female teachers be made compulsory; that no money be refunded to any teacher who abandons the profession, but in the case of the death of a teacher his wife, (or her husband), or legal representative, may be refunded all amounts paid in, except the contributions of the first five years. It was also resolved that if the plan proposed by Mr. Ashdown be adopted a separate Fund should be created, and that contributions into this Fund be optional with teachers.

WEST MIDDLESEX.—The semi-annual meeting of the West Middlesex Teachers' Association was held in the basement of the Presbyterian Church, Strathroy, June 2nd and 3rd, and was fairly attended. The chair was taken at 2 p. m., on Thursday, by the Vice-President, Miss Jarvis, and Mr. Wood, President, gave his address, on the subject, "Self Culture." This lecture contained many valuable hints of an ennobling character. Mr. S. Cuddy opened the discussion on L.C.M., and showed in a very able manner his mode of teaching it. Mr. A. B. Gilbert brought forward a map of Middlesex executed very artistically, and explained his way of teaching it to a class. Officers elected:—Mr. A. S. Leitch, President; Miss M. Dibb, Vice-President; Mr. A. B. Gilbert, Secretary and Treasurer; Mr. J. T. Wood, Delegate to Provincial Teachers' Association. Mr. Ross's lecture on 'Mistakes in Reading,' was ably rendered and well received. Friday was occupied in discussing 'long division,' 'object lessons,' and Canadian history, drawing and 'Super-Teachers' fund.' Resolutions were passed recommending the following changes in the clauses issued by the department: No. 6—All the optional class pays \$4 and a reasonable interest, on the annual payments, so that the sum paid by said class will have the same proportional value as regular contributors. Ladies pay \$2. No. 7.—The word 'Public' be struck out, H. S. Teachers', Inspectors, &c. contributions may be included. No. 9.—Term limited to 25 years service for males and females alike, also the period of 65 years for each, and that one-sixtieth be

changed to one-fiftieth of the average salary, and that period be used in all subsequent clauses. No. 10.—“From performing” be changed so as to include all accidents that might incapacitate a teacher, while in the service. No. 11.—Struck out “deceased of any person while engaged in teaching during the first ten years.” Inserted, “And that the widow of teacher should receive the same amount annually as the teacher would, should he become incapacitated.” No. 12.—In teaching, or of not more than two years’ attendance at the Normal School. All the other clauses were approved of.

A. B. GILBERT, Sec.-treasurer.

PERTH.—The meeting of the united associations of North and South Perth was held in the Town Hall, Stratford, on the 7th, 8th and 9th ult. The attendance was very large, and though the exercises were not numerous they comprised subjects of a very practical nature, which were taken up mainly by outside talent,—the valuable services being secured of Mr. J. M. Buchan, M.A., High School Inspector; Mr. W. Scott, B.A., Head Master, Toronto Model School; Mr. D. Boyle, H. M., Elora High School, and Miss Lewis, Elocutionist, Toronto. The proceedings commenced at 10 a. m., on the first day, under the able presidency of Mr. R. Munro, President of the North Perth Association, and the first matter introduced was the Teachers’ Retiring Fund, which was brought forward by Mr. A. S. McGregor. The basis he adopted was that urged by Mr. C. Ashdown in the columns of the CANADA SCHOOL JOURNAL. After considerable discussion by Messrs. Rothwell, Ryan, Hamilton, Shaw and Brown, it was resolved to hand it over to the following committee to draft a scheme to be submitted at a subsequent session, namely:—Messrs. Rothwell (Chairman), Munro, McGregor, Hamilton, Hodgins, Shaw; Misses Oliver, Lennox, Walker, Dent and Mrs. Warburton. In the afternoon Mr. Boyle, read an interesting essay on Natural Science, which he had named “Our Poor Relations.” The object of the paper was to enlist the attention of teachers to the processes of evolution and revolution in nature so as to cultivate habits of observation in their pupils, which would tend to enlarge their minds, develop their thoughts and secure their sympathies for the lower animal world. In consequence of the Entrance Examination going on in the High School, Mr. S. Woods, M.A., whose paper was next on the programme, sent an apology for inability to attend and the convention then adjourned. At 7.30 p.m. a session was held specially to receive the report of the Superannuation Fund Committee, which was in effect that the fund be retained and payments be made compulsory on all grades of the profession: In moving the adoption of the report Mr. A. S. McGregor spoke with eloquent ability. He was opposed by Mr. Moir who moved that the payment be voluntary, on the ground that teachers who remain in the profession with the retiring allowance in view, are in their later years incapacitated to a certain extent and are willing to undercut others better qualified. Besides, those compelled to pay were actually supporting the retired ones in idleness, who, with care, might themselves have provided sufficient for old age; and improvident habits would obtain among those who expected an annuity in the future. These opinions were very ably combated by Mr. A. S. McGregor, who scouted the idea of a teacher with a family saving sufficient on present miserable salaries to make a provision for old age. He instanced a case where a second-class teacher was getting \$200 a year; and one man who intended to make the profession a stepping-stone to something else, went in for \$170 a year and board himself! The sum paid to the Government annually was small and would scarcely be felt, and in the end would be paid back with a certain amount out of the Government funds far in excess of the teacher’s payments. Mr. Rothwell looked upon the matter in the same light as an insurance scheme, and if it were established, as compulsory, teachers could not object to it, for when they enter the profession they do so knowing that such a payment is expected. Mr. Roberts thought if it were a voluntary system it would fall through. Mr. Hodgins, H.M., Stratford Model School, spoke to the same effect. He would support the motion. Mr. Alexander, P. S. Inspector, North Perth, gave the history of the inception of the fund, and thought that the welfare of the teacher in this matter was the first thought in the mind of the Chief Superintendent, Rev. Dr. Ryerson. The experience of 25 or 30 years in the profession added to a teacher’s value, and he had no need to undercut anyone. Those who intend to remain in the profession are in favour of the fund, those who use it only as a stepping-stone are not, and he did not think the latter should legislate for those who are spending their lives and energies in it. The first year’s annuity repays the teacher all the money he paid in, and the Government gave the rest, as a free gift almost. Mr. Moran, P. S. Inspector, South Perth, said that, though personally not in favour of the fund, he was of opinion that it was an advantage to the profession to have it, but if it were to be made a voluntary thing it would soon die out. If the school tax was voluntary, public schools would soon cease to exist; and he thought it right to tax those who made the profession a stepping-stone and thus keep such people out of it. Those who leave the ranks are not treated unjustly, they get back their money from the Government so that in any case it is not lost to those who pay. The 1st clause, namely, “that the fund be retained” was put and carried. Mr. Moir’s amendment, “that the payments be optional,” was then put and declared carried, after which the convention adjourned. *Second day.*—Mr. S.

Nethercott, President of South Perth Association occupied the chair. He introduced Mr. J. M. Buchan, H. S. I., who was cordially received. He took up the subject “English in Schools,” and after a review of the history and philology of the language, entered particularly into the method of teaching Reading, Spelling, Grammar, Composition and English Literature. During an interval in Mr. Buchan’s exercises, Mr. Boyle said in connection with his essay read the previous day, that at Elora High School there is a collection of natural objects made by himself assisted by the pupils and some neighbouring friends, which he invited the teachers present to see, when opportunity occurred. Mr. Munro proposed a vote of thanks to Mr. Boyle for his services at the convention, which, being seconded by Mr. Laird, was passed with acclamation. In the afternoon, Miss Lewis, graduate of the Philadelphia National School of Elocution and Oratory, gave an exemplification of the art of teaching Elocution, putting the members through a course of exercises as a practical illustration; and from a series of selections gave some admirable renderings of conversational, rhetorical and dramatic pieces. She also introduced the phonic system of spelling. Miss Lewis’s language in describing the several phases of her subject was particularly well selected and to the point. The rounds of applause which greeted the conclusion of each exercise, and the strict attention manifested, indicated the deep interest the members took in the instruction. Mr. W. Scott, B. A., H. M., Toronto Model School, next gave, by special request, his address on “How to deal with Indolent Pupils.” He evidently did not believe in smartening them up with the birch or strap, as he felt more inclined to blame the teacher, the parents, or the boy’s associates, rather than the boy himself for indolence. Mr. Scott suggested many excellent plans for remedying this school plague: such as the teacher’s self-examination, reasoning with the parents, or the boy in private, separating him from doubtful company, etc., all of which he found from experience to be successful when judiciously practised. Mr. Eckert, Principal, London E. Schools, gave an excellent, illustrated address on “Writing,” as he taught it; and judging from the specimens of his skill, the subject could not have been in better hands. He advised teachers to aim at proficiency in this art, but when they were not able to write neat headlines they should use Beatty’s copy-books which he thought the most suitable and best adapted. Mr. Scott, in compliance with the wishes of the members took up the subject, “Object Lessons.” He said that teachers should have a definite aim in view in teaching each lesson. Object lessons should be taught for the following purposes: (1). Cultivating the senses; (2). Teaching the pupils to compare and infer; (3). Leading them to describe accurately what they observe, thus, making these lessons the medium of language lessons; (4). Imparting ideas of orderly methodical thinking. He then went on to show how to teach so as to secure these ends, and concluded by calling attention to the most common errors made in giving object lessons. Mr. Rothwell spoke in high terms of the important work done at the convention by Messrs. Scott and Eckert, and proposed a hearty vote of thanks to these gentlemen. Mr. Munro also spoke of their praise-worthy exertions and seconded the motion, which was passed with acclamation. In the evening a concert was given in the same building, which was attended by a crowded audience. Vocal selections were rendered in excellent style by the Stratford Quartette Club, consisting of Dr. Burkart and Dr. Ahrens, and Messrs. Trainor and Roberts; Solos by Miss Dillon and Miss Kelly, and duets by Misses Clench and Hutton, were received with marked appreciation by the audience, while Miss Allen, organist of the Roman Catholic Church, presided at the piano with her well-known skill and ability. The violin solos of Miss Nora Clench carried the house by storm; she was repeatedly encoored and always responded with the utmost good humour. Miss Lewis’s exercises on elocution at the Convention led the teachers to expect special pleasure from her portion of the programme, an anticipation which was in no way disappointed, for, after her sixth appearance during the evening, the audience found themselves in a frame of mind similar to that in which Oliver Twist once found himself—they “wanted more.” Saturday morning’s session was devoted to the discussion of “Canadian History, and how to teach it.” The subject was introduced in a masterly address by S. Woods, M.A., of Stratford High School, and was afterwards ably discussed by Messrs. Rothwell, Hodgins, Moran, Donaldson and others. Teachers were recommended to clothe the dry bones of Canadian History, as found in our authorized text books, in the living flesh and blood as presented in the works of Francis Parkman, to cultivate a taste for its study by the frequent recital of interesting or thrilling narrative, and to develop patriotic sentiments by recounting the devotion and achievements of the pioneers of Canada. The meeting was pronounced by those who attended it to be one of the most pleasant and profitable ever held in the County of Perth.

OTTAWA.—The Ottawa Teachers’ Association met on June 3rd and 4th. The president, Mr. J. McMillan, B.A., was in the chair. *First Day.*—Miss Shenick, Head Mistress of the Girls’ Model School, had her class in attendance, and taught a lesson on “Geometry.” Among other things, she insisted on (1) A thorough knowledge of the definitions, axioms &c., before proceeding to the propositions. To explain these to the class she made use of cubes, triangles, and compasses, with very good effect. (2) In dealing with the propositions, she would proceed on the

same plan as with the definitions, &c. The pupils should be made to feel the truth of each statement in the proof. In the discussion that followed it was pointed out, (1) That it would be found a good way in beginning Euclid, to teach only those definitions, &c., needed in the first proposition, and then the first proposition itself and so on. (2) That the highest educational value of Euclid was in the pupil having so complete a knowledge of each proposition that he should be able mentally to picture to himself the construction, and each step in the demonstration, without the aid of a diagram. This power of abstraction was too frequently neglected. Mr. A. B. Davidson, B.A., of the Ottawa Coll. Inst., read a very suggestive paper on "The Educational Value of Political Geography." He pointed out, (1) That the text book now generally used was little more than a compilation of names, that a large number of these names were never met with outside a geography, and that they were brought before the student in the least interesting way, with little or nothing to awaken thought. (2) That the departmental examination papers were generally so framed as to put a premium on learning mere names, and "nothing more." He said that nearly all the names necessary to be learned could be made *un-learned* which valuable historical, social, political, or scientific information might be grouped. He advocated that more study should be given to physiography, and the important deductions as to products, &c., to be drawn therefrom. The paper received the hearty approval of the Association. Mr. Smith Curtis read a paper on "Mason's Grammar." Mr. Curtis, while admitting its more scientific treatment of grammar than perhaps any other book of the same size, pointed out (1) That in spite of its boasted superiority in the correctness of its definitions, that many of these definitions were very faulty. (2) That most of the definitions were too technical for a school book. (3) That many of the conclusions respecting certain constructions, were at variance with the definitions and with the line of argument followed by Mason in analogous cases. (4) That in the edition specially issued for use in public schools, the practical application of principles was entirely ignored. On concluding his paper, Mr. Curtis moved, seconded by Mr. Jno. Munro, Head Master of Central School West:—(1) That Mason's Grammars, on account of their technicality and omission of practical application of principles are utterly unsuitable for use in our public schools. (2) That grammar should be subordinated to composition in our public schools, and that after reading, arithmetic and writing, composition should occupy the chief place, so that no pupil who attends school, a reasonable time will be unable to conduct ordinary business in writing in a proper manner. After an animated discussion the first resolution was voted down; the second one was carried unanimously. *Second Day*:—Miss McLardy, Headmistress of Ottawa Ward School, had a class of little girls in attendance, and gave a most interesting "Object Lesson." Miss McLardy's efforts met with the warm encomiums of the Association. Mr. E. D. Parlow, Head Master of the Boys' Model School, explained his method of teaching "Map Drawing." He illustrated his remarks by means of several elegant maps which he drew upon the blackboard. Mr. Parlow's remarks cannot fail to aid in popularizing this method of teaching geography, among the teachers who heard him. Mr. C. Campbell introduced the subject of "Superannuation," but the discussion was cut short for want of time. It was resolved to hold a special meeting to consider the question. The election of officers then took place. Mr. A. Smirle, Head Master of Central School East was elected president. At a special meeting held to consider the subject of Superannuation, the circular submitted by the Legislative Committee of the Ont. Teachers' Association, was discussed with the following results:—Clauses one, two, three, seven, eight, second part of nine, second part of ten, twelve and thirteen, were adopted as they were. Clause four was amended by substituting the following:—"Each person enumerated in clause two as entitled to a retiring allowance, shall comply with the conditions of clause three for each year of his or her service." Clause five was amended by substituting the following:—"That, since high school teachers, inspectors, separate school teachers and female teachers, *now in the profession*, have not been compelled by any previous Act to pay anything into the superannuation fund, it shall remain optional with them whether they shall do so or not for the period of service already completed at the passing of this Act." The first part of clause nine was amended so that the recipient of a retiring allowance shall receive one-fiftieth of his average salary for each year during which he has contributed to the fund. The first part of clause ten was amended so that the recipient of a pension on account of disability, shall present himself each year before either a high school inspector or a public school inspector. Clause eleven was amended by substituting "five years" for the "ten years" mentioned in it.

SOUTH ESSEX.—The convention of teachers in South Essex, was held in Kingsville, on the 9th and 10th of June. The president, Mr. D. A. Maxwell, I.P.S., took the chair at 10 a.m. Devotional exercises were conducted by Mr. Geo. E. Wightman and Mr. B. M. Brisbin, B.A., after which the minutes of the previous meeting were adopted. The exercises of the first day were conducted by G. W. Ross, Esq., M.P., who in his happy way discussed Reading—how to teach it; School Routine, "School Management," and "The Teacher's Decalogue." In the evening a large and appreciative audience assembled in the Methodist Church to listen to Mr. Ross's able and eloquent lecture on "The Intellectual Faculties." It is not at all flattering to say that this lecture was

an able effort. Excellent readings were given by Misses Lewis, Henning and Watkins. Solos by Miss McDonald and A. A. Ross, Esq., and anthems by the choir of the Methodist Church. On the second day the President read a departmental communication in regard to the Superannuation Fund. Each clause was taken *seriatim*, and the whole scheme rejected. It was unanimously agreed to recommend that the present scheme be continued, except that payments should be optional. Thoughtful essays were read by Mr. B. M. Brisbin, B.A., on "The Teacher," and Mr. A. Dorsott, on "How to Conduct a Recitation." A very bitter and scurrilous attack having been made through a local newspaper, on the Inspector, the teachers present with two exceptions, signed a memorial expressing entire confidence in the Inspector, and endorsing his management of educational affairs in the county. It was resolved to resume "Uniform Monthly Examinations," and a committee was appointed to prepare the questions. It was deemed advisable to continue the Promotion Examinations as at present, viz.: The Inspector prepares the questions, the teachers examine the answers of the pupils and send to the Inspector the papers of all pupils who have made 50 per cent. of the total marks attainable, and 25 per cent. on Reading, Spelling, Arithmetic and Grammar respectively; the Inspector re-examines these papers and confirms or rejects the promotion. To all pupils promoted certificates are given. The officers for the ensuing year are:—D. A. Maxwell, I.P.S., President; Miss J. Henning, Vice-President; Geo. E. Wightman, Sec.-Treas.; Messrs. Long and Pearce, Auditors. It was decided to continue Local Conventions, also to furnish each teacher in the Inspectorate with the CANADA SCHOOL JOURNAL.

REVIEWS.

A BRIEF HISTORY OF ANCIENT PEOPLES, WITH AN ACCOUNT OF THEIR MONUMENTS, LITERATURE AND MANNERS. 328 pages, 18 maps and 118 illustrations. A. S. Barnes & Co., New York and Chicago. 1887.

This is an admirable book, thoroughly adapted to the class-room, solid yet nowhere dry, condensed yet far more than a chronological skeleton. The style is graphic and the foot notes abound in anecdotes. Boys will sit down and read it by the hour for entertainment, while the general reader will find fascinating chapters on the social condition of the people, scenes from real life, and the results of recent criticism and discoveries briefly and attractively brought before him. The "drum and trumpet" theory is abandoned now-a-days, and we welcome this volume most cordially. The pronunciation of all proper names would be an improvement.

OUR LITTLE ONES.—Just the right thing for our juveniles. The selections are appropriate and beautifully illustrated; the type is large and clear. Published monthly by the Russell Publishing Co., Boston.

SILVER CYMBALS.—This is a series of seven books, comprising a selection of sacred and secular songs, anthems, glees, part-songs, national and temperance melodies, and sacred choruses, in the Tonic Sol-fa notation, suitable for the different classes in public and private schools, and arranged in two-part, three-part and four-part harmony.

SILVER BUGLES is a similar series, containing pieces suitable for marching exercises, &c. To those who understand this admirable and attractive method of reading music at sight, both these series contain much that will please them; while home and school can be made joyous and happy by their use. For boys and girls who have learned the Sol-fa notation **THE SONG SCHOOL**, or "chord by chord" method of learning to sing from the old notation forms a ready stepping-stone. The price of these books, one penny each, is a marvel of cheapness. Published by Moffatt & Paige, 28 Warwick Lane, Paternoster Row, London, Eng.

LOVELL'S GAZETTEER OF BRITISH NORTH AMERICA is before us, a neatly-bound *multum in parvo*. It contains the latest and most authentic descriptions of over 7,500 cities, towns, villages and places in the Dominion, besides giving general information drawn from official sources, as to the names, locality, extent, &c., of over 2,300 lakes and rivers. It is edited by Mr. P. A. Crossby, and is carefully and creditably compiled. Whether to expand a person's geographical knowledge of the country; to ascertain the mineral resources, manufactures, industries, &c., in the different localities; or to find out the shortest routes of travel, the *Gazetteer* is a perfect "enquire-within." No office is complete without it.

Sample pages of LOVELL'S BUSINESS AND PROFESSIONAL DIRECTORY OF THE PROVINCE OF ONTARIO FOR 1881-82 have been received. In addition to the requirements of such a work, a comprehensive description of the cities, towns and villages will be given, and also a classified business directory of the City of Montreal. It will form a hand-book of speedy reference which almost every class in the community will find of advantage, but it will be especially valuable to commercial men and the travelling public. The type is clear, the "get-up" good and the size convenient. The work will be published in November next, price \$5.00.

The usual issues of *Harper's Weekly* for July contain much that is interesting for the class of readers for whom it is designed. The Nast's caricatures are admirable. "Pound Him, "Out-shining Everybody in Humiliation at Albany," will represent the political contest in New York State. Excellent cuts are given of President Garfield, the assassin Guiteau, and "Rochester Cathedral." "At Liberty's Door" is a timely direction of public attention to the spirit of violence and rebellion which seems to be increasing in all lands.

The stories "The Beautiful Wretch," by Wm. Black; "Christowell," by R. D. Blackmore, are continued. The supplement to the issue of July the 5th gives a full account of the attempted assassination of President Garfield.

Harper's Weekly has well been said to be one of the best Art and Literary weeklies published.

MAGAZINES.

THE NORTH AMERICAN REVIEW for the month of July has been received, and, as usual, contains some well written articles. The first of the list. "Present Aspects of the Indian Problem," is contributed by Carl Schurz. Then follows "The Itching Conflicts of the Age," by a Yankee Farmer. James Parton deals with "The Power of Public Plunder." Henry George gives "The Common Sense of Taxation." Henry Bergh contributes an article on, "The Cost of Cruelty." Richard Henry Stoddard gives an interesting sketch on, "A Study of Tennyson."

The August number of the *North American Review* devotes a liberal share of its space to a polemical duel between Col. Ingersoll, the great exponent of the unbelief of the day, and Judge Jeremiah S. Black, the eminent jurist. Col. Ingersoll has made the attack in the *Review*, and sustained it with all his force as an aggressive assailant. Judge Black has taken up the challenge as the champion of Christianity. It is well that the daring infidel should be called out, and that he should be met by such an antagonist. The cause of truth can have nothing to fear from a contest of this kind. Of the merits of the battle it is for an interested public to judge. Other articles in the August number of the *Review* are: "Obstacles to Annexation," by Frederic G. Mather; "Crime and Punishment in New York," by Rev. Dr. Howard Crosby; "A Militia for the Sea," by John Roach; "Astronomical Observatories," by Prof. Simon Newcomb, and "The Public Lands of the United States," by Thomas Donaldson.

HARPER'S NEW MONTHLY for August. *Harper & Brothers, New York.*—Contents: "The Surrender of Cornwallis;" "Almond Blossom," a Poem; "A Day in Africa," Part II.; "The White Mountains," Part III.; "The Parca, or, Three Dauntless Destinies—the Armetel;" "Anne," a Novel; "Left Behind," a Poem; "Then;" "The Various Languages of Billy Moon," a Story; "A Neglected Corner of Europe," Part III.; "Water Routes from the Great North-West;" "Miss Pickett," a Story; "Assassins and Nihilists;" "Sheltered," a Story; "President Madison and the Baptist Preacher;" "A Laddicean," Book the Third, De Stancey; Editorial Matter. The number is rich in splendid engravings.

ST. NICHOLAS. *The Century Co., New York.*—Contains a fund of the best class of reading, with attractive illustrations for young people. The August number is particularly interesting, and will be an enjoyable companion on rail or river, camping or at home during the holidays.

POPULAR SCIENCE MONTHLY. *D. Appleton & Co., New York.*—Contents: "The Hermit," by Prof. T. H. Huxley, F.R.S.; "Physical Education, Recreation," by Felix L. Oswald, M.D.; "The Blood and its Circulation," by H. L. Fairchild; "The Teachings of Modern Spectroscopy," by Dr. A. Schuster, F.R.S.; "Origin and History of Life Insurance," by Theodore Wehle; "The Insufficiency of Milk," by Dyke Duckworth, M.D.; "Intelligence of Ants," by G. F. Romanes; "Lunar Lore and Portraiture," by F. E. Fryatt; "The Visions of Sane Persons," by F. Galton, F.R.S.; "School-room Ventilation," by Dr. P. J. Higgins; "Origin and Uses of Asphalt," by L. Malo, C.E.; "The Unit in Plant Life," by B. D. Halsted, Sc.D.; "The Electric Storage of Energy;" Sketch of R. W. Bunsen, &c.

SCIENCE'S MONTHLY ILLUSTRATED, Midsummer Holiday Number. *The Century Co., 713 Broadway, New York.* Contents: "The Sailor's Wife;" "The Isle of Peace;" "The Daughter of Henry Sage Rittenhouse;" "No Man's Land;" "Ey the Sea in Norway;" "To My Dog, *Blanco*;" "Ice Yachting on the Hudson;" "Poetry in America," First Article; "Our Circle;" "Songs of Nature;" "A Little World;" "Robert Fulton's Experiments in Submarine Gunnery;" "The People's Problem," II.; "A People's Government;" "Peter the Great as Ruler and Reformer," X.; "Queen Titania," I.; "The River Inn;" "A Rainy Day with Uncle Remus," III. (Evening); "The Village Convict;" Topics, "The World's Work," Brice-a-Brac, &c.

The *Atlantic Monthly* for August. Contents: Chapters I.-III. of "Dr. Breen's Practice," the first instalment of a new story by W. D. Howells, the editor; "French Domestic Life and its Lessons," by John Durand; "Corda Concordia," a poem by Edmund C. Steadman, read at the opening Session of the Sumner School of Philosophy, Concord, July 11, 1881; Part I. of "In Exile," a story in two parts, by Mary Halleck Foote; "The New York Art Season," by M. G. Van Rensselaer; "On the Acting of Iago," by Richard Grant White; Chapters XXXIX.-XLII. of "The Portrait of a Lady," by Henry James, Jr.; "Sleep's Threshold," a poem by Edgar Fawcett, Part II. of "The Indoor Pauper," a study, by Octavo Thanet; "Tidal Waves," a poem by H. H.; "Recollections of James J. Fields," by Edwin P. Whipple; "Parton's Life of Voltaire," by James Freeman Clarke; "Ward's English Poets," by F. H. Underwood; The Contributors' Club; Books of the Month.

THE CONTEMPORARY REVIEW. We are always glad to receive this interesting and instructive periodical. The July number, which has just reached us, seems to be an especially interesting one. It contains "The Two Fausts," an able criticism from the pen of Mr. Charles Grant, on Goethe's Faust, and Marlowe's drama on the same subject. Mr. Thomas Wright gives us some valuable hints in his discourse on "A Possible Popular Culture." We learn some interesting facts from Reginald S. Poole's "Ancient Egypt in its Comparative Relations." Notes from a German Village, by Prof. W. Steadman Aldis, must be interesting to everyone. Mr. Herbert Spencer's "Philosophy and the Philosophy of Religion," is well and ably dealt with, by Dr. A. M. Fairbairn. "They were a Great People, Sir," is contributed by Lieut-Col. W. F. Butler, C. B. Dr. Radcliffe's "Speculates about Dreaming." A Gallenga contributes an article on "Tunis." The Rev. Father O'Leary replies to Mr. Bence Jones Story of his Experiences in Ireland, and the Dean of Peterborough gives some interesting information on "The Revised Version of the New Testament."

Publishers' Department.

GAGE'S SCHOOL EXAMINER.—Subscribers will please take notice that we do not intend to publish the *School Examiner* for the month of August. It was our original intention to give twelve numbers in the year, but as the *School Examiner* is specially designed for actual school work it is not needed now when the schools are closed and the teachers enjoying their much needed holidays.

We shall combine the numbers for August and September—an arrangement which is largely adopted by publishers in the United States and elsewhere, and one which we hope will not be unsatisfactory to our friends.

CORRECTION.—We regret the appearance of a misprint in last month's issue. In the short article replying to Mr. Parker's letter to us respecting the criticism of his book by the editor of an educational paper, the name of the work was given as "Cicero pro Arabia;" it should have been "Cicero pro Archia." The blunder was caused by the reply in question having been hurriedly inserted as the *JOURNAL* was going to press, and it was not seen by our proof-reader. As the *JOURNAL* is now entirely set up in our establishment and under the immediate supervision of our staff, such errors are not likely to arise in future.

We publish the papers given at the Intermediate Examination last month—French and Latin excepted. Solutions will be published in next month's *JOURNAL*. The French and Latin papers we have reserved for GAGE'S SCHOOL EXAMINER, at they are more specially connected with High School Work.

The teachers of Durham County Association have renewed their subscription to the *CANADA SCHOOL JOURNAL*, and have added considerably to the number of subscribers. This plainly evidences the satisfaction the *JOURNAL* is giving, and is the most practical and convincing proof of its value.

We omitted to state in last number of the *JOURNAL* that correct solutions of problems in the January number had been received from Mr. A. S. Mosher, Aylesford, N.S.

HELD OVER.—Solutions to questions in June No., by J. Moser, Nashwaaksis, N.B.; Isaac Leslie, Cow Bay, Halifax Co., N.S.; J. W. Place, Maynard; and A. Chisholm, Black River, N.S.