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The Canada School Journal.

VOL. IX.

TORONTO, OCTOBER, 1884.

No. 10.

The Canada School Journal

IS PUBLISHED THE FIRST OF EACH MONTH AT

54 FRONT STREET WEST, TORONTO, ONT., CAN.

Subscription \$1.00 per year, payable in advance.

Address—W. J. GAGE & CO., Toronto.

CANADA SCHOOL JOURNAL HAS RECEIVED

*An Honorable Mention at Paris Exhibition, 1878.
Recommended by the Minister of Education for Ontario.
Recommended by the Council of Public Instruction, Quebec.
Recommended by Chief Superintendent of Education, New Brunswick.
Recommended by Chief Superintendent of Education, Nova Scotia.
Recommended by Chief Superintendent of Education, British Columbia.
Recommended by Chief Superintendent of Education, Manitoba.
Recommended by Chief Superintendent of Education, P. E. Island.*

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

THE SPIRIT OF THE TEACHER.

“Lay the young eagle in what nest you will,
The cry and swoop of eagles overhead
Vibrate prophetic in its kindred frame
And make it spread its wings
And poise itself for the eagle's flight.”

—George Eliott

In the last analysis life is found to be something more than organization. In the daily work of the teacher, improved methods of instruction, skilful plans, and appropriate machinery may multiply power, increase effects and exalt influence. But all machinery is by itself mechanical and needs a soul of power behind it, a living spirit to move it, an immaterial essence transfused into it, otherwise, it is lifeless, dead, and can produce no spiritual result.

Life itself eludes the most delicate chemical tests, and the finest and best results of the true teacher cannot be estimated either quantitatively or qualitatively by the crude tests at our command. The white of an egg and the poison from the fang of a rattlesnake are chemically indistinguishable, yet one is wholesome food and the other is deadly poison. So also our educational tests must forever fail to measure the higher spiritual products of education, the influence of intellect on intellect, of soul on soul, of heart on heart. These can never be exhibited in tabulated results, nor their sum cast up in percentages. Yet they are all there for eternity, not the less valuable, not the less worthy of attention because we cannot precisely measure them with our rude instruments or estimate their weight in our educational balances. What we can weigh

and measure is likely to occupy a disproportionate share of our thoughts and attention.

What is the soul of all our educational machinery? What is the great motive force that propels our system? What is the invisible power that resides behind courses of study and instruction and gives them organic potency? In short, what is the life and soul of effective teaching? It is

THE SPIRIT OF THE TEACHER.

And what is the spirit of the true teacher? We cannot define it any more than we can define the spirit of poetry or the perfume of a flower. It is the spirit of Socrates, who, by his spiritual midwifery helped to a birth the intellectual throes of his disciples. It is the spirit of Milton, who, amid his poverty and blindness, “saw with that inner eye which no calamity could darken,” and labored diligently at his great work through all discouragements and without the least hope of earthly reward. It is the indomitable spirit of Wellington, who rode without a tremor through iron hail, and listened unblanched to the oft-repeated order, “Close up the ranks!” but wept as tenderly as a mother for her first-born as he walked over that terrible field in the calm moonlight. It is the spirit of Pestalozzi and Fröbel who delighted in little children and spent their whole lives in working out plans to promote their happiness. It is the spirit of Robert Raikes, Dr. Guthrie, and the poet Longfellow. It is the spirit of that GREATEST TEACHER who walked in Judea eighteen hundred years ago, took up little children, put his hands upon them and blessed them.

THE ENGLISH EDUCATIONAL CODE.

The English Education Department now deals with the instruction of very nearly five millions of children, and spends a Government grant of over three millions of pounds sterling. The general administration of the School Law is governed by a legal document called the Code, which is subject to modifications from year to year. Supplementary instructions are issued from time to time to inspectors and school managers to point out the proper interpretation and practical application of the Code. This series of official circulars has just been consolidated in a new circular letter from the Department, and English educationists are at present interested in comparing and discussing the numerous changes introduced. We select a few points from this rather formidable document, which will serve to give a glimpse of the tone and spirit in which the English school law is to be carried out.

Inspection is conducted by Senior Inspectors of *divisions*, each Senior having under him a considerable staff of Sub Inspectors and assistants for separate *districts*. These officers are warned against hurrying through their work, against keeping children under examination for an unnecessarily long time, and are plainly enjoined that infant schools should not be detained

beyond the ordinary hour of dismissal, and that the elder children should not be detained without some intermission for recreation.

In the system of payment by results on the basis of the Inspector's examination, the individual examination in the three R's is to be carried on as usual. But examination by sample is for the future to be the rule for (1) the work of infant classes, (2) needlework, (3) recitation, (4) singing, (5) mental arithmetic, (6) map-drawing, (7) class subjects in general. In selecting the sample class the Inspector will call out a set of children more or less arbitrarily chosen, and the teacher will then add two or three of his best scholars. Three-fourths of those examined must show that they have been well taught before the work is marked *good*.

In a general way the Inspectors are not to interfere with the details of the school time-table. They are, however, to draw the attention of managers to two or three points of grave importance when they find occasion, as (1) too little time allotted to a subject, for instance, for the amusing exercises which ought to form part of the daily routine of every infant class, (2) extra subjects must not be attempted if they cannot be efficiently taught in the ordinary school hours, (3) detention of scholars beyond the prescribed time, or any attempt to make up for neglect or for injudicious distribution of work by special exertions just before examination, must be promptly reported.

No notice is taken of the recent legal decision that home lessons cannot be enforced against the will of the parents. But the instructions state that home lessons are plainly unsuitable for delicate or very young children, and that owing to special circumstances home lessons in any form may be inexpedient in some schools. The inference is, the *Times* remarks, that no home tasks should be set in the lower classes except with the distinct sanction of the managers, and that in the upper classes not more than half-an-hour's work should be given, and it should be set, not to break up new ground, or call forth new mental effort, but simply to illustrate and impress the lessons already taught.

The direction discouraging corporal punishment is repeated. When resorted to it must be administered only by the head teacher, and a record of it entered in the log-book or school diary. This is an excellent rule which ought to be enforced everywhere. There are many other interesting points in this circular to which we cannot at present refer.

Inspectors sometimes have just cause to complain of want of promptness on the part of teachers or School Boards in forwarding half-yearly reports. If teachers desire to secure a prompt apportionment of the Government grant it is necessary to have the reports furnished at an early date, as the delay on the part of one teacher will delay the whole business.

Teachers should not blame Inspectors until they are satisfied that all reports have been correctly made out and forwarded to the Inspector.

Young teachers, tell your difficulties to the School Journal—the teachers' friend.

THE NEW REGULATIONS FOR COUNTY MODEL SCHOOLS.

The Minister of Education has issued in pamphlet form the regulations with reference to County Model Schools, which we purpose reprinting in the *SCHOOL JOURNAL* for the benefit of teachers. In glancing over these pages we see much to commend and some few things that are open to criticism. But it will probably be of more service to point out briefly matters needing improvement than to dwell on those which deserve nothing but praise.

First of all, the regulation of 1877 should be enforced which requires for each County Model School a Principal holding a First-class Provincial Certificate. This rule has been held in abeyance for seven years and should now be rigidly carried out in justice to those who have prepared themselves and passed for higher certificates.

The daily register first issued to these schools was a clumsy piece of old fashioned machinery. The new one has been improved and simplified a good deal, but still inflicts a certain amount of useless labor on the Principals, whose energy should be carefully economised for higher purposes than filling up complicated forms of report. In passing, we may remark that a few *words* serve the purpose much better than a long array of *figures* to give an accurate statement of a student's work.

In the next edition it would be well to distinguish more carefully between "observation" and "criticism". The "hints on observation" are, in fact, really points of criticism such as an examiner might require to notice in testing a candidate for a permanent provincial certificate. They are wholly out of place for the tyros who go to the class-room to observe good teaching with the intention of noting what it is and how it is done. Criticism is quite foreign to the purpose of such a visit, and should be strictly prohibited except by the Principal himself. If permitted it will place the student at a wrong stand-point, and effectually prevent that humble, patient, exact observation of all the facts before him which ought to be required at his hands. These young observers are not competent to pass judgment on the matter, method, plan, purpose, and style of a first-rate teaching lesson. If allowed to attempt it they will probably become only still more inflated with that pernicious self-conceit which is a measure of their self-ignorance, and ought to be emptied out of every teacher-in-training as speedily as circumstances will permit. These "hints" should direct the students to observe accurately the precise facts, and to give an exact account of all that takes place before them, including tone, gesture, expression, etc., the minutest details. It will be found on trial that not one in fifty can at first give a complete history of even a short lesson, still less describe the flavor and essence and individuality of the best teaching. It is early enough for criticism after the student has been taught to look patiently until he actually sees what he was sent to observe. To ensure this seeing the Principal should test thoroughly by sharp cross-examination the extent and accuracy of the observations made, and he should be very sparing in his criticisms of the work done by his assistants. If he has an assistant for his own class, and this

should be made imperative, he may observe most of the lessons along with his students, and thus be prepared to correct and supplement their imperfect observation.

The reports by the students of these observation lessons should be chiefly *oral* not written, as the Regulations seem to imply. The memoranda made in the class should be as brief as possible, for while the student is writing his attention is completely diverted from observation, and if his notes are elaborate he will not see more than half the facts of the lesson as it goes on. Full written reports may be assigned as home work, which would give useful practice in composition and enable the Principal to assist the young teachers in the acquisition of good and correct language, one of the most useful things the teacher can possess.

In the reports by assistants of the lessons taught by students, account should be taken of success as well as of failure. If nothing but faults are noted the students come by and by to experience a sort of chill which discourages the more sensitive and renders them unable to exhibit the teaching power they really have. The sunshine of sympathy is necessary above all to bring the flower of good teaching to perfection, and therefore the good points should be reported as carefully as the faults, of which, indeed, the student is often only too painfully conscious. We read:—"Assistant teachers should not be reticent in reporting criticism." This is well, but the words following, "particularly if the work has been badly done," ought to be struck out as calculated to leave a wrong impression. There are the watchful eyes of the Principal and the final examination to weed out incompetents, and assistants are more likely to criticise too harshly than to over-estimate undeveloped teaching power which may very likely soon eclipse their own.

The Regulations indicate that thirty lessons should be taught by each student in the various classes of the school. This is certainly an excessive number for so short a term as thirteen weeks, and some of the time could be better occupied. An hour and a quarter a day for seven of these short weeks is too ambitious, and should not be exacted from any but the very dullest students with little aptitude to teach. Not the number of lessons taught, but the number and sweep of the principles thoroughly wrought into the very fibre of the student's thinking will determine his success in the schoolroom. He will shortly get practice to his heart's content, meantime, a dozen lessons will test his power and reveal his weakness quite as well as thirty or a hundred. Some of this time might be utilized by the Principal in reviewing non-professional work and giving the candidates a *teacher's grasp* of the subjects they will require to handle, and a more thorough study of the best methods of presenting them. The first three Readers might be gone over in course so as to make sure that every candidate could pronounce every word correctly. It is well-known that many teachers mispronounce the words of the first book, such as *of, with, put, full*, etc., and thus propagate their own inaccuracies, while many such barbarisms as "four over five" for four-fifths or four by five, need a careful hand to eradicate. Much time should be devoted to such work and less to practice lessons. Our space will not admit of further remarks at present.

THE NORMAL MUSIC COURSE.

The First Reader furnishes sufficient for the subject of one notice. The book is so faulty that we are more than surprised it should ever have found a place on the authorized list. We are more surprised, however, to find that it is the only book authorized, and that in future, all the musical genius of the school-rooms in Ontario must receive its inspiration from this series. Such a state of affairs seems almost criminal.

If music is to be taught in the Schools of the Province—if it is desired that a love shall be created for the study of this important subject, the object can certainly never be secured by the use of a book such as that before us. We note a few of the points.

1. The whole of the subject matter of the selections was spun from one man's brain. Suppose the compiler of a school reading-book should sit down and try to fill it with his own composition, *written to order*, instead of culling the gems scattered through our English literature? There is a very large literature of children's songs by the best authors. The unavoidable sameness of this book will prove very tiresome.

2. The exercises, and especially the songs, are not very melodious in the ear of childhood, and they are non-educational in respect to the musical ear of the child from the fact that they wander too far from the natural harmonies. Every song, even in the part, has its harmonic foundation; and that supposed harmony, in order to produce the right effect upon the little learner, should be close to the main pillars of the keys.

3. The first reading lessons are written at too low a pitch for the voices of little children. If the key in which they are written is *not to be kept* in their practice it is falsehood to say that they are in that key. (See M. Tomlins in the June "Century Magazine" on Children's Voices.)

4. The early reading lessons are too stiff and mechanical; this sort of exercise is always fatiguing to little learners, and by their tendency to destroy the child's pleasure in singing, keep him from making the progress that might be made by the use of pleasant little song-forms as reading lessons. Their use would be analogous to pronouncing the words in a spelling column instead of those in a sprightly and well constructed sentence. It might be a trial of skill, but not particularly improving to the mind.

5. In the construction of these exercises the laws of musical form have been repeatedly violated. All German writers—and they lead the world in school music—are very careful in regard to this point.

6. The reading lessons have the numerals that point out the place of every note in the scale printed throughout, which takes away the necessity of pupils using their eyes to measure distance upon the staff, an act which lies at the foundation of all proficiency in music reading. To read music by this book the pupil would really have nothing to do with the notations except to observe the shapes of the notes indicating duration.

7. The preface puts forth the claim that the "true educational principle of instruction" as applied to music is the peculiar possession of the authors of this book. The contents of this book fail to justify this pretention. Aside from a few incidentals of instruction, borrowed from the Tonic-Sol-Fa system, the same principles have been applied to music teaching by all our best music teachers ever since Dr. Lowell Mason's day. The elementary music books of thirty years ago contained just as good reading exercises as this, and much better songs.

8. The preface also tells us that the words Tā, Tū, Tē and Tō name the value of sounds in length. As used in this book they do no such thing. Tā and Tē have exactly the same

length. They only name the place of a note in a measure, in the same way as the common counting of time does, which, for this purpose, is simpler and better, and in use by all musicians. The genuine French time-name system is quite a different thing.

9. There is a great multiplicity of exercises without any very apparent aim, and the difficulties, even when overcome, confer a kind of ability which is of much less value to a child than the true development of his musical sensibilities.

10. Mother Goose is all very well for home use, but it is not necessary to keep it before the children during three or four years of their school life. If the *music*, such as it is, of this book is new, the words of the songs are of the most hackneyed description.

11. To construct a good song-reader, that is, a book in which each step of progress is taken by means of a well-constructed little song, is a work of great labor and difficulty; but to bundle together fifty pages or so of exercises in all keys and all sorts of time, mostly without words, has been the make-shift of Cheap Jack singing book makers for years.

12. This book is excellent as it illustrates the advance in the art of paper-making, type-founding, engraving, printing, and book-binding.

HIGHER EDUCATION OF WOMEN.

The announcement is made that the Council of University College have decided to admit women to the ordinary lectures in that institution. This is the most signal triumph achieved by the workers in the cause since the doors of Cornell University were opened some years ago. University College is a state institution, and the applications of the women had in the long run to be dealt with as a matter of public policy. The Legislature having been appealed to, and having expressed a wish that women should be allowed to enjoy the privileges heretofore monopolized by the other sex, there was nothing for it but compliance on the part of the College authorities.

For the benefit of those women who would like a University education but are afraid to venture within university precincts we may state a few facts. In the first place the entrance examination is not difficult—very little more so than the High school intermediate. Then the course, after admission, is extremely flexible, the student being allowed a large number of options so that only one department is, in the case of those who take honors, required for graduation. Now that women are admitted to lectures, suitable accommodation will no doubt be provided, and the necessary supervision of the rooms set apart for female students.

It is to be hoped that women will in increasing numbers attend Toronto, Victoria, and Queen's University Colleges. They are allowed at present to teach in High Schools as assistants, but they cannot become head teachers without taking a degree in arts. There is no reason why they should be so restricted. In fact, several of them are now in their fourth year in Toronto University, and these will probably all take their degree of B.A. next spring, especially since they have been admitted to lectures.

Old teachers, let us hear from you. Write often. Write briefly.

THE NEW PROGRAMME FOR TEACHERS.

The revised programme of studies for teachers, which has just been distributed, presents a very marked contrast to that which it has superseded. Under the old regulations the High Schools (in which almost all our public school teachers are trained) were embarrassed by the undue latitude allowed to candidates in the way of options. The smaller schools in particular found it extremely difficult to arrange their work to advantage, as almost any time-table that could be framed left numbers of students unemployed. The new regulations abolish options altogether. A cast-iron course is laid down for both third and second class candidates, a bonus being added in the case of the latter for work done in music, or Latin, or French, or German. Whilst we believe the old scheme to have been faulty in its "multiplied options," we venture to think that the new one is not without some very objectionable features. Why, for instance, should a bonus be given, for extra work, to second class candidates and not to thirds also? And why refuse to girls the option of taking a more congenial subject in place of Algebra? This option we regard as one of the best features of the old programme, since, while it did not prevent any candidate with a mathematical leaning from taking Algebra, it allowed those to whom the subject was an insurmountable obstacle to develop a taste in other and, at least equally useful directions. We believe this particular option was found to work well everywhere, and we are sure its abolition will be generally regarded as retrograde in its tendency. Again, why is the subject of botany excluded even from the list of subjects for which a bonus is given? This subject has been rapidly growing in popularity in our High Schools. Its advantages as an educational instrument are exceptionally great, and it may be fairly said to fill a place in our school work for which no other subject is so well adapted. The new regulations must inevitably have the effect of undoing any good which may have been accomplished in this desirable field. It is a curious commentary upon the action of the department that, at the very time when the pursuit of this branch of science is being thus discouraged, the High School section of the Ontario Teachers' Association has recommended that Botany and Chemistry should form part of the work of the University matriculation examination. Some other points we reserve for another occasion.

INSTITUTE WORK FOR NEXT YEAR.

We confess to a feeling of disappointment on reading the circular issued by the Minister of Education regarding the Institute work to be done next year. We believe our disappointment will be shared by the great majority of inspectors and teachers in Ontario. We have the fullest confidence in Dr. McLellan's ability to do the work committed to him in a way that will be perfectly satisfactory to the profession, provided he be left free to do it in the way that he deems best. The universal opinion was that the "right man was in the right place," when he was appointed Director of Institutes. Every one expected his appointment to indicate an advance in the

professional training of the vast body of teachers already engaged in training. Too many seem to think that when their Normal School career is ended their training as teachers is finished. In reality it has only been commenced, even by the best Normal School training, and no national system of education can be regarded as complete which does not devote special attention to the continuous culture and training of the entire teaching profession under its jurisdiction.

We expected that, when a Director was appointed, the work of conventions would no longer be allowed to continue in the disconnected, irregular and indefinite way in which it was necessarily carried on without supervision or departmental guidance. We hoped that a brief and carefully selected course of professional reading, as well as a few good books in general literature would be prepared to be read by the teachers of the entire Province each year, and that these or certain parts of them would be taken as the basis of discussion for a portion of the time at the Institute meetings. At the very least we supposed that the subjects to be taken up by the departmental officer at the Institutes would be announced so that all teachers could prepare themselves for taking part intelligently in their discussion.

We are disappointed. None of our hopes have been realized. So far as we can learn from the Minister's circular, the Institute work of the coming year is to be no better, if it is to even be as good as formerly. Dr. McLellan is to attend one half of the conventions. This makes little change. He attended nearly as many before, by invitation of the Associations themselves. The change will be an improvement for Dr. McLellan who is now allowed a well earned release from his High School duties, but the Institutes will not receive much benefit from his appointment if he is merely to be placed on a level with the Inspector of Model Schools in the management of his own department. We do not believe that the country will approve of the course which the Minister of Education apparently intends to pursue, by using Dr. McLellan as an Inspector of Model Schools during a part of the year, and making Mr. Tilley his equal in Institute work. We are quite clear that the Associations to which Mr. Tilley is to be sent would not have invited him voluntarily.

In saying this we express no opinion regarding his fitness for his own work as Model School Inspector.

THE WEEKLY SCHOOL JOURNAL

At the continued requests of numerous inspectors, teachers, and trustees throughout the Dominion, the publishers of the CANADA SCHOOL JOURNAL have decided to apply for a charter incorporating a joint stock company with a capital of \$10,000 for the purpose of issuing the CANADA SCHOOL JOURNAL as a sixteen page weekly paper. It is the intention to divide the stock into 1,000 shares of \$10 each. These shares will be offered to inspectors, teachers and educationists generally. In order, however, to insure as great a distribution of stock as possible, only a limited number of shares will be allotted to any one person. The new paper will be placed under the ablest management that can be secured, and nothing left undone to

make the Weekly Canada School Journal a first-class educational paper, a credit to the teaching profession, and worthy of the support of all intelligent persons interested in the advancement of education.

The subscription price will be one dollar and fifty cents. Specimen copies will be issued about the close of the present year. In the meantime, parties wishing to purchase stock will be furnished with full particulars by applying to the Secretary, Mr. J. L. Robertson, No. 54 Front Street West, Toronto, Ont.

Mathematical Department.

PRINCE OF WALES COLLEGE, P. E. LAND.

MATRICULATION AND SCHOLARSHIP

ARITHMETIC.

THREE HOURS ALLOWED FOR EACH PAPER.

August 19th, 1887.

1. A bankrupt pays 25 cents in the dollar, and the total of his payments amounts to \$8,000. What was his debt?
2. A. bequeaths his property in the following manner:—to B. $\frac{1}{2}$ of it, to C. $\frac{1}{4}$, to D. $\frac{1}{8}$, and to E. the remainder amounting to \$2,600. What was the sum bequeathed?

3. Express as a decimal:—

$$\frac{3\frac{1}{2} + 4\frac{1}{4} - (4\frac{1}{2} \div 3\frac{2}{3})}{3 + \frac{1}{5 + \frac{1}{4}}}$$

4. If the price of gold be 4 guineas an oz., what is the value of a gold ornament weighing 3 oz., of which 18 parts out of 24 are pure gold; allowing 3 shillings and 4 pence per oz. for the value of alloy, and 25 per cent. upon the whole for expense of workmanship? Express the answer in dollars and cents.

5. A fast train leaves Charlottetown for Tignish, a distance of 120 miles at 2 o'clock, and travels at the rate of 25 miles per hour; at what time must a goods train which travels at the rate of 15 miles in 50 minutes, have left so as not to be overtaken by the fast train?

6. A. invests $\frac{1}{3}$ of his fortune in the five per cents at 95., and receives therefrom an annual dividend of \$1,900. He invests the remainder of his fortune in the 6 per cents, and derives thence an income of \$3,800. At what price was the latter stock purchased?

7. A. can do a piece of work in 25 days, B. can do it in 20 days, and C. in 24. The three work together for 2 days, and then A. and B. leave; but C. continues, and after $8\frac{1}{2}$ days is rejoined by A. who brings D. along with him, and these three finish the remainder of the work in 3 days more. In what time would D. alone have done the whole work?

8. If 4 men and 18 boys working together, can do three times as much work per day, as 2 men and 4 boys together, compare the work of a boy with that of a man.

9. The prime cost of an 80 gall. cask of wine is \$200. Five galls. are lost by leakage, and 85 galls. are sold at \$3.50 per gallon. At what price per gallon ought the remainder to be sold, so as to gain 50 per cent. upon the whole original cost?

GEOMETRY AND ALGEBRA.

1. Prove that the sum of the three angles of any triangle is equal to two right angles; and, thence, that the angles at the base of an isosceles right angled triangle are each equal to half a right angle.
2. If any angle and its supplement be bisected, the bisecting lines are at right angles to one another.
3. The secant which falls upon two parallel lines makes the alternate angles equal to one another.
4. If the square described upon one side of a triangle be equal to the sum of the squares upon the two other sides, the triangle is right angled.

5. Prove that if the straight line which bisects the vertical angle of a triangle, also bisects the base, the triangle is isosceles.
6. Simplify :-

$$2 \left\{ 3a - 2(b-3c) \right\} - 4 \left\{ -2b - 3(2c-a) \right\} + \left\{ c - 3(-b-2a) \right\}$$
7. Divide $1 + 2x - 19x^2 + 16x^3$ by $1 + 4x + 7x^2 + 10x^3 + 13x^4 + 16x^5$.
8. Divide $x^3 - 2ax^2 + (a^2 - ab - b^2)x + ab(a+b)$ by $x - (a+b)$.
9. Resolve into elementary factors :-
 $5x(x^2 - y^2) + 3x(x - y)^2 - 12x(x - y)y$, and $12x^2 - 31xy + 20y^2$.
10. Solve the following equations :-
 (a) $a(x - b) = b(a - x) - (a + b)x$.
 (b) $\frac{1}{2}x - \frac{1}{3}(8 - x) - \frac{1}{4}(5 + x) + \frac{1}{5} = 0$.
 (c) A man and his wife could drink a barrel of beer in 15 days. After drinking together for 6 days, the woman alone drank the remainder in 30 days. In what time would either alone drink it?

EDUCATION DEPARTMENT ONTARIO, JULY EXAMINATIONS, 1884.

ALGEBRA.

SECOND CLASS TEACHERS.

Examiner—J. C. Clashan.

1. Show that $(x - y + z)^5 - x^5 - (y + z)^5$ is exactly divisible by $x(y + z)(x + y + z)$.
2. Write down the factors of $x^3 - (a + b + c)x^2 + (ab + bc + ca)x - abc$, and apply your result to obtain the factors of
 (a) $(a + b + c)(ab + bc + ca)x - abc$;
 (b) $2(a + b + c)^3 + (a + b + c) \{ a(b + c) + b(c + a) + c(a + b) \} - (a + b)(b + c)(c + a)$.
3. If $3x = 2(q + r) - p$, $3y = 2(r + p) - q$ and $3z = 2(p + q) - r$ then shall $x^2 + y^2 + z^2 = p^2 + q^2 + r^2$ and $xy + yz + zx = pq + qr + rp$.
4. If $\frac{ax}{b-c} = \frac{by}{c-a} = \frac{cz}{a-b}$ then shall $ax + by + cz = 0$, and $a^2x + b^2y + c^2z = 0$.
5. If $a = -\frac{1}{2}(1 + \sqrt{-3})$ then shall $\frac{1}{a} = -\frac{1}{2}(1 + \sqrt{-3})$, and $a^3 + \frac{1}{a^3} = 2$.
6. Solve—
 (a) $\frac{4}{x-1} - \frac{1}{x-4} = \frac{9}{x-2} - \frac{6}{x-3}$;
 (b) $\left(\frac{x}{a} + \frac{x}{b} - 1 \right) \left(\frac{x}{a} - \frac{x}{b} + 1 \right) + \left(\frac{x}{b} + \frac{x}{c} - 1 \right) \left(\frac{x}{b} - \frac{x}{c} + 1 \right) + \left(\frac{x}{c} + \frac{x}{a} - 1 \right) \left(\frac{x}{c} - \frac{x}{a} + 1 \right) = 1$;
 (c) $(2x^2 - 2x + 1)^2 = (x - 2)^2$.
7. Solve the simultaneous equations—
 $x^2 - y^2 = xy + 1$, $x^2 + y^2 = 2(xy + 2)$.
8. A boy spends his money in oranges. Had he got five more for his money they would have averaged a cent each less, but had he got three less they would have averaged a cent each more. How much did he spend?
9. Find a number such that if it be divided into any two parts whatsoever, the square of one of these parts added to the other part will be equal to the square of the latter added to the former.

SOLUTIONS. - 1. Put $x=0$, and we have $(y+z)^5 - (y+z)^5 = 0$. Put $y+z=0$, and we have $x^5 - x^5 = 0$. Put $x+y+z=0$, i. e., $y+z=-x$, and we get $0 + (y+z)^5 - (y+z)^5 = 0$.
 $\therefore x, y+z$, and $x+y+z$ are factors.—SEE TEACHERS' HANDBOOK, p. 48.

2. $(x-a)(x-b)(x-b)$.—SEE HANDBOOK, p. 10, 4, Bk.
 (a) Comparing this with the given expression we see that x corresponds to $a+b+c$, and that the first two terms vanish when we substitute $a+b+c$ for x in the first expression. Hence $(a+b+c-a)$, $(a+b+c)-b$, $(a+b+c)-c$, or $(b+c)(c+a)(a+b)$ are the factors.
 (b) For $(a+b)(b+c)(c+a)$ substitute the expression in (a), and we get

$$2(a+b+c)^3 + 2(a+b+c)(ab+bc+ca) - (a+b+c)(ab+bc+ca) + abc$$
 or, $(a+b+c)^3 + (a+b+c)(a+b+c)^2 + (a+b+c)(ab+bc+ca) + abc$. Comparing this with $x^3 + (a+b+c)x^2 + (ab+bc+ca)x + abc = (x+a)(x+b)(x+c)$, we see that the factors must be
 $(a+b+c)+a$, $(a+b+c)+b$, $(a+b+c)+c$
 or, $(2a+b+c)(a+2b+c)(a+b+2c)$.
3. Adding we have $x+y+z=p+q+r$. (A)
 Squaring (1), (2) and (3), and adding, we get
 $x^2 + y^2 + z^2 = p^2 + q^2 + r^2$ (B). Squaring (A) and comparing with (B) we have $xy + yz + zx = pq + qr + rp$.
4. $\frac{ax}{b-c} = \frac{by}{c-a} = \frac{cz}{a-b} = \frac{ax+by+cz}{0}$.
 $\therefore ax + by + cz = 0$.—SEE HANDBOOK, p. 123.
 Again $\frac{a^2x}{a(b-c)} = \frac{b^2y}{b(c-a)} = \frac{c^2z}{c(a-b)} = \frac{a^2x+b^2y+c^2z}{0}$.
 $\therefore a^2x + b^2y + c^2z = \{ a^2x + a(b-c) \} \times 0 = 0$.
5. Invert and rationalise, and $\frac{1}{a} = -\frac{1}{2}(1 + \sqrt{-3})$
 Adding, we have $a + \frac{1}{a} = -1$, cube by formula 6,
 $\therefore a^3 + \frac{1}{a^3} + 3(a)(\frac{1}{a})(-1) = (-1)^3 = -1$; $\therefore a^3 + \frac{1}{a^3} = 2$.
 —SEE HANDBOOK, p. 11.
6. (a) Add each side separately, and
 $(3x-15) \div (x^2-5x+4) = (3x-15) \div (x^2-5x+6)$,
 $\therefore 3x-15=0$, or $x=5$, one solution.
 Also $x^2-5x+4=x^2-5x+6$,
 or $x-5+\frac{4}{x}=x-5+\frac{6}{x}$, i. e. $\frac{4}{x} = \frac{6}{x}$.
 Now this can only be true when x is endlessly increased, so that $\frac{4}{x} = 0$. Hence $x = \infty$ is the other solution.
 (b) 1st product = $\left\{ x \left(\frac{1}{a} + \frac{1}{b} \right) - 1 \right\} \left\{ x \left(\frac{1}{a} + \frac{1}{b} \right) - 1 \right\}$
 $= x^2 \left(\frac{1}{a^2} + \frac{1}{b^2} \right) + \frac{2x}{ab} - 1$, Hence by symmetry,
 2nd “ = $x^2 \left(\frac{1}{b^2} + \frac{1}{c^2} \right) + \frac{2x}{bc} - 1$
 3rd “ = $x^2 \left(\frac{1}{c^2} + \frac{1}{a^2} \right) + \frac{2x}{ca} - 1$
 Sum = $2x \left(\frac{1}{a} + \frac{1}{b} + \frac{1}{c} \right) - 3 = 1$
 $\therefore x = 2 \div \left(\frac{1}{a} + \frac{1}{b} + \frac{1}{c} \right) = 2abc \div (ab+bc+ca)$.
 —SEE HANDBOOK, Chap. II., Symmetry.
 (c) $2x^2 - 2x + 1 = x - 2$, or $-x + 2$.
 $\therefore 2x^2 - 3x + 3 = 0$; or $2x^2 - x - 1 = 0 \therefore x = \&c$.
7. From (2) $x-y = \pm 2 \therefore x = y \pm 2$, \therefore from (1)
 $(y \pm 2)^2 - y^2 = (y \pm 2)y + 1$;
 or $y^2 \pm 4y + 4 - y^2 = y^2 \pm 2y + 1$, i. e. $y^2 \mp 2y - 3 = 0$
 $y = \pm 3, \pm 1, x = \pm 5, \pm 3$.
8. Let $x =$ No. and $y =$ price each $\therefore xy =$ amount spent, and $(x+5)(y-1) = 2y = (x-3)(y+1)$, $\therefore x=4, y=15, xy=60c$.
9. Let $x =$ No. and a and b the parts.
 $\therefore x = a + b$; and $a^2 + b = b^2 + a$, i. e. $a^2 - b^2 = a - b$;
 or $(a+b)(a-b) = a - b \therefore a - b = 0$, or $a = b$ one solution.
 Also $a + b = 1 = x$, another solution. The first solution requires the parts to be equal and does not apply to the problem.—ANS. 1.

Teachers, read our special offer. The Journal will only cost you 25 cents for a year.

Correspondence

To the Editor of THE CANADA SCHOOL JOURNAL.

SIR,—Next to "less noise" and "stop that" by the irritated teacher, and "please ma'am, may I leave my seat," by the juvenile mortals, there is no cry so often heard, no complaint so pathetically uttered in the primary school as "I have no pencil," or an answer not unfrequently given to an inquiry made concerning that necessary article, "I ain't got none." How shall I remedy the evil, is the problem that vexes me. Has it been solved by elder members of the fraternity? If so, I trust some knowledge on the subject will be imparted through the columns of the JOURNAL—our mutual friend, who seems never weary of helping us.

It was the first cry that greeted my entrance to the profession, and a bright idea struck me, which I forthwith put into action. The next morning, as I entered my school domain, armed with a dozen slate pencils, "Surely," thought I, "these broken each into four pieces will begin a bank to which one can resort in case of an emergency." Accordingly, these with all that could be found in possession of the juveniles, were placed in an empty chalk box, and deposited on the teacher's desk, there to be kept when not in use. But in a remarkably short time they all came back (?) missing, and pencils were again in demand. Not foiled by this failure, my quick perception fell upon another plan. What I now proposed with the air of one who seeth not the end from the beginning, was that each pupil should come with a pencil, unmistakably his or her own, and have that attached to its respective slate by a string long enough to admit of use. This, I thought a capital idea. To add to my composure, my charges seemed pleased too with the new plan, and on the morrow, nearly every desk was supplied as I had suggested. The next morning, mute astonishment met me with the following facts:—

"No. one's pencil, slate and string were missing; No. two's pencil broken; No. three's string broken, and pencil gone; No. four's pencil missing, etc. 'Alas!' thought I, 'plans were made in vain.'"

I suggested no more ideas on the pencil question, and have since been laboring to make the best of a bad bargain. Pencils are still wanted, and I am still in a dilemma how to supply the need.

Another question that at first caused me anxious thought but with which I have had better success, is the "Drinking Question." Not to teach children to drink *scientifically*, or *aesthetically*, but to quench their thirst at a proper time, and to suppress the desire "to go and do likewise," which is naturally prompted by the act of one.

I hope my letter is not wearying you, and I will show how I have made my plan serve a double purpose.

It would probably not be at all necessary, and perhaps not wise to adopt in a small-sized school. But take a primary department of 45 or 50, between the ages of five and twelve, and me thinks it would require one with more patience than Job, and more meekness than Moses, to even hear (to say nothing of satisfying) the cry, perhaps three times daily from each one, "Please may I have a drink!" "Have the pail carried around," advises one. This seems to me the worse evil of the two. It takes not only the time of the carrier, but that also of all those within a square of two yards of him. And that time of the teacher is better employed by watching the proceedings, for with her back turned, it affords an excellent opportunity for genuine fun, especially when the dipper leaks, as is, in fact, generally the case. I have step by step perfected my method, which is on this wise:—Allow no asking for a drink. At the close of each class, while it still stands, pass a drink to each one who has a perfect lesson, or one that is comparatively (?)

so. In this way every person that deserves it, has, in a short time, had the privilege of drinking, and no confusion has thereby been occasioned.

ACADIAN SCHOOL MA'AM.

Orangeville, Ont., Sept. 1st, 1884.

Messrs. W. J. Gage & Co., Toronto, Ont.

DEAR SIRS,—I am studying algebra and have before me your 8th Canadian Copyright Edition, new revised, of Hamblin Smith's Elementary Algebra, and in Examples cxvii., Problem 20, Page 225 of this work I find

$$\frac{x}{x-7} \left\{ \sqrt[18]{(3p^2x^3 - 63p^2x^2 + 441p^2x - 1029p^2)} \right\}$$

given and on page 38 I find the answer to the same to be $x^{\frac{1}{3}}(3p^2)$. I can arrive at this answer only by substituting $\frac{1}{3}(3p^2x^3 - 63p^2x^2 + 441p^2x - 1029p^2)$ for $\sqrt[18]{(3p^2x^3 - 63p^2x^2 + 441p^2x - 1029p^2)}$. Thinking that this is an oversight on the part of the printer I have made bold to pen you this "epistle," hoping to do you a favor, and if I am in error I would be much pleased to be so informed, and hope to remain

Yours respectfully,

W. A. FERGUSON.

[NOTE.—The question should read

$$\frac{x}{x-7} \left\{ \sqrt[6]{(3p^2x^3 - 63p^2x^2 + 441p^2x - 1029p^2)} \right\}.$$

The exponent 6 has been broken off the stereotypè plate. The answer is then correct.—*Mathematical Editor.*

THE NEW PROGRAMME.

To the Editor of THE CANADA SCHOOL JOURNAL.

SIR,—The new programme of studies for third and second class teachers will inevitably produce some serious changes in the general work of the High Schools. Every one acquainted with the schools knows that this programme shapes the work of all schools outside the larger cities. That being so, it follows as a matter of common sense:—

First, that no new programme, involving serious changes in classification should come into force in less than two years after its publication. To spring a new programme upon the schools at the beginning of the school year, and to demand that its provisions be carried out within the year is an outrage. What interest was suffering so seriously that this curriculum must needs come into force at once?

Second, that the experience of the past should afford some sort of guidance. Every teacher knows that the average girl is not as good a mathematician as the average boy. Why then insist on forcing girls through the same mathematical curriculum as boys are compelled to take? Some years ago when Algebra was compulsory on girls, fifty per cent. at least failed regularly on the mathematical group. Why bring back that disastrous state of affairs?

Third, that the interests of pupils who do not intend to take the teachers' examinations should be carefully looked after. Nearly every girl wishes to study French, a large proportion of the boys take Latin. The new programme makes so many things compulsory that it threatens to banish the languages from the schools. For the second class examination there are sixteen compulsory subjects. In most schools there are not more than eight divisions of time in the day. Assuming that the lessons of Monday, Wednesday and Friday are on the same subjects, and likewise those of Tuesday and Thursday, it will be seen at once how injuriously the interests of all who wish to study languages will be affected, especially in schools where the staff is small. The programme as it stands bears

on the face of it signs of a complete surrender to public school influences. Is it necessary to say that the High Schools are not intended primarily to train teachers?

Fourth, that the High School masters should be fully consulted before a new programme is issued. It is an act of folly, if not worse to keep the masters in the dark until the programme is finally issued. Why was not this curriculum placed before the High School section of the Ontario Teachers' Association? Their opinion is surely worth something. The Minister of Education professes to have great respect for the deliberately expressed conviction of the teachers. He has taken in the present case a most extraordinary means of showing it.

Fifth, that those who have entered upon a certain course in good faith should be permitted to finish it, without any serious change in their work. What justice is there in withholding the language bonus from those who intend to try the third class examination? Why should those girls who have taken up some subject instead of Algebra not be allowed to finish as they began? It is a piece of cruelty to keep them at school two years more for this reason alone. It is quite certain that many will fail to get up the Algebra within the time, who would pass well on the optional subject.

J. M. HUNTER.

Special Articles.

GRADUATE THE BOYS.

BY FRANK W. GOVE.

We speak, now, of the boys who are enrolled as regular pupils in the schools of Illinois, until they reach the grammar grade, and then part company with school forever. Whose fault is it, and how shall we remedy the evil? Though the teacher may not be responsible this wholesale desertion by the boys, it lies within his province to check the unfortunate stampede from school life,—unfortunate to the boys, because they are too young to realize their error, and unfortunate to the State, because the boys of to-day will rule the nation to-morrow. We shall not discuss the courses of study pursued throughout our schools at this time, for we think that the small-per cent. of boys in the graduating classes is not caused by the particular line of work prescribed. In the main, the courses of study are what is needed, for no amount of "tinkering" so far as our observations go, has brought the millenium in attendance, that is so anxiously desired. There is an occasional cry for the practical, among those who think we ought to make the tradesman at the expense of mental training. But this class is in a small minority, and can never affect our schools to any great extent.

Poverty is often presented as an excuse for absence, but it is used to shield too many who might, with earnest effort and a due amount of grit, work their way through school to the glorious end. In some cases it is absolutely necessary for the boy to leave the school room to support himself and mother but the fact is that he more often leaves school to engage in business that he thinks will bring him immediate return, and trusts to chance for the future. With no stock in trade but a beardless chin, he grasps for a fortune years before he can vote, and, too young to manage any business, drifts about the world. Perhaps he succeeds. Many boys do; what then? Enjoy himself in his ignorance! The world has no charms for him, save the acquisition of wealth, and he has no pleasure in life, except from without. He possesses no elements within his nature by which he has power to be happy, such as he might have met with a well trained and cultured mind. But perhaps he may not have prospered, and at the age of twenty-five he finds

himself with no more than when he started, and worst of all, with only the first elements of an education. Too late, he has come to realize that an education alone is enduring. The majority of men do not disagree on this question, but boys are boys, and by the hundred they are falling out of the ranks of school every year, just for an experiment. Isn't it time that mature judgment should come to the rescue, and with the support of the educated men and women of this age, call a halt in these rash decisions of early youth, and insist on boys remaining in school long enough, at least, to complete the course of the public graded school? If this evil is checked at all, it must be accomplished by a united effort of teachers and parents. Strike at the root of the evil and boldly assert and maintain by argument the solid fact, that boys must be educated if they expect to keep apace with our fast progressing civilization. Examples of ideal Americans, whose lives are brought so prominently before our nation as to be familiar to us all, are not wanting. The fact that an occasional inventor, who had little school drill, has risen to the pinnacle of fame, is indeed poor incentive for a boy of twelve or fifteen years of age to leave his school work, one, two, or three years before he has completed his regular course. Fifty years ago, yes twenty-five years ago, no such advantages were afforded for school discipline as every boy now has, and if he hopes to compete with his associates, he should be taught now that his work must be done to the end. Just so sure as our American boys fail to prepare themselves for statesmen and scholars, just so sure will our laws be framed and executed by foreigners of higher educational ability and more thorough mental discipline. The boy who can make his mark without school drill is just the boy who ought to remain in school until the very last, equipping himself most generously for the active duties of life. America has great need of such men. But it is not a question what we think. The boy must be reached, and his action governed, or, at least, tempered by the influence of his seniors. In addition to the first principles of the common branches, he must be taught that hard work and persistent effort are the only means by which he can accomplish any work honorably; that a thorough mental training will alone fit him for the duties of man in the next generation or admit him to the best circles of society; that an American is not born great, but with full and untrammelled liberty to become so, if he will profit by his advantages; that *worth* not chance, makes the man, and last, that money is a means, not an end. The right sort of teachers, with their shoulders to the wheel, can soon persuade the boys of to-day, that aside from the inward satisfaction of a good common school education, the advantages are all in favor of securing it simply on financial grounds. And this must be done, for the boys seem determined to leave school and we can expect nothing better until they are persuaded that their judgment is in error.

The truth is that the boy who carries a diploma with him, certifying his honorable completion of the regular course in the public schools, bears also the evidence that he has pluck, perseverance, and ability,—especially is this true of a public school diploma which represents the honest effort of many years, and hence the importance to every boy of securing it. The time is already at hand when such boys are at a premium. The average boy of to-day brings no certificate with him, except that he lacks moral character and moral courage to remain in school the proper time, and upon this showing, seeks employment in the crowded avenues of trade. The signs of the times betoken a demand for more thorough men, and no man can be an expert specialist, until he has first mastered such a general education, at least, as is embraced in our public schools.

We remarked at the beginning that teachers, perhaps, were not at fault, but the people naturally look to the teachers to make

These "observations" should be submitted to the Principal for consideration during the "criticism hour," who will find ample material in the notes made, and in the discussion of the more theoretical part of the course, such as "management, discipline, organization, etc., to occupy all the time at his disposal.

SECOND SECTION OF TERM—THREE WEEKS.

Observation and Class Teaching.—During this section of the term one-half of each day should be spent by the students in the Model School room:—

1. In observing class teaching by the Principal.
2. In class teaching before the Principal and their fellow students.
3. In criticisms. During the "criticism hour" the students should be required individually to read their notes with reasons, and all should be encouraged to express their opinions freely, the Principal directing the discussion and closing the criticisms.

During the second half of the day the students should be engaged in observing teaching in the different rooms and in taking notes. In order to secure uniformity and definiteness, the following form is recommended:—

Report of lesson on

Taught by

The faults most worthy of notice were:—

1. Your position
2. The plan of lesson
3. Your management
4. Your Language was
- for instance
5. In energy you
6. Your mode of questioning was
- for instance

Besides the above, other matters worthy of criticism should be reported.

Date..... Assistant Teacher.....

The assistant teacher should make entries on the *form* during the progress of the lesson, and at the close hand it to the student teacher, who should hold himself ready to be criticised on the points noted, by the Principal, whenever necessary. The marks assigned by the assistant teacher for the lesson should be given immediately after the lesson is concluded, and may be communicated to the student teacher, at the option of the Principal. All lessons should be assigned to the student teachers by the Principal, on consultation with the assistants in whose rooms the lessons are to be taught, and a record kept of each lesson in the Training Register, so as fairly to afford equal practice in every subject in the Public School curriculum.

THIRD SECTION OF TERM—SEVEN WEEKS.

I. Teaching by Students in the Divisions.—The student teacher having already seen the Principal teach a number of subjects; having taught the subjects himself under the direction and criticism of the Principal; having observed how classes are taught by the assistant teachers; and having some idea of the "matter" and "method" of a lesson, should now be able to take charge of a class in the subjects already illustrated. As preliminary to this step, the lesson to be taught should be assigned the previous day, and thoroughly prepared. The assistant teacher, with whose class the student is entrusted, should leave him as much as possible to his own resources, and should take notes for subsequent entry in the Training Register. Assistant teachers should not be reticent in reporting criticism, particularly if the work has been badly done. The criticism should be *thorough, definite, just and kind.*

II. Number of Lessons to be taught by Students.—It is desirable that not less than thirty lessons shall be taught by each student. By the course suggested, at least seven weeks will be available for teaching in the different divisions. Taking twenty students as the average number in a Model School, and allowing one half-hour lesson per day to each student, we have ten hours per day for teaching by the student. Taking four divisions as the number used for Model School purposes, with a senior and junior section in each division, we have eight classes for ten hours of teaching, or an average of one hour and a quarter for each class during each day for seven weeks. When the number of students exceeds twenty, more than four divisions should be used if possible. The students should be properly distributed among the different rooms, and while one teaches, the others will observe and take notes. Lessons by students should not immediately follow each other. It is also strongly recommended that the students assigned to a division should remain a week in one room. By this means the corrections made by the assistant teachers will be more effective, the students and the pupils will become better acquainted, there will be less change, and consequently the regular work of the division will be less disturbed.

FOURTH SECTION OF TERM—ONE WEEK.

Review and Examination.—Students should not be required to do any school work during this week, but should be allowed to review the work of the term.

LECTURE I.

Characteristics of a Good Teacher.

I. Mental Characteristics.

1. Professional spirit.—2. Sympathy.—3. Tact.—4. Earnestness.—5. Energy (not demonstrative).—6. Enthusiasm.—7. Hopefulness.—8. Patience.—9. Watchfulness.—10. Definiteness.—11. Thoroughness.

II. Characteristics of Manner.

1. Quietness.—2. Cheerfulness.—3. Calmness.—4. Self-possession.—5. Uniformity of temper.—6. Politeness.—7. Kindness.

III. Habits.

1. Speaking in a low tone.—2. Orderliness.—Punctuality.—4. Cleanliness.—5. Neatness.

LECTURE II.

Primary Reading.

I. There are two steps in learning to read well:—

- (a) Word recognition.
- (b) Expressive reading.

II. Methods of teaching reading.

1. Expressive reading can only be taught to junior pupils by giving them good examples for imitation. It should be taught to senior pupils by giving them proper rules for pausing, emphasis, inflection, etc.

2. Word recognition may be taught by either of the following methods:

- (a) The alphabetic, or naming method.
- (b) The word, or "Look and Say" method.
- (c) The phonetic method.
- (d) The phonic method.

3. The alphabetic method has been generally discarded, because in most cases the names of the letters in a word are in no sense suggestive of the sound of the word itself. The only plea urged for its use is that it teaches spelling, by compelling pupils to spell words

With sufficient encouragement from our friends among the teachers we are ready to issue the Journal as a weekly. Help.

before naming them. It does this only to a limited extent, and in direct opposition to the recognized rule that spelling should be taught by reading, instead of trying to teach reading by spelling.

4. The phonetic method requires a new alphabet with a letter to represent each sound in the language, and is therefore impracticable with our present alphabet.

5. The word, or "look and say" method gives the name of the whole word to the pupils. The objections to its use are:—

(a) It depends too much on the memory.

(b) It does not make the pupils do independent work soon enough.

(c) The pupils can make very little, if any, use of knowledge already gained in acquiring more.

(d) It makes the pupil a receptive rather than a constructive agent.

(e) It does not compel such scrutinizing inspection of words as to lead to correct spelling.

6. If the English alphabet had but one sound for each letter and only one letter to represent each sound, the phonic method alone would be the best plan for teaching children to recognize new words. It gives the pupil the sound of the letters and trains him, first, to combine these sounds to form words; and secondly, to recognize new words by sounding the letters which form them.

7. To avoid the mental confusion of children, teachers should use a perfectly self-consistent alphabet, with only one sound for each letter, during the first five or six weeks of a child's experience in learning to read. By using the short sounds only of the vowels a very large number of words may be formed.

8. The Phonic, combined with the word method, will be found to lead to the best results in teaching word-recognition.

III. *General Suggestions.*

1. Use slates and the black-board in teaching reading from the beginning.

2. Let the pupils write script from the first.

3. Only teach the sounds of letters as they are used. It is a great mistake to teach the alphabet as a whole, either by names or sounds, before putting these to a practical use.

3. Pupils should not be allowed to try to read a sentence until they know all the words it contains.

5. Simultaneous reading should only be allowed when the pupils are imitating the teacher, or when they are reciting something that has been committed to memory.

6. Bright pupils are certain to engross most of the teacher's attention so long as they are in the class. Dull pupils should get most teaching. In order to secure this result, when the new work of a lesson has been taught give review test words or sentences, and let those who read them first go to their seats and work there.

7. Backward pupils rely on those more advanced to lead them, and it is of the utmost importance that they should be compelled to make independent efforts. It is therefore very much better to let the pupils whisper the new words or sentences to the teacher after he has written them on the black-board.

8. Pupils should be required to do a great deal of word-building. The following are illustrations of an infinite variety of problems which may be assigned to them:—

(a) When they know the sounds of at, in, ing, on, etc., let them make as many new words as possible by prefixing letters to them.

(b) Give them two consonants, one for the beginning and the other for the end of a series of words, and let them form words by writing vowels between them.

(c) Give a single consonant, and let the pupils form as many words as they can, beginning or ending with it, and containing the number of letters fixed by the teacher.

(d) Write a certain number of letters on the black board and let the pupils form as many words as possible by using only these letters.

(e) If the word method be used it is a good plan to set the pupils to count at their seats how often certain words occur on a certain number of pages.

8. Lessons in reading to primary classes should be brief and lively. Two fifteen minute lessons are much better than one lasting half an hour.

10. Vary the method of conducting the lessons as much as possible.

11. In order to correct or prevent the habit of sounding "e" and "the" separate from the words following them, let the pupils first use them in speaking of some object held by the teacher. He holds up a book, for instance, and the pupils say correctly and naturally "a book," or "the book." They will do so without fail. Then these words should be written on the black-board, and repeated by the class, the teacher pointing alternately to the object and to the written words. It is also a good plan to join such words, as well as adjuncts, by bracketing them when they are written on the black-board.

SYLLABUS OF LECTURES AND REGULATIONS FOR THE ORGANIZATION AND MANAGEMENT OF COUNTY MODEL SCHOOLS.

Approved by the Lieutenant-Governor in Council, August 14th, 1884.

LECTURE VI.

Spelling.

I. *How Spelling is Learned.*

1. Pupils learn to spell through the eye.
2. Correct spelling depends upon seeing with precision.
3. Spelling is learned through reading.
4. The ear may aid in spelling words spelled phonetically, but the eye alone is the best means of learning to spell. (Deaf mutes spell accurately.)

II. *How Spelling is Taught.*

1. As correct spelling depends on accurate seeing; the great aim of the teacher should be to train the pupils to look definitely at all parts of the words.
2. Young pupils should copy largely from primers and from the blackboard.
3. Transcription is the best means for committing a spelling lesson to memory, as it compels the most careful scrutinizing examination of the words.
4. Pupils should never see words incorrectly spelled.

III. *Testing Spelling Classes.*

1. There are two methods, oral and written. (Although spelling is to be learned through the eye, a knowledge of spelling may be shown orally.)
2. As spelling has to be used practically by writing words, it is undoubtedly best to test spelling classes by making them write the lessons assigned.
3. Writing a word impresses its form much more than spelling it orally.

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IV. *Examining Spelling Lessons.*

1. In review lessons and in small classes the teachers should correct the lessons.
2. Pupils may exchange slates, and mark the words wrongly spelled, the teacher spelling the words slowly.
3. Pupils may retain their own slates, and the teacher may call on different pupils to spell the words orally. Those who agree with the spelling given must indicate this by raising their hands before the teacher decides as to its correctness.
4. Slates may be exchanged and the corrections made as in No. 3.
5. While the teacher writes the correct spelling on the black-board, each pupil may correct his own work, and slates or books will then be exchanged for revision only.

NOTE.—In all cases when slates are exchanged the pupil owning the slate should have the right to appeal against the marking done by his neighbour.

V. *Correcting Errors.*

1. Each pupil should write the words he misses five times to impress their correct forms on his memory.
2. It is better that he should write these words once a day for five days than five times on the same day.
3. He should keep a list of his errors at the end of his dictation book, and copy it occasionally.
4. From these lists the teacher should prepare review lessons.

VI. *General Suggestions.*

1. The teacher should articulate clearly and pronounce correctly when giving words for spelling.
2. Only one trial should be allowed in oral spelling.
3. In oral spelling the divisions into syllables should be marked by a slight pause.
4. Spelling should be taught to a considerable extent by means of composition, in order to give pupils practice in spelling their own vocabularies.

LECTURE X.

*History.*I. *Aim in Teaching History.*

1. To show the nature and value of historical knowledge.
2. To guide pupils in finding its treasures.

II. *Method of Teaching History.*

1. Topical better than chronological.
2. Classify events in connection with the great departments of national life, instead of associating them merely with the reigns of monarchs.

3. Topics: Dr. Arnold suggests, "race, language, institutions and religion." The history of most countries may be subdivided into (a) wars, civil and foreign; (b) the constitution; (c) the church; (d) progress of the people, commercially, socially, educationally; (e) literature; (f) notable people.

III. *Plan of Teaching History.*

1. In one lesson give a general sketch of the whole history to be taught, and divide it into its great development periods, fixing the date of the commencement of each period.
2. Teach the history of each period, beginning with the first.
3. Teach independently the events connected with each topic.
4. Sketch the history connected with each topic successively through all the periods, after having taught each period independently.

5. Show the advantages of this plan (a) in giving connected ideas regarding the progress made in each department of national life, (b) in facilitating the remembrance of historical facts in their relation to their effects; and (c) in affording natural and incidental reviews of the history already taught.

IV. *Training Pupils to Study History.*

1. This is the most important of the teacher's duties in dealing with this subject. History should be learned chiefly after school life has ended.
2. Assigning lessons wisely is the means for training to study.
3. Do not assign answers (notes) to be committed to memory.
4. Assign questions, and let pupils prepare answers by reading their histories.
5. All questions should not relate merely to isolated facts or dates.
6. They should compel a comparison of facts and exercise the pupils' judgment.
7. A good outline or plan of the lesson is better than questions for advanced classes.

V. *General Suggestions.*

1. Chronology is not history.
2. Epoch men and women should receive a large share of attention.
3. Striking scenes and great events should be vividly pictured to awaken interest.
4. Pupils should write historical abstracts and biographical sketches for compositions.

Examination Questions.

LINDSAY PUBLIC SCHOOLS.—PROMOTION EXAMINATIONS, JUNE 1884.

LITERATURE.

THIRD CLASS JUNIOR.

Readers may be used.

- 1.—Page 13, Lines 7 to 26.
 - (a) Explain: canals, autumn, solitary, lazy, perceived, herbage, perceptible, distinctly, injunction, ravine, regain, beach.
 - (b) Why could he not distinguish between the blue and the green?
 - (c) What was the father's injunction?
- 2.—Page 70-71, Canadian Boat Song.
 - (a) Give the meaning of:—tolls, chime, rapids, unfurl, surges.
 - (b) When would the woods look dim?
 - (c) What is the difference between "him" and "hymn"?
 - (d) Explain, "the daylight's past."
 - (e) Who was Thomas Moore?

GRAMMAR.

THIRD CLASS JUNIOR.

- 1.—Give the Part of Speech and relation of the words printed in italics: *The first forenoon was the longest I ever spent.*
- 2.—What is the difference between a Proper and a Common Noun?
- 3.—What is a Verb? a Pronoun? an Adverb?
- 4.—Correct: All the boys at school likes to play sometimes.
Is the boys playing right?
We ain't going to school to-morrow.
He don't know nothing.
Many men grows older but not better.

GEOGRAPHY.

THIRD CLASS JUNIOR.

- 1.—How could you tell the cardinal points in the day-time?
- 2.—Name all the townships of the County of Victoria.
- 3.—In what townships are Omamee, Woodville, Fenelon Falls, Bobcaygeon and Kinmount?
- 4.—Name the southern point of Europe, Asia, Africa, South America and Australia.
- 5.—What and where are Florida, Biscay, Orange, Hoang-ho, Bon.

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COMPOSITION.

THIRD CLASS JUNIOR.

- 1.—Tell what you know about any game you play.
- 2.—Make sentences each containing one of the following words : their, seen, were, Canadian, too.
- 3.—Correct : The queen of england she lixes in london. Was you going there ? John dont know his lessons. He aint here yet.

ARITHMETIC.

THIRD CLASS JUNIOR.

- 1.—Divide 24689753 by 987.
- 2.—Write in Roman Notation 49, 194, 1884
- 3.—A lady having 312 dollars, paid for a bonnet 20 dollars, for a shawl 75 dollars, for a silk dress 97 dollars, and for a fur coat 83 dollars : how much had she remaining ?
- 4.—Add together the following quantities : \$729.43, \$16.70, \$976.81, \$9987.17, \$429.00 and \$129.19.
- 5.—In 7 weeks, 6 days, 23 hours, 59 minutes, how many seconds ?
- 6.—Multiply 74625983 by 9876.
- 7.—Write down in figures, seventy millions, sixty thousand, and fifty-five.
- 8.—Find the cost of the following goods :

| | |
|---------------|---------------------|
| 3 lbs. of Tea | at 65 cents per lb. |
| 4 " Raisins | at 12 " " |
| 12 " Rice | at 5 " " |
| 13 " Ham | at 16 " " |

LITERATURE.

THIRD CLASS INTERMEDIATE.

Readers may be used.

- 1.—Page 165.
 - (a) What is meant by :—firmament, spacious, ethereal, un-wearied, publishes, shades, utter.
 - (b) Why is "Creation" written with a capital C ?
 - (c) Explain 1 "Their great Original."
2 "spangled heaven."
3 "the evening shades."
- 2.—Page 121, Lines 13-26. (a) Give meaning of "elation," "glided," "adopt," "tiptoe, intelligence."
(b) Who were the strangers ?

GRAMMAR.

THIRD CLASS INTERMEDIATE.

- 1.—Divide into subject and predicate ;
A lion cub, of vulgar mind,
Avoided all the lion kind.
- 2.—Parse ; And now the lizard began dragging the body of the spider across the grass.
- 3.—Name the ways in which nouns form their plural
- 4.—Compare : white, grey, sunny, honorable, sad.
- 5.—Divide into syllables, mark accented syllable, and write out the silent letters in : miraculous, shouldering, desperately, slaughtered, miniature.
- 6.—Correct : The prince of wales was very sick in london, but re-covered on tuesday the seventh of july.
Geography or history are pleasant to study.
Neither Henry or Mary study very long.

GEOGRAPHY.

THIRD CLASS INTERMEDIATE.

- 1.—Draw a map showing the counties on Lakes Erie and Huron, and their county towns.
- 2.—Define archipelago, tributary, peninsula, gulf, sound.
- 3.—Locate the cities of Ontario.
- 4.—Name in order the rivers flowing into Lakes Huron and Ontario.
- 5.—Locate Adriatic, Aral, Belle Isle, Cattegat, Dardanelles, Euphrates, Everest, Java, Matapan, Nile.

COMPOSITION.

THIRD CLASS INTERMEDIATE.

- 1.—Write a note inviting a friend to dine with you.
- 2.—Write sentences containing : relative, at a venture, muzzle, muscle.

- 3.—Change the following sentences to the interrogative : John went to the woods. The ground squirrel is quite numerous now. I threw him back with some violence.
- 4.—Correct : Yesterday was wensday the forth of february. Is there any boys here ? Many trees was cut down.

ARITHMETIC.

THIRD CLASS INTERMEDIATE.

- 1.—Multiply 749 lbs., 10 oz., avoirdupois, by 72.
- 2.—Reduce 179 lbs., 3 oz., 3 dr., 1 scr., 14 grs., to grains.
- 3.—Reduce 74002702 square inches to acres, roods, &c.
- 4.—How many times will a carriage wheel turn in going from Toronto to Hamilton, a distance of 38 miles, the circumference of the wheel being 14 ft., 11 inches ?
- 5.—Find the cost of 73429 lbs. of oats at 30 cents a bushel.
- 6.—Multiply 123 bus., 1 pk., 1 gal., 1 qt., 1 pt., by 640.
- 7.—Divide 422 miles, 4 fur., 38 rods, by 37
- 8.—Find the cost of

| | |
|----------------|-------------------|
| 17 yards Cloth | at \$1.40 a yard. |
| 18 " " | 1.75 " " |
| 19 " " | 2.20 " " |
| 20 " " | 1.65 " " |

LITERATURE.

FOURTH CLASS JUNIOR.

Readers may be used.

- 1.—Page 37, Stanzas 1, 2, 3, 4, 5, 6.
 - (a) Give meaning of :—fleet of ice ; corsair ; blast ; glistened ; pennons ; crystal ; seaward he bore ; leaden shadows ; streamlets ; main.
 - (b) Explain :—"The east wind was his breath ;" "Should Sir Humphrey see the light."
 - (c) Why have "Death" and "Book" capital letters ?
 - (d) Where is Campobello ? Why was Sir H. Gilbert ?
 - (e) Write what you know about Longfellow.
- 2.—Page 69, Lines 17 to 41 inclusive.
 - (a) Explain :—shrubby, pendulous, tortuous, prominent, tendril, drachm, scruple.
- 3.—Distinguish between :—color and collar, hold and old, minut6 and min'ute, prepare and per pair, mangled and mangold.

GRAMMAR.

FOURTH CLASS JUNIOR.

- 1.—(a) Analyze : "Our friend, the traveller, gave a sixpence for the little plant which he had brought up from the time of his first receiving it."
(b) Parse : our, friend, traveller, gave, which, had, brought, from, receiving, it.
- 2.—Name four classes of adjectives not compared, and give examples of each.
- 3.—Put "a" or "an" before, hour, honest, honorable, humming, hotel, history, horse, historical, holy, hemisphere.
- 4.—Write the past tense and past participle of throw, forsake, strive, stride, write, see, fly, slay.
- 5.—Write the 1st person, singular, present perfect tense, passive voice of know, ride, smite, take.
- 6.—Correct and give reasons :—
 - (a) I will be drowned and nobody shall save me.
 - (b) It is more than a year since I have regularly went to school.
 - (c) It was him that I saw chasing the cow.
 - (d) Them is the kind of apples I like.
 - (e) George is the tallest of the two boys.

GEOGRAPHY.

FOURTH CLASS JUNIOR.

- 1.—Name the Provinces of Canada and locate the capitals.
- 2.—Name the most important productions of British Columbia and Nova Scotia.
- 3.—In a coasting voyage from Quebec to Halifax through what waters would you sail ; and what islands and capes would you pass ?
- 4.—Define watershed, delta, arctic-circle, tide.
- 5.—Locate Amherstburgh, Calais, Elba, Elbe, Hungary, Odessa, Palermo, Rhine, Timbuctoo, Weser.

- 6.—Draw a map of the Midland Railway showing Belleville, Blackwater, Cobocok, Haliburton, Lakefield, Lindsay, Lorneville, Manilla, Madoc, Midland, Millbrook, North Hastings, Omencee, Orillia, Peterborough, Port Hope, Stouffville, Toronto, Whitby.

HISTORY.

FOURTH CLASS JUNIOR.

- 1.—Write notes on any four of the following: Bede, Canute, (Cnut), Greecy, Montfort, Joan of Arc.
- 2.—In whose reign was the title of Prince of Wales created, and under what circumstances?
- 3.—How came Henry II to be king of England?
- 4.—Name the sovereigns of England from Henry III to Henry VI, give date of accession, and relation of each to his predecessor.
- 5.—What English sovereigns tried to conquer France? What reason did each give for so doing? How did each succeed.

COMPOSITION.

FOURTH CLASS JUNIOR.

- 1.—Change into complex sentences :
(a) The country was covered with snow, and he could not find his way.
(b) The little boy hurt his finger and went home.
- 2.—Write out in proper form a note for \$10 due in 30 days from date.
- 3.—Correct : (a) John dont write bad
(b) I hate those kind of people.
(c) The dinner smells pleasantly.
(d) What sort of a time had you?
(e) I dont feel like going for a walk.
(f) You become that hat well.
- 4.—Write a letter to a friend asking him to visit you during the Central Exhibition.

ARITHMETIC.

FOURTH CLASS JUNIOR.

- 1.—Bought 96 acres, 3 roods, 17 perches of land, for which I pay \$7764; what did I pay for it per perch?
- 2.—Divide £1694, 16s. 1½d, by £9, 19s. 11½d.
- 3.—Divide 123.4 by .000000066.
- 4.—What is the least common multiple of 8, 10, 18, 27, 36, 44 and 396?
- 5.—Find the value of .1234625 of 2 weeks and 2 days.
- 6.—A room is 34 ft. long, and 21 ft wide. Find the cost of carpet 27 inches wide at \$1.75 a yard.
- 7.—A pile of wood is 70 ft long, 4 ft. wide, and 5 ft. 4 inches high. Find the cost at \$2.75 a cord.
- 8.—Find the cost of
96 lbs. of Butter at 20½ cents per lb.
40½ “ Ham at 17½ “ “
36½ “ Lard at 15½ “ “
23½ “ Cheese at 12½ “ “

LITERATURE.

THIRD CLASS SENIOR.

Readers may be used.

- 1.—Page 238, Soldier's Dream.
(a) Write the meaning of —truce, lower'd, reposing, pallet, thrice, desolate, autumn, traversed, oft, aloft.
(b) Explain, "sentinel-stars."
"our bugles sang truce."
"wolf-scaring fagot."
"in life's morning march."
"the sweet strain."
- 2.—Write what you know about Campbell.

GRAMMAR.

THIRD CLASS INTERMEDIATE.

- 1.—Divide into subject and predicate :
A lion cub, of vulgar mind,
Avoided all the lion kind.
2. Parse : And now the lizard began dragging the body of the spider across the grass.
- 3.—Name the ways in which nouns form their plural.
- 4.—Compare : white, grey, sunny, honorable, sad.

- 5.—Divide into syllables, mark accented syllable, and write out the silent letters in : miraculous, shouldering, desperately, slaughtered, miniature.

- 6.—Correct : The prince of wales was very sick in london, but recovered on tuesday the seventh of july.

Geography or history are pleasant to study.
Neither Henry or Mary study very long.

GEOGRAPHY.

THIRD CLASS SENIOR.

- 1.—Draw a map of the County of Victoria, showing all the Townships, Railways, Lakes and Rivers.
- 2.—Define equator, river, lake, isthmus and shore.
- 3.—Give the boundaries of New Brunswick.
- 4.—Name the rivers of Quebec flowing into the St. Lawrence, and a town at the mouth of each.
- 5.—What and where are Bab-el-mandeb, Ceylon, Congo, Finland, Lena, Marmora, Naze, Okhotsk, Sardinia, Tonquin?
- 6.—What rivers drain the following lakes : Champlain, Geneva, Scugog, St. John, Winnipeg?

HISTORY.

THIRD CLASS SENIOR.

- 1.—Why do we keep July 1st as a holiday?
- 2.—When was the battle of Queenston Heights fought? Who were the parties fighting, and who were the leaders? What were the results? In what war did it occur, and what was the cause of that war?
- 3.—From whom did the English obtain Canada? How? And when?
- 4.—Name some Indian chief who tried to win Canada from the English.
- 5.—When was Canada discovered, and by whom?

COMPOSITION.

THIRD CLASS SENIOR.

- 1.—Write a description of "The Cow."
- 2.—Write out in proper form a receipt for rent, \$96.50, paid to-day.
- 3.—Combine into one sentence :
Their hair is matted.
Their hair is stiffened.
It is stiffened with the fat of swine.
It is stiffened with the fat of other animals.
The fat is mixed with powders.
The powder are of various colors.
- 4.—Write sentences containing :
(a) that he come so late.
(b) where he intended to make a home.

ARITHMETIC.

THIRD CLASS SENIOR.

- 1.—Reduce 7964327 square inches to acres, rods, etc.
- 2.—Multiply 6 weeks, 4 days, 3 hours, 17 minutes by 429.
- 3.—I bought four fields; in the first there were 6 acres, 3 roods, 12 perches; in the second 7 acres, 2 roods; in the third, 9 acres and 13 perches; in the fourth, 5 acres, 2 roods, 36 perches. How much in all?
- 4.—A silversmith made 3 doz. spoons, weighing 5 lbs., 9 oz., 8 dwt.; a tea-pot weighing 3 lbs., 2 oz., 16 dwt., 16 grs.; two pair of candle-sticks weighing 4 lbs., 6 oz., 17 dwt.; a dozen silver forks weighing 1 lb., 8 oz., 19 dwt., 22 grs. What was the weight of all the articles?
- 5.—Multiply 47 miles, 6 fur., 17 rods, 4 yds., 2 ft 7 in. by 576.
- 5.—Reduce 72 miles, 3 fur., 7 rods, 2 yds., 1 ft. 7 in., to inches.
- 7.—From May 17th, at 9 a. m., to September 19th, at 3 p. m., how many hours?
- 8.—Find the cost of
17 pairs Boots at \$3.75 per pair.
19 “ “ 2.65 “
21 “ “ 4.10 “
23 “ “ 2.85 “

Any teacher sending us the name of a new subscriber and \$1.25 can have the School Journal for a year and a copy of Ayre's Verbalist (price of Verbalist is \$1.00.)

Practical Department.

* THE IMPORTANCE OF METHOD IN EDUCATION.

It will depend upon the use of the means or the method employed by the teacher whether or not he can accomplish the work expected of him. There are two ways by which knowledge is gained, one is finding the knowledge ready made, the other is through the exertion of the mind itself. The method will determine two things—the character and amount of knowledge, and the character of the training acquired in coming into possession of the knowledge. Proper mental training always brings two results—a consciousness of increased power and at the same time a consciousness of the possession of new knowledge. The ready made knowledge may be got from a book or be given to us by another. Whether the knowledge will be of any real value to us will depend upon the mind's action in connection with it. If the mind put forth no act the knowledge cannot be taken in—it is left out in the cold, to use a common expression—it does not grow, it has no root, it withers away. It is this kind of knowledge that can never be found when wanted, or if perchance it may have reached that part of the brain called by physiologists *sensorium*, which has the power of reproducing its impressions just as a parrot can, it can be reproduced at a given signal. The fact, or rule, or whatever it may be, is glibly repeated and passes for knowledge, but the pupil can apply it to nothing except to some particular case with which it was previously associated. When some one else than his teacher questions him, he does not understand, does not know what is meant—the signal is not the same. He often hazards an answer which may be a correct one to another question but absurd to the one proposed, and as ludicrous as the scene which has been described between Frederick William the Great and a tall French grenadier who knew only three words of German. He was instructed to reply to the king's three general questions on parade, "How old are you?" "Three and twenty." "How long have you been in my service?" "Three years." "Are you satisfied with your rations and lodgings?" "Both your Majesty." The King, however, took the very unusual course of inverting the first two questions and the grenadier of course made himself three years old and twenty-three years in his majesty's service. The king, amazed at such answers, did not put the other question about the rations, but the inquiry, "Are you a fool or am I?" "Both your Majesty." Such is often the character of the knowledge we get ready-made, and the application we make of it. No doubt examples as ludicrous have been witnessed by some of yourselves. Let me give you one or two, not for the purpose of making sport, but of illustrating the character of knowledge got ready made without bringing the mind to bear upon it. "What is the Equator?" was a question asked a class in geography not very long ago. "A line perpendicular to itself and called the meridian." In another class the following questions were asked: "What is the difference between the noun 'book' and the book itself?" "What is an abstract noun?" "A collective noun?" To which the following answers were given: "There is no difference." "An abstract noun has no particular calling." "A collective noun is what it wants to make it more complete." In another class the following answers were given to the questions: "What is the circumference?" "Distance round the middle of the outside." "Distance through the middle." "What is the meaning of develop?" "To swallow up." "Give an example." "God sent a whale to develop Jonah." I do not say there are many such cases, I hope there are not, but the existence of any show that knowledge, however accurately it may be given,

may be reproduced in a most absurd form, unless the mind is called into exercise. It must not, however, be assumed that when the knowledge is accurately reproduced it is therefore understood by the pupil or of service to him. A long series of questions may be answered correctly and not one of them be understood. The verbal memory of children is very powerful. They can readily remember sounds without attaching any idea of them, and can readily reproduce them.

The teacher has, therefore, frequently to adopt the other method of securing knowledge, viz.: through mental exertion. He has to train the pupil to do things for himself, to get his own ideas from things. A physical, mental, or moral act can be done only by performing it. Every one has to do those things which he would acquire the power of doing. You know yourselves that you could never acquire the power of readily solving arithmetical problems without performing the operations yourselves, nor acquire a dexterous movement of hand without performing the acts through which the power is acquired. Now look how nature does. She gives the child no laws, no rules, no principles, no formulas. She simply gives the material, the faculty, and the occasion for its exercise. There is much repetition in her teaching, in order that the difficult may become easy and use become second nature. She does not tell the child but prompts him to action and induces him to think what he is doing. She does not explain to him the difference between hard and soft, or between a hot stove and a cold one, but says, "feel them." Lay your facts, she says, side by side and compare them, find out where they are alike and unlike. Her business is the training of faculty and the development of power.

These two methods of acquiring knowledge may both be successful as respects the knowledge, but their effects upon the mind are very different. When the mind's activity consists in merely comprehending the thoughts of others, the truths which have been discovered and explained, it becomes a receptacle, a working one, it is true, working the nourishment into its own substance, but preparing it only for taking in more and making progress. The method which presents the material to the pupil for observation and reflection, and simply stimulates and directs the mind to an orderly plan of study, trains him to form his own ideas of things, to put forth his own efforts in the acquisition of knowledge. I do not mean to put the one method against the other, for both are necessary in our schools; pupils must have lessons assigned to learn from books, when they are sufficiently advanced to master them, but I do say that the one method is too generally followed to the exclusion of the other. The teacher in many instances becomes a mere hearer of lessons instead of a trainer.

There is a constantly increasing demand for results of greater commercial value from our school system; and the school must consider the question. If our boys had training in the elements that are common to all industrial pursuits and our girls training in the principles of domestic economy, all reasonable demands would be met without disturbing the primary aim of the school or increasing the number of subjects in the course.

Such training should embrace industrial knowledge and manual dexterity. Industrial knowledge consists in an acquaintance with industrial materials and processes. Industrial materials are of course the various materials used in the industries, consisting of substances from the mineral, vegetable or animal kingdom. Industrial processes are those operations by which raw materials are converted into forms for our use.

You have seen that we have in the course the subjects that form the elements of industrial knowledge. Instruction is required in

* Abridged from the opening address of Principal Crockett of the Provincial Normal School, Fredericton, N. B.

minerals, plants and animals, and their uses. With respect to the processes, a large number relating to the most useful industries are described in our Readers, and these lessons are required to be supplemented by oral instruction. Industrial drawing, the subject of Form and of Geometry, so far as taught, all bear directly upon many industries.

That they shall result in industrial gain will depend upon the mode of teaching them. Let me give you a few practical hints in the form of some examples.

The subject of Form, which is taught in the first two grades may be made mainly constructive. During the first year, after the pupil has gained perceptions of the various forms brought under his notice, proceed to construct them of such suitable material as can be conveniently had. The ball, cube, cone and cylinder may be formed of clean moist or moulding sand, or suitable clay. They should be made as accurately as a child can be taught to make them, and considerable pains should be taken to give him the necessary facility of manual movement. During the second year the material should be of a more resisting nature than sand, perhaps pasteboard. As a sample of an exercise, suppose he is required to construct a square whose side is three inches, or any convenient length. Require him to place his ruler upon the piece of pasteboard and mark with his knife along the outer edge. This operation is not so easily done as one might suppose. The ruler has to be correctly applied and firmly held with the left hand, so that it cannot slip and produce a crooked line instead of a straight one. He should also be required to do it with the least amount of waste. He will have to be shown, in the first instance, how to move the ruler as far as possible towards the edge, so that none but the waste parts may be marked off. When this is done he proceeds to cut. His first attempts will be awkward and the line will be imperfectly cut; it will be ragged and probably uneven. He will require to be shown how to steady the pasteboard and how to hold the knife when he cuts. Let him test the accuracy by applying his ruler to the cut. Let it be done again and again, if necessary, but not so often as to discourage him. Let us suppose one side completed.

The second adjacent side is ruled off and completed in the same way. Let him now apply the carpenter's square to test the work (small carpenter's squares can be had for the purpose). He will not only learn the use of this tool, but he will become practically acquainted with a right angle, and his eye will soon detect the slightest deviation from it. The two remaining sides will be constructed in a similar manner and the square completed. There will, no doubt, be many trials and repeated corrections before a fairly accurate square has been made, but the pupil has made substantial gain. He has learned to use a ruler and knife properly, and acquired some manual neatness and dexterity. Exercises may be proposed on the square, by means of which its geometrical properties may be practically understood. They may be further led to find out that the diagonals of a square are not only equal to each other, but bisect each other—truths which they will never forget when taught in this way. If each form is similarly dealt with, the drawings which the pupil makes in his subsequent course will be not only much better executed, but of far deeper interest.

When he has entered upon his course in industrial drawing, the pupil should frequently cut out forms before drawing them, sometimes with scissors as well as with a knife. While studying the elements of geometrical drawing, such as bisecting lines, angles, erecting perpendiculars, etc., he will acquire facility in using the compass. In drawing plans of the school house, play-grounds, etc., of given dimensions, he will become accurate in measuring and accurate in representing measurement.

Arrived at the study of formal geometry, the pupil should previous to drawing his figures on the blackboard for demonstration

construct them of pasteboard or paper, etc., whenever practicable, and find out the geometrical truths which he is to establish by demonstration. Industrial tools, whose principles depend upon his geometrical truths, should be explained.

In the teaching of arithmetic how many opportunities are afforded of giving a practical character to the work—by associating articles of commerce in the neighborhood with the questions—requiring the pupils to frame bills of parcels for themselves, and to make them out accurately and neatly! The tables of weights and measures should be determined by experiment and each operation gone through properly, the filling of a gallon or quart from a pint measure, the filling of a pint bottle from a small phial of so many ounces, the measuring of length with a rule or tape line, finding by measurement the content of the play ground, or some other portion of land, all having in view manual dexterity as well as practical knowledge.

Geography, and even history, may be highly practical as well as powerfully educative. The great natural forces and products which underlie all industries—the industries of a country depending on its products and forces—the interchange of these—and the brotherhood of man, are fitted to awaken and keep alive an interest in industrial work and workers.

Every good citizen of an enlightened country respects the institutions under which he lives, he moves amongst its people, he is protected and governed by its laws. His training towards manhood lies through a knowledge and discharge of his duties as a citizen as well as a workman. How much valuable instruction of a practical character may be imparted, and with what interest it will be received, if, instead of loading the pupil's memory with isolated facts little understood and appreciated because they begin and end in themselves, we group together facts that have a bearing upon the great epochs of our history of civil liberty.

A king's reign is not a division of history. Kings die and dynasties, but the great forces move onwards. What are the moving forces? what are the events associated with such forces? Whatever divisions our next text books may make it is by some such treatment as I have indicated that we can hope to make history influence character.

It is unnecessary for me to add one word respecting the importance of a study of method and its principles. The whole of this address goes to show that neither the proper aim of the school nor the wants of society can be met unless the work is conducted upon sound principles of method. It is true that some teachers, and more especially young teachers, are apt to pay more regard to the mechanical processes than to the principles of method, and they cannot of course reach satisfactory results; but no intelligent man would on this ground affirm that method tends only to give a mechanical character to teaching. If method is not fitted to lead to great and important results, why should the institutions of the most enlightened countries take practical steps to give a knowledge of it? Two of the universities of Scotland, Edinburgh and Saint Andrews, have established chairs of education, and the London University has just announced that it will hold a yearly examination in the art, theory and history of education. Socrates, the Greek philosopher, regarded method as the first thing. Comenius, Locke, Rousseau, Basedow (of whose work Goethe says, "such methods must promote mental activity and give the young a fresher view of the world,") Pestalozzi, Froebel—all insisted upon the importance of method, and Alexander Bain and Herbert Spencer, two of the deepest thinkers of our own day, tell us that all modern systems of instruction must be based upon nature's plan and nature's methods.

Miscellany.

A CAVALRY CHARGE.

The roll called, silence succeeded, and some men were detached from each company to bring the bread. In a few minutes the parties returned with the loaves in sacks and baskets. The distribution began at once. As the Republicans had made and had their soup on arriving, they buckled their loaves on their knapsacks.

"Now," cried the commandant, in a gleeful voice, "we are off." He took up his trunk, threw it over his shoulder, and went out without saying as much as "Good day" or "Good night" to us.

We thought we had seen the last of them.

We heard the officers outside shout, "Forward! March!" The drums sounded, the cantinière cried "Gee up" to her mule, and the battalion began to move, when a terrible sort of clatter echoed through the village. It was a fire of musketry; now many together, now one by one.

The Republicans were just entering the street.

"Halt!" cried the commandant, standing up in his stirrups to see and hear.

Suddenly a soldier appeared at the end of the street, running with his musket over his shoulder.

"Commandant," he cried, out of breath, from a distance, "the Croats! The post is forced: they are here.

The commandant no sooner heard this than he galloped at full speed along the line, shouting—

"Form square!"

The officers, the drummers, and the cantinière closed up to the fountain, whilst the companies, sliding together like a pack of cards, in less than a minute formed a square three deep, the others in the middle; and almost at the same time there arose a fearful din: the Croats came on, shaking the very earth. I think I see them now bursting into the street, their great red cloaks floating out behind them like so many flags, their long straight swords advanced, and their heads so bent over their saddles, that their brown, bony faces and long yellow moustaches could scarcely be seen.

I had scarcely time to see and tremble, when the Croats reached the square. At that instant I heard the commandant shout, "Fire!" A crash like thunder followed, and I could hear nothing more for the roaring in my ears. All the face of the square turned to the street had fired; the glass fell in shivers from our window, smoke and cartridge flakes eddied into our room, and the smell of powder filled the air.

With bristling hair, I still looked on and saw the Croats on their big horses towering through the grey smoke, bounding, falling, starting up as though trying to climb over the square; others from behind pressing on and yelling in savage tones "Forvertz! Forvertz!"

"Second rank, fire!" shouted the commandant over the ceaseless shouts and snorts of men and horses. He might have been speaking in our room, his voice was so calm.

Another thunderclap followed. As the plaster fell, as the tiles rattled down the roofs, as heaven and earth seemed to be coming together, Lisbeth, in the kitchen behind, uttered such piercing cries that they sounded over the tumult like a burst of catcalls.

File-firing succeeded the platoon fire. The muskets of the second rank rose, fired, and fell incessantly, whilst the first rank kneeling crossed bayonets, and the third rank loaded the muskets and passed them to the second.

The Croats circled round the square of infantry, striking with their long swords; sometimes a hat fell, sometimes a man. One of the Croats, running back his horse, leaped it over the three

ranks right into the square; but the Republican commandant rushed at him, and with a terrible thrust nailed him, so to speak, to the croup of his horse. I saw the Republican withdraw his sabre red to the hilt; the sight made me turn cold all over. I was on the point of flying; but I had scarcely made a movement when the Croats turned and fled, leaving a great number of men and horses on the ground.

The horses tried to rise, and fell again. Five or six of the riders, caught under their horses, tried to disengage their legs; others all over blood dragged themselves along, raised their hands in deprecation, and cried in lamentable tone, "Pardône, Françose," in fear of being slaughtered. Some, unable to endure their sufferings, begged to be put out of pain. The greater number remained motionless.

For the first time in my life I comprehended death: those men whom I had seen two minutes before, full of life and strength, furiously charging their enemies, with wolf-like bounds, lay there pell-mell, insensible as the stones of the street.

In the ranks of the Republicans there were vacant spaces too, bodies fallen on their faces, and some wounded men with brows and faces covered with blood. They bandaged each other's heads without leaving the ranks, their muskets grounded, and their comrades helping then to tighten the handkerchief and fix the hat over it.

The commandant, on horseback near the fountain, the point of his great plumed hat between his shoulders, and his sabre in his hand, closed up the ranks. The drummers stood near him, and a little further away, close to the trough, were the cantinière and her cart. The bugles of the Croats were heard sounding the retreat. They had halted at the corner of the street; one of their sentinels stopped there, behind the angle of the town hall. His horse's head could alone be seen. Some shots were still fired.

"Cease firing," cried the commandant.

Then all was silence, the distant bugle of the Croats being alone heard.

The cantinière went through the ranks distributing brandy to the men, whilst seven or eight sturdy fellows filled their canteens at the fountain for the wounded, who implored water in lamentable voices.

I, leaning out of the window, looked down the empty street, asking myself if the red-cloaks would dare to return. The commandant gazed, too, in the same direction, speaking to a captain who stood by his horse, resting his hand on the saddle. All at once the captain crossed the square, passed through the ranks, and hastened into our house.

Innumerable shouts of "Hurrah! hurrah!" wild and sharp as the cries of ravens, filled the street from end to end, and almost drowned the blunt rush of galloping horses.

The Uhlans, for they were Uhlans this time, came on like the wind, their lances couched, the sheepskin dolmans floating out from their backs, their ears covered with their hairy caps, their eyes staring, their noses sunk in their moustaches, their great brass-handled pistols sticking in their belts. It was like a vision. I had only time to throw myself back, my blood curdling in my veins, and it was only when the firing recommenced that I seemed to awake as from a dream in a corner of our room opposite the broken window.

The air was obscured, and the square white with smoke. I could only see the commandant, motionless on his horse near the fountain; he might have been taken for a bronze statue seen in the bluish cloud, through which hundreds of red flames were flashing. The Uhlans, like enormous grasshoppers leaping all round, darted out and recovered their lances, or fired their great pistols into the ranks four paces off.

The square seemed to be giving way. It was true.

"Close the ranks! Hold firm!" called the commandant with a calm voice.

"Close the ranks! Close up!" repeated the officers.

But the square gave way, the front face was hollowed like a bow, the centre of it nearly reached the fountain. Swift as lightning the bayonet-guard met the thrust of the lances, but sometimes the man sank down. The Republicans had not time to reload; they no longer fired, and the Uhlans still came on more boldly in ever-increasing numbers, surrounding the square with their whirling masses, and already shouting their cries of triumph, for they thought they had conquered.

I thought the Republicans were lost, when in the crisis of the action the commandant raised his hat on the point of his sabre, and began to sing a song that made my flesh creep, and all the battalion took it up like one man and sang with him.

Instantly the face of the square was redressed, forcing back into the street the masses of horsemen, crowded together with their long lances, like the ears of a corn-field.

This song seemed to render the Republicans furious: it was the most terrible spectacle I ever saw. I have often thought since that men infuriated by battle are more ferocious than wild beasts.

But what was still more terrible was that the rear ranks of the Austrian column at the end of the street, seeing nothing of what was occurring at its opening into the square, still advanced, shouting "Hurrah! hurrah!" so that the front ranks, goaded by the bayonets of the Republicans, and unable to retreat, struggled in inexpressible confusion, uttering cries of distress; their tall horses with bleeding noses, their manes stiffened and their eyes glaring, reared and lashed out frightfully with shrill neighs. I saw the unhappy Uhlans, mad with terror, turn and strike their comrades with their lance-staves to force their way through, and scurry off like hares by the side of the barns.

Dead men and horses lay in heaps, from which blood trickled and flowed down the gutter to the sewer.

"Cease firing!" cried the commandant for the second time that morning. "Load!"

At that instant the church clock struck five. The condition of the village at that moment cannot be described—houses riddled with balls, shutters hanging from a huge, shattered windows, tottering chimneys, the street strewn with broken tiles and bricks, the ruined sheds, the heap of dead men, and the overthrown horses, struggling and bleeding—it is not to be imagined.

The Republicans, diminished by half, their great hats pushed back, waited with shouldered muskets and stern and terrible mien. Behind them, a few steps from our house, the commandant conferred with his officers. I heard him quite well—

"We have an Austrian army before us," he said abruptly, "and the question is to take whole skins out of this. In an hour we shall have twenty or thirty thousand men on us: they'll surround the village with infantry, and we shall be lost. I shall beat a retreat. Has anyone anything to suggest?"

In less than ten minutes they had built a barrier across the street as high as the houses, with hay and straw above and below. The beat of the drums recalled those who were working at it, and at once fire began to climb from wisp to wisp to the top, sweeping the neighboring roofs with its red flame, and spreading its black smoke like an immense vault over the village.

Loud cries arose in the distance, and musket shots rattled beyond it; but nothing was to be seen, and the commandant ordered the retreat.

I saw the Republicans file off before our house, with firm, slow steps, their eyes sparkling, their bayonets red, their hands black, their cheeks hollow. Two drummers marched without beating their drums; the little fellow I had seen sleeping in our barn was there, his drum was on his shoulders, and his back was bent: big tears were falling down his plump cheeks blackened with powder smoke. His comrade was saying to him, "Come, little Jean, come, be brave." He did not seem to hear him. Horatius Cocles had disappeared, and the cantinière also. I followed the regiment with my eyes as it turned the corner of the street.

—Madame Therese, by ERCKMANN and CHATRIAN.

Any teacher sending us the name of a new subscriber and \$1.25 can have the School Journal for one year and a copy of Ayre's Orthœpist (price of Orthœpist is \$1.00.)

Notes and News.

ONTARIO.

At the last convention of Wellington teachers, the N. W. Association chose the following officers for the ensuing year.—President, P. McEachern, 1st Vice President, A. M. Shields, B.A.; 2nd Vice President, P. Harper; 3rd Vice President, Miss McGeohan; Secretary, A. Spence, Treasurer, Miss A. Doyle, Management Committee, Messrs. W. McEachern, Corbett, Phillips, Wiseman and Lipton. The S. W. Association retained the old staff.

When discussing the superannuation question, Mr. Ross asked the teachers of Wellington if ladies should be made to contribute. The teachers, with cheers, answered "No."

In March last a uniform promotion examination was held in Wellington county. In the North Riding alone, about two hundred candidates passed. All the arrangements were admirable and the result gave general satisfaction.

The following letter just received, speaks for itself. It is gratifying to find that the JOURNAL is on the right track. The publishers are desirous to make the paper a necessity to every live teacher in Canada.

We propose a big "bill of fare" for the coming year and an effort will be made to carry out the programme. The success attendant upon our efforts in the past and the appreciation we have received at the hands of the teaching profession, encourages us to make still further efforts.

At the departmental examination last July the Blenheim Public School has a very creditable record. Out of fourteen candidates sent to the examination two obtained second class grade A, two second class grade B, six third class and one Intermediate. The school has been very prosperous under its present principal, Mr. James Bruce. Last year six of the pupils wrote and all passed.

Hon. G. W. Ross has accepted the invitation of the Frontenac County Teachers' Association, and will attend the fall institute on the 16th and 17th September. He makes two addresses on educational subjects, one to teachers, and one to the general public.—*Napanee Standard.*

Drill and calisthenics are now on the compulsory list for High Schools. Mr. John Bohannon has been appointed drill instructor for the Sarnia High School, and this week he began his duties with a class formed of the boys attending the schools.—*Sarnia Observer.*

"Some time ago you made mention in the JOURNAL of a weekly edition, and wished an expression of opinion. I would go in for it heart and hand. Surely there are enough of us to support a live weekly.—*JOS. C. MANUEL.*"

HONOUR DESERVED.—Mr. Seath, the well-known head master of St. Catharines Collegiate Institute, having been appointed Inspector of High Schools, has resigned the position in which he has made so high a reputation for himself. His place has been filled by John Henderson, M.A., who has long held the position of second master. Mr. Henderson is an Oxford boy, son of Mr. Henderson, postmaster at Chesterfield. He thoroughly deserves the position he has won. The St. Catharines school is one of the best educational institutions in the province. Not a little of its extraordinary success is due to the ability and industry of Mr. Henderson. We congratulate him and the institution at the head of which he has been placed.—*Woodstock Sentinel-Review.*

A. W. Bannister, B.A., formerly Professor of Latin in Albert College, has been appointed classical and English master in the Farmersville High School.

The High School has begun work for the autumn term with an attendance of 135, rather more than last year on the corresponding date. It was thought by some that the imposition of tuition fees and the opening of Petrolia High School would diminish the attendance considerably.—*Strathroy Age.*

The best and most important part of a man's education is that which he gives himself.—*E. Gibbon.*

Rev. Dr. Mockridge has been appointed Inspector for Schools, city of Hamilton.

FROM THE FAR WEST.—"Office of Steenerson & McManus, law, real estate, and loans, Broadway, south of U. S. Land Office, CROOKSTON, Minn., Sept 4: Gentlemen,—Please find enclosed \$1, for which send to me Hughes' "Mistakes in Teaching" and "How to Secure and Retain Attention." Are you still publishing CANADA SCHOOL JOURNAL? and if so, please send sample copy. I wish to see if, after the manner of many school journals, it has fallen from its once high standard. I am, gentlemen, yours very truly, GEORGE J. McMANUS."

Mr. McClurg, formerly the efficient Principal of the Petrelea Public Schools, has been appointed first Assistant in the Provincial Model School, Toronto. Mr. McIntosh, formerly of Brantford Collegiate Institute, has been appointed second Assistant.

INTERMEDIATE EXAMINATIONS.—Smith's Falls passed 3 Intermediates; Renfrew School passed 4 Intermediates, 4 third class and 1 second class, Grade B; Pembroke passed 1 Intermediate and 1 second class Grade A, Lanark passed 3 Intermediates and 1 third class; Perth passed 8 Intermediates, 5 third class and 8 second class, Grade B's.

At the recent non-professional examination for teachers, Lanark Village Public School passed two seconds, one third and three intermediates, as follows:—Second Class—Andrew Bradford, Grade A; Lizzie Hillis, Grade B. Third Class—Maggie Drysdale, Intermediate—F. Day, Lizzie Drysdale, Carrie Mair. It was a pupil of this school who won the gold medal at the recent Entrance Examination at Almonte, and another who headed the list in Perth Collegiate Institute.

The following pupils of the Ryerson High School passed the first-class non-professional examination:—Grade A.—Wilson Taylor. Grade C.—J. Hogg, E. McKilber. Mr. Taylor was the only person in the Province who obtained a first-class Grade A. non-professional certificate.

PRINCE EDWARD ISLAND.

The Charlottetown schools commenced work on the 25th of August with a large number of pupils.

The Prince of Wales College and Normal School re-opened on the 27th of August with 105 students. Eight scholarships were competed for—two for each county and two for Charlottetown. The successful competitors are:—Roderick McNiel, Frederick McMillan, Queen's City; Minnie Howatt, Geo. W. Schurman, Prince County; Thomas McLeod, F. D. McIntyre, Kings County; Maggie Maxfield, John F. Clarkin, Charlottetown.

The Educational Institute will meet on the 6th and 7th days of October. Invitations have been sent to Prof. J. G. McGregor, of Dalhousie College, and Prof. George E. Foster, M. P., of Kings County, N. B. A large and interesting meeting is expected.

Messrs. John Ings and Thomas Foley were appointed members of the Charlottetown School Board. The Government appointed W. E. Dawson, Esq., (ex-Mayor of Charlottetown) Chairman of the Board, vice Hon. J. Longworth, whose term expired.

The present popular and worthy Lieutenant-Governor of this Province was, up to the date of his appointment, a member of the Charlottetown School Board. He was an energetic and useful member, and the teachers feel that in him they have a warm friend in the gubernatorial chair.

At the closing session of the Provincial College and Normal School, the Governor-General's silver medal was awarded to Gordon Laird, (son of ex-Governor Laird); and the bronze medal to George W. Sutherland, of Montague. The former was awarded for General Proficiency, the latter for Proficiency in the Normal Department of the College.

The teachers of this Province are beginning to take a lively interest in the CANADA SCHOOL JOURNAL; and many more of them will subscribe for it before the close of the present year.—*Cor. Prince Edward Island.*

NOVA SCOTIA.

The fifth annual session of the Provincial Educational Association met at Truro on the 16th of July. The exercises continued until the evening of the 17th. The place of meeting was the spacious Assembly hall of the Provincial Normal School. In his introductory address the President, Dr. Allison, welcomed the members of the Association to what gave promise of being one of its most interesting meetings, though he deeply regretted that Mr. Ross, the Minister of Education for Ontario, had been unable to attend the Association. He hoped on some future occasion to introduce that eminent educationist to the teachers of Nova Scotia. Proper allusion was made to the presence on the platform of Dr. Rand, and to his important services in the cause of Provincial education.

Mr. A. McKay, Supervisor of Schools for the city of Halifax, was unanimously elected secretary, and Mr. A. J. McEachern, of St. Patrick's school, Halifax, was again chosen assistant secretary. The Executive Committee presented its report and submitted the programme of exercises. The first paper, "A Glimpse at Eng-

lish Schools," was read by J. B. Hall, M. A., Ph. D., of the Provincial Normal School. In this highly-finished production, the interesting results of personal observation in a number of typical English schools, were prefaced by a brief sketch of the history of common school education in England, and an outline of the provisions of the celebrated "Foster Act," of 1870. An illustrative lesson on "the generation and properties of carbonic acid," was given by Mr. A. E. Thompson, a recent graduate of the Normal School. A class of about a dozen small children was handled with great skill, and with results which greatly gratified all present.

The afternoon session began with an address on "Science in Schools," by L. Gordon McGregor, D. Sc., Professor of Physics in Dalhousie College. The learned lecturer alluded to the limited development of scientific education in Nova Scotia, and suggested that neither our common schools nor our colleges were doing their full duty in this important regard. So long as we remained in this condition, so long would the great natural resources of our country, be to a large extent, unappreciated and undeveloped. In other countries technological schools and schools of applied science existed, which served as a powerful stimulus to industrial progress. These rested on the basis of a diffused interest in scientific study generated in the common schools. Our teachers were earnestly exhorted to study science and to teach it to their pupils. While by profession a scientist, Dr. McGregor took care to guard against a narrow interpretation of his views. He simply demanded for science its rights, but not the rejection in toto of other studies which had been found useful. The proper combination of scientific and classical studies should be aimed at.

Principal Calkin, of the Normal School, followed with a paper on "Methods of teaching beginners to read." This valuable paper may be summarized as follows:—

A definite aim and a determined effort were the prime conditions of success in any and every enterprise. A man who aims at nothing, it has been said, seldom misses the mark. This principle of definiteness is as necessary and as important in educational matters as in any other matter connected with human affairs. Teachers should take note of this, and in all their work study to obtain a clear idea of the work undertaken, and also endeavor so to work that when done, all the various parts of his plan may so harmonize and fit together as to make a complete symmetrical whole, no deformities nor decrepit and unsightly defects. The ability to read in itself is of no value, as it is not knowledge but only the means of acquiring knowledge. Hence there are two things to be considered.

1st. The child should be so taught that his ability to read shall become to him an effective means for the acquisition of knowledge.

2nd. The child should be so trained to read aloud that he can convey to others in a distinct, impressive and pleasing manner the ideas of the printed page, thus giving to himself and others the fullest benefit of that which he reads. It is necessary to form habits of good reading even in the earliest stage of a child's life at school. The old method of giving to the child the unmeaning syllables *a-b ab and b-l-a, blas*, or even more significant words, tends to make the child acquire the habit of listless reading—naming words without ever receiving or seeking ideas. A child's first lesson should mean something to him, should show him how objects with which he is familiar may be represented by written characters, that the written characters of his text-book represent the sound of the spoken word. The second aim is to secure to the pupil the ability to read, so as to profit and please others. This involves all those qualities of voice, manner and expression which distinguishes the elocutionist from the drawler and the stammerer. In order to secure this, the instruction must be patient and vigilant. The methods for teaching beginners to read are, at least, four, the alphabetic or A B C, the phonetic, the word and the sentence method. The speaker preferred the phonetic and word methods combined.

The principles of the paper were then illustrated by an interesting and apposite class exercise conducted by Miss Miller, a graduate of the Normal School.

A very largely attended public meeting was held on the evening of the first day of the session. The Superintendent of Education, in opening the proceedings, referred to the fact that Nova Scotia was just concluding her first twenty years' experience of the Free School system. He claimed that the Province was richer, stronger and better than she could possibly have been had her statesmen of two decades ago decided to let her jog along in the old way. Much yet remained to be done,

but public education in Nova Scotia had an honorable past and a hopeful future. The chief speaker of the occasion was Dr. Rand, Professor of Education and History in Acadia College. The subject presented to the audience, was the position occupied by the teacher in the eyes of the community as measured by the financial recognition accorded him. The magnificent prizes within reach of other professions, notably the legal, were contrasted with the paltry stipends of teachers and the limited possibilities of their profession. The speaker showed the magnitude of the trusts committed to the teacher, and the importance of the results which he was expected to educe from the material placed in his hands. He urged the necessity of creating a sound public opinion on the subject, that one of the most important of the professions may no longer be the most poorly paid of all. Rev. E. M. Kierstead, Professor of Logic in Acadia College, followed in a brief but much admirable speech, setting forth the dignity of the teacher's calling, and the power which a true education, symmetric and complete, enabled its possessor to wield amid the stirring conditions of modern life. Col. Blain, M. P. P. for the County of Colchester addressed a few rigorous remarks to the Association on his favorite topic of Industrial Education. His good natured thrusts at the Educational authorities, whom he seemed to regard as somewhat remiss in seconding his efforts, were thoroughly enjoyed by the audience, and not the least by those against whom they were directed. Mr. Carswell, the noted temperance lecturer of Ontario, who happened to be in the audience was loudly called for, and brought the meeting to a most successful close earnestly exhorting the teachers present to be true Temperance workers both by precept and example.

On Thursday morning the Association, after the transaction of some routine business, listened to an interesting paper from the Assistant Secretary, Mr. McEachen on "the Educational value of the study of Language." The drift of this elaborate essay, which was elegantly composed, was to show the danger of too exclusive devotion to physical science on the one hand, or mathematics on the other. The part which the study of language and literature had played in developing great characters and careers was eloquently described, and a carefully reasoned out exposition was given of the underlying philosophy of the author's theory. Principal McKay (of Pictou), who warmly complimented Mr. McEachen on the excellence of his paper, followed with a modest plea in behalf of science, claiming that the scientist argued against by Mr. McEachen was not the scientist of true modern progress, the humble devoted student of nature, who made it his sole business to search out and reveal the mind of the great Creator as revealed in his works. The last session of the Association was devoted to the consideration of two valuable papers on subjects connected with health and proper physical development. The first was by Dr. J. W. McDonald, on "School Room Ventilation." In this paper, which was amply illustrated by experiments, Dr. McDonald, who has distinguished himself by the philanthropic earnestness with which he has sought to enlighten the people of Nova Scotia on matters connected with the public health, so combined information, practical suggestions, and earnest exhortation, as to make one of the most valuable contributions to the success of the meeting. Dr. Dodge of Halifax, discoursed in an equally profitable manner on "short-sightedness as resulting from defective methods in school life." The learned practitioner called attention also to the general subject of physical Education, and detailed the steps which have been taken at a recent meeting of the Nova Scotia Medical Society to secure the co-operation of the medical and educational authorities in bringing this important matter into greater prominence in the schools. Space does not permit a report of the full and exhaustive discussion which followed the reading of the various papers. The attendance surpassed that of any previous year, the number of registered members was 362.

NEW BRUNSWICK.

St. Joseph's College at Memramcook re-opened Sept. 2nd.

Mount Allison College, Sackville, resumed work Sept. 11th.

The collegiate year of the Provincial University commenced Sept. 18th. Fourteen young men passed the matriculation examination, eight of whom went up from the Collegiate School, Fredericton. In the Freshman Class, some half dozen Counties are represented. The whole number of undergraduates this year will be somewhat less than last year.

The alumni and friends of the University have been much elated by the success of A. W. Duff, A. B., '84, in winning the Gilchrist Scholarship and gaining the first position among all the candidates examined for matriculation at the London University.

Mr. Duff's classmates gave him a complimentary dinner, in the College Hall, on the evening of Sept. 17th on which occasion a number of distinguished graduates and others were present, several of whom indulged in laudatory after-dinnerisms. It is understood that Edinburgh University is to add Mr. Duff to the number of her New Brunswick students.

Mr. Crocket, the Chief Superintendent, was present at the Teachers' Institutes at Shediac in July, and at Hillsboro, Aug. 28 and 29, and gave public addresses in the course of which explanations were made relative to some of the recent changes in the School Law and regulations. There has been quite a broeze of newspaper writing on the subject of these changes.

The Northumberland County Teachers' Institute was to meet at Chatham on the 2nd. and 3rd October. A capital programme was provided.

BERMUDA.

We have been pleased to receive a visit from Mr. Simpson, the able Superintendent of Schools for Bermuda. Mr. Simpson has held the position of Superintendent for over three years, having been sent out by the Colonial office with a view of organizing a school system. The success that has attended his efforts is proof that he is the right man in the right place. Mr. Simpson, after paying a visit to Toronto schools goes to Montreal, then to Boston, thence to Bermuda.

Official Department.

At the request of a number of teachers in Ontario we republish recent regulations with reference to High School Courses.

I. The Course of Study in High Schools and Collegiate Institutes shall consist of such obligatory subjects as may be prescribed by the Education Department, and such optional subjects, within the limits determined by the Department, as may be agreed upon by resolution of the Board of Trustees.

II. The range of instruction in the obligatory subjects is as follows:—

1. English Grammar.—Review of Elementary work; Orthography, Etymology and Syntax; Derivation of Words; Analysis of Sentences; Rendering of Poetry into Prose.

2. English Literature.—Critical Reading of portions of the Works of Authors, to be prescribed from time to time by the Department.

3. Composition and Reading.—(a) *Composition*—The Framing of Sentences; Familiar and Business Letters; Abstracts of Readings or Lectures; Themes; The Formation of a good English Style. (b) *Reading and Elocution*—including the learning by heart and recitation of selected passages from standard authors.

4. Dictation.

5. History and Geography.—(a) Leading Events of English and Canadian History; also of Roman History, from the commencement of the Second Punic War to the death of Augustus. (b) A fair course of Elementary Geography, Mathematical, Physical and Political.

6. Arithmetic and Book-keeping.—(a) *Arithmetic*—Simple and Compound Rules. Vulgar and Decimal Fractions; Proportion, Percentage in its various applications; Square Root. (b) *Book-keeping*—Single and Double Entry, Commercial Forms and Usages; Banking, Custom House and General Business Transactions.

7. Drill and Calisthenics.—(a) *Drill*—The following portions of Squad Drill. Position of the soldier, standing at ease, Dressing a squad with intervals; turnings; extension motions; saluting; instruction in marching; balance step, without advancing; advancing; the slow march; the halt; stopping short; stepping out; marking time; stopping back; changing feet; quick march; side, or closing step; turning when on the march; squad drill in single rank; marching and turning; marching in file; diagonal march. (b) The boys to be ranged in companies, sized from both flanks, and told off in companies, half-companies and sections, and practised in the marches and variations of step which have been taught in single rank; the formation of fours; increasing and diminishing front; wheeling; forming company square. (c) *Calisthenics*—the regular exercises for physical development.

III. The range of instruction in the optional subjects is as follows:—

1. Algebra and Euclid.—(a) *Algebra*—Elementary Rules; Factoring; Greatest Common Measure; Least Common Multiple; Square Root; Fractions; Surds; Simple Equations of one, two and

three unknown quantities', Easy Quadratics. (b) *Euclid*. Book I. and II, with easy exercises, Application of Geometry to the Measurement of Surfaces; Volumes of Parallelepipeds and Prisms, and of the Sphere, Cylinder and Cone.

2. Natural Philosophy, Chemistry and Botany.—(a) *Natural Philosophy*—Composition and Resolution of Forces, Principle of Moments; Centre of Gravity; Mechanical Powers, Ratio of the Power to the Weight in each; Pressure of Liquids; Specific Gravity, and modes of determining it; the Barometer, Siphon, Common Pump, Forcing Pump, and Air Pump. (b) *Chemistry*—Combustion; the Structure and Properties of Flame, Nature and Composition of Ordinary Fuel. The Atmosphere—Its Constitution; Effect of Animal and Vegetable Life on its Composition. Water—Chemical peculiarities of Natural Waters, such as Rain-water, River-water, Spring water, Sea-water. Preparation and Properties of Hydrogen, Oxygen, Nitrogen, Carbon, Chlorine, Sulphur, Phosphorus, and of their more important compounds; Combining Proportions by weight and by volume; Symbols and Nomenclature. (c) *Botany*—The elements of Structural Botany, with special reference to the study of Canadian Plants.

3. Latin and Greek.—(a) *Latin*—The Accidence and the Principal Rules of Syntax and Prosody; Exercises; Portions of works in prose and verse, as prescribed from time to time; Learning by heart selected portions; Re-translation into Latin of easy passages. (b) *Greek*—Elementary Grammar and Exercises.

4. French or German.—(a) *French*—The Accidence and the Principal Rules of Syntax; Exercises; Portions of De Fivas' Introductory French Reader and French Authors, as prescribed from time to time; Re-translation of easy passages into French; Rudiments of Conversation. (b) *German*—The Accidence and the Principal Rules of Syntax; Exercises—Portions of Adler's Reader and German Authors, as prescribed from time to time; Re-translation of easy passages into German; Rudiments of Conversation.

5. Music.—Elementary Principles.

6. Drawing.—Linear and Freehand—Elementary Principles.

7. Physiology and Hygiene—Elementary.

8. Principles of Agriculture—Elementary.

SPECIAL SUBJECTS FOR 1885.

English Literature:

1885. *Scott*—The Lady of the Lake, with special reference to Canto V., *Irving*—Rip Van Winkle.

1885. *Cicero*—Cato Major; *Ovid*—Fasti, B. I., vv. 1-300.

French:

1885. *Bonnechose*—Lazare Hoche.

German:

1885. *Schiller*—Belagerung Von Antwerpen, Der Taucher.

Publishers' Department.

W. J. GAGE & CO.

INTERESTING DESCRIPTION OF THEIR FACTORY AND WAREHOOMS.

We republish for benefits of the readers of the SCHOOL JOURNAL the following extract which recently appeared in the *Toronto Mail*. No doubt there are some will be interested in reading what others say about us:

The most interesting features in an industrial and commercial centre like Toronto, perhaps, are the factories and warehouses of the merchants. The vast strides made by Toronto's industries during the past few years have frequently been commented upon. Not only do the great extensions of the industries give them a peculiar interest, but the improved machinery that is being used demonstrates the real advance that is being made. New machinery is being used and new methods are being adopted. A visit to the warehouses and factory of Messrs. W. J. Gage & Co., 54 Front St., may prove interesting in this connection. This firm does a very extensive business, which is growing in dimensions every year.

BOOK AND STATIONERY DEPARTMENTS.

In the first two flats of the warehouse, which is one of the largest of the kind in the Dominion, are displayed three large stocks of miscellaneous books and stationery. The book stock embraces the lines of the leading publishers of Great Britain and the United States. The immense stock of stationery and stationers' sundries comprises printing, writing papers, blank books, and manufactured stationery of every description. Two entire flats of the building are used to display goods, and every conceivable kind of stationery and stationers' sundries are to be found there. The neat and

careful way in which the goods are displayed, together with the attention that is given, show that the elements of success are not lacking. The stock of blank books, which occupies considerable space, besides being extensive, is of a superior quality. Everything that could be needed in a first-class stationers' and booksellers' store is to be seen there in abundance.

THE MANUFACTURING DEPARTMENT

include envelope making, printing, lithographing, binding, and the other necessary adjuncts. In the lithographing department copy-books are printed, and this forms an important part of the business. Not long ago English copy-books were used almost exclusively in Canada. The Canadian article received very little patronage. Matters are now changed and the reverse is the case. The cause of the revolution has been chiefly that enterprising companies have gone extensively into the business and manufactured an article that is not only equal, but superior to that of the English. This is chiefly due Messrs. Gage & Co., who were among the first to recognize the importance of the trade. The copy heads are printed by hand machinery, hence the perfection that is obtained. The making of envelopes is also carried on by Messrs. Gage & Co. The machinery used is the latest and chiefly the better kinds of envelopes are manufactured. The composition and printing departments are under the control of competent men, and the work executed speaks well for their ability.

THE BINDING DEPARTMENT

is in every respects a model one. Until recently perfection had not been reached in binding machinery. Everything was done in a most laborious and expensive way. A creditable job could only be turned out with difficulty. But the bindery of Messrs. Gage & Co. is of quite a different character to that. The most intricate and expensive machinery, which does the work in a style hitherto unknown, is used. Folding machines and stitching machines take the place of hundreds of girls who were formerly employed. Books are folded and stitched without being scarcely handled. The work is done accurately and cleanly. Instead of the cumbersome hydraulic press a very simple one, which has just been perfected, is adopted. After the books are bound they undergo an inspection to make sure that they are all fit for the market.

EDUCATIONAL DEPARTMENT.

The school book publishing of this firm has assumed large dimensions, and their Public and High School text-books are found largely used in every province of the Dominion from British Columbia on the west to Prince Edward on the east. Their grammars, arithmetic, readers, copy books, and a score of others are now recognized as the standard text-books. It is stated that of the copy books alone over half a million are issued annually. The publication of all these books has led to the employment of some of the leading teachers of the country as editors, while the printing and binding necessitates the employment of a large staff of skilled workers, and the consumption of large quantities of paper and other supplies. One of Messrs. Gage & Co.'s specialties is school supplies. Their school books have been adopted almost throughout the whole of the Dominion. In this trade they are the most prominent firm in Canada. Their business as booksellers, stationers, and publishers of educational works bid fair to assume still larger proportions.

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.

PROVINCIAL TEACHERS' ASSOCIATION.

ONTARIO—Continued.—As provided by the programme, the three sections into which the Association is divided—Public School, High School and Inspector's sections—met separately for the discussion of matters specially appertaining to the work of those in these three branches of the profession.

In the Public School section, the President, Mr. James Duncan, of Windsor, occupied the chair. The first business was the annual address of the President. This address, though brief, was pointed, and dwelt upon several matters of grave importance to the teachers and to the public as well. After eulogizing Dr. Ryerson and dwelling upon the great work that he had accomplished, Mr. Duncan dwelt upon the necessity of closely watching legislation affecting the school system, expressing at the same time great hopes respecting the change to be made at the next session of the Legislature under the present able and popular Minister of Education. Mr. Duncan expressed grave fears of

the result of the tendency to an increase in the number of female teachers and a corresponding decrease in the number of male teachers. His observation taught him that the ambition of woman was not to conduct a school, but to reign in her own family. Experienced teachers changing their single state for that of married life must necessarily be succeeded by less experienced teachers, and thus it was possible that great evil would be done. The tendency with male teachers particularly was to leave the profession, and thus leave the way open to women. He confessed himself unable to suggest a remedy, except that valuable and skilful teachers should be given inducements to remain in the profession. The question of the Bible in the public schools was also briefly dealt with, the President expressing a preference on the whole for the present system, fearing that any of the changes proposed would lead to discord, and so lessen the efficiency of the school system. A paper was then read by Mr. John Campbell upon the superannuation fund. The paper was an elaborate argument in favor of maintaining the fund, on the ground mainly that the older teachers who had borne the heat and burden of the day for very small stipends could not otherwise be treated with justice. The paper also pointed to the systems of superannuation among clergymen and other classes, and those of foreign countries, as proving the general regard for the principle involved in the present system. Mr. D. J. Murphy, of West Middlesex, was one of the most strongly opposed to Mr. Campbell's views, and in the course of his remarks attacked the present system at a great many points, to show that it was not just in itself, nor was it carried out in such a way as to be fair to all. He complained especially of the forms the teacher had to sign if he sought a superannuation allowance before he reached the age of 60 years. One of the declarations to be made is that the applicant is unable to teach and has no other means of support. This, he contended, placed a premium upon extravagant habits and want of economy. Other declarations were an insult to the teaching profession. After some time a resolution to the effect that the superannuation system should be continued in some efficient form, was carried over an amendment to the effect that those who desired it should be allowed to withdraw the money (with interest) they had paid into the fund, but that the fund should be continued so far as it affected those now on the fund or those who wished it continued. In the High School section Mr. J. E. Bryant, of Galtread a paper on "A Commercial Department in High Schools and Collegiate Institutes" in support of the view that there should be a departmental examination in business subjects. Mr. H. I. Strang, of Godeich, read a paper on "Matriculation Examination in the University," consisting mainly of comments on the curriculum of the University. In the Inspectors' section the discussion was mainly on amendments to the school law, and a number of changes were suggested. Under the present law it is provided that a child shall attend thirteen weeks each term, but a resolution was carried proposing an amendment changing the number to thirteen weeks for the first half year, and nine weeks for the second half year. Another resolution was carried in favor of an increase of the legislative grant to Public Schools, and that the school fund be apportioned each half year, a portion as a fixed grant to each school department, and the balance on the basis of the average attendance. Also that the inspector on completing the apportionment of each of the school grants shall furnish to the county or sub-treasurer a statement of the sums apportioned to the several schools—the amount for superannuation having been deducted—and that the treasurer shall pay the said amounts to the teachers on the order of the trustees. *Afternoon Session.*—The Association, as a whole, assembled in the theatre at two o'clock, Hon. G. W. Ross, President, in the chair. The afternoon was devoted to the reading and discussion of papers.

COUNTY MODEL SCHOOLS.

The first was on "How best to secure the permanence, and increase the efficiency, of the County Model Schools," by Mr. G. W. Johnson, of Hamilton. After some preliminary remarks he suggested, in the first place, that reading, mental arithmetic, hygiene, and a review of the first four classes of the public Schools should be taken off the Model School course, thus giving time for matters more in the line of those schools. He noticed that there were some Model Schools which trained very few teachers indeed, while others taught a great many. To close the smaller ones would be to break faith with boards of trustees, who had gone to the trouble and expense of providing for the accommodation of the Model School. Rather than this he believed that the number at the Model Schools should be equalized. Most of the pupils in Model Schools had to go from home in order to study in the Model School, and a few miles further could make little or no difference to them. He denied what was so often said that the existence of a Model School in connection with another was a hindrance to the work of the school. On the contrary, in his opinion it was an advantage rather than a hindrance. He knew as a fact that in many instances the pupils in the Model School showed greater progress than those who had not had the advantage of having the lessons presented by a number of teachers. He made a number of suggestions as to the work of the Model Schools, all tending to the view that the practice as well as the theory should be to teach young teachers how to teach. He thought that the Government grant should be increased to those schools in which the Principal was

free to give all his time to Model School work. As the third-class certificates were now good in every part of the Province, the examinations should be uniform. (Applause.) The final examination should occupy the last week of the term and should be taken up with the actual work of teaching by the candidates under the eye of the examiners. The County Board in his opinion, should consist only of three members, the city, town, or county inspector, chairman, and the principals of the city, town, or county High and Model Schools. A fee of \$5 was now charged each student teacher. Supposing there was an average of 18 in attendance this would make \$90, of which \$56 should go to the County Board for their services, the balance of \$34 being given year by year for the purchase of a good Model School reference library. After other suggestions relating to matters of detail he developed a system for making the third-class certificates permanent which at the same time might be used to weed out teachers who it was clear could not become successful. He believed that County Model Schools must remain a feature of our educational system, and thought that if the suggestions he made were adopted, their efficiency would be increased. (Loud applause.) Mr. Kelly, of Brantford, said that he could not quite agree with all that had been said. He objected to the master of the Model School being a member of the Board, as this principal was rejected in all other cases. He objected altogether to making certificates permanent. Any teacher who was fit to do his work should advance, if he did not he should leave teaching and take some other position. Mr. McBrien, of Ontario, agreed with the reader of the paper respecting the permanency of third-class certificates because a teacher could do his work better after experience. Mr. Scantler, while not prepared to favour the idea of the Model School master being a member of the Board, yet thought a good deal of deference should be paid to his report. Mr. Chadwick did not see that it was necessary to maintain all the existing Model Schools. The large ones did just as good work as the small ones, and there seemed to him no doubt that there were too many now in existence.

THIRD-CLASS CERTIFICATES.

A paper on the status and value of third-class certificates was then read by Mr. F. H. Michell, of Perth. He said that as seventy-five per cent. of the teachers were those holding third-class certificates the status of these was most important. The Minister's report showed that there was an increase in the number of those authorized to teach by permits and other—as he considered them—unlawful means. (Laughter.) The President—"Irregular" would be a better word. Mr. Michell—I accept the word. (Renewed laughter.) The increase to which he referred showed that there was a large proportion of teachers who took up the profession as a mere make-shift. He objected strongly to the system of giving three years' certificates, requiring at the end of that time a re-examination on non-professional subjects. He could see no reason for this. If there was to be an examination at all, it should be in the professional branch. Teachers changed about, and were in fact a race of birds of passage, here to-day and away to-morrow. The teachers recruited the ranks of the ministers, the doctors, the lawyers, and the book agents. (Laughter.) Many took up the work merely to secure means to take a course in law or medicine, and this must have the effect of degrading the profession. This might be to some extent overcome by a change in the mode of grading certificates. He objected to third-class certificates being good outside of the county in which they were granted, because the mode of examination differed in different places, and because this offered unfair competition with holders of higher certificates. Teachers, different from people of other classes, made annual agreements, occasioning an annual bickering with the School Board. The agreements should be for an indefinite term at a fixed salary. (Applause.) In order to get over some of the difficulties, he would suggest an increase in the membership of rural School Boards. This would make it more difficult for a schemer to manipulate the Board. He objected very strongly to the proposal at one time made to legislate the salaries up. A good teacher would have no difficulty in getting a good salary. One of the difficulties was that many teachers wanted everything done for them, and did not want to do anything for themselves. Another great difficulty was that the parents took little interest in the schools, except when their children complained, or were not promoted as rapidly as the parents desired. Scholars should be compelled to attend regularly. Often children were allowed to stay away because they did not like the teacher. A teacher's position should not depend upon the likes or dislikes of children. Another difficulty was the shameless way in which too many teachers deserted their employment, breaking faith with school boards and with the public, also the endeavours sometimes made to undermine each other. (Applause.) He had great hope for the future of the profession, and thought that with a proper assertion of their dignity the position of teachers would be better.

CONFLICTING OPINIONS.

Mr. Alexander, of Galt, strongly sympathized with the idea of making third-class certificates permanent. The many certificates becoming void now made places for persons who desired to make teaching a stepping-stone to something else. Yet he thought it must be evident that the great number of new-comers could not be as efficient in their

work as those who had been teachers for three years. In reply to a question from the President, Mr. Alexander stated that in his experience there were many teachers who went out of the profession because they did not care to face the work of a second class certificate.

SCHOOL FUND.

The report of the School Fund Committee was presented by Mr. J. Dearness, as follows: 1st. That the amount of the legislative grant to public schools be largely increased. 2nd. That a part of each grant (say one-half) be divided equally among all the school sections in the municipality, and that for the purposes of this section each "additional department" count as one-half of a school in making this division. 3rd. That the balance of the legislative grant (say one-half) be appropriated on the basis of the rates of taxation in the several school sections for the previous year, and that the balance of the municipal grant be appropriated on the basis of average attendance for the whole year. The report was adopted without amendment. The main feature of the evening session was an address by Rev. Principal Grant, of Queen's University, on the subject of "Some popular fallacies with regard to education."

PRINCIPAL GRANT'S ADDRESS.

Rev. Principal Grant, called attention to the fact that he did not choose to speak of all fallacies in education, but only some. He did not propose to give them opinions, but to attack fallacies. If opinions were to be given, for instance, he might say that he would prefer to have a non-political head of the Education Department, one having a seat in the House, but not for any particular constituency, and with the right to speak on educational matters, but without the right to vote. He would not argue the proposition, he would merely state it. A Minister of Education would be all the better if he were not a politician. He thought that, in order to progress, they must be freed from the thralldom of mere words and theories. The theory-ridden mind was almost debarr'd from progress. One of the things to be got rid of above all was conceit. We had got into the idea that we had a perfect system. We took prizes at foreign exhibitions, and intelligent strangers coming here, being interviewed and desiring to say something civil, praised our educational system. We therefore got a conceited idea that we were far ahead of other countries. A true system must aim at sending out the youth with minds flexible and strong. Education should have reference to the race, surroundings, and circumstances of the pupils. What became of all the gold medal winners? No wonder that somebody had said the hope of the country was in its stupid boys. The delicate, sensitive brains were killed by over-stimulation. There was seen the evil of early competitive examinations and of frequent promotion examinations for young children, particularly when the promotion of the teacher depended upon the result. Poor man! He must live though they died. Boys brought to him examination papers, and he confessed that he would be plucked upon them. There was also the result cramming which left the brain in a congested state. Young men came to college anxious not to study as much as possible, but barely to scrape through. Another result was that the mind was dissipated among a whole lot of subjects. In many schools were the three R's badly done and a great many things not done at all. The men who framed the curriculum had no intention of putting in so much, but even a man who came along had come new and so all this lot of subjects was pressed down upon the poor little shrinking brain. The great thing he thought, was to teach the children how to read. If they taught them to read so as to understand what they read, there was no chamber of the great temple of knowledge which they might not unlock, and if they did not unlock them it was their own fault. Then there should be optional courses, and those studies most useful for their gymnastic results. He highly commended the German system of intermediate schools, and called attention to the fact that the Professors of the Berlin University had declared that even for the study of science, the gymnasium was better than the school in which the science teaching was begun. Rather than a training in mathematics he would train in literature, for a literary training was in his opinion the best for all (Applause.) Taking up another branch of the subject he dwelt upon the fact that it was an old practice to bring the plastic, unawakened mind of the child in contact with the formed and awakened mind of the teacher. That was a good rule. The better the teacher the better the school. Having found what they wanted in education, therefore, the next thing was to find out how to secure the best teachers, retain them, and get the most out of them when at work, and how should they smooth the way of the children to come in contact with these teachers? A host of fallacies clustered round these questions. Some people said that they could get the best teachers by paying them. He did not believe that. To secure teachers they should make the profession thoroughly honourable. To do that they must follow the lines of other professions. It must not be supposed that the best way was to hire teachers by the year; they did not get ministers, or lawyers or doctors in that way. They must enable the teacher to retain his self-respect. It was not calculated to promote the self-respect of the teachers by compelling them to retire at the end of three years unless they passed a higher examination. But they said these teachers were given permits to go on teaching. That was simply putting the rope around the teacher's neck, and giving

him to understand that the rope might be tightened and his official life taken away at any time. Again, they would not allow the teacher to examine. If they wanted to find out the pupil's ignorance, that was right. But the object was to find out his knowledge. This system was obsolete in England, and should not be retained here. The Scotch system which enabled boys to study in their own schools, thus enabling them to prepare for college at home was better, to have to go to a school five miles distant was as great an expense as to go to one five hundred miles away, for he had to pay his board in either case, and this must keep many clever boys away. The result was that a great deal more was done with the same grant in Scotland than in England, and the reason, he believed, was largely because of this system of local training for the Universities. The teachers' hampered, pressed back, and harassed, were often told that one of the great needs of their profession was that they should be enthusiastic. What encouragement was there for them to be enthusiastic? No wonder that many left the profession. He asked them to remember that he had been talking about fallacies. Had he been talking about their encouragements his tone would have been different. For they had many things to encourage them, and their position was much better than that of the teachers who had preceded them. They had the grandest material to work upon minds created in God's own image and in their hands lay the destiny of the country. He asked them to remember that, and prayed that the blessing of God would rest upon them in their labors.

Hon. G. W. Ross presented the medal won by Mr. W. H. Davis, of the Ottawa Normal School.

LANARK.—The first business was reading minutes and communications. Mr. Michell, I. P. S., and President of the Association, delivered the opening address. Mr. W. A. Smith, Almonte S. School, should have then read a paper on "How to increase the influence of the profession," but failing to take his place, Mr. E. Anderson, No. 2, Pakenham, gave a practical illustration of his method of teaching "Mental Arithmetic to 2nd and 3rd classes." The President called on those present to state any difficulty they had met with in teaching spelling. A number of difficulties were mentioned and written on the black-board; the President then took them up one by one and threw much light upon each. Mr. J. McCarter read a very fine essay on "The Status of the Teacher." The essay was so good that we will not do it the injustice of referring to isolated parts of it. Several teachers joined in a discussion, all commending the essay, and particularly emphasizing the necessity of the teacher being a pattern in morality. Mr. John McDonald, of No. 5, Pakenham, then read a short but instructive paper on "Music in Schools." He advocated the Tonic Sol Fa System as being much simpler, and capable of being more easily and more quickly taught than the common method. Dr. McLellan highly complimented Mr. McDonald for his paper, and said that it was very probable that music and industrial drawing would soon be made compulsory subjects in our High School curriculum. Dr. McLellan then gave a short but instructive address on the best method of teaching reading, pointing out many of the most common errors into which the great bulk of readers are apt to fall. On Friday morning the election of officers took place, with the following result: F. L. Michell, M.A., I.P.S., President; J. McCarter, H.M. P.S., Almonte, Vice-President; H. S. Robertson, Perth M.S., Secretary-Treasurer; Committee of Management—Mr. Jacques, Perth M.S.; Mr. McCreary, S. Falls P.S.; D. M. Ross, Lanark P.S.; J. R. Johnston, B.A., H.M. H.S., C. Place; and Miss Finlay, Balderson P.S. Auditors, M. Rothwell, H.M. C.I., Perth, and N. McDonald, Balderson P.S. Mr. Walrond, of the Almonte High School, gave quite a lengthy blackboard illustration of his method of teaching vulgar fractions, and received the thanks of the Association for his papers. Mr. Rothwell then took up the subject of the "Assignment of Home Work." By his remarks we should judge that he was not in all respects in accord with the present state of affairs. Mr. McGregor, of the Almonte H.S., then addressed the Association for half an hour on the subject of "English Composition." He pointed out what he thought were the best methods of teaching the subject by the teachers speaking correctly, correcting all oral or written mistakes made by the pupil, practical exercises, themes, letter-writing, etc. He claimed that the pupil should commence in some measure the study of English composition the first day he enters the school, and that it should be continued side by side with English Grammar. The last paper was an exceedingly well arranged and well composed one on "The Atmospheres," by Mr. J. R. Johnston, of C. Place H.S. After a short discussion on this subject the convention was brought to a close.

PRINCE EDWARD.—According to programme, the forenoon was spent in visiting the public school, Picton, and observing the methods of teaching followed by the Principal, Mr. R. W. Murray. Arithmetic, Grammar, Dictation and Reading were taken up by the Principal and handled in a very thorough and practical manner. At half-past one the teachers assembled in Shure Hall. The meeting was called to order by the President, Mr. Murray, and opened with prayer by the Inspector, G. D. Platt, B.A. H. M. Faul was appointed secretary. Minutes

of last meeting were read by Secretary and approved by convention. The report of committee, Messrs. Kinney, Faul and Brown, on Chief Superintendent vs. Minister of Education, was next received. Mr. Kinney opened the discussion, and favored removing educational affairs from the arena of politics. H. M. Faul next followed, showing that points in favor of the present system far outweighed those against, and claimed that it was impossible to free educational affairs from politics. He was well supported by Messrs. Brown and Platt, and the following resolution was brought forward: Moved by H. M. Faul, seconded by W. R. Brown, that this convention is of the opinion that it is desirable to retain the present system of administration of educational affairs until at least we have given it further trial. Carried. Mr. Weeks next introduced the subject of Reduction in a thorough and practical manner. A very excellent essay was next read by Miss N. Hicks on "Teachers' Conventions." The subject of Promotion Examinations was discussed, and the present arrangement was approved of. Convention adjourned to meet in Town Hall at 8 o'clock, when an excellent lecture was delivered by Dr. McLellan, an account of which will be found elsewhere. *Saturday*—Mr. John Kinney was appointed delegate to the Provincial Association. A communication from Toronto Public School Principals' Association was next read. This referred to doing away with teachers' superannuation fund. After a discussion by Messrs. Murray, Brown, Dobson, Faul and Trampour, a committee of Messrs. Dobson, Murray, Netbery and the Inspector was appointed to report at next convention. Mr. Platt next read a communication concerning the establishment of an Art School in Toronto. Dr. McLellan was next introduced. Subject—Literature in Public and High Schools. He stated that literature in the public schools had not been a success. The selections in the Fourth book were very poor, and not the best that the book contained. Gray's *Elegy* was not among the selections. The English Language stands pre-eminent. There is more thought in Shakespeare than in Homer and all Greek poets together. Aim at giving a taste for literature. It should be taught to all the classes. The faculty of story-telling should be cultivated. Literature must be in the teachers' first. Mr. Dobson took up the subject of composition under the following headings: (1) Correction of Mistakes, (2) Purity of Language, (3) Figures of Speech, (4) Building of Metaphors, (5) Outline, (6) Reproduction Orally and in Writing, (7) Examples for correction, (8) Paraphrasing, (9) Letters. The Auditor's report was adopted. Convention adjourned. H. M. FAUL, Secretary.

REVIEWS.

Ginn, Heath, & Co., have just brought out the American copyrighted edition of Mr. Alexander Gustafson's great book on the Drink Question, which has already been accepted in England as the most complete book on the subject ever made, and one that will be the bible of temperance reformers for years to come. The prominent reviews have pronounced it the fairest, most exhaustive, freshest, and most original of all the literature on the subject that has yet appeared. They also declare it to be most impartial and careful in its evidence, and fair and fearless in its conclusions. Its accuracy is vouched for by the best physiologists and physicians. Mr. Gustafson is a Swede by birth, he is a graduate of Harvard University, and has won high distinction as a thorough student of world politics, and as a political writer of marked insight and acumen, having written articles for the Boston and New York dailies, as well as for the "North American Review," "National Quarterly," and "Atlantic Monthly." Price, \$2, by mail, \$2.25.

QUESTION BOOK OF STIMULANTS AND NARCOTIC. By C. W. Bardeen, Syracuse, N. Y. 38 pp., 10 cts.

This excellent little book is exactly suited to the needs of our schools. It is thoroughly scientific in its matter, containing nothing but hard facts judiciously arranged.

THE TONIC SOL FA MUSIC COURSE FOR SCHOOLS Bk. I., by Daniel Batchelor and Thomas Charnburg, Boston: F. H. Gibson; Chicago: S. N. Winchell & Co.

A collection of studies and songs in the first and second steps of the Tonic Sol fa Method. The book is beautifully got up, and must prove a treasure to teachers of this new system.

A FIRST BOOK IN GEOLOGY, by N. S. Shaler, S.D., Boston. Ginn, Heath & Co. 330 pp., \$1.10.

Dr. Shaler, professor of palaeontology in Harvard University, has produced a geology primer of 250 pages strongly marked by the simplicity and rigid accuracy which come from a profound knowledge of the subject. He has succeeded in making a really attractive book which is of special value to teachers on account of the 75 pages of Directions to Teachers. There are about 150 fine illustrations and a great deal of matter of great interest to students of physical geography.

EXERCISES IN TRANSLATION AT SIGHT. Arranged by A. W. Spratt, M.A., and A. Pretor, M.A., Bivingtons, London.

Vol. I. Original Passages; Vol. II. English Version.

FIRST LESSONS ON MINERALS, by Allen H. Richards, (Guides for Science Teaching No. XIII.), Boston. Ginn, Heath & Co.

This book would make an excellent manual for the upper classes of our public schools. It is really a series of lessons on the elements and a few of their compounds.

A PRACTICAL METHOD OF LEARNING SPANISH. By General Alejandro Ybarra, Professor of Modern Languages in the Martha's Vineyard Summer Institute. 320 pp. Ginn, Heath & Co., Boston.

This book properly assumes that language must precede grammar. It aims at the shortest method of giving the learner a vocabulary and command of the sentence. It does not pretend to be a formal grammar but is rather a series of practical language lessons. Each lesson is divided into three parts; first, important words and phrases, idiomatic constructions, and exercises on the conjugation of the verbs; second, a reading exercise with translation in parallel column, third, a practical conversation to be translated from dictation. Every teacher of language may learn something from the method of the book.

BIOGRAPHY OF EZRA CORNELL, FOUNDER OF THE CORNELL UNIVERSITY.—New York: A. S. Barnes and Company, 322 pp.

This elegant volume gives in readable form an account of the liberal minded patriot who devoted so much of his means to the establishment of Cornell University.

FORTY SECOND ANNUAL REPORT OF THE BOARD OF EDUCATION OF THE CITY OF NEW YORK.

This volume will be found well worthy of a careful perusal by every one interested in education.

A METHOD OF ENGLISH COMPOSITION, by T. Whiting Bancroft, Professor of English Literature in Brown University. Boston: Ginn, Heath & Co. 96 pp.

This is a supplementary work designed to outline the logical relations of Rhetoric, and to discuss the different kinds of composition from a rhetorical point of view. This part of the book is well done and the student will find it very helpful. The examples and lists of subjects in part II. are excellent.

MEIN BRUDER, NOVELLE von Auguste Bunder. Philadelphia: Ig. Kohler, 911 Arch St. 109 pp., paper.

Tinily printed and well got up Kohler's Catalogue will be useful to students of German.

A PROGRESSIVE SERIES OF INDUCTIVE LESSONS IN LATIN, by John Tellow, Master of the Girls' Latin School, Boston. 340 pp. Boston: Ginn, Heath & Co.

This is a piece of substantial work in language teaching. The method of discovery by induction is carried out in these lessons in such a way as to make the learning of Latin a splendid piece of intellectual training in observation analysis, induction, and generalization. Every teacher of classics will learn here something about the method of teaching classics to beginners.

HANDBOOK OF LATIN WRITING, by Henry Preble and Charles P. Parker Tutors of Greek and Latin in Harvard University. 101 pp. Boston: Ginn, Heath & Co.

Classical masters will find the first part of this book very suggestive. The exercises are well adapted to the requirements of learners, but it would have been better to add a few notes and cautions with each exercise and a few good examples worked out.

Variety is a very marked feature of the *North American Review* for October. The first two articles, "Moral Character in Politics," by President Julius H. Seelye, and "Why I Wish to Visit America," by the Rev. Dr. Augustus Jessop, are difficult to classify; but each of the remaining six represents a distinct department of thought. In theology we find "The Philosophy of Conversation," by O. B. Frothingham; in medicine "The Origin of Yellow Fever," by Dr. C. Creighton; in law, "Shall the Jury System be Abolished?" by Judge Robert Y. Hayne; in literary criticism, "The Genesis of Irenyus's Mand," by Richard Herns Shepherd; in military science "The Development of Machine Guns," by Lieut. C. Sleeman, and in political economy, "The Benefits of the Tariff System," by John Roach and others. All of these subjects are treated in an interesting and original manner.