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CANADA SCHOOL JOURNAL HAS RECEIVED

An Honorable Mention at Paris Exhibition, 1878.

Recommended by the Minister of Education for Ontario.

Recommended by the Council of Public Instruction, Quebec.

Recommended by Chief Superintendent of Education, New Brunswick.

Recommended by Chief Superintendent of Education, Nova Scotia.

Recommended by Chief Superintendent of Education, British Columbia.

Recommended by Chief Superintendent of Education, Manitoba.

Recommended by the 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 SUPERANNUATION FUND.

In the course of a discussion in the House on March 10th., DR. McLAUGHLIN stated that a change in the present system was needed. He pointed out that the fund now costs the province \$40,000 a year, \$438,736 having been paid out, and \$167,390 paid in, making a charge of \$272,335 on the province during twelve years. He thought that this burden on the finances of the province should not be increased, and that the door should be shut against any more teachers paying into the fund. He would not advocate any system which compelled teachers to pay a certain amount of money into the fund, and prevented them from enjoying it. Nowhere on this continent, outside of Canada could such a system be found in vogue.

HON. G. W. ROSS, (Minister of Education) said he had given the subject some attention, and hoped during the recess to obtain the views of teachers on it. When the fund was instituted, teachers were made civil servants, on the ground that the teacher's salary was very low, that he was a public benefactor, that he was spending his time more in the interests of this province than in his own interest, and by making this allowance it was thought an appropriation would be made which would serve him when he was no longer able to act as a teacher. Mr. Ross thought it was a mistake to consider the teacher a civil servant. Although the salary was not high, the profession was one in which they should endeavor to cultivate a higher feeling of independence than was usually attributed to civil servants. Two views of the matter presented themselves. One was that *the fund should be self-sustaining*, in which case the \$4.00 a year now contributed would have to be immediately increased to \$16.00, and eventually to \$20.00.

On the other view, namely *the abolition of the fund*, they must not overlook those who are now sharing in it, and the refund to those who had not yet become claimants upon it. The amount due to those not yet pensioners was about \$100,000. Mr. Ross was not prepared to say what he would do, or what he thought best. He hoped to receive information during the recess which would enable him next year to bring down a scheme to make it self-sustaining or else provide for its abolition.

MR. MEREDITH thought there was no necessity of grafting on the provincial system any scheme of superannuation, and it was far better to pay those in the employ of the Province as they should be paid, so that they might be enabled to save something against a rainy day, rather than that they should be dependent on the Province for a gratuity.

HON. O. MOWAT thought that if the teachers had not received this allowance some of them would be actually starving. Nobody could dispute the fact that teachers' salaries were so low that nothing could be saved from them, and it would be a lamentable thing if those who had spent their lives in performing their duty, the most important, perhaps, in the State, should be deprived of its assistance. He trusted that the Minister would be able to arrive at some scheme which would meet the object of the fund without increasing the burden on the province. MR. HARCOÛRT said that if the Minister of Education were to address a circular to the teachers, fully ninety per cent. of them would favor the abolition of the fund.

In this Mr. Harcourt was undoubtedly correct, but it does not necessarily follow that a majority of the teachers know what is best to be done. The young and inexperienced do not yet fully appreciate the injustice of miserable salaries. Those who have entered the profession as a mere step-ladder by which they hope to reach something better, will naturally try to escape any burden for the general good of their temporary profession. Their permanent interest lies elsewhere. But these two classes form a majority of our teachers. We shall not pretend to dogmatise on a question admitting of so much diversity of opinion. At any rate teachers must prepare themselves to give their decision. If any means can be devised for adding about fifty per cent. to present salaries, the superannuation fund will no longer be a matter of importance. In the words of Mr. Mundella, the English Minister of Education, "teachers would know how to deduct their own per cent., and they would know how to make their own investments." Meantime, the fund is important and the question of its abolition deserves very serious attention.

One of the leading denominations has lately been successful in establishing an augmentation fund for the purpose of bringing up all salaries of its ministers to a certain fixed minimum. If something of the sort could be done for teachers the superannuation fund might be abolished forthwith. Indirectly,

such a fund might be made to tell powerfully on the advancement of the teaching profession. We have previously called attention to the proposal to give every teacher a direct interest in the government grant in proportion to his professional standing. Why should trustees derive the whole benefit of the grant? Why should stagnant mediocrity be on the same footing in the eyes of the Department as progressive talent? If this dead level in the matter of government grants were broken up, the best men would not drift off to easier and better paid professions. Any one who holds a second class grade A certificate to-day, can easily and certainly secure better remuneration for less labor in some other occupation. Either a better system must prevail, or teaching must remain a sort of caravansary in which the flower of our youth stay all night, and sail off by the first boat in the morning.

HISTORY FOR PUBLIC SCHOOLS.

We lately gave a brief discussion of the questions, What History is suitable for our Public Schools? How should the vast subject of History be introduced? Several opinions of eminent authorities were presented, and some correspondence on the subject published. We return once more to the topic to insist on a reconstruction of the programme, and to effect, if possible, a reformation in the method of teaching history to our junior classes. We shall remain true to our own plan and begin with the most recent writers. Let us hear J. G. FITCH, M.A., *Lecturer on Teaching at Cambridge*, and one of Her Majesty's Senior Inspectors of Schools. Here is his evidence dated January, 1881:—"How then should we begin to teach English History? Not certainly by plunging at once into the story of Julius Cæsar and the Druids; nor by giving a number of dates to be learned, to form a framework for pictures we mean to paint. I should first give a short series of lessons either orally, or from a well written reading book, if I could find one, with a view to make some simple and fundamental historical ideas intelligible—a *state*, a *dynasty*, a *monarch*, a *parliament*, *legislation*, the *administration of justice*, *taxes*, *civil and foreign war*. Scholars would thus see what sort of matter history had to do with, and would be prepared to enter on the study with more interest. Then a general notion should be given of the number of centuries over which our history extends. Thus a sort of Time-map divided into nineteen centuries is roughly constructed, on the same principle as . . . the meridian lines of a geographical map. But, as soon as this is done, the task of selection begins. The teacher is by no means bound to follow blindly the course prescribed by the text-book. On the contrary it will be far better to fix upon the most characteristic periods, to cause them to be studied with fulness and exactness, and to reserve the chronicle of the less notable reigns until afterwards. The person who understands these well is, as far as history is concerned, a well-informed man, even though he is unable to repeat in due order the list of sovereigns, and to tell their relationship to each other. . . . It is absurd to find children knowing about the Heptarchy and the Feudal System, and yet

not knowing how our present Parliament is constituted and what are its duties and functions."

Our next witness is JAMES PYLE WICKERSHAM, M.A., formerly Principal of the Pennsylvania State Normal School, State Superintendent of Education, etc. His evidence bears date January 1865, and reads as follows:—"The first historical matter I would place in the hands of children to be read or studied would be what I have denominated Fragments of History. Children commence learning all things by fragments; and, if written in a suitable style, they will read the kind of writings now designated with remarkable avidity. This matter, in the form of voyages, travels, biographical sketches, historical narratives, may be arranged in lessons for reading in schools, it may be studied and recited, or it may be read at home. They can accumulate in this way a vast store of facts before they reach the age of twelve, and before this age they are generally unable to enter upon a more systematic course of study.

I would next require children to study in detail the principal facts in the History of their native land. No one can well do without this knowledge, and to the citizen it seems indispensable. I am well aware that the history of one country cannot be fully understood without some knowledge of the histories of other countries with which it has been connected. But teaching must begin somewhere, and less difficulty will be found in commencing with the history of one's own country than with that of distant countries, or with general history. The reason is that pupils are better acquainted with the events that have transpired in their own country than with those that have transpired in others, and are naturally more anxious to increase their knowledge in respect to the former than in respect to the latter. A knowledge of the history of their own country is about all that can be expected of pupils in our common schools, but pupils in high schools and colleges should study universal history. So far as the laws of history can be inferred from the observed facts it is an empirical science, and must be taught according to the principles of the *Inductive Method*. Methods applicable to all other studies are employed in a higher sense in this. There is no good reason why history should not be as interesting to the young as fiction. Facts of history can be found adapted to pupils of any age, and expressed in forms which render them agreeable to every taste; and the teacher who fails to do his duty in selecting them can offer but a poor excuse."

We adjourn for the present, but intend to invite other witnesses who will place before the jury of educational opinion the necessity of Canadian History for Canadians, and the History of *recent times* as the introduction best suited to the average citizen.

THE HISTORY OF EDUCATION.

A very slight knowledge of mineralogy would have prevented Jacques Cartier from mistaking quartz crystals for diamonds and would have saved him much useless trouble. It is always important to know what has been attempted and what accomplished before we undertake new experiments of our own.

Frequently a few historical or scientific facts may save us the labor of proving over again what was long since investigated. Perhaps there is no other department in which men are more prone to neglect the results of previous explorers than education. This partly accounts for the *ex cathedra* dogmatism of shallow doctrinaires, who are always ready to pass their quartz for diamond and expatiate on its purity with the vehemence of a patent medicine vendor. One cure for the prevalent empiricism in educational methods is found in the study of mental science and the laws of mental evolution and development. Another, almost as important, lies in the history of the educational systems that have prevailed in various countries, especially those of modern times. There we may see particular theories clothed with practical application and worked out to their legitimate results, and thus save ourselves from the repetition of demonstrated error. We may gather valuable suggestions for new progress as we note the principles and the steps of the old. The scientific educator cannot afford to neglect the results.

TEACHERS AND TEXT-BOOKS.

A text-book for elementary schools to be successful must of necessity be the work of a practical teacher. The author must have some grasp of methods, some comprehensive knowledge of the best ways of presenting the subject matter to beginners. There is no other principle of early education more firmly established beyond all controversy. Some of the worst text-books on mathematics for junior students have been produced by writers who were themselves eminent mathematicians. It were easy to draw illustrations from science, literature, music, and other departments. When the mere technical skill of the author is not supplemented by adequate knowledge of educational facts and laws it is quite safe to predict the same conspicuous failure in the future as in the past.

Mr. O'Brien, the lately appointed drawing master for the public schools of Toronto, is undoubtedly a good water color painter. Quite as undoubtedly also he is not an experienced practical teacher, and, notwithstanding the skill of his fingers, he will have a great deal to learn in his new position before he understands the best methods of teaching the elements of drawing to young children. When Mr. O'Brien entered on his duties he recommended Prof. Walter Smith's books, which are the result of half a lifetime spent simplifying and systematising the course suitable for public schools. Owing to some misapprehension, however, on the part of the Board these books were not immediately introduced. In the meantime, at the request of a Toronto Publishing firm, one of whose members is an active member of the Toronto Public School Board, Mr. O'Brien has, we believe, notwithstanding his lack of public school experience, undertaken to prepare a series of drawing books. No doubt he has done this the more gladly from a hope that they will be used in the Toronto schools. Let Mr. O'Brien first prove himself a competent teacher of the subject he has undertaken, and then we see no

good reason why he should not have an opportunity of being heard from as an author. But we protest against the time of the pupils and money of the citizens being wasted to enlarge the income of even an artist, and increase the profits of a trustee. As to Mr. O'Brien's ability complaints have already been made, which go far to show that he is not the right man in the right place, and does not possess the first qualifications of a practical teacher.

We shall hold over further discussion of this important matter until next issue, when we shall give some interesting points on this question, believing that it will be of service to the profession and public generally to thoroughly ventilate the whole subject.

WEEKLY EDITION OF THE CANADA SCHOOL JOURNAL.

We have lately been urged by prominent educationists to make still greater efforts to meet the growing wants of education in the Dominion. We have received definite proposals to issue a weekly edition, and generous offers of support to make it an assured success. The great strides of educational progress that have been made since the JOURNAL was founded in 1875, and the favor with which it has been received in educational circles in all the provinces are certainly very encouraging. No doubt a weekly educational journal will appear as soon as the country demands such further assistance, and we know of none more likely than the CANADA SCHOOL JOURNAL to enter first on this enlarged mission. We shall be glad to hear from our friends throughout the teaching profession.

MANITOBA.

The Legislature has, during the present session, made an important change in the mode of levying taxes for the support of rural schools. Hitherto each school section, or district, as it is called, was compelled to raise from local taxation, every dollar required for the support of its school, except the Government grant of one hundred dollars. This law bore very hardly upon newly settled districts and tended toward the prevention of the establishment of schools in new settlements.

The change made requires three-fourths of the expenses of each school, not exceeding in each case four hundred dollars, to be raised from a tax upon the whole municipality and the balance from the school district, thus ensuring to every school a minimum sum from the general tax, at the same time leaving each free to increase its expenditure from a local tax.

The Normal School under its new regulations is proving very successful. The first session at Birtle during the month of May was well attended and excited great interest. Principal Goggin has won golden opinions by the knowledge he displays of his subject and the enthusiasm he succeeds in infusing into the students. At the close of the sessions both at Brandon and Birtle, Mr. Goggin was the recipient of addresses from the students, expressing their appreciation of the benefits they had received from their attendance.

The offices of the Education Department have been re-

moved to the building lately occupied as Government offices, accommodation being provided for both sections of the Board of Education and the Council of the University.

The school law of the province being now included in several Acts, Mr. Somerset, Superintendent of Education, is engaged upon the compilation of all the unrepealed portions of these Acts into a manual of easy reference for School Trustees.

The number of school districts increased from 182 at the beginning of 1883 to 328 at the commencement of 1884.

This new province has been highly favored in having at the head of its Educational affairs so able a gentleman as Mr. Somerset, who, although new to the place, has shewn most admirable administrative tact and ability, and has proved himself a worthy successor to the Ven. Archdeacon Pinkham, who for ten years with distinguished success held the educational helm.

QUEBEC.

A great advancement has lately been made in Educational affairs in the Province of Quebec during the past two years. It is universally conceded that the credit of this improvement is largely due to the energetic efforts and skillful management of the Secretary of Educational Department, Rev. Elson I. Rexford. The conscientious energy with which he is enforcing school regulations, and his assiduous attendance and effective service at teachers' conventions, bid fair to place the Quebec system in the front rank.

MORE ABOUT SCHOOL BOOKS AND AUTHORS.

Elsewhere we have pointed out how a disgraceful attempt is about to be made to manipulate for personal gain the text-books on Drawing for use in Toronto schools, and to supplant the books of Professor Walter Smith, which are recognized as the standard works on the subject in the provinces of Ontario, Quebec, Nova Scotia, New Brunswick and Prince Edward Island, besides being used very largely in every state in the Union.

Our attention has been called to the course pursued by a teacher in music in one of our Normal Schools, which will require some explanation.

It is stated there has been during the past and previous sessions a series of books and a system adopted of teaching music known as National Music Course, by Mason, Holt and two other masters who together are the supervisors of music in Boston public schools.

These books and this system were adopted by the aforesaid teacher as the best extant, and we believe are generally recognized as the most popular in the United States, where considerable attention is given to the study of music in schools.

However a change has come over the spirit of his dream and the teaching of music henceforth must be done after a different fashion. The books and system of a former session are discarded—a new series and a new system must forthwith be had at once. The question naturally arises why should there be so radical a change in the views of our Normal Musical Professor? Why should all our teachers in training be led a different road from the one taken in former sessions by the same gentleman? Is it because a new and better way

has been found? This can scarcely be the case, especially as the books and system last adopted are, we believe, discredited in most of the best schools in the United States, and the ones displaced are held high in public favor. Will the answer not be found in the fact that the same publishing firm who would manipulate if possible the Drawing interests of the Toronto Schools has approached the Normal School Master, and secured his name upon the title page, and instead of continuing as we had in the session of 1883, a series of books by Messrs. Mason, Holt & Co., called National Music Course, we now have the *Normal Music Course*, by Holt & Tufts, adapted to Canadian schools, by S. H. Preston, *Teacher of Music, Normal School, Toronto*. In the mean time while Teachers and Publishers have benefited the booksellers are left with a considerable quantity of the old books and a change in the system of teaching music is quietly brought about. Do the teachers in training and the country at large benefit by the change? We shall see. We wonder what the Minister of Education will have to say?

A NEW ENTERPRISE.

From representations that have been made to us we have been led to contemplate the issue of a weekly journal which will occupy a field somewhat different from that of any now before the public. We believe there is a mission for a paper having as a feature cartoons illustrating political events of the day, *independent in politics*, and giving attention to *religious, temperance, and social reforms*, combining the best features of the ordinary newspaper with those of the magazine and the humorous periodical. The publishers of the CANADA SCHOOL JOURNAL are in treaty with the proprietors of a new and rapid process recently produced in Germany and specially adapted to bring out political cartoons and sketches with effect. As soon as matters have assumed a more definite shape we shall be prepared to make further announcements.

REPORTS OF CASES.

The *Pall Mall Gazette* cites some more cases illustrating the quality of the learning furnished by the English board-schools. The study was geography. The children were able to give an accurate list of the exports of Norway, but could not recall the picture of a fiord. They knew that the latitude of Paris was 49 degrees, but when asked, "What is latitude?" they were either dumb, or gave such answers as—"Latitude means lines running straight up;" "Latitude means zones or climate;" "Latitude is measured by multiplying the length by the breadth." Correct lists of imports were given, but customs duties were defined by a girl, "Customs are ways, duties are things that we have to do, and we ought to do them;" by a boy, "Customers' duties are to go to the places and buy what they want, not stopping about, but go out when they are done."

We give a few sentences uttered by teachers in our hearing during the past few days:

"Every one of the teachers present were discouraged."

"That man was me."

"If I was in your place, I shouldn't have done it."

"It taint no use for me to try."

"I done that myself."

"He oughtened not to have carried one."

"He is a good ways from right."

This list could be indefinitely multiplied.

Mathematical Department.

FIRST-CLASS ALGEBRA PAPER,

Set for Pupils' Examinations of the College of Preceptors,
Christmas, 1883.

1. Given $4x - 5y = 18 = 3(5x + 2y)$, and $z = 0$, find the value of $\sqrt{(3x + y - 2z)(5z - 4y + 2x) - 7z^2 + 2x^2 - 3y^2 - 5xy}$.

2. Prove, in any way, that $a^2(b-c)(b+c-a)^2 + b^2(c-a)(c+a-b)^2 + c^2(a-b)(a+b-c)^2 = (a-b)(b-c)(c-a)[2(ab+bc+ca) - a^2 - b^2 - c^2]$.

3. Reduce to its simplest form $\frac{4x^2 - 3x + 5}{x^2 + 1} - \frac{1 - 2x}{x^2 + x + 1} + \frac{6}{-x}$.

4. Solve the simple equations:—
(i.) $1 - \frac{3x}{5} + \frac{1}{2} = \frac{2 + 5x - x^2}{10 + 21x - 10x^2}$
(ii.) $(2x - 3)(3y + 5) - 2(x - y) = (4 \cdot 5 - 3x)(3 \cdot 5 - 2y) + 12 \cdot 5$
 $3x = 2y + 3 \cdot 75$

5. Solve the quadratic equation: $\frac{7x - 2}{9} - \frac{3x + 4}{4 - 3x} = \frac{9x + 1}{7}$.

6. A Bill upon which 576 Members voted was lost on a division; subsequently, the same Members voting, it was carried by a majority half as large again as it was originally lost by, and the majority in the latter case equalled the number of those who first voted for the Bill. Find how many voted on each side, and how many Members changed their minds.

7. A messenger has to go a journey of 20 miles, and times himself to do it in a certain time. After walking 8 miles, he is delayed one hour, and is consequently obliged to increase his former rate by two miles an hour. Find his original rate of walking.

8. What values of p and q will make $4x^4 + 4px^3 + 16x^2 + qx + 9$ a perfect square?

SOLUTIONS.

1. $\left. \begin{matrix} 4x - 5y = 18 \\ 5x + 2y = 6 \end{matrix} \right\}$, therefore $x = 2$, $y = -2$, and $z = 0$, therefore
Expn. = $\sqrt{(6 - 2)(8 + 4) + 8 - 12 + 20} = \sqrt{(48 + 16)} = \sqrt{64} = 4$.

2. If $a = b$ the left hand member vanishes. $\therefore a - b$ is a factor, and hence $(a - b)(b - c)(c - a)$ is a factor, for the expression is symmetrical with respect to a, b , and c . It is of five dimensions, and we have found 3 factors, hence there must be only another factor of two dimensions of the form $P(a^2 + b^2 + c^2) + Q(ab + bc + ca)$. Hence put left hand member
 $= (a - b)(b - c)(c - a)[P(a^2 + b^2 + c^2) + Q(ab + bc + ca)]$

where P and Q include all numerical factors. Then to find P and Q put $c = 0$ on both sides and we have

$$a^2b(b - a)^2 + b^2a(a - b)^2 + 0 = (a - b)(-ab)[P(a^2 + b^2) + Q(ab)]$$

or, dividing through by $-ab(a - b)$, this becomes

$$-(a^2 + b^2) + 2ab = P(a^2 + b^2) + Q(ab),$$

from which it is plain that $P = 1$, and $Q = 2$, and consequently left hand member

$$= (a - b)(b - c)(c - a)[a^2 + b^2 + c^2 + 2(ab + bc + ca)].$$

See May Number—Elementary Algebra.

3. Expression = $(4x^2 - 3x + 5 + 2x^2 - 3x + 1 - 6x^2 - 6x - 6) + (x^2 - 1)$
 $= -12x \div (x^2 - 1) = 12x \div (1 - x^2)$.

4. (i.) Sinister member

$$= 1 - \frac{5 - 3x}{5 - 2x} + \frac{2 + 3x}{2 + 5x} = \frac{x}{5 - 2x} + \frac{2 + 3x}{2 + 5x} = \frac{10 + 13x - x^2}{10 + 21x - 10x^2}$$

Therefore, since denominators are equal, we have

$$2 + 5x - x^2 = 10 + 13x - x^2 \text{ and } 8x = -8, \therefore x = -1.$$

(ii.) $6xy + 10x - 9y - 15 - 2x + 2y = 15 \cdot 75 + 10 \cdot 5x - 9y + 6xy + 12 \cdot 5$,
 $\therefore 18 \cdot 5x + 2y = 43 \cdot 25$
 $\left. \begin{matrix} 3x - 2y = 3 \cdot 75 \\ 18 \cdot 5x + 2y = 43 \cdot 25 \end{matrix} \right\}$, $\therefore 18 \cdot 8x = 47$, and $x = \frac{47}{18 \cdot 8} = \frac{1}{2} = 2 \cdot 5$.

Hence $2y = 75 - 3 \cdot 75 = -3$, $\therefore y = -1 \cdot 5$.

5. $\frac{3x + 4}{4 - 3x} - \frac{7x - 2}{9} - \frac{9x + 1}{7} = \frac{32x + 23}{63}$,
 $180x + 252 = 90x^2 - 59x - 92$, $96x^2 - 248x - 344 = 0$,

i.e., $12x^2 - 31x - 43 = 0 = (x + 1)(12x - 43)$,
therefore $x = -1$ or $3\frac{1}{2}$.

6. Let $x =$ No. who voted for (first division), then $576 - x =$ No. against, therefore first majority = $576 - 2x$. Hence, taking account of second division, we have
 $x = \frac{1}{2}(576 - 2x)$ and $x = 216$.

Hence, in first division, 216 voted for, and 360 against. The majority in second division = 216,
therefore voters against = $\frac{1}{2}(576 - 216) = 180$,
and voters for = 396.

Hence 180 changed their minds.

7. Let $x =$ original rate, \therefore time originally allowed $\frac{20}{x}$
hence $\frac{20}{x} - \frac{8}{x} + 1 + \frac{12}{x + 2}$, i.e., $1 = \frac{1}{x} - \frac{12}{x + 2} = \frac{24}{x(x + 2)}$
 $\therefore x^2 + 2x - 24 = 0$, and $x = 4$ miles per hour.

8. $\frac{4x^4 + 4px^3 + 16x^2 + qx + 9}{4x^4} = \frac{2x^2 + px + 3}{4x^4}$

$$\begin{array}{r} 4x^2 + px \\ \hline 4px^3 + 16x^2 \\ \hline 4px^3 + p^2x^2 \\ \hline (16 - p^2)x^2 + qx + 9 \\ \hline 12x^2 + 6px + 9 \end{array}$$

By conditions of question, $16 - p^2 = 12$, $q = 6p$,

$$\therefore p^2 = 4 \text{ and } p = \pm 2, \therefore q = \pm 12.$$

Or we may solve the question by writing

$$4x^4 + 4px^3 + 16x^2 + qx + 9 = (2x^2 + ax + 3)^2,$$

and then equate the coefficients of like powers on the two sides of the equation. The result is the same.

THE EXAMINATION OF STUDENTS IN TRAINING COLLEGES (ENG.), DECEMBER, 1883.

ARITHMETIC.

1. Find the length of the edge of a cubical tank that contains 2,143 gallons and 3 quarts of water. Given, that 1 gallon of water weighs 10 pounds, and 1 cubic foot of water weighs 62½ pounds.

2. A bicyclist ran $4\frac{1}{2}$ miles in 17 minutes. The distance made in the last minute was $\frac{1}{2}$ of that made in the first minute; and the distance in each successive minute was less than that made in the preceding minute by the same quantity. Find the average and the decrease per minute.

3. A money lender charges 10% on a three months' bill, taking his 10% from the amount of the loan when the money is lent. What yearly income will he have from a capital of £3,561 constantly employed in this way?

4. If cloth 42 inches wide, weighing $6\frac{1}{2}$ ounces per yard, and made of wool worth 3s. 9d. per pound, be sold for 8s. 2d. per yard, how many ounces will there be in a yard of cloth 27 inches wide, made of wool worth 6s. 5d. per pound, and selling at 5s. 6d. per yard?

5. If an income tax of one penny in the pound produce £3,857, 216 11s. 1½d., and the capital of the country be supposed to produce an income of 2½%; find the capital of the country.

6. A put into a partnership £4,815 for one year and five months; B put in £3,531 for two years and one month; C put in £6,099 for ten months. Their profit was £1,926. What was the share of profit of each?

7. A bill for £3,511 10s. 6½d. was discounted for £3,497 3s. 1½d. at the rate of 2½%, simple interest per annum. For what time was it drawn?

8. What sum of money at $3\frac{1}{2}\%$ per annum, simple interest, will amount to £13,083 1s. 6 $\frac{1}{2}$ d. in 3 years and 146 days?
9. Find to two places of decimals the diagonal of a face of a cube which contains 95443.993 cubic inches.
10. Find the value of $7 + \frac{1}{7 + \frac{1}{7 + \frac{1}{7 + \frac{1}{7}}}}$ \times 1 ton, 2 cwt., 3 qrs., 11b, in tons.
11. Multiply 31.027 by 0.0057, and divide the result by 27.64899.
12. Find the value of—
 $\frac{\frac{1}{18} + \frac{1}{17} \times \frac{1}{3} + \frac{1}{4}}{\frac{1}{19} + \frac{1}{21} \times \frac{1}{3} + \frac{1}{4}} \times \text{£}56 \text{ 8s. } 0\frac{1}{2}\text{d.}$
13. Find the compound interest on £104,166 13s. 4d. for four years at 3% per annum.
14. If £10,420 in $3\frac{1}{2}\%$ per cents. be sold out at 102 $\frac{3}{8}$, and the proceeds invested in $2\frac{1}{2}\%$ per cents. at 69 $\frac{3}{8}$, what will be the change of income, brokerage of $\frac{1}{8}$ per cent. being charged on each transaction?

SOLUTIONS.

1. Tank holds 8575 quarts; 4 quarts weigh 10lbs, \therefore 1 quart weighs $\frac{10}{4}$ lbs.
 Weight of water = (85750+4)lbs.
 \therefore No. cubic feet in tank = $85750 \div 4 \times \frac{1}{175} = 8585 \div 25 = 343 = 7^3$
 \therefore length of edge = 7 feet.
2. He went 17 quarter miles in 17 minutes, \therefore average rate = $\frac{1}{4}$ mile per minute. The middle minute must have been travelled at the average rate, i.e., during the ninth minute he went $\frac{1}{4}$ mile = 440 yards. If D = decrease per minute in yards we have $440 - 8D = \frac{1}{8}(440 + 8D)$ $\therefore D = 13\frac{1}{2}$ yards.
3. Interest = $\frac{1}{8}$ loan; amount in 3 months = $\frac{1}{8}$ loan; amount in 1 year = $(\frac{1}{8})^4$ loan. Amount of 6561 in a year
 $= (\frac{1}{8})^4 \times 6561 = 65,610,000 \div 9^4 = 10,000$
 \therefore Income = 10,000 - 6561 = £3439.
4. $\left. \begin{array}{l} 42 \text{ in.} : 27 \text{ in.} \\ 6\frac{1}{2} \text{ oz.} : \text{Ans.} \\ 45 \text{ d.} : 77 \text{ d.} \end{array} \right\} \therefore 98\text{d.} : 66\text{d.}$
- Answer = $\frac{42 \times 6\frac{1}{2} \times 45 \times 66}{27 \times 77 \times 98} = 3\frac{1}{2}$ oz.
5. Income = $2\frac{1}{2}\%$ = $\frac{25}{1000}$ capital; tax = $\frac{1}{10}$ income,
 \therefore tax = $\frac{25}{1000} \times \frac{1}{10}$ capital = $\frac{25}{10000}$ capital,
 \therefore capital = $\frac{25}{25} \times 8000$ tax = 8000 (tax + $\frac{1}{10}$ tax)
 $= 8000 \times 4,024,921 \text{ " } 12 \text{ " } 6 = \text{£}32,199,373,000.$
6. Observe that $4815 = 15 \times 321$; $3531 = 11 \times \dots$; $6099 = 19 \times 321$,
 \therefore capitals are at 15, 11, and 19 shares of £321 each.
 Then $(15 \times 17) + (11 \times 25) + (19 \times 10)$
 $= 255 + 275 + 190 = 720$ shares for 1 month.
 \therefore gains are $\frac{255}{720}$, $\frac{275}{720}$, $\frac{190}{720}$ of 1926.
 i.e., A 's = $\frac{255}{720}$, B 's = $\frac{275}{720}$, C 's = $\frac{190}{720}$ of £1926
 $= \text{£}682 \text{ " } 2 \text{ " } 6$; $\text{£}735 \text{ " } 12 \text{ " } 6$; and $\text{£}508 \text{ " } 5$, respectively.
 Also $1926 \div 321 = 6$ shares = profit,
 i.e., 720 shares for 1 month, or 60 shares for a year, give 6 shares profit.
 \therefore rate of profit = $\frac{1}{10}$ or 10% on capital for a year.
7. $\text{£}3511 \text{ " } 10 \text{ " } 6\frac{1}{2} - \text{£}3497 \text{ " } 3 \text{ " } 1\frac{1}{2} = \text{£}14 \text{ " } 7 \text{ " } 5\frac{1}{2} = 13797 \text{ far.}$
 $2\frac{1}{2}\%$ = $\frac{1}{40}$; and $\text{£}3497 \text{ " } 3 \text{ " } 1\frac{1}{2} = 3357270 \text{ far.}$
 $\frac{13797}{3357270} = \frac{1}{243}$, which must = $\frac{1}{40} \times$ time in years.
 $\therefore \frac{1}{243} \times 805 = \frac{1}{40} \times$ time in days = $\frac{3}{2}$,
 \therefore time = 60 days.
8. $3\frac{1}{2}\%$ = $\frac{1}{60}$; 146 days = $\frac{1}{4}$ year $3\frac{1}{2}\%$ = $\frac{1}{4}$.
 Amount of £1 for given time $1 + \frac{1}{60} \times \frac{1}{4} = \frac{25}{24}$ principal
 \therefore principal = 2000 amount $\div \frac{25}{24}$
 $= 2000 \times 13,083 \text{ " } 1 \text{ " } 6\frac{1}{2} \div 2221 = \text{£}11781 \text{ " } 5 \text{ " } 0$ Answer.
9. Side³ = 95443.993, \therefore side = 45.7
 (Diagonal of face)² = side² + side² (I. 47.)
 $= 2 \text{ side}^2$
 \therefore diagonal of face = $\sqrt{2} \times$ side = $1.41 \times$ side.
 $= 1.41 \times 45.7 = 64.437$ nearly.

10. 1 ton, 2 cwt., 3 qrs., 11b (long ton) = 2547lbs.
 Fraction reduced = $18200 \div 2549$.
 Answer = $2547 \times 18200 \div 2549$ lbs = $162\frac{1}{2}$ cwt = $8\frac{1}{2}$ tons.
11. $31.027 \times .0057 \div 27.64899 = .00639$.
12. Expression = $(\frac{1}{3} \times \frac{1}{4}) \times (\frac{1}{2}) \times 54154$ farthings
 $= 43092 \text{ far.} = \text{£}44 \text{ " } 17 \text{ " } 9$.
13. Amount of £1 = $(1 + \frac{1}{100})^4$
 $= 1 + 4(\frac{1}{100}) + 6(\frac{1}{100})^2 + 4(\frac{1}{100})^3 + (\frac{1}{100})^4 = 1.12550881$.
 \therefore Interest of £1 = 12550881.
 $\text{£}104,166 \text{ " } 13 \text{ " } 4 = 100,000,000$ farthings.
 \therefore Interest = 12550881 farthings = $\text{£}13073 \text{ " } 16 \text{ " } 8\frac{1}{2}$ Answer.
14. $\text{£}10425 = 104\frac{1}{4}$ hundreds.
 \therefore First dividend = $104\frac{1}{4} \times 3\frac{1}{2} = 364\frac{3}{4}$.
 $102\frac{3}{8} - \frac{1}{8} = 102\frac{1}{4}$ = rate realized by sale of old stock.
 $69\frac{3}{8} + \frac{1}{8} = 69\frac{1}{2}$ = rate paid for new stock.
 \therefore Second dividend = $(104\frac{1}{4} \times 102\frac{1}{4}) \div (69\frac{1}{2} \times 2\frac{1}{2})$
 $= \frac{1}{2} \times 104\frac{1}{4} \times 2\frac{1}{2} = \frac{1}{2}$.
 Difference = $383\frac{1}{8} - 364\frac{3}{4} = 18\frac{1}{8} = \text{£}18 \text{ " } 11 \text{ " } 3$ Answer.

SELECTED PROBLEMS,

SUITABLE FOR MATRICULATION AND TEACHERS' EXAMINATIONS.

I.—ARITHMETIC.

1. Investigate the rule for finding the square of a number expressed in the following:—To find the square of 297.

$$\begin{array}{r} 297 \\ \times 297 \\ \hline 2079 \\ 2673 \\ \hline 87219 \end{array}$$

Square = 88209

NOTE.—This is an easy application to arithmetic of the algebraical process $(a+b+c+\&c.)^2 = a^2 + 2ab + \&c. + b^2 + 2bc + \&c.$ the position of the figures being made to account for their local values.

2. The old standard bushel was defined by statute to contain 2,150 cubic inches but on examination it was found to contain only 2,124. By the Act of 1824, the bushel was declared to contain 2,218 cubic inches. Examine the real loss on the rental (1,075£) of a farm (which was calculated on a certain per centage of the selling price of the corn grown), supposing the price per bushel to remain the same.

NOTE.—First rental : second rental = 2,218 : 2,124,
 i.e., £1,075 : " = " &c.

3. Having three separate parcels of powders weighing respectively 84lbs, 3oz., 15dwt., Troy; 45lbs, 10oz., 4dr., 12grs., Apothecaries; and, 32lbs, 7oz., 3.712drs., Avoirdupois; how can I subdivide them into parcels weighing each the same integral number of grains?

NOTE.—1lb Troy = 1lb Apoth. = 5760grs.; 1lb Avoir = 7000grs. Reduce each weight to grains and take the G. C. M.

4. The link of Gunter's chain being $7\frac{1}{8}$ inches, prove that ten square chains make an acre.

The Scotch ell being 37.069 inches, and 24 ells making the Scotch chain, what difference (in square feet) is there between 55 English and 42 Scotch acres?

NOTE.—1 link = 7.92 inches, \therefore 1 chain = 792 inches = 66 feet = 22 yards.
 10 square chains = 220 \times 220 square yards = 4840 square yards.
 Scotch chain = 37.069 \times 24 inches = 37.069 \times 2 feet = 74.138 feet.
 42 Scotch acres = 42 \times 741.38 \times 741.38 square feet;
 55 English acres = 55 \times 4840 \times 9, &c.

5. A grocer buys a stock of tea, and sells $\frac{1}{8}$ of its nominal amount at 82 cents per lb, thus clearing \$190; he now calculates that if he sells the remainder at 85 cents per lb he will, on the whole, make 30% on his outlay; but he has forgotten to take into account a loss

in weight of 2% by waste in handling. How much less cash will he receive than he expected?

NOTE.— $\left. \begin{matrix} \text{tea @ } 82 \\ \text{tea @ } 65 \end{matrix} \right\} = \text{tea @ } 82\frac{1}{2} = 1\frac{1}{2} (\text{to } \times \text{cost})$
 $\therefore 82\frac{1}{2}\text{c.} = 1\frac{1}{2} \text{ cost per lb. and cost per lb} = 63\frac{1}{3}\text{c.}$
 Gain on whole @ 82 would have been \$228.
 Gain on 1lb = $82 - 63\frac{1}{3} = 18\frac{2}{3}\text{c.}$ \therefore number of pounds bought = $\$228 \div 18\frac{2}{3}\text{c.} = \&c.$

6. Reduce to its simplest form $\frac{\sqrt{51}}{119}$ of $\frac{\sqrt{360}}{441}$ of $\frac{\sqrt{225}}{343}$.

Expression

$$= \frac{(\sqrt{3} \times \sqrt{17}) \times (2 \times \sqrt{5} \times \sqrt{3} \times \sqrt{5}) \times \sqrt{5} \times \sqrt{5} \times \sqrt{3} \times \sqrt{3}}{7 \times 17 \times 7 \times 3 \times 7 \times 3 \times 7 \times 7 \times 7}$$

$$= \frac{3 \times 2 \times 5 \times \sqrt{17} \times \sqrt{3} \times \sqrt{3}}{7^4 \times 17 \times 3 \times 3}$$

$$= \frac{10}{7^4 \times 17^2 \times 3^2}$$

7. My watch was right at noon. In the evening, looking at a distant clock, I was unable to distinguish whether the clock showed five minutes to ten or ten minutes to eleven, my watch then being at twenty minutes past ten. After an hour or so, on looking at the clock, I was again unable to tell whether it pointed to eleven or to five minutes to twelve, and my watch was then at half-past eleven. What was the least possible error of the clock at the previous noon, supposing the rates of watch and clock to be uniform, and could I draw any inference as to the true time?

At first the clock is either 25 minutes slower or else 30 minutes faster than the watch. Afterwards the clock is either 35 minutes slower or else 25 minutes faster than the watch. So the clock either lost 10 minutes or lost 5 minutes while the watch went 70 minutes.

Time from noon to half-past eleven = 690 minutes by the watch, during which the clock must have lost $2\frac{1}{2} \times 10$ or $2\frac{1}{2} \times 5$ minutes, \therefore least error = &c.

8. If the hour and minute hands of a clock are exactly alike, show that their position will always enable us to distinguish between them except after every interval of $5\frac{5}{11}$ minutes starting from noon, and the time by the clock will then be ambiguous except after every thirteenth interval.

9. Prove the following rule for computing interest at 6% per annum for a period of months and days:—

Multiply the number of months by 5, and add $\frac{1}{2}$ the number of days; multiply this sum by the principal expressed in dollars; the result will be the interest expressed in mills.

6c. = int. of \$1 for 12 mos., \therefore 5 mills = int. for 1 month.
 6a. = 60 mills = int. for 360 dys., \therefore $\frac{1}{2}$ mill = int. for 1 day.
 $\therefore 5 \times \text{months} + \frac{1}{2} \times \text{days} = \text{int.}$

10. By the Canadian Statute it is provided that the silver coins of the Canadian currency shall bear the same relation to the pound currency that the sterling silver coins bear to the pound sterling, being also of the same standard of fineness. Sterling silver is 92.5 per cent. fine, and from 1lb Troy of this metal are coined 66 shillings. The pound sterling is said to be equal to £1 4s. 4d. currency or \$4.86 $\frac{2}{3}$, the pound currency being \$4. In Martin and Trübner's "Currency," the Canadian 10-cent piece is said to weigh 38.42 grs. and to be $\frac{9}{10}$ fine, but an analysis by Professor Croft shows that the fineness is that of sterling. The American mint asserts the value of this piece to be about $\frac{9}{8}$ cents, their dollar containing 345.6 grs. pure silver.

Examine the consistency of these statements.

II. — ALGEBRA.

1. Multiply together $x^2 - \frac{2}{3}ax + \frac{1}{3}a^2 + \frac{1}{3}x - \frac{1}{3}a + \frac{1}{3}$ and $x^2 + \frac{1}{3}ax - a^2 - \frac{1}{3}x + \frac{2}{3}a - \frac{1}{3}$.

Divide the product by $\frac{1}{3}x^2 + \frac{2}{3}ax - 2a^2 - \frac{1}{3}x + 2a - \frac{1}{3}$ and extract the square root of the quotient. — Toronto University, 1865.

NOTE.—1st expression = $\frac{1}{3}(4x - a + 1)(x - 2a + 1)$. See Teachers' Handbook, p. 72.
 2nd expression = $\frac{1}{3}(4x - a + 1)(r - 4a - 2)$
 Divisor = $\frac{1}{3}(x - 2a + 1)(x + 4a - 2)$
 \therefore Quotient = $\frac{1}{3}(4x - a + 1)$, and sq. rt. = $2x - \frac{1}{2}a + \frac{1}{2}$.

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

— Cambridge, 1862.

NOTE. Put $a^2 + b^2 + c^2 = x$; $ab + bc + ca = y$; and observe that $x + 2y = (a + b + c)^2$. Also put $a + b + c = z$, and observe that $a^3 + b^3 + c^3 - 3abc = z(x - y)$. Left hand member becomes $x^2 + 2y^2 - 3xy^2$, i.e., $(x - y)^2(x + 2y)$; i.e., $z^2(x - y)^2$ Q. E. D.

3. If $z = \sqrt{(ay^2 - a^2) + y}$, and $y = \sqrt{(ax^2 - a^2) + x}$, prove that $x = \sqrt{(az^2 - a^2) + z}$. — Toronto University, 1869.

NOTE.— $y^2z^2 = xy^2 - a^2 \therefore x^2y^2z^2 = x^2y^2 - a^2x^2$ (A)
 $x^2y^2 = ax^2 - a^2$. Substitute for x^2y^2 in (A) and thus eliminate y.

4. Prove $\frac{y-z}{1+yz} + \frac{z-x}{1+xz} + \frac{x-y}{1+xy} = \frac{(y-z)(z-x)(x-y)}{(1+yz)(1+xz)(1+xy)}$. — Toronto, 1871.

NOTE.—Put the left hand member = V, clear of fractions, and we have,

$$(x-z)(1+xz)(1+xy) + (z-x)(1+yz)(1+xy) + (x-y)(1+yz)(1+xz) = V(1+yz)(1+xz)(1+xy)$$

Factor left hand member by putting $x=y$, &c. (see Teachers' Handbook, p. 85), and $(y-z)(z-x)(x-z) = V(1+yz)(1+xz)(1+xy)$. Divide through and $V = \&c.$

5. If $(ay + bx) \div c = (cx + az) + b = (bz + cy) \div a$, then will $\frac{x}{a} + b^2 + c^2 - a^2 = \frac{y}{b} \div (c^2 + a^2 - b^2) = \frac{z}{c} \div (a^2 + b^2 - c^2)$. — Toronto University, 1872.

NOTE.—Put each of the given factors = m, whence $acy + bcx = c^2m$, $bcx + abz = b^2m$, $abz + acy = a^2m$,

and by addition $(acy + bcx + abz) + abc(a^2 + b^2 + c^2) = \frac{m}{2bc} =$ any one of required relations. Again combining, $m(b^2 + c^2 - a^2) = 2bcx$. $\therefore \frac{x}{a} \div (b^2 + c^2 - a^2) = \frac{m}{2abc}$, and similarly for the other two.

6. If $x + a(y - z) = y \div b(z - x) = z + c(x - y) = 1$, prove that $ab + bc + ca = -1$. — Toronto University, 1882.

NOTE.—Clear of fractions and transpose, and $x - ay + az = bx + y - bz = -cx + cy + z = 0$.

Eliminate x from (1) and (2), also from (2) and (3) and $\frac{y}{z} = \frac{(a+1)b}{ab+1} = \frac{(c-1)b}{(b+1)c}$, from which $ab + bc + ca = -1$.

7. If $x^2 + 2ayz = y^2 + z^2$, $y^2 + 2bxz = z^2 + x^2$, $z^2 + 2cxy = x^2 + y^2$ show that $x(a + bc) = y(b + ac) = z(c + ab)$, and also that $(1 - a^2)(a + bc)^2 = a^2 = a^2$. — Toronto University, 1870.

NOTE.—Transpose so that $x^2 = y^2 + z^2 - 2ayz = y^2 - z^2 + 2bxz = z^2 - y^2 + 2cxy$.

Taking (1) - (2), (1) - (3), and (2) + (3) we get $x - ay - bx = 0$, $y - az - cx = 0$, $x - cy - bz = 0$; whence $x = cy + bz = (y - az) + c = (z - ay) \div b$.

From the latter pair $y(b + ac) = z(c + ab)$, and by symmetry $= x(a + bc)$, which is the first part.

Resume $x - ay - bx = 0$, &c. Eliminate x from (1) and (2), from (1) and (3), and (2) and (3), and we get

$$\frac{y}{z} = \frac{c + ab}{b + ac} = \frac{1 - b^2}{a - bc} = \frac{a - bc}{1 - c^2}$$

Now the square of the first is equal the product of the other two equal fractions,

$\therefore (1 - c^2)(c + ab)^2 = (1 - b^2)(b + ac)^2$, whence by symmetry, &c.

8. If a, b, c be the roots of $x^3 + px^2 + qx + r = 0$, show that $\frac{a+b}{c}, \frac{b+c}{a}, \frac{a+c}{b}$ are the roots of the equation

$$rx^3 + (3r - pq)x^2 + (r^2 - 2pq + r)x + (r - pq) = 0.$$

— Toronto University, 1872.

NOTE.—Given

(1) $a + b + c = -p$, (2) $ab + bc + ca = q$, and (3) $abc = r$.

Required (4) $d + e + f = \frac{1}{r}(pq - 3r)$, (5) $de + ef + fd = \frac{1}{r}(r^3 - 2pq)$,

and (6) $def = \frac{1}{r}(pq - r)$, where d, e, f are $\frac{a+b}{c}, \frac{b+c}{a}, \frac{a+c}{b}$

Multiply (1) by (2) and $a^2b^3 + ab^2 + b^2c + bc^2 + c^2a + ca^2 + 3abc = -pq$ (A)

$\therefore a^2b^2 + ab^2 + b^2c + bc^2 + c^2a + ca^2 = 3r - pq$; $\therefore d + e + f = \frac{1}{r}(2q - 3r)$.

Also, $a^2b^2 + ab^2 + \&c. + 2abc = r - pq$; $\therefore def = \frac{1}{r}(pq - r)$.

Similarly from (A) $2pq - r^3 = a^2b^2c^2 + 2(ab^2 + a^2b + \&c.) + 6abc$,

$\therefore \frac{r^3 - 2pq}{r} = a^2b^2c^2 + 2\left(\frac{a+b}{c} + \frac{b+c}{a} + \frac{c+a}{b}\right) + 6$
 $= de + ef + fd.$

9. If a, b, c are the roots of the equation $x^3 + px - \frac{2}{3}r = 0$, show that $a^5 + b^5 + c^5 : a^2 + b^2 + c^2 = r : 1$.

—Toronto University, 1873.

As in (8) we have $a + b + c = 0$, $ab + bc + ca = p$, and $abc = \frac{2}{3}r$.

Squaring (1) and substituting $2p$ for $2(ab + \&c.)$ we have

$a^2 + b^2 + c^2 = -2p$ (A). Cubing (1)

$a^3 + b^3 + c^3 + 3(a + b + c)(ab + bc + ca) - 3abc = 0$, $\therefore a^3 + b^3 + c^3 = \frac{2}{3}r$ (B)

Multiply (A) and (B) and

$a^5 + b^5 + c^5 + a^2b^3 + a^2c^3 + b^2a^3 + b^2c^3 + c^2a^3 + c^2b^3 = -\frac{2}{3}pr$,

i.e., $a^5 + b^5 + c^5 + (a + b + c)(a^2b^2 + b^2c^2 + c^2a^2) - abc(ab + bc + ca)$.

$\therefore a^5 + b^5 + c^5 = -2pr$ C. $\therefore A + C = r$. Q. E. D.

10. If $a + b + c = 0 = x + y + z$, show that

$4(ax + by + cz)^3 - 3(ax + by + cz)(a^2 + b^2 + c^2)(x^2 + y^2 + z^2)$

$- 2(a - b)(b - c)(c - a)(x - y)(y - z)(z - x) = 54abcxyz$.

—Toronto University, 1883.

Correspondence.

To the Editor of the CANADA SCHOOL JOURNAL.

DEAR SIR,—Much has been written regarding proper and remunerative employment for women. Silk culture, poultry raising and many other themes have been thoroughly ventilated and the result has no doubt been very beneficial. But there are many ladies who have no opportunity to raise silk worms or follow any employment of this kind. To this class I wish to open what to me was entirely a new field. Some three months ago an uncle of mine from Albany, N. Y., was visiting at our house. They were talking of plated ware which he was engaged in manufacturing; to gratify my curiosity, he made a plating machine and replated our knives, forks, spoons, and castor; it only cost \$4, and it did the work perfectly. Some of our neighbors seeing what we had plated wanted me to plate some for them. Since then I have plated 22 days and have cleared during that time \$94.34. At almost every house I got from \$2.00 to \$3.00 worth of plating to do, and such work is most all profit. Just for replating one dozen tea spoons I got \$1.75. This work is as nice for ladies as for gentlemen as it is all indoor work, and any one can do it. My brother Anthony plated two days longer than I did and he cleared only \$91.50. I am getting up a collection of curiosities. To any of your readers sending me a specimen I will send full direction for making and using a plating machine like mine, that will plate gold, silver, and nickel. Send small pieces of stones, ores, shells, old coins, &c. Any kind of geological specimens. What I want is to get as many different specimens from as many different places all over the country as I can. Please address,

MISS M. F. CANSEY,
Oberlin, Ohio.

To the Editor of the CANADA SCHOOL JOURNAL.

DEAR SIR,—I wish an answer through the columns of your paper whether a teacher can be compelled to attend the conventions, and if so, how often.

Yours,
WM. JNO. McLEAN.

REPLY.—We do not know that a teacher can be compelled to attend. If he went under compulsion he would probably do more harm than good by his presence. At the same time we consider that every teacher owes it both to himself and to his profession to make some sacrifices of time and money for the purpose of making the conventions successful. Wide awake teachers make it a point of conscience to be present as often as possible and to labor for the elevation of the brotherhood of teachers. A compulsory attendance would in some cases entail a disproportionate expense, but a teacher who is habitually absent from the convention is very shortsighted with regard to his own real interests.—[EDITOR.]

THE PERSONAL CHARACTER AND EXAMPLE OF THE TEACHER.

To the Editor of the CANADA SCHOOL JOURNAL.

SIR,—Children will form habits which will be the charm or the curse of the social circle, which will be instruments of good or evil to their fellow-men, and blessings or pests to their country. What sort of habits they shall form depends to a certain extent on their teachers.

“The personal influence of the teacher” it has been said “is continual in its effects. In a certain sense he is teaching always, and often when he least thinks of it. He is continually imparting his own likeness, reproducing in the minds of his pupils the impressions and convictions of his own. A silent influence is at work which he little suspects. The words which drop unobserved from his lips, the acts which he performs mechanically and immediately forgets, his daily habits and deportment, have their effect, and may be made subservient to the highest ends. The very way in which his school is managed, its order and impartiality, the tone of kindness which pervades it, and the reverence openly paid to what is good and true and generous, are so many parts of moral training.” It is by these influences that the habits and character of children are formed. They are more powerful than direct teaching, for lessons only enforce what is right, but example allures to the practice of it.

It must not be forgotten that the influence of the teacher may be for evil as well as good. Hence the importance of striving earnestly by personal discipline for every qualification of a good teacher. It is important to remember that character cannot be assumed at pleasure; it is a growth which has its roots in the soil of bygone years: nothing is in the character which has not grown there.

Yours truly,
MARY LADD.

Comber, Ont.

To the Editor of the CANADA SCHOOL JOURNAL.

SIR,—As you have not in my opinion paid sufficient attention recently to educational affairs in the Queen City, I take the liberty of writing to you concerning a subject, which is at present causing some uneasiness among some of the public school teachers in our city. At the close of last year Mr. L. R. O'Brien was appointed Superintendent of Drawing in the Toronto public schools. The Inspector introduced him to the teachers with a flourish of trumpets, and Mr. O'Brien in a two hours speech, which some admired very much because they did not understand what he meant, laid down some theories by which he proposed to be guided. Probably the effort exhausted him, or possibly he may have been trying since

to find out what his own theories really did mean, for so far as I can find out nothing more has been heard of him outside of the Fifth Book classes, which he occasionally visits. The teachers were much interested in Drawing, but their interest has waned during the period of Mr. O'Brien's masterly inactivity. The School Board very wisely agreed to let the schools be dismissed at 3 o'clock once a month to allow Mr. O'Brien to train the teachers in the work to be done the following month. He has never once called us together, and there are some who are cruel enough to insinuate that it is because he has learned by his attempts and failures in the Fifth Book classes, that he knows very little about elementary Drawing, and much less about teaching. It is rumored that he declined to act as an examiner in elementary Drawing at the Art School. I suppose he knew his lack of knowledge would be detected there. I admire his painting and wish our salaries were good enough to enable me to purchase some of his sketches, but I think that the fact that he is a great artist is in itself a sufficient reason to show that he is disqualified for public school work. If the School Board would spend the money they pay him in purchasing some of his pictures to hang in the schools, the pictures would do more teaching than he has done so far.

Yours, &c.,
TORONTO TEACHER.

“EMPHASIS FIRST.”—Said an old teacher: “When I first began to teach, I resolved never to use the rod. I had a delightful school, and was delighted with my work. But there was one boy, the son of a prominent citizen, quick to learn, if he choose, but lazy and addicted to playing truant. He had no very bad habits, and seemed to mean well. He could be melted to tears with a very few words, and made most earnestly to promise amendment, which promise he always broke. His parents blamed the teacher for his slowness to learn, and his example demoralized the school. I have no doubt,” said the teacher, “that boy was the means of my losing the situation. Some months after I visited my successor in the same school. It was in excellent order. That boy sat in his seat deep in his studies. I whispered his case to the teacher, and asked by what means he had reformed the fellow. He raised the lid of his desk, and pointed to a rattan, ‘I gave him an emphatic moral lecture, put in the emphasis first,’ said he, ‘and the work was done. He is as steady and as bright as any in the school.’”

THE BEST AIDS TO DISCIPLINE.—1. Let the teacher teach well. 2. Let him teach order and system by being orderly and systematical himself. 3. Let him provide means to keep all profitably and pleasantly employed. 4. Let him secure the aid of parents and school boards, and work in harmony with them. 5. Let him be calm, watchful and firm. Above all, let him constantly study his profession; remember that, “to educate a child correctly requires deeper and profounder thought than to govern a State.”—*Ed. Record.*

CASTOR OIL AS A DETERRENT.—Many persons have tastes which differ widely from those of humanity at large, but the consensus of opinion upon the subject of the extreme nastiness of castor oil may be regarded as universal. The school authorities of Lochgoilhead have utilized the aversion to this medicine by introducing it as a means of punishment, and children who have not properly prepared their lessons have been compelled to drink it out of a bottle. Such, at least was the statement of Dr. Cameron in his question to Mr. Mundella; and he added that the oil had habitually been used as a punishment. Mr. Mundella, in his reply, said that the statement was correct; he found, however, that it had not been used as a punishment but as a deterrent. This is even worse. That a child should be punished for idleness by being made to drink castor oil is, as Mr. Mundella said, at once unwarrantable and reprehensible, but that a number of children should be obliged to drink it beforehand, to deter them from idleness, is a piece of revolting conduct which no Parliamentary words are capable of characterising. Henceforth Lochgoilhead will be known as a place where the brimstone and treacle regime of Dotheboys Hall is thrown into the shade, and where children are treated with a cruelty which far surpasses the sketch of the great novelist. We hope that an inquiry will be made, and that condign punishment will fall upon all who are found responsible for this treatment of children.—*London Standard.*

Special Articles.

THE STUDY OF SCIENCE.*

(Concluded from last month.)

The following account is taken from Warren's Introduction to Law Studies pp. 175, 176, London 1845, 2nd Ed.

Some two or three years ago a counsel, manifestly not having enjoyed a very superior education, was engaged in arguing a case, *in banco*, at Westminster—before four very able judges, one of them being a man remarkable for his logical acuteness and dexterity. “No, no,—that won't do,” said he suddenly interposing—“put the converse of the proposition, Mr. —: try it that way.” The judge paused—the counsel paused, while a slight expression of uneasiness flitted over his features. He expected the judge to not “put the converse for him:” but the judge did not. “Put the converse of the proposition, Mr. —, and see if that will hold”—repeated the judge, with some surprise, and a little promptness in his tone. But it was unpleasantly obvious that Mr. — could not “put the converse” of the proposition—not even understand what was meant. Some better-informed brother-barrister whispered to him the converse of the proposition, but it was useless. Mr. — faltered, repeated a word or two, as if mechanically. “Well!” said the judge, kindly, suspecting the true state of the case, “go on with your argument, Mr. —.”

The following narrative forms an interesting sequel to the preceding case:

“Some years ago, a young gentleman of superior natural talents, having had an average classical education, was, in his twenty-first year, desirous of going to the Bar. He had read much of what is called ‘light literature,’ but indolently and discursively; and even written not a little, nor unsuccessfully, for the press; and had several times found opportunities for speaking in public on political subjects; acquitting himself on such subjects, successfully—being fluent, ready, and ingenious. In short he had contrived to pass, among a pretty large circle of acquaintances, as ‘a decidedly clever man.’ Some casual observation made by a Cambridge friend of his, concerning the use of Geometry in testing the strength of the reasoning powers, induced him on returning that evening to his lodgings, to take down a copy of Euclid, which he recollected had lain on one of the upper shelves of a book-case belonging to his landlord. After glancing over the definitions, axioms and postulates, he, in like manner, and ‘in his then superficial way’—read over the first problem, ‘and saw nothing so very wonderful in it.’ Some impulse or other moved him to read it again, and very attentively; that inducing him after a thoughtful pause to read it a third time, still more attentively than before. After this, he rose from his chair, ‘in a sort of trepidation,’ and felt that he had suddenly made a great discovery; namely that till then ‘he had really known nothing whatever of the connection between premiss and conclusion,—in short, of real reasoning,’—and he passed a night of sleepless despondency. On the morrow, however, he betook himself to action; and, turning his discovery to good account, addressed himself immediately to the study of Euclid, overcoming a thousand risings of weariness, disgust and even despair, till he had mastered several books. Then he attacked Algebra; went to the University pretty well prepared, and acquired considerable distinction there.

“I never now,” said he, “think of Euclid, who taught me first that I had an understanding which I could not use, and then showed me how to use it, without feeling all the reverence and affection due to so august an instructor.” I am conscious that he changed the whole character of my mind, and gave me my only chance of success in life. By the time that I had mastered the first three books, not with the design of becoming a Mathematician, but simply of learning to reason, I became sensible of a great improvement in my faculties, occasioning me unspeakable satisfaction, mingled with secret shame and vexation at the frivolous, indolent, and superficial habits of thought with which, up to the moment of discovering their existence, I had been content.”

The following narrative of a conversation with Abraham Lincoln, late President of the United States of America, is not uninteresting:

* Extract from Preface to New Edition of Potts' Euclid, furnished through the kindness of Robert Potts, M.A., Cambridge, England, author of Potts' Euclid.

The Rev. John P. Gulliver said to Mr. Lincoln "I want very much to know how you got 'this unusual way of putting things.' It must have been a matter of education. No man has it by nature alone. What has your education been?"

"Well," said Mr. Lincoln, "as to education, the newspapers are correct. I never went to school more than six months in my life. But, as you say, this must be a product of culture in some form, and I have been putting the question you ask me to myself, while you have been talking. I can say this, that, among my earliest recollections, I remember how, when a mere child, I used to get irritated when anybody talked to me in a way I could not understand. I don't think I ever got angry at anything else in my life. But that always disturbed my temper, and has ever since. I can remember going to my little bedroom, after hearing the neighbours talk of an evening with my father, and spending no small part of the night walking up and down, and trying to make out what was the exact meaning of some of their, to me, dark sayings. I could not sleep, though I often tried to, when I got on such a hunt after an idea, until I caught it, and when I thought I had got it, I was not satisfied, until I had repeated it over and over, until I had put it in language plain enough, as I thought, for any boy I knew to comprehend. This was a kind of passion with me, and it has stuck by me, for I am never easy now, when I am handling a thought, till I have bounded it north, and bounded it south, and bounded it east, and bound it west. Perhaps that accounts for the characteristic you observe in my speeches, though I never put the two things together before."

"Mr. Lincoln, I thank you for this. It is the most splendid educational fact I ever happened upon. This is *genius*, with all its impulsive, inspiring, dominating power over the mind of its possessor, developed by education into *talent*, with its uniformity, its permanence, and its disciplined strength, always ready, always available, never capricious—the highest possession of the human intellect. But let me ask, did you prepare for your profession?"

"O yes! I 'read law,' as the phrase is: that is, I became a lawyer's clerk in Springfield, and copied tedious documents, and picked up what I could of law in the intervals of other work. But your question reminds me of a bit of education I had, which I am bound in honesty to mention. In the course of my law-reading I constantly came upon the word *demonstrate*. I thought at first, that I understood its meaning, but soon became satisfied that I did not. I said to myself, 'what do I mean when I *demonstrate*, more than when I *reason* or *prove*?' How does demonstration differ from any other proof? I consulted Webster's Dictionary. That told of 'certain proof,' 'proof beyond possibility of doubt'; but I could form no idea what sort of proof that was. I thought a great many things were proved beyond the possibility of doubt, without recourse to any such extraordinary process of reasoning as I understood, 'demonstration' to be. I consulted all the dictionaries and books of reference I could find, but with no better results. You might as well have defined *blue* to a blind man. At last I said, 'Lincoln, you can never make a lawyer if you do not understand what *demonstrate* means; and I left my situation in Springfield, went home to my father's house, and stayed there till I could give any proposition in the six books of Euclid at sight. I then found out what 'demonstrate' means, and went back to my law studies."

I could not refrain from saying, in my admiration at such a development of character and genius combined:—

"Mr. Lincoln, your success is no longer a marvel. It is the legitimate result of adequate causes. You deserve it all, and a great deal more. If you will permit me, I would like to use this fact publicly. It will be most valuable to inciting our young men to that patient classical and mathematical culture which most minds absolutely require. No man can talk well unless he is able first of all to define to himself what he is talking about. Euclid, well studied, would free the world of half its calamities, by banishing half the nonsense which now deludes and curses it. I have often thought that Euclid would be one of the best books to put on the catalogue of the Tract Society, if they could only get the people to read it. It would be a means of grace."

"I think so," said he, laughing: "I vote for Euclid."—*From the Anglo-African, No. 6, Vol. IV.*

A boy was going up Sycamore Street yesterday with a glass inkstand to fill. Every few steps he would toss it into the air and catch it again. He did it successfully until the last time, when it landed gracefully on the pavement in a thousand pieces. As looked at it a minute and then said: "It serves the old man right. I told him before I started that I couldn't carry that thing up street."—*Oil City Derrick.*

SALARIES IN THE UNITED STATES.

Governor Butler thinks our male teachers are paid too high, and our female teachers too low salaries. We agree with him in the last clause of the statement, and shall expect him to use his influence in securing an increase to women's wages in our public schools. His honesty in desiring to see our female teachers paid better salaries will probably appear in the special message on that subject, which we shall be glad to circulate as wide as possible all over our land, in all places where woman's work is held at too small value. Massachusetts pays her women 30.59 dollars per month; but what will Governor Butler say of these States where the average pay to women teachers is less than twenty dollars, and in some less than sixteen dollars per month? These are wrongs which should be righted, and to accomplish their overthrow the Governor has a 'Herculean task, but many well-wishers and helpers. But, says the Governor, "the salaries of the principals in most of the higher schools, teachers, and supervisors are very much more than they ought to be; or, to use other words to express my meaning, higher than other like business pays, and higher than the sum for which equally good services could be, and are, obtained." Here we beg to differ from His Excellency, because his opinion is unwarranted in fact, and is unsupported by argument. The principals of our high schools, and the superintendents of our public schools, represent, as a rule, the best scholarship, and the largest and ripest experience in the profession. Most of these men and women are college graduates, or have a liberal education equivalent to a college course of study. They are the exceptional men and women on whom devolve the greatest responsibilities, and the most delicate and arduous labours. Scholarship, teaching-tact, experience, professional success, are parts of the inventory of qualifications for the highest places in the profession, to secure which, years of toil, study, sacrifice, have been cheerfully rendered. As masters of our largest grammar and high schools, these men have reached mature life, have devoted all their years to the preparation for teaching and in teaching, and now have the instruction and discipline, sometimes of twenty schools with one thousand pupils,—often more; and this high position is acquired for the enormous salaries of from 1,200 dols. to 3,000 dols. a year. From this position, promotion is made to the superintendency, where the salaries range from 1,000 dols. to 4,000 dols. a year; the higher figures in each case being only exceptional in the whole country, the general average in both not exceeding 1,500 dols. a year. Now, we cannot believe that Governor Butler has the face to say that 1,500 dols. a year is too high a salary to be paid to the master or superintendent of our larger schools,—a salary probably less than half that paid his own private clerk, or the superintendent over some of his industrial interests of vastly less importance and with less labor, and would Governor Butler limit the income of the most talented and successful in our profession to a salary less than that paid the head cook at Parker's, or the chief clerk in the Fifth Avenue or the Grand Pacific?

"Upon what meat doth this our Cæsar feed,
That he is grown so great,"

that he may accumulate annually by hundreds of thousands, while he is unwilling to bestow the pittance of a livelihood upon those who are carrying the heavy burdens and doing the hard service of directing, advising, superintending school affairs,—of prime interest to the State?—*The New England Journal of Education.*

"WE LEARN TO DO BY DOING."

This statement admits of a two-fold interpretation. One is true, the other, false. It is not therefore a good aphorism, and should be avoided in a scientific discussion of the Art of Teaching.

Let us examine it. The statement is true, when interpreted to mean that a full and adequate knowledge of a process results only from an actual performance of the process so many times repeated as to make it familiar. In this case practice is seen to give clearness and distinctness to our theory.

Every process is a double-sided unity,—a knowing and a doing,—a theory and an art. The two are essentially one. Practice is the concrete phase of theory. The knowledge,—the succession of ideas that constitute the process,—is the essence of the process. The concrete, objective expression of those ideas is the objective phase of the subjective essence. It is educationally valuable because by this actual “doing” the knowing is more perfect. If the process is a physical one practice of it accustoms the muscles and nerves to a form of action corresponding to the ideas which direct the activity. A habit is formed; a memory is established in the physical organs, which results in skill in execution. A clear apprehension of the ideas involved in any process is knowledge of the process. In so far as the actual, objective execution of the process aids to make these ideas clear,—in other words, gives a clear knowledge of the theory,—thus far it is true that “we learn to do by doing.”

But the statement is false when it is interpreted to mean that by merely doing we gain an adequate knowledge of the ideas involved in the process. What is learned by the doing merely, is a series of physical movements. These may or may not have an idea behind them. The real significance of these separate movements may or may not be seen. He who learns to do by doing remains ever the artisan. He is the bond slave of precedent. He can perform the particular process which he has learned, but he is without freedom in that performance. His process is the expression of a theory, but it is the theory of some one else, not his own. He can not interpret his own work. There are those who make frequent use of the injunction, “Learn to do by doing,” who do not put any other meaning into it. Such persons can never really *learn to do by doing*.

But there is another class who put still another meaning into the phrase. They believe that the real thing to learn is the *theory* of the doing, and that the road by which this must be learned is by *practice* in the doing. So they set themselves, or if they happen to be teachers, they set their students to work to discover the theory by the way of the art. This is the method of nature they say; the method by which the race has discovered science.

I was reading recently a report of an intelligent visitor of a western normal school, which school is held by many to be the modern Mecca of all devout pedagogues. I judged from this report that in this school the students were “to learn to teach by teaching.” So they are set to teaching for a certain length of time each day. At the end of that time they pass to another room and submit to criticism by that portion of the class who did not teach, but were watchful observers of the teaching done by the others. This criticism seemed for the most part pointless and of small significance. It could not well be otherwise, for want of a basis. An older member of the class who has seen some years’ service as a teacher, criticised the critics for these aimless and baseless criticisms, which were made without any recognition of principles which should control the development of the lesson and form a standard by which to judge of it. To this the principal of the school promptly replied, “A good point and well taken, but my object is to have you learn these laws and principles by yourselves.”—“You are to learn to do by doing,” he said in another connection.

They are to learn the theory of teaching by groping in the dark for the ideas which compose it, unaided, except by the scintillations

of light that may be thrown upon the chaos by experience and the example of others.

This interpretation of the phrase, “learn to do by doing,” is at present a popular one. It is “following the order of nature”;—it is the “method of science”;—it is the “inductive method.” Now any one of these catch phrases is potent above all argument. The method of science is the method *par eminence*, and to question its universal application is to stand athwart the path of progress and write one’s self down a foggy.

But the earnest foggy believes that the truth must be told if the heavens fall. He dares to stand athwart the “path of progress,” which is often but another name for the path of the hobby-rider, and call upon this rider to dismount and look and see how things appear when standing upon solid earth. The point of view greatly affects the appearance of a thing.

The “Scientific Method” is just now a hobby, and the number who are riding it or trying to mount it, inside and outside the schools, is legion. This method, as it is interpreted by these “reformers,” is that every learner of any art or science must follow the method which the human race has followed in the construction of that art of science. The race groped for generations constructing first the art, and after a much longer period the science or true interpretation of the art. It is held that each individual must in like manner grope for a corresponding number of years of his natural life in a similar way in order to come by a knowledge of what the human mind has thus constructed. It is claimed that this groping is a strengthening process, developing the power of independent thought and preparing the way for independent action.

But it would be a sad reflection to conclude that the experience of the race is to be of no help to me; that this great inheritance of knowledge which I have thought to be my birth-right is really of no value to me. That for any purposes of culture, I might as well have lived in pre-historic times as now. There is no ground for the assumption that I must follow the same process in learning that the race pursued in constructing. If so I must needs come through Alchemy to Chemistry, and Astrology to Astronomy, and Paganism to Christianity. It is a principle of growth that all organisms grow by exercise, and the assimilation of nutriment. But is it not probable that there has been improvement in the nutriment and exercise of the spiritual powers, as well as in the exercise and nutriment of the physical organism? We do not learn what to eat by going through the experience of the race in the preparation of food. There is no valid reason why I must learn what the race has found out in the realm of thought, by following the process by which they found it out. The chief requisite is that the two prime conditions of growth be realized, viz., exercise and proper nutriment. The application of this plain truth to the education of teachers requires that the laws and principles which form the science of teaching, in so far as they have been discovered, be used as a basis of criticism from the start. This is the intellectual inheritance of every teacher, into the possession of which he should be allowed to enter at once. His first business is to learn what others before him have discovered. This he can do most rapidly and truly by a practical and conscientious application of these principles for its basis;—and by observation and criticism of the work by others. In this practice we shall find both the needed exercise and nutriment for a satisfactory growth in knowledge, and a great saving of energy which otherwise runs to waste in vain processes and needless emotional excitation. The critic of the critics was right. It is at too great a cost that the pupil-teacher “learns the principles of teaching himself.” He has a right to be helped to these, and thus be helped to form a standard of criticism for his and others’ work. There is an inexhaustible field for original activity in

the varied application of these principles in the practice schools. After the student has found out what is already known he is prepared for original investigation and discovery. Not before.—*President, G. P. Brown, in Indiana School Journal.*

"ENGLISH AS SHE IS WROTE."*

I.—BY THE INACCURATE.

In the account of an inaugural ceremony it was asserted that "the procession was very fine, and nearly two miles long, as was also the report of Dr. Perry, the chaplain."

A Western paper says: "A child was run over by a wagon three years old, and cross-eyed, with pantalets on, which never spoke afterward."

Here is some descriptive evidence of personal peculiarities:

"A fellow was arrested with short hair."

"I saw a man digging a well with a Roman nose."

"A house was built by a mason of brown stone."

"Wanted—A room by two gentlemen thirty feet long and twenty feet wide.

"A man from Africa called to pay his compliments tall and dark-complexioned."

"I perceived that it had been scoured with half an eye."

A sea-captain once asserted that his "vessel was beautifully painted with a tall mast."

In an account of travels we are assured that "a pearl was found by a sailor in a shell."

A bill presented to a farmer ran thus: "To hanging two barn doors and myself, 4s. 6d."

A store-keeper assures his customers that "the longest time and easiest terms are given by any other house in the city."

Here is a curious evidence of philanthropy: "A wealthy gentleman will adopt a little boy with a small family."

A parochial report states that "the town farmhouse and almshouse have been carried on the past year to our reasonable satisfaction, especially the almshouse, at which there have been an unusual amount of sickness and three deaths."

A Kansas paper thus ends a marriage notice: "The couple left for the East on the night train where they will reside."

In the account of a shipwreck we find the following: "The captain swam ashore. So did the chambermaid; she was insured for a large sum and loaded with pig-iron."

II.—BY CORRESPONDENTS.

From an Indian school-boy:

"Benevolent Sir: The wolf of sickness has laid hold on the flock of my health."

From an Indian clerk:

"Sir. Being afflicted to the stomach and vomiteng I am sorry I cannot attend to office to-day."

From a Canadian lady to eligible gentleman:

"Dear Mr. B. I, Mrs. Wigston, wish you would call on my daughter Amelia. She is very amusing and is a regular young flirt. She can sing like a hunny bee and her papa can play on the fiddle nicely and we might have a rare ho-down. Amelia is highly educated, she can dance like a grass-hopper looking for grub and she can meke beautiful bread, it tastes just like hunny bees bread and for pumpkin pies she can't be beat. In fact she's ahead of all the girls and will make a good wife for any man.

"Yours truly

"Mrs. Wigston.

"Bring your brother."

*From "English as She is Wrote," a little work published by George Routledge & Sons.

III.—BY THE EFFUSIVE.

Professor Huxley is credited with the assertion that the primrose is "a corollifloral dicotyledonous exogen, with a monopetalous corolla and a central placenta."

A reporter with a large imagination, writing about the decoration of a church at a fashionable wedding in this city, said that "the church was ensconced in flowers."

A scientific writer defines sneezing as "a phenomenon provoked either by an excitation brought to bear on the nasal membrane or by a sudden shock of the sun's rays on the membranes of the eye. This peripheral irritation is transmitted by the trifacial nerve to the Gasserian ganglion, whence it passes by a commissure to an agglomeration of globules in the medulla oblongata or in the protuberance; from this point, by a series of numerous reflex and complicated acts, it is transformed by the mediation of the spinal cord into a centrifugal excitation which radiates outward by means of the spinal nerves to the expiratory muscles."

The school committee in Massachusetts recommend exercises in English composition in these terms:

"Next the pleasure that pervades the corridors of the soul when it is entranced by the whiling witchery that presides over it consequent upon the almost divine productions of Mozart, Haydn, and Handel, whether these are executed by magician concert parts in deep and matured melody from artistic modulated intonations of the finely cultured human voice, or played by some fairy-fingered musician upon the trembling strings of the harp or piano, comes the charming delights we experience from the mastery of English prose, and the spell-binding wizards of song who by their art of divination through their magic wand, the pen, have transformed scenes hitherto unknown and made them as immortal as those spots of the Orient and mountain haunts of the gods, whether of sunny Italy or of tuneful, heroic Grecca."

NORMALS—WHO OUGHT TO ATTEND?

I answer that I do not believe that any person who expects to teach a term of school can afford to lose the benefit to be derived from attendance at the Institute when it is brought within convenient reach.

This applies to both old and young teachers, but for different reasons.

The teacher with little or no experience needs to learn first that there is a difference between learning and teaching. To him the Institute opens a new line of ideas.

It shows him how to look from the standpoint of the teacher at the same subjects which he has hitherto considered only from the standpoint of the learner.

How to teach, is made more prominent than how to learn, or what to learn.

It would be a wonderful benefit to the schools of our country if all our young teachers could attend at least three Institutes before attempting to teach. That would give them time to think over methods of teaching and principles of school management, and in that way to become better qualified for the work when they begin. There would be fewer failures in government and methods.

The older and more experienced teacher needs to attend for two reasons. First, because the Institute needs him. It needs his experience, and he can be of great help to those with less experience; secondly, because it will improve his own work. He is liable to fall into ruts, and unless occasionally stirred up he is apt to fall behind the times.—*Central School Journal.*

Examination Questions.

GRAMMAR.

[The questions are the ones used for the past ten years, 1874-83 in the examination of the boys of the grammar schools of N. Y. City.]

1. Of what does syntax treat? What is the subject of a sentence? What are the principal parts of a verb? Why called principal parts? Define an irregular verb.
2. Arrange in tabular form the principal parts of the verbs cost, hang, plead, slink, sot, shine, forbear, spit, thrive, shear. If any of these are regularly formed, indicate this by capital R, as in the grammars.
3. Give a synopsis of the verb *strike* in the second person, singular, of the tenses of the indicative and potential moods, solemn or ancient style.
4. Parse the italicized words in the following sentence: "The illustrated *library* of travel, exploration and adventure has been the means of furnishing the *public* with much information bearing upon the geography, history and *customs* of distant and partially *unknown* countries."
5. Correct the errors in the following sentences, and give the rules of syntax violated:
 - (a) The whole need not a physician, but them that are sick.
 - (b) Will you tell me who you take me to be?
 - (c) Nobody will ever entrust themselves to that boat again.
 - (d) If you can wait till to-morrow, I will consider of it.
 - (e) The richness of their arms and apparel were conspicuous.
6. What is the difference between a preposition and a conjunction, and between an adjective and an adverb? Make one sentence containing these four parts of speech, and write under each example, prep., conj., adj., adv., as the case may be.
7. Define an active verb, a passive verb. Make a short sentence in which both forms are used.
8. How is the plural of nouns regularly formed? Name at least five plurals that are exceptions to this rule.
9. In how many ways may the word *that* be used as a part of speech, and what are they? Make very short sentences illustrating the various uses of the word.
10. State the difference between a conjunctive adverb and a conjunction. Make a sentence showing the proper use of a conjunctive adverb.
11. In how many and what ways may the plural of nouns be formed? Give an example of each.
12. What is the difference between a pronoun and a pronominal adjective? Write a short sentence of not less than two lines introducing an example of each of these parts of speech.
13. In what ways can the gender of nouns be expressed? Give two examples of each of the different modes.
14. What is the infinitive mood? In how many and what ways can it be used in a sentence?
15. Parse the following words in italics:

From scenes like *these* old Scotia's grandeur springs,
That makes her loved at home, *revered* abroad;
Princes and lords are *but* the breath of kings,
"An honest man's the noblest work of God."
16. Construct a complex sentence, one member of which must contain an adverbial phrase.
17. Write a synopsis of the verb "strike" in the second person singular of all the tenses in the active voice, ancient or solemn style. Arrange this neatly, naming the tenses and moods in order.
18. Correct the errors in the following sentences, and give the reasons for the corrections:
 - (a) Gravitation is where one body attracts another.
 - (b) Henry is not tall like I am.
 - (c) If you will go I will pay thy expenses.
 - (d) Whether or no this is the man which committed the burglary is uncertain.
 - (e) Nearly a thousand head of cattle was transported over the road.
19. Analyze the following sentence: The most mischievous liars are those that keep on the verge of truth.

20. What is meant by the "principal parts" of a verb? Give the principal part of "wring, catch, forsake, go, speak, swim, lend."
21. In how many and what ways is gender expressed in English? Give three examples of each mode of formation.
22. How are adjectives regularly compared? Give four examples of irregular comparison.
23. Parse the words in italics in the following lines:

"On parent's knees, a naked, *new-born* child.
Weeping, thou *sat'st* while all around thee smiled;
So *live* that, sinking in thy last long sleep,
Thou then may'st smile, *while* all around thee weep."
24. Analyze the last two lines of the preceding stanza.
25. What is a finite verb?

Make a sentence of at least twelve words, containing a finite verb, and underline the verb.
What is the infinitive mood?
Make a sentence of at least twelve words, containing a verb in the infinitive mood, and underline the infinitive.
26. What is a defective verb?

Give an example.
What is a passive verb?
Give an example.
What is a compound active verb?
Give an example.
What is the difference between an intransitive and a passive verb?
27. Correct the errors in the following sentences:

We sorrow not as them that have no hope.
Notice is hereby given to every person to pay their taxes.
If we have any victuals left, we will help you eat it.
That is a better furnished room than any in the house.
Washington was given the command of a division.
28. Construct a complex sentence of not less than twenty-five words, and underline all the words of the dependent clause.
29. Give a definition of a sentence, and also of its subject and predicate.
30. State what is meant by an active verb; what by a passive verb. Illustrate by a sentence containing both forms.
31. Give synopsis (second person singular), of the active voice of an English verb (to strike).
32. In how many ways is gender expressed in English? Give an example of each.
33. How is the plural of nouns formed in English? Give one example of each way.
34. Give principal parts of the verbs fall, know, begin, fly, strike, shine.
35. Parse the italicized words in the following passage:

About him *exerci-ed* heroic games
The *unarmed* youth of heaven. But o'er their heads Celestial
armory, shield, helm, and *spear*,
Hang bright, with diamond *flaming*, and with gold.
36. Correct the errors in the following sentences, and give the reason for each correction:
 - (a) He that cometh unto me, I will in no wise cast out.
 - (b) The train of our ideas are often interrupted.
 - (c) Of all their ill habits idleness is the most incorrigible.
 - (d) He acted much wiser than his neighbors.
 - (e) If he is but discreet, he will succeed.
37. Analyze the sentence:

"Who could guess
If evermore should meet those natural eyes,
Since upon night so sweet such awful morn could rise?"
38. Parse the following words in italics:

"Romans, countrymen, and lovers! hear me for my cause, and be silent that you may hear; *believe* me for mine honor, and have respect unto mine honor, that you may believe; censure me in your wisdom, and awake your senses that you may the better judge."
39. Analyze the sentence:

"Pray for the living in whose heart
The struggle between right and wrong,
Is raging terrible and strong."

40. Parse the following words in italics :
 "I seem to *have been* only like a *boy* playing on the sea-shore, and diverting myself in now and then *finding* a smoother pebble or a prettier shell than ordinary, *whilst* the great ocean of truth lay all *undiscovered* before me."
41. Write the following sentences with the errors corrected ; and give the reasons for such corrections :
 (a) Wh^t signifies fair words without charitable deeds?
 (b) The next New-year's day, I shall be at school a year.
 (c) You may choose either of these three books on the table.
 (d) Send the multitude away that it may go and buy itself food.
 (e) The carpenter performed the work agreeable to his promise.
42. Analyze the following sentence :
 "The most singular fact of all is that he should have allowed himself under the circumstances, to be so deceived."
43. Parse the words italicized in the sentence :
 "Anger is a *thing* that those who live under us *suffer* more from than those who live with us.
44. Analyze the following sentence :
 "In a moment, ten *thousand* persons, who crowded the great hall, replied with a *still* louder shout, which made the old oaken roof *crack*; and in another moment, the innumerable throng *without* set up a third huzza, which *was* heard at Temple Bar.
45. Parse the words italicized in sentence 54.
46. Correct the following, giving in every case the reason for the correction :
 (a) "I cannot tell who to compare them to."
 (b) "Write upon your slates a list of the ten first nouns."
 (c) "Everybody trembled for themselves or their friends."
 (d) "The mechanism of clocks and watches were wholly unknown."
 (e) "Either a pestilence or a famine, a victory or a defeat, an oracle of the gods or the eloquence of a daring leader, were sufficient to impel the Gothic arms."
47. (a) Which of the parts of speech have modifications?
 (b) What are moods?
 (c) What is an irregular verb? Give an example.
 (d) What is the difference between a participial adjective and a participle?
 (e) What is a complex sentence?
48. Analyze the sentence :
 "But *when* thou doest alms, *let* not thy left hand *know* what thy right hand *doeth*."
49. Parse the words italicized in the foregoing sentence.
50. (a) Construct a complex declarative sentence :—subject, *Winter*.
 (b) Construct a compound sentence :—subject, *The Telegraph*.
 (c) Construct an interrogative sentence of not less than ten words.
51. Correct the following sentences, and give in each case the reason for correction :
 (a) The whole need not a physician, but them that are sick.
 (b) Each of which have stamped their own impress on the character of the people.
 (c) In depicting of character this writer is little better than a mannerist.
 (d) We will send either of those three books on payment of the advertised price.
 (e) I am afraid of the man dying before the doctor can come.
52. What is a participle? a participial adjective? a participial noun? a clause? a sentence?
53. Construct a sentence containing not less than twenty words, under each of the three following heads—*a, b, c* :
 (a) A complex interrogative sentence with an object clause; choose one of the three subjects : High Bridge, Broadway, Brooklyn.
 (b) A complex declarative sentence with an object clause; choose one of the three subjects : patriotism, obedience, honesty.
 (c) A compound declarative sentence with an adjective clause in both members; choose one of the three subjects : Columbus, Washington, Lincoln.

54. Analyze,
 Under a spreading chestnut tree
 The village smithy stands ;
 The smith, a mighty man is he,
 With large and sinewy hands ;
 And the muscles of his brawny arms
 Are strong as iron bands.
55. Parse, *smith, he, under, as* and *hands*.
56. Correct the errors (if any) in the following sentences, and give the reasons for such corrections :
 (a) The crowd was so great that the judges with difficulty made their way through them.
 (b) Good order in our affairs, not mean saving, produce great profits to those who use them.
 (c) He is like a beast of prey who destroys without pity.
 (d) He would not be persuaded but what I was greatly in fault.
 (e) I came to see you because I knew you was my old master's friend.
57. In how many ways may "that" be used as a part of speech? Form separate sentences illustrating the different uses of "that."
58. (a) Reconstruct and correct the following :
 maximin for that was his Name though born on the Territories of the Empire descended from a Mixed Race of Barbarians his father was a goth and his Mother of the nation of alani.
 (b) When corrected and reconstructed, analyze your work to prove its correctness, giving only the subjects, predicates and modifiers in the simplest manner, and stating the kind of sentences you have constructed.
 (c) Parse the subjects and predicates for the purpose of ascertaining their agreement.
59. (a) Change the third person singular, present indicative active of the verb "*bring*" to the passive form.
 (b) Give the perfect infinitive of the verb "*come*."
 (c) Give the third person pluperfect indicative active of the verb "*go*."
 (d) Give the second person plural of pluperfect indicative passive of the verb "*raise*."
60. "Have I no friend?" quoth he." Parse the italicized words.
61. Construct a simple sentence from the following propositions. (Notice that the main proposition is the fourth :)
 (a) I believe Thomas to be my friend.
 (b) I depended on him for help.
 (c) I had no anxiety for the future.
 (d) I left my home for America.
 (e) I left in the month of June, 1860.
62. Correct the errors in the following sentences and give a reason for each correction.
 (a) He indeed, would be a useful policeman, that should detect all the rogues that were found in every part of the city.
 (b) I am the man that has protected thino infancy and have over loved thee with parental affection.
 (c) There is no other measure here than this ten feet pole.
 (d) We could neither find the place nor the persons by whom the goods had been concealed.
 (e) With the return of spring came four martins, who were evidently the same which had been bred under those eaves the previous year.—*N. Y. School Journal*.

BRAINS OR BRICKS.—"Let us put less money in great school-houses and more in the salaries of teachers. Smaller schools and more teachers, less machinery and more personal influence, will bring forth fruits higher and better than any we have yet seen." There is practical wisdom in these words of Garfield which the American people would do well to heed. There is no doubt that the tendency of our school system is too much in the direction of brick and mortar. We seem to be in danger of forgetting that brain and heart are of far more value in education than brick and mortar. More and better teachers, with better pay, are the greatest need of the hour.—*Ohio Ed. Monthly*.

Practical Department.

TOPICAL SPELLING.

1. Direct the whole school to write on their slates fifteen names of objects they can see in the school-room. The first one who has the requisite number raises his hand, and is then requested to copy his list on the black-board. As soon as this is done, the whole school rise, turn their backs to the board and spell the words from the board, dictated by the teacher or the pupil. When this is finished, the teacher calls upon the school to raise their hands if they have any words on their slates *not* on the board. The teacher points to each one who spells his additional words. In this way, in a few minutes, every object in the school-room is spelled by the whole school; difficult words are noted, and the whole school is educated in spelling, so far as the school-room is concerned.

2. For the next exercise, let them rise from their seats, look out of the windows five minutes, by your watch, and then spell everything they can see. Drill them on difficult words.

3. Give them for topics everything they saw on the way to school; everything they can see in a store of goods; everything on the dinner-table; names of all kinds of cloth; all the parts of a wagon and harness; names of quadrupeds, birds, reptiles, fishes, insects, shells, garden vegetables, flowers, trees, fruits, metals, rocks, and minerals.

4. Let them write the name of every object made of iron, or that has any iron about it; also, everything made of wood. A live teacher can draw out of pupils an immense number of words from the foregoing subjects.

5. Let them write the names of the capitols of the different States in the Union; also, of different countries of the globe.

6. Let them write the names of all the persons living in the school district.

7. Let them write the names of the days of the week, and of the months.

8. Let them write the names of the parts of an apple, a ship, or a house, different kinds of food, and names of different trades.

9. Let them write a list of all the persons necessary to make a loaf of bread, commencing with the felling of trees in the forest. It is said that one thousand different occupations are involved in making a loaf of bread. Let them see how many they can write.

10. For an occasional exercise, let the first pupil in an advanced class spell the name of some town or city, and then let the next mention the name of a town whose first letter is the same as the last letter of the name just spelled. If a scholar fails to do this, he is seated at once.

11. Make the whole school rise, and as soon as any scholar can mention the name of a town in the State, he raises his hand. The teacher asks him to spell it, and he is then seated. When the class are all seated, they rise and repeat the exercise, with a new list of words.

12. Tell a class to spell, for their next lesson, all the words they can think of, commencing with the letter A. Go on this way through the alphabet.

13. Tell small scholars to spell, for their next lesson, as many words as they can think of which contain but one syllable. Go on through the different grades of words by syllables.

14. Give them some familiar work for a subject, and tell them to write on their slates everything they can think of about it, and then make them spell the words in the order in which they have written them. This is an excellent introduction to the writing of compositions, though the teacher should not be so unwise as to call them such.

15. Dictate to a class ten words difficult to spell, and see how many will write them correctly on their slates.—*Teacher's Manual*, No. 1.

NOTE.—Teachers who desire to see a school text aiding the teaching of spelling as above, would do well to examine Gage's Practical Speller.—[*Ed. SCHOOL JOURNAL*.

TOPICAL EXERCISES.

The term "topical exercises" is used by some teachers to cover "talk" by pupils. The former term is not very clear, and the term "pupil talks" is much more descriptive of the facts.

Each pupil, even the youngest, selects some theme, and when called on, either at his seat or on the platform, states his thoughts in the best manner possible. The teacher should keep a book, and in one column put a list of subjects, and opposite in another column, let the pupil put his name and the date when he selected it. The same may be taken by a second pupil three weeks afterward. In this book the teacher should gather subjects for talks. They should be classified under Literary, Biographical, Historical, Geographical, Scientific, Humorous Anecdotes, etc.

The pupil generally selects his own subjects, but he may be assisted. He then looks in some cyclopedia for his materials. I encouraged the use of scrap-books, and so all of my pupils made scrap-books. They selected from these books things *the* suited them and told them in their own words. In this case the subject goes into the "Subject-book," and the scrap-book is referred to with page, etc., so that any one else can get the same information at another time.

This plan secures two results: (1) It gives the pupils power to describe. (2) It increases the stock of general knowledge wonderfully. No talk is over a minute long, usually, but some are two and even three minutes. In a school of 40 pupils, during the year, there are 130 biographies, 30 battles, 20 literary, 200 stories, 80 humorous, 300 geographical, 117 scientific, and 20 local. This is an average of about five per day. The "local" referred to was concerning the town, people, manufactures, etc.

In given these "talks" the pupil should stand in a natural attitude and speak naturally and easily. At first there will be diffidence and awkwardness; these will disappear by practice.—*N. Y. School Journal*.

METHODS OF TEACHING READING.

On Thursday, the 7th inst., a lecture on the above subject was given by Mr. J. B. Rundell (Guunersbury) to a gathering of school teachers at the Chiswick Globe Board School. He said that the art, which all must now acquire, was almost invariably taught in a way which over-burdened a child's memory, confused a naturally bright intelligence, and hopelessly stupefied and discouraged children who were naturally dull and backward. The reason of all this was no other than the idea, of which few people appear able to disburthen themselves, that to spell—i.e. to pronounce the ordinary names of the letters which make up any given word—was a guide to a child who had to sound the word as a whole. It seemed part and parcel of the order of things that a teacher shall repeat to a child who is beginning to learn to read such utterly irrelevant sounds as *see, ay, tee, cat; dee, ove, jee, dog; see, owe, double-you, cow!* Writers on education, from the time of Miss Edgeworth, and long before, had called attention to this absurdity, but the genius of misrule was nearly as prevalent as ever. In 1844 appeared a Phonic Reading-book, in two parts, published under the authority of the Lords of the Committee of Council on Education, in which a mode of teaching reading, better than that in ordinary use, was explained. The dead-weight of resistance on the part of teachers and school managers proved, however, too great, and the effort to bring the book into general use was abandoned. And at the present time, in spite of the progress which education had made in many respects, in the matter of the first steps of teaching reading we were very much as we were fifty years ago. A remedy would be very speedily found, Mr. Rundell contended, if people would

only grasp the idea that, with a language so irregularly spelt as English is, the problems of teaching to read and teaching to spell should be treated separately, and a child should not be called upon to spell at all until he or she was able to read with fluency. As Her Majesty's inspector would not tolerate any liberties being taken with the mode of spelling now current, reading-books in phonetic spelling were at present out of the question, and teachers wishing to adopt a better mode of teaching reading had to be content with the "phonic" system, which retained the ordinary spelling, but, by means of italics and accents, gave a workable approximation to the sound of the spoken word. Mr. Rundell then explained Robinson's phonic method, which is largely adopted with excellent result in many elementary schools under inspection in the North of England, especially at Leeds.—*School Guardian (Eng.)*

PROMOTIONS.

We wish now to notice what we fear to be a growing evil in the schools of the day. Pupils are often advanced from one grade to another before they have done their work well, just as in the country they are advanced from one book to another without careful preparation. If parents and pupils knew that superintendents would promote only such scholars as did good work, many absences and tardy marks which we now have would be wanting and there would be general attention to business which would save a deal of trouble. It is the listless and vicious in a school-room who are generally behind, and when once they have acquired the idea that somehow they are going to pass along with their class, they will find plenty of time and opportunity to exercise those vicious traits. To let them slide along easily is not only unjust to the scholar, but also to the teacher who has to take them. It is not pleasant for a superintendent to say to a pupil "you cannot be promoted" and it sometimes brings on a storm of abuse from parents. If a teacher consults only his own ease, and wishes to get rid of some bad boy or girl, he may try to make it seem best to pass him along, but no such reason should ever take the place of a governing motive. We know it to be true that the intellectual leaders of our classes, are not our cases of discipline; that fact alone ought to forbid any prize being put upon school wickedness by promotion. You could hardly find such a thing as a boy who had no feeling on the subject of being dropped from a class he ever so ugly, and so it would do him good morally as well as intellectually to hold him closely to the work, for he would find less time to practise his evil propensities, and at the same time would be laying up a store of facts, which would help to make a man of him.

There is no law in any school which compels all scholars without regard to age, ability or bodily health to complete a certain course in a certain time, but there ought to be one that says a certain work must be complete before attempting anything higher. Should there be pupils, who from any cause, cannot take the course prescribed, let them do part of the work at once and consume a longer time in this preparation. A teacher can make it appear to a class and to a scholar and parent that it is wise to do so; show them how "the battle is not always to the strong nor the race to the swift," and so make them happy and contented in believing the true adage to be, "not how much but how well." In every class there may be scholars who are brighter than the majority and able to comprehend the lessons allotted from day to day and have time to spare.

To such a wise selection of reading, matters would be of untold value. A general taste for good reading fostered in our schools would soon cripple those firms who send about their immoral story literature.—*The Moderator.*

BAD LIGHT FOR THE EYES.

After a thorough examination of all the class-rooms in every section of the city of Philadelphia, it was discovered that in only 200 out of 2109 rooms in the public school buildings of the thirty-one sections are pupils properly seated. In his report to the Board upon this important subject, Supt. McAlister says:—

It has been ascertained that a considerable number of the seats are so placed that the light falls directly upon the eyes of the pupils. The injurious effects of this are so well established that no word of comment is needed. The accompanying table contains a detailed statement of the position of the desks in every class room in the public schools in the city, except the Boys' High School and the Girls' Normal School. It will be seen from it that in 378 rooms the desks and seats are so placed that all the light received by the pupils comes from the windows directly in front of them. In 422 rooms the light comes partly from the front and partly from the right or left side. Pupils cannot sit in such positions for the length of time required of them without permanent injury to their eyesight. In only 202 rooms out of a total of 2109 are the pupils placed in accordance with the requirements of hygienic science.

In the same connection, Mr. A. M. Spangler, of the Philadelphia Board of Education, after examining seventy-six of the public schools of the city, says, in the extended report of his investigations, that 14 per cent. of the girls and 8½ per cent. of the boys in the secondary schools are near-sighted, while in the primary schools 8 per cent. of the girls and 5 per cent. of the boys are afflicted in the same manner. The causes of the infirmity are set forth at great length in this report. In 95 per cent. of the schools visited the seating is wretchedly bad. He found in the front room children shielding their eyes with slates and books and desk lids from the glare that came through the blindless windows. Where this was prevented by shades or newspapers pinned up, a dim twilight pervaded these rooms. In the rear rooms the gas had to be lighted. Another cause of the prevalence of myopia is the location of blackboards. In the schools examined all the boards in front of the children are hung between two windows, "and as a consequence," says Mr. Spangler, "a knowledge of what is written on them can only be learned by a straining of the eyes that can not be otherwise that hurtful in the extreme." The remainder of the boards are hung on one side, necessitating a change of position whenever the children must consult them. In 95 per cent. of the school-rooms Mr. Spangler found the only means of ventilation to be by opening doors and windows. The result of these investigations should set teachers and school officers to thinking, and to making intelligent inquiry and observation, in all parts of the State.

HOW FAR SHALL I HELP THE PUPIL?

BY D. P. PAGE.

It is always a very difficult question for the teacher to settle, "How far shall I help the pupil, and how far shall the pupil be required to help himself?" The teaching of nature would seem to indicate that the pupil should be taught mainly to depend on his own resources. This, too, I think, is the teaching of common sense. Whatever is learned should be so thoroughly learned that the next and higher step may be comparatively easy. And the teacher should always enquire when he is about to dismiss one subject, whether the class understands it so well that they can go on to the next. He may, indeed, sometimes give a word of suggestion during the preparation of a lesson, and by a reasonable hint save the scholar the needless loss of much time.

But it is a very great evil if the pupils acquire the habit of running to the teacher as soon as a slight difficulty presents itself to request him to remove it. Some teachers, when this happens, will send the scholar to his seat with a reproof, perhaps, while others,

with a mistaken kindness, will answer the question or solve the problem themselves, as the shortest way of getting rid of it. Both these courses are generally wrong. The inquirer should never be frowned upon; this may discourage him. He should not be relieved from labor, as this will diminish his self-reliance without enlightening him, for whatever is done for a scholar without his having studied closely upon it himself, makes but a feeble impression upon him, and is soon forgotten.

The true way is, neither discourage inquiry nor answer the question. Converse with the scholar a little as to the principles involved in the question: refer him to principles which he has before learned and now lost sight of; perhaps call his attention to some rule or explanation before given to the class; go just so far as to enlighten him a little, and put him on the scent, then leave him to achieve the victory himself. There is a great satisfaction in discovering a difficult thing for one's self, and the teacher does the scholar a lasting injury who takes this pleasure from him. The teacher should be simply suggestive, but should never take the glory of a victory from the scholar by doing his work for him, at least not until he has given it a thorough trial himself.—*The Teacher.*

HOW WILL THEY DEVELOP?

Many a teacher has stood before his school and felt a sadness steal over him that he could in no way resist. There are great powers and capacities existing in yonder boy, there are wonderful possibilities in yonder child. Those two who sit side by side; what will be their future?

Look back ten years, teacher, and do you not feel sore at heart? You did your best, God knows, but why did James —, a very pleasing, interesting boy, take first to tobacco, then to beer, then to whisky, so that now when you meet him he wears the look of a hardened criminal? You cannot answer; you wish he was once more in the pleasant state he then was. You would like to try your power again.

The truth may be stated as follows: every individual at some time stands where two ways diverge—one is the right and the other is the wrong way. To cause to choose the right path should be the effort of the teacher. Deep impressions cause this choice to become a habit. Hence the effort to fix deep impressions in the heart. Fix earnestness as a trait of the character. They will develop; if they develop with earnest purposes, then you need not fear.—*N. Y. School Journal.*

HYGIENE.

I.

1. Hygiene for the teacher :
 - a. The teacher's liabilities to ill-health.
 - b. Overwork.
 - c. Anxiety.
 - d. Care of his diet, rest, sleep.
2. Hygienic observations concerning the school-house and grounds.
 - a. The teacher should visit the house before commencing school.
 - b. He should notice drainage, decaying matter, the out-buildings, the well, etc.
 - c. The lighting of the school-room.
 - d. The heating of the school-room.
 - e. The ventilation of the school-room.
 - f. The arrangement and condition of the seats and desks.

II.

1. Hygienic law applied to the pupil :
 - a. Position of pupils in seats; in school-room.
 - b. Variety required.
 - c. Recesses.
 - d. Use of eyes.
 - e. Sitting in drafts; by hot stoves.
 - f. Care of clothing.
 - g. Care of person.
 - h. Contagious diseases; rules to be observed.
 - i. Amount of work to be required of pupils.
 - j. Temperance; (1) moderation in right things, (2) abstinence from harmful things.
 - k. Athletic sports.
 - l. The will to be trained to obey hygienic law.

—From Outline of Institute Work (Incl.)

PRACTICAL TEACHING.

I fear we are not practical enough. We lay too much stress on grammar, arithmetic and geography as we find them in our text books, and spend too little time on general knowledge; less text book work in that line, and more that shall tend to symmetrical development of the heart, the head and the hand would give more useful men and women. It would be much more advantageous to a boy or girl to understand the principles of the telegraph, steam engine, telephone and the like, than to know how to solve intricate problems in arithmetic or algebra. Better for them to know how to correct language incorrectly used, and express themselves with elegance and ease than he versed in difficult analysis and parsing. Better for them to understand reasons for the different states of our atmosphere, causes for changes in climate, the relation of countries and governments to one another, than to be studying the almost unending local geography in its minutiae as given in our books. Better for them to know about the government of their own town, county, and country, than to learn the hundreds of small bays, rivers and places that they are required to learn. Better for them to know something about the law of animal and vegetable life, and especially their own bodies, than the careless repetition of rules and definitions, that will never enter into practical life.—*The Moderator.*

UNQUALIFIED TEACHERS.

It would astonish you to know how many teachers there are in this State (Tenn.) who are without an educational journal or book, or who have never attended a normal school or teachers' institute, or had any preparation whatever.

The above was addressed to an editor of a school journal. The writer did not see from the standpoint of a publisher of a school paper. Tennessee is not so much behind. Our experience for the past three years has been a continual surprise to us. If you wish to find a verification of the above, work a while among the teachers of any State. An intelligent man was in our office a few days since and said "If I should divulge to the public all I know with regard to the real lack of preparation of teachers to keep abreast of the times, I would be driven from the city. This may be an extreme view, but you doubting ones, take one hundred papers of the average examination, in any county in the State, and if you are not satisfied you are past conversion and "will be given over to hardness of heart that you may believe a lie."

A member of an examining board said to us only a few days ago, that there was not a minister in the State that possessed grace enough to patiently examine one hundred papers of so many candi-

dates for a third grade certificate. If teachers were seeking helps through books and papers, could these things be so?

We are glad to say that there are better omens in the sky. "The mills of the gods grind slow"—but they are grinding. The people are waking up to the needs of the hour—and the future teachers will have to use the teacher's tools.—*School Moderator*.

General Suggestions.—1. The teacher should always articulate clearly and pronounce correctly, when giving words for spelling.

2. Never overstrain the enunciation of a word in order to indicate its spelling.

3. Allow only one trial in spelling orally or in writing.

4. In spelling orally, the divisions into syllables should be marked by slight pauses, but in no other way.

5. Do not assign lessons too difficult for the pupils who have to prepare them. This compels the pupils to spell badly.

6. It is desirable that spelling should be taught to a considerable extent by means of composition, in order to give the pupils practice in spelling the words in their own vocabularies.

7. In some of the dictation lessons, time may be saved by having only words in italics spelled. The teacher should read the whole sentence, and emphasize the words to be spelled.—*Preface to Gage's Practical Speller*.

Notes and News.

ONTARIO.

Ingersoll Public School Trustees have increased the salaries of their teachers twenty per cent.

A kindergarten department is to be established in connection with the Toronto Normal School next session. During the remainder of the present session Miss Mareau, who has charge of the public kindergarten in the city, will deliver a course of lectures to teachers in training.

Mr. J. E. Wetherell, B.A., late head master of the Collegiate Institute of this town, is working up the Strathroy High School. There are now about 200 pupils in that institution, and steps are being taken to advance it to the status of an institute. We are pleased to hear of Mr. Wetherell's success. He is a very energetic and painstaking teacher, and deserves all the success which attends him.—*St. Mary's Argus*.

Alfred Baker, M.A., has just been appointed dean of residence. We learn also that William Dale, M.A., will receive the classical tutorship. It is rumored that on account of the scarcity of funds the new chair of Roman languages will be filled by a lecturer for the present. John Squair, B.A., the present acting lecturer, has received this appointment. D. R. Keys' duties are more definitely fixed by the new calendar. He is now designated as English lecturer. President Wilson confines himself for the future to history and ethnology.—*Toronto World*.

Pickering College occupies a peculiar place among the educational institutions of Ontario. It is under Quaker management, and though doing good work it never in any way forces itself into public notice. It has no parade exercises of any kind, neither opening nor closing formalities. No prizes are given, nor is there any marking system. Work is carried on in the belief that the students should work from love, and not from fear or feelings of rivalry. Co-education is adhered to, and the authorities claim to have the best literary society to be found in any institution in the Province outside of the University of Toronto.—*Globe*.

We understand that it is contemplated to organize a company of cadets among the pupils in the Collegiate Institute in this town. There is the material for a first-class company attending the Institute at present, and the drill would do them good. Three of the officers of the 28th Battalion in the town have agreed to spend an hour each week in drilling them. The Government will supply the rifles, and all the expense that the cadets would be at would be the clothing, which need not necessarily be expensive. We hope to see the company organized.—*St. Mary's Argus*.

An interesting article in the July-August number of the CANADA SCHOOL JOURNAL on Penmanship was contributed by J. S. Carson, Esq., Inspector of Public Schools, Strathroy. He takes a broad, general view of the causes of poor writing in the common schools and therefore among the masses, and lays much of the blame at the door of teachers and school officers. Correct. We have no desire to complain unnecessarily for we are aware that parents and officers generally get some blame, which they deserve, while teachers deserve some blame and they get it. We have been doing our very best to arouse some interest in penmanship among teachers, not only mental, or professional, but plain business writing.—*From Woodstock Business College Mirror*.

Rev. Dr. Kemp, a graduate of Edinburgh University, who came to this country with the 26th Cameronians, and was afterwards pastor of St. Gabriel's church, Montreal, and joint editor of the Canadian Presbytery, died in Hamilton a few weeks ago. In 1874 Dr. Kemp accepted the principalship of the Brantford Young Ladies' College, which position he held until his acceptance of the principalship of the Ottawa Ladies' College in 1878. On retiring from this position in 1883, though broken in health and admonished to rest content with the life-long service he had been privileged to render, the veteran soldier preferred to die upon the field, and placing his services at the disposal of the church, he filled pulpit appointments from week to week until completely prostrated by the progress of the disease that had for months been stealing away his strength. He passed peacefully away at the residence of his son-in-law, Mr. C. H. Sutherland of Hamilton. He leaves a widow, three daughters and one son.

"Bystander" in last issue of *Week* touches upon a subject which ought to be of interest to every man who has at heart the future welfare of his country, alike in Canada and the United States. He says:—"The writer of a letter to the *Globe* the other day sought an answer to the doubts created in his mind by the difficulties which arise about discipline in our public schools. Why are extreme measures necessary? Why are our young boys so disrespectful to their teachers in school, and sometimes afterwards? Why are many of them equally disrespectful to their parents, even in the presence of strangers? Why are they so insolent in the streets, using profane and foul language, puffing their cigar smoke in the faces of passengers, spitting on the dresses of ladies, and committing every sort of outrage? The facts, unhappily, cannot be disputed. Even Lord Dufferin, who poured his eulogies so copiously over everybody and everything, could not help declining to eulogize the manners of children. The blame, as the writer in the *Globe* is inclined to think, rests on the home. It cannot fairly be said to rest upon a school master, who is denied effective means of maintaining discipline among the pupils, and if he whips a young barbarian for the grossest outrage or the most contumacious disobedience, he is brought before a magistrate and fined for excessive punishment, his moral influence being at the same time totally ruined. The home, no doubt, is the chief seat of the evil. But the home itself only participates in the general decay of authority. Few of those who have studied social history without prejudice doubt that democracy, with all its drawbacks, is, on the whole and for the mass of the community, a vast improvement on any previous state of things. But democracy has its drawbacks, at least while it is crude, and before people have learned that without authority there can be no true liberty. The world has been too much occupied in deposing constitutionalizing kings to think how order, which is indispensable to progress itself, was to be maintained when the kingly power was gone. Men are now afraid to rule their own households lest they should offend democratic sentiment. Indeed, the headship of the family is itself the object of special attack in which some, even of the churches, led by their anxiety to cultivate popularity are beginning to join. The home being the mould of character, domestic anarchy will breed insubordination in the commonwealth."—*Exchange*.

"The present Minister of Education and Dr. May as his subordinate have just hit on one of the most important reforms ever introduced into our school system. They have brought forward a practical measure, the effect of which will be an increase by at least one-third of the salaries of most public school and high school teachers. It is a truism to say that the rate of pay for the skilled labor of a good teacher in one of our city schools has been far too low. But the pay in the city schools is better than in a country village school, and as a consequence a better class of teachers are secured for the city. Dr. May, at the instance of the Minister of Education, has issued a circular to all public and high school teach-

ers, informing them that at the end of the present term a series of gratuitous lessons would be given in the science of drawing and perspective, so as to prepare them for being able to pass an examination, the successful candidates at which will receive certificates of being competent to teach practical drawing. A school for art is to be established in connection with every mechanics' institute in the province, and teachers competent to instruct in drawing will receive an addition of at least \$300 yearly to their salary.—*News*, Toronto, May 27.

Mr. J. S. Tilley, inspector of Public Schools for the county of Durham, has been appointed one of the model school inspectors of Ontario.

TRINITY MEDICAL SCHOOL.—The special recognition this well known school has received within the past year, from the several Royal Colleges in Great Britain and Ireland, is a feature we are pleased to notice in connection with it.

Mrs. J. A. Moore, wife of J. A. Moore, B.A., of Goderich high school, died after a lingering illness, at the early age of 36 years. The disease, consumption, had been steadily undermining her system for three years, and for the past year but little hope was had of her recovery. Her illness was borne with Christian patience. The deceased lady was held in high esteem for her gentleness of manner and her piety.

Mr. W. Stahlschmidt, Principal of Preston Public School since 1869, handed in his resignation in order to devote his whole time and attention to the manufacturing of school, church, office, and lodge furniture. He has opened a factory for this work.

The Toronto Public School Principal's Association thinking that an attempt will be made to abolish the Superannuation Fund in the Province of Ontario, has submitted the following questions for consideration to the different Teachers' Conventions of the Province:—

1. Was not the Fund established (1) to encourage teachers to remain in the profession; (2) to compensate teachers in some measure for the inadequate salaries they received, by making some provision for them when they became incapacitated for duty?

2. What effect will the abolition of the pension grants have on the educational interests of the Province?

3. As it is admitted that the labors of teachers are indispensable to the public good, are their claims for aid, in their declining years, unusual or are the derogatory to their dignity or self-respect, in view of the fact that Ministers of State, Judges, and other public functionaries receive similar compensation for their services, and that churches regard it as a sacred obligation to superannuate their clergymen, to whose duties, in their moral aspect and influences, those of the school teacher bear so close an analogy.

4. Is it probable that the existence of the teachers' pension grant tends to prevent an increase of salaries, and that its abolition would induce the public to compensate them adequately for the loss thus sustained?

5. Would it not be more just to act on the merits of the case by a consideration of the services and claims of those teachers who spend their lives in the profession, rather than be guided by the decision of those who engage in school teaching only until they can enter upon more lucrative employment?

6. Are any teachers, whether they remain in the profession or not, justified in objecting to pay the small amount levied, in view of the advantages they receive, and of the claims of those who remain until incapacitated by age or infirmity?

At the last meeting of the Ottawa Teachers' Association the following resolutions were adopted:

Moved by Mr. R. J. Tanner, seconded by Mr. R. H. Cowley, that we, the members of the Ottawa Teachers' Association, avail ourselves of this our first opportunity as a body of expressing our sincere regret for the loss sustained by the Teaching profession in the early demise of our late esteemed member Mr. Samuel N. McCready, Assistant Master of the Provincial Model School, Ottawa, who as a teacher was pre-eminently successful, as a friend warm-hearted and generous, and as a citizen respected by all, and that we hereby tender to his widow and family our earnest sympathy in their sad bereavement, and that the Secretary be and is hereby requested to forward to the widow and the mother of the deceased gentleman and to each of the School Journals a copy of this resolution.

Moved by Mr. John Munro, seconded by Mr. John McMillan, that whereas this Association has learned with profound regret of the death of the late James McNevin, Esq., Mathematical Master of the Ottawa Collegiate Institute, who was in entire sympathy with this Association, and was ever ready to do his part in advancing the interests of Education, and who was a most successful and

faithful teacher, an earnest worker, and a refined Christian gentleman.

Therefore be it resolved, that this Association extend its sympathy to Mr. McNevin and family and also to the parents of the deceased.

Be it further resolved that a copy of this resolution be forwarded to Mrs. McNevin, to Mr. McNevin (father of deceased) and also to each of the School Journals.

At the invitation of the Grimsby Park Association the National School of Elocution and Oratory will conduct their next summer term upon the grounds of Grimsby Park, commencing July 7th. We think the authorities of this important school have acted wisely and judiciously in their selection of a place to hold their third season in Canada for it is convenient to the boarders of the two countries and is delightfully situated as regard beauty of location and salubrity of climate. The aim and object of the school are now so well known that it is needless to mention the decided advantage that a course of study is calculated to produce in the case of those who have occasion to read or speak in public. That the school is appreciated is apparent from the fact of its re-appearance at this season for the third time in Canada.

NOVA SCOTIA.

The annual Convention of Dalhousie College, closing the session of 1883-4 was held in the House of Assembly Chamber, Province Building, on the 23rd of April. The venerable principal, Dr. Ross, presided and opened the exercises with prayer. The following degrees were conferred:—*Bachelors of Arts*.—Henry Stanislaus Adams, Halifax; Edmund Munro Dill, Centre Rawdon, Hants Co.; Frank Jones, Digby; Donald McDonald, Cape North, Cape Breton; John Peter McLeod, Valleyfield, P.E.I.; Daniel Alexander Murray, Truro; William Bell Taylor, Halifax; Dawson Evers Duckworth Turner, Liverpool, G. B. *Bachelor of Science*.—Henry McNeil Smith, Halifax.

The University prizes were announced and presented as follows: *Classics*—Fourth year, McLeod, J. P. Third year, Aiton, W. Second year, Robinson, A. First year, Latin, Shaw, Shaw, J. C. *Greek* Fraser, D. *Mathematics*—First year, McNeill, Charlotte M. Second year, Stewart, D. *Astronomy*—Murray, D. A. *Physics*—Mackenzie, A. S. *Ethics*—McDonald, D. *Political Economy*—Turner, D. F. D. *Metaphysics*—Ritchie, Eliza. *Logic and Psychology*—Cahan, C. H. *English Language and Literature*—First year, McNeil, Charlotte M. *Chemistry*—*Inorganic*—Second year, Robinson, A. First year, Morrison, A. M. *Organic*—Smith, H. M. *History*—Fourth year, McLeod, J. P. Third year, Gammell, I. *French*—Second class, Turner, D. F. D. First class, McKenzie, A. S. *German*—Second class, Saunders, Maria F. First class, Aiton, W. Then came the following statement and presentation of special prizes:—*The St. Andrew's Church Prize*—Nicholson, A. Presented by St. Andrew's Pastor, Rev. L. H. Jordan, B. D. *North British Society Bursary*.—By the Principal. *The Waverley Prize*—Stewart, D. By the Principal. *The Avery Prize*—Turner, D. F. D. By Mr. Peter Jack. *The New Shakespeare Society's Prize*—MacKnight, Catharine K. By Prof. Schurman. *The Jack Herbarium Prize*.—Campbell, G. G. By Mr. Peter Jack.

An interesting feature of the Convocation was the presence of the recently organized Law Faculty and the announcement of passmen and prize-winners in that flourishing department of the University. The Law School prizes (as below) were distributed by Dean Meldon, Mr. Justice Thompson, and the other Professors:—*Hebrew*—Campbell, A. (New Glasgow.) Law School prize-winners were:—*Real Estate and Contracts*—W. W. Wells, Dorchester, N. B. *Torts and Crimes, and Contracts*—W. D. Carter, New Brunswick. *Construction of Statutes and Equity*—J. A. Sedgewick, Halifax. *Commercial Law*—P. C. C. Mooney, Halifax. *Constitutional Law, Evidence, &c*—C. Morse, Liverpool, N. S.

The valedictory oration was pronounced by Mr. D. A. Murray of the graduating class. Mr. Murray's paper was conceived in excellent taste, and rose quite above the level of ordinary valedictory addresses. The more formal exercises were followed by brief and appropriate speeches from His Honor, Lieutenant-Governor Ritchie, and Sir William Young. The Principal announced that the well-known benefactor of the University, George Munro, Esq., has placed at the disposal of the Governor funds for the endowment of a chair of English Literature, and had nominated as Professor, Dr. Alexander. The new Professor, having won the Gilchrist Scholarship for Canada, pursued a brilliant career at the University of London where he graduated B.A. He has since taken the degree

of P. H. D. at Johns Hopkins University, Baltimore, at which distinguished seat of learning, he won a conspicuous record in both classical and English literature. He is now pursuing a line of special study at the University of Loipzig.

Mr. E. H. Owen in consequence of ill health has been obliged to resign the Principalship of Lanenburg Academy, a position which he had filled for the long period of thirteen years. All who have knowledge of Mr. Owen's scholarship and educational zeal will earnestly hope for his early restoration to health. The post vacated by the retirement of Mr. Owen has been filled by the appointment of Mr. M. R. Tuttle (B.A. Acadia.)

The fifth annual session of the Teachers' Association for Inspectorial District No. 4 (counties of Annapolis and Digby) was held at Bridgetown, on the 1st and 2nd of May. The meeting was called to order by L. S. Morse, Esq., A.M., Inspector of Schools, to whose tact and geniality as a Presiding Officer much of the success of the occasion was due. Nearly seventy teachers called themselves as members. The following staff of officers was elected:—Vice-President, Mr. W. H. Magee; Sec.-Treasurer, Mr. L. Ruggles; Executive Committee, Messrs. A. D. Brown and J. A. Banks, Miss Jessie Prince and Miss A. M. Clarke. The following programme was submitted and most effectively carried out:—A Theory of (School) Government, Mr. J. A. Banks; Negative duties of the Teacher, Mr. M. H. Clarke; Object Lesson (subject, the oyster), Miss Augusta Palfrey; Language, Mr. W. H. Fairn; Progress—the watchword of the teacher, Mr. L. Ruggles; Time-takes, Mr. W. L. McGregor; Lesson in Elementary Physics, Miss Bonyman, (owing to Miss B.'s necessary absence through illness this lesson was given from her notes by Mr. A. D. Brown, in a highly interesting manner); Normal School Training, Mr. W. H. Magee. The papers, without exception, were well written and well read, and dealt with living questions in a practical and telling manner. The Association which is happy in the possession of many members who can "think and talk on their legs" gave every object a thorough discussion. At intervals, many questions bearing on the School Law and its applications as well as on disputed points of grammar, &c., were propounded and interestingly discussed. Among other business transacted, a motion was passed to the effect, that, the President, Chairman of the Executive Committee, and Sec.-Treas., be a committee to forward a petition to the Legislature, praying for some tribunal other than a Magistrate's Court to try cases in which teachers are prosecuted for administering corporal punishment. The Association also adopted the following resolution, which was brought before it in connection with Mr. Magee's paper:—

"Whereas at present too much of the Normal School session is obliged to be given to non-professional work, to the neglect of the true end and intention of the Normal School as intended when it was first established,

And Whereas, no encouragement is now given to students to attend the Normal School, beyond the fact that they may do better work;

Therefore Resolved, that this Association petition the Council of Public Instruction both to raise the standard of entrance examination for B students equal to a license grade B.; for C students equal to a license grade C. and for D students equal to a license grade D.; less the professional papers in each grade; and to make the grants to trained teachers at least one fourth larger than the untrained and to give a larger proportion of the County grant to sections engaging for the term of one year trained teachers.

The regular exercises of the Association were interrupted on the evening of the first day by a public educational meeting, addressed by Dr. Allison, Superintendent of Education, and other gentlemen, to which the *Bridgetown Monitor* thus refers:—In the evening Dr. Allison, Superintendent of Education, addressed a large and appreciative audience in the Baptist Church on some of the leading educational questions of the day. The Dr. objected to the theory that education is the universal antidote for all the ills of social or national life. He, however, considered education a prime necessity, not intended to take the place of religion and morality, but a necessary accompaniment. He cited the growth of the local press as an indication of progress, our school system has been instrumental in producing a reading public. The moral duties of the teacher were clearly set forth. Every teacher has the opportunity of placing before his pupils a high example of all that is noble, pure, true and good; of teaching the broad principles of morality. The claims of the industrial interests were clearly, logically and forcibly defined. The necessity for a closer connection between

our common schools and colleges was noted, and improvements suggested. The lecturer closed his remarks with a few words of cheer and earnest appeal to teachers and patrons. At the close of the Doctor's remarks short but appropriate addresses were given by Revs. Mr. Wilkins and Warron, J. G. H. Parkor, Esq., and Dr. J. B. Hall. This public meeting was one of the most successful ever held under the auspices of the Association. On motion a vote of thanks was tendered Dr. Allison which received a suitable response.

Mr. Angus McLeod (grade A) has been elected to the principalship of the County Academy, Kentville. For several years past, Mr. McLeod has been principal of the public schools, New Glasgow. In the latter position he has been succeeded by George Patterson, B.A., late principal of the County Academy, Baddeck, C. B.

During the past few months under the sagacious guidance of supervisor McKay much prudent progress has characterized the course of educational events in the city of Halifax. Probably Halifax never had a Board of Commissioners more competent to deal with the important interests of public education.

The annual session of the Provincial Educational Association is announced for the 16th and 17th of July at Truro. The programme of exercises is looked for with much interest.

ENGLAND.

When we find a lady heading the subscription list with £10,000 towards the building fund of the New College for Women at Hampstead, and other ladies coming forward to found scholarships in the same institution, we must admit that it will not be for lack of enthusiasm on the part of members of the fair sex themselves if an epicurean ideal as regards education is never realized. The possibility of its realization, however, is becoming daily more apparent. Whatever may be the result of the meeting of Convocation at Oxford, which is being held while we go to press, on the question of admitting women to certain of the ordinary examinations of that University, nobody can doubt that the decision in their favor already arrived at in Congregation will sooner or later be endorsed.

Referring to this subject, "An Old Don" protests, in the columns of the *Pall Mall Gazette*, that it is a great mistake to imagine that "the craze" for admitting women is entirely due to a disinterested enthusiasm on the part of the teaching profession at Oxford for the education of women. Matrimonial considerations he declares to be at the bottom of the whole agitation:—

"The secret spring of this movement and its sustaining force is to be found in the permission given a few years ago to the Fellows of Colleges to marry. As a natural result, as time rolls on and their families begin to multiply, they find themselves unable to make both ends meet, and like others in the same predicament, they have to cast about to find means of supplying the necessary funds to provide their children with 'bread and butter.' They had about reached the end of their tether so far as one half of creation was concerned. By hook or by crook, it was impossible to extract another fee from the masculine section of the human race. But, having exhausted the resources of the males, they discovered in womankind a vast and unexplored field from which the astute teacher might reap a golden harvest."

The "Old Don" adds:—

"Why, of all places in the world, young ladies who are so anxious to perfect their studies in classics and in physiology should persist upon being admitted to a small town where two thousand young men of the marriageable age are assembled together, is a thing which I cannot understand, excepting on the supposition that it is not culture so much as a husband of which they are in search. But I cannot consent to quit the field without at least a protest on behalf of those old-fashioned notions of modesty which used to be regarded as the shield and crown of womanhood. The remarks that are made upon the young women who are prosecuting their studies in the University towns by the young men are, as I think, regrettable, nor would I for the world subject any of my female relatives to such an ordeal."

To this "An Oxford Lady" replies:—

"If there are people who believe this kind of thing, there is no help for it! One can but shake the head of sorrow on the shoulders of amusement!" But when one thinks of the unfortunate Professor of Latin—one of the most distinguished of European scholars—devoting the leisure hours of the three afternoons a week

during term to dragging a small number of imperfectly trained girls through their Cicero or their Horace, for a sum considerably less than he could earn by a single article in a magazine; or when one remembers the many hardworked and kindly college tutors who, sooner than let those who want to learn go without teaching, have devoted the walking and recreation time they could ill spare to the poorly paid labors of the Women's Association, one puts the facts as they are side by side with your correspondent's remarks, and one realises once more what kind of evidence it is with which prejudice will content itself."

Mrs. Kitchener, of Newcastle, who for eight years has kept a calendar of teachers holding University Certificates, thus records experience:—

"For teachers in high schools a University Certificate is absolutely necessary, and each class has its regular separate value, i.e., a woman with a Third Class may succeed better in the long run than her sister with a First Class, but she must be content to start behind her in the race. With regard to private governesses, parents are thoroughly alive to the advantages of having a governess whose knowledge has been tested. It is true that they not unfrequently write that 'refinement and high moral tone were more valuable to them than a First-Class Certificate,' but they almost invariably added that, if they got the former without the latter, they would expect to give a lower salary."—*Educational Times*.

GENERAL.

The National Educational Exposition to be held in Madison, Wis., July 16-18 of this year, promises to be highly successful. It will certainly be one among the most notable exhibitions of the kind that have ever taken place. The exhibits will be organized in twelve departments, those, viz., of the Main Exhibition, which will include work of the higher schools, both public and private: industrial education; art; kindergarten; selections from the National Educational Museum; pedagogic literature; Ward's Museum of Mineralogy, Geology, and Zoology; school architecture, including ventilating and heating apparatus; school journals and other current educational publications; apparatus and supplies; school books and school furniture. The exhibits in the main department will be grouped in three classes. Class I. embracing examination manuscripts, specimens of penmanship, graphic work, etc., prepared by students according to prescribed rules. Class II.—Special work, prepared by students, for which no rules are prescribed except such as may be made by the teachers or by local school authorities. Class III.—Materials arranged by students, teachers, or school authorities, and presented to illustrate systems, processes, and results of instruction.

A writer in the Boston *Advertiser* complains that teachers in Massachusetts are frequently removing without just cause, and he calls for the abrogation of the custom of electing teachers for a single year. He takes the sensible ground that teachers ought to be chosen to serve during efficiency and good conduct. The practice now in vogue he characterizes as "worse than Greek ostracism."

A student of Harvard medical school wrote an excellent set of papers for examination lately, and two others copied them word for word. The examiner ranked the papers at 98 per cent., and for a moment the trio were happy. Then he remarked to them as the three papers were identical, they were entitled to an average of about 33 per cent. each, and as 50 per cent is required for a diploma, all three were plucked. The youth who wrote the papers is still wondering at this display of even-handed justice.

A contest in pronunciation gave great amusement at a church social meeting in Chicago lately. Each candidate was called in separately, and required to read the following sentences:—

The root of the difficulty was a pile of soot allowed to accumulate on the roof.

The rise of the waters has injured the rice crop, and it may be expected that the price will rise.

He had moved his goods to the depot, but his friends bade him not to be discouraged, as he would soon become acclimated if he would only stay.

He is an aspirant for Asiatic honors.

The disputants seemed to be conversant with the question, and if not good financiers, they are at least familiar with the problems of finance.

The irrefragable evidence that he was the sole cause of the alteration indisputably fastened on him the responsibility for the irreparable damage.

His conduct was indicative of the blatant blackguard, but his complaisant coadjutor, with his incomparable complacency, was even more dangerous.

The physician, after a careful diagnosis, pronounces the patient to be suffering from bronchitis, gastritis, periostitis, and meningitis, caused by the prevalence of nephritis, and has prescribed morphine.

S. D. Risley, M. D., who has devoted much time to the study of ophthalmology among the pupils of the public schools, in an illustrated lecture at the Spring Garden Institute of Philadelphia upon the subject, "Our School Children's Eyes," showed that one of the most important considerations and one which is most frequently overlooked in the building of our schools is their architectural adaption to the laws of optics. The position of a window or a black-board may become the source of serious widespread optical weakness among the pupils. He deprecated the practice of giving young students lessons to prepare at home after school hours, and recommended greater attention to the character of the type used in the text books. He held that children are sent to school too young, and thought that better results would be attained if pupils were not eligible to the public schools until eight or ten years old.

FRENCH SCHOOLS.—A prominent feature of republican France is the attention which is paid to education. Between 1870 and 1881, 16,678 schools have been erected, at an average cost of \$2,600. In a recent statement M. Jules Ferry said, in vindication of the money spent on education by the government, that there was not a village church but cost \$8,000, and that the school was at least of equal value. Twenty years ago the ambition was to erect churches. Now it is to erect schools. In the course of ten years it is expected that 400,000 schools will be erected throughout the country, at a cost of \$60,000,000 to localities and \$140,000,000 to the State. In the event of any parish proving contumacious the prefects are invested with compulsory authority. The school buildings are to be modelled after the best patterns of those of England, Belgium, Saxony and Wurtemberg, and the value of the playground is much insisted upon. There can be no two opinions as to the value of education to the republic, but it will be a misfortune if education is divorced from religion.—*New York Herald*.

The experiment of dispensing with recesses is being tried with success in some of the schools of New York. In the Yorkers schools it has been found to work well for the study, health and morals of the children. Physical exercises are introduced twice during the morning and once during the afternoon session. At a signal the doors and the windows of all the class rooms are simultaneously opened, so that the buildings are filled with fresh air, and three to five minutes are devoted to vigorous calisthenics. Good results are said to have followed.—*Detroit Evening Journal*.

At last women are to be admitted to the Oxford University examinations. They have gained a great victory over the more illiberal portion of the University, and, although not yet placed on a footing of full equality with their sisters at Cambridge, they are now certainly in a position to fight their battle for "complete academical equality" with their undergraduate brethren at Oxford, as the Warden of Merton puts it, in practically assured hopes of success. On Tuesday last (February 26th), the battle to which we have been referring was fought and won in Congregation at Oxford. The proposal was to the effect that women should be admitted to certain of the University examinations, those in Mathematics, Natural Sciences, and History, *pari passu* with men. In these schools both the sexes are for the future to be examined by the same examiners, and the class-lists issued after each examination are to be similar in the two cases. This is all that was secured by the form of statute proposed on Tuesday, but it is highly satisfactory to note that the proposal was carried by the large majority of 54,—100 voting in favor, and 46 against the statute.—*School Guardian*.

Strange to say, Texas limits by statute the salaries of her teachers. We never yet saw town or city so generous to this class of servants that it became necessary for the State to interfere to prevent extravagance. But it would seem that the love of education is so strong in the breasts of the Texans, that they have felt obliged to place themselves under guardianship through fear of impoverishment. It is evident, however, from the *Texas School Journal*, that the law has not worked well, for it has proved impossible under the law to obtain a sufficiency of first-class teachers. It is suggested by the same paper that the engine be reversed and *minimum* salaries be provided by law.

Readings and Recitations

A STORY OF FOUR BOYS.

The *Atlanta Constitution* says : This paper has printed many a story of denial, energy, and heroism, but none more deserving than that of the Green boys.

These four boys started a few years ago selling newspapers. They made ten cents apiece the first morning they went to work, and for two winters thereafter they went barefooted, through the snow and sleet in the freezing dawn, on their morning rounds. From the very first they wisely saved a certain percentage of their earnings, which they wisely invested in Atlanta real estate. The oldest one of them is now eighteen years of age, and the youngest twelve. They have supported an invalid father and their mother all the time, and now have property worth considerably over \$5,000, houses from which the rent is twenty dollars a month, and \$200 stock in a building and loan association. They have educated themselves the meanwhile, remaining from school this year in order that they might work the harder and build a home for their parents, that is to have a front parlor and a bay window in it. These little boys have been carriers, newsboys, errand boys, about the *Constitution* office, and one of them is now assistant mailing clerk. Their net savings from their sales and salaries, exclusive of their rents, have been twenty dollars per week for the year. Next year they can do better, and by the time the oldest of the brothers is of age they ought to have a comfortable little fortune.

What these boys have done other boys can do. The whole secret is steadiness, sobriety, industry, and economy. There are few lessons for boys more important than that the smallest amount—no matter how little it may be—will make a man independent if he will only live inside of it and compound his surplus. It must have been discouraging to these youngsters when it took them a month to lay up a dollar, and it was heroic in them when they laid this dollar up and went barefooted over frozen ground rather than use it to buy shoes. It is easy now when they are comfortably clad and housed, and everybody about them is comfortable, and their savings amount to twenty times a week more than they were formerly able to save in a month. They have conquered life almost before they have entered it, and if they will only keep cleanly hearts and genial souls, and broad, hearty impulses, they will not only be rich but useful men.

HAND IN HAND WITH ANGELS.

BY LUCY LARCOM.

Hand in hand with angels,
Through the world we go ;
Brighter eyes are on us
Than we blind ones know ;
Tenderer voices cheer us
Than we deaf will own ;
Never, walking heavenward,
Can we walk alone.

Hand in hand with angels
In the busy street,
By the winter hearth-fires—
Everywhere—we meet,
Though unfledged and songless,
Birds of Paradise :
Heaven looks at us daily
Out of human eyes.

Hand in hand with angels,
Oft in menial guise ;
By the same straight pathway
Prince and beggar rise,

If we drop our fingers,
Toil-embrowned and worn,
Then one link with heaven
From our life is torn.

Hand in hand with angels ;
Some are fallen—alas !
Soiled wings trail pollution
Over all they pass.
Lift them into sunshine !
Bid them seek the sky !
Weaker is your soaring
When they cease to fly.

Hand in hand with angels ;
Some are out of sight,
Leading us unknowing
Into paths of light.
Some dear friends are loosened
From our earthly clasp,
Soul in soul to hold us
With a firmer grasp.

Hand in hand with angels,—
'Tis a twisted chain,
Winding heavenward, earthward,
Linking joy and pain.
There's a mournful jarring
There's a clank of doubt,
If a heart grows heavy,
Or a hand's left out.

Hand in hand with angels,
Walking every day :—
How the chain may lengthen,
None of us can say.
But we know it reaches
From earth's loveliest one,
To the shining seraph,
Throned beyond the sun.

Hand in hand with angels !
Blessed so to be !
Helped are all the helpers ;
Giving light, they see.
He who aids another
Strengthens more than one ;
Sinking earth he grapples
To the Great White Throne.

THE LITTLE PHILOSOPHER.

The days are short and the nights are long,
And the wind is nipping cold ;
The tasks are hard, and the sums are wrong,
And the teachers often scold.
But Johnny McCree,
Oh ! what cares he,
As he whistles along the way ?
" It will all come right
By to-morrow night,"
Says Johnny McCree to-day.

The plums are few, and the cake is plain,
The shoes are out at the toe ;
For money you look in the purse in vain
It was all spent long ago.
But Johnny McCree,
Oh ! what cares he

As he whistles along the street?
Would you have the blues
For a pair of shoes,
While you have a pair of feet?

The snow is deep, there are paths to break,
But the little arm is strong,
And work is play, if you'll only take
Your work with a bit of song.
And Johnny McCreo
Oh! what cares he,
As he whistles along the road?
He will do his best
And leave the rest
To the care of his Father,—God.

The mother's face is often sad—
She scarce knows what to do;
But at Johnny's kiss she is bright and glad,
She loves him, and would not you?
For Johnny McCreo,
Oh, what cares he,
As he whistles along the way?
The trouble will go,
And "I told you so,"
Our brave little John will say.

—Harpers' Young People.

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.

SOUTH GRAY.—The semi-annual meeting of the teachers of South Gray was held in Flesherton, April 29th and 30th. The programme was a good one, the discussion lively and instructive. A pleasant entertainment was provided for the evening.

PERTH.—The teachers of the county of Perth held their semi-annual convention in Stratford, Wednesday and Thursday, 14th and 15th May. The meeting which was exceedingly interesting was characterized by the usual discussions on the various subjects taught in our public schools, and the reading of essays. A novel and pleasing feature of the meeting was the recitation of a number of kindergarten songs by D. G. McNeil, of Downie, with his class of thirty scholars. Mr. J. E. Hodgson, M.A., H.S.S., gave an address on the "Study of Words" which was full of interest and practical utility to teachers. At the evening meeting addresses were delivered by Rev. Mr. Wright and D. D. Hay, Esq., M.P.I. Excellent readings were given by Mr. Ludwig, and Miss Macdonald, and music by Misses Katie Johnston and Walker.

WATERLOO.—The teaching profession, we believe, unanimously in the opinion that the late convention held here was the most successful, viewed from whatever standpoint, which ever took place in the county. The presence of the Minister of Education, and his practical remarks, added much to the interest of the proceedings and Mr. Ross won golden opinions during his visit. The honorable gentleman displayed an intimate and thorough acquaintance with all matters pertaining to education and evinced a laudable desire to ascertain the views of the profession and others interested in the proposed changes. Mr. Ross is the right man in the right place, and is adopting the proper course to become acquainted with the requirements of the people, and many needed reforms may with confidence be looked forward to in the Education Department within the next year. The Hon. Minister has both the courage and the ability to carry out his convictions.

WEST HURON.—The semi-annual meeting of the West Huron Teachers' Association was held at Exeter on Thursday and Friday, May 8th and 9th. After routine business a communication from the Women's Christian Temperance Union with reference to the introduction of scientific temperance education into the public schools, was read and referred to the resolution committee. In the afternoon Mr. T. F. Young read an able and instructive essay on "Teachers and Teaching." After some remarks by Messrs. Henderson, Brown, Gregory, Holmes and Huston, a vote of thanks was tendered to the gentleman for his able paper. Miss Dickson then illustrated her method of teaching an "Object Lesson" with class-subject "wheat," which was well received, and elicited a hearty vote of thanks. Miss Henderson then

took up "Primary Drawing," with illustrations, which caused an animated discussion. The lady was tendered a hearty vote of thanks for her effort. In the evening a large and attentive audience met in Mr. Drew's hall to listen to the excellent rendering of various selections by Professor Chapman, of Hamilton, and to the very fine music furnished by the local talent. At the close a well merited vote of thanks was given to Professor Chapman and the musicians. On Friday Mr. G. Holmes read a spicy paper on "Whither are we drifting," coupled with "What can be done to give greater permanency and stability to the teacher's position," which evoked a very lively discussion and the usual vote of thanks. Miss Oliver next read a carefully prepared essay on "Temperance," which was well received. The singing of Miss Helyar's class received much applause. The following resolutions were passed: 1st. That we, as an association, are strongly of the opinion that a diffusion of scientific knowledge of the effects of strong drink is greatly in the interest of morality. That it can be well taught in a public school, and, therefore, we memorialize the Minister of Education to incorporate lessons on the subject in the series of readers. 2nd. That increased Legislative aid should be granted to public schools and distributed on the basis of the amount paid to the teacher. The appointment of Messrs. J. R. Miller, S. P. Halls and Huston, to meet with a committee of the East Huron Teachers' Association, agent the union meeting; and the appointment of G. Baird, sr., as delegate to the Provincial Association, brought this pleasant and profitable meeting to a close.

NORTH HURON.—The regular annual meeting of this Association was held in the Central School, Seaford. The first paper discussed was one on "False English," by Mr. Crighton of Seaford High School. He illustrated his meaning by references to periodicals, newspapers, and selections from many authors, showing the ambiguity frequently met with. A hearty vote of thanks was tendered Mr. Crighton for his subject. Mr. W. G. Duff, of Roxboro, next presented his paper on "Discipline." Mr. Duff showed first that discipline was essential and elevating, he then proceeded to show how to obtain it. Mr. Duff received a well deserved vote of thanks upon the conclusion of his paper. Miss Graham, of Brampton, introduced the subject of "Difficulties in Reading," suggesting remedies for common errors and difficulties encountered in the average school. Upon motion of the Secretary, seconded by Mr. McFaul, a vote of thanks was tendered Miss Graham. Mr. Groves next read the delegates' report, which on motion was adopted. On the evening of Thursday the Association assembled in Cardno's Hall to hear Miss Graham's evening of reading. The readings were interspersed by musical selections, Miss Ewing, of Seaford, playing three instrumentals, and Miss Callendar, of Clinton, a solo. Upon resuming work on Friday morning Mr. H. S. McLean, of Clinton High School, pointed out frequent "Errors in Pronunciation," illustrated by a long list of words frequently if not usually mispronounced. Mr. Shaw moved, seconded by Mr. McGill, Tuckersmith, that a vote of thanks be tendered Mr. McLean for the manner in which he had treated the subject. A discussion then followed as to the advisability of holding a union meeting of the West Riding Association with the North Huron Association, when it was finally decided that we deem it advisable to hold such union meeting, and that Messrs. Malloch and Turnbull, of Clinton, and Mr. Ferguson, Wingham, be a committee with full power to act. The President appointed Messrs. Shaw, Henderson, Duff, McFaul, Lough and Stewart a committee on nominations. Mr. W. H. Stewart, of Lakelton, next presented his method of Teaching "Multiplication Tables and Division," showing how readily a child might understandingly learn the latter from the former. On motion of Messrs. Henderson and Harstone a vote of thanks was tendered Mr. Stewart for the pains he had been at to prepare his subject. A vote of thanks was also tendered Misses Ewing and Callendar for their kind assistance the evening before at the entertainment. In the afternoon Mr. Turnbull sketched a brief outline of "Herbert Spencer's Education," and pointed out that though philosophic in all its arrangements, it was not practical, from the fact that Spencer himself was not a practical but a theoretical educationist. Mr. Turnbull on motion of Messrs. Harstone and Malloch received a hearty vote of thanks. The committee to draft a resolution of condolence with the family of our late Inspector, Mr. Dewar, reported as follows: We, the members of the North Huron Teachers' Association, regret that since our last meeting one who always took a prominent part in our proceedings has passed away from amongst us. The late Inspector, Mr. Dewar, will be long remembered by the teachers of the Institute, and also by the numerous friends whom he made in the various parts of East Huron during the past twelve years. His genial disposition, his kindness of manner, his invariable urbanity with the teachers under his care, and his fairness of dealing in the school room have rendered his memory particularly dear to them. We desire to give expression to our sympathy with Mrs. Dewar and the other members of the family in the severe loss that they have, in the providence of God, been called upon to sustain, and trust that they may be enabled to draw comfort and support in their affliction from a higher than human source. Signed, D. M. Malloch, L. J. McFaul, J. Turnbull and J. Shaw. Moved by Mr. Duff, seconded by Mr. Lough, that the report be received and adopted, and that the Secretary send a copy of

the resolution to Mrs. Dewar.—Unanimously carried. The nomination committee presented their report as follows: President, Mr. W. G. Duff, Roxboro; Vice-President, Mr. W. R. Lough, Clinton; Secretary-Treasurer, Mr. W. E. Groves, Wingham; Provincial Delegate, Mr. J. Ferguson, Wingham; Executive Committee, Messrs. J. Ferguson, L. L. McFaul, D. C. Dorrance, A. A. McKay and J. King. The nominations were one by one adopted. J. A. Morton, Esq., and Dr. McDonald, Wingham, were re-appointed Auditors. A vote of thanks was tendered the retiring officers and the Association adjourned.

CHATHAM DISTRICT.—The semi-annual convention of the Chatham District Teachers' Association was held at the Central School, Chatham, on Thursday and Friday, May 22nd and 23rd, 1884. After the opening exercises Miss Metcalfe read an essay on Culture; after which a chorus was rendered by some of the teachers. New business, including the appointment of Mr. Shaw as delegate to the Ontario Teachers' Association and the reading and adoption of the Treasurer's report was then disposed of. After a few questions for the question drawer were collected the following new officers for the incoming year were appointed, viz: President, Mr. J. Birch; 1st Vice-President, Mr. J. Brachen; 2nd Vice-President, Miss M. E. Orr; Secretary, Miss Mary O'Neil; Treasurer, Mr. W. M. Nichols, P. S. I. In the afternoon the Hon. G. W. Ross, Minister of Education, addressed the Association on various topics, such as superannuation of teachers; the renewal of third class certificates, and granting of permits, (these permits the gentleman considered a great evil, inasmuch as every teacher applying to the Inspector for a permit loses his independence, and often places the Inspector as well as himself in a false position;) the intended changes in text books; the propriety of requiring county councils to aid in supporting High Schools in towns separated from the county, especially as many of the county teachers are educated in the said High Schools, &c. The superannuation question was discussed pretty warmly and such words as "stepping stone teachers" and "unfair competition" were pretty freely bandied. Even the fact that there were many ladies in the profession was by some considered a great grievance and it was openly stated that their competition kept down the salaries of the men; and stalwart men in receipt of high salaries noted that contribution to the superannuation fund should be compulsory for the lady teachers, though these same men openly opposed that the contributions required should be a percentage on the salary received. They also passed a resolution that no monies paid into the fund should be refunded except in case of the death of the teacher while employed in teaching. As the results of these discussions the following resolutions were passed:—1st. That the superannuation fund be continued. 2nd. That a service of 25 years should be considered sufficient to entitle a teacher to the superannuation fund. 3rd. That no refund be made to any teacher, of the amount contributed to the fund except in case of death while employed in teaching. In the evening a public meeting was held at which Rev. Dr. Laing, of Dundas, delivered a very able address on "The End of Education, and the proper means of obtaining that End," and the Hon. G. W. Ross delivered a lecture on educational matters in general. A chorus of children rendered songs. On Friday morning the subject of "School Periodicals" was brought forward by Mr. Nichols, P. S. I., West Kent. The subject of Phonography was then introduced by Mr. Smith, after which Rev. Dr. Laing, of Dundas, addressed the Association in a very able manner on the subject of "Examination" the relative value of which the Dr. thinks is far too highly estimated inasmuch as many of the qualifications necessary to a successful man in any capacity can never appear on examination papers. At the commencement of the afternoon session Dr. Laing again addressed the meeting on "The Bible in the School," noting the fact, that, education is not so much the mere storing the mind with certain abstract facts, as it is the development of mind and moral nature in such a manner as to make the pupil a useful member of society, and as an immortal soul, to fit him for eternity. Therefore is it consistent that while five days in the week are given to the mere temporal matters of education about twenty or thirty minutes on a Sabbath are given to the study of the Bible? At the end of Dr. Laing's address a vote of thanks was given him and he was made an honorary member of the Association. Dr. Cameron then delivered an address on "Physical Culture," at the close of which he was given a vote of thanks and made an honorary member of the Association. A paper on "Frequent changes of Teachers" was read by Mr. Rothwell; an illused member of society, to judge from the tenor of his paper which was full of the wrongs which fall to the lot of some teachers. The frequency of change and the unfair competition of "stepping stone teachers," and last, but obviously not least, female teachers. What a crying evil lady teachers seem to be to some of these gentlemen! In our country though a man has every profession open to him, and he has all trades to choose from, while ladies have in reality but one profession—that of teacher open to them; and though from time immemorial woman has been the teacher of the young, still it seems that our competition in our own particular profession is an irredeemable wrong to some men who through force of circumstances (for they acknowledged that to be the fact) were compelled to remain teachers. Probably Mr. Rothwell would like the Chinese system to be adopted and all super-

fluous females to be put to death during infancy. The next subject "How to Think and Write on Simple Subjects" was introduced by Mr. J. G. Rose, and after a few questions from the question drawer were answered, the meeting adjourned. ELIZABETH S. E. DAWSON, Secretary.

DURHAM.—The next meeting of Durham Teachers' Association will be held in the High School Buildings, Port Hope, on Friday and Saturday, June 13th and 14th, at 2 p. m. On June 13th Hon. G. W. Ross, Minister of Education, will be present, and he desires to meet Teachers, Trustees, Municipal Officers, and all interested in education. J. Gilfillan, President; A. Barber, Secretary.

REVIEWS.

NEW NATIONAL FIRST READER: NEW NATIONAL SECOND READER; NEW NATIONAL THIRD READER: A. S. Barnes & Co., New York and Chicago.

These books are really first rate. The presswork, the paper, binding, illustrations, gradation and suitability of matter, and general plan are unsurpassed. The illustrations are gems of art, the matter is instinct with sympathy for child life, and the volumes are neither too small nor too large. The type is large and heavy and the lines well leaded out, thus saving the eyes of the children. This series must prove a great success.

THE AMERICAN UNIVERSITY: WHEN SHALL IT BE? WHERE SHALL IT BE? WHAT SHALL IT BE? pp. 22, paper. JOHN W. BURGESS, PH. D. OF COLUMBIA COLL. Ginn, Heath & Co., Boston, 1884.

In this timely brochure, American means United States. Every one interested in the University question should read it. It is immensely suggestive, exceedingly lucid, and has the rare merit of saying the actual truth about the American higher and secondary education.

NOTES ON SHAKESPEARE'S VERSIFICATION. With two appendixes.—pp. 34, paper. By Geo. H. Browne, A.M. Ginn, Heath & Co., Boston, 1884.

A very useful book for class purposes, crammed with information. Readers will here find the spelling reform put into practice—"giv, hav, publisht, foret," etc. There is "a short descriptive bibliography" at the end. The book is interleaved for notes.

ENGLISH OF THE FIFTEENTH CENTURY, illustrated by notes grammatical and philological on CHAUCER'S PROLOGUE AND KNIGHT'S TALE. By Steven H. Carpenter, A.M., Univ. of Wis., cloth 313 pp. Ginn, Heath & Co., Boston, 1884.

Morris's text, full notes, and glossary with short grammatical outline. The notes are in large type; copious, and judicious. Those who value their eyes will prefer it to the Clarendon Press series. The book forms the best introduction to the study of early English.

AN INTRODUCTION TO THE STUDY OF THE ANGLO-SAXON, with selections for reading, explanatory notes and a vocabulary. Cloth 213 pp. Same Author and Publishers, 1884.

The grammar covers forty pages, giving just sufficient to enable the student to begin reading. The extracts are easy and the notes supplement the grammar. The time is near at hand when those who have made a specialty of such studies as these will find a ready market for the skill they have acquired in our early literature. This book is the best we have seen with which to make a good beginning.

LIBRARY OF ANGLO-SAXON POETRY. VOL. I. BEOWULF—Harrison & Sharp. Cloth, 319 pp. VOL. II. EXODUS AND DANIEL—Hunt. Cloth, 120 pp. Same Publishers, 1884.

The texts are accurately and beautifully printed. Vol. I. follows Heyne's fourth edition; Vol. II. follows Grein's text. The glossaries are very full, and we heartily recommend these cheap, handy volumes to all students who have any taste for our earliest literature. To those who have not had the advantage of early training in Latin and Greek, an effectual door is opened to our own early classics. The mine is worth working.

MAGAZINES.

St. Nicholas for May is exceedingly good. Its illustrations are life-like and its stories excellent, especially "Historic Boys." Young Olaf, the boy viking afterwards king of Norway, is the hero of the story for this month and is a good story character. Boys and girls who study history as well as those who do not would find "Historic Boys" very useful and interesting. In the April number a good part of Henry of Monmouth's youth is described. This great and historic boy was afterwards Henry V of England. The "Scarlet Tanager" is another good story and is one which all the 7,000 teachers of Ontario should read with care. It shows forcibly how a wayward boy was reclaimed not however by his master's stick but by the interest and kindness shown on the part of the teacher towards the boy.