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The Educational Journal.

Consolidating "THE EDUCATIONAL WEEKLY" and "THE CANADA SCHOOL JOURNAL."

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No. 7.

EDUCATIONAL SYSTEM OF ONTARIO.

HON. G. W. ROSS, MINISTER OF EDUCATION FOR ONTARIO.

THE School System of Ontario includes the Kindergarten, Public and Separate Schools (Separate Schools being both Protestant and Roman Catholic) High Schools and the Provincial University.

As a system of education it might be regarded as an organic whole; a distinct unit. The Kindergarten course looks towards the University and the University course looks back towards the Kindergarten. A vertical section, using the methods of Geology, would be as follows:—

- The University.
- The High Schools.
- The Public Schools.
- The Kindergarten.

Do not suppose from this illustration that our system is a mere stratification; we regard it as a development. The pupil, four years of age, who starts with the Kindergarten and follows the curriculum prescribed by our system, will reach the University in the natural order of things, just as the early discoverers of Canada reached the lakes separating the Dominion from the United States by sailing through the waters of one into the waters of another. I may say more. The course of study in the Kindergarten is intended to prepare the pupil for thoughtful observation in the Public School. When the pupil exhausts the Public School course (if he has capacity) he is prepared to enter the High School; when he exhausts the High School course the examination which he meets by the way admits him into the University. So much for the organic unity of our system.

Its administration.—The school system of Ontario is democratic. Every ratepayer, male or female, is an elector, and eligible to hold the office of public school trustee. The area of school sections, the location of the school-house, its size and cost, the salary to be paid the teachers and the standing of the teachers to be employed, the amount of money to be expended for improvements on the Public Schools are all determined by the trustees, within certain limitations to be referred to hereafter. Each Board is a corporation in itself, deriving its power from the Legislative Assembly of the Province. The executive authority in educational matters is vested in the Education Department, presided over by the Minister of Education, who is practically the chief executive officer of the whole system.

While the Legislative Assembly is primarily the source of all legislation affecting the school system of the Province, the Minister has power under the statute to make regulations affecting the qualifications of teachers, the standard of certificates, the authorization of text books and such matters of detail as will readily occur to every educator. It is the duty of the Minister to direct all the educational forces of the country; first, from his place in the Legislative Assembly, secondly, through the officers of his department. From the wide sweep of the legislation which he is expected to direct, and from his position as a member of the Government administering

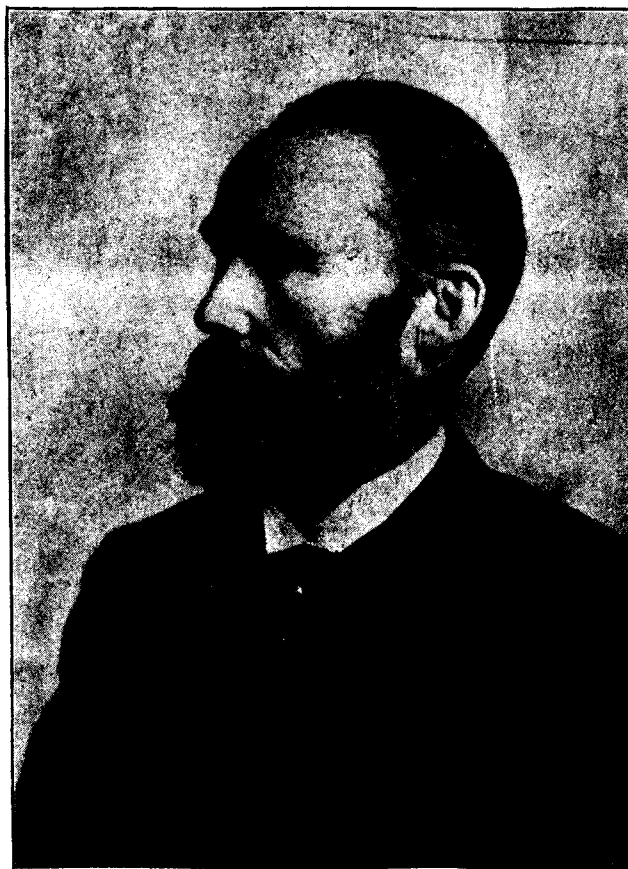
first four forms, which includes ninety-eight per cent. of the entire school population of the country, consists of reading, writing, geography, grammar and composition, history, arithmetic, temperance and hygiene, drawing and agriculture, all of which are compulsory in the form to which they belong. In the fifth form, embracing about 10,000 children in the Public Schools of the Province, are taught euclid, algebra, physics, botany and chemistry.

The classification of the school is intended to serve the great mass of our school population who leave school at about fourteen years of age, and as their necessities are so urgent it is deemed of the first importance that no part of their time should be occupied except with the essential branches of a good English education.

The High School course of study includes the higher mathematics, the sciences, with abundance of laboratory practice, classics and the modern languages, with a comprehensive course in English literature and composition. Several options are allowed to meet the circumstances of pupils, some of whom may desire to enter the teaching profession, or some other learned profession, or whose objects are merely to obtain the advantages of an English education with a view to citizenship or commercial life. The High School course practically extends over three years. Ninety-nine per cent. of the students attending our Universities take their matriculation course in the High Schools. High Schools are managed by trustees with powers similar, in a general way, to those which Public School trustees possess.

The Provincial University is under the direction of the Senate, partly appointed by the Government, partly ex-officio, and partly elected by the alumni, but the action of the Senate is subject to the approval of the executive government. The University provides an Arts course with a considerable number of options, and has the right to grant the usual degrees. It is open to matriculated students of both sexes. The Province of Ontario has five Universities in addition to the one supported out of the Provincial endowment, they have a common standard for matriculation and all admit their students by one examination, conducted on their behalf by the Education Department.

So far I have been considering the non-professional or literary side of our system. To many of you, no doubt, its professional side will be even more interesting. For the purpose of providing efficient teachers the Province of Ontario has four classes



HON. G. W. ROSS, MINISTER OF EDUCATION FOR ONTARIO.

the affairs of the country, he is able to advance such legislation as will preserve the unity of the system and maintain its symmetry as well as prevent any needless innovation from pseudo-reformers or visionary meddlers.

Course of Study.—The course of study for the sub-division of the system is framed with a view to the age and mental limitations of the pupils ordinarily ranking under that division. For instance, in the Kindergarten the course is purely Fröbelian; in the Public School division the course is suited to the capacity of children from five to sixteen years of age. The course in the

of training schools; two Provincial Kindergartens, for the training of Kindergarten teachers; fifty-three County Model Schools for the training of Third Class teachers; two Normal Schools for the training of Second Class teachers, and a School of Pedagogy for the training of High School teachers. The course in the Kindergarten extends over two years, namely, one year for assistants and one for directresses which includes the study of everything

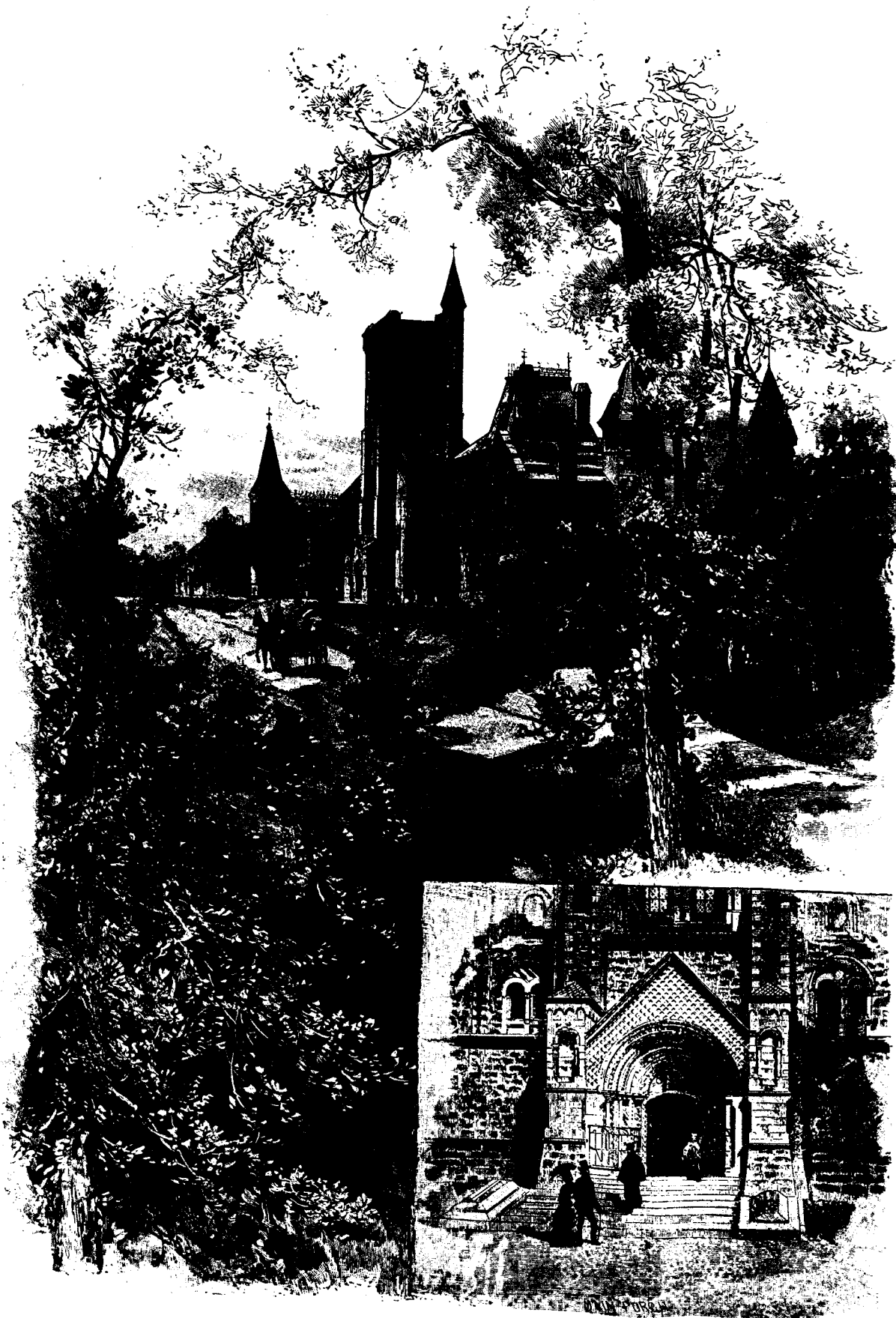
pertaining to Kindergarten work. The course in the County Model School extends over four months, and includes instruction in the theory of education, with as much observation and practical teaching as circumstances will admit. The course in the Provincial Normal School extends over six months, and in the School of Pedagogy five months. In all these schools the course may be said to be purely professional. There may be an occasional

review of a portion of the academic work of the teacher in training, but as a rule his whole attention is devoted to the practical and professional side of his profession. It is felt that by centralizing his attention on his professional duties, particularly as he is not admitted to the Normal School without at least one year's experience as a teacher, he is in a condition to benefit more by such a course, extending over six months, than he would be by a mixed academic and

professional course extending over much longer time. It will be observed that professional training applies to teachers of every grade, that no one is allowed to shirk it or evade it, and that no person who does not give reasonable evidence of fitness for the profession by showing his aptitude in actual practice in the school-room is admitted there-to.

Non-professional Training.—Teachers' certificates are divided into three grades: First, Second and Third. The course of study for these grades is prescribed by the Education Department and, in the majority of cases, candidates for certificates, even in the lowest grades, attend a High School. The examinations for the lowest grades of First, and for Second and Third Class Certificates are held simultaneously at the different High Schools of the Province on questions prepared by the Education Department. The answers of candidates are returned to the Department and are read by examiners appointed for that purpose. As nearly as possible all the certificates granted are of uniform value. The two higher sub-divisions of first class certificates, namely, A and B, are obtainable on examinations conducted by the University of the Province, the papers for which are submitted and the answers read by University examiners. For High Schools the qualifications are, the standing of an undergraduate of two years for assistants, and a full graduate for the Principal, the Department accepting the valuation of the University for this purpose. As the certificates are all awarded by the Department they are valid throughout the Province. Third Class Certificates are valid for only three years, however. All other grades are valid during good behavior, and all are disposed of by one annual provincial examination.

Religious Instruction.—Every school is required to be opened by the reading of



TORONTO UNIVERSITY.

scripture and by prayer. In the Roman Catholic Separate Schools the religious exercises are subject to the direction of the trustees. No pupil is required to be present at the religious exercises of the Public School whose parents or guardians notify the teacher of their desire that he should absent himself. Provision is made for religious instruction by any denomination at such hours as may be agreed upon by arrangement with the trustees.

Text-Books.—No text-books can be used in any Public or High Schools of the Province until sanctioned by the Department. There is now but one text-book in each of the subjects taught in the Public Schools. In the case of High Schools more than one text-book is used in some of the subjects, although the tendency is towards the same limitation as prevails in the Public Schools. When a text-book ceases, in the opinion of the Department, to serve its purpose, it is set aside and a more advanced one substituted. The price of the text-book, the quality of the paper, style of binding, typography, etc., are all regulated by the Department. Under a statute, Boards of Trustees may provide free text-books for pupils in cities, towns and incorporated villages.

Compulsory Education.—By an act of last session the Police Commissioners of every city, town and incorporated village are required to appoint truant officers. This act came into effect on the first of this month. It may take a year or two to acquaint the people of the Province with its requirements. It may also take some time to train the truant officers to the proper discharge of their duties. As the schools of Ontario have been free for over twenty years there is no doubt the people will gladly accept their natural complement—compulsory education—as indispensable.

The Public Schools of Ontario are un-denominational. Fifty years ago the Roman Catholics were granted Separate Schools, and by a more recent Act in settlements where Roman Catholics predominated and a Roman Catholic was employed as teacher in the Public Schools. Protestants were allowed to form themselves into Protestant Separate Schools. The classes of schools number as follows: Public Schools, 5,380; Roman Catholic Separate Schools, 243; Protestant Separate Schools, 11. The Department has not the same authority under the statute, over Roman Catholic Separate Schools, as it has over the Public Schools. Yet in the main features, such as the qualification of teachers excluding those in religious orders, the selection of text books except those required for religious exercises, the authority of the Department may be said to be the same.

As incidental to the educational system of the Province, and indicating the jurisdiction of the Educational Department, I may state that the Free Library system and Mechanics' Institutes, numbering 234, and representing 290,617 volumes, are under the control of the Department and that a system of Night Schools, Art schools and Industrial Schools, each having its distinct sphere of labor, are also subject to the regulations of the Department.

The educational system of Ontario also includes schools for the deaf and dumb, for the blind and the idiotic. It includes a course in technology on the basis of the technical school of Boston, and a course in Agriculture, extending over three years, followed by a degree in Agriculture from the Provincial University.

This closes my summary of the educational system of Ontario. I have not included it in other schools for the study of medicine or law, or architecture, or stenography, or other subjects over which the Education Department has no control, but which, nevertheless, form part of the public education of the Province.

I have dealt entirely with schools for which the tax-payer is held responsible. They are not perfect in their organization by any means, but subject to constant changes and adaptations according to the wants of our people, or the advances of educational reformers here and elsewhere. If they are not improved it is not because the people of the Province are not fully in sympathy with a progressive system.

THE REV. DR. RYERSON, FOUNDER OF THE ONTARIO SCHOOL SYSTEM.

J. GEORGE HODGINS, M.A., LL.D.

THE founder of the Ontario School System was a native Canadian, born in 1803, in one of the counties of Ontario bordering on Lake Erie. His father, Colonel Ryerson, was one of the United Empire Loyalists who served as a British officer during the war of the American Revolution. He first settled in New Brunswick; his wife, Dr. Ryerson's mother, was a native of that Province.

Dr. Ryerson received his early education partly at the district grammar school, near his father's residence in Upper Canada. He was afterwards an usher in the same school. But he was largely self-educated, for he was a diligent student, and a great reader of such books as came in his way. After he became a Methodist minister he devoted himself to the work of a missionary and teacher among the Indians in their settlements near Toronto. He was one of the original founders, in 1832-1836, of the Upper Canada Academy, Cobourg—afterwards Victoria University, of which he was first President. While in that position he was appointed Superintendent of Schools for Upper Canada in 1844.

Dr. Ryerson had been a prominent public man long before his appointment as Provincial School Superintendent. In 1828 he first entered the lists as a champion of the equal rights of all classes of Her Majesty's subjects.

His distinction as a Canadian educationist and practical statesman rests mainly, however, upon the fact that he successfully laid the foundation of the school system of his native province. What made this distinguishing excellence in his case so marked was the fact that the soil on which he had to labor was so unprepared, and the social condition of the country so unpropitious. English ideas of schools for the poor, supported by subscriptions, prevailed in Upper Canada; free schools were not



THE LATE DR. RYERSON.

thought of; the very principle on which they rest was denounced as communistic, and an invasion of the rights of property; while compulsory education—the necessary complement of free schools—was equally denounced as an impertinent and unjustifiable interference with “the rights of British subjects.”

In 1846-1847 Dr. Ryerson prepared two measures for the improvement of the schools of Upper Canada, as the result of extended observations on the subject in the United States and Europe. He published a valuable and extensive Report on the subject in 1846. In the Acts which he prepared he provided for:

1. A general Board of Education for the Province, to take charge of a Normal School, and to aid the Chief Superintendent in certain matters.
2. A Normal School, with practice or model schools attached.
3. The regulation of school libraries.
4. Plans of school-houses.
5. Appointment of district, instead of county and township, school superintendents.
6. Apportionment of school moneys to each school according to the average number of children in each school district, as compared with those in the whole township.
7. Levy of a school rate by each district (county) municipal council, of a sum at least equal to the legislative grant to each such district.
8. The collection, by the local school trustees, of the balance required to defray the expenses of their school, in any way which the school ratepayers (at the annual meeting) might determine.
9. The recommendation of a uniform series of text-books, with the proviso that no books disapproved of by the general Board of Education should be used.
10. The re-establishment of District Model Schools (as provided in the Act of 1843).
11. Examination and licensing of teachers.
12. Visitation of schools by clergymen, magistrates, municipal councillors, etc.
13. Protection of children (retained from the Act of 1843) from being “required to read or study in or from any religious book, or join in any religious exercise or devotion objected to by parents.”
14. Establishment (re-enacted from the laws of 1841 and 1843) of Roman Catholic Separate Schools, where the teacher of the locality was a Protestant, and *vice versa*.

These measures were somewhat tentative; but, in 1850, they were repealed, and

a more comprehensive measure was substituted, which is substantially the foundation of the school system of to-day.

The basis of distributing school moneys was changed to that of school attendance instead of that of school population.

School legislation, (chiefly in regard to High Schools, school libraries, maps and apparatus and other matters of detail,) took place at intervals during the succeeding years; but it was in 1871 and 1874 that the final legislation under Dr. Ryerson's auspices took place. That of 1871 was strikingly progressive, and took a wide range. That of 1874 was largely supplemental and remedial.

The important principle embodied in the school legislation of 1871 related chiefly to:

1. Governmental, combined with improved local, inspection of schools.
2. A high and fixed standard of qualifications for Inspectors of Public Schools.
3. The abolition of non-certificated township superintendents of schools, and the substitution therefor of duly licensed County Inspectors.



HARBORD STREET COLLEGIATE INSTITUTE, TORONTO.

4. The institution of simultaneous and uniform examinations in the several counties for teachers desiring certificates of qualification. This principle was soon extended to other examinations, including competitive school examinations in townships, counties, etc.

5. The fixing and rendering uniform of a higher standard of qualification for Public and High School teachers.

6. Giving the profession of teaching a fixed legal status, and providing more fully and equitably for the retirement and united support, by the profession and the legislature, of worn out or disabled teachers.

7. The establishment by law of a national system of free schools.

8. Declaring the right by law, as well as the necessity, of every child to attend some school, thus recognizing the principle of, and providing for, "compulsory education."

9. Requiring, by law, that adequate school accommodation, in regard to school-house, playground and site, be provided by the trustees, for all of the resident children of school age in their localities.

10. Prescribing a more systematic and practical course of study for each of the classes in the Public Schools.

11. Discriminating, by a clearly defined line, the course of study in Public and High Schools respectively.

12. Providing for the establishment and support of collegiate institutes, or local colleges.

13. Requiring municipalities to maintain High Schools and Collegiate Institutes, equally with the Public Schools, and as part of the general school system.

14. Providing, at the option of the rate-payers, for the substitution of township Boards of Education, in place of local trustee boards.

15. Authorizing the levy of rates by district municipal councils, for the erection of school houses and teachers' residences.

16. Authorizing the establishment of Industrial Schools.

Such were the main features of the comprehensive and progressive School Act of 1871. In many respects it revolutionized the existing state of things. It gave a wonderful impetus to the schools and to every department of the school system, the salutary effects of which we feel to this day—after twenty years have passed away.

In summing up his efforts to accomplish this work, Dr. Ryerson said—and it reveals largely the secret of his success:—

During my connection with the Education Department—from 1844 to 1876—I made five

founder of the Ontario system of Education in estimating the results of his labors, as illustrated at the Centennial Exhibition during the year of his retirement from active labor.

Dr. Ryerson retired from office in 1876; he died in 1882 in the seventy-ninth year of his age.

RELIGION IN THE COMMON SCHOOL.

REV. G. M. GRANT, D.D., LL.D., PRINCIPAL QUEEN'S COLLEGE, KINGSTON, ONT.

THE change that is taking place in our method of teaching religious truth in the Common or High School is neither arbitrary nor isolated. It is part of the change that has taken place in the attitude of the teacher and in his relation to every subject that he undertakes to teach. Formerly, he depended to a great extent on external authority. Now, he has to depend on the authority of character, or on rational methods of presenting truth. So far as religion is concerned, the text-book has been taken out of his hands, but it does not follow that the school is thereby made secular. It may be more truly penetrated with religion than it was when the Bible lesson had to be memorized and the Shorter Catechism was taught by the aid of threatening tones and uplifted laws.

Solomon is responsible for a good deal of the old-fashioned severity that was considered a necessary sign of the good teacher. Ancient and Mediæval ideas of sovereignty are, perhaps, still more responsible, just as they are for the conceptions of God that were in vogue in almost every Church till recently. The teacher in relation to the scholars represented the master or sovereign, and it was essential that they should understand that he was not entrusted with the rod in vain. No rank secured exemption from punishment. When James VI. was a man, he used to wake at midnight in fear, thinking that his stern preceptor, the illustrious George Buchanan, stood beside him. The sarcastic scholar never had much respect for his royal pupil. When told that he had made him a pedant, "A pedant," he echoed, "I was glad to make anything of him." One is inclined to think, however, that a different method of treatment might have made even James something better than "the wisest fool in Europe." But the authoritative method was universal, and it was applied to the teaching of religion as to everything else. It was part of the work of the school, and it was recognized that there was only one way of doing the work. The proud peers of England sent their sons to the Public Schools to be fagged by the older boys, cuffed by the tutors, and caned black and blue by the head-master, and they expected religion to be instilled into them by the same methods as Latin verse. Scottish mothers sent their boys to the Parish School, birch in hand; or if they had to show them the road, they would take leave of the teacher with the admonition, "Noo, sir, mind ye skelp them weel." They expected, too, that the Scripture lessons were to be learned under the same penalties as the multiplication table. All this seems to us not only barbarous but irreligious. But it is wonderful what an amount of positively

educational tours of inspection and enquiry to educating countries in Europe and the United States. I made an official tour through each county in Upper Canada once in every five years, to hold a County Convention of municipal councillors, clergy, school trustees, teachers and local superintendents, and thus developed the school system as the result of repeated enquiries in foreign countries, and the freest consultation with my fellow-citizens of all classes in the several County Conventions, as well as on many other occasions.

The last important official act of Dr. Ryerson was to arrange for the Educational exhibit of the Department of the Centennial Exhibition of 1876. At the close of the Exhibition the following highly satisfactory award was made by the United States Centennial Commission:

For a quite complete and admirably arranged exhibition, illustrating the Ontario system of education and its excellent results; also for the efficiency of an administration which has gained for the Ontario Department a most honorable distinction among government educational agencies.

Such was the gratifying tribute which a number of eminent American educationists unconsciously paid to the distinguished

mischievous treatment a healthy human soul can stand without being spoiled, provided only that it is convinced that it is all well intended and that no partiality is shown. The Parish Schools of Scotland turned out fine men and women, and the Duke of Wellington is reported to have said that the battle of Waterloo was really won at Eton.

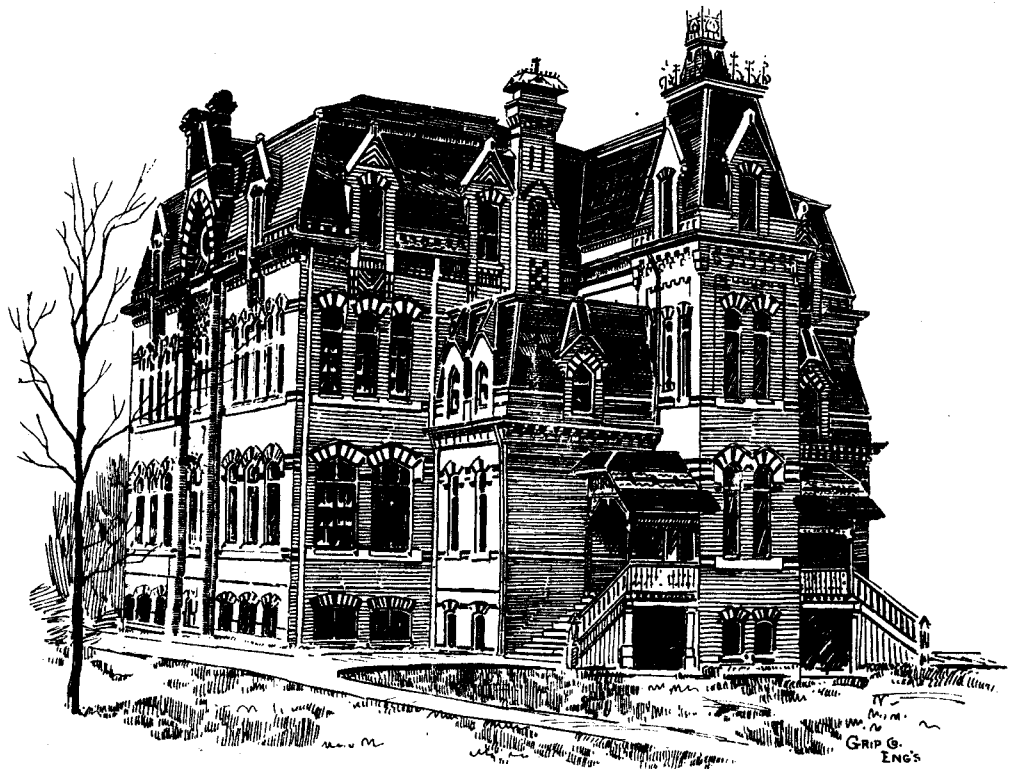
The dogmatic point of view from which the Bible was regarded corresponded to this external and ferocious method of teaching religion. The Bible was regarded, not as literature, the purified essence of the literature of the people of Revelation, but as a compilation of dogmas, a sort of original Larger Catechism. It was, therefore, to be crammed rather than understood; or, when a meaning was sought, it was sought, not from the ideal or prophetic, but from the dogmatic point of view. The Rabbinical method of interpretation has passed over to the Church, and without the excuse that the Rabbis had; for to the Rabbis the foundation of all Scripture was the Law, and law must always be expounded and applied dogmatically. But to the Christian the Law had been superseded by Christ, and it was valued only from the ideal elements and spirit in it; whereas the histories, the Canonical prophecies, the Psalms, and the Wisdom literature had not even the legal form, and referred to Christ more truly than the law. However, this was the light in which the Bible was regarded. It was a statute-book; and, therefore, the watch-word with regard to it was "the Bible, the whole Bible and nothing but the Bible," both for children and for adults. A curious survival of this way of looking at it cropped up in Ontario a few years ago, when the most extreme indignation was loudly expressed at the action taken by the Minister of Education in having a book of Scripture selections prepared for use in the schools. It was regarded as the sin of Uzzah, a case of laying profane hands on the Ark. The point made was not that the selections were ill chosen, but that they were made at all. It was forgotten that every time that a passage of Scripture is read by minister or layman a "selection" has to be made, or the Bible opened unintelligently and at random.

One of the gravest evils that has resulted from this Jewish method of regarding the Bible is that it is made a sectarian book, and therefore those who are opposed to sectarianism have come to demand its exclusion from the schools to which they are forced by the State to contribute. Their position is logical, and according to the modern conception of the State, unanswerable. But, what a melancholy *reductio ad absurdum* it is, when, in the interest of justice we are compelled to turn the Bible out of the school, or relegate it to the last few minutes, and then have it read as a fetish, without note or comment! I do not want my children to read the Bible in school unless the teacher is free to explain it, or answer questions with regard to it, and unless I could trust a teacher in such a matter, I could not trust him at all.

But, if the Bible is not studied in our schools, it is a great mistake to admit that they must therefore be secular. However

it may be in other countries, in Canada the teacher will be valued and honored according as he brings religious motives to bear on his scholars; according as he points them to God as their Father, Saviour and Friend, and seeks to form in them the character of Jesus of Nazareth. The most successful teaching of the letter may kill, but the spirit invariably gives life; and the school-teacher who is helpless because deprived of his religious text-books is likely to do as little good with them as the clergyman who cannot preach because he has not "his manuscripts" is likely to be a spiritual power, even with his manuscripts, prayer-books and all the rest of his supposed armour of proof and arms of precision. Let us secure religious men and women for teachers, and I, for one, have no fear of our schools being "godless."

was conducted with marked ability and success, assisting visibly in the great reformation in mathematical teaching that took place in Ontario between 1871 and 1881, through the noble work of Dr. Young and Dr. J. A. McLellan. During this period also *The Hamilton School Magazine* flourished, and with other good things, supplied a very cleverly edited mathematical department, under the guidance of Inspector Ballard, who still directs mathematical teaching in the capacity of University examiner. These two last papers were by-and-by consolidated in the *Canada School Journal*. In 1884 the *Educational Weekly* was issued by the publishers of the present JOURNAL, and the editor, Mr. J. E. Bryant, established a vigorous mathematical department in the new paper. In a year or two the *Weekly* amalgamated with the *Canada School Journal*



STRATFORD COLLEGIATE INSTITUTE, ONTARIO.

MATHEMATICS IN ONTARIO.

A RETROSPECT.

CHARLES CLARKSON, B.A., MATHEMATICAL EDITOR

WITH the present number we reach another landing-place, and may appropriately glance over the pages of our history. This department may trace its origin through several respectable relatives to the occasional columns of problems and solutions in the *Journal of Education*, issued monthly for about twenty-five years by Dr. Ryerson, the founder of our Public School system. The late Dr. G. P. Young, and Inspector Glashan, of Ottawa, the simultaneous and independent discoverers of the general solution of the quintic equation, were the ablest contributors. After the *Journal of Education* ceased to be published, Mr. S. Brown, Mr. Glashan and others carried on a lively mathematical column in the *Teacher's Companion*, published in London. This paper was after a few years merged in the *Canada School Journal*, issued in 1877 by Gage & Co., Toronto. Under Professor Baker, of Toronto University, the discussion of mathematical topics

under the present title. For a short time after the union mathematics was discontinued, but in April, 1887, the present editor, who had served on the *Canada School Journal* during its last four years, began the monthly column in its present form, aiming to supply to teachers matter that would be useful in their daily work and helpful in their private studies. It has correspondents scattered over all the Provinces from Great Britain to Vancouver, and a few in Colorado, California and Kentucky. How to divide the space available to the greatest advantage of all is often a difficult problem. An eclectic system of selection from all grades of work has generally been followed, with apparently satisfactory results. It would be manifestly destructive of our usefulness to the mass of our readers to aim too high, since most of them are engaged in teaching the elements of science, and only a few desire to become specialists in mathematics. We receive numerous letters on primary work, many of which are answered privately, a few on secondary subjects, and a few on methods of presenting solutions. These facts are mentioned in

order that our friends may understand how their interests are studied, and why they are sometimes disappointed in not finding a desired solution "in the next number of the JOURNAL." In a constituency so large the average must be considered, and the "greatest good of the greatest number" made the guiding principle.

As closely connected with this department of THE JOURNAL, a chapter might be written on the text-books that have served as landmarks of the progress of mathematical studies in Ontario. We have produced some well written text-books, and among the best the *Elementary Arithmetic* of Kirkland & Scott deserves mention. Professor Loudon's *Elementary Algebra* also stands as a piece of neat work which presents a fine example of brevity and clearness, exhibiting in a profound scholar the rare faculty of knowing how to omit details from an outline. McLellan & Kirkland's *Problems in Arithmetic* gave a great impulse to that study by lifting it out of the ruts of mechanical routine, into which it had fallen by a too subservient imitation of the average English text-book. McLellan's *Handbook of Algebra* and Robertson & Birchard's *Higher Algebra* have supplied in original forms the best results reached by European teachers, and have added some new developments of their own. The *Algebraic Analysis* of McLellan & Glashan, the *Synthetic Geometry* of Professor Dupuis, the *Trigonometry* and the *Mechanics* of Cherriman & Baker, and the *Geometrical Optics* of Dupuis are, perhaps, the most original and the ablest mathematical books we have produced, and several of them are well known on both sides of the Atlantic. They all show a masterly grasp of the subject, and excel in that graceful elegance of style which shows to such advantage in the works of French mathematicians.

When the history of our mathematical progress comes to be written, it will be found that Ontario occupies a high place in the imperial science, and that her native text-books and her native teachers will compare favorably with those of any other country. If the present rate of progress is kept up there will, we may safely say, be no other community on this continent that can point to a higher or a more uniform standard of mathematical training in High School and college. We have supplied Frisby and Morrison to the Washington Observatory, and Hunt and Patterson to Harvard University. We have among us mathematicians who have equalled Cayley and Sullivan in the highest branches of pure mathematics, and we may reasonably predict that our future courses will produce men equally well trained, and fully abreast of the times. In chemistry a new field of inquiry is rapidly opening up, and all along the line natural science is more and more coming under the domain of mathematics, so that the future scientist must be familiar with several branches of mathematics. We have great mineral wealth, and our mining engineers must be mathematicians as well as mineralogists. Our schools and colleges must continue to make mathematics a principal subject of their courses, and we may hope to see complete courses of texts written by native authors.

ENGLISH IN ONTARIO SCHOOLS.

BY F. H. SYKES, M.A., ENGLISH EDITOR OF "THE JOURNAL."

SOONER or later every school system answers to the demands of the practical life that envelops it. Yet custom in school systems has terrible strength, and it is only by hard, persistent struggle that new subjects secure due recognition, even when these subjects are demonstrably essential to true education, as it is only by hard blows that old subjects secure due neglect when the world has clearly outgrown them.

The influence of the *trivium* and *quadrivium* of the school discipline of the Middle Ages upon modern education is incalculable. To-day, were we to create a school system to suit our needs, untrammelled by the studies of the past, we should have a system far different from the one in

the educative value of English Grammar, will not hear a word said against it. Such men as he are bidding the sea retire. Nature has made the boy eager to handle objects, inquisitive about natural phenomena, fond of drawing and fashioning, glad to hear of travel, adventure, heroic action. We are wiser than Nature, and place the dead weight of grammatical analysis and parsing upon his ardent impulses. It is true there is a tide in the human mind, which, taken at the flood, leads on to grammar, but let us wait till the tide rises. The reflective, logical action of the mind fitting one for the handling of abstractions is a later development of mind than the Public School boy has reached. Yet Grammar is a study of abstractions. Therefore the attempt to teach it at an early age every-



PUBLIC SCHOOL, BRANTFORD, ONTARIO.

force and as far removed from that of the Middle Ages as light is from darkness. The truth is, we grope darkling after what the soul and the body want, but the hands of the past clasp and bind and check. Prejudice and custom and the force of immobility are against change, and what we have secured in the new subject of English has been won by fighting, and maintained by strife. However, let us be patient; King George did acknowledge the Independence of the Thirteen Colonies.

The condition of English in our school system is briefly this: the status of English as a school subject is generally conceded, but there is not unanimity in the teaching profession as to the character of the course of study in English or the proper methods of instruction.

The greatest question in dispute is the proper status of English Grammar. The influences of the past make for its retention, the influences of the present tend towards restricting, if not abolishing it. It is taught to-day in the highest grades of the Public School and in all grades of the High School. Strong efforts have been made and are being made to have it struck off the Public School course, efforts which merit success. Yet my old friend Inspector X—, able to point to himself as a proof of

where breaks down, and in the hands of incompetent teachers, young and old, produces the deadliest of school diseases, the habit of taking words instead of ideas. Therefore, hide-bound pedants, who day by day thrust into unoffending throats the chaff of knowledge, take thought how soon the child's tender-hearted interest in the world and human life will pass away and the vision of youth be lost in the glare of common day. There is good reason for believing that Grammar has received notice to leave the Public School. Even in the High School its sphere has just been greatly limited. Rhetoric and Grammar to-day share the attention formerly paid to the latter alone. Grammar will continue to hold a place in High School work because it aids slightly the teaching of foreign languages and is in itself a logical discipline of no mean kind, but only in a subordinate manner and with due knowledge of the dangers that attend it.

English literature has had a place in our curriculum some fifteen years. During this time the methods and aims of study have been revolutionized. We began by teaching Literature as we had taught Grammar and Etymology. My school edition of Gray's *Elegy* contains interleaved notes on the derivation of all foreign words, on the

figures of speech—I mean the names of the figures of speech—on the parsing and analysis of all difficult words and phrases. The dust of merited oblivion lies heavy upon that sort of teaching of English literature. To-day the teacher endeavors to have his pupils understand the lines they are studying, not merely intellectually but emotionally, to have them realize the value of each fine phrase or figure or allusion, to recognize the relation of the stanza to the poem, of the poem to human life, and to the life of the man who wrote it. A poem has become for the teacher, not a field for grammatical athletics, but a work of art, the value of which it is his privilege to discuss with sympathetic pupils, confident that it produces culture the moment it is realized! The curriculum in English literature is yet by no means what it should be. While we have advanced in preferring (for school work), *Evangeline* to the *Task* and *Ivanhoe* to the *Friend*, we have to regret that the grist is very small as prescribed for very capacious mills. For the entrance examination to the High School the Government have wisely extended the course to the limits of the Fourth Reader, with special reference to certain pieces. But to require at the Leaving Examination from a boy who should be tolerably well grounded in general literature a knowledge of say three thousand lines of Longfellow is certainly very unsatisfactory. We laugh at the English curriculum of our predecessors, already we can foresee posterity smiling at ours.

In the teaching of English Composition, now an essential feature of every departmental examination, two methods are in vogue—the artificial and the natural. The artificial method, that seeks to obtain facility and correctness in the use of written language by means of exercises in correcting errors, filling in blanks, changing the tenses in stated sentences, etc.; the natural, which chooses a subject interesting to a child, and seeks to have him tell what he knows about it; or gives him stories he likes to reproduce; in a word, looks upon the child as a spiritual being growing by the nourishing of the spirit. In the High School the tendency of the artificial method is less felt than in the Public School. The test in the former is an essay pure and simply upon themes with which in general the pupil is familiar with by prescribing reading, such as that of *Sesame and Lilies* and *Waverley* (course of '91) for his Leaving Examination, or of *Waverley* merely for his Primary. But in the Entrance examination the pupil is forced to a great deal of artificial work by the very nature of the Regulations and of the examination paper. The difficulty with the subject may be modified in the case of junior pupils by one or other of the books on language lessons now in the press. The present is a period of transition and experiment in composition teaching, but already there is the promise of higher aims and better methods. Our fathers have boasted of teaching reading and writing, but their vision went only as far as the bare mechanical ability. We see further in endeavoring to train the mind to read and to write, a much more difficult task, but how much more worthy!

The tendency of the human spirit to

work in a natural element, in methods that are natural, may be seen throughout all the struggles connected with the English course. It is gratifying to find that we have realized in English education a measure of the ideal. It is doubly gratifying to find the ideal in the teaching of English more nearly attained by the High School teachers of Ontario than by any other body of men in the world.

SHOULD ELEMENTARY SCIENCE BE TAUGHT IN THE PUBLIC SCHOOLS?

H. B. SPOTTON, M.A.

THIRTY years ago Professor Huxley eloquently pleaded for the introduction of object lessons upon plants and animals into the work of the primary schools of Britain, pointing out with great force that while the influence of science is manifest everywhere in modern civilization and has, in fact, revolutionized intellectual habits and impregnated the best thought of the time, no corresponding change had so far been made in educational methods. "Physical Science," said he, "its methods, its problems, and its difficulties, will meet the poorest boy at every turn, and yet we educate him in such a manner that he shall enter the world as ignorant of the existence of the methods and facts of science as the day he was born. The modern world is full of artillery; and we turn out our children to do battle in it equipped with the sword and shield of an ancient gladiator. . . . It is my firm conviction that the only way to remedy this deplorable state of things is to make the elements of Physical Science an integral part of primary education." And he bewailed the ignorance of the true claims of science, which he said, infested the minds of even the most highly educated classes of the community. It was urged then, as it is often urged now, that children in the elementary schools should be taught only what is "practical," meaning thereby chiefly the three R's. And then, as now, many were carried away by this word "practical" and the interpretation put upon it. Yet the intensely practical value of the habit of accurate observation, of the habit of tracing cause and effect, of the habit of clear and precise expression, all of which it is the aim of scientific instruction to inculcate, must be so obvious to any one who reflects at all upon the matter, as to need no argument.

But many who admit the importance, nay the necessity, of doing something towards furnishing the children of the Public Schools (most of whom never reach the High Schools) with this exceptionally practical equipment for meeting the difficulties of life, fail to see how, in view of the many things already on the school programme, time can be found for anything more. This is a plausible objection, but the answer is that with proper economy of time and effort a place can easily be found, and the science work, if properly managed, so far from being an additional burden upon the pupils, will come to be regarded as a welcome relaxation from the ordinary work of the school. The reason is obvious. In

every normal child the perceptive faculties are the first to be aroused. His interest centres almost wholly in the external objects around him. His curiosity incessantly seeks to be gratified; he is, in short, in his earliest years, exactly fitted by nature for the pleasurable pursuit of scientific knowledge. As Professor Rice well puts it: "The study of nature should be introduced at the beginning of the educational course, instead of near its end. It should commence—not in the primary school, but in the nursery, before the child is old enough to go to school at all. A vast deal of knowledge may be smuggled into the child's mind without paying any duty of conscious toil. . . . Whatever of useful knowledge a child gets while he thinks he is playing is clear gain."

A real difficulty presents itself, however, when we come to consider the qualifications of the teachers. It goes without saying that to make elementary science work thoroughly successful, qualifications of a very special kind will be needed. The teacher must be imbued with the scientific spirit, and nothing but a practical acquaintance with the subjects he has to teach will be of any use. I quote again from Professor Huxley's remarks to an audience of teachers: "Mere book learning in physical science is a sham and a delusion. What you teach, unless you want to be impostors, that you must first know; and real knowledge in science means personal acquaintance with the facts, be they few or many."

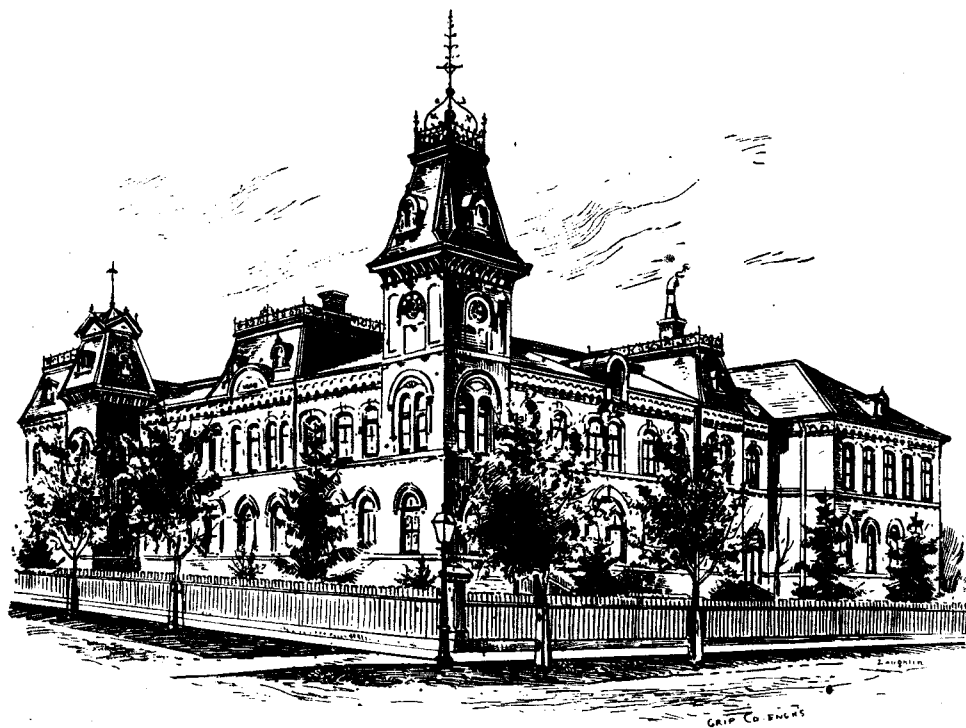
It can hardly be said that all our teachers have reached the high standard of efficient preparation here indicated. Indeed, as a result of our system of options, very many third class teachers have as yet no knowledge of science whatever. But the prospect is hopeful. The facilities for the proper teaching of science in the High Schools have vastly improved in recent years, and this improvement cannot fail to be reflected in the higher qualifications of our primary teachers, so many of whom are wholly dependent upon these schools for their preparation. And it seems not unreasonable to hope that the time is not far off when every High School in the Province will become a local centre of science-culture, diffusing enlightened ideas among the public schools around it, and through the agency of occasional lectures, summer classes, the formation of clubs, and otherwise, assisting to establish on a sound basis the work of elementary instruction. Meanwhile, even in the absence of a full supply of highly qualified teachers, a beginning might be made. It has been remarked that no way of teaching a boy to swim has been found which is quite so effective as putting him into the water, and perhaps there is no way of securing a supply of qualified teachers so effective as insisting that the teaching shall be done.

As to the amount and character of the work which may be attempted, I content myself with transcribing the following recommendations from the Report of the Committee of the American Society of Naturalists on Science in the Schools. The recommendations are such as apply only to the grades below the grammar and high schools.

"Instruction in Natural Science should commence in the lowest grades of the primary schools, and should continue through the curriculum.

"In the lower grades the instruction should be chiefly by means of object-lessons; and the aim should be to awaken and guide the curiosity of the child in regard to natural phenomena, rather than to present systematized bodies of fact and doctrine.

"In the primary schools, and in the lower grades of the grammar schools, we would recommend that the study of plants and animals should be the main part of the scientific work. The botanical instruction should commence with such simple exercises as drawing and describing different forms of leaves, and should gradually advance to the easier and more conspicuous flowers, and later to the more obscure and difficult forms of flowers, the fruit and seeds.



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"The zoological instruction in the lower schools should not attempt a systematic survey of the whole animal kingdom; but attention should be directed chiefly to the most familiar animals, and to those which the pupils can see alive. The common domesticated animals should be first studied, and later the birds, the lower vertebrates, the insects, crustacea, and mollusks. While the range of zoological instruction must be limited as regards the number of forms studied, these few familiar forms should be so compared with each other as to give the pupils, very early, some conception of the main lines of biological study—morphology, physiology, taxonomy.

"Special prominence should be given to the study of plants and animals which are useful to man in any way, and the teacher may advantageously, from time to time, give familiar talks in regard to useful products of vegetable and animal origin, and the processes of their manufacture.

"A most important feature of the scientific instruction in the lower grades should be to encourage the pupils to collect specimens of all sorts of natural objects, and to make

those specimens the subject of object-lessons. The curiosity of the children will thereby be rationally cultivated and guided."

These extracts will serve to indicate the prevailing feeling in the United States in regard to the importance and practicability of early scientific instruction. Possibly too much is asked, but at all events, some portion of what is recommended is perfectly feasible in every Canadian school.

WOMAN'S EDUCATION IN ONTARIO.

BY MISS N. SPENCE, B.A.

"THE woman's cause is man's; they rise or sink Together, dwarf'd or godlike, bond or free," concludes England's laureate at the close of that charming medley in which the question of woman's education and position is poetically, yet not illogically, discussed—*The Princess*. America, breaking loose as

we have yet been able to make the modest boast,

"But we have feet to scale and climb,
By slow degrees, by more and more,
The cloudy summits of our time."

It is in the matter of the higher education that the chief difficulties have arisen. That girls required a primary and an intermediate education was universally admitted. False syntax is none the less false syntax, though it falls from pretty lips; and sentences, whether treble or bass-voiced, showing innocence of any knowledge of the usages of the English language or of the rules of Grammar, are offensive to tender sensibilities. So no objection was raised against opening Public and High Schools to girls, and prescribing for them the same course of studies as for boys; for even they were thought to be improved and made more fit for practical usefulness—and there seems to have been no fear that they might be unsexed—by some slight acquaintance with grammar, history, geography, mathematics, their own and perhaps one or two other languages, and it was even permissible to "brush with extreme flounce the circle of the sciences."*

There, however, it was thought by many desirable to call a halt. But that was no easy matter. The intellectual appetites, when once called into activity, are not easily satisfied, and as they seem to know no distinction of sex, an eager appeal for more and more came from the fair hungerers after knowledge. Having held their own in competition with boys in Public and High Schools, feminine obtuseness could not see the logic which excluded them from the Colleges and Universities. It soon began to be realized that it was true of the one as of the other sex, that

"A little learning is a dangerous thing," and that there was no wise alternative other than allowing them to

"Drink deep or taste not the Pierian spring."

Nearly all the triumphs have been won during the last decade. The University doors have been flung wide, and even the classic walls of the old University College, Toronto, give back the faint echo of happy if subdued, girlish voices. Queen's and Victoria have the honor—it is an honor surely!—of taking the lead. From Queen's, indeed, women were never excluded, but there were no regularly enrolled women students till 1876, when one name appears on the register, and no others till 1880, when six registered. As early as 1836 Upper Canada Academy was opened to the youth of both sexes. It was the only institution of a higher grade open to women. When the Academy became the University of Victoria College in 1841, women were excluded. Various private institutions were opened to women from that time, but the advantages they offered, though good in their way, were vastly inferior to those afforded to young men by the Universities.

In 1877, the first regularly enrolled woman student entered Victoria University,

*It is not Miss Spence's fault that her memory does not carry her far enough into the past to enable her to recall what some of us remember very well—the time when the question of the admission of girls to the High Schools had to be fought out with almost as much courage and pertinacity as were necessary at a later date to secure them the University privileges they now enjoy.—[EDITOR.]

she has done from a thousand old world traditions, conventionalities, and absurdities, has generously included woman in the progressive movement, and acting upon this Tennysonian principle, has sought to give to her better facilities for developing whatever capabilities a bountiful or parsimonious nature may have bound up in the grey-and-white matter deposited in her cerebrum.

And yet, so conservative seems the temper of all branches of the English race, this state of affairs did not exist from the beginning of our provincial—this obstinate pen had almost written national—existence, nor was it obtained by leaps and bounds, but by long, patient, painful, persevering struggles on the part of the women themselves and the champions who gallantly came to their aid, and beat down, bit by bit, the barricades of prejudice had piled high against them. With literal truthfulness the women of Canada can appropriate the words of an American household poet, and while sighingly admitting as a fact of sad personal experience that

"We have not wings, we cannot soar,"

though before that time, several pupils of a neighboring Ladies' Academy used to visit the University classes, especially in the department of modern languages. Trinity and the Provincial University did not follow the good example set by their sister colleges until 1884. The question of the Higher Education of women in Ontario was forever settled when in October, 1884, at the opening of University College, a few timidly bold maidens appeared in one of the lecture-rooms, not knowing whether they would be allowed to remain, or would be ceremoniously shown the door. With something of the wisdom which Eve is said to have gained from her first interesting interview with the chief representative and type of wisdom, and which the same Eve is believed to have transmitted as a legacy to her daughters, the first lecture-room to which they sought admittance was that of their avowed friend and champion, the late beloved Professor Young. They were admitted and since then women in increasing numbers have regularly attended as students. In all these colleges the pioneers, eager to make the most of their hard-won privileges, went resolutely to work, and soon demonstrated to a somewhat startled public that when woman chooses to turn from the study of fashion-plates to that of letters, she can accomplish results almost as remarkable in the latter as in the former department. It is true, as has been remarked by more than one cynic, that the women students have devoted themselves almost entirely to one department, that of Modern Languages, and it is gravely insinuated that in other departments their inferiority would probably show itself. Without inquiring minutely into this subject—for it is not the object of this sketch to inquire into the relative abilities of the sexes—it may be remarked that, wherever attention has been turned to other departments, as classics, science, mathematics, or metaphysics, the University records show a very creditable standing on the part of the women. The number of graduates is itself a remarkable testimony alike to the eagerness and to the ability of women to gain a higher education. About seventy women have been graduated in arts from the four Universities of Toronto, Trinity, Victoria and Queen's, and according to the statements of the registrars, "they have taken *in proportion to numbers*, a larger percentage of high places in the pass lists, and a larger number of medals and scholarships than the male students have taken."

The present question is not so much the extent to which the education of women should go—as that has been practically and happily settled—but as to *how* they should be educated, whether by separate education or by co-education. The indications seem to be in favor of co-education, though it is acknowledged to be only an experiment which may be abandoned. In the greater number of the High Schools and Colleges, co-education, with its manifest advantages and no less manifest difficulties, is being tried, and on the whole seems to work pretty satisfactorily.

With regard to a strictly literary education, therefore, the progress and present condition of the facilities for the training of

women are all that could be expected or desired. At the same time, the much greater attention paid than heretofore to calisthenics and gymnastic training gives hopeful indication that the physical is keeping pace with the intellectual development. It was matter of general remark at the recent commencement exercises of the University of Toronto, that the plump, rosy girl graduates were an emphatic protest against the current traditions concerning pale, attenuated, feminine intellectuality. So the oft-quoted ideal of ancient culture, the *mens sana in corpore sano*, seems as likely of realization in female as in male students.

And surely the third of the triad of excellencies, the development of the moral as well as of the physical and the intellectual

engaged in successful practice. The legal profession is, however, still closed. Only the other day, an application from a woman for admission to the Law School in the city of Toronto was refused. So it is yet very difficult to make prophecies with regard to the destined progress of the professional education of women here. And yet why difficult? Can we prescribe limits to the ambition of a band of enthusiasts, whose ambition is steadied by a determination which seemed but now to be a monopoly in the possession of the other sex, and whose watchword seems to be:

"Not in vain the distance beacons; forward, forward let us range!
Let the great world spin forever down the ringing grooves of change!"



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nature is not being neglected. Dependent, as it is largely, on the other two, it is likely to advance as they advance, or be retarded as they are retarded.

Has it cost nothing then, this Higher Education of Woman? Has there been no large sacrifice of womanliness? Have none of the dismal forebodings of warning but unheeded prophets, been realized? So far nothing awful seems to have happened, and only a few unnaturally sensitive ears protest they hear the mutterings of a coming storm. But as few are bold enough to assert that Elizabeth was any the worse queen, or Lady Jane Grey any the worse woman, for their daily conning of Greek texts, the fair devotees sit undaunted, indulging, unmolested, in raptures over "Æschylus the thunderous," or "Plato the Divine," and rejoicing that for "the book of knowledge fair," they are no longer presented with "a universal blank," and that even from them wisdom is not "at one entrance quite shut out."

In one respect the education of women has advanced slowly in Ontario—that is in professional education. It is true the profession of medicine is now open to them, and women are flocking to our Medical Colleges and some who have been graduated are

THE TEACHING OF AGRICULTURE IN OUR PUBLIC SCHOOLS?

PROFESSOR THOMAS SHAW, AGRICULTURAL COLLEGE, GUELPH

THAT so many years were allowed to pass away before any systematic effort was made to introduce the broad subject of agriculture into our Public Schools is not creditable to the intelligence of the people of Ontario. That so long a period elapsed before, the farmers of this country demanded that it should be taught in these schools, speaks of an apathy bordering upon the incomprehensible. That they do not now demand that its teaching in our rural schools be made compulsory, betrays a half-heartedness in the desire for progress that almost discourages one when he thinks of it. On the other hand it is creditable to Ontario that she has been foremost among the provinces and states of this continent in bringing out a text-book on agriculture, adapted to the teaching of the subject in our rural schools.

There is yet, however, a missing link, and it must be supplied. Agriculture, in the strict sense of the term, has not as yet been taught in our High Schools, and partly for the reasons, no doubt, that the farmers have not as yet requested that it be taught there, and that no suitable text-book has yet been

furnished for so teaching it. This missing link, however, will soon of necessity have to be supplied. It will have to be supplied for the reason that the pupils who enter the High School after having been grounded in agriculture in the common school will require more on this subject to enable those of them who enter upon the profession of teaching to pass their examinations in agriculture more creditably, and also to teach the subject more effectively. This instruction will have to be supplied for the further reason that teaching it in the High Schools will enable the pupils who enter the Ontario Agricultural College to prosecute further the study of the subject and to do so more effectively. Again, it will have to be supplied because of the return of many of those who graduate in the High Schools to the pursuit of agriculture as a life-work, since the continued exodus from the farms to other occupations cannot last forever. The relative importance of agriculture cannot materially change with the passing of the years, hence the time must be near at hand when our young people will cease to look upon agriculture as an ignoble pursuit compared with many other lines of life.

As the law stands at present it is optional with the candidates for examination as teachers whether agriculture shall or shall not form one of the subjects of examination. Those of them who may find it necessary to teach in the country, greatly err when they do not include agriculture as one of these subjects.

That the farmers will yet demand that the teaching of agriculture shall be made compulsory in our rural schools is a settled conviction in the mind of the writer, as is also the conclusion that this demand will soon be made. Indeed, we have evidence of this in the resolution passed by the Central Farmers' Institute, last winter, asking that the Minister of Education give this matter his careful consideration. That the trustees in rural schools will soon insist upon the introduction of the new text-book into these schools is a foregone conclusion, and that the teachers who have fitted themselves for teaching the subject with efficiency, all other things being equal, will soon get the preference in such schools, is equally certain. It is therefore of some consequence to the teacher that the warning note now given should receive some attention, and that he govern himself accordingly. It is not enough that the teacher be barely able to take the pupil over the ground covered by the text-book. Teaching after this fashion is never effective teaching. To impart instruction effectively the teacher must be a long way in advance of the ground covered by text-books, more especially those that are introductory. Where will those who have teaching in view as a life work get this information? They cannot get it easily and in best form until agriculture is extensively and efficiently taught in our High Schools.

The extent to which agriculture should be taught in our rural schools is a matter on which at present there will be a wide difference of opinion. The teacher who is not equipped for teaching in this subject may probably desire to evade teaching it altogether. In other words, he may probably

prefer his own ease, notwithstanding that the interests of the farmer will be seriously prejudiced thereby. There is no law of Christian ethics, which will uphold the teacher in a course so unworthy of the progress of the age. No fair-minded teacher will cherish this view. He will try and get this information as best he can, that, as a good citizen, he may prove more helpful to those amid whom he labors. The farmer who is alive to the importance of having his children instructed in the principles which underlie the successful prosecution of his own calling will be anxious to have much attention given to the subject in the school. Relatively, to him the teaching of agriculture will be all-important. He will, or should at least, greatly desire that much time be given to it, especially with the pupils who are more advanced. It may be that in some schools where the text-book has been introduced, it may receive only a passing attention on the part of the teacher. It is the duty then of the farmer parent in such cases to bring down the big sledge-hammer of his indignation in a way that will smash such indifference to splinters. It may be true that the course of studies in our common schools is already over-crowded. Be that as it may, room must be made in future for the teaching of this subject in our rural schools, even though some subjects now upon the list be thrown overboard to make room for agriculture.

To teachers who may not have given their attention to the study of this subject, I desire to say this, that you are almost certain to find the study of agriculture one of the most pleasing on the list. It deals almost wholly with the things of Nature, whether animate or inanimate, which seldom fail to charm those in search of knowledge in such channels. It will certainly prove a subject which may be made fascinating to the young to a degree seldom found in any other subject.

That all male pupils attending our rural schools should study agriculture is a view which will certainly receive the support of all reasonable people. The extent to which it should be studied by the girl pupils may furnish grounds for a difference of opinion. It would not be proper for me to give an opinion as to the merits of the new text-book on agriculture which is now an authorized text-book, owing to my relation thereto, but I desire to be permitted to say this, that there is not a chapter in it which it would be improper for any one to study or to teach. There are some chapters which need not of necessity be taken up by the girl-pupils as, for instance, those on the mechanical working of the land, and the principles which govern the science of feeding animals, while, on the other hand, a large portion of the work treats of subjects which it will be advantageous for the pupils of both sexes to know. When those days arrive when it will be said that a farmer's daughter ought not to be taught the principles which govern successful butter-making at the common school, then look out for the tokens of the decay of the commonwealth.

The advantages to the rural community, and through it to the country at large, arising from teaching agriculture in our rural schools, may not be discussed in this

paper. These must be so patent to everyone that the great wonder is that anyone should be found holding a different view. With the general and efficient teaching of this subject in our schools we may look for a stimulus to be given to agriculture such as it has never felt before, and a progress to be made in prosecuting it which will place Ontario still more clearly in the van of continental States and Provinces.

MANUAL TRAINING IN THE PUBLIC AND HIGH SCHOOLS.

W. H. HUSTON, M.A., PRINCIPAL WOODSTOCK COLLEGE.

I AM asked to write a paper on the above subject. I gladly consent, because I know how much will be gained if Manual Training becomes a usual department in our primary schools.

The terms Public and High Schools are used in their ordinary application in the Province of Ontario. The average age of boys entering the High School from the Public School is fourteen. The High School course occupies four years, or perhaps five. The period covered in these schools, therefore, corresponds to that in the Public, the Grammar and the High Schools in some of the States in the American Union.

Shall we introduce Manual Training into the Public Schools? If so to what extent? It is there already. The Kindergarten is the alphabet of Manual Training. That the kindergarten is correct in principle and efficient in practice no one will dispute. So striking have been its good results that the best educational thought has for some time been planning to introduce it into the higher stages of the Public Schools. The mistake of kindergartners in the past has been the regarding of their work as distinct from the general systems of education, as fitted only to prepare for or introduce to real educational activity, instead of being in itself of great utility as a school study and fitted to form a part of any Public School system in all its grades. Why cease the kindergarten when a child is seven years of age and put him into work altogether different? The practical answer to this question has been the carrying of kindergarten methods into higher classes, and this with good results. But what kindergarten methods shall we use with boys of ten, eleven, twelve, thirteen years of age? What will come after the clay modelling and the sand work, the drawing and the designing? What but *carpentry*? How can the constructive thought of a boy of eleven best show itself? In what way can he most easily put into solid form what he is learning to express in words, as in drawing? The answer is not far to seek. All construction consists of shaping and joining. The simplest means for doing this are those tools invented and improved through the need of constructors. They are the hammer and the saw, and, for more particular work, the plane and the chisel. Every Public School should afford training in the use of these tools. Nothing may be said in favor of drawing—geometrical or æsthetic—that cannot be said in favor of construction, geometrical or æsthetic. The same arguments apply to both. The power to make the hand express the thought

of the mind is developed and the sense of beauty in form and combination is strengthened. The two studies are identical and should be reciprocally conducted. The real box is set before the student that he may express his notion thereof on paper in graphic form. He measures the box and makes his drawing as exact as he can, and the training he receives is invaluable. He takes his drawing and from it he makes his box as exact as he can, by measuring and planning. And this training is invaluable. Thought-expression means thought-awakening, thought-accuracy, thought-planning, thought-beautifying. The power to express one's thought in wood is the object of carpentry in the Public School, just as is the case in drawing.

That a thousand profitable results attend this effort to express one's own thought or that of another, in *substantial* form, is the good fortune of the kindergarten in its straw-laying, its clay-modelling, its drawing and its construction in wood; but these good results, though in themselves more valuable than the sum of those derived from other studies I might name, are not yet the *raison d'être* of the kindergarten in its various forms. This it is essential to remember, for we shall fail to make the full profit from the work, if we forget that Manual Training is primarily and principally mind-training, and this not only because it calls into exercise muscles, and the brain tissues commanding those muscles—in itself a most important thing, as is proved by an examination into the use of muscular action in child life—but because it causes the child to think, to reason, to plan, to contrive.

This being definitely premised, I would point out some of the secondary advantages derived even in the Public School from the Manual Training.

First.—The training of the eye to observe carefully and discriminate accurately. This it has in common with drawing, but to a greater extent. How many of our pupils need this.

Second.—The mind obtains power over the hand. In the play-ground the hand learns to obey the mind unconsciously and involuntarily, in the workshop consciously and voluntarily.

Third.—Opportunities are given in the teaching of Manual Training to develop habits of neatness, order, method. Those that have seen the effect of the work upon boys are particularly struck with this. The keeping of tools in good order and in their proper shape, the experience of inconvenience and confusion that are sure to arise if things are not in their exact places and in proper condition, beget in the pupil the greatest care, and create in him a *habit* that manifests itself in all his other work. What more valuable than a good habit.

Fourth.—The faculty of observing is most strongly developed. Where so much depends on the nature of the material, *e.g.*, quality of the wood, the direction of the grain, its hardness, its dryness, and the way in which it is utilized, a premium is put upon noticing things.

Fifth.—In the workshop more than anywhere else the teacher can insist upon thorough work. Again and again the exercise must be performed till a satisfactory

result is obtained. Those experienced in workshop practice know how much greater is the opportunity for insisting on accurate work than in any other class.

Sixth.—There is a strong influence towards making boys natural and practical. In many respects we are in our schools injuring our pupils rather than helping them. Here is a boy with a good memory—remembering everything that comes before his notice. He goes to school, and ere long, through the use of note-books, etc., his memory is altogether gone. So, too, in other regards. Now, Manual Training makes the pupil practical and inquisitive. He sympathizes with everyday things and wants to understand them—the pavement, the railway engine, the electric light, the penknife—everything. This is an excellent quality in a boy. Boys should leave school with all their inquisitiveness set on edge, instead of being, as is too often the case, satisfied with themselves, and altogether uninterested in the world around them.

Seventh.—The necessity of having in the mind a distinctly formed idea, of transferring that idea to paper, in its entirety and in its individual parts, and the working out of each part in solid form and combining and arranging so as to produce the object desired, develops a boy's planning, arranging and creative powers; in other words tends to originality which is after all the main thing to be considered in educational work, men being powerful in proportion as they are original. Can any such course be provided in our Public Schools. Yes. For seven hundred dollars, six double benches and six foot-lathes, with full equipment of tools may be obtained. Thus a class of eighteen is provided for. If the teacher can afford the time the same tools may be used for two or three classes and thus thirty-six or fifty-four pupils may be trained. What country school so poor that it cannot thus equip itself—if necessary in a room in the basement or the attic. Where school boards are niggardly a few concerts, or a subscription list will do all that is needed. Two hundred dollars would make grand provision for a class of six. In town schools steam, or gas, or electric power may be added, and additional tools provided at small cost. With reference to our High Schools, it is not too much to say that there should be erected a workshop equipped with work-benches and wood-working tools, turning-lathes, wood-carving tools, forges and tools required for blacksmithing and machines for working in wood and iron as may be obtainable.

At Woodstock College, corresponding in many respects to the High Schools, we have made a modest beginning—have erected a two storey brick building, with ten horse power gas engine, wood-planer, circular-saws, gigsaws, iron-lathe, iron-planer, milling machine, mortising machine, eleven turning lathes, twenty-four benches with tools complete, carving tools, six forges, completely supplied, for the sum of \$6,000. For most High Schools one half our equipment would be sufficient. That any city should fail thus to equip its schools—whether public or high—will one day be regarded as disgraceful as it now is to have no kindergarten classes.

In completing the space allotted to this paper

I would point out that in the Public Schools boys and girls should alike take this work. The elementary carpentry and the wood-turning are admirably suited to girls and would do them great educational good. In the junior classes of the High School the wood-turning might be continued and the wood-carving would be delightfully profitable to both sexes. The blacksmithing would be too heavy for the girls, as would almost all of the machine work; though there is no reason why the smaller iron-turners and planers could not be well worked by girls.

It is also worthy of regard that Manual Training must be taught by a teacher, and if possible the teacher who has most to do with the boys and girls. Mere artisans, however skilful, as a rule do not exercise educational power. They will bring to naught the best devised course of instruction and make of the Manual Training a play shop or a trade school.

Manual Training is destined to form a part of every good system of national education. No one can yet point out all its advantages, but those known are sufficient to warrant its establishment in connection with any Public or High School.

TRAINING IN HUMANITY AN IMPORTANT PART OF EDUCATION.

AGNES MAULE MACHAR.—("FIDELIS").

THE principle of Humanity, along with that of Justice, lies at the root of our social life; and it would be difficult to decide which is the more important, though, truly understood, the one implies the other. It is, therefore, quite as important to train children in the spirit and practice of kindness as in that of Justice, and such training is the more needed, because, in the great majority of children, the spirit of kindness is *not* naturally strong. On the contrary left to grow up untrained, with selfishness unchecked, they too often develop into brutal little savages, capable of any thoughtless cruelty which seems to promise a momentary pleasure. This is true not merely of the children of the vicious and degraded classes, since we too often see examples of reckless and brutal cruelty among the Sybarites of our modern civilization. But the roughness and brutality of too many parents is a fruitful source of the same qualities, reproduced in their children. Training *in* kindness *by* kindness, is necessary to educate thoughtful, humane men and women.

And, while we may, indeed, believe that society is, on the whole, growing in the spirit of humanity towards the animal creation, as well as towards man, there is still much left to desire. Countless sufferings are daily needlessly inflicted on helpless animals by people who are not brutal or cruel, but simply *thoughtless*. Nay, on the part of too many, there is a strange apathy on the score of animal suffering, as if *this* were to be taken as a matter of course, and the pain of a few animals, more or less, were of very little consequence. Those who *do* think it matters, and endeavor as much as possible to diminish its amount by

promoting Humane Societies or repressive legislation, are usually regarded as a set of amiable and, on the whole, harmless cranks, "who must have very little serious work to do." This apathy is unfortunately too common, even among people who "profess and call themselves Christians," strange as it must seem to any one who reads aright the spirit of the Gospel. In one of the leading reviews, recently, a sharp indictment was drawn up by an Agnostic against Christianity, on the score of deficient moral teaching; and one of his strongest counts was based on what we must admit to be a fact, that the common sin of thoughtless and selfish cruelty towards animals is seldom even glanced at in our Christian pulpits. Do our religious teachers imagine that such sins are not common? Or do they think them of little account? In the first case, they can hardly keep their eyes open to the fact. In the second, they forget that humanity towards the lower animals is closely connected with kindness to human beings, and they must also forget the declaration made by Him who was Truth itself, and in whose name they speak, that even a sparrow is not forgotten by our Heavenly Father. Whatever may be the shortcomings of professing Christians in this particular, there is no countenance for them in the Christian Scriptures. *There*, humanity towards animals is taught and provided for, side by side with humanity towards man; and, while we are emphatically told that "blessed are the merciful," we are as distinctly told that "the merciful man is merciful to his beast." This, like other statements on the same authority, will be found true to life, and so, in the long run, will the converse, despite the exceptional and abnormal Neros, who are made the most of in a vain attempt to prove the contrary. No act of cruelty towards any animal can be perpetrated, the consequences of which do not go far beyond the immediate victim, reacting on the character of the perpetrator, and, through him or her, on others who shall be affected in various ways by the influence of that character.

But teachers, at least, have much in their power, and those who desire to educate not merely the brains, but also the hearts and morals of their pupils, at which *all* teachers should surely aim, will not consider unimportant or beneath their notice, the duty, not only of inculcating *principles* of humane action, but also of cultivating the sensibilities, so that kindness to the creatures about them should all become the natural impulse of hearts which would be pained by a rough or brutal act. This development of the sensibilities will not generally be difficult. When children are cruel, as they so often are, it is usually not because they are *naturally cruel*, but either because they have been hardened to cruelty by brutal treatment, or because they have never been taught to regard animals habitually as sensitive creatures, or to exercise their imaginations so far as to put themselves in their places. The untaught and naturally selfish child usually regards animals and is allowed to regard them simply as material for his own pleasure or caprice. He cuffs or pinches the cat,

kicks or "pounds" the dog, *ad libitum*, and, when a little older, captures and puts young birds to death by slow torture, without a twinge of his unawakened conscience. Later, as soon as he can shoulder a gun, he will shoot every beautiful, harmless creature within his reach for want of sport, over-drive a horse to see how fast it can go, or mutilate dog or horse so as to deprive it of what was intended for its health and comfort, simply because the effect of the mutilation pleases his vitiated taste, or because it is supposed to be the fashion. As is most truly said in that touching plea for horses, "Black Beauty," "Boys, you see, think a horse or pony is like a steam engine or a thrashing-machine, and can go as long and as fast as they please—they never think a pony can get tired, or have any feeling"

Now, all this can be changed by training, and such training as every teacher has it in his power to bestow, if he or she has but the heart and the will to do it. Let the teacher, in the first place, cultivate the habit of intelligent observation, first in himself, and then in his pupils. Let him occasionally explain to the latter something of the structure and manner of life of the living sentient creatures around him, pointing out how beautifully each is adapted for its natural sphere, and how man cannot interfere to cut and carve, without marring the adaptation. Let him take trouble to interest the children in the actions and ways, the little pains and pleasures, of their dumb fellow-creatures, explaining, that they, like us, are sensitive to pain or pleasure, and dependent on man for much of their well-being, and thus endeavor to awaken that *sympathy* with the lower animals, which rightly belongs to every generous and truly developed nature, child or adult. The teacher cannot do this without another benefit, that of bringing himself more into *touch* with his pupils, and so promoting that mutual sympathy, which is so helpful in imparting instruction, being as different from the rigid routine teaching still too common, as a living tree is from a dry stick. And the teacher who systematically develops and trains the sensibilities *meant* to play an important part in our lives, will open to children a world of the most keen and delicate enjoyment, which must remain sealed to one whose sensibilities have been left dead or dormant.

Children taught and developed will not grow up to be heartless and unfeeling tyrants over the animals committed to their care. The boy who is to be a farmer will learn to think and know better than to injure his stock by stupid neglect, to dock his horses' tails, or over-drive them, or torture them with check-reins, or to permit the cruel and stupid practice of tying the legs of sheep or poultry for market so tight that the poor creatures can scarcely stand when untied, as the writer has frequently observed. They will learn to make the case their own, and to be as careful in their treatment as they would be in that of helpless human beings. And their treatment of the latter will be proportionately kinder and more thoughtful for the kindness and thoughtfulness they practise in the case of dumb animals.

There are other ways that a careful teacher can easily find to promote the growth of kindness and humanity. The occasional reading in school of such selections as are to be found in a small volume published by the Toronto Humane Society, or from such a book as the well-known "Black Beauty," will be found a help in cultivating thoughtful sympathy. By an occasional essay-competition on the subject the ideas of the children can be drawn out and the influence of the better and more thoughtful pupils can be brought to bear on the rest, and sometimes the lessons conveyed in the essays of boys will have even more influence with younger boys than the more mature teaching of the preceptor. "Bands of Mercy" can be organized with great advantage, and be made the means of teaching natural history as well as humanity, if the pupils are encouraged to bring to the monthly meetings, which they may be taught to conduct in a great measure themselves, the results of *their own patient observation* of the animals that come in their way. Small premiums might be offered for the best and most correct description of the structure and habits of some animal, from personal observation, or of the different character of nests and eggs, always, however, on the express condition that *these should be left undisturbed*, and with the explanation that the robbery of a bird's nest is a *real* robbery and an immoral action. The formation of bands of "King's Daughters" has also been found to be of great service in developing kind, and checking cruel tendencies. But, above all things, children should be taught to regard their humbler fellow-creatures as, like themselves, the creatures of a loving Father, placed under man as the superior being, and therefore, holding the stronger claim on that quality of merey which is the noblest attribute of either the human or the Divine nature.

EDITORIAL NOTES.

THE organization of the School of Pedagogy for the training of High School Assistant Masters having been completed, we are authorized to announce that the School will open on the 18th of August. Applications for admission should be made to the Deputy Minister of Education not later than August 11th. The School will be under the management of Dr. McLellan as Principal, who will be assisted by a competent staff of lecturers in the different departments of the High School course of study.

ONE very important part of the Educational system of Ontario we are obliged, much to our regret, to leave wholly unrepresented in this special number. We refer to the department of Drawing and Art studies. Drawing is being successfully taught in the Public and High Schools, and technical education, in connection with Free Libraries, Mechanics Institutes, Art Schools and Scientific institutions is being vigorously prosecuted under the indefatigable supervision of Dr. May, Superintendent of these institutions. The results of these studies will no doubt be fully illustrated in the exhibit in connection with the Convention.

TEMPERANCE INSTRUCTION IN OUR PUBLIC SCHOOLS.

MRS. L. J. HARVIE.

THE subject of "Temperance," as it is popularly called, is the problem of the age.

A quarter of a century ago, or less, nobody, save, perhaps, a few fanatics, as they were opprobriously called, paid the slightest attention to this momentous question. Now, alcoholic drinks, and their action upon physical, intellectual, social, religious and civil life are freely and fully discussed from the scientific, legislative, educational, and, indeed, from every other stand-point.

One of the results of the present widespread agitation is the fact that thoughtful minds are looking to the young for a solution of the difficulties that surround the question of the use of, and the trade in, strong drink. Men may agitate and legislate; laws looking towards Prohibition may be placed on our statute book; but until we as individuals, making up the body politic of this young Canadian Nation, learn, each for himself, or herself, that the habitual use of spirituous liquors, is, like the imagination of the thoughts of the heart of man, *evil*, and that *continually*, alcoholic drinks will be made, and alcoholic drinks will be used.

Now why should we teach the children in our schools that the use of strong drink is an evil?

(a) Because water is really the *natural* drink for man, as it unquestionably is for animals. Alcoholic drinks, in all their varieties are unpalatable. When first taken they are very nauseous, which in itself is evidence that we were not intended to use them habitually. Water and milk are both pleasant to the taste, as well as nutritious. The taste for other drinks is an acquired one, and will never, probably, be contracted if not in youth.

(b) Because youth is the *impressionable* age. "As the twig is bent the tree is inclined." Give me, says a wise man, the training of a child until he is seven years old, and I will tell you what kind of a man he will make. What is learned in childhood is not soon effaced from the mind; in fact, it is rarely, if ever, obliterated. The circumstances, associations and training of boyhood or girlhood, do much towards moulding the character and deciding the tendency of the future man or woman. Teach the generation growing up among us now the baneful effects of "spirits" of all kinds upon the human body, as well as upon the soul and spirit. Demonstrate to them the fact, that the pure water so lavishly provided for the needs of man and animals by the Divine Being, is *necessary* to life and health, and you deal a deadly blow to the use of spirits, wine and beer, and do much towards the production of a race of "water-drinkers."

(c) Because youth is the *questioning* age. Who that has a boy or girl of from seven to ten years of age in the house, will dispute this statement, Why is this? How is that? What is the other? are continually sounding in our ears. The children are knowledge-seekers. Not from curiosity, but from an eager desire to *know*, implanted by the Creator, a real thirst for knowledge, do they

ask questions. Take an eager questioner of this kind, and by the use of a chart or diagram illustrate the pernicious effect of liquors on the stomach, liver, heart, brain, etc., etc., and not only have you satisfied the desire for information, but you have indelibly stamped upon the mind the fact that "drink" produces and aggravates disease.

(d) Because *prevention* is easier and better than cure. God's Word says, "Can the Ethiopian change his skin, or the leopard his spots? Then may ye also do good that are accustomed to do evil." Rescue work is ever discouraging and depressing; preventive work is full of encouragement and bright with hope and promise. A spirit, wine, or beer drinker may hate the chains that bind him, but he cannot break them. The children are free as the air from the fetters of strong drink. Let us keep them free.

(e) Because our *national* life depends upon individual life. As are the individuals and homes, so is the nation. Nine-tenths of the crime and vice we mourn over in our land is the direct result of the habitual use of stimulating drinks. Every boy or girl who is taught the evils of intemperance is another added to the ranks of our future noble men and women, who will by precept, example, influence and vote help the cause of Temperance.

Now, what is done in the way of Temperance instruction in our Public Schools? In passing, it will not be out of place to speak of our system of school instruction as admirable. The advantages for the training of the young in the Dominion of Canada, are, in many respects, second to none in the world. In our towns and cities, commodious, handsome and substantial structures, containing every facility and appliance for school work, uplift themselves, and are at once our hope and our pride. In our rural districts, the department of school buildings and appliances requires further development; but this, we trust, will come in the near future.

The curriculum in our Public Schools embraces lines of study which are calculated to give our children an "all round" knowledge, which will be invaluable to them in the battle of life. In proof of this, we mention the following. A few days ago, we had occasion to make a payment of a considerable amount to an energetic, pushing, business woman. Upon asking for a receipt, the woman said, "I am sorry to tell you that I cannot write. Will you please wait until T—comes from school?" We were considerably interested, and very anxious to see the little pupil, but could scarce restrain a smile when a small mite of a girl, possibly some seven years old, presented us with a receipt, properly drawn up and signed.

To return to the matter in hand, it is satisfactory to know that, in compliance with public opinion, an Act to provide for the teaching of "Temperance" in the Public Schools was, in 1886, introduced during the Session in the Legislature of Ontario and received unanimous approval. Under the provisions of this Act, the subject was placed on the programme of Public School studies, and Dr. Richardson's celebrated work was

authorized by the Department of Education as a text-book. Dr. Richardson is well known throughout England as one of the highest authorities on this and kindred scientific subjects.

Lessons, in the shape of short lectures illustrated by the Yaggi charts, are given regularly, on the text-book mentioned. These lessons are connected with studies in Physiology and Hygiene, and include explanations and demonstrations as to the composite properties of alcohol and its action upon the various organs of the body, the diseases occasioned or aggravated by its use, the evils of the use of tobacco, and the necessity for the diffusion of pure water through the body. The value of these "Talks" is enhanced by the use of diagrams, charts, etc., and rarely do the children forget these object-lessons.

Of course, the importance of this training, and its assistance to the cause of Temperance, largely depend upon the heartiness of the teacher. This, however, is true of all kinds of teaching. The ladies of the W. C. T. Unions have, in many schools, aided in this good work by the distribution of medals and prizes for essays on the subject. May the time soon come when every teacher of the young will, as a matter of conscience and duty, help to keep the children pure and free from the terrible curse of strong drink.

EDITORIAL NOTES.

WE are sorry that the exigencies of space and make-up, compel us to hold over among others an excellent article on "The Public Schools of Ontario," written at our request by Mr. S. B. Sinclair, B.A., Principal of the Model School, Hamilton.

WE had intended to have an article on the work of the Independent Schools Colleges and Universities of the Province. All the various classes of voluntary educational institutions are now well represented in the Province, and are growing in numbers and efficiency from year to year. They are doing, in our opinion, a noble work, and, in proportion to the means at their disposal, are second in influence and usefulness to none of those supported by the State. We have great faith in the results of voluntarism in every sphere of social and moral progress, and regret deeply that the limits of our plan and space preclude us from doing the voluntary colleges ample justice in this number.

To the five efficient editorial workers already associated with us in connection with different departments of THE JOURNAL we expect to add a sixth the coming year, in the person of a Science Editor. The need of a special Scientific Department has been felt during the past year, and arrangements are being made to supply it. We hope to be able to place at the head of this Department a name which will be the best guarantee of ability and efficiency. The Science Editor will have a double duty to discharge. He will need not only to aid students and teachers in the work to the extent already prescribed in the schools, but to push the just claims of science to fuller recognition in the curricula of our Public and High Schools.

THE ELECTRO-THERAPEUTIC INSTITUTION.

PROF. VERNON'S Electro-Therapeutic Institution, 231 Jarvis Street, Toronto, has for many years enjoyed an extensive reputation on account of the many remarkable cures effected by the treatment employed. A long list of prominent men—clergymen, merchants, manufacturers, public officials and others, well known in their various localities—can testify as to the genuineness of Prof. Vernoy's system. The distinguishing feature of the electro-therapeutic treatment is the substitution of electricity—the great vitalizing force of nature—for drugs and nauseating compounds, which, though they may temporarily alleviate the symptoms, leave the root of the disease untouched. In order to enable patients who are unable to receive the electrical treatment at the institution to secure the unparalleled advantages of this life and health imparting process, Prof. Vernoy has patented an instrument which enables any one to apply electricity to the system without the least danger. The Improved Family Battery, which should be in every household, has had a very extensive sale, and, wherever fairly tried, its superior merits have been fully recognized. Electricity now having secured its rightful place as the great curative agent, Prof. Vernoy's improvements in electrical application are of interest to all who seek to keep informed on the advances in medical science. His advertisement will be found elsewhere.

ST. PAUL was a great preacher—the most illustrious pulpit orator in history; but he was a poor judge of women.—*Sunny South.*

PROMINENT among the institutions for the education of young ladies, which are now happily becoming numerous in Ontario, is the Hellmuth College, of London, Ont. Hellmuth College was founded in 1869 by the Right Rev. Bishop Hellmuth, and at once took a foremost place among the ladies colleges of the Dominion. Located in the suburbs of the city of London, which is about three and a half hours' ride from Detroit and Suspension Bridge, and between east and west on the two great Canadian railroads, the College is easy of access from all parts of the Dominion of Canada. Its professional staff consists of three well-qualified gentlemen and six lady teachers in the Literary Department, while the Musical and Art Departments are thoroughly equipped and under the management of competent and accomplished professors of both sexes. The discipline of the College is under the constant and careful supervision of the Principal and Vice-Principal, the Rev. E. N. English, M.A., and Mrs. English. Provision is made for definite religious and moral instruction; also for healthful, physical exercises and pastimes, the avowed aim of the College being "to direct and supervise, on broad and liberal principles, all employments, pastimes and exercise of pupils, whether pertaining to their moral, intellectual or physical training." For full information see advertisement elsewhere.



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The beneficiaries of those dying early receive a very large return, in the payment to them of the face value of the policy; it is therefore equitable that those who persist and pay premiums for a given term of years, should obtain the benefit of the surplus accumulations.

There are many, however, who consider that in the event of death between the 11th and 20th years, a dividend should be paid on the policy; others again doubt their ability to pay their premiums regularly for a term of 15 or 20 years, and are thereby prevented from securing an Investment Policy.

It is to meet these two objections that the form of Compound Investment Policy, already so favorably known, was lately introduced by the North American Life Assurance Company.

Under this form of policy the applicant may select a term for the payment of his premiums of 15 or 20 years, at the termination he is offered certain favorable options as hereinafter explained.

After the policy has existed for 10 years and the 11th annual premium is paid, in the event of the insured's death, a dividend is paid with the policy of the 11th premium, or if death should take place in the 15th year, a dividend of the last five premiums is paid. In the policy it is guaranteed that the 11th and subsequent premiums paid, will be returned as a dividend, if the policy becomes a claim by death before the termination of the investment period.

It is also guaranteed, that, after the policy has existed for 10 years, the 11th and subsequent premiums will be lent, if required, the insured paying thereon interest annually at the rate of 6%. If insured should die before completion of the investment period, no deduction is made from the face value of the policy, as the guaranteed cancels the amount of the loan.

If the Compound Investment Policy be on the 20 payment Life plan, should the insured survive to the end of the investment period, the following options are secured by the policy, any one of which may be selected, and which may then be most suitable to the circumstances of the holder of the policy:

1st. Surrender the policy to the Company and lie in thereof receive its full cash value.

OR

2nd. Withdraw the investment dividend in cash and in addition have a paid up policy for its full face value, payable at death.

OR

3rd. If insured in good health, use the cash dividend to increase such paid up policy.

OR

4th. Leave the whole amount of cash with Company and in lieu thereof, receive an annual income for life.

OR

5th. Take a paid up policy for the full face value, and in addition use the cash investment dividend to purchase an annual income for life.

If there is any debt against the policy, that sum will first be deducted from the cash investment dividend.

For premium rates and additional information respecting this excellent form of Investment Insurance, apply to any of the Company's agents, or to

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 - " XXXIV. Death of Little Nell.
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 - " XLI. Making Maple Sugar.
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- " XCI. Robert Burns.
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- Lesson XIII. The Bells of Shandon.
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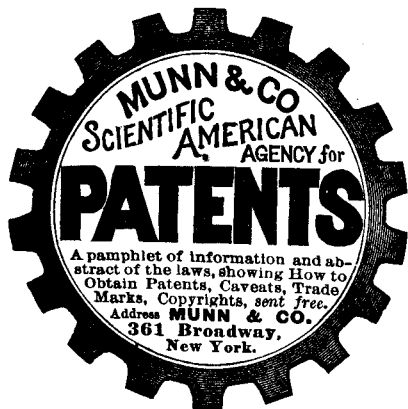
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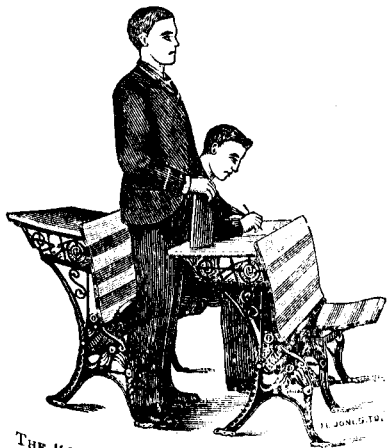
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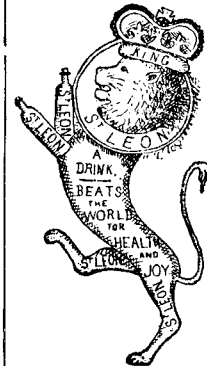
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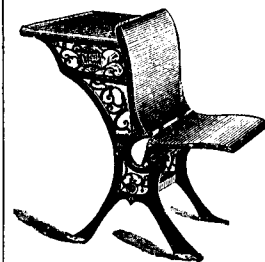
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