

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessus.

- Coloured covers/
Couverture de couleur
- Covers damaged/
Couverture endommagée
- Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée
- Cover title missing/
Le titre de couverture manque
- Coloured maps/
Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur
- Bound with other material/
Relié avec d'autres documents
- Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure
- Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.
- Additional comments:/
Commentaires supplémentaires:

- Coloured pages/
Pages de couleur
- Pages damaged/
Pages endommagées
- Pages restored and/or laminated/
Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées
- Pages detached/
Pages détachées
- Showthrough/
Transparence
- Quality of print varies/
Qualité inégale de l'impression
- Continuous pagination/
Pagination continue
- Includes index(es)/
Comprend un (des) index
- Title on header taken from:/
Le titre de l'en-tête provient:
- Title page of issue/
Page de titre de la livraison
- Caption of issue/
Titre de départ de la livraison
- Masthead/
Générique (périodiques) de la livraison

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

	10X		14X		18X		22X		26X		30X	
	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X	

Educational Weekly

VOL. IV.

THURSDAY, SEPTEMBER 16TH, 1886.

Number 87.

The Educational Weekly

Edited by T. ARNOLD HAULTAIN, M.A.

TERMS: Two Dollars per annum. Clubs of three, \$5.00. Clubs of five at \$1.60 each, or the five for \$8.00. Clubs of twenty at \$1.50 each, or the twenty for \$30.00.

New subscriptions may begin at any time during the year.

Payment, when sent by mail, should be made by post-office order or registered letter. Money sent in unregistered letters will be at the risk of the senders.

The date at the right of the name on the address label shows to what date the subscription is paid. The change of this date to a later one is a receipt for remittance.

Subscribers desiring their papers to be discontinued are requested to give the publishers timely notification.

In ordering a change of address, or the discontinuance of the paper, the name of the post-office to which the paper is sent should always be given.

Rates of advertising will be sent on application.

Business communications and communications intended for the Editor should be on separate papers.

PUBLISHED BY

THE GRIP PRINTING AND PUBLISHING CO.,
TORONTO, CANADA.

JAMES V. WRIGHT, *General Manager.*

TORONTO, SEPTEMBER 16, 1886.

In looking over some reports of addresses delivered at a teachers' association meeting held not very long ago, we came across the following query: "What does our system of education do to find out the natural aptitude of a boy?"

At first sight it appears a most reasonable question to ask. Every one is supposed to possess an aptitude for some particular thing, to be able to excel in it, to give up his life to it; and if our educational system is formed for the purpose of giving our youths opportunities of developing this natural aptitude and enabling them to take up that part in life for which they are best fitted, it is but fair to ask what that system does "to find out the natural aptitude of a boy."

But a very little thought will show that this is not the purpose of our educational system. Our educational system begins with the public school and ends with the university, and throughout its whole course, from the rural schoolhouse to the college lecture-room, it has nothing to do *directly*

with discovering a pupil's or an undergraduate's forte. Indeed we doubt whether it is possible, except in exceptional cases, to discover this forte until the pupil's studies are virtually beyond the control of his teachers. It certainly is not discovered in the public school. Nor is this the function of the public school. A natural *bent* cannot be created until there is something to *bend*. Until the mind has been endowed with some power, and has been stored with some knowledge, there cannot possibly arise any predilection for any particular branch of study. It is the function of our schools to provide this knowledge and increase this power—nothing more.

After all, one's natural bent is not found by the system of education under which we are placed, it shows itself, surely, unconsciously, in spite of any system. Cowper's literary and poetical tastes—what school could have discovered them, much less developed them? And so with Shelley's, and so probably with all who have shown remarkable talent in some one direction. All that the school can do is to foster this talent *when found*. The finding of it must be left to the pupil himself. No other can do it for him. All others can do is to place before him such advantages as will enable him to pursue his natural bent.

So is it with the university, the highest part of our educational system. The professor's duty is not to probe the undergraduate's mind; his duty is merely to lecture to the best of his ability on his particular subject. Here again the discovery of natural bent is left to the man himself.

The truth is, a fallacy underlies this question. The object of education is not to take into account individual proclivities. The master may, with his matured knowledge and observation, be able to prophesy what shall be the future vocation of this or that pupil, and he may set to work to foster those means which shall most conduce to bring out in full force those mental habits; but the system as a whole has nothing to do with this.

The system as a whole is built up with the sole object of cultivating all the powers of the mind. Schools cannot recognize specialism, and it is specialism that this question refers to. It would be simply impossible in a class of thirty or forty boys and girls so to conduct the exercises and lessons as that these shall have for their aim the discovery of the peculiarities of each of those thirty or forty pupils.

DR. J. P. WICKERSHAM, ex-Supt. of Public Instruction, in speaking of "Discipline as a Factor in the Work of the School Room," well says:—"Teachers are prone to look upon discipline more as a means than an end. This view is partly correct. There is a form of discipline known as the discipline of force; another, the discipline of tact; the third, the discipline of consequences, and lastly, the discipline of conscience. They differ somewhat as to end, but materially as to method. Under the discipline of tact, a school-room is kept orderly through nice management. It governs by strategy rather than force. The teacher must keep in mind the awakening of the conscience. The straight line that runs between right and wrong should be strongly marked and well defined. We have much to do with the intellect of children, but if we do not also direct the conscience we have failed to do our whole duty. No clumsy hand can teach the conscience of a child; it takes skill of the highest order.

THE total number of votes cast on the Federation question was 251; 138 for, 113 against. By colleges, the figures were, ministers for, 66; against, 67; laymen for, 72; against 76. Guelph Conference polled the largest majority of votes for federation, viz., 21, New Brunswick and Prince Edward Island the largest against, 3. London cast for the scheme a majority of one vote. Toronto Conference gave a majority of 10 for federation. The three eastern provinces combined were against federation by a majority of 9.

Contemporary Thought.

It may be said in apology for many of the books of poetry which are printed nowadays, that their authors are deluded with the belief that the volumes would bring in money, irrespective of their poetic value. The authors, in every case, lose a hundred or a thousand dollars. The unbound copies are used as wrappers for cook-books.—*Current.*

LET the American people now begin to ask themselves these questions: "Why do not we have parcel posts, postal savings, postal telegraphs, and governmental railways, as other nations have such things? Is our boasted progress all a mockery? Is a machine the only thing we can invent? Are our corporations depriving us of the advantages which are enjoyed abroad.—*Current.*

Luck is ever waiting for something to turn up. Labour, with keen eyes and strong will, will turn up something. Luck lies in bed, and wishes the postman would bring him the news of a legacy. Labour turns out at six o'clock and, with busy pen and ringing hammer, lays the foundation of a competence. Luck whines; labour whistles. Luck relies on chance, labour on character and energy.—*American Art Journal.*

Now the condition of affairs between Church and State in both France and England has this in common, that religion has little or nothing to do with the matter in either case. In England it is a social, and in France a political question; consequently in both countries the real and genuine religious hatred which belonged to the old spirit of enmity between Catholic and Protestant has given place to a newer and less virulent kind of antagonism. It seems likely, therefore, that the separation of religion from the State will be accomplished in both countries by the ordinary processes of legislation, probably about the same time, or with the interval of only a few years; and there is no reason to apprehend any civil war about it except the war of speeches and newspaper articles.—*September Atlantic.*

LET us take theairest, choicest, and sunniest room in the house for our living-room—the workshop where brain and body are built up and renewed; and there let us have a bay window, no matter how plain in structure, through which the good twin-angels—sunlight and pure air—can freely enter. This window shall be the poem of the house. It shall give freedom and scope to sunsets, the tender green and changing tints of spring, the glow of summer, the pomp of autumn, the white of winter, storm and sunshine, glimmer and gloom—all these we can enjoy as we sit in our sheltered room, as the changing years roll on. Dark rooms bring depression of spirits, imparting a sense of confinement, of isolation, of powerlessness, which is chilling to energy and vigour; but in light is good cheer. Even in a gloomy house, where the wall and furniture are dingy brown, you have but to take down the dingy curtains, open wide the window, hang brackets on either side, set flowers-pots on the brackets and jivy in the pots, and let the warm air stream in.—*Ex.*

AMONG naturalists, examples of well marked precocity are to be met with. Linnaeus as a boy showed so decided a bent to botany that, through the advocacy of a physician who had remarked

the early trait, he was saved from the shoemaker's shop, for which his father had destined him, and secured for science. At the age of twenty-three we find him lecturing on botany and superintending a botanical garden, and at twenty-eight he begins to publish his new ideas of classification. Cuvier's history is similar. A poor lad, he displayed an irresistible impulse to scientific observation, and by twenty-nine published a work in which the central ideas of his system are set forth. Humboldt, again, showed his special scientific bent as a child. From his love of collecting and labelling plants, shells, and insects, he was known as "the little apothecary." At twenty he published a work giving the results of a scientific journey up the Rhine. In medicine, Haller is a notable instance of precocity.—"*Genius and Precocity*" by James Sully in *Popular Science Monthly* for Sept.

ONE of Lord Macaulay's letters has just found its way to a public institution. It bears the date October 24, 1748, and is interesting as giving the writer's estimate, a few weeks previous to publication, of his "History of England from the Accession of James II." "I work," he says, "with scarcely an intermission, from seven in the morning to seven in the afternoon, and shall probably continue to do during the next ten days. Then my labours will become lighter, and in about three weeks will completely cease. There will still be a fortnight before publication. I have armed myself with all the philosophy for the event of a failure; though Jeffrey, Ellis, Marion, Longman, and Mrs. Longman seem to think that there is no chance for such a catastrophe. I might add that Macleod has read the third chapter, and though he makes some objections, professes to be on the whole better pleased than with any other history that he has read. The state of my own mind is this: When I compare my book with what I imagine history ought to be, I feel dejected and ashamed; but when I compare it with some histories which have a high repute, I feel reassured."

A CERTAIN very young girl living in Middlesex county decided last summer to try the Harvard examinations, in the autumn, with a view to entering the regular course of study in the Annex. She betook herself, therefore, with a trunk full of books, to a secluded home in the country, and settled herself for ten weeks' hard work reviewing her high school studies and conquering Greek enough to pass for college. Two young gentlemen presently appeared upon the scene determined also upon secluded preparatory study. When they learned that the pretty girl with the Titian hair was "digging" for Harvard too, they tried to laugh her out of her ambition. One of them, with the wisdom of twenty years, told her it was really a sin and altogether against nature for a seventeen-year-old-girl to try to read Greek alone or to think of taking a Harvard course. The other youth declared that it didn't matter, she'd never "get through the exams anyway," and tried to persuade her to take rides and boating excursions. But still she studied faithfully and crammed her self taught Greek until the examinations came. Then she went down to Cambridge and passed her examination triumphantly, while both of the young men failed dismally, and found themselves obliged to study another year before getting into college.—*Boston Record.*

"WRITES badly, does he?" "Oh, that doesn't matter; I've generally found that boys who could write well were little good at anything else." So spoke the head master of a large public school, when discussing the penmanship of a favourite pupil, who was a prodigy in the matter of Latin verses and Greek roots, but whose writing would have been unworthy of a small boy in a preparatory school. What with letters of all shapes and sizes, some sloping to the right, some tumbling over one another to the left—his exercises looked very much as though a spider had contrived to fall into the ink pot, and then crawled over a sheet of paper until he had got rid of the ink that covered his body and legs. And with the head master's dictum to encourage him in his carelessness, it is no wonder that matters did not improve as the boy passed from school to college, and from college to professionalism. He had been taught to consider bad writing a sign of genius, and the result was that he wrote plenty of clever letters and essays, which no one but himself could decipher. And is not this typical of hundreds and thousands of cases at the present day? Partly because handwriting is not taught so carefully and industriously as in by-gone times, partly because of the headlong speed which characterizes most of our daily transactions, whether in private or public life, there seems to be some fear lest penmanship may become almost as much a lost art as letter writing.—*Cassell's Magazine.*

IT is customary with the reactionary parties in France to look to England as the model of everything that is stable; and as their ignorance of English affairs prevents them from seeing what is going on beneath the surface, they conclude that what they believe to be the British constitution is invested with indefinite durability, whilst the French republican constitution is always about to perish. In calculating thus, the French reactionists omit one consideration of immense importance. They fail to see that the very presence of old institutions, unless they are so perfectly adapted to modern wants as to make people forget that they are old, is in itself a provocative to the spirit of change, and that it excites a desire for novelty, which has never been more common than it is now. The old thing may quicken the impulse to modernize, when a new thing would have left that special passion unawakened. In many European towns old buildings have been destroyed, not because they were either ugly or in the way, but simply because they were old, and because the modern spirit did not like what was old, and wanted to put it out of sight. Changes have therefore been made in these towns that would not have been thought of in some new American town, where there is nothing to irritate the modern spirit. It cannot be denied that the presence of some old institutions in England does just now excite the desire for change. Great numbers of the English electors and many of their representatives are animated by the same tendency to destroy and reconstruct which used to be very active in France. It does not require any special clearness of vision to perceive that, so far from having closed the era of great changes, Great Britain and Ireland have only entered upon it.—*Philip Gilbert Hamerton in the Atlantic Monthly* for September.

Notes and Comments.

MR. BOWERMAN'S salary for 1887, in S. S. No. 8, Grey, is to be \$450, not \$440, as stated recently in our columns.

THE interesting "Special Paper" on Chautauqua is from the pen of the Rev. R. D. Fraser, M.A., of Bowmanville.

MISS KIN KATS, a graduate of the normal school of Tokio, has been chosen by the Japanese government to receive three years' training at the government's expense, at the Salem Mass. Normal School. She will then take charge of the normal schools of Japan. She will be the first Japanese woman to be educated at the government's expense in America.—*The Academy News*.

WE have received the following from the Honourable the Minister of Education:—

To Local Boards of Examiners for entrance to High Schools and Collegiate Institutes.

DEAR SIRS,—In view of the complaints made respecting the papers prepared for the recent entrance examination to High Schools, I deemed it advisable to confirm every recommendation made by the local Boards of Examiners. In addition to the candidates recommended there were several whose marks were so high (although they failed partially in one or two subjects) as to warrant me in passing them without further consideration. There were others, however, whose standing was more doubtful, and whom the local Boards had not recommended. In order to continue the responsibility with which local Boards are charged in this matter, I advised a re-consideration of the standing of such candidates, thinking it quite possible that, through a desire to construe the regulations strictly, the Examiners had read the papers too closely, thus excluding from the High School some pupils who might very properly have been admitted.

In order that the intentions of the Department may not be misunderstood, I desire to state that, as a rule, the candidates passed provisionally, as well as those recommended, are confirmed by the Department. Some Boards have been found too lax and others rigid in their examinations, and in a few cases the Department has had to revise their work. Owing to some exceptional features in the papers submitted last July the *right of review* was more freely exercised than usual, with the sole aim of restoring the equilibrium which had been disturbed. In connexion with the general work of local Boards of Examiners, it may not be inopportune to make a few observations.

1. The great object of Entrance Examination is to test the candidate's *fitness* for taking up the work of the High School. Deficiencies of a trifling character, such as

a slip in spelling, or a mere blunder in an arithmetical calculation, should not be fatal to his success. Where it is quite evident he comprehends clearly the subject in hand and has that maturity of mind which is necessary for undertaking High School work, then, notwithstanding some minor defects, such as I have already referred to, he should be *recommended* without the slightest hesitation, and the grounds of such recommendation stated opposite his name. (See Reg 86.) On the other hand, Examiners should remember that the standard for *entering* the High School determines the thoroughness of the work in the Public School. Answers badly expressed and badly put on paper, or answers betraying a general want of knowledge of the subject, should not entitle the candidate to any consideration. A good foundation in all elementary work must be laid in the Public School. To preserve the unity of our system the High School should not be required to do Public School work, while at the same time to give as many as possible the superior advantages of High School training, no one should be refused admission who shows reasonable evidence of fitness.

2. The subjects offering the greatest difficulty to candidates seem to have been Literature, Grammar and History. In regard to the first two I am aware that a change in the mode of questioning has been recently introduced, to encourage better methods of teaching. It may be that in seeking to obtain this object a more easy gradation would have been better, but there is no doubt as to the desirability of the object itself. So far as the failure was attributable to the use of terms not found in the authorized text books, or so far as it arose from the adoption of too high a standard, is an objection which can and will be removed. But still the important element, namely, the proper mode of questioning in these subjects, remains. To prevent failure requires more *thoughtful* teaching—more mental training, and less dependence upon the memory simply. In regard to History a similar course is necessary. To memorise a few dates and leading facts—as the multiplication table is often learned—is not *studying History*, and yet many teachers say that is all, or nearly all, pupils who are well up in other subjects can do at the age at which they usually enter the High School. Now, if this be a correct estimate of the pupils' mental grasp at that age, the subject of History might better be dropped out of the curriculum. But is it true? For instance, is it not possible for the pupil to give an intelligent idea of the higher civilization of the Roman occupation of Great Britain as compared with its condition at the time of the invasion of Julius Cæsar—of the bold stand made by King Alfred time and again against

the Danes—of the despotism of the Stuarts—of the benefits of *Habeas Corpus*—of the character of the Georges? etc., etc. True, on all of these and kindred topics the Examiners should look only for such fulness of detail as could reasonably be expected, having regard to the age of the candidates. A judicious Examiner could in this way do equal justice, and, in many cases, test quite as well the attainments of a candidate for a Second Class Certificate and a candidate for entrance to a High School on the same paper—the only difference being the fulness of the answer and the mental grasp exhibited in each case. It is in this spirit the Department desires the examination in History to be conducted. What the Examiners should consider is not, "Has the question been fully and exhaustively answered?" but "Does he show a *fair* knowledge of the facts, either as independent facts, or in their *relation* to other facts?"—"Has he stated all a pupil at his age should know if he had given that attention to the subject which he could be reasonably expected to give?" It is scarcely possible to ask any good question in English or Canadian History, in answer to which many pages might not be written. The intelligent Examiner will at once discern that it is not a matter of *quantity*; it is a knowledge within the natural and necessarily limited range of a child's possible attainments that is sought. To expect more, or to insist upon more, in History, or in any other subject, would defeat the purpose of the examination.

3. I observe it is the practice of many Boards, when the candidate fails in one or two subjects, not to read the remaining papers. When the failure is complete this may be quite justifiable. But when there is any doubt as to the candidate's attainments every paper should be read. It is as much the duty of the Board to *recommend* candidates as to *pass* them provisionally.

4. Much inconvenience sometimes arises from delay in forwarding the usual Schedules to the Department, particularly at the Christmas examination. Hereafter I trust no effort will be spared to have returns made in time.

5. The Department is largely dependent for its successful management of public affairs upon those invested with local responsibility. That they have done their work well is not open to question. In complicated machinery of any kind there is necessarily considerable friction. Where prudence and forethought would remove irritation or promote efficiency they should be exercised. The absolutely perfect is unattainable. Very often "what is best administered is best."

I have the honour to be, yours truly,

GEO. W. ROSS,
Minister of Education.

EDUCATION DEPARTMENT,
TORONTO, September, 1886.

Literature and Science.

TO THE BLACKBERRY.

FINN thee by the country side,
With angry mailed thorn,
When first with dreamy woods and skies
The summer time is born.

By every fence and woodland path
Thy milk-white blossom blows;
In lonely haunts of mist and dream,
The summer airs enclose.

And when the freighted August days
Far into autumn lean,
Sweet, luscious, on the laden branch,
Thy ripened fruit is seen.

Dark gypsy of the glowing year,
Child of the sun and rain,
While dreaming by thy tangled path,
There comes to me again,

The memory of a happy boy,
Barefooted, freed from school,
Who plucked your rich lip-staining fruit
By road-ways green and cool,

And tossed in glee his ragged cap
With laughter to the sky;
Oblivious in the glow of youth,
How the mad world went by;

Nor cared in realms of summer time,
By haunts of hough and vine,
If Nicholas lost the Volga,
Or Bismark held the Rhine.

Oh time when shade with sun was blent,
So like an April shower,
Life has its flower and thorn and fruit,
But thou wert all its flower.

When every day Nepenthe lent
To drown its deepest sorrow,
And evening skies but prophesied
A glorious skied to-morrow.

O, long gone days of sunlit youth,
I'd live through years of pain,
Once more life's fate of thorn and fruit
To dream your flower again.

WILLIAM WILFRED CAMPBELL.

West Claremont, New Hampshire.

LETTERS AND NUMBERS.

THE Greeks used the letters of the alphabet for numerals. The cumbersome system used by the Romans, and called after them, consisted of strokes (I - II - III - IIII) to indicate the four fingers, and two strokes joined (V) to represent the hand, or five fingers. Ten was a picture of two hands, or two V's (X). But when the Romans and Greeks worked at the higher mathematics or attempted hard sums in arithmetic, they are much more likely to have used letters, in

order to avoid the clumsiness of these numerals; in other words, they used what looked like a kind of algebra. We know that they tried to simplify the Roman numerals at Rome by making four and nine with three strokes instead of four, by placing an I before the V and an I before the X (IV and IX).

Our use of the numerals which we call "Arabic" is comparatively recent, and it is believed that the Arabs got these numbers from India several centuries after the Koran was written, or about eight hundred years after Christ.

Whether the Indian numerals were originally part of some ancient alphabet, or a series of shortened signs originally somewhat like the Roman numerals that we still use, is not really decided.

The numbers used by the peoples of India who wrote in Sanskrit were very like the figures 1, 2, 3, 4, 5, 6, 7, 8, 9, and 0, that we use to-day. Even closer resemblances will be found if one goes back to the earliest forms of our numerals; for, during the last thousand years, our numbers have undergone some slight changes. Together with these numerals, the Arabs learned from India how to do sums by algebra. For algebra, though an Arabic word, is a science of which the Arabs were ignorant before they reached India.

It may be said that the invention of these numerals and of algebra for the higher mathematics stamps the old Hindoos as one of the most wonderful races of the world.—From "Wonders of the Alphabet," by Henry Eckford, in *St. Nicholas for September*.

DRYING UP THE ZUYDER ZEE.

THE project of drying up the huge Zuyder Zee is again being urged with some vehemence. A "State Socialist" argument is now freely used; it is said that the gigantic task will find rich employment for the Dutch working class population for many years, among whom social democracy is increasing. The provinces of Utrecht, Gelderland and Groningen, and most of the municipalities whose cities and towns lie upon the sea, have given their adhesion to the scheme, and have empowered a commission of experts to report on the probable cost.

On the other hand, a few of the towns, including Monnikendam and others, protest eagerly against the scheme, since its execution must infallibly convert them into truly "dead cities." If the sea should ultimately be turned into dry land the kingdom of Holland will be enlarged by the addition of a new province twice the size of the province of Utrecht. The new country has been already provided by anticipation with the name of "Willensland."—*Chicago Tribune*.

NIGHT AIR.

AN extraordinary fallacy is the dread of night air. What air can we breathe at night but night air? The choice is between pure night air from without and foul air from within. Most people prefer the latter—an unaccountable choice. What will they say if it is proved to be true that fully one-half of all the diseases we suffer from are occasioned by people sleeping with their window shut? An open window, most nights in the year, can never hurt anyone. In great cities night air is often the best and purest to be had in twenty-four hours. I could better understand shutting the windows in town during the night, for the sake of the sick. The absence of smoke, the quiet, all tend to make night the best time for airing the patient. One of our highest medical authorities on consumption and climate has told me that the air of London is never so good as after ten o'clock at night. Always air your room, then, from the outside air, if possible. Windows are made to open, doors are made to shut—a truth which seems extremely difficult of comprehension. Every room must be aired from without, every passage from within.—*Sanitary World*.

DANA finds that the average height of the land above sea-level is about 1,000 feet, and that this would probably cover the bottom of the sea to the depth of 375 feet; so that, taking the average depth at 15,000 feet, it would take forty times as much land as exists above sea-level to fill the oceanic depressions. The mean height of Europe has been stated to be 670 feet (Leitpoldt makes it 974 feet); Asia, 1,150; Europe and Asia together, 1,010; North America, 748; South America, 1,132; all America, 930; Africa, probably about 1,600 feet; and Australia, perhaps 500. So far as now known, the extremes of level in the land are 29,000 feet above the level of the ocean, in Mount Everest of the Himalayas, and 1,300 feet below it, at the Dead Sea. Asia has also a great depressed Caspian area; Africa, in the Algerian "chotts," sinks to 100 feet below sea-level; while in America, Death's Valley, California, reaches from 100 to 200 feet lower than the ocean surface.

It is not long since a Frenchman wrote two silly little books about the English, treating them in that lively style which is always sure of popularity. Nearly at the same time, another Frenchman, more careful and more serious, published a volume on the same subject, which, though it contained a few unintentional errors, was on the whole likely to be instructive and useful to his countrymen. The flippant little books had an enormous sale; the instructive book had but a moderate circulation.—*P. G. Hamerton in the Atlantic Monthly*.

Special Papers.

CHAUTAUQUA.

CHAUTAUQUA is the principal one of the score of summer assemblies in the United States and Canada, which seem to be the lineal descendants of the old-fashioned camp-meeting, but which have an educational rather than a directly religious object in view, and find a legitimate place also for recreation pure and simple. It dates from 1874, and claims to be the first of its kind in point of time, as well as of importance.

No better locality could have been hit upon than that selected by the founders of Chautauqua, Lewis C. Miller, Esq., and Dr. J. H. Vincent. In northwestern New York, three miles from the head of Lake Chautauqua, which lies 700 feet above Lake Erie, though only ten miles distant, and about 1,400 feet above the sea level, the little city in the woods is of easy access over the great railway lines by Mayville, some sixty or seventy miles west of Buffalo, at the head of the lake, or Jamestown, some seventeen miles distant, at its outlet. Chautauqua lake is fed mostly by springs in its banks and bed, and is therefore a clear, cool, and wholesome body of water. One hundred and thirty-six acres of a well-wooded slope, artistically laid out in parks and avenues, afford an admirable site for the city-like Hotel Athenæum, and the 500 cottages, which accommodate the immense throngs of residents and visitors—said to verge on 100,000 in the season. The whole concern is managed with truly Barnum-like skill and enterprise. The gigantic programme, stretching from June 24th to August 30th, and taking in almost every waking hour, runs with clockwork smoothness. The machinery is nicely adjusted, and with merely the risk of perhaps rather close quarters at the height of the season, the visitor feels quite at home among the thousands, and is perfectly free to indulge in whatever strikes his fancy, from the roller coaster, which, it ought to be said, is banished to a remote part of the grounds in the neighbourhood of the stables and rubbish heaps, to Prof. Bowne, of Boston University, on "The Philosophy of Theism."

The Chautauqua with which the visitor of a day comes into contact is the jolly cottage life, and the popular lectures or concerts of the Amphitheatre, an admirable audience-room seated for 5,000, furnished with an excellent pipe organ, and open on three sides to the air. Perchance he may strike upon a picturesque "C.L.S.C." procession, or the "Athenian Watch-Fires," or the "Illumination of the fleet" on the lake. But the real Chautauqua is to be found in the classes, whose work goes quietly forward simultaneously in a dozen buildings scattered through the grove. The history of the movement will illustrate this. It began in an "Assem-

ble" for the training of Sabbath school teachers, and the normal work of this "assembly" is still the core of the whole. It is faithfully carried out from year to year under the best leaders to be procured. The Literary and Scientific Circle came next, in the order of development, and has attained enormous proportions. Some 24,000 persons are in active membership. Its work is done chiefly at the homes of its members, and consists in the reading of a four years' course in literature, science, art, sociology, and religion. The course is set upon a scale to embrace all persons of ordinary intelligence who are willing to give a short time each day to thoughtful reading. About the "assembly" and the "C.L.S.C." have sprung up the Teachers' Retreat, Gathering of Educationists, the School of Languages, for brief summer courses; the College of Liberal Arts and the School of Theology, for study through correspondence; besides the popular daily programme in the Amphitheatre, and more select lectures for thoughtful people in the smaller audience rooms. Occasionally, as this season, when the American Society of Microscopists made Chautauqua the place of their annual meeting, the ordinary routine is enriched by the presence of specialists in science or art from all parts of the country.

It may be readily guessed that with so many schemes in hand, and with a constituency for the most part quite popular, there will be some superficial work done. It is doubtful whether the superficiality of cursory and intermittent reading is worse than that which is the certain attendant on cram. But Chautauqua has no need to dread the sneer of "superficial." Her leaders seek thoroughness in the work done, as far as that work goes. And, besides, she claims as her object, not the giving of a complete education, hardly even the laying of the foundation of an education, but the *giving of an impulse*. And for this she certainly deserves favourable recognition. The influence of Chautauqua on the training of Sabbath school teachers has been wide-spread and wholesome. Her various correspondence schools are doing unquestionably good work; while the Literary and Scientific Circle is providing for thousands what a Mississippian captain, who was one of its readers, writes that it had given him: "When I stand on deck stormy nights *I have something to think about*: and you know, when one has not taken care of his thoughts, they will run away with him, and he will think about what he ought not."

"Chautauqua University" is now the title which covers the whole work. It is presumed that it has degree-conferring powers. So far as we know it has granted no degrees. It cannot be too cautious in beginning. It has had its phenomenal success because it has been content with the modest aim of "giving an impulse to education," and of

"inspiring a love for study." The brief period into which the summer work is crowded, however thorough that work may be, precludes the covering of very much ground. Voluntary "circles" and "correspondence schools" can hardly hope to prepare for an academic degree. It is safe to predict that the slower the degree-conferring process goes on, the more wholesome and enduring will the influence of the movement be.

The management of Chautauqua is Methodist Episcopal, but its methods and aims are catholic. Its purpose has ever been distinctly religious, though not sectarian. Dr. Vincent, the ruling spirit of the whole, speaking in our hearing, made use of these memorable words: "The beginning of Chautauqua was the Book. The work of Chautauqua is the Book; and alas for Chautauqua when the Book ceases to be the centre of its work."

It may be necessary to add to what may be thought a mere eulogy, or perchance an advertisement, that the writer is not a Chautauquan; but a visit to the place and some previous knowledge of the work done, have convinced him that this and similar summer assemblies have a place which they are filling admirably, and which only they can fill. The tastes of many will lead them to prefer such summer resorts to hotel or cottage life at the seaside or in the mountains; those thirsty for knowledge, but with few opportunities, will find the brief summer session a boon; while the wide diffusion of knowledge, secular and sacred, and of a love for study, through local circles and correspondence schools, can be nothing but beneficial. One of the memorable scenes of the late session was the teaching of a Bible class of 2,000 by the novelist, Cable. It was as it ought to be. Culture and Christianity should never be divorced.

R. D. FRASER.

Bowmanville, Sept. 1, 1886.

VENTILATION.

1. Do the houses in which we live and the public halls in which we meet with others contain pure air?

They do not.

2. Why is this?

Because we are all the time throwing off impure air and gases from our lungs, which, with the heat and other gases from stoves and furnaces, render the rooms close and unhealthy.

3. What are the names of the gases which render the air so unhealthy?

Their are two principal kinds, called carbonic acid and carbonic oxide.

4. How are they produced?

The first is thrown off from the lungs, and both are formed when anything like wood or coal is burned with fire.

5. How does the air in a room which contains either of these gases affect persons?

It makes them cough and causes the headache.

6. What common mistake do people make in their houses?

They sleep in small rooms with both the doors and windows closed.

7. Why is this a mistake?

Because each person renders ten cubic feet of air impure in a minute, and as, usually, there are two persons in one room, the bad air soon affects the sleepers, so that they do not rest well, but toss about and have troubled dreams.

8. What is the size of an ordinary bedroom?

About 12 feet long, 10 feet wide, and 10 feet high.

9. How long should it be before so much impure air would be thrown off from the lungs of two sleepers, in such a sized room, as to render the air unfit to breathe?

Not more than one hour.

10. How may a supply of pure air be obtained?

By raising the windows a little at the bottom, and lowering them about the same space from the top.

11. Why is this a good plan of ventilation?

Because in such a case the warm and foul air would escape at the top of the window, while fresh air would enter at the bottom.

12. Should the windows be open on both sides of the room at the same time?

They should not; as, in that case, a current of air would pass through the room, and might cause the sleepers to take cold.

13. In what other way may a room be ventilated?

If it contains a fire-place, the best plan is to leave the fire-board partly open.

14. How should teachers ventilate school-rooms?

By opening some of the windows wide for a few minutes at each recess.

15. How should churches and public halls be supplied with fresh air?

About an hour before the time for meeting the windows should be raised for fifteen minutes, then closed entirely on one side, and almost so on the other, leaving only a small space open at the top of each one.

16. Why should the windows in a public building be opened an hour before the time of meeting?

In order that the fresh air may be somewhat warmed before the people arrive.

17. At what rate would an audience of two hundred persons render the air of a church or hall impure?

Two hundred would render the air impure at the rate of two thousand cubic feet per minute.

18. Are our school buildings and public halls properly ventilated?

They are not; as a general rule they are sadly neglected.—*American Teacher*,

Educational Opinion.

RELIGIOUS INSTRUCTION IN SCHOOLS.

THE public school in America is an institution of which every American citizen may justly feel proud. Every school may be regarded as an anchor for the security of the ship of state, an additional guaranty of the perpetuity of our republican institutions. Human intelligence, however, has not yet arrived at a point beyond which it cannot move forward. The methods of knowledge are constantly changing.

But what is education? It correctly signifies development, the unfolding of mind and body, of all the physical, intellectual, and moral elements of our being. No education can be perfect which is not in the strictest sense moral education. But "morals" have not necessarily any connection with theology. Theological training, properly so-called, belongs exclusively to religious institutions, and to professed teachers of religion. Ministers of various denominations have from time to time made strenuous efforts to introduce theology in the schools under the name of morals, but so far without any great success attending their efforts. About four years ago a conference was held in the city of Boston, to which representatives of all religious denominations were invited. The special business before the conference was to make arrangements for the compilation of a moral text-book to be used in the schools of Massachusetts. It pleases me to say, that the idea and opinion of all the reverend gentlemen was, that the book on *morals* should entirely refrain from any attempt at instruction in religion. A committee was appointed, consisting of Universalists, Baptists, Catholic, Congregationalist ministers, and myself representing the Jewish faith, to arrange for the compilation of a manual such as was desired. Competent editors were secured. But though this step was taken four years since, no results have followed the action then taken. The text book on morals does not exist. The chairman of that committee told me recently the reason is, "You cannot separate morals from religion," hence it would be entirely impracticable. Quite recently circulars and pamphlets have been sent to ministers of all denominations, requesting them to use their influence in accelerating the production of such a work, and pointing out the best and most effective means for producing such a manual for instruction in public schools. The circular says, that at the meeting of the Presbyterian Synod of New York, held at Troy, Oct. 21, 1885, a resolution, introduced by Rev. Geo. Shipman Payson, was adopted, to be considered and acted upon at the next meeting of the body in Elmira, October, 1886, urging

them "to use every proper influence to secure the incorporation with the course of state and national instruction of the following religious truths as a ground-work of national morality, viz:

1. "The existence of a personal God."

2. "The responsibility of every human being to God."

3. "The deathlessness of the human soul as made in the image of God after the power of an endless life."

4. "The reality of a future spiritual state beyond the grave in which every soul shall give account of itself before God, and shall reap that which it hath sown."

To this resolution it was proposed to add the following item, viz:

5. "The Decalogue, interpreted by the Sermon on the Mount, and by the life and example of Christ, as the standard of morality."

The circular goes on and says:

"It will be seen that the resolution is absolutely without sectarian bias. It makes the sharpest possible distinction between church and religion. It presents only those fundamental religious truths which belong to all sects alike, and which, in every age, have been the inspiration of those lives of whom the world was noteworthy."

These five points are considered *perfectly* undenominational, absolutely *without* sectarian bias. Now, I have no doubt that those who desire to see this work put into execution are desirous of giving the fullest liberty to all schools of thought, but so impossible does it seem to disconnect morals from theology in the minds of the bulk of Christian ministers that they perhaps unwittingly propose a decidedly theological and really sectarian basis for what they are pleased to call strictly "undenominational moral training."

Whatever may be the privately or publicly expressed views of any person or set of persons with regard to the Bible, the Bible is not regarded as a divine volume by everybody who pays taxes to support public institutions; and in a free country which tolerates no established church, the endeavour to foist a biblical foundation for morals upon an unwilling section of the community is surely an unconstitutional act, and one which in the long run will inevitably cause religion to be regarded as a bone of contention, but by no means a blessing to the public at large.

President Eliot of Harvard College lately expressed an opinion, that he would highly approve of a practice in vogue in Germany and other European countries, that ministers of various denominations visit all the schools periodically for the purpose of imparting religious instruction to such scholars as belong to their respective faiths. This practice would undoubtedly have a direct tendency to create estrangements between the children. It is calculated to bring forth a

spirit of prejudice and bitter feelings. Children become dubbed, subjected to taunts and annoyances, bordering upon persecution, because of the religious proclivities of themselves and their parents. Now, in this country, we pride ourselves upon the perfect equality of all sects and no sect in the eyes of the law. The schools are supported by Catholics, by Trinitarians and Unitarians, Jews, Materialists, Agnostics, and Spiritualists. The children are sent to school to receive a secular education; to have their faculties trained, their minds developed, their hearts enlarged, their character formed and improved; to qualify them to deal with all the phenomena and laws of nature, and with all the interests of patriotism, benevolence, and industrial activity in the community to which they belong. Sunday schools, etc., are provided for religious instruction. And, if the statement of the circular sent out by the Presbyterian Synod is true, that at least 500,000 children in New York State alone are not reached with religious instruction by either Catholics or Protestants of any denominations, it reflects indeed no credit on the various churches and spiritual guides, who show either their unwillingness of their neglect in reaching those, to whom they should give their greatest attention.

But many ask, Is secular training alone enough to really educate a child and qualify him to nobly and usefully perform the duties of life? It depends entirely upon what is meant by secular training. If secular training is less than moral,—that is, if the moral nature of the scholars is not recognized; if no attempt is made to inculcate principles of justice, truthfulness, honesty,—in a word, *virtue*, education is lamentably deficient, and the teachers have sadly neglected their duty. But when we get down to the bed-rock of morality, pure and simple, we have left all theological differences far behind us.

True religion is an every-day affair. The moral law has its bearing upon every event of life. It does not deal with the observance of one day out of seven only, but with the observance of every day in the year as a day upon which it is permissible only to act honestly. Upon pure morality all the churches are agreed, and so even are all the atheists who respect virtue and endeavour to live as good citizens. Col. Ingersoll, for instance, does not approve of theft; neither does a Catholic Archbishop. A falsehood is often quite as grave an offence in the eyes of an agnostic as in those of a church member. Treachery and dishonour are held as much in execration by the ultra radical as by the ultra conservative. We need not really discuss this point further than to call your attention to it; we are convinced that an appreciation of the moral sense and the wish to cultivate it, lies at the very root of the desire of every right-minded person in every land beneath

the sun; but when theological partisans come together in the name of religion, which is a matter of individual conscience, with which the state has no right to meddle,—having nothing to do with a person's private convictions; when clergymen and their adherents attempt to exercise supervision over the religious tenets of the children of the multitude who support the public schools, I consider them promoters of the greatest evil,—one very nearly affecting the welfare and liberty of our country.

The children must feel that they are all one, all equal; race, colour, caste, must all be forgotten; they must meet as equals, form one family, and never in any way be encouraged to pry into each others radical and religious differences. It is our utmost duty to retain the common school system, to strengthen its bulwarks, and work vigorously to destroy whatever has a tendency to weaken its power or limit its usefulness and influence. I maintain that moral training such as I have described is in a measure imparted to the children in our public schools, and is amply sufficient to produce respectable citizens, to restrain vice, promote virtue, and consolidate the two interests of the Republic.—*New England Journal of Education.*

Methods and Illustrations

ELOCUTION.

IF we call to mind the various occasions on which we have listened to public speakers, and endeavour to remember from which we experienced the chief pleasure and profit, we shall not always find that this was owing to the wisdom or wit of the utterance. The pleasurable remembrance is more likely to be associated with any voice which sounded distinctly in our ears, giving each word and sentence as if the speaker were close beside and talking to ourselves, yet adding to the minuteness of personal conversation the weight and force which public utterance gives to spoken thought. When we have taken the trouble to go, for this purpose, to some public gathering, there is always a willingness to pay attention, if it can be given with any degree of comfort. But, almost three times out of four, if at any distance from the speaker, you hear one sentence, and fail to hear the next, or you hear the beginning of one and not the end. Presently the connexion of thought—the speaker's chain of reasoning is broken, and you have lost all the force of that part of his argument. You wait till he reaches a new point, determine to listen; but presently you lose that also, and so on till the end, by which time you only know that a gentleman has been speaking now and then, but that you did not know what he meant for want of the words between

now and then. He will begin a sentence plainly, and drop his voice to inaudible tones at the end, or he will speak in a voice the echo of which every here and there drowns the sound of the words, or he will speak now carefully and be heard, and then carelessly and fail to be heard. Half the oratorical failures are the result of inaudibility. People do not always expect fine sentences, do not always expect wit, do not always expect wisdom, but they do expect to hear what a man has to say, and if he can make them hear it, and if it be a straightforward statement of his views not too prolix they will generally listen, for a reasonable time with profit and remember with pleasure. But as a rule they do not get this. The habit of reading newspapers is overmastering the habit of listening to speakers, and the least pleasing is beginning to occupy the whole ground.

We are often told that elocution, with a view to forming public speakers, should be taught in schools. I would suggest that a few things are necessary to obtain the desired result, namely, pupils should be practised in:

1. Thinking rapidly, so as to grasp a subject, its past, present, and future, so far as known to the pupil, massing in his memory at once, for present use, his knowledge of the matter being discussed.
2. Giving their ideas in as good English as they can produce at the moment, in which the teacher should suggest improvements when a feasible.
3. Speaking plainly—best learnt perhaps by speaking always to the farthest part of the room. Practice will do the rest, if it be frequent and earnest. R. W. PHIPPS.

NEW IDEAS IN GEOGRAPHY TEACHING.—I.

PERMIT me to depart from the customary method of procedure by starting from the general and going down to the particular subject, by first directing attention to the fact that in teaching young pupils we should invariably start from sense-perception, from that the next-step to conception and idea is easily taken, never *vice versa*. Show the child the particular, the concrete thing; show him several similar facts, and offer an opportunity to abstract from them—to rise from the object to the idea. Every subject of instruction in the lower schools has a certain elementary basis of sense-perception. The primary ideas resulting therefrom will be easily understood by the child, because by means of his five senses he can take them in, retain and assimilate them. If anything were taught lacking this sound basis, that is, anything the elements of which cannot be perceived by the senses, it has no business to be included in the course

(Continued on page 554.)

TORONTO:

THURSDAY, SEPTEMBER 16, 1886.

OBEDIENCE.

I.

THE *Spectator* (London, Eng.) of the 21st of August contains a long and well-written article with the foregoing title. The peg upon which it was hung was a barring-out incident in a Provençal pauper school in France. "This rejection of authority," says the *Spectator*, "by a few charity-boys, and still more, the respect with which it appears to have been met by its judges, combine to furnish a striking illustration of the tendencies of our day." And it goes on to say, after touching on Rousseau's scheme of education and the peculiar training John Stuart Mill underwent at the hands of his father: "We know not whether experience justifies the suspicion that scholarship has become less exact since training became less strict; we should expect, and we are somewhat surprised to find that John Mill did also, that this would be the result of a system which never requires a child to persevere in anything that is distasteful to him. The belief that the school-room may be made as agreeable as the playground, can be entertained only by those who have never had any permanent relations with either."

With the opinion expressed in the last sentence we are entirely in accord. And yet it is useless to attempt to blind our eyes to the fact that such a belief as that which the *Spectator* attempts to demolish is, if not at present very wide spread, at least showing itself possessed of much power of spreading. On this continent especially is this the case. That much-abused word Liberty can best, we think, be defined among cis-Atlantic peoples to mean "absence of necessity for obedience." The incident of the French Provençal school which elicited four closely-printed columns from the *Spectator* has had many parallels in the United States, and the leniency with which it was treated by the authorities has been more than paralleled, if we may judge from the jocular accounts of the newspapers.

We in Canada are very much influenced by the habits of thought and modes of action of our neighbours. That restlessness under restraint, that hatred of discipline, that scorn of authority which marks a republican nation whose unrecognised

motto is "A Free Country," is contagious. And it shows itself in very various disguises; indeed were it traced through all its ramifications, it would doubtless be found affecting all the relationships of life: parent and child; teacher and pupil; master and servant—in short wherever there exist mutual rights and duties.

It is a large and complicated subject this. The only phase of it to which we need in this place turn our attention is the effect of this laxity of subordination upon the minds and characters of our pupils. If, as we believe, there is really in existence among us a spirit of insubordination, and if, as we also believe, it is encroaching upon the relationships of teacher and pupil, it is high time to consider thoughtfully what is its influence upon the youth of the country.

Scholarship, thinks the *Spectator*, has become less exact, and in saying so it has wisely chosen its words. Exact scholarship must ever be the result of laborious study, and laborious study is ousted from the schoolroom when the attempt is made to make that schoolroom as agreeable as the playground. But when we say this, we are by no means advocating the converse of this proposition and arguing that disagreeableness is the proper character of a school-room. By no means. Between agreeableness and disagreeableness there is a large neutral region. Besides, the agreeableness of which the *Spectator* speaks is the avowed outcome of the banishment of discipline.

To go back then: a little thought will convince us that the more we banish discipline, the more we strive to eliminate that toil by which alone information is stored up and the powers of the mind strengthened, the less grasp shall we enable our pupils to obtain of the various subjects taught in our schools. This will hold true in all cases—from the public school to the university. Nor are many novel modes of educating any proof to the contrary. The Kindergarten system, although one of its primary objects is to make work agreeable, does not attempt to achieve this end by eliminating discipline and allowing children to do what amuses them, but it attempts to achieve it by (amongst other things) stimulating intelligent interest and curiosity. This is the true source of agreeableness properly so-called. "Wonder," says some one, "is the basis of knowledge"; and intelligent

interest and curiosity are but wonder in other form.

This is a subject of so wide interest that it deserves, we think, more attention than space allows for a single article.

THE METHODIST CONFERENCE AND THE UNIVERSITY CON- FEDERATION QUESTION.

THE Quadrennial Session of the General Conference of the Methodist Church has decided by a vote of 133 to 113 that the University of Victoria College shall enter the scheme of university confederation and remove to Toronto.

The history of the chief portion of the debate is as follows:—

At a meeting of Victoria College Board, held May 21st last, the following resolution was adopted:—

It is the judgment of this board that it would be neither wise nor patriotic in us as a board to reject the scheme because it is not in every particular all that we might desire. We therefore recommend the entrance of Victoria into the proposed federation to the favourable consideration of our General Conference, provided that full security be given us on the two points as to the permanence of the university professoriate and the certainty of a satisfactory site in the park, leaving the final determination of the matter with that body, whose decision this board will be prepared to accept and carry out.

After reading the report, Dr. Nelles moved that it be referred to the Committee on Education. Rev. Dr. Sutherland moved in amendment to the effect that the proposition to remove to Toronto had met with but little encouragement, while on the other hand liberal offers are made by another city to aid an independent Methodist University, therefore be it resolved:—

1. That the report of the Board of Regents be received and referred to the Committee on Education.

2. That this Conference re-affirm the decision of the General Conference of 1883, as contained in the basis of union between the various Methodist Churches, namely, that "The best interests of the Churches, and of education, imperatively demand that our colleges and universities should be under the fostering care of the Church," and also the further decision as contained in the report of the Committee on Education adopted by the General Conference of 1883, viz:—"That the ultimate object to be reached shall be the establishment of a consolidated university for the Methodist Church (Journals p. 205).

And in order that the foregoing decision may be fully and fairly carried out, and the educational work of the Church placed upon a permanent and satisfactory footing, it is ordered that the Committee on Education be instructed to consider and report upon the following points: (1.) The advisableness or otherwise, of changing the location of Victoria University. (2.) The various buildings necessary for the work of the University, with the approximate cost of each, including site; with the equipment necessary as regards furniture, scientific apparatus, library.

On this amendment Dr. Sutherland spoke long and well, on Monday evening, 7th September. On the following morning Dr. Dewar moved as an amendment to the amendment:—

Whereas the scheme of college federation, which has been before the people of this province, provides by means of the proposed university professoriate large and important educational advantages for the students of Victoria and other confederating colleges, under the supervision of the senate of the university in which the church colleges shall be duly represented, while it leaves Victoria as complete control of its own religious life and collegiate work, as it possesses at present.

And whereas, in response to the representations of our Board of Regents, the Government of Ontario has agreed to carry out the scheme, even though none but Victoria comes in; and has agreed to give a site for our college in the Queen's Park at a nominal rent, and has also given assurance in regard to the efficiency and stability of the university professoriate, and the equitable recognition of our claims in future government appointments to the university senate:

Resolved, therefore, that this conference hereby expresses its approval of Victoria University uniting with our Provincial University, on the line indicated in the plans of federation prepared by the representatives of the different colleges; and further, that this conference authorizes and instructs the Board of Regents to complete on behalf of Victoria any necessary details of the basis of union, and to take proper steps to give effect to such federation at as early a period as due regard to existing interests and to the necessary financial and other arrangements shall render it practicable.

Many excellent speeches were made to this motion, amongst others that of Dr. Burwash being prominent. The following paragraphs from his speech are worth quoting in this place:—

Coming to consider confederation, he said it was an attempt to combine the old finished college culture with the broadest modern university lines, and to put upon the Government, upon the Legislature, the burden of the multifarious university learning—and that was a matter properly for the State. He did not think that all this learning should be provided by the Church. The Church did not need all these things, but it did need grand, intellectual men. So far as he could read history and the experience of the past, such men could be best produced by the compact organization of college life, by the contact of mind with mind, by the influence of the professor upon the student, and by the personal acquaintance and personal association and guidance of the professor. Such work could be better accomplished in that way than in any other. That compact college was the sphere of the Church, and where the Church could wield a mighty moral power. It was thought by some that there was danger in the sciences. If the man of science kept to his science there would be no danger, but when he dragged in something else there was danger. The time when a young man attending college was a critical one in his life, when he needed somebody to guide him through that crisis, and rather than endanger a young man he would do without the sciences. But he believed that the two were not incompatible.

Dr. Burwash was followed by the Hon. Edward Blake, Dr. Castle, and others; and at half-past eleven on Friday night, the 10th inst., the vote was put with the result recorded above.

THE Harpers have sold over fifty thousand of William Blaikie's "How to Get Strong."

OUR EXCHANGES.

THE *Century* for September is a number considerably in advance of the average in many points. The *Century's* chief object seems to be variety; this the volume for this month certainly attains. It contains, among minor contributions, "A Summer with Liszt in Weimar;" "Amateur Ballooning" (sensationally illustrated); "Balloon Experiences of a Timid Photographer" (with excellent reproductions of photographs); "A Glance at the Arts of Persia;" and the usual complement of articles on phases and incidents of the war. John Burroughs contributes "Notes from the Prairie;" and Stockton's "The Casting Away of Mrs. Lecks and Mrs. Allshine," and Howell's "The Minister's Charge" are continued.

Littell's Living Age. The numbers of *The Living Age* for August 21st and 28th contain "Native India," *Asiatic Quarterly*, "On the Study of Science," by Sir John Lubbock, *Contemporary*; "Letters and Letter-Writers," *Nineteenth Century*; "Christopher North," *Maxmillan*; "Parrots I have Met," *Cornhill*; "Elizabeth Fry," *Blackwood*; "The Monks of Islam," *Gentlemen's*; "The Templars," *Good Words*; "A Tropical Calm and Sunset, and the Chateaux of Touraine," *Spectator*; "Jacobean Houses in the North," *Saturday Review*; "Beaconsfield, and the Men of the Turkish Army," *St. James'*; "In Heligoland," *All the Year Round*; with instalments of "Treasure Trove," "A Garden of Memories," and "Don Angelo's Stray Sheep," and poetry.

REVIEWS AND NOTICES OF BOOKS.

The New Second Music Reader. Giving First Lessons in Reading Music at Sight, with one- and two-part Exercises and Songs, and Directions to Teachers. The National Music Course. By Luther Whiting Mason. Boston: Ginn & Co. 1886.

Much that is both new and useful will be found in this book. The chapters on Tune and Time in the introduction are not alone interesting but are clearly and well expressed. The test-exercises contained in Part IV. are novel, and we call the attention of teachers to them. In the Appendix a full explanation of the system and use of time-names is furnished. Altogether, we have no hesitation in recommending this work to all teachers and pupils.

Profit Sharing Between Capital and Labour. Six Essays by Sedley Taylor, M.D., Late Fellow of Trinity College, Cambridge, England. I. Fitzgerald, 108 Chambers street, N.Y.

THE question of the division of the profits of industrial enterprises commands attention everywhere, as probably affording the true solution of the problems involved in the relations between Labour and Capital. The work before us, written by a very well-informed student of political economy, gives a very full account of the methods of dividing the profits between employer and workman in several departments of industry—manufacture, agriculture and commerce. This book will be read with profit by every one, and its exceedingly low price (fifteen cents) places it within the reach of all.

The Combined Historical and Geographical Reader.

The History of Scotland in the times of Bruce and Mary. The Geography of Scotland and Geographical terms. London and Edinburgh: William Blackwood & Sons.

By the term "combined" in this work it is not meant to be understood that the history and the Geography of Scotland are learned hand in hand, as it were: the influence of the climate, productions, coast-line, latitude, nature and configuration of soil, etc., upon the people is not learnt simultaneously with the history of that people. The historical portion occupies the first half of the book, the geographical, the latter.

The plan is a good one, however, especially for the young—for whom this book seems to be particularly prepared.

LADY BURTON, wife of Captain Burton, has begun the preparation of a new edition of her husband's translation of "The Arabian Nights," which will be sufficiently expurgated to allow its general circulation.

AN official of the Turkish Ministry of Education is about to publish a translation of the Homeric poems, and to give a sketch of the influence which Homer has exercised upon the development of Turkish culture.

D. C. HEATH & CO. announce, for October, a book on manual training, by Prof. C. M. Woodward, of Washington University, St. Louis, who, they claim, was the founder of the first manual training-school, strictly so-called.

WITH the September number *Treasure Trove* will begin the second year of its increased size. The July number is particularly timely. It is handsomely illustrated and beautifully printed.

UNDOUBTEDLY the prince among question books is the one edited by Edward R. Shaw, of Yonkers, N.Y., and to be ready in September, from the press of E. L. Kellogg & Co., of New York. It will have a number of entirely new features. The typography is to be most excellent.

T. Y. CROWELL & Co. will publish immediately "The Great Masters of Russian Literature in the Nineteenth Century," by Ernest Dupuy, translated by N. H. Dole, and provided with an appendix giving extracts from, critical and biographical notes upon, and portraits of, the authors mentioned.

A REPORT on theological seminary libraries, by E. C. Richardson, of Hartford Theological Seminary, in the Proceedings of the American Library Association, gives some curious facts. The largest library belongs to Union Seminary, New York, Presbyterian, which has 50,000 volumes. By denominations the figures run: Presbyterian, fourteen, with 203,000 books; Catholic, eighteen, with 186,000; Congregational, ten, with 118,986; Baptist, fourteen, 105,000; Episcopal, twelve, 86,000; Lutheran, thirteen, 52,000; Reformed (Dutch), one, 37,000; Methodist, six, 28,000.

BOOKS RECEIVED.

Profit Sharing Between Capital and Labour. Six Essays. By Sedley Taylor, M.A. ("Humboldt Library"). New York: J. Fitzgerald. 1886. 47 pp. 15 cents.

(Continued from page 551.)

of study of the elementary schools; it would, in fact, be like the proverbial bladeless knife that had no handle. In a measure this rule holds good in every branch of study, even in the most abstract philosophy.

A few simple examples may explain what is meant. (1) You may never see South America, yet you can obtain a tolerable accurate knowledge of the topography of that continent. And it is sense perception by means of which you gain this knowledge. You know what is signified by such terms as elevations and depressions, peaks and ridges, valleys and heights, plateaus and plains, coasts and banks, capes and inlets, rivers and lakes, bays and harbours, islands and peninsulas, llanos and pampas; they are the names of things the like of which have come under your own personal observation. And, with the aid of illustrations, your imaginative power may be fed sufficiently to obtain a pretty accurate idea of South America. (2) The artist who modeled the Venus of Milo may not have seen the original in reality, but his power of imagination was so great that, starting from what forms of beauty he had seen, he combined them, and these created the graceful figure which, to this day, has remained the ideal of beauty. (3) No one ever saw the ideal, that is, the absolutely perfect human being, of whom we all have a more or less definite idea. His eye must have the keenness of an eagle's eye; his form must vie in beauty with that of Apollo Belvedere; his strength must be superhuman; he must be accomplished in all the arts—be a Mozart in music, a Raphael in painting, a Demosthenes in elocution, etc.; he must be a thinker far beyond any philosopher of ancient or modern times; in point of morals he must be as unblemished as the very stars above. Where is he to be found? Yet he exists in our imagination; and he is a creation, every part of which has its origin in reality. (4) Take history. You were not present at the downfall of the Roman Republic; yet from what is told you, and what you have experienced yourself, you can form a vivid picture of the state of things at the time of Caesar. And your knowledge of the events that happened 2,000 years ago in Rome will be the more vivid the clearer your ideas are of the political institutions of your own country.

Analogy and comparison are impossible, when there is nothing in your mind with which to compare. Not having a standard measure, how will you measure a distance? Every iota of instruction, every idea, every rule must be based upon or lead back to perceptions previously gained; and when these are wanting, they must first be supplied. This is a condition of rational instruction *sine qua non*.

Now the question arises: Have our pupils the necessary basis of sense-perception when they take up the study of geography, say in the third school year? I think not; and in the way in which geography is taught commonly, we do not even offer facilities for sense-perception. Do not say: "Aye, but we do; for we start from the school-room, and gradually widen the horizon of observation." Despite this assertion, I repeat: The method in vogue is faulty, inasmuch as it fails to establish, first of all, a sound basis of sense-perception. The average teacher begins to build, before he knows upon what foundation he builds. To prove my assertion I could bring in evidence enough to convince even a jury composed of proverbial court-house rats. A few facts may suffice, however.

Out of 90 children in a grammar school in Hamburg, only 38 had seen the sun rise; only 8 had ever noticed the Milky Way. Out of 1,000 children, when entering the public schools of Berlin, only 638 had seen the evening red; only 462 the setting sun. I am prepared to give many more instances of ignorance of common daily occurrences and facts, but my time is limited. Of 502 children that last year entered the schools of a town in Saxony, only 92 had seen the sun rise, and 114 had seen the sun set. You may be tempted to say: "These frightful examples of ignorance were found in Germany; God be thanked, they can not be found in enlightened America." This is but poor consolation. I claim these cases have been systematically enumerated in Germany, because there teaching is a profession, and people there are accustomed to treat educational questions with scientific thoroughness; while in this country, as Hon. Henry Barnard, of Conn., says: "The business of education is pursued with an utter lack of system, with complete, unsympathizing, independent, self-dependent isolation of effort." I am confident, that our American children, if examined, would be found to exhibit the same deplorable want of information. Dr. Stanley Hall has proven this satisfactorily to all who are not prejudiced. My own experience during twenty years in the school-rooms of this country, is in substance the same.

The greatest error, then, which prevails in the teaching of geography, is the lack of preliminary steps. In every other branch of study, even the most inferior teacher proceeds somewhat rationally, but geography usually begins, I am sorry to say, with the introduction of the text-book.

Ritter, the father of modern geographical science says: "The most natural method is the one which makes the child familiar with reality first,—which lays a sound foundation of geographical knowledge, gained through actual observation of that part of nature

which surrounds the child. Here he is to learn to see. Whether he lives in the city, or in the hamlet on the mountain, or in the valley, it is certainly not within the four walls, not from maps, and not from text-books, but in nature alone that knowledge of nature will be gained by him. Nature ever remains the same. She knows no typographical errors, no blunders in drawing, no want of discretion. Nature's teaching is always perfect. This elementary method combines all the requirements of science; it furnishes the stratum of concrete knowledge, from which abstract ideas are drawn. Amid nature the child learns to know the country in all its various conditions, and learns to recognize it even on the flat surfaced representation—the map. If this genuine elementary instruction be given, all difficulties of subsequent instruction in geography are removed."—*New York School Journal*.

NOTES FROM "TALKS ON READING."

READING, as usually understood, should not be commenced until the children have been in school long enough to get acquainted with the teacher and become accustomed to the novelty of their surroundings. Until this has been accomplished the teacher should call the little ones around her and let them talk about their toys, games, and other things that interest them. When the children can talk freely and fearlessly the reading lesson may be introduced.

In order to avoid any misunderstanding, I will say that the names of the letters are not used in connexion with reading. They have their place in oral spelling, but are of no value in relation to reading. The word is taught as a whole, is drilled on as a single word, and is then combined with other words in sentences. The following is an illustrative teaching exercise given at the Institute:

Ten little children, who had never read a word in their lives, were grouped in front of a blackboard. After a word or two of greeting, the teacher said: "Now each one of these little folks may tell me one thing he wore to school." "I wore a coat;" "shoes;" "apron;" "I had on a hat;" were some of the replies. "How many wore hats?" All the hands came up at this. "See the little hat I have," said the teacher, holding up a doll's hat. Then the children talked about it. One child went to the closet and brought another hat. This the teacher held in her hand, and said: "You may tell me what I hold up." "Hat," came the chorus of voices. Each child then said the word. All said it in loud tones. All whispered it. "Now the crayon will whisper it;" and, turning to the board, the teacher wrote the word "hat" in a bold hand. She wrote it again and again, sometimes large and some-

times small, calling on the class to tell each word or touch the object. "Now I want all the children to close their eyes. When you open them tell me what you see." Just a touch of the crayon and a hat was drawn on the board. "Open your eyes." Every child in the class was ready to say: "I see a hat." Then the teacher wrote the sentence on the board. After reading it many times, the children were told to point out the word hat on the board. Those who found it first were sent to their seats, and the slow ones given a little extra drill.

This exercise has been reported for the purpose of illustrating what follows. Words should be taught objectively, as far as possible. Each teacher should have a box of toys with which to illustrate the reading exercises. Teach first those words that are found in the First Reader. Place every word taught in sentences. The child learns the first few idioms from the teacher. As in this lesson the class read, "I see a ——" because the teacher said that as she wrote it. After teaching several idioms the single words forming these idioms may be taught. Do not do so at the beginning, however.

We hold that reading is getting thought, and that thoughts are gained from sentences. The unit of thought is a sentence. In order that one may read at all, he must at least read a sentence. In order that a child may read at his first lesson we teach him a sentence, although he is taught the form of but one of the words that composes it.

After the first word has been fixed in the child's mind teach another. Give a new idiom as soon as the one already taught is learned. These idioms must be those that the child uses every day.

"I see ———"

"O, see ———!"

"Can you see ———?"

"I have a ———"

"The ——— can ———"

"This is a ———"

Upon interest depends attention. Upon attention depends memory. In teaching any word make the impression of its meaning and form as vivid as possible. A child is sure to remember those things that have been impressed on his mind by some attractive picture or device.

As an aid to the teaching of reading, black-board sketching is invaluable. One may not be a Reubens or a Dore, but one can cultivate the power of making crayon "speak." The pupil hesitates on the word "rabbit." What is easier or more impressive than to draw the ears and nose of the animal? No matter if it is crude in execution, so long as it suggests the idea you wish to present. A simple outline answers the purpose just as well as would the touch of a master hand.

Do not teach words or idioms too rapidly. Give repeated drill on the matter taught,

fixing surely the old before introducing the new. Teach all lessons on the board, and in script. Why in script? Because the child can and must learn to write as soon as he learns to read. Reading written forms will help in the work of writing. After having taught the first sentence, write it on a ruled black-board. The slates are ruled in horizontal lines similar to those on the board. (This is done in order that the child may gain, unconsciously, an idea of spacing and relative height of letters.)

Do not try to teach the forms of the separate letters in the sentence, but let the child copy it again and again until he can write it fairly well. Then give a new sentence very like in form to the first. Continue this work until the child can write with ease any sentence placed before him, and can write from dictation simple sentences. Writing follows in the footsteps of reading. The work in the former is slower than the latter. Nothing is gained by pushing any of this work.

When the child has attained a fair degree of excellence in writing, and can read, with ease, sentences in script equal in difficulty to those in the first reader, the change to print may be safely made. This is not a trying ordeal unless the teacher makes it so. As a rule the child has no difficulty in recognizing in print those words whose acquaintance he has already made in script. After having changed to print teach all new words in their printed forms. Show these words in script, but give the most drill on the print. All lessons, so far, are given on the black-board. When the pupils read print lessons from the board with ease, begin the work in the books. Continue teaching on the board all new words.

The following is a plan of work adapted to any lesson:—

1. Teach new words.
2. Show forms of words on board, and drill on them.
3. Drill on each new word in a great variety of sentences.
4. Each pupil reads silently the first sentence. Then someone reads it aloud. Proceed in the same way with each sentence, until every thought in the lesson has been given.
5. Make one pupil read all the lesson.
6. Give a talking exercise. The pupils tell what they read about, and use the new words in sentences. Every lesson in reading should be a language lesson as well.

After the class is dismissed, give the pupils some work in connexion with the lesson to do at their seats; such as writing the new words in sentences, drawing pictures of all the objects read about, or making sentences from words written on bits of card board. An attractive device to keep the little ones busy is this: Place a box of words written on card board slips on the desk; give each child a small box with one of the words pasted on the cover, and let him select all

the words like it from the large box; or, draw a picture of an object on the small box and let him select its name from the other box.

Keep the class busy every minute. When writing becomes tiresome let the children build with blocks, make pictures with little sticks and classify the colours of painted tablets. Train to habits of industry and application by providing employment for every child.

How to secure good expression in reading has long been the inquiry of many a teacher. Much has been said in reference to punctuation, accent and inflection. When we study these points we are in the boundaries of "Reading as a Science." In all teaching, the art should precede the science. What has a little child to do with the science of reading or the science of any other branch? Teach expression, in the lower grades, in the most natural manner possible, and leave upward and downward slides until a later date. But how shall we secure correct expression if we ignore these things? Simply by developing thought. If a child gets the ideas in a sentence, he will express them correctly. Do not allow one word to be read aloud until the entire sentence has been read silently. If, from poor expression, you learn that the child has not the right thought, try to develop it instead of telling him to emphasize this or that word. Never read a part of the lesson and let the pupils imitate you. If they are well taught they will be able to read the very first sentence just as well as the teacher does. "Expression will follow thought" is a text from the "New Education" that every teacher should paste on the cover of her reading book.

The reading books should be kept on the teacher's desk. All reading should be done at sight. If a child really knows a word once he knows it for all-time. Nothing is gained by studying reading lessons. The secret of good sight reading is plenty of black-board drill on hard words. Drill in as many kinds of sentences as possible. From a vocabulary of ten words, three times that number of sentences can be made.

No one book furnishes variety enough in reading matter. The teacher must call to her aid the various juvenile publications and instructive books. Give the class all the new reading matter that they are able to grasp. When the pupils have read all the lessons in one reader give them another of the same grade. Let them master two or three first readers and they will read with more ease the second reader. Nothing is gained by giving work that is too difficult for the pupils. Lead them, step by step, from the easy to the difficult, the near to the remote, and from the known to the unknown.

The key-note of success in teaching reading is this: Find a good method and persevere in the intelligent use of it.—*Edith Good-year in the Carolina Teacher.*

HYGIENE IN THE SCHOOLS.

At the thirteenth annual meeting of the Public Health Association in Washington the opinion was expressed by resolution that American schools need the teaching of hygiene and the practice of physical exercise on a far more extended scale than at present. All the speeches, papers and resolutions were predicated upon the idea that American civilization and progress depends upon the improvement of personal and public health and the strengthening of the national vitality. It would be a happy event in the history of sanitary science if some wealthy man, desirous of doing a noble, philanthropic deed, should give to such an association as this so large a sum of money as would enable it to conduct any experiment, however costly, looking to the solution of those problems which involve the health of the people who live in the great cities.—*Current.*

If a pupil finds the pronunciation of a word or sound difficult, begin by telling him, "Look at me!" Then pronounce the word yourself, taking particular care, and even exaggerating the difficult sound a little. Have you never seen that the infant, when he begins to articulate words in imitation of what he hears, keeps his eye fixed on his mother?—*Revue Pédagogique.*

PRACTICE OF ACCENTS IN MUSIC.

THOSE who have taught the fractional names of notes and rests and measured their values by set motions of the hand all their lives, will be slow to believe that this is all unnecessary, and that there is a much more effective, direct, and less complicated way of teaching this subject. A two-part measure is simply a *strong* accent followed by a weak one, and as soon as children are made to feel these regular, recurring strong and weak accents, they are prepared to sing intelligently in plain two-part measures. A three-part measure is simply one strong and two weak accents. A four-part measure consists of a strong accent followed by a weak one and another less strong than the first, and followed by another weak one. A four-part measure is not two two-part measures united, nor a six-part measure two three-part measures. How can these various groups of accents be most clearly presented and named to the mind? We have found that our appeal to the mind must be through the senses of hearing and seeing and feeling; we can only use the eye to assist in regulating the movement. The real objects to be taught in both time and tune are mental objects, and no idea of them can be given through any picture or drawing we can make to the eye.—*H. E. Holt.*

Educational Intelligence.

HAMMONI street school in Detroit will be built at a cost of \$3,000.

ADDITIONS are being made to Ryerson School, Toronto, costing \$600.

MISS BAYNE, of Woodstock, has been engaged as teacher for Trimble's Corners school.

THE school board has engaged Mr. Forester, of Wyoming, as head master of Springfield schools.

MR. F. DROUILLARD has succeeded Adolphe Gignac as teacher at McGregor, Anderson, Essex.

MR. H. CATLEY has been engaged as assistant teacher for the Mount Forest Central School during the model term at a salary of \$130.

IN the Essex Centre Public School Department there will be two new teachers, Miss Beatty and Miss Mark.

MISS M. GRENIER is now assistant to D. Belanger in the Gravel Road, Malden, Essex, Separate School.

MISS ROGERS takes charge of the junior division of the model school, Whitby, made vacant by the promotion of Miss Burns to the second division.

IN the collegiate institute, Whitby, Mr. Henry succeeds Mr. T. G. Campbell as mathematical master. With those exceptions the staff is the same as last term.

MISS WADSWORTH, of Boston, a lady very highly recommended, has been appointed principal of Acadia Seminary in place of Miss Graves, who resigned last spring.

MR. KNIGHT, of Cranbrook, has been engaged to fill Mr. Nethercott's department at Mitchell during the model school term. Mr. Nethercott takes charge of the model school.

IN the Napanee high and public schools, Miss Lizzie McLaurin, of Gananoque, has been appointed as teacher in the West Ward School in the place vacated by the retirement of Miss Vrooman.

MR. WALTER S. McALPINE has been appointed to take charge of Mr. Wark's room in the Sarnia Model School for the ensuing term of three months, while Mr. Wark is engaged with the new class of model teachers.

THERE are a number of vacancies in the teaching staff of the Hamilton Public Schools, but these will not be filled till the Internal Management Committee meets in a day or two. In the meantime the places are filled by monitors.

THE following changes have been made in the staff of teachers in school No. 12, Walkerville: Miss Emma Cameron succeeds Mr. Sanborn, who has resigned, and Mr. John Bushell, of Windsor, will teach Miss Cameron's room.

IN the New Glasgow, N.S., schools Miss Falconer has resigned and Miss McLean has been promoted to the vacant position. Miss McDonald, daughter of John J. McDonald, Esq., was appointed to fill Miss McLean's place.

MR. THOS. MIDDLEBRO, of Owen Sound, has been engaged to teach the model school in Orangeville. Mr. M. holds 2nd A professional and 1st B non-professional certificates and will receive \$135 for his services, which will be in requisition till the 25th December.

At the last convocation of the University of Manitoba, a committee was appointed, consisting of Rev. Father Drummond (convener), Rev. Dr. Bryce, Canon O'Meara, Archdeacon Pinkham, J. A. M. Aikins, and the registrar, T. A. Bernier, to consider the advisability of changing the mode of voting at convocation, and the increasing of the representation of the graduates on the council.

At a meeting of the trustees of the Milton public school, recently held, Miss McLean's resignation was accepted, and three new engagements were made: Miss Curtis, of Trafalgar, for the new junior department; Miss Kelly, of Milton, in Miss McLean's place, and Miss Jennie Patterson, of Milton, as assistant with Mr. Gray in the senior department during the model school term.

THE annual meeting of the South Grey Teachers' Association will take place in the school building, Durham, on Wednesday, Thursday and Friday, September 29th, 30th, and October 1st next. A long and interesting programme has been prepared. J. A. McLellan, M.A., LL.D., will be present and give a public lecture on Thursday evening, and Jos. Reid, B.A., LL.B., Mount Forest, will deliver an address on Friday morning.

FROM the minutes of the meeting of the Board of Education at London, Ont., held 7th September, we learn that the following teachers were promoted: Miss Dunbar from King street to the 5th division (boys) at the central school, Miss Webb from Princess avenue to King street, Miss Nattrass to Princess avenue (provisionally), Misses Vanstine and Taylor to fill the two vacancies now on the staff. That the salaries of the music and drawing teachers at the collegiate institute are as follows: Mr. St. John, \$200 per annum; Mr. F. M. Bell Smith, \$218.50 for the remainder of the time of their engagement. That the following lady teachers were appointed to assist Mr. Carson at the model school for the next term at \$25 each: Miss Booth, Miss Cannall, Mrs. Gahan, Miss McIntosh. It was decided to appoint Mr. Rowlands to the vacancy in the model school.

MR. MATTHEW ARNOLD'S Special Report on Education on the Continent of Europe, which has just been published, contains some interesting matter. In France and Germany and Switzerland the rivalry between voluntary schools and State-aided schools is more keen than in this country. But where the State assumes the whole charge and offers free education it is not possible for voluntary schools to maintain themselves in the old numbers. On this vexed subject of the retention of school fees in public elementary schools, Mr. Arnold pronounces that the Continental system, although not the best, may not improbably have to be accepted as a necessary evil. But what he especially calls for is a thorough organization of our system of secondary instruction. Until this has been done, he thinks that our popular instruction, free or paid for, will and must be unsatisfactory.—*The Times (London, Eng.)*

THE St. John *Globe* says: Because of the interest shewn by the Marquis of Lorne in speaking throughout Great Britain favourably of our New Brunswick school system, and especially of the Victoria School, which he in company with the Rev. Dr. Macgregor and others visited five years ago, the board of St. John trustees requested his

acceptance of some of the work now on exhibition in London, from that school. To the letter from the chairman of the board, stating this, which was presented to him by the secretary, Mr. March, he replies,—

KENSINGTON, LONDON, Aug. 9, 1886.

MY DEAR MR. BOYD,—Your letter was very gratifying to me, and I shall much value the token of remembrance from your great school, my visit to which, five years ago, has always been a very pleasant recollection to me. Believe me,

Yours truly,
LORNE.

At the meeting of the board of governors of Acadia College, which was held in St. John last Friday, Prof. Tufts presented the financial reports of the academy and seminary. The cash receipts of the academy and seminary for the year were \$20,151.40. The business of the year shows a profit of \$91.12. Action was taken upon the matter of scholarships and a resolution was passed requiring that hereafter the scholarships be registered at the college, and that a limited number be placed at the disposal of the president to be awarded to needy students. These scholarships give free tuition during the four years' course and are of the value of \$24 a year. The report of the treasurer of the college was read and considered. The endowment fund is now \$94,865.92; income from other sources \$3,389.86. The governors decided to erect a new academy boarding-house to accommodate about forty boarders. A preliminary committee was appointed to select a site for the new building and to prepare plans and estimates.

THE pupils and teachers of Elgin (New Brunswick) Superior School, with a number of other friends of Inspector Smith, assembled in the school room last Monday evening to present him and Mrs. Smith with some tokens of their esteem before their departure to take up their residence in Moncton. The chair was taken by G. T. Horsman, who briefly stated the object of the meeting, after which an address was read from the school by Miss Clara Steeves. This was signed by forty-five pupils. After the reading of the address, Mr. Jonah, on behalf of the school, presented a handsome glass set. W. P. Robinson, for the citizens of Elgin, presented a photograph album, expressing in well-chosen remarks the regrets of the community for the loss of such valuable members as the inspector and his estimable lady. Mr. Smith replied at some length referring to his interest in Elgin school, in which he had spent so many years as a teacher. He urged upon the district the necessity of always keeping up the efficiency of its educational work, since the education of the young was the most important and sacred charge which could be committed to any people. Owing to the recent changes in inspectorial districts, Mr. Smith, who has been a resident of Elgin for the last eleven years, was compelled to seek a more central location. He removed to Moncton on Thursday, whither he is followed by the best wishes of his friends.

CHARLES FRANCIS ADAMS, JR., is about to write the life of the late Richard H. Dana, Jr., and desires to obtain any of Mr. Dana's letters that are not strictly private and might be of use for the biography. If sent to Mr. R. H. Dana, No. 30 Court Street, Boston, they will be copied and returned.

Correspondence.

AN EXPLANATION.

To the Editor of the EDUCATIONAL WEEKLY.

SIR,—My attention has been directed to an oversight in my paper on "Prizes and Scholarships," through which I failed to give a detailed statement of amounts paid in scholarships, by the several universities, in the different faculties—Queen's only being thus referred to.

1. The sum given as annually expended in scholarships by Toronto University (\$4,000), I understand to include the \$750 offered to medical students.

2. The \$2,000 spent by Trinity includes \$364 for theological students. The Medical School offers besides about \$180.

3. For theological students exclusively, Victoria offers no scholarships at present—\$500 for art students. Toronto Medical School, affiliated to Victoria and Toronto University, offers \$200.

4. The sum spent by McGill (\$4,000) includes, for medicals, \$20 in cash, two medals, and several prizes in books—nothing in theology.

5. Queen's, as given, offers \$1,000 to art students; \$930 to theological students, and \$240 to medicals.

6. The \$7,000 annually spent by Dalhousie is for art students—no scholarships being offered in medicine or theology. Yours truly,

D. C. McHENRY.

COBOURG COLL. INST., Sept. 7, 1886.

Table Talk.

AN International Exhibition, to be held in June, 1887, is announced for Adelaide, the capital of South Australia.

It is of the greatest consequence that children should read in school, and in their school-days, books that shall form their taste and inspire them with a love of knowledge.

LORD TENNYSON, Robert Browning and Sir Theodore Martin are arranging for a dinner to be given by authors and artists in London in honour of Dr. Holmes.

WILLIAM MORRIS, author of "The Earthly Paradise," and one of the recognized leaders of the Social Democratic Federation, was fined one shilling recently for alleged obstruction of street traffic, caused by a Socialist open-air meeting.

THE position of "Musical Pastor" has been created by a Boston church. The duties are "to develop musical talent from among the congregation that shall supplant the salaried singers, and to instruct the congregation and Sunday school in chorus singing."

WHAT is the great object of education? One will answer, to *increase* knowledge; another, to be successful in business, and a third something else. Were these the objects of education, then success would be easily gained; but the real, true object of education is, to *promote, and secure the happiness of those whom we educate.*—*Suppl. J. Wernli, Iowa.*

AT the annual meeting of the Shakespeare Memorial Association, at Stratford, Mr. Flower,

the leading spirit in the enterprise, announced that the memorial buildings, which include a theatre, library and picture gallery, were at length completed and out of debt. The surrounding grounds had just been laid out as gardens, and other improvements effected. Mr. Flower's gifts to the scheme have already amounted to about \$113,500, and he intends to provide a sustaining fund also.

AT Sir Frederick Leighton's, although his studio is far more interesting and attractive than any other in London, people seem to speak softly and to look at the subjects shown to them as if they really came for that purpose only; but it is curious to note at some other studios how the same people seem to come so that they may meet one another and chat together, rather than to gratify any special love for pictures. "Academy Sunday" is the fashion and must be dutifully observed, and so Kensington and St. John's Wood and Chelsea are thronged with carriages and cabs and fashionably dressed ladies.—*Literary World.*

WE are glad to learn that, on the recommendation of the Canadian Executive Commissioner, the Royal Commission has set apart a room in Old London for a Colonial Exchange. Here exhibitors may meet to discuss matters of trade relations and the possibilities of future developments. The want which this exchange will supply has been much felt, not only now, but before the Exhibition. Perhaps the present step may lead eventually to the establishment of a permanent Colonial Exchange in London, where samples of Colonial goods likely to meet with sale at home and in other Colonies might be placed under intelligent management by each Colony.

LANDSEER had an extreme fondness for studying and making pictures of lions, and from the time when, as a boy, he dissected one, he tried to obtain the body of every lion that died in London. Dickens was in the habit of relating that on one occasion, when he and others were dining with the artist, a servant entered and asked, "Did you order a lion, sir?" as if it were the most natural thing in the world. The guests feared that a living lion was about to enter, but it turned out to be the body of the dead "Nero," of the Zoological Gardens, which had been sent as a gift to Sir Edwin. His skill in drawing was marvelous, and was once shown in a rare way at a large evening party. Facility in drawing had been the theme of conversation, when a lady declared that no one had yet drawn two objects at the same moment. Landseer would not allow that this could not be done, and immediately took two pencils and drew a horse's head with one hand, and at the same time a stag's head with the other hand. He painted with great rapidity; he once sent to the exhibition a picture of rabbits painted in three-quarters of an hour. Mr. Wells relates that at one time when Landseer was visiting him, he left the house for church just as his butler placed a fresh canvas on the easel before the painter; on his return, three hours later, Landseer had completed a life-size picture of a fallow deer, and so well was it done that neither he nor the artist could see that it required retouching.—*From "Stories of Art and Artists," by Clara Erskine Clement, in St. Nicholas for September.*

Examination Papers.

BOARD OF EDUCATION, MANITOBA (Protestant Section.)

Examination of Teachers, July 1886.

ARITHMETIC—THIRD CLASS.

Examiner—D. McINTYRE.

Time—three hours.

1. From the sum of 61 gal. 3 qts. 1 pt., and 36 gal. 1 pt. take 28 gal. 2 qts., and divide the result by 18.

2. In excavating a cellar 3,240 cubic feet of earth were removed by three men in eight days. How much did each man earn if the work was paid for at the rate of 27½ cents per cubic yard?

3. From a lb. Troy of standard gold are coined 46.725 sovereigns. How many grains in each sovereign?

4. If a quantity of wheat fills 1,155 sacks, each holding 8 bushels, 4 qts., how many sacks will it take to contain the wheat when each sack holds 6 bushels, 3 qts.?

5. I receive \$400 in uncurrent money, which I deposit in a bank at ½% discount. With how much shall I be credited?

6. If two men can reap 2½ acres in 2¼ days, how long will it take 11 men to reap 15 acres?

7. Write the note which, being discounted at a bank at 7% on the day of making, will produce \$450.

8. An executor of an estate finds it encumbered with debts to the amount of \$4,322.50 over and above its realized value of \$10,929.50. How many cents on the dollar can he pay the creditors?

9. In what time will \$2.73 amount to \$3.73 at 9 per cent. simple interest?

10. Find the square root of 17242,3161.

11. A man invests his property in four successive ventures. In the first he gains as much as he invested, and in each of the others he loses ½. What fraction of his original outlay does he gain on the whole?

12. A man deposits in a savings bank £1 per month. Simple interest at the rate of ½% per month for each pound is allowed, and the interest is added to the principal at the end of the year. What sum will he have saved in 2½ years?

GEOGRAPHY—THIRD CLASS.

Examiner—D. J. GOGGIN.

Time—two hours.

1. Give a short explanation of deltas, the equatorial current.

2. Two points on the Arctic Circle have the same difference of longitude as two points on the Tropic of Capricorn. Which two points are the farthest apart in miles? Why?

3. Trace and explain the correspondence between the river systems of North and South America.

4. If rain is plentiful on one side of a mountain range, and is lacking on the other side, what is the prevailing direction of the winds?

5. Draw a map of Manitoba, showing the counties, railroads, and the farm of Mr. B. who lives on 12 in 2-3, west of the first principal meridian.

6. Under these heads:—(a) Surface and drainage. (b) Climate and productions. (c) Exports and manufactures. (d) People and government.

Describe one of the following countries: Ontario, China, Egypt, Brazil, France.

7. With what is a vessel from Yokohama bound for San Francisco likely to be freighted?

8. Give the position of the following places, mentioning anything notable about them: Valparaiso, Halifax, Havana, Manchester, Cronstadt, Melbourne, Heligoland, Malta, Indus River, Crimea, Nelson River, Laurentian Hills.

HISTORY—THIRD CLASS.

Examiner—REV. CANON O'MEARA.

Time—three hours.

1. Give the divisions of Britain—(a) Under the Romans. (b) Under the Saxons.

2. Sketch briefly the leading events of the reign of William the Conqueror.

3. "The title of 'King of France' was claimed until lately by our monarchs, but Henry of Monmouth was the only English monarch who really deserved the name."—*Collier*.

Explain and justify this statement.

4. Show clearly the claim of Henry VIII. to the English throne as proved by his descent from William the Conqueror.

5. Give some account of the rebellion under Monmouth.

6. Describe the circumstances which led to the union of England and Scotland, and enumerate the chief provisions of the treaty of union.

7. Give a full description of the Battle of Waterloo.

8. Describe the discoveries of Cabot and Jacques Cartier.

9. Give a full account of the taking of Quebec by the British.

10. Give a brief account of the two North-west rebellions.

DICTIONARY—THIRD CLASS.

NOTE TO THE PRESIDING EXAMINER.—This paper is not to be seen by the candidates. It is to be read to them *three times*—first at the ordinary rate of reading, they simply listen to catch the meaning of the passages; second, slowly, the candidate writing; third, for review. Candidates are not to be permitted to re-write the passage.

The school house should be located in a pleasant situation remote from disturbing influences to the quiet activity of the mental and physical development of the pupils. The grounds should be elevated above the level of the surrounding country, and should, for drainage purposes, slope gradually away from the locality.

The house should be exposed to the direct rays of the sun, and to currents of fresh air, and the soil should be of such a loose nature as readily to absorb water that is not drained off or evaporated. The grounds should be of sufficient extent to allow of healthful exercise, and should include separate enclosures, if practicable, exclusively allotted to boys and girls respectively.

The temperature of the school room should be maintained at a degree that will prevent restlessness from overheating or discomfort from cold, and evenness of temperature should be regarded as indispensable. The ventilation should be thorough and systematic, not occasional or capricious. It should be regulated by well known hygienic laws, and not by the sensations of the inmates.

UNIVERSITY OF TORONTO.

Annual Examinations, 1886

JUNIOR MATRICULATION—ARTS.

EUCLID—HONOURS.

Examiner—A. K. BLACKADAR, M.A.

1. Define the terms, *straight line*, *angle*, *circle*.

Draw a straight line perpendicular to a given straight line from a point without it.

Find a point within an isosceles triangle, such that its distance from the base will be double its distance from either of the equal sides.

2. If a side of any triangle be produced, the exterior angle is equal to the two interior and opposite angles; and the three interior angles of every triangle are together equal to two right angles.

The internal and external angles at *A* of the triangle *BAC* are bisected by *AD* and *AE* respectively, which meet the base *BC* and *BC* produced in the points *D* and *E*. If the angle *ABC* be greater than the angle *ACB* by two-thirds of a right angle, prove that *DE* is double of *DA*.

3. In obtuse-angled triangles, if a perpendicular be drawn from either of the acute angles to the opposite side produced, the square on the side subtending the obtuse angle, is greater than the squares on the sides containing the obtuse angle, by twice the rectangle contained by the side upon which when produced the perpendicular falls, and the straight line intercepted without the triangle between the perpendicular and the obtuse angle.

A point *O* is taken in the base *AB* of the triangle *ABC*, so that *AO* is double of *OB*; if the vertex *C* be joined to *O*, prove that $AC^2 + 2BC^2 = OA^2 + 2OB^2 + 3OC^2$.

4. If a straight line drawn through the centre of a circle bisect a straight line in it which does not pass through the centre, it shall cut it at right angles; and conversely, if it cut it at right angles, it shall bisect it.

If *AB* be the diameter of a circle, and *AC*, *AD* any two chords, and if with the centre *B* another circle be described cutting *AC*, *AD* in the *G*, *H* respectively, prove that

$$AC^2 - AD^2 = GC^2 - HD^2,$$

5. Inscribe an equilateral and equiangular pentagon in a given circle.

If an isosceles triangle be drawn having the same altitude and area as a regular pentagon, shew that each angle at the base will be equal to three-fourths of the vertical angle.

6. Give the geometrical definition of proportion.

Triangles and parallelograms of the same altitude are one to the other as their bases.

If from the extremities of a diameter *AB* of a circle, any two chords *AH*, *BG* be drawn in the same semi-circle, and meeting in *C*, and *O* be the centre of the circle, prove

$$\frac{\triangle AHB}{\triangle HBC} + \frac{\triangle AGB}{\triangle AGC} = \frac{4AO^2}{AO^2 - OC^2}$$

7. If an angle of a triangle be bisected by a straight line, which likewise cuts the base; the rectangle contained by the sides of the triangle is equal to the rectangle contained by the segments of the base, together with the square on the straight line which bisects the angle.

8. (a) Given the three middle points of the sides of any triangle: construct it.

(b) Given the base, area, and the ratio of the sides of a triangle: construct it.

ALGEBRA—HONOURS.

Examiner—J. W. REID, B.A.

1. If $X = ax + cy + bz$, $Y = cx + by + az$, $Z = bx + ay + cz$, shew that $X^2 + Y^2 + Z^2 - YZ - ZX - XY =$

$$(a^2 + b^2 + c^2 - bc - ca - ab)(x^2 + y^2 + z^2 - 2x - 2y - 2z)$$

and also that

$$X^2 + Y^2 + Z^2 - 3XYZ = (a^2 + b^2 + c^2 - 3abc)(x^2 + y^2 + z^2 - 3xyz)$$

2. If $\frac{1}{1+a} + \frac{1}{1+b} = \frac{1}{1+x} + \frac{1}{1+y}$, find the values of x and y in terms of a and b .

Find the value of the expression

$$\frac{2a-1}{x+1} + \frac{2b-1}{y+1}$$

when we put $x = \frac{1}{2} \left(\sqrt{\frac{a}{b}} - \sqrt{\frac{b}{a}} \right)$

3. If $ax^2 + bx + c = 0$, and $a'x^2 + b'x + c' = 0$ have a common root, prove that

$$(a'c - ac')^2 + (ab' - a'b)(cb' - bc') = 0$$

If α and β are the roots of the quadratic $ax^2 + bx + c = 0$, from the quadratic whose roots are

$$(\alpha + \beta) \text{ and } (\alpha - \beta)^2$$

4. Solve the equations:

$$(1) (1+x)^4 + (1-x)^4 = 2^4$$

$$(2) \begin{cases} \frac{x-y}{x} - \frac{x+y}{x^2+y^2} \\ \frac{x^2-y^2}{y^2} - \frac{x-y}{y^2} \end{cases}$$

$$(3) \begin{cases} x^2 - xy + y^2 = 37 \\ x^2 + xz + z^2 = 28 \\ y^2 + yz + z^2 = 19 \end{cases}$$

5. If $A \propto B$ when C is invariable, and $A \propto C$ when B is invariable, then will $A \propto BC$ both B and C are invariable.

The value of diamonds varies as the square of their weights, and square of the value of rubies varies as the cube of their weights; a diamond of a carat is worth m times a ruby of b carats, and both together are worth $\mathcal{L}c$; find the value of a diamond and ruby, each weighing x carats

6. Insert n arithmetical means between two given terms a and b .

There are n arithmetical means between 1 and 31, such that the 7th mean: $(n-1)^{\text{th}}$ mean = 5:9; find n .

If a, b and c be the $p^{\text{th}}, q^{\text{th}}$, and r^{th} terms respectively of an arithmetic series; shew that

$$a(q-r) + b(r-p) + c(p-q) = 0$$

7. Find the sum of a given number of quantities in Geometrical Progression, the first term, and the common ratio being supposed known. Find also the sum of the same series to infinity.

If P be the continued product of n quantities in Geometrical Progression, S their sum, and S_1 the sum of their reciprocals; shew that

$$P^n = \left(\frac{S}{S_1} \right)^n$$

8. Given M and N the m^{th} and n^{th} terms of a Harmonical Progression: find the $(m+n)^{\text{th}}$ term.

The term of 3 numbers in Harmonical Progression is 26, and the product of the extremes exceeds the square of the mean by the mean; find the numbers.

9. Find the number of permutations of n things taken r at a time.

Given m things of one kind, and n things of another kind, find the number of permutations that can be formed containing r of the first and s of the second.

10. Assuming the Binomial Theorem for positive integral indices, prove it for fractional and negative indices.

Shew that

$$\left(\frac{1+x}{1-x} \right)^n = \frac{n}{1} \left(\frac{x}{1-x} \right) + \frac{n(n-1)}{1 \cdot 2} \left(\frac{x}{1-x} \right)^2 + \text{etc.}$$

Find the greatest term in the expansion of

$$\left(1 + \frac{5}{6} \right)^{\frac{2}{3}}$$

PROBLEMS—HONOURS.

Examiner—A. K. BLACKADAR, M.A.

1. A watch which is 10 minutes too fast at 12 o'clock noon on Monday loses 4 minutes and 12 seconds per day. What will be the true time on the following Saturday morning when the watch shews 8 o'clock?

2. If $a + b + c = 0$, prove that

$$\frac{a}{bc - a^2} + \frac{b}{ca - b^2} + \frac{c}{ab - c^2} = 0$$

3. Having given for all values of n , the relation

$$a_1 a_2 a_3 \dots a_n = a_1^{n^2}$$

find the sum to n terms of the series

$$a_1 + a_2 + a_3 + \dots + a_n$$

4. If θ be an angle whose tangent is $\frac{1}{3}$, and ϕ an angle whose tangent is $\frac{1}{15}$, then will

$$\sin(\theta + \phi) = \sin \frac{\pi}{3} \cdot \cos \frac{\pi}{5}$$

5. Eliminate θ from the equations $(a+b) \tan(\theta - \phi) = (a-b) \tan(\theta + \phi)$, $a \cos 2\phi + b \cos 2\theta = c$.

6. Find x from the equation $\cot 2^{-1} x - \cot 2^x - \operatorname{cosec} 3x$.

7. Solve the equations

$$\begin{cases} x + 2y^2 = 18 \\ xy + xy^2 = 12 \end{cases}$$

8. Prove that

$$(1+x)^n + n(1+x)^{n-1}x + \frac{n(n-1)}{1 \cdot 2}(1+x)^{n-2}x^2 + \dots \text{to infinity } (1+x)^{2n}$$

9. n counters are marked with the numbers 1, 2, 3, 4, ... n respectively. Find the number of ways in which three may be drawn, so that the greatest and least together may be double of the mean.

10. In any plane triangle ABC , if $\cos A, \cos B, \cos C$ are in arithmetical progression and if $2s = a + b + c$, prove that $s - a, s - b, s - c$ are in harmonical progression.

11. If equilateral triangles be described on the sides of any triangle ABC (without the triangle),

and the vertices be joined by the straight lines a, b, c ; prove that

$$a^2 + b^2 + c^2 = \frac{1}{2} (AB^2 + BC^2 + CA^2) + 6 \text{ Area } ABC$$

12. If P, H, D , be the sides of a regular pentagon, hexagon, and decagon inscribed in a circle, prove that

$$P^2 = H^2 + D^2$$

13. D is the middle point of the base BC of an isosceles triangle ABC ; CF is perpendicular to AB ; DE is perpendicular to CF ; EG parallel to the base meets AD in G prove that EG is to GD in the triplicate ratio of BD to DA .

14. A quadrilateral is circumscribed about a circle, prove that the line joining the middle points of the diagonals passes through the centre of the circle.

15. A circle with centre O and radius r is inscribed in a triangle ABC , and touches the sides in D, E, F . Circles are inscribed in the quadrilaterals $AEOF, BFOD, CDOE$. If r_1, r_2, r_3 be their radii, prove that

$$\frac{r_1}{r - r_1} + \frac{r_2}{r - r_2} + \frac{r_3}{r - r_3} = \frac{r_1^2}{r^2 - r_1^2} + \frac{r_2^2}{r^2 - r_2^2} + \frac{r_3^2}{r^2 - r_3^2}$$

NOW READY.

THE STUDENT'S REVIEW
Chart of Chemistry

BY
GEO. DICKSON, M.A., & A. Y. SCOTT, B.A.,
Principal Professor of Chemistry & Lecturer in Chemistry, U.C.C.

This Chart is a complete synopsis of the lectures on non-metallic elements delivered by the authors during years of practical teaching, and is arranged with special reference to the needs of those preparing for Third and Second Class Teachers' Examinations and Students attending Medical Colleges.

IT IS A COMPLETE BIRD'S EYE VIEW
Of the Essentials of Non-Metallic Elements in the form of a wall map—size, 28x42 inches—plainly printed and neatly mounted for hanging on the wall before the student.
Every Student preparing for an examination should have one hanging in his room for ready reference.

Price 40 Cents. For Sale by all Booksellers.

CANADA PUBLISHING CO. (Limited),
TORONTO.

SECOND EDITION.

TENTH THOUSAND.

McLellan's New Algebra.

FOR HIGH AND PUBLIC SCHOOLS.
NOW READY.

HINTS AND ANSWERS
(IN THE PRESS)

Will be Presented to all Teachers using
the book in their classes.

Canada Publishing Co. (Limited),
TORONTO.

W. STAHLSCHEMIDT & CO., PRESTON, ONTARIO
Manufacturers of Office, School, Church, and
Lodge Furniture.



THE "MARVEL" SCHOOL DESK,

PATENTED JANUARY 14TH, 1886.

Send for Circulars and Price Lists. Name this paper.
See our Exhibit at the Toronto Industrial Exhibition.

The Bennett Furnishing Co.,
LONDON, CAN., GLASGOW, SCOTLAND.



MANUFACTURERS OF

SCHOOL, CHURCH, OFFICE
AND ART FURNITURE.

Send for Illustrated Catalogue and Price List of our School
Furniture. Over 30,000 of our Bennett Desks now in use.
They have no equal for convenience, comfort and strength.

THE BENNETT FURNISHING CO.,
LONDON, ONT.

EST FINE WOOD MANTELS A SPECIALTY. SEND FOR
SPECIAL CIRCULAR.

A \$1.00 BOOK.

Premium for One New Subscriber.

During the next thirty days the Publisher of EDUCATION
will forward to every one who will send him One New
Subscriber, with the subscription price, \$3.00, a copy of
TALKS WITH MY BOYS;

A book of 266 pages, containing 27 TALKS. This is the
Second Edition of the book, which is now published by the
well-known Publishers, Roberts Brothers, Boston. Send
\$3.00 by Check, Draft or Postal Order, and the book will
be returned by mail free of all expense.

[From A. G. Boyden, *Bridgewater, Mass.*] "I believe
no ought in EDUCATION, and would like to have all our
graduates take and read it." [From John Sweet, *California.*]
"Thinking educators cannot do without it." From D. B. F.
H. G. A., Ph. D., *Salem, Mass.* "It is brimming full of
thoughtful, instructive, and interesting matter." [From
Prof. W. H. Payne, Ph. D.] "It is altogether such a journal
as the teaching profession of this country should loyally and
liberally support."

"EDUCATION is a Monthly Educational Magazine. It is
"Intelligent," "Vigorous," "Independent." It discusses
The Science of Teaching, The Art of Instruction, School
Discipline, Normal Methods, Industrial Education, Common
School Topics, Science Teaching, Classical Study.

Address the Publisher, WILLIAM A. MOWRY,
3 SOMERSET ST., BOSTON, MASS.

School Teachers, Ministers & Lady Agents

FROM ALL OVER THE COUNTRY

Pour in daily reports of the greatest and most flattering
success of our agents. Reader, go to work at the best busi-
ness your attention was ever called to, and in a short time
earn more than ten dollars per day. Send for particulars
and Illustrated Catalogue, mailed free. THE ONTARIO
TEA CORPORATION, 125 Bay Street, Toronto.

TEACHERS.

Write us, male or female, good respectable agency.
AWNING, TENT and CAMPING DEPOT, 169 Yonge
Street, Toronto.

SPECIAL OFFERS!

We will send the Educational Weekly three
months, and the New Arithmetic, postpaid,
for \$1.00.

We will send the Educational Weekly four
months, and Williams' Composition and Practi-
cal English, postpaid, for \$1.00.

We will send the Educational Weekly one year,
and Williams' Composition and Practical Eng-
lish, postpaid, for \$2.10.

We will send the Educational Weekly three
months, and Ayres' Verbalist and Orthoepist,
postpaid, for \$1.00.

We will send the Educational Weekly one year,
and Ayres' Verbalist and Orthoepist, postpaid,
for \$2.25.

We will send the Educational Weekly one year
and Stormonth's Dictionary (Full Sheep), for
\$7.50.

We will send the Educational Weekly one year,
and Worcester's Dictionary (Full Sheep), for
\$9.50.

We will send the Educational Weekly one year,
and Webster's Dictionary (Full Sheep), for
\$11.50.

We will send the Educational Weekly one year,
and Lippincott's Gazetteer (Full Sheep), for
\$11.50.

Address—

EDUCATIONAL WEEKLY,

SPECIAL OFFER.

Students' Shakespeare, 12 vols., flexible, reduced to \$8 00
Green's History of England, 4 large vols., 4 00
History of Our Own Times, 2 vols., by Justin McCarthy, 2 25
History of England, Macaulay, 5 vols., 2 50
All kinds of second-hand books taken in exchange. Send
lists, as we require a large number at once. Any book sent
free on receipt of price.

LIBRARY ASSOCIATION,
DRAWER 2674, TORONTO.

TRADE MARK REGISTERED.



For Consumption, Asthma, Bronchitis, Dyspepsia,
Catarrh, Headache, Debility, Rheumatism, Neuralgia, and
all Chronic and Nervous Disorders.

Canadian Depository:

E. W. D. KING, 58 CHURCH STREET,
Toronto, Ont.

BUSINESS TRAINING.

DAY'S BUSINESS COLLEGE.

Near Rosin House.

References to former students and reliable business men.

Terms, address,

Jas. E. Day, Accountant, Toronto.

GRIP OFFICE TORONTO.

COUNTER
CHECK BOOKS

THESE valuable contrivances are acknow-
ledged to be necessary to the proper carrying
on of any retail business. They economize time
and prevent confusion and loss; and they secure a
statement of the items of a purchase for both the
merchant and the customer. They are, thus,
valuable for all selling and book keeping purposes.

PRINTING
THE GRIP AND PUBLISHING COMPANY

Make a Special Branch of this Business.

SEND FOR SAMPLES AND QUOTATIONS.

26 and 28 Front Street West, Toronto.

St. Catharines Collegiate Institute

WILL RE-OPEN ON MONDAY, AUG. 30TH.

Amongst the many pupils who have attended this Institute
during the past year, one obtained the Classical Scholar-
ship at Matriculation Examination of Toronto University,
one the Classical Scholarship at Queen's University; two
were bracketed equal for Mathematical Scholarship, First
Year, Toronto University; and nine (9), the whole number
sent up, passed for 1st Class Certificates.

The work for First Year, Junior Matriculation, First,
Second and Third Class Certificates fully taken up.

For Prospectus and Record apply to

JOHN HENDERSON, M.A., Principal.



From seventeen different colonies, provinces and states
have found the course at this institution an opening to
successful careers since it was established in 1868.

W. B. ROBINSON,
J. W. JOHNSON, F. C. A., Principals.

SEND FOR CIRCULARS.

GALT COLLEGIATE INSTITUTE

Will re-open on Monday, August 30th. Special attention
given to the preparation of candidates for their Third,
Second and First Class Examinations, and for Junior
Matriculation with Honors in all departments. The School
has a Literary Society, Football and Cricket Clubs, beauti-
ful grounds, a well-equipped Gymnasium, and Drill and
Calisthenics are taught. Board for \$2 75 a week and up-
wards.

For Catalogue apply to

THOS. CARSCADDEN, M.A.,

Principal.

ORDER YOUR BOOKS (NEW OR SECOND-
hand) from DAVID BOYLE, 353 Yonge Street,
Toronto.



This is the leading Commercial College in Canada. Its location is in the business and educational
centre of this Province. The course of studies has been specially arranged to give a sound business
training. Arithmetic, Penmanship, Commercial Law, Phonography, Bookkeeping, Correspondence
and Typewriting, practically taught.

RE-OPENS SEPTEMBER 1ST.

For Circular giving full information address—

C. O'DEA, Secretary.