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JOURNAL OF EDUCATION,

Province of Ontario.

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CONTENTS OF THIS NUMBER.

ESTABLISHMENT OF SCHOOL LIBRARIES.

As the usual period of the year for establishing or replenishing the School Libraries has now arrived, we desire to call the attention of Inspectors, Masters, and Teachers to the subject.

The approaching long winter evenings will afford ample leisure for reading as well as for study. The perusal of good books will be at once a stimulus and a relaxation, as well as an intellectual advantage to the pupils themselves. It will doubtless also be no less a source of pleasure and profit to their parents and other ratepayers, who have the right of free access to the Public School Library, under the regulations provided by law.

Painful evidence has already been afforded in Canada of the evil effects upon young persons of an acquaintance with that pernicious class of the lighter literature of the day only, which is everywhere so abundantly supplied, and which, in the absence of better tastes and some controlling influence against it, young people are too apt to seek out and to read with avidity.

Most of our public schools—chiefly in cities, towns, and villages—have by their excellence created, especially among the more advanced pupils, a taste for reading and intellectual culture, which, after a time, the ordinary instruction in these schools, without the aid of a suitable library, does not fully meet. Having acquired in the school this taste for reading, these pupils will necessarily seek to gratify it. How important is it, then, that this desire for reading should be rightly directed, or, what is better, gratified in a legitimate way in the school itself. It should be remembered, too, that teachers labour under serious disadvantages, and are less effective in their instructions where they are unable to supplement their labours by means of a library of reading and reference books. It is therefore the more necessary, both for teachers and pupils, that this indispensable adjunct to a good and successful school should not only be provided, but that it should be well kept up, with a continuous supply of the more valuable and attractive books, as they issue from the press.

The facilities afforded by the Education Department for carrying out this most important object are now most ample. An abundant supply of most appropriate books has been procured to meet the winter's demand. The terms upon which they are furnished to municipal and school corporations will be found on the last page, and are worthy of the consideration of the local school authorities. A catalogue and form will be sent on application.

We would also call attention to the "Departmental Notices" on the last page, relating to school maps, apparatus, and prize-books. The variety of maps and apparatus now manufactured in Canada, under the direction of this Department, is both extensive and excellent.

VILLAGE LIBRARIES AND READING-ROOMS.

Some of our provincial contemporaries, we note, have been discussing the need of more occupation and means of healthy amusement for our young men during our long winters than now fall to their lot. One ventures, indeed, on the query whether so many sons being idle, or "as good as idle," one-third of the year is not a main reason why they frequently become listless and dissatisfied, getting into loafing or drinking habits, or in the case of energetic character, try their fortunes across the line where manufactures have given an impetus to progress, and offer a greater variety of occupation. The agricultural *ennui*, and difficulty of retaining our Canadian youth on the farms their fathers laboriously hewed out of the bush is an old story, yet none the less deserving attention. Every thoughtful suggestion on the subject merits considerate attention. Village libraries and reading rooms, one of our contemporaries says, are much required in the agricultural districts of Ontario for the winter months, as introducers of a more intellectual atmosphere, as a counterpoise for questionable haunts and modes of recreation, and as a means of bringing together the different classes of which even village life is composed, and cementing the union by the bond of intelligence. Of course, when such a proposition is hazarded various objections are heard from the let-things-alone people. The population—especially the intelligent population—would be insufficient; a library and reading-room would not be appreciated; in the majority of instances such an attempt would prove a failure: public libraries may do well enough for towns, but in rural districts they are altogether impracticable. But there are arguments and facts on the contrary side of this interesting question. Where village libraries are established they are found to be fairly patronised. It is not to be supposed that in rural populations they can be carried out with all the independence and self-support which may attend them in towns. Yet there are circumstances which render their operation and management easier and less expensive in the village than in the town. It is generally admitted by all but a very small and, one hopes, decreasing number of those who adhere to worn-out prejudices that if we educate in the school we must prepare for the consequences and result of education in a supply food. The intellectual recreation of an educated population involves intellectual resources. We cannot ne-

gative the taste we have created. The library, therefore, is an admitted requisite. But very often there is also required a place where the library can be used—where, comfortably and undisturbed, books and cheap publications may be read and enjoyed. Owing sometimes to the crowded state of the living-room, sometimes to household operations, the small farm-house or village tenement is hardly the place in which quiet or comfort can be expected as consorts reasonably with the necessities of intellectual pursuits. Let it further be admitted that the persons for whom provision is wished to be made have some of those tastes or dispositions which have led in higher life to the establishment of clubs and literary societies. We shall then recognise in the reading-room the resource which many are now led to seek in the tavern. Very many young men go to this only in the first instance to pass the idle hours of a long evening, and because they find there, either in social converse or in the newspapers, that resource and relaxation their day of toil requires. Let us not be uncharitable concerning them. Even in their shortcomings—as much the fault of others as their own—one would take their part. What they began from necessity gradually grows upon them and becomes a habit. They cannot enjoy the resources they seek without drinking. It is for this class the well-lighted reading-room, with books and papers, chess and draughts, will prove the resource they otherwise seek elsewhere.

Many, of course, will at once admit the desirableness of such a resource, but doubt first, on the score of expense, and secondly, on the score of management, the practical application of such a scheme. With regard to expense, we have already said that, in many respects, this is an easier matter in villages than in towns. The school-room or the class-room of a Sunday-school can generally be had gratis, or at a trifling cost. Fuel and lights are a certain expense, but many persons would freely contribute some papers and publications, and others could be provided by small subscriptions. Where the expenses exceed the resources, derivable from the payments of the members, there are still means of increasing them by lectures which, when suitable to the population, will in many instances not only ensure receipts sufficient to meet the expenses of the reading-room, but advance the general cause which was sought to be promoted by its establishment.

In forming public libraries the first and most important step is to determine that there shall be a collection of books on a footing of practical usefulness to the locality for which it is intended. This must vary according to the circumstances of a district. The selection which would suit a mining population in the Black Country would hardly do for a purely agricultural portion of Devon. In local efforts in England the Society of Arts makes grants in aid of purchases comprehending both old and new works, and for the religious element, as also in connection with general requirements, the Christian Knowledge Society, the Religious Tract Society, and others, are ready to volunteer assistance without dictating the particular books or subjects to be included in the catalogue. In both of these Societies there is a large collection of historical, literary, and what in the language of the day are called secular works, from which there is a free choice. These and other resources, judiciously combined, enable any reading-room to start with a fair and sufficient library, which will of itself gradually diffuse a taste for better things and at the same time provide the aliment for it.

The different village associations are grouped into districts for the delivery of lectures on the mutual principle. Each village provides a lecturer who, getting up a lecture on some subject agreed upon at an annual meeting, delivers it in succession before the different Library Associations of the district, and, of course, receives those of the other lecturers in return. This arrangement may be readily made to provide a lecture monthly or bi-monthly, during the six winter months. While it affords a variety, it gives both support and life to the associations, materially benefiting the funds, and assisting to support the libraries.—*Toronto Mail.*

LORD DUFFERIN ON SPURIOUS LITERATURE.

Those who have read carefully the numerous addresses delivered by His Excellency the Governor-General, during his present tour through the Province, must have been struck by the elegance of diction and felicity of expression which characterized them all. He is quite "at home" on all subjects. In reply to the address of the Faculty of the new Wesleyan Female College at Whitby, His Excellency thus referred to a class of literature so common and popular at the present time:

"My views in regard to education are so sufficiently known that it is unnecessary for me to state them upon the present occasion, but I cannot help saying that I take it as a most happy augury that in the room in which we are placed there should stand the bust of one of the princes of European literature, of a man the healthiness of whose mind and the high standard and perfect taste of whose compositions it would be well if his successors in literature would imitate. I allude to Sir Walter Scott. (Applause.) I do not know whether it would be out of place to remark that there are dangers against which it is advisable for all those who are interested in the healthy intellectual training of the youth of this continent, and particularly of its female youth, to guard. Of late there has sprung up a class of literature which in my opinion contributes but very little to the advancement of those higher aspirations which it ought to be the aim and object of all literature to promote. There has arisen of late a school of writers whose chief object seems to be to extract amusement and to awake laughter by turning everything that is noble, elevated, and reverenced by the rest of the world, into ridicule; to substitute parody for invention, and coarse vulgarity for the tender humour of a better day, or if this error is avoided, a sickly, morbid sentimentalism is substituted, more corrupting than absolute vice, or a historical sensationalism which is as bad as either. I cannot but think that it is a great matter that in our schools we should take the greatest pains to maintain a standard of healthy, robust, and refined taste." His Excellency concluded by thanking the authorities of the school for the flattering remarks contained in their address.

I. Papers on Ontario School Matters.

1. UNIVERSITY CONSOLIDATION IN ONTARIO.

The writer of "Current Events," in the *Canadian Monthly* for October, thus discusses a question of University Consolidation in Ontario.

"As the Academical year is opening, it is not unseasonable to call attention once more to the question of University consolidation which was mooted by us some time ago, and our view of which has recently received support in a very able address delivered by the President of Cornell University, at the Detroit National Education Convention in August. The fact is there is not room in Ontario for more than one University worthy of the name. Even England, with all her wealth and corresponding demand for high culture, finds room only for two. The so-called University of London is merely a central examining board; it does not teach, or discharge any other function of a University; and as it was called into existence solely by the obstinate retention of the Tests which excluded Nonconformists from Oxford and Cambridge, it is not unlikely that, the tests having been abolished, it may in time cease to exist. The attempt to found a new University for the benefit of the North of England, at Durham, has proved totally abortive, though the new institution was sumptuously endowed, both with buildings and funds, out of the colossal wealth of the Cathedral chapter. A similar fate appears to have attended the project of a special University for Wales. The calamitous dispersion of resources and the equally calamitous prostitution of degrees which the friends of the higher education in the United States deplore, and from which they are now struggling, with painful steps, to return to a better system, is the result of mixed causes. But the similar disaster in our case is traceable almost entirely to Church feeling, which was originally forced into its present channel by the exclusive Anglicanism of the University of Toronto. We have said before, and nobody, we believe, has denied, that a small University means an inadequate and under-paid staff, an ill-furnished library, defective apparatus, lack of vigorous intellectual life, depreciated degrees, inferior education in short, and a consequent loss of power to the church which thus allows the intellect of its young men to be starved by poverty of instruction and stunted by seclusion. Another result of denominational Universities is that the national University is apt to contract an anti-Church bias by contrast and antagonism; and as the national University is sure to be the real seat of intellectual power, the cause of religion receives a deadly wound from the instrument intended to promote it. President White calls for central and unsectarian Universities on the model of Cornell. We would qualify this demand. The student, to attend a central University, must leave his home and its influences, religious and domestic. For these a substitute is desired and the desire is reasonable. The student class at Paris, and even that at Berlin, presents a moral type which we are far from desiring to propagate, much as we must respect the thoroughness of their mental training. But we have already pointed to the plan of an undenominational University, with denominational Colleges—the University furnishing the general instruction, holding the examinations and conferring the degrees, the College furnishing the religious instruction and the moral discipline—as the natural solution of the problem. Let the different denominational Colleges migrate to the precincts of the University of Toronto, and enter into the

same relations with it in which an Oxford or Cambridge College is with the University of Oxford or Cambridge. They will lose nothing individually in point of religious or moral character; they will gain collectively all the advantages of a great University. Mere affiliation without migration to the central University would be something, because it would introduce uniformity of examinations, and thus restore in a measure the value of degrees; but it would not give us concentration of resources or much better instruction, and the instruction always drags down the examinations to its level, set your standard as high as you will. The heads of the denominational Colleges might hold University offices—Professorships or the Vice-Chancellorship—as the heads of Colleges do at Oxford and Cambridge. No doubt, rooted feeling and strong local influences are in the way. But the first church which moves in this direction will at once render a great service to the general cause, and increase its own influence in proportion to the improvement which is sure to follow in the training and intellectual power of its young men, besides relieving itself of a burden which hardly belongs to it as a religious association. Theological Colleges, and the theological departments of other Colleges, might of course remain where they are, and continue to do their own work; in the case of theological students seclusion is not a disadvantage. The same may be said of denominational schools, into which the local Universities might perhaps be partly converted.

"At the same time we most earnestly hope that the University of Toronto will not shrink from adapting itself to the general requirements of the country by organizing a thoroughly efficient department of practical science. It was understood to be entering on this path of improvement at the instance of some of the most eminent representatives of practical science among us, who assert that for want of such training great advantages are slipping through our hands. How far the teaching of practical science is suitable work for Oxford or Cambridge is not the question; Universities, like other institutions, must meet the exigencies of the community to which they belong, and in a new country they must, to a certain extent, mix trades. Mere alterations of the curriculum or of the degrees will not be enough. What is needed is an efficient department, not severed from the University, but with a head of its own, a comprehensive master of practical science, with the power of organization, whose special functions need not, however, in any way interfere with the supremacy of the general head of the University. The aid of the Government and the Legislature will, no doubt, be needed, and it could not be better bestowed."

2. CHAIR OF NATURAL SCIENCE IN TORONTO UNIVERSITY.

We see it announced that the Chair of Natural Science, in the Toronto University, vacated by the resignation of Dr. Henry Nicholson, the celebrated Geologist, has been filled by the appointment of Mr. Ramsay Wright, of Edinburgh. The Toronto University seems fond of Scotch Professors. Dr. Wilson and the Rev. Professor Young are both Scotchmen and University of Edinburgh men, and we need not say they are each of them an honour to their *alma mater*, the country of their birth, and the land of their adoption. Dr. Nicholson is also a graduate of the University of the Modern Athens, and leaves Toronto to take a Professorship in Dublin. He was a man of no common attainments before ever he saw our shores, and his sojourn in this country has added largely both to his knowledge and his reputation. His deep sea dredgings in Lakes Ontario and Superior, and his general geological researches in Upper Canada, as set forth in his address before the British Association at Brighton two years ago—an address, which was in substance repeated afterwards before the Canadian Institute of Toronto—have brought to light many facts of the utmost importance to those who interest themselves in the primeval history of British North America—facts, too, for the discovery of which Professor Nicholson alone deserves credit. He has established, for instance, beyond the shadow of a doubt, that the bed of Lake Ontario must have been at one period of the world's history covered with salt water, or what is equal to the same thing, he has brought to the surface in the course of his dredgings the fossil remains of a kind of crustacea never known to have existed in fresh water—indeed, to which the very presence of fresh water is alleged to be fatal. With equal reason he argues—and geologists have not disputed the logic of the argument—that the water of Lake Ontario must have been salt at one period, although admittedly it was a remote one. Then the Doctor has placed before the world of letters a great fund of information regarding the character of the bottom of our North American Lakes, the different classes of life to be found in them at various depths, and where peculiar kinds of soil predominate in the lake-bed, and the temperature of the water at various distances below the surface and at different seasons of the year. It is a pity the learned Professor could not have been induced to remain in this country, but there is a consolation left to us in the hope that he may do us some good where he is going. There is little doubt the gentleman selected to succeed him will be in every way worthy of the shoes into which he is to step. He was educated at the High School of Edinburgh, and afterwards graduated at the University of that city.—*Ottawa Times.*

3. HON. E. BLAKE, ON THE EDUCATIONAL FRANCHISE TEST.

In his recent speech at Aurora (County of York), the Hon. Edward Blake thus referred to the educational test for the exercise of the franchise. He also referred to the question of teachers' salaries and attendance at the schools. He said:—

"I desire to speak of one of the truest tests of the right to the franchise—I mean the educational test. There is no doubt that our future will be largely affected by the course we take with regard to the extension of education throughout the land. I agree with many of the remarks of Mr. Mowat on that subject I commend heartily the public spirit which has led the people of this country to expend such large sums on education; but my information leads me to believe that the people have not done all that they ought to have done. It is not only expenditure which is needed, but it is equally important to take care that when you have the schools, you send your children to them for a proper portion of the year. Then you cannot get good work without reasonable pay. You have improved considerably the rate of pay of your teachers in the last few years. Three or four years ago, after investigating that subject I spoke to my own constituents upon it, and I say now again, that if you want to make all this expenditure effectual, it is a prime duty to consider how much is required in order to obtain a good teacher, and to pay that sum whatever it may be. Without that the whole system is ineffective. The teacher is the key. To what purpose do you build brick school-houses, elect trustees, and send your children to school, unless you have an efficient teacher to instruct them? And you cannot get good teachers at the present rate of pay, increased though it is. Another point is this. In old and well-settled counties where the farms are cleared and the men have become wealthy, where there is no reason, no necessity, for the children being kept at home, how is it that the average period of attendance is so short? In some parts the shortness of the average attendance is positively alarming. I exhort my fellow-countrymen to see to these things. You have established free schools, and you have resolved to tax every-one to maintain them. We are all interested then in this matter, and it is to the general and wide diffusion of instruction and education that we must largely look for the great future that we expect."

4. PROCEEDINGS OF COUNCIL OF PUBLIC INSTRUCTION.

The writer of "Current Events," in the October number of the *Canadian Monthly*, deprecates the introduction of reporters at the sittings of the Council of Public Instruction. He says:—

"Upon the meeting of the reorganized Council of Public Instruction for Ontario, a question was raised as to the publicity of its proceedings. Some propose that reporters should be present at the sittings. The question is one which, we may safely say, has very little interest for the general readers of newspapers, who would prefer a column filled with less intellectual intelligence. In fact, if the Council wished to shroud itself in perfect mystery, it could hardly do better than publish a verbatim report of its proceedings in all the morning papers. The throne of the Congress of the United States has in this way become "dark with excess of light," while the sanctuary of private life, as it stimulates curiosity by its seclusion, is everywhere eagerly penetrated by the purveyors of food for the public appetite. The answer to the proposal of introducing reporters at the meetings of a deliberative Council is, however, one general in its scope, and founded on a fact little noticed, but of no small importance. Where publicity commences deliberation ends. No assembly, the discussions of which are reported, is, or can possibly be, really deliberative. To render deliberation real, every one must be perfectly at liberty to change his mind up to the close of the discussion; but when a member's opinion has once been taken down by a reporter, his liberty of changing his mind is gone. Tentative suggestions, objections thrown out for the purpose of eliciting answers, the characteristic methods of men really taking counsel together, are almost equally precluded, and the so-called deliberation becomes a mere registration of opinions formed before the discussion began. There is not a grain of counsel in all the debates of the British House of Commons or in those of any legislature sitting with open doors. The result is settled beforehand; and if there is any

deliberation it goes on in some sort of cabinet or caucus, where a free interchange of thought can take place. The public knows this, and unless there is something spicy in the way of rhetoric or personality, it never reads the report of the debates."

5. THE HIGHER EDUCATION OF WOMEN IN CANADA.

Judging from the number of institutions that have been recently founded, public attention seems, at last, to be turned in earnest to this most important subject. Nothing is really more needed than schools for young women where a first-class education may be received on terms within their reach. The "Fashionable boarding-school" has its place, and an important one, but it cannot, by any possibility, meet the demand. The expense, if it were nothing more, makes it impossible for any but the daughters of the rich to attend such. What is wanted is a school where a thoroughly liberal education in all the branches can be had for say two hundred dollars, or at the most two hundred and fifty dollars a year, including board and all other expenses. Institutions of this kind are found everywhere in the United States. Whether established by private munificence or by public subscription, they are so managed as to pay their own way at least, while in some instances they return fair dividends to stockholders. Toronto, Hamilton, London, Brantford, Whitby and Ottawa, in the Province of Ontario, have each large and well-conducted Ladies' Colleges. It is now proposed to commence one in Halifax to cost fifty or sixty thousand dollars. The calculation is made, that with a hundred boarders, paying $200 each, and a hundred day scholars, $50 each, a revenue of $25,000 would be obtained—"more than sufficient to work the institution and pay interest on the stock subscribed." In the Province of Quebec, where the need of it is more pressing, and where the means are in abundance, it is hoped that soon the mountain's brow at Montreal may be crowned with its "Trafalgar Institute," a splendid monument to the liberality of its founder, who began by divesting himself of ten acres of land, the finest site in the city, worth at least $50,000, and who has also bequeathed a large fortune for its future extension and maintenance.—*Exchange.*

6. LIST OF CERTIFICATES.

AWARDED BY THE COUNCIL OF PUBLIC INSTRUCTION, AND BY THE COUNTY AND CITY BOARDS OF EXAMINERS, AT THE JULY EXAMINATIONS, 1874.

1. *By the Council of Public Instruction.*

MALE.

First Class.

A.

	County, &c.		*County, &c.*
*Carson, Jos. Standish	Simcoe.	*Munro, John	Simcoe.
		Orr, Robt. Kimball	Durham.
*Fletcher, Morris Johnson	Waterloo.	*Parlow, Edwin D	Ottawa.
		*Smirl, Archibald	Ottawa.

B.

*Barnes, Charles Andrew	Lambton.	Hammel, David	Huron.
		Leitch, Thomas	Elgin.
*Goodbow, Alfred	Perth.	*McArdle, David	Perth.

C.

Clark, Levi	York.	*Hotson, Alexander,	Toronto.
Cook, John Wesley.	Wentworth.		

2. *By the County and City Boards of Examiners.*

Second Class.

MALE.

A.

Adair, Henry	Grey.	*Cornforth, William	Wentworth.
Armstrong, J. E.	York.	Dafoe, William A	Hastings.
Beringuette, George	Lanark.	Dunbar, R. H.	Elgin.
Black, William J	Lennox and Addington.	Elliot, William	Dundas.
		Ferguson, John	Huron.
Bowerman, John T.	Prince Edw.	Flemming, Robert	Middlesex.
Burdick, Caleb F	Middlesex.	Fraser, William H	Simcoe.
Cairns, John A.	Perth.	Funnell, Henry E	Oxford.
Campbell, John	Victoria.	Glass, George	Durham.
Campbell, Alex.	Huron.	Gibson, Robert	Middlesex.
*Chadwick, Chas. W	Grey.	Godwin, William H.	Frontenac.
Grassick, James	Huron.	*McIntosh, Angus	Waterloo.
Hall, Theophilus	Bruce.	McGregor, Charles	Middlesex.
Hallet, William J	Wellington.	Petrie, Alexander	Wellington.
Henry, Thos. McK	Lennox and Addington.	Reid, David	Wentworth.
		Sinclair, Robert G	Grey.
Hindson, William	Lincoln.	Sinclair, John	Peel.
Hobkirk, A. A	Huron.	*Sinclair, Samuel B.	Elgin.
Inglesby, R. C	Elgin.	*Sifton, James W	Elgin.
Mackay, Hector	Grey.	*Slater, James	Elgin.
Malcolm, Fullerton B	Carleton.	*Smily, George	Carleton.
		Stanton, James H	Durham.
Martin, Joseph	Ottawa.	Staples, Samuel	Wentworth.
Millar, James	Haldimand.	Stuart, Joseph U	Middlesex.
*Moir, R. G	Huron.	Stuart, Alexander	Middlesex.
Moore, Thomas	York.	Walker, John A.	Kent.
Moore, Charles A	Peterboro'.	Westervelt, Samuel B	Peel.
McEwen, James	Carleton.	Wilson, Nicholas	Middlesex
*McFaul, Leonard L	York.		

B.

Armstrong, William S	York.	Kirkpatrick, Thos.	Durham.
		Kimade, Thos. L.	Wentworth.
Banks, Maltimore	Lincoln.	Kirk, George	Lambton.
Barron, Robert	York.	Lamb, William	Bruce.
*Bannerman, Wm	Grey.	Leacock, Henry J.	Lambton.
Bonner, John D.	Haldimand.	Leahy, John	Essex.
Bradley, William E.	York.	Macintyre. Donald	Glengarry.
Brennard, Henry T.	Essex.	Metcalfe, James H.	Frontenac.
*Brown, Thomas D.	Prince Edw.	Miller, Edward A.	Lambton.
Bewell, William H.	Grey.	Mills, David	Grey.
Bell, Thomas	Lincoln.	Mullen, Henry J	Peel.
Campbell, Colin	Huron.	*McClung, John	Bruce.
Cantelon, Peter	Huron.	†McEwan, Robert A.	Dundas.
*Case, E. T	Huron.	McGrath, John	Middlesex.
Chenay, David	Dundas.	McKeown, Wm.	Hastings.
Chisholm, Thomas	Wellington.	McKay, Angus	Elgin.
Clapp, Robert E.	Grey.	McLean, Angus	Middlesex.
Collin, John	Ontario.	McLean, George	Frontenac.
Crawford, George E.	Prince Edw.	McMahon, John	Wellington.
*Crawford, Wm. H.	Lincoln.	*Norton, Theophilus	Victoria.
Cowan, William	Durham.	Nathess, William	Peel.
Dick, John H.	Wellington.	*Nasmith, Archib'd	Perth.
Dickson, Albert	Lambton.	O'Reilly, James	Northumberland.
*Dolbear, Ransom	Elgin.		
*Donnocker, Delbert G.	Elgin.	Pauling, James G.	Elgin.
		Patterson, James	Huron.
Duncan, John A.	Russell.	Park, Alexander	Kent.
Dunnfield, John	Northumberland.	Rowan, James E	Haldimand.
		Sheehan, John	Hamilton.
Flanagan, James.	Dundas.	Sheridan, Samuel	Ontario.
Flewelling, John E.	Wellington.	Sinclair, James A	Northumberland.
Fraser, Ebenezer E.	Simcoe.		
Gilbert, Abraham	Middlesex.	Sinclair, Archibald	Waterloo.
Glenn, James E.	Prince Edw.	*Smith, William C.	Peterboro'.
Graham, John J.	York.	Stafford, Henry E.	Elgin.
Hanna, Franklin	Leeds and Grenville.	Standish, Joseph	Huron.
		Talbot, Daniel	Wellington
Hanna, William	Lanark.	Tanner, John A.	Lambton.
Hand, James	York.	Tanner, Robert J.	Lambton.
*Hart, Hermon	Victoria.	Thomas, John S.	Wellington.
*Hicks, R. W.	Toronto.	Wallace, Robert J.	Leeds and Grenville.
Hislop, James	Perth.		
Hobbs, William B.	Middlesex.	*Welch, Lafayette	Middlesex.
*Hodgins, Frank	Middlesex.	*Wellwood, Richard	Wellington.
Hunt, Hannan W.	Leeds and Grenville.	Wetherill, Eben. R.	Leeds and Grenville.
Huston, E. H.	Huron.	Wickens, Walter	Brant.
Houston, Robert	Lincoln.	*Yorke, John	Carleton.
*Kester, Andrew	Ontario.	Yule, David D.	Bruce.

FEMALE.

A.

Andrews, Priscilla	Carleton.	Living, Eliza	Ottawa.
Cotton, Martha	Hamilton.	Marritt, Salome	Middlesex.
Cowper, Mary	Grey.	McIntyre, Isabella	Kingston.
Gill, Annie	Kingston.	*Newton, Margaret.	York.
Harvey, Lilly	Hamilton.	Pardon, Kate L.	Kent.
Hunt, Martha E.	Peterboro'.	Whittaker, Jennie.	Oxford.

B.

Abbott, Susie J.	Leeds and Grenville.	*Baily, Louisa	York.
		Brown, Esther	Grey.
Armstrong, Annie	Prescott.	*Carlyle, Thomasina	Toronto.
Chuse, Lauretta	Elgin.	Palmer, Antoinette	Ontario.
Comfort, Ellen	Elgin.	Pentland, Emma	Wentworth.
Cooke, Margaret	Prescott.	Rothwell, Caroline	Ottawa.
Crawford, Annie	Kingston.	*Shaw, Kate A.	Lambton.

* Normal School Students. † Conditional.

*Davidson, Alice ...	York.	Springer, Elizabeth	Elgin.
Dawson, Eva	Kent.	*Staples, Susannah.	Victoria.
Forgie, Agnes	Lanark.	Steacy, Annie C....	Ottawa.
*Glassford, Mary E.	York.	Stevens, Ann.....	Huron.
Harvey, Annie M..	Wentworth.	*Thompson, Maggie	Victoria.
Haskett, Eliza	Grey.	Waddell, Lizzie F.	Prescott.
*Hoskins, Cecilia C.	Lincoln.	Walker, Cath. R...	Perth.
*Hudson, Celeste...	Elgin.	*Wallace, Mary ...	Peel.
Magen, Clara.....	Hamilton.	*Watson, Carrie J..	York.
Miller, Amelia	London.	Weller, Matilda C.	Lennox and Addington.
*McCulloch, Marg't	Perth.		
*McLean, Matilda M.	York.	Welstad, Anna	Lincoln.
*McLean, Marg't A.	Victoria	*Westman, Mary A.	York.
*O'Leary, Alice	Victoria.	*White, Mary A. ...	Wentworth.

II. Papers on Practical Education.

1. OBJECT LESSONS.

Each exercise in object lessons should be conducted with a view to forming habits of attention and careful observation through the use of the senses.

FORM.—In Nature's school, children first learn to know things as wholes; they learn to know their parts afterward. The teacher who would be successful must follow Nature's plan of instruction. Present, therefore, common objects as wholes, and lead the pupils to notice resemblances in shape, first; afterward direct their attention to prominent differences.

A Box of Forms and Solids, containing Forms and fifteen Solids, has been prepared for the special purpose of *Object Teaching*.† This is the most important aid in illustrating the various forms and solids.

Select the Form to be taught from the Box of Forms, and lead the pupils to observe it, and then tell them its name; next require them to mention other objects having the same shape. Proceed in this manner with each Form and Solid, and continue these exercises until the pupils can recognise and name each.

COLOUR.—The pupils should be led to distinguish resemblances and differences in colour, from "coloured cubes," or cards, and to group together objects of like colours. They should also learn the names of the six principal colours.

OBJECTS.—The lessons on *Common Objects* should be simple and conversational, treating only of their most obvious parts and uses. Such common objects as a bell, chair, slate, pencil, hat, cup, knife, etc., are appropriate for this purpose. The pupils should be led to notice and point out the principal parts, and encouraged to tell what they see and what they know of each object shown them.

HUMAN BODY.—The lessons on the Human Body should lead the pupils to notice and name the parts, as head, neck, trunk, arms, hands, legs, feet; also parts of the head, as crown, face, forehead, cheeks, chin, mouth, nose, eyes, ears, etc.

DRAWING ON SLATES, ETC.—The exercises of *Drawing* and *Printing on Slates* should be introduced in such manner as to give an interesting variety to the class-work; also, so as to aid in the discipline of the class, by giving the children something *to do* that will interest them after they have become tired with their other lessons. The children might be allowed to use slates for drawing, as a reward for good order and attention. Short daily exercises may be made very useful.

LENGTH OF EXERCISES.—The exercises of this grade should not be continued upon the same subject longer than fifteen minutes at one time, without materially changing the manner of the exercise.

DISCIPLINE.—Young children cannot attend to the same thing for a long time without change in the form of attention. Their natural activity demands frequent changes in the position of the body; also constant but varied employment. If the teacher does not furnish the needed employment and changes of position by variety in her methods of instruction, the children will seek to gratify their need by play. Therefore children *should never be compelled to sit without employment, either for the mind, the hands, or the body.*

Children should be led to do right by encouragement rather than be driven by fear. Judicious praise is more efficient than scolding. Teach them to be cleanly, mannerly, truthful, and obedient. Let good examples of these traits be commended frequently.—*Am. Ed. Monthly.*

* Normal School Students.

† From "How to Teach. A Manual of Methods," At Peoples' Depository, Toronto.

2. THE KINDERGARTEN SYSTEM OF EDUCATION.

The Kindergartem system of education has become so popular that many teachers are adopting it in their schools, some we are afraid without much comprehension of its philosophy or its methods. Dealers in Kindergarten toys are often requested to instruct purchasers in the use of the various gifts, which they of course have not the time to do. A little book which will prove useful to these would-be learners, has been prepared by *Heinrich Hoffmann*, who, under the title of "Kindergarten Toys, and how to use them," explains the first six gifts, and gives hints as to the proper way of employing them. It is a sensible, practical little book, and will, as far as a book can do so, help those who wish to become kindergartners. Kindergartens, however, cannot be made by books. A thorough training is indispensable.—*Ibid.*

3. THE KINDERGARTEN.

The question, "What is a Kindergarten," is so often asked that it may be well to answer the enquiry by setting forth briefly the aims of this comparatively new method of education; to describe some of its processes in detail, and thus to show in what way it differs from the ordinary manner of instructing very little children. The name Kindergarten is derived from the German words *kinder* (children) and *garten* (garden), literally child-garden. Kindergarten, then, means simply a garden of children, and Froebel, the first Kindergartner, meant to symbolize by the name the spirit and plan of treatment. As the gardener treats his plants, studying their pecularities and putting them in the most favourable circumstances of soil and atmosphere to enable them to grow, flower, and bring forth fruit, so the child-gardener treats the human flowers under his care. While he knows the tender plants must not be forced too rapidly, or against their individual natures, yet he does not allow them to grow wild, but prunes their redundancies and removes every impediment to their truest development. One of the prominent features of the Kindergarten is block-building. A box of little cubes is so managed that it will unfold in the child's mind the law of symmetry, by means of a series of forms which the children are taught to make, in a way which cannot well be described here. In fact, it is difficult to describe intelligibly any of the numerous occupations of the Kindergarten. However, we shall attempt to give one somewhat in detail, which may serve to illustrate, or to suggest, the method used with all the rest. The inventive faculties are stimulated, while the eyes and fingers are trained to accurate measurement and exactness by exercises, called stick and ring laying. A number of little sticks of different lengths, or a quantity of whole or half rings, are given to the child, who proceeds to form with them, upon the table in front of him (which is for the purpose ruled in inch squares), figures, say of any object he sees about him.

By means of combination the children often produce forms which give them great pleasure. They will almost invariably express the wish to show these results of their patience and skill to father or mother, or to some friend. But this they cannot do, as the sticks and rings separate when removed. Now comes the opportunity to show the child, by his own desire, how he may make these forms permanent. It must be remembered that in the Kindergarten, while all reasonable discipline is maintained, nothing in the form of lessons or work is forced upon the child; but his powers of observation being stimulated, he will, through natural activity and the imitative capacity, or inventive genius, with which all human beings are to some extent gifted, desire to make for himself forms like those he sees, or to invent new ones by giving his individual ideas tangible expression. As he cannot with the sticks and rings make permanent forms which he may keep for future pleasure, his mind begins to search for some other mode of expression, and the slate, or paper and pencil, almost suggest themselves. The slates and paper used are ruled in squares (like the table, only much smaller), and thus drawing comes naturally to be a pleasant and much desired pastime. The formation of letters with the rings and sticks, leads in the same manner to writing, as well as to reading and spelling. Arithmetic is practically taught by this exercise, as well as by the use of the blocks and other toys. Instead of learning to repeat in a careless way rules and tables which he does not see the use of, or necessity for, the child will discover for himself that in six bundles of sticks, with seven in each bundle there are forty-two sticks, and will readily see that it is quicker and easier for him to say "six times seven are forty-two," than to "count up" in his old childish fashion. Many simple games are introduced which call for exercises in mental arithmetic in which, as the physical powers are constantly exercised and the sympathies enlisted, it is impossible that there should be any undue mental strain, and yet the little one is very rapidly adding to his stock of knowledge, because he puts into immediate use all his acquirements, and thus really *knows*, not merely "has learned by heart," which Montaigne says means "not to know

at all." We "children of a large growth" know well how much greater strength of mind and body we can bring to bear upon any undertaking,—how much more we can accomplish when our interest and sympathy are enlisted, than when merely plodding through some dull routine to which circumstance or even duty calls us. Object lessons are among the most important exercises of Froebel's system. Most children ask numberless questions about anything which they see, but how few are taught to use their powers of observation to find out for themselves answers to these questions which constantly arise in their busy brains. These lessons are given in the form of conversation between the teacher and the children, and the little ones are thus drawn to reflect and to discover method and reasons for themselves. So far as they can comprehend, all the familiar processes of nature are pointed out and explained to them. The structure of their own bodies, the simple laws of health, the habits of insect and animals, a thousand facts of Natural History, Chemistry and Botany, are known to be interesting and wonderful parts of a wide and beautiful world, which a loving God and Father has given in trust to each one of them. Long voyages on the map or globe, in the path of some brave discoverer, stories of men and women of past ages, will help to fix in their minds lessons in geography and history, and in making real to them what must otherwise often seem like an endless jumble of tiresome dates and empty names,—a veritable "valley of dry bones." In all the various business and professions of life a certain dexterity of the hand is required as an element of success.

An awkward, unwieldly person finds difficulty in carrying out the details of any labour, whether professional or industrial. More attention, therefore, ought to be given to the education of the body, and particularly of the hands, during childhood, while the muscles are supple and easily trained. Many processes of the Kindergarten, such as paper-folding, cutting and weaving, are used to promote this end. Remembering how soon the little minds and bodies, unused to long-continued application to one task, become wearied, a frequent change of position and occupation is deemed best, and song-plays with gymnastics are interspersed with the other exercises.

Much attention is given to music, the children being taught the notes and generally first principles. In fact, the Kindergarten aims to lay the foundations for all knowledge; to teach the beginnings of everything, because the child is not born into a narrow world of mechanical routine, but a wide world of nature and art. His powers correspond with his outward conditions and should naturally develop in harmony and almost stimultaneously with each other. The child needs to learn the use and extent of his own powers, and, above all, his moral nature needs to be strengthened by helping him to know and govern himself. Very many children who, at home, without companions of their own age, are peevish and fretful, blossom out in the genial atmosphere of the Kindergarten into the most healthfully active and amiable pupils. The immense success of this system of education, and its rapid spread during the past ten years, is some guarantee of its value. In Austria, a law has been passed that all children under a certain age shall attend Kindergartens. Throughout Germany, England, France and Italy, these schools are becoming universal. In the United States, this department is being added to very many of the public schools, and all who have carefully observed and studied Froebel's method, agree that, if faithfully carried out, it must do much toward preventing the tendency to superficial education.—*Daily Witness.*

4. LEARN TO DRAW.

The Washington Bureau of Education has just issued a circular giving some interesting information on the subject of the industrial relations of art. It is shown on general principles, and by extracts from official reports and the writings of men of special observation and experience, that mechanical skill is greatly advanced by a knowledge of drawing. Almost every thing that is well made now is made from a drawing. "The more of an artist the better the artisan." "Skilled labour is the only sure foundation for prosperous manufactures." "Educated, skilled labour—ever the cheapest, as it is the best, labour." "The workman who lacks this knowledge and ability"—that is, of drawing—"must work under the constant supervision of another, doing less and inferior work, and receiving inferior wages." These are some of the suggestive aphorisms to be found amongst the citations of the pamphlet before us. If it be true that the workman who builds a house, or lays a brick, or cuts a stone, or makes the commonest article of every-day use, does his work better if he knows how to draw, it follows that drawing is not the mere ornamental "accomplishment" that many suppose it to be, but a very practical branch of education. It is not only the foundation of the whole superstructure of the fine arts, but also a most valuable aid to the handicraft of the artisan. It has been said that "whoever can learn to write can learn to draw," but it might be better to say whoever can learn to write well can learn to draw, because drawing that is not more regular and accurate than a great deal of hand-writing is, would not be of much use. Still it is well that drawing should be taught in the first instance, just as writing is taught; not in the former case, upon the assumption that the draughtsman is a genius in embryo, sure to mature into a celebrated artist, any more than in the latter case, upon the assumption that the learner of writing will by-and-by write some stirring poems or beautiful essays—but in both cases upon the assumption that the special acquirement will be practically useful. If there be an unsuspected artist among the pupils he will turn the knowledge to the more ideal, artistic purpose, while the future artisans will find it helpful in their more commonplace callings. The paper issued by the Washington Bureau is of interest and value in showing what has been done for general art culture in Europe, and what is doing in a more limited way in the United States. The growing taste for art among the artisan population of this city is shown in a gratifying manner, in the progress that has been made in drawing by the students of the class at the Mechanics' Institute, under Mr. Wilkens. The number of earnest pupils, drawn from the ranks of young apprentices, engaged in this fruitful study there is surprising, and exhibits the keen desire amongst them to take advantage of this method of advancing their skill in their various callings.—*London Free Press.*

5. SCHOOLS AND SOCIAL MANNERS.

The intimate relation of good manners to good morals is such that in everyday life we presume to estimate *character* by deportment. Indeed, we doubt if one can really exist long without the other, for it is no less true that good manners are the effect of good morals, than that the former by reflex action, preserve the latter from injurious contact. We do not believe that human beings fall at once, "like the snow, from heaven to hell." Open immorality is a fungus which exists only under conditions, the first of which is the destruction of that *instinct* of decorum which we may truly term the "sentinel of the soul." On this principle rests that propriety of behaviour which society has ever maintained as essential to respectable reputation. This fact is too apparent to need either argument or illustration here.

In the minor morals involving candor, courtesy and hospitality—as distinguished from deceit, vulgarity and brutish selfishness—are to be found the buds and blossoms which by and by reach fruition in a noble after-life. From our consciousness of this arises our tendency to ascribe every heroic characteristic of the great and good back to the holy sentiments of a mother's counsel and a mother's piety. Without doubt early home influence is the most potent motor of human life, and it is largely because all our homes are not what they ought to be, that *all* our young folks are not what they ought to be. It is a sad but certain fact that the parents of many of our pupils are themselves so besotted, uncouth, and ignorant, that the home influence which ought to be elevating and holy is either *not* positively good or decidedly degrading.

In such cases can the Commonwealth look passively on, content merely to supply her "little ones" with what book knowledge the caprice of the parent will permit? By no means. Compulsory education, itself a matter of simple justice to helpless children, must soon arrive, unless the world moves backward; and it is the undoubted duty of public education to earnestly counteract, both by precept and example, the misfortune of its pupils through uncivilized homes.

Class books will not aid the teacher in this important matter. He himself is both the teacher and the book. Herein is his position on a level with that of the pulpit, although we must sorrowfully confess that, as classes, the moral standard of teacher and preacher is far from equality.

Positive immoral influence, such as profanity, tippling, etc., on the part of teachers, is too often tolerated, and that heart-power and culture which one educator calls "sweetness and light," are little regarded.

Thus our schools are frequently occupied solely in abstract studies, which have but little effect on either morals or manners. The model ideal of this class seems to be a modern *Menonium*, whose stony oracle is too "elevated" to enter into sympathy with childhood, and whose individual influence, in moulding their character, is "equal to nought." Machines, of course, have their uses, but moral power is not among them.

However we neglect the cultivation of warm hearts and noble sentiments, yet the truth remains, that it is by these things that great nations and great men live and move and have their being, while it is equally true that such sentiments are both created by, and the creators of, our social manners.—*Manhattan, in Pennsylvania School Journal.*

III. Monthly Report on Meteorology of the Province of Ontario.

ABSTRACT OF MONTHLY METEOROLOGICAL RESULTS, compiled from the Returns of the daily observations at ten High School Stations, for SEPTEMBER, 1874.

OBSERVERS:—*Pembroke*—R. G. Scott, Esq., M.A.; *Cornwall*—James Smith, Esq., A.M.; *Barrie*—H. B. Spotton, Esq., M.A.; *Peterborough*—J. B. Dixon, Esq., M.A. *Belleville*—A. Burdon, Esq. *Goderich*—Hugh J. Strang, Esq., B.A.; *Stratford*—C. J. Macgregor, Esq., M.A.; *Hamilton*—George Dickson, Esq., M.A; *Simcoe*—Dion C. Sullivan Esq., LL.B.; *Windsor*—J. Johnston, Esq., B.A.

STATION.	North Latitude.a	West Longitude.a	Elevation. a: Above the Lake.	Elevation. a: Above the Sea.	Barometer at temperature of 32° Fahrenheit: Monthly Means. 7 A.M.	1 P.M.	9 P.M.	Mean.	Highest. Reading.	Highest. Date.	Lowest. Reading.	Lowest. Date.	Range. Monthly.	Range. Greatest in 24 hours.	Range. Date.
	°	°	Ft.		Inches.										
*i*Pembroke	45·50	77·10	....	423	29·6783	29.6299	29·6133	29·6405	29.881	9 p.m. 16	29·169	7 a.m. 30	·712	.....	.....
*f*Cornwall	45·0	74·50	137	175	29·8673	29·8432	29·8414	29·8506	30·088	7 a.m. 4	29·245	7 a.m. 30	·843	·468	3—4
*d*Barrie	44·25	79.45	59	779	28·6720	28.4850	28·5725	28.5765	29·026	7 a.m. 4	28·140	1 p.m. 10	·886	·600	2—3
*k*Peterboro'	44·20	78·25	....	670	29.3775	29·3441	29·3425	29·3547	29.610	7 a.m. 4	28·928	7 a.m. 30	·682	·431	3- 4
*e*Belleville	44·10	77·52	72	307	29·7396	29·7244	29·7094	29·7244	29·987	7 a.m. 4	29·302	7 a.m. 30	·685	·410	3—4
*g*Goderich	43·45	81·42	....	715	29·2989	29·2798	29·2634	29·2807	29·490	7 a.m. 1	29·024	9 p.m. 29	·466	·304	15—16
*k*Stratford	43·25	80·58	....	1182	28·8196	28·7896	28·7850	28·7981	29·006	7 a.m. 4	28 491	7 a.m. 30	·515	·282	25—26
*h*Hamilton	43·12	79·50	90	324	29·6222	29·5914	29·6055	29 6064	29·935	1 p.m. 1	26·230	1 p m. 29	·705	.381	28—29
*l*Simcoe	42·51	80·14	150	716	29·0877	29.0544	29·0424	29·0615	29·283	1 p.m. 5	28·757	9 p m. 29; 7 a.m. 30	·546	·275	25—26
*m*Windsor	42·20	83·00	....	620	29·4380	29·4142	29·4150	29.4324	29·628	7 a.m. 21	29 130	1 p.m. 19	·498	·467	19—21

STATION.	Temperature of the Air. Monthly Means. 7 A.M.	1 P.M.	9 P.M.	ME'N	Mean Maximum.	Mean Minimum.	Mean Range.	Daily Range. Greatest.	Date.	Least.	Date.	Highest. Reading.	Date.	Lowest. Reading.	Date.	Monthly Range.	Warmest Day. Date.	Mean Temp.	Coldest Day. Date.	Mean Temp.	Tension of Vapour. Monthly Means. 7 A.M.	1 P.M.	9 P.M.	ME'N.
	°	°	°	°	°	°	°	°		°		°		°		°		°		°				
*i*Pembroke	56·85	69·21	61·18	62·41	72·32	51·77	20·55	35·1	9	8·3	18	87·6	10	37·3	4	50·3	10	75·47	30	47·60	·350	.480	.379	.403
*f*Cornwall	57·19	68·23	58·83	61·42	82·48	53·42	29·06	56·7	5	11·9	29	83·3	10	33·2	22	50·1	10	71·37	30	48·00	·410	·447	·425	.427
*d*Barrie	58·56	67·97	62·95	63·16	72·17	55.32	16·85	23·6	3	9·4	27	83·6	10	43·2	30	40·4	10	73·83	30	46·57	·422	.467	·451	.446
*k*Peterboro'	56·25	71·99	60·64	62·96	75·83	46·42	29·41	42·3	2	13·8	18	93·6	10	35·3	22	58·3	10	80·93	30	45·50	·393	.431	.412	412
*e*Belleville	56·86	69·95	61·40	62·73	73·59	52·70	20·89	31·4	5	7·9	18	88·2	11	40·1	4	48·1	11	75·50	30	46·96	·410	·510	·479	.446
*g*Goderich	61·29	70·99	61·68	64·65	74·13	54·50	19·63	32·2	12	6·8	30	89·1	10	41·6	4	47·5	14	77·00	30	47·23	·476	·506	.437	.473
*k*Stratford	55.27	69.83	59·67	61.59	72·61	51·06	21.55	31·0	12	8·3	30	85·7	13	39·1	29	46·6	14	74·35	30	43·27	·408	.462	.434	.435
*h*Hamilton	62·06	73·40	63 88	66·45	74·53	54·42	20.11	36·7	10	4·5	18	93·4	10	41·3	22	52·1	11	80·70	30	51·66	·463	·533	·477	.491
*l*Simcoe	57- 7	72 50	60·05	63·27	75·	42.72	32·28	43·5	10	16·7	17	87·7	11	28·0	21	59·7	14	75.36	30	48·2	·453	·554	·466	.491
*m*Windsor	61.26	76·31	62.63	66·73	80·47	53·55	26·92	41·0	11	9·6	17	94·5		38·4	21	56·1	14	79·67	30	50·17	·459	·51	·467	·489

Approximation. *d*On Lake Simcoe. *e*Near Lake Ontario on Bay of Quinte. *f*On St. Lawrence. *g*On Lake Huron. *h*On Lake Ontario. *i*On the Ottawa River. *l*Close to Lake Erie. *m*On the Detroit River. *k*Inland Towns.

STATION.	Humidity of Air. Monthly Means. 7 A.M.	1 P.M.	9 P.M.	MEAN.	Winds. Number of Observations. Surface Current. North.	North-East.	East.	South-East.	South.	South-West.	West.	North-West.	Calm.	Total.	Motion of Clouds. a North.	North-East.	East.	South-East.	South.	South-West.	West.	North-West.	Impercept.	Clear.	Total.	Estimated b Velocity of Wind. Monthly Means. 7 A.M.	1 P.M.	9 P.M.	MEAN.	Amount of Cloudiness. Monthly Means. 7 A.M.	1 P.M.	9 P.M.	MEAN.	Rain. No. of Rainy Days.	Duration in hours.	Depth in inches.	Snow. No. of Snowy Days.	Duration in hours.	Depth in inches.	Total Depth of Rain and Melted Snow.	Auroras. Class I.	Class II.	Class III.	Class IV.	Sky unfavorable, obs. doubtful.	Sky unfavorable, obs. impossible.	Sky favorable, none seen.	
Pembroke	73	66	68	69	15	..	14	9	9	4	22	5	..	78	2	..	1	..	9	..	41	2	5	16	76	1·1	1·46	1.38	1·31	6·35	6.54	6·	6.27	12	.....	3·889	.....	.....	.....	3·889	..	..	..	5	..	12	9	3rd, 9th, 16th, 21st, 24th.
Cornwall	86	65	85	79	2	2	16	21	17	5	5	6	4	78	3	..	..	..	..	..	3	8	48	16	78	1·0	1·6	0·6	1·07	7·1	6·5	5·5	6·3	9	.....	1·9901	.....	.....	.....	1·9901	..	..	..	2	..	13	10	9th, 12th, II.; 6th, 7th, IV.
Barrie	84	68	78	76	3	2	12	7	2	5	2	7	38	78	3	..	..	..	..	..	1	7	41	25	78	0·7	1·3	0·71	0·9	4·5	5·6	3·4	4·4	11	.....	1·8005	.....	.....	.....	1·8005	2	..	..	..	8	18		
Peterborough	85	55	77	72	2	2	7	7	3	5	6	18	28	78	1	4	..	4	1	1	20	9	20	18	78	1·15	2·46	0·8	1·47	5·38	5·31	3·0	4·56	11	57·20	2·0539	.....	.....	.....	2·0539	..	..	1	..	4	22	17th.	
Belleville	85	68	86	80	4	2	14	8	22	8	9	6	5	78	1	1	2	..	5	1	6	2	26	34	78	1·2	1·6	1·2	1·3	4·8	3·5	3·8	4·03	13	56·	2·929	.....	.....	.....	3·929	..	..	..	..	11	15		
Goderich	86	67	78	77	4	3	2	13	6	16	6	6	22	78	3	2	1	2	2	9	10	7	13	29	78	1·5	1·7	1·5	1·6	4·8	4·6	2·9	4·1	13	34·	2·8388	.....	.....	.....	2·8388	..	..	1	2	4	19	12th.	
Stratford	90	63	83	79	4	2	3	5	8	11	4	12	29	78	2	..	2	..	4	8	4	10	21	27	78	1·3	2·9	1·3	1·83	4·0	4·7	2·9	3·9	8	38·15	2·5907	.....	.....	.....	2·5907	..	..	..	..	4	26		
Hamilton	81	65	78	75	7	5	4	2	14	2	25	6	13	78	2	4	1	1	2	..	4	2	28	34	78	2·9	2·6	2·3	2·6	3·48	4·53	2·65	3·67	5	.....	2·2915	.....	.....	.....	2·2915	..	1	2	..	7	16	9th. III.; 12th. 24th, IV.	
Simcoe	92	67	87	82	..	4	..	19	8	19	3	22	3	78	..	16	11	15	1	3	1	1	..	30	78	1·4	2·5	1·9	1·93	4·1	3·8	2·9	3·6	9	24.	1·5509	.....	.....	.....	1·5509	..	1	1	3	7	14	12th, III. 30th, IV.	
Windsor	79	57	81	72	6	10	3	5	15	10	3	7	19	78	..	1	1	..	..	3	5	2	4	33	29	78	1·7	2·3	0·9	1·63	5.2	6·0	4·0	5·1	4	.....	·9288	.....	.....	.....	·9288	..	..	1	..	7	18	7th.	

a Where the clouds have contrary motions, the higher current is entered here.
b Velocity is estimated, 0 denoting calm or light air; 10 denoting very heavy hurricane.
c 10 denotes that the sky is covered with clouds; 0 denotes that the sky is quite clear of clouds

REMARKS.

PEMBROKE.—On 5th and 11th, lightning with rain. 15th, lightning and thunder with rain. On 3rd and 20th, frost. Rain on 3rd, 5th, 11th, 15th, 17th, 18th, 20th, 22nd, 27th–30th.

CORNWALL.—Lightning and thunder with rain, 7th, 15th. 21st, two brilliant meteors. Frost, 22nd. Wind storm, 17th. Fog 4th. Rain 3rd, 4th, 6th, 16th, 18th, 19th, 24th, 29th, 30th.

BARRIE.—Lightning and thunder with rain, 5th, 19th. Frost 3rd, 4th. Rain 3rd, 5th, 15th,—19th, 22nd, 26th—29th, 30th.

PETERBOROUGH.—Meteor on 1st. Frost 3rd, 20th 21st, 22nd, 30th. Wind storms, 19th, 30th. Fogs 2nd, 4th, 9th, 25th, 29th. Rain 3rd, 5th, 15th, 17th, 19th 20th, 22nd, 23rd, 27th, 28th, 29th.

BELLEVILLE.—Lightning and thunder with rain, 5th, 14th. Fog 25th. Rain 3rd, 5th, 6th, 14th, 15th, 17th —20th, 22nd, 27th. 28th, 29th.

GODERICH.—Lightning, 22nd. Lightning and thunder with rain, 19th. Wind Storms, 19th, 29th, 30th. Rain, 2nd, 3rd, 4th, 5th. 15th, 17th, 19th, 22nd, 26th, 27th, 29th, 30th.

STRATFORD.—Lightning and thunder with rain, 19th. Frost 21st,

(Continued on page 184).

Fogs 23rd, 24th, 25th. Rain, 3rd, 5th, 7th, 15th, 17th, 19th, 22nd, 27th. Excess of mean monthly temperature over average of 13 years + 4°.71.

HAMILTON.—Lightning and thunder with rain, 17th, 28th. Rain, 3rd, 5th, 15th, 17th, 28th.

SIMCOE.—Lightning and thunder with rain, 5th, 15th. Frost, 20th, 21st, 30th. Wind storms, 19th, 30th. Fogs, 9th, 10th, 11th, 21st, 26th. Rain, 3rd, 4th, 5th, 15th—17th, 22nd, 27th, 28th. Brilliant Aurora, class I, covering the whole N. Hemisphere, 26th. Last three days unusually cold.

WINDSOR. Thunder with rain, 19th. Lightning and thunder with rain, 8th. Meteors on 2nd, N. E. towards H. ; 5th, through *Scorpio* towards H. 6th, through *Arcturus* towards H. : through Northern Crown towards S. : from *Cassiopea* towards S. 25th, Lunar halo.

IV. Papers on Scientific Subjects.

1. WHEN AND WHERE DOES THE DAY BEGIN?

The *Scientific American* thus answers the question : "As we travel eastward, the day begins earlier ; near the Equator starlight appears an hour earlier for each thousand miles going east. When it is sunrise in New York, the people of Europe have had sun-light for many hours, and the Californians are still in their beds dreaming. Evidently the day has a first beginning, and at the eastward. But how far and where? What are the people who first see the light of Monday morning?

"It is the sun which brings the day ; where does he first bring Monday? If we could travel with him, we might find out. Let us suppose the case. We will take an early start ; at sunrise on Sunday morning, with the sun just at the point of peeping over horizon behind us ; we travel westward. As we go, the people give us a Sunday greeting ; we bring Sunday with us to Pittsburg, St. Louis, Salt Lake, San Francisco. At San Francisco our faithful chronometer informs us that we have been on the tramp about five hours. But we started on Sunday morning, and it is Sunday morning still. We go on, still on Sunday morning. Will this Sunday morning never end? The quiet Pacific knows but little of Sunday, or any other day, and our question scarcely receives an echo for reply. When we get to Yokohama in Japan, or Shanghai in China, we search for some Yankee, wide awake in the early morning, and we are told for the first time that Monday has come. Everywhere now we bring Monday, and in twenty-four hours by the chronometer, after starting, we are in New York again, and find the merchants taking down their shutters, and the Monday newspapers telling us what has happened during our absence."

2. THE FIRST TRANSATLANTIC STEAMER.

There is a statement on record to the effect that the first steamship that crossed the Atlantic, from Europe to America, was in 1819. (Previous to this time they had been quite extensively employed in the home trade of Great Britain, and were already assuming large proportions and great power.) This announcement, if substantially correct, would be fatal to Canadian glory, but it admits of some explanatory remarks which modify its force and give us the honour claimed. By reference to nautical regulations then enforced, we find that though nominally steamships, such vessels, when crossing the ocean, made their way almost entirely by means of sails, the engine only being used when head winds prevailed, and even then at a low rate of speed. This manner of navigating the great distance prevailed for a number of years. In 1833, the "Royal William," of 180 horse power, and 1,000 tons burden, was built at Three Rivers, on the lower St. Lawrence, and was intended to sail between a Nova Scotian port and Cowes, Isle of Wright. We have the best of authority for asserting that *she was the first steamship to make the entire voyage across the Atlantic under steam.* From that year may be noted the inauguration of a new era in trans-oceanic communication ; a more powerful and faster class of boats was introduced, the use of steam being entirely relied upon for motive power, and sails only employed as aids at certain times. Thus it would appear that a Canadian built ship, manned by Canadian seamen (presumably so), and sailing from a Canadian port, was the first to demonstrate the superiority of steam over wind and wave in connection with the navigation of the boisterous Atlantic.—*From New Dominion Monthly for March.*

3. UNKNOWN PLACES.

Chief Justice Daly, in his annual address before the American Geographical Society, in referring to the work yet to be done by geographical societies, says : "There are not now great highways along the ocean to be tracked, or great continents to be discovered, but there is yet one-seventeenth part of the globe, of which we know nothing except by conjecture. The region which surrounds the South Pole, the Antarctic, covers an area of 7,000,000 square miles. The Arctic measures nearly 3,000,000. The unexplored portion of Africa may be put down at least as 1,000,000. The unknown part of Australia is certainly more than two-thirds of that amount, and in this connection I may draw attention to the great Islands of the East Indian Archipelago, stretching from the north-east corner of Asia to New Zealand, occupying the most favoured part of the earth, and which have in extent the magnitude of a continent. One of this great group, Borneo, is considered the second largest island on the globe. A strip along the coast of about 100 miles deep, represents what we know of it ; the interior and the larger portion remains unknown. Papua or New Guinea is as large or may even be larger than Borneo. What do we know of it? Comparatively nothing. Sumatra is 1,000 miles in length, and Celebes and Lozon are inferior only to Sumatra, and there are in addition numerous islands of considerable size, some as large as Ceylon, and thousands of minute islands, many abounding in spices and mineral ores. It was with the view of drawing public attention to the importance of obtaining more exact geographical knowledge of the planet we inhabit, that the first geographical society was formed in Great Britain 43 years ago, and that the stimulus which such a body can give to such an enquiry is very great, and the results it can produce extensive, is seen in the fact that there are now 33 of these societies distributed over the globe, in England, France, Holland, Belgium, Italy, Spain, Germany, Hungary, Russia, India, the United States, Mexico, Brazil, and Buenos Ayres. It is only very large societies—like the Royal Geographical Society in London, which has now 2,700 members, paying £2 each annually, and has in addition a permanent fund of over $100,000 and a stipend from Government, making its annual income over $30,000, or the Imperial Russian Geographical Society, which is munificently supported by the Government—that can engage in and defray the expense of explorations in the unknown parts of the earth."

4. LAKE SUPERIOR.

It is something to remember for a lifetime, is a trip to the shores of this most vast and most interesting of all our inland seas. The cool temperature, fully ten degrees below that of Lake Ontario, and the thickly wooded hilly shores, rising occasionally into mountains, the pointed rocks of the South border, the vast rocky promontory of Cape Thunder, with its neighbouring rocky islands and rising settlement at the beginning of the Dawson Road, the singular rocky island under the lee of the Cape which has proved a mass of silver ore, the vast and wonderful expanse of Nepigon Bay, studded with rocky and timber-crowned islands, a very dream of romance and beauty, the wild solitude of the Nepigon River, the beautiful Michipicoton Island, rising, with its woods and groves, some 800 feet out of the Lake,—all these combine to make the trip to Lake Superior quite unique and unparalleled. Day after day the steamer winds her way amongst the mazes of the islands of the Georgian Bay (of which 30,000 have been counted), and under the shadow of the mighty rocks of Lake Superior, the voyage having all the incidents of ocean travel without its excessive monotony, and, generally, without its accompanying sickness. Every hour brings change of scene. The bracing air inspires the appetite. Fish are caught on the way in abundance. Here and there passengers can land in some romantic out-of-the-world kind of spot, and wander about, picking up strange mosses, pebbles, agates, and what not ; or, if it pleases them better, they can fish. The social intercourse takes place that always arises on an ocean voyage. Intimacies arise, and friendships are formed. Evenings are spent in music and social enjoyments, and when the long and varied voyage is brought to an end, and the little world of the steamboat has to be broken up, there are few but must regret that all is over, and wish for a renewal of such pleasant scenes.—*From the New Dominion Monthly for August.*

A Russian admiral has built a vessel in the shape of a tin pail, 99 feet in diameter. She is represented as being a fair sailer, and takes rough weather comfortably.

A beautiful experiment by Rother shows that albumen in the presence of starch is not coagulated, even at a boiling temperature.

It makes a fine class illustration of catalysis. Mix 50 grains of pure starch, with one fluid ounce of water. Dilute the albumen of one egg to make three fluid ounces and strain through muslin. Mix the two solutions and boil. There will be no coagulation or precipitate. Filter. Add a drop of nitric acid to the clear liquid, and instantly a dense white coagulation will be formed.

V. Correspondence of the Journal.

1. THE TEACHER IS NOT A DESPOT.

Various are the views of outsiders about our business. Some, reflecting on the continual exercise of our patience, compare us to saints, while others, as the American writer in this Journal for September, call us despots. With these conflicting opinions, we hardly know what we are; for my part, I have no objections in harmonizing both views, and am willing to be called a *despotic saint*. In judging an artist, some regard should be had to the times and country in which a man lives; the great national sentiment is apt to permeate his discourse, and, in subjects embracing government of countries and schools, an acute observer can, sometimes, determine, by the *timbre* of the article whether the writer is an Englishman, a Frenchman, or an American. The above writer compares a school to a miniature republic—the teacher representing the president, and, I suppose, the boys would be "fellow citizens." An Englishman would see a small king in the teacher and subjects in the scholars, owing unconditional obedience. An Indian would liken the school to a *tribe*—the teacher to a chief, haranguing the boys on hunting, fishing, and fighting. Although all unite in the necessity for order, yet there is difference about the means. A European's motto is *you must*, an American's *if you will*. The American *lectures*; the European *leathers*. For bad boys and bad men, the American says "moral suasion;" the European says, "the birch for boys and the bayonet for men."

If we are despots, we are made so by necessity, on us is imposed the work of parents, namely:—breaking their bad boys. In this unpleasant business, a good teacher, like a good magistrate, judge, constable, or hangman, may be justly and necessarily severe, but a good teacher never can be cruel.

The same writer also says, "the despotic method may be approved by the superficial and brutal." Now, a despot is a cruel master, and, since anyone may be a teacher, then everyone is cruel. Since everyone approves his own method, then everyone is superficial and brutal! But it is not only unfair but untrue to call our bad actions brutal—we do thousands of things brutes never do. We say a man is "beastly drunk"—beasts are never drunken; would that all men would behave like brutes.

In both the Divine Law and the Civil Law, pain is the last remedy; and with every competent teacher it should also be the last remedy. Pain should never be inflicted for revenge, it should become rather a preventative of future bad actions than a retribution for past ones. And it is greatly to be regretted that its power as a preventative depends altogether on its certainty and intensity. No inhuman man is fit to be a teacher, and it is a great public error to suppose that the popularity of the best teachers depends largely on severity. Cruelty, or great severity, instead of being a sign of a good teacher, is the sign of a bad one; bad ones that lack tact, if they keep good order, always employ despotism. I often think that none but fathers and mothers are fit to become teachers—the parental sympathy one has for his own children greatly mitigates the austerity sometimes used by those not yet acquainted with a father's love. Many and many a time have I lightened the down-coming stroke, or not given it at all, when I saw the tiny but mischievous little white hand of another man's child, held out under the hard rough rod.

JOHN IRELAND,
Guelph, P.O.

2. CHANGING TEACHERS.

To the Editor of the Journal of Education.

DEAR SIR,—Would you be kind enough to permit me through your columns, to say a few words to some of the Boards of Trustees in rural School Sections, about the engagement or re-engagement of teachers. Few of our Trustees really know what is lost by changing teachers. One or two of the rate-prayers may have some small objection to the teacher, and on that account must have a new one or they will withdraw their children from the School. Another may think the teacher is too particular, his children do not care for going, and therefore the old one must be changed. Now, if they would but consider for a moment, how much time must elapse before the new teacher can find out the disposition of each child, and how long it takes the children to get the teacher's ways, I think there would be far less grumbling and nibbling at teachers. At least two months is taken up in this manner, and very often the whole year; and then you have lost your money, and your children have lost a year's study. A great loss this to farmers' children, especially some of the older ones, who can only attend School a few months of the year. Now that the time for engagement or re-engagement of teachers is drawing near, I would say to intelligent Boards of Trustees to ask themselves the following questions: Is our teacher moral? Is he a gentleman in and out of the School-room? Do the pupils like him? Can he manage the pupils in the School? Does he combine firmness and kindness in his government of the School? Is he punctual?

Now, if they can answer these questions satisfactorily, then I would say, by all means re-engage your teacher. Such a teacher is cheap at any price.

RURAL TRUSTEE.

VI. Mathematical Department.

Solution of question proposed by "Clericus."

$(60^2 - 20^2) \div 2 \times 60 = 26$ feet 8 inches from stump, or 33 feet 4 inches from top of the pole.

If x = the No. of feet from the ground; $60 - x$ = the No. of feet broken off. Then we have $x^2 + 20^2 = (60-x)^2$, and $x = 26\frac{2}{3}$. The 35th Prop. of III Book gives the geometrical explanation.

Correct and elegant solutions received from the following correspondents:

J. A. P. Clarke, Davenport; James Millar, Abingdon; W. R. Telford, Port Dalhousie; Con. O'Gorman, White Lake; David Robb, Birmingham; R. E. Clapp, Speedside; D. J. Doran, Cathcart; S. Moag, Smith's Falls; S. R. Brown, London; W. S. Howell, Sidney, near Belleville; Geo. K. Powell, Mimico; W. H. Colles, Hanover, and E. F. Langstaff, pupil, Guelph High School.

Correspondents are respectfully requested to answer the following problems, as soon as possible. Address, Mr. P. Doyle, Ottawa.

1. The base of an isosceles triangle is a, and a segment of one of the equal sides, made by a perpendicular from one of the base angles on the opposite side, is b; required the sides.

2. Find the sides of an isosceles triangle inscribed in a circle, whose radius is r, having the base equal to one half of each of the other sides.

3. In the figure to I. 5 book of Euclid, join FG; then $FG = 150$; angle $BGF = 22^0$, and the difference between the angles FCG and $BGC = 40$; find the parts of triangle ABC.

SOLUTION OF QUESTION NO. 8, IN NATURAL PHILOSOPHY PAPER FOR FIRST CLASS, JULY 1874.

BY J. DONOVAN, *Teacher, S. S. No. 11, Dover, Kent County.*

As the segment containing the condensed air is similar to the whole cone, their columns are proportioned to the cubes of their heights; and their heights are as 84 : 91=12 : 13; ∴ the volume of the segment $= (\frac{12}{13})^3 = \frac{1728}{2197}$ part of the volume of the cone; that is the air is condensed into $\frac{1728}{2197}$ part of its original volume ∴ its pressure is $\frac{2197}{1728}$ times its ordinary pressure (Marriott); that is $\frac{2197}{1728} \times 15 = 19\frac{41}{576}$ lbs. per square inch = pressure exerted on the surface of the liquid in the cone per square inch by the condensed air.

On the surface of the liquid within the cone take any area P equal to one square inch; and in the liquid surrounding the cone *in the same horizontal plane with* P *take an equal area* Q. Now, the pressure on P is = to the pressure on Q, because they are in the same horizontal plane and in equilibrium; but the pressure on P is that exerted by the condensed air, which has been shown to be $19\frac{41}{576}$ lbs.; and the pressure on Q is the ordinary atmospheric pressure (15 lbs.), + the weight of 84 cubic inches of the liquid (it being 84 inches beneath the surface of the liquid surrounding the cone.)

∴ 15 lbs. + 84 cub. inches of the liquid $= 19\frac{41}{576}$ lbs.

∴ 84 cubic inches of the liquid weighs $4\frac{41}{576}$ lbs.; ∴ one cubic inch of the liquid weighs $4\frac{41}{576} \div 84 = \frac{2345}{576 \times 84}$ lbs.. But 1 cub. inch of water weighs $\frac{1000}{1728 \times 16}$ lbs., and as the specific gravities are proportioned to the weight of = volumes. ∴ specific gravity of liquid $= \frac{2345}{576 \times 84} \div \frac{1000}{1728 \times 16} = \frac{2345 \times 1728 \times 16}{576 \times 84 \times 1000} = 1.34$. G. P. Y.

VII. Biographical Sketches.

THE LATE JOHN SANDFIELD MACDONALD.

The monument to the memory of the late Hon. John Sandfield Macdonald, which it has for some time been understood was under preparation, has for some weeks past been in its appointed place in the St. Andrew's Church burial-ground, Cornwall. This monument, as the inscription upon it indicates, was the spontaneous offering of the honourable gentleman's personal friends throughout

the Dominion. It is a handsome column, presenting a chaste and graceful memorial. The base is of grey granite, and the superstructure of Aberdeen granite highly finished. The whole is surmounted by a cross about three feet in height, the height of the structure being about fifteen feet. The following inscription is cut into the granite column, the letters being relieved by gold tinting :—

SACRED
TO THE MEMORY OF
JOHN SANDFIELD MACDONALD,
WHO DIED AT CORNWALL
ON THE 1ST DAY OF JUNE, 1872,
In the 59th year of his age.
HE HELD THE OFFICE OF PREMIER
OF THE PROVINCE OF CANADA,
AND WAS THE FIRST PREMIER
OF ONTARIO,
BESIDES FILLING OTHER POSITIONS
of distinction in the service
OF THE STATE.
Upright and zealous in the
discharge of his public duties,
His private life was marked
by a high personal integrity,
AND THIS MEMORIAL,
In affectionate remembrance of
the constancy and worth of
his private friendship,
HAS BEEN ERECTED BY FRIENDS FROM
ALL PARTS OF THE DOMINION.
Resquiescat in Pace.

2. ALBERT PELLEW SALTER, ESQ.

Albert Pellew Salter, Esq., who was buried here on Monday last, was one of four brothers, English gentlemen in the true sense of the word, who emigrated to this country, so far back, if we are correct in our information, as in 1834. During all the years which have intervened, the subject of this notice has resided within the limits of the old "Western District," as it was called when he came to the country. For the first few years, he lived in the township of Plympton, in Lambton. Thence he removed to Sandwich, where for several years he discharged the duties of Grammar School teacher in a manner alike creditable to himself and advantageous to his pupils. From Sandwich (having resigned his position as Grammar School teacher) he removed to Chatham, where he entered upon the practice of his profession as land surveyor and civil engineer. In 1854, or thereabout, while in the enjoyment of an extensive and lucrative practice, he was called upon by the government of the day to assume the duties of Chief of Surveys of the Lake Superior region, a position which he continued to hold for several years, during which many townships were laid out and colonization roads built under his direction. Upon the advent to office, however, of the Hon. Wm. McDougall, in 1862, Mr. Salter was recalled, and since that time he has practised both in Essex and Kent, though occasionally called upon by the government to assume the discharge of duties requiring the skill and experience of a first-class engineer, for in point of education he had few equals in the country. His reports to the Crown Lands Department have been models in their line, and, to this day are frequently quoted in parliamentary debates. During the rebellion of 1837, Mr. Salter did good service to his country, serving under the orders of Colonel Dunlap, Major Elliott and others. In short he was an enthusiastic loyalist, a thorough Briton and a gallant soldier. At the period of his death he held the rank of Lieut.-Colonel of Militia, and though somewhat advanced in years, would, at a moment's warning, have been as ready to buckle on his armour in defence of his Queen and country as any youth of 20 within the confines of the Dominion. In politics he was an unwavering Conservative, firmly adhering to his principles, even where his so doing was in direct conflict with his best interests.—*Chatham Planet.*

VIII. Miscellaneous.

1. MEMORY BELLS.

Memory bells are ringing—ringing,
In the distance, far away ;
Do you hear them singing -singing ?
Do you hear their silver chiming ?
Do you hear their mellow rhyming ?
Do you hear the dear sweet story
Of your childhood's far-off glory ?
Do they take you back to years
Clouded by no haunting fears ?
Do they speak of sunny hours
When your path was strewn with flowers,
When a rainbow arched your sky,
And when faith stood smiling by ?

They are tolling—tolling slowly ;
Hear the echoes die away,—
Tender, lowly, sad, and holy ;
Will you tell me what they say ?
Do they tell of manhood's dreaming ?
Do they tell of bright eyes beaming ?
Do they tell of fond words spoken ?
Do they tell of young hearts broken ?
Do they tell of hopes you cherished ?
Do they tell how faith has perished
Do they tell how night and day,
Cruel Fate has tracked her prey ?
Do they tell of proud hopes blasted,
And of life's sweet treasures wasted ?

Memory-bells are pealing—pealing—
O'er the ruins by the way,—
Through the mind's dim chamber stealing ·
Will you tell me what they say ?
Has your heart lost all its lightness ?
Has your life lost all its brightness ?
Has your day-star set in gloom ?
Do you hear the voice of Doom
Mocking every groan that bursts
From the aching heart that thirsts
For the love it ne'er may share,
And the joys it ne'er may wear,
For the light by clouds o'ercast,
For the glories of the past ?

Memory-Bells, Memory-Bells, softly you're ringing ;
Through years of long silence, I hear you to-day.—
Soothing to rest with the notes you are winging ;
Oh, Memory-Bells, shall I tell what you say ?
Over long years you are bearing me back,—
Over each step of the desolate track ;
Over temptation, and yielding and sin :
Over the hurry, and whirl, and din
Of a life that was dark ; and I kneel once more
At my mother's knee as I knelt of yore,
While she tells me the story, sweet and brief,
Of the "Man of Sorrow, acquainted with grief,"
And I hear the lips that have long been clay
Pray for her boy as she prayed that day.
Oh, Memory-Bells, with your weird, strange power,
You have brought back my mother to me, this hour,
And brought what you hoarded with faithful care,
Her fervent love and her earnest prayer.
You have stilled in my bosom the tempest wild
And made me again "as a little child."

2. TO PROMOTE PEACE IN A FAMILY.

1. Remember that our will is likely to be crossed every day, so prepare for it.
2. Everybody in the house has an evil nature as well as ourselves, and therefore we must not expect too much.
3. To learn the different temper and disposition of each individual.
4. To look on each member of the family as one for whom we have a care.
5. When any good happens to any one, rejoice at it.
6. When inclined to give an angry answer, "overcome evil with good."
7. If from sickness, pain, or infirmity, we feel irritable, to keep a strict watch over ourselves.
8. To observe when others are suffering, and drop a word of kindness and sympathy suited to them.
9. To watch the little opportunities of pleasing, and to put little annoyances out of the way.
10. To take a cheerful view of everything—even the weather—and encourage hope.
11. To speak kindly to the servants—to praise them for little things when you can.
12. In all little pleasures which may occur, to put yourself last.
13. To try for "the soft answer that turneth away wrath."

IX. Educational Intelligence.

Lord and Lady Dufferin, accompanied by several of the members of the New York Board of Education, paid a visit on Thursday to the Normal College, where they remained for a considerable time, after which the party visited the Grammar School in Twenty seventh Street. At both places the visitors were given a full explanation of the workings of the institutions, as well as the particulars relating to the public school system, and at both places they were entertained with the exercises peculiar to such occasions. Lord Dufferin, says the *Herald*, expressed himself as much pleased not only with our school system, but with the manner in which he was entertained by the teachers and scholars

——Competitive Examination.—At the Teachers' Convention, for the County of Durham, held at Port Hope recently, the Committee on Competitive Examinations brought in the following report, which was received and adopted :—

1. That Competitive Examinations be held in the Townships of Hope and Cavan.
2. That the first examination take place on Saturday, 20th March, 1875, commencing at 9 o'clock, a.m.
3. That the examination for Hope be held in the Town of Port Pope, and for Cavan in the Village of Millbrook.
4. That the subjects be Reading, Spelling, Geography, Grammar, British History, Arithmetic.
5. That special examinations in Book-keeping, Algebra, and Euclid be held on Friday, 5th March.
6. That Algebra be limited to simple equations of some unknown quantity ; Euclid to First Book ; History from the Norman to the Stuart period, inclusive ; and all other subjects the limits to the Fourth Class work, according to official programme.
7. That candidates be divided into two classes, those fourteen or over, and those under fourteen years of age, and that no pupil who has a teacher's certificate be allowed to compete.
8. That every teacher sending pupils to compete, shall send acertificate of the age of each pupil, signed by his or her parents, and that all applications shall be forwarded to Mr. D. G. Goggin, Port Hope, not later than the 1st of February, 1875.
9. That the number of pupils from each school shall not exceed three in each class.
10. That there shall be ten General Proficiency, and one or more Speical prizes in each class.
11. That no pupil shall receive more than two prizes.
12. That Messrs. D. J. Goggin, J. J. Tilley and W. E. Tilley, be a Central Board of Examiners to prepare papers for the examination, and that Messrs. Moulton, Watson, and C. J. Logan, B.A., be examiners for the Township of Hope, and Drs. Hamilton and Thomson, and W. Vance for the Township of Cavan.
13. That a committee consisting of Messrs. W. E. Tilley, Goggin, Glass and Coleman for Hope, and Messrs. Davey, Stanton, Peters and Pendrie for Cavan, be and is hereby appointed to solicit subscriptions from private individuals, and that Inspector Tilley be instructed to apply to Township Councils for aid.
14. That each teacher sending pupils to compete, shall contribute the sum of two dollars into the fund for obtaining prizes, said sum to be raised from his section.

——English University School Examinations.—The first published results of the new Oxford and Cambridge school examinations have appeared in the English papers recently. These examinations embrace all schools that profess to be preparing their pupils for the Universities and the certificates granted to those who pass are accepted as equivalent to one year of study and the first public examination (known as the Little Go) at the Universities. This, it will be seen, must prove an immense advantage in the saving of time and expense to students at the latter, and is calculated to do away with a cause of complaint that has been often referred to by eminent professors, that their aims and efforts to lead students on to the higher branches of a particular class of studies were hindered by their having to go over intermediate ground which should have been covered by the schools, that, in fact, they had to do more of the work of the schoolmaster than was compatible with their efficiency as professors. The examinations are conducted by one and the same body of independent and qualified men appointed by Oxford and Cambridge Universities, and thus all schools will be subjected to the same test. In the recent examinations twenty-one public schools are reported on as having been successful more or less, Winchester College heading the list with thirty-four of its boys who have received University certificates ; Manchester grammar school coming next with twenty-eight boys, Marlborough College third, Eton fourth ; Wellington College, King's School, Sherborne, Rugby (which has only seven boys passed) and others follow, five large schools only passing one boy, while Harrow, Westminster, Charterhouse and St. Paul's, formerly singled out as worthy of commendation by the Public Schools Commission, are either not placed or have not applied for examination—probably the latter. As this is the first of these occasions, however, there are necessarily the shortcomings and defects inseparable from beginnings, but it is considered that as the system is carried out the result will be a very great improvement in the character and teaching of the public schools. They will furnish the people with an index as to what institutions are best fitted to prepare boys for university study, and the stimulus thus imparted to education must prove of incalculable benefit.—*Montreal Witness.*

X. Short Critical Notices of Books.

Personal Recollections of Mrs. Somerville by her Daughter.*

Mrs. Somerville's name will secure her "Recollections" an interested perusal, for though published and arranged by her daughter, the "Recollections" are her own, and recall the names of most of the distinguished men, chiefly, but not exclusively scientific, who have lived, laboured, and died during the past three-quarters of a century. Quite free from the ordinary style of modern biographies, it gives us most of what was interesting and valuable in Mrs. Somerville's life. That portion of it which was "remote from public gaze," she carefully throws into the shade, and her daughter has followed her example closely. Though married twice, both times to a cousin, it was not till her second marriage that she found a real sympathiser in her desires and pursuits. After the publication of her first work—and indeed before—she was treated with great kindness by the scientific and literary celebrities with whom she came in contact, and was made a member of most of the scientific associations of Great Britain and the Continent. In her flittings about Europe she had the rare fortune of meeting many whose names are famous in many lands, and for many reasons. In France, Laplace, Arago, Humboldt, Cuvier, and Sismondi, were as familiar spirits with her, while literature and the fine arts were represented among her acquaintances by Byron, Fenimore Cooper, Thorswaldsen, Canova, Schlegel, Rossini, Miss Hosmer ; and patriotism by Cavour.

She witnessed the important revolution consummated by Victor Emmanuel's formal entry into Rome, and was also present at his subsequent entry into Florence. She passed the closing years of her life in Italy, cheered by the continual notice and friendship of those whose acquaintance she valued. Her peaceful death occurred at Sorrento in her 92nd year.

The Earth : by Elisee Reclus*—This is one of those exhaustive works, in which the author so thoroughly masters his subject as to leave to succeeding writers but comparatively little to dilate upon. The very comprehensiveness of the title points to such a task as would deter any but a man like M. Reclus from attempting it.

The internal arrangement of the book is admirable : First, it treats of the relation of the world to other worlds, and then takes up the configuration of the globe, and the influence of remote and immediate causes upon it ; while the closing chapters go below things seen, and throw as much light on subterranean causes as visible effects render possible. A conspicuous feature of the work is the illustrations, explanatory of the text—an invaluable addition to so thorough a work.

Arctic Experiences : a History of the Polaris Expedition, by Captain Gen. E. Tyson*—The unhappy circumstances connected with this expedition, and the sad death of the commander, whose life-dream it had been to "go on to the Pole," invest this account with rather a gloomy interest. The adventures and miraculous preservation of the explorers are truthfully described, and add another chapter to the history of the world's heroic men in connection with scientific discovery. Just now, when other expeditions are being fitted out for a like purpose—though there is nothing in it but the renown of the discovery to be striven for—it will be interesting to read the hopes of the future in the light of the past's varying results.

The Heart of Africa : by Dr. Schweinfurth, with an Introduction by Winwood Reade. * This work, in two volumes, though chiefly valuable, *in extenso*, to those interested in the geographical and botanical exploration of the hidden heart of Africa, will yet repay a not

* New York : Harper & Brothers ; Toronto : Hart & Rawlinson, King Street West.

merely cursory perusal. Mr. Winwood Reade's short preface of Dr. Schweinforth's work exhibits the advantages which a scientific botanist and experienced draughtsman has over amateurs in those departments, in making his discoveries more complete and valuable. Being, as Mr. Reade says, an interesting contribution to the problem of the Nile, it will be eagerly welcomed by geographical readers, while it sets at rest, authoritatively, problems advanced and discussed by earlier explorers.

We have received * Wilkie Collins' *Antonina, or the Fall of Rome*, in which he weaves a romance upon the unpromising framework of historical facts: *The Law of Evolution:* in which Dr. Winchell advances arguments for, and reflections on, the *Law of Evolution*. The *Annual Record of Science and Industry*, edited by Dr. Spencer F. Baird, of the Smithsonian Institution, assisted by the principal scientists of the United States, gives at some length the results of the past year in Physics, Medicine, Mechanics, Astronomy, Agriculture, and what is of some value to this country, Pisciculture, and other branches worth noting. This is the third of an annual series, and deserves warm encouragement.

The latest of Victor Hugo's works, *Ninety-three*, * is doubly entertaining, both for its own surpassing interest, and for its now aged writer's sake. The bold style of the writer seems as fresh as ever, and is marked by a sprightliness and vivacity, purely French, that never seems to have grown old.

R. CARTER & BROTHERS' PUBLICATIONS: NEW YORK.—We have received this month from the now celebrated pen of the Rev. E. Bickersteth (author of "Yesterday, To-day, and Forever,") *The Reef and other parables*. They are all most beautiful and striking in their application, and are in every way worthy of their author.

Willow Brook, and *The Little Camp*, two books by the popular author of the "Wide, Wide World."

The New Scholars, and *Birthday Gift*, from Johanna Mathews, author of the "Bessie Books."

Lionel St. Clair, *Children's Tabernacle*, two of A.L.O.E.'s countless stories.

Maggie's Mistake, a school-girl's story, by L. Frolich; and *Giuseppe's Home*, another of the Golden Ladder Series," by Thera Mathews; also the *National Temperance Orator*, published by the New York Temperance Society.

Aimée, a Tale of the Days of James II., and *Diary of Isoult Barry*.

Two pictures of English History are before us; the one a historical romance, the other the diary of Isoult Barry, carefully compiled from historical documents, and written in somewhat antique style. The romance, by Agnes Giberne, will naturally carry with it more interest, the tale being founded on incidents occurring at a later period of time than those of the diary, and though short, is interesting.

THE BRITISH REVIEWS.—Messrs. Hart & Rawlinson, of this city, send us from the Leonard Scott Publishing Company, of New York, the October number of the *Edinburgh Review*—the last one for the year—which has, as usual with this *Review*, an attractive table of contents:—I. "Scharnhorst," or a sketch of General von Scharnhorst, the regenerator of the army after Prussia had been shorn of half her dominions by the first Napoleon. II. "Carlaverock" Castle, in Dumfriesshire, the stronghold of the Maxwell family, whose romantic and tragic histories are here briefly sketched. III. "English Fugitive Songs and Lyrics." IV. "The Census of France in 1872." Art. V. "Comets and Meteors." Art. VI. "Convocation, Parliament, and the Prayer-Book." Art. VII. treats of the "Origin and History of the Grenadier Guards." VIII. "Renan's Antichrist." IX. "Journal of Mr. Charles Greville," Clerk of the Privy Council through the reigns of George IV. and William IV,. is full of anecdotes and extracts from conversations. X. "The Session and the Disraeli Ministry." Our readers will do well to provide themselves for the coming year with one or all of the periodicals reprinted by the Leonard Scott Publishing Company, and furnished by Messrs Hart & Rawlinson, King Street West. They are as follows:—*The London Quarterly, Edinburgh, Westminster*, and *British Quarterly Reviews* and *Blackwood's Magazine*. Price, $4 a year for any one, or only $15 for all.

THE ALDINE for November has reached us. It contains the usual variety of matter, illustrated with several exquisite wood-engravings. The agents in Toronto will gladly receive subscriptions for the coming year. We can cordially commend the publication. Want of space precludes a fuller notice.

Mr. Buchan's "FLORA OF HAMILTON AND NEIGHBOUHOOD" has been received. It gives a most interesting and valuable sketch of the botany of that part of the Province. We regret want of space for a more extended notice.

* Toronto: Hart & Rawlinson.

XI. Departmental Notices.

HIGH SCHOOL EXAMINATIONS.

With respect to the Entrance Examinations for High Schools, it is to be observed that a pupil who passes the entrance examination at any High School may enter another school without re-examination.

TEACHERS' CERTIFICATES EXPIRING IN DECEMBER.

In consequence of the December Examinations having been discontinued by the Legislature, the teachers whose certificates will expire in December, 1874, can have them specially renewed by the Inspectors. The holders of such certificates can thus be regarded as legally qualified teachers till the July Examination of 1875, as such teachers will have no earlier opportunity of obtaining new certificates from the County Boards.

XII. Advertisement.

Printed for the Education Department by HUNTER, ROSE & CO., Toronto.