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I. Proceedings of the Education Department.

1. CERTIFICATES EXPIRING IN DECEMBER.

The undersigned respectfully represents to His Honor the Lieutenant-Governor in Council, that whereas examinations of Teachers were formerly held in July and December, such examinations are now held in July only, and teachers whose certificates will expire in December will have no opportunity of being examined till July. It is therefore recommended that the third-class certificates granted for three years, and expiring in December, be held valid till the following July.

Respectfully submitted,
(Signed) ADAM CROOKS,
Minister of Education.

EDUCATION DEPARTMENT,
Toronto, 30th October, 1876.

COPY OF AN ORDER IN COUNCIL approved by His Honor the Lieutenant-Governor, the 3rd day of November, A. D. 1876.

Upon consideration of the Report of the Honorable the Minister of Education, dated the 30th October, 1876, the Committee of Council advise that Teachers' third-class certificates, granted for three years and expiring in December next, be held valid until the following July.

Certified,
(Signed) J. G. SCOTT,
Clerk Executive Council.

3rd Nov., 1876.
The Honorable the Minister of Education.

2. MR. MARTIN'S CERTIFICATE.

The undersigned respectfully recommends to his Honor the Lieutenant-Governor in Council the following with respect to the case of Mr. Joseph Martin, Public School Teacher.

That Mr. Martin on the report of the Central Committee of Examiners became entitled to a First Class Certificate of qualification as a Public School Teacher, Grade A., on the 11th September, 1875, but the actual issue of such certificate was postponed until Mr. Martin had by another year's service as Teacher fully complied with the conditions of the regulations in that behalf.

That by Order in Council, dated the 27th March, 1876, in consequence of certain irregularities in the examination at which Second Class Certificates were awarded to Mr. Martin and others, Mr. Martin's standing was declared to be conditional on his successfully passing the Examination for Second Class Certificates held in July last.

That he has successfully passed such Examination, and has furnished proof to this Department of his having complied with the condition of Teaching service required by the regulations.

The undersigned therefore respectfully recommends that an order in Council be passed to confirm the standing of Mr. Joseph Martin, as possessing the qualifications as a Public School Teacher of First Class, Grade A, and that the undersigned be authorized to endorse the said certificate of the 11th day of September, 1875, to that effect.

(Signed) ADAM CROOKS,
Minister of Education.

EDUCATION DEPARTMENT,
October 30th, 1876.

COPY OF AN ORDER IN COUNCIL approved by His Honor the Lieutenant-Governor, the 3rd day of November, 1876.

Upon consideration of the report of the Honorable the Minister of Education, dated the 30th of October, 1876, with reference to the case of Mr. Joseph Martin, Public School Teacher, Committee of Council advise that the standing of the said Mr. Joseph Martin as possessing the qualifications as a Public School Teacher of First Class, Grade A, be confirmed, and that the Minister be authorized to endorse the Certificate of the 11th day of September, 1875, to that effect.

Certified,
(Signed) J. G. SCOTT,
Clerk Executive Council.

3rd Nov., 1876.
The Honorable the Minister of Education.

3. HIGH SCHOOL ENTRANCE EXAMINATION.

The next examination for admission to the High School will be held on the 19th and 20th December, and not the 9th and 10th as announced in the last issue.

4. SCHOOL CENSUS BY TRUSTEES BEFORE 31st DECEMBER.

We would remind School Trustees that the law requires them to have a School Census of their School Section Division or Municipality taken before the 31st December.

The Census should distinguish the names, ages and residences of the children, with a view to see whether they have attended some school, or have been otherwise educated as required by law.

Forms for census returns are provided by Messrs. Copp, Clark & Co., Toronto.

5. Number of Certificates awarded by the Education Department, and by the County and City Boards of Examiners, at the July examinations, 1876.

COUNTIES AND CITIES.	Number who applied for			Total.	Who received					Total.
	1st Class.	2nd Class.	3rd Class.		1st Class.	2nd Class.		3rd Class.		
						Male.	Female.	Male.	Female.	
Glengarry			64	64				7	26	33
Stormont		6	49	55				3	12	15
Dundas		7	57	64				12	2	14
Prescott			22	22				3	19	22
Russell		3	30	33				10	7	17
Carleton		34	77	111			1	26	21	48
Leeds and Grenville	1	17	182	200			1	29	64	94
Lanark	1	5	106	112				21	40	61
Renfrew		3	78	81				11	8	19
Frontenac	1	5	64	70		1		10	13	24
Lennox and Addington	1	5	66	72		1		12	9	23
Prince Edward		13	54	67		2		14	9	25
Hastings		19	124	143		1		17	20	38
Northumberland		12	36	48		1		19	12	31
Durham		20	52	72		1		11	7	19
Peterborough		8	88	96		1		13	22	35
Haliburton			19	19				4	7	11
Victoria	1	10	100	111		1		20	23	44
Ontario	1	32	116	149		2	1	26	19	48
York	3	59	120	182	1	11	3	28	22	65
Peel		14	24	38		2		5	5	12
Simcoe		43	179	222		1		73	46	120
Halton		10	40	50		1		10	2	13
Wentworth	2	23	90	115		2	1	33	22	58
Brant	3	22	38	63		1	3	11	17	32
Lincoln	1	13	65	79		5		11	18	34
Welland		4	58	62				5	12	17
Haldimand		10	54	64		1	1	18	15	35
Norfolk		8	84	92				20	17	37
Oxford		5	67	72		1		16	22	39
Waterloo	2	8	66	76		3		10	10	23
Wellington	2	38	172	212		4	1	41	40	86
Grey		38	165	203		6	4	33	52	95
Perth	2	18	91	111	1	1		14	11	27
Huron		35	137	172		3	2	41	44	90
Bruce		35	81	116		5		44	24	73
Middlesex	1	52	181	234		2		38	24	64
Elgin	1	37	92	130		7	4	25	23	59
Kent	1	13	96	110		2		13	21	36
Lambton	1	28	141	170	1	5		18	26	50
Essex		8	51	59			1	14	11	26
Hamilton		10	65	75				1	11	12
London		10	27	37				2	29	31
Ottawa Normal School	6	29		35	2	1				3
Toronto Normal School	45	56		101	6	10	15			31
Kingston		4	12	16					12	12
Total	76	829	3,580	4,485	11	84	38	792	876	1,601

6. TEACHERS' CERTIFICATES ISSUED.

List of Teachers' certificates awarded by the Hon. Minister of Education, and by the County and City Boards of Examiners at the July Examinations, 1876.

(1.) BY THE HON. MINISTER OF EDUCATION.

Class I.—Grade A.

	COUNTIES.
McLurg, James, (Gold Medal)	Perth.
Barnes, Chas. Andrew, (Bronze Medal)	Lambton.
McAllister, Samuel	York.

Class II.—Grade A.

Agnew, Andrew	Frontenac.
Curtis, Smith	Haldimand.
Ferguson, Miles	York.
Gray, Henry	Lincoln.
Hallett, Wm. John	Victoria.
McTavish, Alexander A.	Waterloo.
Tilley, Wm	Lennox and Addington.
Wallace, Alexander E.	Waterloo.
Gripton, Charles McP.	Brant.

(2.) BY THE COUNTY AND CITY BOARDS OF EXAMINERS.

MALES.

Second Class. A.

Howell, William S.	Prince Edward.
McLean, Allan	York.

COUNTIES.

Martin, Joseph	Halton
Mullen, Henry J.	York.
Moir, Robert	Huron.
Seymour, William Frederick	Hastings.

B.

Allan, David	Grey.
Archibald, James	Oxford.
Bickell, David	Wentworth.
Brown, Oliver J.	Middlesex.
Brodway, Augustine	Elgin.
Bryer, Raymond	Kent.
Carmichael, Archibald	Elgin.
Cook, William R.	Peel.
Crow, William	Ontario.
Davidson, James	Ontario.
Deacon, George	Lincoln.
Dixon, William L.	Bruce.
Dodge, Oscar	Middlesex.
Dunsmore, Thomas	Lambton.
Gray, James	Lincoln.
Grant, James	Wellington.
Hansel, Franklin	Lincoln.
Hassard, Thomas	Peel.
Huff, Jno. S.	Prince Edward.
Hughes, Thomas	Elgin.
Hyatt, Bruce	Kent.
Judge, William S	Wellington.

	COUNTIES.
Johnston, George	Grey.
Johnston, John	Lambton.
Kinney, Stephen	Northumberland.
Keys, Thomas A.	Lincoln.
Lawrence, Wm.	Huron.
Learn, James	Elgin.
Leith, Duncan L.	Lambton.
Long, Wm. H.	Lambton.
Lutin, Alfred	Grey.
McArthur, Colin	Elgin.
McIntyre, Archibald ..	Grey.
McKellar, Archibald ..	Wellington.
McLean, Duncan E.	Bruce.
Masewell, Charles	Elgin.
Minnie, John G.	Wellington.
Norton, Wm. E.	Lambton.
Nugent, James	Wentworth.
Paterson, Archibald C ..	Elgin.
Phoenix, George E.	York.
Potter, Charles	Durham.
Ranton, Samuel	Bruce.
Reid, Wm. R.	Grey.
Reid, Thomas	York.
Reid, Samuel J.	Simcoe.
Ross, Adam A.	York.
Sheir, Henry A.	York.
Stewart, James Albert ..	York.
Terry, Robert I.	York.
Tudhope, James B.	Perth.
Therbald, Albert	Bruce.
Walker, M. David	Huron.
Walrond, John E.	Waterloo.
Watson, Joseph	York.
Windsor, John Alfred ..	Grey.
Wilkinson, John	York.
Young, John	Bruce.

FEMALES.

Second Class. B.

Bartlett, Barbata	Essex.
Beith, Margaret	Grey.
Brown, Alice	Grey.
Burkholder, Annie J.	Ontario.
Chalmers, Maria S.	Leeds.
Cowie, Agnes	Wentworth.
Day, Emelie M.	Wellington.
Duncan, Barbara	Huron.
Lawlor, Jane	York.
Mitchell, Margaret	Grey.
Morgan, Annie M.	Brant.
Patterson, Christina	Elgin.
Potticary, Eliza	Elgin.
Robinson, Hattie	Elgin.
Shaw, Margaret	Carleton.
Spence, Jane	York.
Tenny, Emily	York.
Tolton, Harriett	Grey.
Walker, Anna	Brant.
Wise, Maria S.	Elgin.
Wilson, Janet	Huron.
Woodyatt, Jennie W.	Brant.
Wood, Ruth	Haldimand.

NOTE.—In addition to the above, certain cases have been appealed and are under consideration.

7. DIFFICULTIES IN THE SCHOOL SYSTEM.

While we claim that through the untiring efforts of your worthy predecessor, Dr. Ryerson, our system is not surpassed, at least in breadth and minuteness of detail, in any country, we are painfully conscious of causes rendering all its liberal provisions almost inoperative, and we feel confident that our alluding to some of them is only necessary to receive your best effort for their removal. First, and greatest, is the fearful irregularity of attendance which paralyzes the teacher, and renders useless the fitful efforts of those who attend. We are aware of treading on delicate ground when we assert that the system is suffering seriously from the multiplying and renewing of certificates of a low grade, and putting them into the hands of untrained youths. That good teachers are suffering, and that schools cannot make the best progress must, however, be admitted by all who look into the character of those now employed as teachers. Other evils, only to be mentioned, but requiring your

best consideration are to be found in the too frequent change of teachers, and the great inequality of taxation for school purposes.—*Extract from an address of the North York Teachers' Association to the Minister of Education.*

8 THREE OBSTACLES TO THE EFFICIENCY OF THE SCHOOL SYSTEM.

We respectfully submit the following, as some of the greatest obstacles to the efficient working of our Public Schools—the lack of trained teachers; the migratory life of almost all Public School Teachers, caused partly by low remuneration, and partly by the whim of Trustees, and which we think would be greatly obviated by the establishment of Township Boards of Trustees, and the lamentable irregularity of attendance.—*From the address of the East Bruce Teachers' Association to the Minister of Education.*

9. TOWNSHIP BOARDS.

We respectfully submit the following as some of the greatest obstacles to the efficient working of our Public Schools:—The lack of trained teachers; the migratory life of almost all public school teachers, caused partly by low remuneration and partly by the whim of trustees, and which we think would be greatly obviated by the establishment of Township Boards of Trustees; and the lamentable irregularity of attendance.—*Extract from the address of the East Bruce Teachers' Association to the Minister of Education.*

II. Proceedings of School Conventions.

1. THE ELGIN TEACHERS' ASSOCIATION.

TOWNSHIP BOARDS AND THE PROFESSIONAL EDUCATION OF TEACHERS.

The quarterly convention of the Elgin Teachers' Association was held in the Court House, on Friday and Saturday, and was largely attended by teachers from all parts of the County. We can only give the *résumé* of the proceedings here.

The meeting was formally opened at 10 a.m., on Friday, the President, Mr. Burdick, of Springfield, in the chair.

A variety of miscellaneous subjects were brought up and discussed by the Association while awaiting the arrival of the Minister. The Inspector thought that above all other subjects that of the revision of the text-books was the most important. Another question was that of Teachers' Institutes. The opinion was generally expressed that Institutes should be established, and attendance at them made compulsory.

At this stage in the proceedings the Honourable Minister of Education entered the room, and was introduced to the teachers by the President. He gave a short address, indicative of his pleasure in meeting so many of the teachers of the County, after which the Association adjourned till 2 p.m.

On assembling in the afternoon Mr. J. Walker introduced the subject of Township Boards. He illustrated the practical working of the present system of section trustees, and showed the great defects attending it. With Township Boards this will be done away with. The rate would be equalized over the whole township, and the standard of Education would be raised by it. The Government grant would be apportioned more equitably, and a teacher should be given a certain proportion of the money, the amount to be dependent upon his success.

Mr. Miller gave a lengthy address on the wants of the teachers' profession. He classified them under three heads, viz., defective education, defective preparation, and inadequate remuneration. He showed that while the standard for first and second-class certificates was very high, that of the third class was very low. The vast majority of those engaged in the profession in this Province was third-class teachers. To remedy this want, and place the schools on a proper footing, it would be required to raise the standard of the third-class certificates. He showed that preparatory training was absolutely necessary to the success of the teachers. This want was one of the greatest difficulties which the schools of Ontario had to contend with. Young men entered the work because they could learn more for the first year or two than they could in any other profession, but after a few years' application they found that had they devoted the same time to any other pursuit they would be in a far better position, and the result was that they abandoned it. The true remedy for this evil was the raising of the standard of the lower class certificates and grading the schools, confining the holders of different classes of certificates to teaching certain grades of schools. A different distribution of the Government grant could be used to keep good teachers in the profession. If the money were divided according to the class of certificates held by

the teacher, if a school having a third-class teacher got no grant, one with a second class \$50, and one with a first class teacher \$100 as a gratuity, it would be a powerful incentive to the selection of first-class teachers. In conclusion he moved the following resolution:—*Resolved*, that this Association, deploring the evils arising from the small number of experienced teachers, would urge such changes in the school regulations, as may induce those of high qualifications and tried ability to remain in the profession.

Mr. Butler, inspector for the county, while agreeing with many of the propositions in Mr. Miller's paper, felt bound to dissent from many others. The young teachers should be aided to get a professional training, and this could be effectively done in Teachers' Institutes. This professional training would be a remedy for those evils, and in connection he would move the following resolution:—*Resolved*, that Legislative assistance to Teachers' Institutes would be a great boon to the profession.

Mr. Carlyle, Inspector at Oxford, next addressed the Association. He said it was a complicated subject. If aid were granted to the Institutes the teachers then should be compelled to attend them. A year's employment as a monitor would be as good a training as a session at the Normal School. If we want the profession of teaching to stand on a level with others, we should have training institutions like them. The Normal School had been the "salt of the earth" to the province, and the men and women who have gone out from it had been educating the profession up to the present standard. We want one for every four counties. But there was no need for so great a cost for brick and mortar. He thought the great mass of teachers would always be young teachers, and he should be sorry to hear that one of the teachers present would teach till he or she was grey-headed.

Mr. Campbell thought that if a week were taken from the Christmas holidays and added to the Easter holidays, it would make a convenient and a sufficient time for a teaching Institute.

A number of teachers took part in the discussion, and great interest was manifested in the subject.

Mr. A. McLachlin, Registrar, being called upon, said that the Normal Schools were the only remedy. In them alone could they get the assistance required to successfully prosecute their labour.

In the evening a public meeting was held in the Court House, to listen to addresses on educational topics by Hon. Adam Crooks and others. Besides the members of the Association there was a large gathering of citizens, every available seat in the court-room being taken up.

Mr. Burdick, President of the Association, was elected to the chair, and in a few appropriate remarks introduced the Honourable Minister of Education as the first speaker.

Hon. Mr. Crooks on rising said that it gave him great pleasure to meet so many of those persons who were charged with the duty of educating the youth of our country. He had adopted the plan of visiting institutes like the present one, and mingling with the teachers there assembled, for the purpose of educating himself in the wants of the profession, in order that he might be the better qualified to assist in remedying its defects. Our system of education had attracted the attention of other communities, who were busy with the endeavour to improve their system of public instruction. Older countries than ours were not ashamed to confess that in this respect we were in a position to give them lessons from our own experience. He would direct attention for some time to some of the chief characteristics of our system. The local system of self-control by section trustees was one of the most prominent of these, and this had its origin previous to our full-developed municipal system. Another essential feature of difference was a central controlling power, which many systems lacked. This deficiency was especially noticeable in many of the States of the American Union, notably so in that of Massachusetts. The most prominent educationists in that country admitted that the work of the school was seriously marred by this deficiency. In some of them, as in Vermont, each school section or district, was virtually an independent school republic, uncontrolled by any outside authority. Many of them however had central authorities, and more would adopt the plan for the more efficient working of their system. The principle adopted in this country is that every child in it is entitled to an education at the hands of the State. The door of no public school room can be closed against it, and the parent has no more right to withhold its education than to deprive it of its physical sustenance. In the early history of the Province this principle was not acted upon. The pioneers in our forests were too busy in hewing out for themselves homes in the wilderness to pay that attention to the educational wants of the rising generation which its importance demanded. On the establishment of our present system, in 1842, there were about 65,000 children entered on the registers of the schools in the Province, and in 1875 these numbers had increased to 450,000 or 700 per cent, in a period of 33 years, an in-

crease almost marvellous in itself; yet every child was not now under the influence of the school-house. This success is not so complete as it should be, for of the whole population of school age only 89 per cent. are on the registers of the schools. This is a very satisfactory exhibit if there were not a darker side to it, for out of this percentage on the register only 42 per cent. equalled 100 days in the year. This exposes the weakness of our system, which consists in the fact that the parents are not sufficiently alive to the advantages resulting from the possession of a good education. This state of things should be remedied by every individual interesting himself in seeing that the provisions of the law are carried out. However, with all our deficiencies, he was glad to say that our results compare favourably with those of any other country. The efficiency of our public schools was a subject to which he would draw their attention for a short time. Among the minor essentials of the efficiency of a school might be mentioned the site, the buildings and the appliances within. In a majority of cases these were quite satisfactory, the expenditure during the past year for those purposes amounting to about \$700,000, and it appears to have been given ungrudgingly. The question of supplying our schools with trained teachers is an important one. The majority do not enter the profession for the purpose of making it a life occupation, but use it as a stepping stone to attaining a high position in some other. In many old countries the profession was as distinct and isolated as law, medicine, or the ministry, but in this province there was a continual influx into, and efflux from the ranks. We have about 5,000 schools, and about 5,700 teachers. About 1,500 are admitted annually, and of course an equal number take their leave for other fields of labour. Training colleges are required for the purpose of keeping up a supply of trained teachers, but there was great danger of schools of this kind degenerating into mere general schools. They are generally successful at the first, but ultimately you find them doing ordinary work and in many instances entirely losing sight of the object for which they were founded. Our own training school had not entirely escaped the contagion attaching to schools of this class. Even were it to adhere ever so rigidly to its charter, it could not, though aided by the new one at Ottawa, supply more than 250 trained teachers per annum. It is not to these sources that we are to look for our supply of trained teachers. The daily work of an ordinary third-class teacher is better training for him than any thing he can get in these schools. He had heard the advantages and disadvantages of Institutes discussed that day in an exhaustive manner. In some cities, notably in that of Baltimore, they are relied upon exclusively for the training of teachers, and he had no hesitation in saying that in connection with the Institutes and High Schools a scheme might be elaborated which will give us a supply equal to the demands of the profession for trained workmen. The next subject demanding attention was that of school sections. In the great majority of cases a trustee is estimated by his constituents to be efficient or otherwise just in proportion as he has kept down the expenses in the section. Township boards of trustees would remedy this defect in a small section, and while it would be cheaper in the main it would direct the attention of those interested more to the efficiency of the school than to the expense incurred to its maintenance. There was no doubt but this matter would be brought before the Government for further action. In the matter of text books he did not know that the late administration were governed by any principle in their selection. As far as he was concerned he thought that no book should be authorized unless of a high order. The copyright should be the exclusive property of the Government, and the book should be thoroughly Canadian. In conclusion the Honourable Minister of Education said that the topics he had discussed were the prominent ones before the people. He had spoken longer than he had intended, and would close abruptly as he desired to hear the opinions of other men present.

Mr. C. W. Ross, M.P., was the next speaker. He said he had not come so much to make a speech, as to hear what the Minister of Education might say on a subject in which he (Mr. Ross) felt a special interest. They had listened to some of the weaknesses which Mr. Crooks had discussed in our system of education, and he several improvements which he had been contemplating, and he (Mr. Ross) thought that in both the Honourable Minister was pretty near correct. We have only 13 per cent of our school population not attending any school, as compared with 41 per cent in the United States. Again the people of the United States tax themselves at the rate of \$5.40 for the education of each pupil, while our tax is at the rate of \$5.72. Another way of comparing results was to ascertain the ratio of school attendance to the total population. Taking this test we found that in Norway 1-pupil was attending school out of every 6 of the entire population; in Prussia 1 out of 7; in Scotland 1 out of 9; in Austria 1 out of 10; in Ireland 1 out of 16; in England 1 out of 17; in France 1 out of 21; in Spain 1 out of

of 70; in Russia 1 out of 700; in the United States 1 out of 5; and in Ontario 1 out of nearly every 3. To make our school system thoroughly efficient the Minister referred to the necessity of trained teachers. He thought that the true remedy was to be sought in the training schools, and at present the number of Normal Schools was altogether inadequate. He was entirely in accord with the system of Teachers' Institutes, and in the County of Lambton they had found them to be a marvel of success. But he would say this, that while the Government was providing assistance he hoped that no teacher would consider it his duty to be idle until the machinery was ready to his hand. Any teacher by diligent application may improve himself 500 per cent in the course of a single year. Let him procure some good works on the theory and practice of education, and if he applies what he learns he may at the end of a year be worth \$500 where at the beginning he was worth but \$100. The best key of success is in the teacher's own hands. Let teachers but do their duty, let those engaged in managing the machinery of education but do their duty, and the results will be such as to gratify every lover of his country.

Mr. Carlyle, Inspector for the County of Oxford, next addressed the meeting. He expressed his regret at lack of preparation, and as Mr. Ross had given some practical advice to young teachers he would follow in the same strain. The lack of self-reliance among the pupils of our public schools was one of the greatest barriers to their progress. To a great extent this evil could be traced back to the teacher who has allowed the pupils to contract the habit of idling. The speaker concluded by giving the teachers, particularly the younger ones, some excellent advice relative to their conduct in the sections in which they are employed, by making themselves felt in their respective neighbourhoods as a power for good.

After short remarks from Messrs. Casey, Wilson and Macdougall, and the customary votes of thanks, the meeting closed.

Variety was lent to the proceedings by some good music from the teachers and others present, and a reading by Mrs. Bourne.

The Association met at 9 a.m., on Saturday, when Mr. Butler discoursed at some length on the best means of teaching English literature. His remarks were supplemented by Messrs. Cook, Campbell, Finney, Ross and Carlyle. The two latter spoke at some length on this and kindred subjects, and on concluding received the thanks of the Association.

Taking advantage of a hint dropped by Mr. Ross, the Association took into consideration the forming of an Institute Library, and some \$40 was subscribed for that object by the members. Committees were formed to make application for aid to the several Municipal councils, as was done successfully in the County of Lambton.

The proceedings of the Association closed at noon.

2. MINISTER OF EDUCATION IN ESSEX.

The regular programme of exercises at the Thursday evening session of the North Essex Teachers' Institute was so far modified as to dispense with discussion of the topics set down for that evening, and permit only the reading of essays by their authors, in order to permit the Minister to address the teachers and friends of education. Accordingly all who desired to do so repaired to the Court House about seven o'clock. We observed present, besides those connected with the Institute, Wm. McGregor, M.P.; Rev. Fathers O'Connor and Ferguson; James Dougall, Chairman of the Windsor Board of Education; Sheriff McEwan; S. S. Macdonnell, County Crown Attorney; Donald Cameron, Windsor; Alex. Bartlet, Secretary of the Windsor School Board; G. W. Mason, Sandwich; P. Ramon, Inland Revenue; Ed. Boismier, Mayor of Sandwich; Rev. J. Gray, Windsor; Luc Montreuil, Walkerville; J. H. Wilkinson, and Rev. Mr. Martin, of Walkerville. The Court room was filled. At 7.30 o'clock the Hon. Mr. Crooks ascended the platform, being accompanied by Mr. Girardot, and Rev. J. Gray, Rev. Father O'Connor and Messrs. Wm. McGregor and J. C. Patterson, occupying seats to the right and left of the speaker. Mr. Girardot took the chair and announced Mr. Crooks' intention of delivering an address, but would prefer that Messrs. Duncan and Ashdown should first read the essays they had respectively prepared. Mr. Girardot proceeded to say, "If there is a man who feels happy to-night it is myself. When a man has spent twenty years of his life in the earnest endeavour to promote advancement in the cause of education, as I have done, and sees as in some degree the result of those years of devotion such an audience as is now before me, all of whom are animated by the same enthusiasm for the work that has impelled me forward, and particularly when he and they can have for a guest so distinguished a personage as the Hon. Minister of Education, there could be no other feeling than that of great happiness. Essex does not desire to be behind her sisters in the matter of education, and if the inspectors and teachers are properly backed by school

trustees and parents, the county in a few years will have no superior in that respect."

Mr. James Duncan now read a paper upon "education," in which he "went for" the school-law and our law-makers, past and present, in a lively fashion, and was followed by Mr. Ashdown, in a paper upon "What to read."

Mr. Girardot next read an address of welcome to Mr. Crooks from the teachers, to which the Hon. gentleman briefly replied, adding he was glad to be able to accept the invitation to attend the convention, although compliance involved considerable inconvenience. While with them during the afternoon and listening to the discussion then going on, he had been very strongly impressed with the excellent character of our school system. It enabled a mixed population such as that of Essex to work side by side in the utmost harmony for the education of the youth of the country. It made all classes aid in the administration and interested in its success, and divided the care and responsibility between trustees, parents and teachers in a just and equitable manner. He would not attempt to discuss all the subjects touched upon by educationists here and elsewhere, because he had not directed his attention to them sufficiently long to do so safely. He had occupied his present office but a few months, and had not mastered all the details of the system; but he had done his best to thoroughly inform himself and was conscious of having made a good deal of progress. The paper read by Mr. Duncan shewed some of the difficulties one in his (Mr. Crooks) position must necessarily encounter, what a diversity of opinion existed upon some points of the law, and how careful one must be in coming to a conclusion, lest a mistake be made. For 30 years Dr. Ryerson had laboured to develop the present system, a system, though still imperfect, that we as Canadians might still feel proud of.—It was a general topic of conversation among foreigners at the Philadelphia exhibition that there Ontario made the very best educational exhibit. At the present day all nations were endeavouring to improve their educational system, and the praise bestowed by foreigners upon ours shewed its excellence. In every country legislators were trying to find out the elements of a popular yet effective scheme, and the same thing had been the late Superintendent's object. In England, Scotland and other countries named it was the all-important question. In the United States the system lacked that central, independent authority that we possessed, while in England they had that authority but lacked the popular local forces, or agencies which we enjoyed. We could truthfully assert that we had placed a good common school education within the reach of every child in the Province. More than that, we had made every property-holder pecuniarily interested in the public schools, by taxing him for their maintenance. If a man has no child to be educated, he is interested in knowing if the taxes he pays are properly employed, and will naturally strive for the improvement of the schools. One clause of the law, proclaimed it the duty of every parent or guardian to educate the children under his control—to send each child to school at least four months in the year; but nevertheless a fair average attendance could not be secured. And why was this? Educators differed upon this question, some believing a strict enforcement of the law against parents who do not send their children would prove the best remedy for the evil, while others maintain that no amount of coercion would suffice, but that the effect of a healthy public opinion would alone effect a cure. In England the law prohibits the employment of children in any capacity who have not attended school 450 times a year for five years; yet the evil still continues. The more trustees and teachers think about and understand this matter, the more rapid will be the improvement in attendance. Parents must unite with trustees and teachers in searching for the next and applying the remedy. School accommodation may more or less depend on the whim of trustees, but in very few cases do the trustees neglect to provide what the law demands. The efficiency of the law and the progress of the schools was no doubt dependent in no inconsiderable degree upon the character of the teachers. There were no doubt grievances in this direction. Teachers holding first and second-class certificates had a good ground of complaint in the immense increase in the number of third-class certificates granted, because the immediate effect of that was the cutting down of salaries; and in the disinclination third-class teachers shewed to qualify for higher certificates, preferring, it was alleged, to hold on to teaching only until something more profitable should turn up. It must not be forgotten, however, that we had to take things as we found them, and could only be expected to make improvements when and where a necessity made itself apparent. Boards of trustees could do much towards curing this evil, by ignoring as much as possible those teachers destitute of the ambition necessary to carry them upward in their profession, and by greater liberality towards second and first teachers. Something could also be done by altering the law so as to place third-class teachers in the position of apprentices, and render the attainment

of higher certificates a necessity. There was also a pressing need of change in the matter of text books. Any author should be free to submit to the Department for adoption a work of his production, but in no case should a book be adopted unless the Department first became the absolute owner of the copyright, in order that extortion might be prevented and the book supplied to pupils at bare cost. The High Schools of the Province were generally in a flourishing condition, but it was a matter of regret that the county councils frequently fell far short of their duty towards them. They were essentially county schools intended to be supported by the county in each case, and should not be a charge upon the towns in which the buildings happen to be erected. Canadians were certainly not retrograding, and it must not be said that the people of to-day are less enlightened or less awake to the advantages of a good education, than was the old Parliament of Upper Canada, which made provision for the Grammar Schools of that period. Means should be found for inducing the county councils to pursue a wiser course. Mr. Crooks, after briefly adverting to several other features of the school system, repeated his thanks to Mr. Girardot and the teachers for their invitation, kind address and hearty welcome. On resuming his seat he was enthusiastically cheered, as he had also frequently been during the delivery of the address we have very imperfectly reported.

It being now 9.30 o'clock the meeting was brought to a close, and the entire party repaired to Stewart's hotel for supper.—*Record.*

3. COUNTY DUNDAS EDUCATIONAL ASSOCIATION MEETING.

The meeting of the Association was opened, as advertised, at 10 a.m., on Friday, the President, Rev. Mr. Fergusson, P.S.I., occupying the chair. The President referred to the pleasure it gave him to greet the Minister of Education. The last two occasions on which his predecessor had visited the eastern part of the Province, he had passed by this County,

The Secretary read the address of the Association to the Minister.

Hon. Mr. Crooks, in replying, said he thanked the Teachers' Association of this County, for giving him an opportunity of meeting with them, and proceeded to give a lengthened address on educational topics.

Rev. Mr. Fergusson referred to a change he had noted in the County, and concluded an eloquent speech by expressing the pleasure he felt at the presence of the Minister of Education.

The subject of "Too much Pressure on the Youthful Intellect," was then introduced by Mr. A. Brown, and the discussion entered upon by several gentlemen.

At three p.m., a public meeting was held in Bradfield's Hall, Adam Harkness, Esq., Warden, in the chair. Addresses were delivered by the Warden and by the Minister of Education.

The Resolutions adopted have already been published.

4. THE MINISTER OF EDUCATION IN HALTON.

A public meeting was held on Saturday, the 28th ult., in the Town Hall, Milton, for the purpose of hearing an address by the Hon. Mr. Crooks, Minister of Education, and of expressing an opinion on the following subjects, viz.:—"Programme of Studies," "School Accommodation," "Assistant teachers," &c. The meeting was very largely attended, being composed of Municipal Committees, Trustees, Teachers, and friends of Education generally.

Mr. Jno. Waldie, Warden of the County, being appointed chairman, in a few appropriate remarks, introduced Mr. Crooks, who was warmly received, and delivered an address, completely reviewing the history of our educational system from its earliest inception up to the present. The hon. gentleman was listened to with attention throughout, and was most heartily applauded at the close.

It was then moved by Mr. W. C. Lyon, M.P.P., seconded by Mr. John Warren, Deputy-Reeve of Esquesing.

"That in the opinion of this meeting, the programme of studies for the public schools is not adapted for rural sections, inasmuch as the multiplicity of studies prevents pupils from making as much progress as they otherwise would in those branches of study which would prove more useful in after life; and that the present system of classification is too rigid, as it frequently happens that owing to a pupil's incapacity in certain subjects, his progress is hindered or retarded in others for which he is more naturally adapted; and that the school law and regulations ought to be so amended, that the master of a school, when requested by the parents or guardians, might, with the consent of his board of trustees, allow an option as to subjects of study to pupils of the age of twelve years and upwards, enabling them to take up such subjects only as will be

more useful to them in their intended sphere of life; and that the master of a school might, with the approval of the trustees, promote a pupil from a lower to a higher class, although from incapacity or inability he might be unable to come up to the required standard in some of the studies prescribed for his class, whenever, in the opinion of the master, it would be to the pupil's advantage to do so."

Mr. McPhee moved in amendment, seconded by Mr. Maxwell: "That in the opinion of this meeting the subjects prescribed for the first, second, and third divisions in our public schools are well suited to the wants of our youth attending said schools; but, owing to the diversity of pursuits followed in after life, we are of opinion that at a certain stage of progress, and when a certain trade or occupation has been decided upon, such pupils arriving at this decision or stage of progress should be allowed to study those subjects best adapted to qualify them for such trade or occupation. Resolved, therefore, that the study of subjects in our public schools on promotion from the third division be optional, and that the parent or guardian who desires a departure from the prescribed study, shall acquaint the teacher of the same in writing, and also of the nature and extent of the departure."

Several prominent and influential gentlemen from different parts of the county expressed their views of the programme, and appeared to be all of one opinion—that some change or relaxation was necessary, and that something more pliable than the present programme of studies was needed, to meet the wants of the Canadian schools.

On a vote being taken, the motion of Mr. Lyon was carried almost unanimously. (A similar resolution was carried, on motion of Mr. McLean, Milton, seconded by Mr. Nixon, Esquesing, at the teachers' meeting held in the forenoon.)

Mr. McPhee moved, seconded by Mr. Menties: "That rural sections be not required to furnish accommodation for all the children of school age in the section, but for the largest attendance in school for any one month during the previous year." Carried.

Mr. H. Watson moved, seconded Mr. Geo. Smith: "That the law be so modified as to allow the employment of monitors in junior departments of public schools." Carried.

On motion of Mr. Geo. Smith, seconded by Mr. Ramsay, Reeve of Nassagaweya, a vote of thanks was passed to the Minister of Education for his very interesting and instructive address. Mr. McLean, the secretary, was ordered to forward a copy of the above resolutions to the Minister, and Mr. Coates, secretary of the teachers' meeting, was requested to do the same with the resolutions passed at that meeting. A vote of thanks was then given to the chairman, when the meeting adjourned.

5. PUBLIC SCHOOL PROGRAMME.

Copy of Resolutions passed by the Teachers of the County Halton, at Milton, 28th Oct., 1876.

Resolved (1.)—That, in the opinion of this meeting, the Programme of Studies for the Public Schools is not adapted for rural sections, inasmuch as the multiplicity of studies prevents pupils from making as much progress as they otherwise would in those branches of study, which would prove more useful in after life: And that the Limit Table and classification of pupils are too rigid, as it frequently happens that owing to the pupil's incapacity on certain subjects, his progress is hindered, or retarded in others, for which he is more naturally adapted: And that the School Law and Regulations ought to be so amended, that the master of a school, when requested by the parents or guardians, might, with the consent of his Board of Trustees, allow an option as to the subjects of study, to pupils of the age of thirteen years and upwards, enabling them to take up such subjects only as will be more useful to them in their intended sphere of life: And that the teacher of a school, might, with the approval of the Trustees, promote a pupil from a lower to a higher class, although, from inability or otherwise, he may be unable to come up to the required standard of proficiency in all the subjects prescribed for his class, whenever it would, in the opinion of the master, be to the advantage of the pupils to do so. *Carried.* Eight yeas, four nays, with thirty present.

Resolved (2.)—That, in the opinion of this meeting, it would be detrimental to the cause of Education to make Third-class Certificates granted under the present standard, permanent; but would recommend the formation of another grade of certificates midway between the present third and second, and to continue in force for six years, and renewable on examination at the end of that period. *Carried.*

Resolved (3.)—That, in the opinion of this meeting, candidates for Second and First-class Certificates should be permitted to take but

a portion of the number of subjects at one examination, thus dividing the work into at least two sections. *Carried.*

Resolved (4.)—That the school year should end on the fifteenth day of July, or at the end of the spring term. *Carried.*

Resolved (5.)—That the midsummer vacations should be extended, and made similar to that now enjoyed by the High Schools. *Carried.*

Resolved (6.)—That this meeting favours the formation of Township Boards of Trustees throughout the Province. *Carried.*

Resolved (7.)—That, in the opinion of this meeting, teachers' salaries should be paid quarterly and not, as at present prevails, by the various grants, and the balance at the end of the year. *Carried.*

6. RESOLUTIONS OF THE PLYMPTON AND BOSANQUET TEACHERS' ASSOCIATION.

This Association, while not approving of any legislation that would reduce the standing of any of the grades of Teachers' Certificates, would nevertheless submit the following for the consideration of the Honourable the Minister of Education :

1. That much valuable experience is lost to the profession by the summary cancellation of Third-class Certificates at the end of their legal period of existence, inasmuch as the places occupied by many holding such certificates are generally taken by others, no better qualified, and altogether lacking in the important element of experience.

2. That, in order to remedy this defect, such legislation be provided as would extend Third-class Certificates an additional period of three years, provided always that all such candidates for renewal obtain 25 per cent, of the aggregate marks on Second-class Certificates.

3. That the subjects for Second and First-class candidates be so divided as to extend over three years—a certificate to be awarded at the close of each examination for work done.

4. That the financial year should close on the 30th June, instead of the 31st of December, as at present.

5. That this Association, knowing by experience that "Teachers' Meetings for mutual improvement" are productive of much good, hereby respectfully memorializes the Minister of Education to organize as quickly as possible Teachers' Institutes under such regulations as would provide systematic instruction in the theory and practice of teaching.

7. RESOLUTIONS ADOPTED AT THE SCHOOL CONVENTION IN BELLEVILLE, OCTOBER 13TH, 1876.

Moved by W. Mackintosh, P. S. I., N. Hastings, and seconded by Professor Bell, Albert College:—Whereas several years apprenticeship, or period of preparatory training is considered a necessary introduction to the practice of the learned professions and the most ordinary handicrafts, and whereas the business of the Teacher, the exceedingly delicate and important work of developing, training and strengthening the minds and characters of the children of the Province, far transcends in importance any other occupation:—

Be it therefore resolved:—

1st. That facilities should be provided by the Legislature for giving some amount of professional training to every candidate for a Teacher's certificate.

2nd. That the mere multiplication of Normal Schools to any practicable extent cannot overtake the work of training all, or even a majority, of those who wish to become Teachers.

3rd. That this can only be accomplished by providing each Inspectorial District with facilities for doing the work by means of a Model, or District Training School, and a Teachers' Institute.

4th. That some existing Public School, or Schools selected by the Minister of Education in each Inspectorate should be constituted a Model School for such District, and that no school should be selected that has not a staff of at least three competent Teachers, the Principal being a First Class Certificated Teacher of five years' actual experience.

5th. That all Candidates for Teachers' Certificates should be required to furnish proof of at least six months' attendance at some such school, or a Normal School.

6th. That, while in attendance, pupil Teachers should be required not only to study the subjects in which candidates for Third Class Certificates are examined, but to engage under the direction of the Principal and Inspector, in actual teaching in the School.

7th. That a special grant should be paid annually to such Schools.

8th. That financial aid should be given by the Legislature to Teachers' Institutes. This should be applied to securing the ser-

vices of thoroughly competent persons to conduct or assist in the meetings of such Institutes, and that attendance at these meetings should be compulsory on all Teachers.

8. MINUTES OF S. GREY TEACHERS' ASSOCIATION.

The Association held its second Convention, in Durham School, on the 14th day of October. After the reading and adoption of the minutes of the previous meeting, it was resolved: That the minutes of the Association be placed at the disposal of the Editor of the JOURNAL OF EDUCATION. Moved and seconded, That, if practicable, classes be brought before the Association to exemplify the various methods of teaching. *Carried.* Moved, seconded, carried, That the subject of Teachers' Institutes be discussed at next meeting.

Mr. Ritchie read an essay on Geography calculated to induce reflection. A few of its leading features may be indicated. The child being young and his mind in an unprepared state, it would require to be improved by undergoing a proper training, and as power was gradually acquired and new ideas multiplied, then the subject could be pursued with success, otherwise, if wrong methods were adopted, a dislike, to say the least of it, would take the place of what ought to be a delight. Some of the hindrances are: A young person does not see the advantage of studying it, and having no object before him, he cannot be expected to engage in it with the energy of an older person; taught in an isolated manner, by crowding dead facts upon the memory, is slow work and takes up too much time; when commenced at the mathematical part it is particularly uninviting to children. In order to place the disadvantages at a minimum, the subject should be commenced without books, in such a manner as to create a love for the study, and when the student is deeply interested in it and feels the want of books, supply them; by map drawing on the black-board, slate, or paper, simply giving the outlines, or more fully according to the requirements of the pupil; by the law of association, such as in speaking of Philadelphia, fix it in the mind by reference to the Centennial; and, finally, by giving it in connection with history.

Writing was introduced by Miss McArthur, in a neat essay, describing the process, requisites, &c., from the time the pupil is scarcely able to hold the pen, until the course is completed, when he may be supposed to possess such a knowledge of form and command of pen as to be able to write, at least, a good school hand. In order to produce this, patience, diligence, attention, and time are necessary. The great number of forms required, amounting, in all, to between sixty and seventy, might well seem a herculean undertaking, yet, by acting upon these four items, the work would at last be done. The little fingers might tremble under the burden laid upon them, knowledge of form be so defective that unwittingly, the turns, or loops, might take the wrong course, yet, by kindly criticising, the letters would at length stand forward boldly in proper uniform, marshalled like a regiment of soldiers. That this may be accomplished in the shortest time, with the greatest ease and the highest culture to the scholar, the best material that the market can supply, such as copy, pen, ink, and last, but not least, teaching must be laid under contribution.

It was resolved, that Mr. Ritchie parse the difficult words in the Battle of Waterloo, Fifth Book; that the President take second-class arithmetic last examination; that the Secretary give geometrical exercises; that Miss McMillan give a reading; and that Mr. E. McArthur give difficult problems.

Adjourned to meet in the same place on the 16th Dec., 1876, at 12 o'clock noon.

WM. K. REID.

The following were carried at the meeting in August:—

1. That, in the opinion of this Association, it would be preferable for the Easter holidays to commence on the Monday before Easter, and continue for the week, and the summer holidays to commence on the second Monday in July, and ending on a Friday, continuing for the same time as the High School vacations.

That, in our opinion, the results of the late examinations for Teachers' Certificates were quite satisfactory, and that it would not be well in the interests of education to lower the standard of qualification as required by the papers issued this year, this motion being understood to apply more particularly to second and third-class certificates.

9. SCHOOL MEETING IN NASSAGAWEYA.

At a Public Meeting, held on the 21st day of October, 1876, in the Township of Nassagaweya, John Ramsay, Esq., Reeve, acting as Chairman, the following resolutions were adopted:

1. That the stringency of the programme of studies in rural

schools be relaxed, so as to allow of pupils over the age of fourteen years, in exceptional cases, to take up a course of studies suitable to their circumstances, the decision in such cases to be left with the Trustees in such school sections.

2. That rural school sections be not required to provide accommodation for all the children of school age in the section, but for the largest attendance in any one month during the previous year.

3. That Trustees be empowered to engage monitors in separate departments, instead of assistant teachers, when the average attendance exceeds forty and is under sixty.

4. That the standard of Third-class Certificates be uniform, and that candidates applying for Second-class and failing, may be awarded Third-class Certificates for an additional three years, provided that said candidates obtain a number of marks equivalent to Third-class Certificates.

5. That a Committee present the above resolutions to the Hon. A. Crooks, Minister of Education, at Milton, on the 28th inst.

JOHN RAMSAY,
Chairman.

10. HURON TEACHERS' ASSOCIATION.

The annual meeting of the Huron Teachers' Association was held in Clinton. The following particulars relating to the meeting, we condense from the report of the *Signal*. There were about 120 teachers present, and the meeting was a most interesting and instructive one. Mr. A. Dewar, Inspector, occupied the chair, and delivered the opening address. Mr. S. Martin, of Osborne, read an essay on music in schools. Mr. K. Orr, of Clinton, delivered an address on mathematics and physical geography, and Mr. H. I. Strong, of Goderich, gave an interesting report of the meeting of the Provincial Teachers' Association. Professor D. C. Bell, of Brantford, the elocutionist, gave an able address on "The Art of Reading," in the town hall, to a large audience. Mr. J. Turnbull, Clinton, gave a clear and interesting address upon Algebra, giving examples of his mode of instructing the primary classes in that branch. Mr. S. Hicks, of Tuckersmith, gave an interesting sketch of his visit to the Centennial, and what he saw there. Mr. J. R. Miller, Inspector, gave an account of his recent trip to the old country. Speaking of the educational system there, Mr. Miller said that he had heard that it was a grand old system, by which one teacher could teach three hundred scholars, but he could not agree with that statement. In one school he found six teachers attending to their classes in the one room, which every teacher must know would prove a very annoying situation. Writing, he found, was much in advance of what was attained in Canada; enunciation was more perfect; and singing was good. In Scotland the scholars wore their hats and bonnets in school, giving the rooms a strange appearance to Canadians. This was allowed because the scholars moved frequently from one room to another, and the teachers say it is more convenient to permit the scholars to wear their "head gear" continually. Mr. Miller visited one school in London where 1,600 scholars were being taught, and a board, consisting of 43 members, presided over this school. Principal teachers were better paid than here, but assistants were not so well remunerated, but their salaries increased with their experience. The system of grading salaries was done upon the work performed and promotions made and not upon the attendance as here, and the consequence was that cramming occurred to an injurious extent. He returned to his home with a greater love for Canada than ever, and with a greater admiration of our school system. After passing sundry votes of thanks, the meeting adjourned, to meet again in February next.—*Huron Expositor*.

11. PROGRESS OF EDUCATION IN THE COUNTY OF BRANT.

(Extract from an address to the Minister of Education—October, 1876.)

In the remarkable progress which has characterized Public and High School education in this Province since 1872, the County of Brant has participated, in evidence of which the following comparative statements may be adduced: In the rural schools of the county, the total amount paid to Teachers was in 1872, \$16,625, in 1875, \$22,791, showing an increase of \$6,166. The value of School property in the county, was increased during the same interval in a still greater ratio. Last year the sum of \$11,046 was expended in new school-houses, and an equal if not a greater sum will be expended this year for the same purpose. In the Town of Brantford, the salaries of Teachers in the Public Schools amounted in 1872, to \$6,514 and in 1876 they reach \$9,372. The value of School property in 1872, was little more than \$25,000—it is now nearly \$40,000. Since 1872 the amount expended for High School accommodation in this Town has been \$13,980, and the amount paid in sa-

larities has risen from \$1,600 to 4,900, and the High School from a third class position, with only two teachers, and an average attendance of 45 pupils, has attained to the rank of Collegiate Institute with an average attendance of 135 pupils, and a staff of five masters.

12. AMELIASBURGH TEACHERS' INSTITUTE.

A desire having been long felt by the Inspector and teachers of the county to make the Teachers' Convention of a more interesting and practical nature, the Inspector has suggested the idea of utilizing the "visiting days" allowed to teachers by holding Teachers Institutes in some central school of each township throughout the county, retaining the scholars for the purpose of exhibiting more practically the instructions given.

The ever progressive staff of energetic Dominees of Ameliasburgh resolved to act upon the suggestion, and held their first Institute in Roblin's Mills School, on Friday last. A large number of teachers, male and female, were present, notwithstanding the short notice given, and all took a lively interest in the various subjects taught.

Mr. Jas. Glenn gave his method of teaching spelling and derivation. Mr. Kinney, assisted by Mr. Shannon, taught a junior third class. The sentences were first read as in the book; then words of the same meaning were substituted, when it was again read in a number of different ways with different substitutes and different words emphasized. Spelling orally and in writing were given, but Mr. Shannon ignored entirely the system of oral spelling, which he termed "spelling by jingle." Rewards and punishments for recitations were discussed at some length, the principal incentives used being tickets, cards and position in the class to juniors, the number varying from one to five, with prizes according to merit, honour cards, honour rolls hung up in the school room, position in the class, together with the great and lasting benefits derived from an education, were the chief inducements held out to seniors. It was argued that the prizes were impracticable, as many trustees were opposed to them. Mr. Rothwell said his trustees had granted \$5 for cards and presents. Mr. Glenn thought there were few sections so liberal. Mr. Kinney thought nearly every section could be induced to grant at least five dollars for presents, cards, prizes, &c., if the teachers took the trouble to get the parents and children interested in the matter, and he believed it would be five dollars well invested.

In the afternoon, Mr. Jas. Benson taught a class in arithmetic illustrating in a clear, impressive manner his method of teaching fractions and proportion. Wm. Benson experimented very successfully on some youths who had never learned arithmetic. He would commence with small numbers and gradually work up to large, using marks to ascertain the result at first. Mr. Rothwell followed with a very interesting class in junior grammar. He explained nouns by things, verbs by acts, such as whittling, moving, books, handing a stick, knife, &c.; adverbs, by moving books slowly, quickly, &c.; prepositions by the position of the object, as, over, under, between, &c.; each act being expressed orally or on slates by the pupils and on the black board by the teacher. Mr. Shannon deprecated the black board exercise as being very injurious to the health to swallow so much chalk. Mr. McKibbin gave a very interesting lesson on history, using notes on the lesson containing the leading facts which he wished to impress on his class. Messrs. Rothwell and Kinney would commence at Victoria's reign and reverse the general order pursued. Mr. Rothwell next took up drawing, which, from long experience, he succeeded in making very interesting. Mr. Shannon was entirely in favour of perspective drawing, and utterly ignored the imitative system. The thanks of the Convention were tendered to Mr. McKibbin and his school for the privilege afforded, and the meeting adjourned, to meet again in January.—*New Nation*.

13. EDUCATION SOCIETY OF EASTERN ONTARIO.

The meeting for the organization of this Society was held in the Ottawa Normal School. After welcoming the delegates present, who numbered about 100, Mr. McCabe, as Chairman of the Temporary Committee, introduced the report of that committee.

Mr. Slack, P. S. I. for South Lanark, having been appointed Chairman, and Rev. T. D. Philipps, Secretary, the proposed constitution was considered, and the general articles adopted seriatim, as follows:—

Art. I.—Name.—This Society shall be called "The Education Society of Eastern Ontario."

Art. II.—Members.—Two classes of members shall be recognised in the Society, viz.: "Active members" and "honorary members."

Art. III.—Membership.—All legally qualified members of the profession actually engaged in the work of education shall be eligible for active membership, and upon the payment of an annual fee of 50 cents, and the signing of this constitution, shall become entitled

to all the privileges of the Society. Lady members to be admitted free.

Art. IV.—Election of Honorary Members.—Any person who has rendered distinguished services in the cause of education, being duly proposed and seconded, may be elected an honorary member, at any regular meeting of the Society, by a two-third vote of the members present.

Art. V.—Rights of Honorary Members.—Honorary members shall be entitled to all the privileges of active membership, other than that of voting.

Art. VI.—Officers.—The officers of the Society shall be a President, three Vice-Presidents, Recording and Corresponding Secretary, a Treasurer and seven Directors, two of whom shall be *ex-officio* members.

Art. VII.—Nominations of Officers.—Nominations for office must be made by one member and seconded by another, immediately before the ballot for each officer is taken.

Art. VIII.—Election of Officers.—Officers shall be elected by ballot at the annual meetings of the Society.

Art. IX.—Balloting.—Immediately after the nominations for each office, the presiding officer shall order a ballot to be taken, and a majority of votes shall constitute an election; but in case no candidate receives a majority of the votes cast, the name of the candidate receiving the smallest number of votes shall be dropped, and a new ballot taken on the remaining names, and so on until an election is secured. In the event of there being but one nomination for an office, the candidate shall be declared elected by acclamation.

Art. X.—Regular Meetings.—Regular meetings of the Society shall be held at such time and place as may be determined by the Society at a previous meeting.

Art. XI.—Special meetings.—Special meetings may be called at any time by the Board of Directors, provided always that due notice of such meeting be given to the members.

Art. XII.—By-Laws.—By-laws, not inconsistent with the constitution, may be made, altered or amended by a two-third vote of the members present at any regular meeting; provided also, that notice of the proposed By-law, alteration or amendment shall have been given at a previous session.

Art. XIII.—Alteration or amendment of Constitution.—This constitution shall not be altered or amended except at a regular meeting, and then only by a two-third vote of the members present. In all cases, notice of the proposed alteration or amendment must have been given at a previous session.

It was then resolved to proceed with the election of officers for the year. Messrs McMillan, MacCabe, Slack, Thorburn and May were nominated, and the first named elected by a large vote. Mr. Slack was, on a second ballot, elected 1st Vice-President. He may be considered to represent the Public School Inspectors. Mr. P. A. McGregor, Head Master of the Almonte High School, was unanimously elected 2nd Vice-President, and Mr. A. Smirle, Head Master of the Ottawa Central School East, 3rd Vice-President. Mr. Parlow, Head Master of Central School East, was elected Recording Secretary, and Mr. Riddell, Mathematical Master of the Normal School, Corresponding Secretary. For the office of Treasurer two nominations were made—Rev. T. D. Phillipps and Mr. Thorburn. The former was elected on ballot. There then remained five directors to be appointed. Messrs. Steele (P. S. I. for Prescott County), MacCabe and R. Dawson (Belleville High School), were elected by acclamation. To fill the two remaining vacancies Mr. Thorburn and Rev. J. May were elected on ballot. It was then resolved that Mr. MacCabe should be Convener of the Board of Directors.

The President elect took the chair, and thanked the Society for the honour done him. He also stated his conviction that the standard of the teacher's qualification was susceptible of still greater elevation, and, to this end, he advocated an increase in the number of Normal Schools for the training of teachers. The future of the new organization depended on their own exertions, and he relied confidently on the aid and consideration of the members in the endeavour to perform the arduous duties of his office.

Rev. J. May pointed out that a very large proportion of the new Directorate were men from Ottawa, and in the interests of the Society, and to enable the meeting to rectify what he considered a mistake by appointing another director from the outlying counties, he hoped the Society would accept his resignation. No action being taken in the matter, the President called upon Mr. Phillipps, who read an interesting address. At a subsequent meeting, Mr. May's resignation was accepted, and his suggestion that Mr. Bigg, P.S.I. for Leeds, should be appointed as a director, was unanimously adopted. The by-laws of the Society were then introduced and passed. A prolonged discussion on the propriety of withdrawing the power to grant 2nd class Public School teachers' certificates

from the County Boards, resulted in the passing of a resolution affirming the principle that such powers should be in the hands of the Central Committee. After the usual complimentary resolutions to the Principal of the Normal School for his considerate attention to the wants of the members, to the railway companies for their reduction of rates, the Society adjourned to meet on the 8th, 9th and 10th of August, in the Town of Brockville.—*Citizen*.

III. Communications to the Journal.

1. TEACHERS' EXAMINATIONS.

LONDON, 8th Nov., 1876.

To the Editor of the Journal of Education.

SIR,—In view of the many failures at the recent examination, I take the liberty of recommending candidates for future examinations to read carefully, Hamblin Smith's Arithmetic (published by Rivington), by way of preparation in this important branch. Candidates failed, not because the papers were extremely difficult, but for want of power in independent analysis, a want of familiarity with the *Unitary Method*. This method to which the Central Committee have given prominence during the past five years, is explained and illustrated by Mr. Hamblin Smith; and if intending candidates apply the method to solve the questions given in Mr. Smith's work as well as those given from time to time by the Central Committee, I venture to predict that there will be fewer failures at the next examination, and little or no clamour about the difficulty of the papers.

(Signed) J. A. McLELLAN.

2. TEACHERS' ASSOCIATION.

To the Editor of the Journal of Education.

DEAR SIR,—With a view to making the next meeting of the Provincial Teachers' Association a "live" one, allow me to make a suggestion through your Journal.

Hitherto the programme for the annual meeting, has been solely arranged by the General Executive Committee, at a meeting held during the Christmas holidays. Now, I do not wish to change the method of arranging the programme, but rather to improve it. If the Secretaries of the various local Associations throughout the Province, will forward to me, at Newmarket, before Christmas, the names of any subjects they think suitable for discussion at the annual meeting, I will lay the list before the "Executive" at their next meeting, and I am convinced the Committee will be only too willing to receive such assistance, and the programme thereby be greatly improved.

Yours truly,
H. DICKENSON,
Sec. P. S. Sec. O. A. A. E.

Newmarket, Nov. 1st, 1876.

IV. Mathematical Department.

1. SOLUTIONS OF PROBLEMS IN THE APRIL NUMBER OF THE JOURNAL OF EDUCATION.

1. Let ABC be a triangle, P a point within it; $AP=37$, $CP=54$, and $BP=63$. Assume a line ac any length at pleasure, say 80, and on it describe a $\triangle abc$, similar to ABC . In $\triangle abc$, we have the base and angles; hence the other sides are known. Divide ac in E in the ratio of $AP : PC$ or $37 : 54$; and ab in F in the ratio of $AP : PB$ or $37 : 63$; then $aE=32.5275$, and $Ec=47.4725$; $aF=30.672$, and $bF=52.253$. Now, the radius is a fourth proportional between the diff. of the segts. of the base, the least segt. and greater segt.; $\therefore Ec - aE : aE :: Ec : EK = 103.323$; the point K is in ca produced. $Fb - Fa : Fa :: Fb : FG = 74.321$. Then there are given the radii EK and FG of two circles intersecting in p , such that ap and cp , and ap and bp of the triangles apc apb will have the ratio of $AP : CP$, and $AP : PB$. Join Kp and Gp . Then by trigonometry, $KG=57.311$, $ak=70.7955$, and $aG=43.649$; $aKG=38^\circ 2' 10''.6$, and $pKG=44^\circ 34' 18''$; $\therefore aKp=6^\circ 32' 16''$, and $aPK=13^\circ 34' 23''$; $\therefore ap=33.938$. The triangles apb and APB , apc and APC , bpc and BPC , are similar, and we obtain the following results: $AC=87.218$, $AB=90.376$, and $BC=80.677$. The diagram is easily drawn, and the entire calculation may be performed.

2. When the \triangle is isosceles, the least whole numbers that answer the conditions of a right angled \triangle are 3, 4, and 5; \therefore the sides are 5, 5,

and 6. If the Δ is scalene, as ABC , let fall the perpendicular BD on AC , and let $BD=a$, and $AD=x$. Then $AB=\sqrt{a^2+x^2}$; put $p+x=\sqrt{a^2+x^2}$; then $p^2+2px+x^2=a^2+x^2$; $\therefore x=\frac{a^2-p^2}{2p}=\frac{a^2}{2p}-\frac{p}{2}$. Now, a , p , and x must be all whole numbers. If $a=8$, $p=4$, $x=\frac{64}{8}-2=6$, and $AB=p+x=10$, or, if $p=2$, $x=15$, and $p+x=17$; \therefore when $a=8$, $AD=6$, and $DC=15$. $\therefore AB=10$, $BC=17$, and $AC=21$. These numbers admit of two constructions. Make $DF=AD$, and join BF , then the side of the ΔBFC will be $FB=10$, $BC=17$, and $CF=9$. In the latter case, the perimeter is 36, in the other case 48. To give a scalene Δ answering the first conditions of the question, 8 is the least value of a or perpendicular; but it will not produce a Δ of the least perimeter. Suppose $a=12$, then $x=\frac{144}{2p}-\frac{p}{2}$, the greatest value of p that will make x a whole number is 8; then $x=5$, $AB=x+p=13$. Next greater value of p is 6; $\therefore x=9$, and $x+p=15=BC$; $\therefore AC=14$, and perimeter=42. Then the least perimeter of a scalene Δ , when the perpendicular falls within, is 42, the sides being 13, 14, and 15. When the perpendicular falls without, the sides must be 13, 15, and 4, and perimeter 32.

3. First the side of $\Delta = a = \sqrt{\frac{640}{3}} = 19.2225$. Put $BB = x$, and perpendicular $BD = y$; then $\frac{a+x}{2} \cdot y = 240$; but $y = \sqrt{a^2 - (\frac{a-x}{2})^2}$. $\therefore \frac{a+x}{2} \sqrt{a^2 - (\frac{a-x}{2})^2} = 240$, and $x^4 - ca^2 x^2 = 8a^3 x = 3a^4 = -960^2$. Substituting the value of a and solving, $x = 7.0714 = BB$, and height of trapezium = 18.249. Secondly, let fall the $\perp OE$ on AC , then $OE = 170 \div 19.2225 = 8.8432$; AO or $CO = \sqrt{OE^2 + EC^2} = \sqrt{(8.8432^2 + 9.611125^2)} = 13.0605$; $OB^1 = 19.2225 - 13.0605 = 6.162$; then $CO : OB^1 :: AC : B^1B^1 = 9.0692$.

4. The length of an arc of 10', when rad. = 1, is .0029089 : \therefore .0029089 : 160 :: 1 : 55004, the required distance.

5. $x^4 = mx + ny$, and $y^4 = nx + my$,
 $x^4 + y^4 = (m+n) \cdot (x+y)$ (1)
 $x^4 - y^4 = (m-n) \cdot (x-y)$ (2)

Multiplying cross-ways, we obtain,
 $(m+n) \cdot (x^5 + x^4 y - y^4 x - y^5) = (m-n) \cdot (x^5 - x^4 y + y^4 x - y^5)$;
 $\therefore 2nx^5 + 2mx^4 y - 2my^4 x - 2ny^5 = 0$;
 Put $x = yz$, and divide by $2ny^5$,

$Z^5 - 1 = \frac{m}{n}(z^4 - z) = 0$, . . . (3)
 Whence $z = 1$; $\therefore x = y = \sqrt[3]{m+n}$; divide (3) by $z - 1$;
 $Z^4 + Z^3 + Z^2 + Z + 1 = \frac{m}{n}(Z^3 + Z^2 + Z) = 0$;

$\therefore Z^4 + \frac{m+n}{n}(Z^3 + Z^2 + Z) + 1 = 0$,
 $(Z^2 + \frac{1}{Z^2}) + \frac{m+n}{n}(Z + \frac{1}{Z}) + \frac{m+n}{n} = 0$,
 $(Z + \frac{1}{Z})^2 + \frac{m+n}{n}(Z + \frac{1}{Z}) = 2 - \frac{m+n}{n}$; hence $Z + \frac{1}{Z}$ may be found; thence z or $\frac{x}{y}$; call this c , then $x = cy$. Substitute these values in (1) and (2), and we get the values of x and y .

6. $xy + zw = 444$ (A); $xz + yw = 180$ (B);
 $zw + yz = 156$ (C); $xyzw = 5184$ (D).

Solution by J. W. Henstridge.—Multiply A by xy , B by xz , and C by yz ; subtract each in turn from D, and solve the quadratics; then $xy=432$ or 12 (E), $xz=144$ or 36 (F), $yz=108$ or 48 (G). Comparing (F) and (G), (first values), $Z = \frac{144}{108} = \frac{4}{3}$; $\therefore y = \frac{3}{4}x$, substitute in (E), (first value), $x^2 = 576$, $\therefore x=24$; whence $y=18$; $z=6$; $w=2$. Comparing 2nd values of F and G, &c., we get $x=18$; $y=24$; $z=2$; $w=6$. Comparing 1st value of F with 2nd of G, we get $x=36$; $y=12$; $z=4$; $w=3$. Comparing 2nd value of F with 1st of G, $x=12$; $y=36$; $z=3$; $w=4$. Again, by taking 2nd value of E and working as before,

$$\begin{aligned} x &= \underline{+4}; y = \underline{+3}; z = \underline{+36}; w = \underline{+12} \\ x &= \underline{+3}; y = \underline{+4}; z = \underline{+12}; w = \underline{+36} \\ x &= \underline{+6}; y = \underline{+2}; z = \underline{+24}; w = \underline{+18} \\ x &= \underline{+2}; y = \underline{+6}; z = \underline{+18}; w = \underline{+24} \end{aligned}$$

$\therefore x=24, 18, 36, 12, 4, 3, 6, 2$
 $y=18, 24, 12, 36, 3, 4, 2, 6$
 $z=6, 2, 4, 3, 36, 12, 24, 18$
 $w=2, 6, 3, 4, 12, 36, 18, 24$. All these values may be considered negative; therefore, there are sixteen possible answers.

7. Let D and d be the diameters of a shilling and sovereign, T and t their thickness; then $\frac{p}{4}D^2 T$, $\frac{p}{4}d^2 t$ are the magnitudes of shilling and sovereign; also $mD=nd$: and $pT=qt$. If x shillings = y sovereigns in bulk, $xD^2 T = yd^2 t = \frac{m^2}{n^2} \cdot \frac{p}{4}D^2 T$; $\therefore x^2 q = ym^2 p$; $\therefore x : y :: m^2 p : n^2 q$; \therefore the value of silver; value of gold : : $m^2 p$; $20 n^2 q$.

8. $26^2 \times 14 \times \text{nat. sin. } 56^\circ 35' \times \frac{1}{8} \times 62\frac{1}{2} = 82286.5225 \text{ lbs.} =$ pressure on Δ whose base coincides with the surface $26 \times 14 \times \text{nat. sin. } 56^\circ 35' \times \frac{1}{8} \times 62\frac{1}{2} = 164573.045 =$ pressure on Δ whose vertex coincides with the surface.

If the plane of the immersed parallelogram were \perp to the surface of the fluid, the pressures on triangles would be, $26 \times 14 \times 62\frac{1}{2} \times \frac{1}{8} = 98583\frac{1}{2} \text{ lbs.}$, and $26 \times 14 \times 62\frac{1}{2} \times \frac{1}{8} = 1971.66\frac{1}{2} \text{ lbs.}$

9. $80x = 50(20-x) + 10(40-x)$; $\therefore x = 10$ feet.

2. CORRECT SOLUTIONS RECEIVED.

J. W. Henstridge, Collins Bay, solved 2, 3, 4, 5, 6, 7, 8, 9; John Anderson, Clarendon, P. Q., 4, 6, and 7; E. E. Fraser, West Essa, 4, 7 and 9; S. White, 7, 8, 9; D. Drimmie, Flesher-ton, 5 and 9; R. M. Pascoe, Bowmanville, 9; W. G. Stewart, P.M., Hilly Grove P.O., 4 and 5 in the February number of the Journal.

Send solutions of the following questions to A. Doyle, Ottawa :

1. For a lease of certain profits for 7 years. A makes two offers, either to pay \$600 fine and \$1,200 per annum, or \$6,800 fine, without any rent. B bids \$2,600 fine and \$800 per annum. C offers \$800 fine and \$1,600 per annum. Which is the best offer? and what is the difference at 5 per cent. compound interest?
2. $x^x + y = y^y$ and $y^y + x = x$. Find x and y .
3. A wheel has 248 teeth, and a pinion to it has 13; how many revolutions must each wheel make before the same two teeth meet together again?
4. What angle did the meridian form with the line which denoted mean time, on the 1st of July last, when the angle, formed by the hour and minute hands of a watch, was first trisected, after twelve o'clock?
5. The radius of a semicircular plane immersed in a fluid is 27 inches, and coincides with the surface; at what distance below the surface must a horizontal cord be drawn, so that the pressure which it sustains may be greater than that in any other cord drawn parallel to it?

V. Ontario Education at the Centennial.

1. AN EDUCATIONAL MUSEUM AT THE PERMANENT CENTENNIAL EXHIBITION.

We are much gratified to state that the managers of the Permanent Exhibition have resolved to make education one of the leading features of the Exhibition. Mr. Biddle, the president of the Exhibition Company, convened a meeting of the leading educationalists from all countries exhibiting at the Centennial, when it was resolved to devote a large space to education, it being considered that the progress of arts and manufactures depends upon the progress of education. After considerable discussion it was recommended that a similar plan be adopted as that so successfully carried out in Canada, by forming an educational museum. It is proposed that this museum will contain specimens of all the necessary books, maps, apparatus, school furniture, &c., suitable for the different grades of schools. These are to be selected by a Committee of Educationalists. In addition to the museum there will be a collection of school material from the different publishers and manufacturers, which will be scientifically arranged. The company have wisely resolved to place the control of education matters in the hands of experienced educators. The following gentlemen were appointed a committee to prepare the necessary plans and scheme for its success: The Hon. Mr. Wickersham, State Superintendent of Schools, Pennsylvania; Professor Apgar, State Superintendent of Schools, Trenton, N.J.; Dr. S. P. May, Education Department, Toronto, Canada. The company is to be congratulated on the formation of a committee of such experienced gentle-

men, whose various exhibits at the Centennial have been a sufficient proof of their ability and knowledge of the objects entrusted to them, and which will no doubt give our country precedence for the future in all educational exhibits.

2. ONTARIO EDUCATIONAL EXHIBIT AT PHILADELPHIA.

Our northern neighbours make up for the loss of the mother country by sending a magnificent exhibit of their school system. It includes models of school buildings from country and city—the former of which may be studied with profit; photographs of the Educational Department at Toronto, the Normal School at Ottawa, and other elegant school buildings, and full cases of apparatus, from the counting frames of the Primary Departments to the elegant philosophical apparatus of the High Schools and Colleges. There is a fuller exhibit of apparatus here than in any other department. On large frames, suspended by side hinges, is shown the work of the scholars, including first-rate map drawing and penmanship, and superb free-hand and mechanical drawing, from the evening classes of the School of Practical Science, at Toronto. The samples of school furniture are noticeable, also the elegant Relief Maps, and Oliver and Boyd's Object Lesson Cards.—From the *American Bookseller* for August.

3. OBJECT-LESSON TEACHING AT THE CENTENNIAL.

The necessity of object teaching is now an acknowledged fact. It has been demonstrated that the future progress of our country and the advancement of commerce are dependent upon the progress of science. At the first Universal Exhibition, in 1851, British manufacturers were surprised to find competitors from other nations exhibiting goods superior to their own, belonging to a class of which hitherto they had been proud as a nation. They did not despair, but to overcome the difficulty they established schools of art and design, and offered rewards for the best method of teaching practical science. What England did we require to do. We must make science more popular with our youth. It must be simplified, so as to call forth the observant faculties of very young children. They will eventually develop the perceptive faculties and investigating energies of our youth as they grow up, and make them practical people. We, of course, consider the whole Exhibition one huge object-lesson, from which we shall acquire practical information which is worth to this country wealth untold. It is impossible to estimate the value this comparison of the productions of different countries will prove even to our own community. We can compare the artistic designs and the fine workmanship so skilfully executed by the artisans of different nations. It behooves us, however, to do something more than this. We must provide the requisites for the advancement of our children, not only that they may keep pace with, but, if possible, take precedence in the future. We have carefully examined the various educational exhibits to ascertain what our educationalists are doing in this respect, and are pleased to find that many of our States have adopted the Kindergarten system for very young children, but that seems to be the extent of their object-teachings. The country that exhibits the finest collection of educational appliances for this important branch of education is Ontario. The exhibits of the Canadian School-apparatus Manufacturing Company, of Toronto, in the Ontario Education Department in the Main Building, have received the International Judges' award for their excellence and cheapness. The system adopted by them to teach natural history is acknowledged to be superior to the old, dry methods by books and charts; instead thereof they teach from nature. For example, take botany: They have cabinets containing the raw and manufactured material, from which the child is gradually brought to understand the nature and uses of the plant examined. Supposing the subject to be wheat, specimens of the seed, bran, flour, biscuit, macaroni, straw, straw plait, straw paper, &c., are exhibited, and, as they are properly classified, they not only are useful to teach young children the importance of common things, but they impart a useful lesson in botany. These cabinets, containing on the average, 200 specimens illustrative of the animal, vegetable and mineral kingdoms, are sold at \$12 each. The models exhibited by the company for teaching physiology and anatomy are superb. More information can be gained of the true position and the formation of the organs of circulation and respiration, the necessity of cleanliness, the importance of attention to the teeth, &c., by studying these models for a few hours, than can be obtained from books in years of close study. Their system of teaching chemistry, too, is considered by experts to be very superior. This science is so simplified that little children can perform experiments. They have a laboratory for boys and girls, price, \$2, containing chemicals and apparatus to perform over 120 experiments in chemistry, manufactures, domestic economy, physiology, &c. Student's laboratories

are supplied at \$6 each, with a book, to perform 200 experiments. The laboratories for teachers and normal-school students, price \$12 each, are marvels of cheapness. They contain all the chemicals and apparatus to perform the ordinary experiments with the metalloids as found in elementary books on chemistry. We have no doubt that this important branch of study, which is the keystone to our manufactures, will receive an impetus and become one of the necessary studies in our school system, as we understand several of our neighbouring States have already ordered samples of these laboratories for the purpose of introducing them into their schools.—*Phil. Press.*

VI. Extracts from Periodicals, &c.

1. BAD AIR IN THE SCHOOL-ROOM.

Among all the evil things in some of our school-rooms, there is one which is hardly mentioned, and it is the breath of the pupils, and sometimes of the teachers. Take a school of 50 children, and by count about 10 of them will be found to have a breath more or less objectionable; and there will be very few who have an absolutely pure breath. A pure breath comes only from pure physiological conditions. A foul breath comes from some accumulation of filth in the system, which finds its way out through the expired air. The following are some of the causes of bad breath:

1. Bad teeth.
2. Catarrh in the nasal passages.
3. Imperfect action of the skin, leaving some of the excretory matter which should find its way out through that channel to pass away with the breath.
4. Imperfect excretion through the bowels, leaving the material of this excretion to be excreted from the lungs.
5. Medicines taken internally which affect the breath.
6. The use of intoxicating drinks which always affect the breath.
7. The use of tobacco, which fouls every mouth, and consequently every breath.

8. Foods that affect the breath by evaporating through the lungs. The remedies for a bad breath are few, and easily applied.

1. Where the teeth are decayed, get the dentist to fill them, and then keep the mouth clean by the use of some good tooth-soap once a day.

2. If catarrh is the cause, consult a good physician.
 3. For the skin the daily bath and friction on the skin are necessary.
- A person who bathes daily, as he ought to, and uses much friction, will be more likely to have a clean breath than one who does not. There are some odours which arise from the skin, which are dispelled by a daily bath and clean under clothing.

4. The bowels should be kept open by a daily allowance of food. They will then carry off those matters the breath otherwise takes on.

5. Those Medicines which affect the breath are few and need not be mentioned here.
6. No teacher should ever use intoxicating drinks—and generally do not. If one does, the School Board should eject him and hire a temperance man.

7. The same may be said of teachers who use tobacco. If the food is not of the right sort, this may be easily changed. Certainly teachers will try to avoid onions and the like. If the pupils use them the teacher can quietly give a little speech on the breath, and bring in the matter incidentally so as to give no offence. So, too, he can tell his pupils to take care of the health, so the breath shall be pure.

There are two other points to be mentioned. First, keeping the air of the school-room pure. The following are some of the ways house air is spoiled:

1. An adult person consumes 34 grammes of oxygen per hour, a gramme being equal to 18 grains.
2. A stearine candle consumes about one half as much.
3. An adult gives off 40 grammes per hour of carbonic acid. A child of 50 pounds weight gives off as much as an adult of 100 pounds weight.

4. A school-room filled with children will, if not well ventilated at the beginning of the hour, contain 25 parts in 1,000 of carbonic acid, at the end of the first hour 41, and end of second hour 81.
5. The air is also spoiled by the perspiration of the body, and by the volatile oils given out through the skin. An adult gives off through the skin in 24 hours from 500 to 800 grammes of water mixed with various excrements, poisonous if breathed.
6. A stearine candle gives off per hour 0.4 cubic feet of carbonic acid, 0.03 pounds of water.
7. Carbonic oxide is a much more dangerous gas than carbonic

acid, and this obtains entrance to our rooms in many ways, through the cracks in stoves, and defective stove-pipes; or when the carbonic acid of the air comes in contact with a very hot stove and is converted into carbonic oxide. The dust of the air may on a hot stove be burned to produce it: or it may flow out from our gas pipes when the gas is not perfectly consumed.

8. Another form of air injury is the dust of a fungus growth which fills the air in damp or warm places. We call it miasma from a want of a true knowledge of its character.

9. Accidental vapours are the crowning source of air poisoning. These are tobacco smoke, kitchen vapour, wash room vapours, and the like.

10. When we heat our school-houses and close them from outside air, the heat turns the mixture into a vile mess unfit for breathing. The only remedy is ventilation.

Query.—How large should a school room be for 30 pupils?

Ans.—30 feet square and 12 feet high. The entire air of such a room should be warmed and changed five times an hour to keep the carbonic acid down to the proper amount, nothing short of this will keep the air sufficiently sweet. At the end of every hour the room should be flushed from every direction to still further purify it.

An adult requires 2,000 cubic feet of air per hour. Think of the amount necessary for a room full of children. Keep the air of a school-room pure and comfortable, and foul breaths in most cases disappear.

If a teacher has a bad breath it is a sign that he has poor health, and he should at once take to out-of-door life, and let some healthy person take his place, or he should if this is not desirable, go out of doors more to take exercise and attend to personal hygiene.

If a pupil has a bad breath he should be turned out of doors more frequently, and be encouraged to take gymnastic exercise and sports, and in this way improve his breath. Good health is the cure for bad breath.

Every person should consider it a duty to keep the body pure and healthy, as well as the mind, and a bad breath should be no more tolerated in a school-room than bad grammar.

2. SANITARY EFFECT OF SHADE-TREES.

The London *Medical Examiner*, alluding to the sanitary effect of trees, says:—"Apart from the sense of relief and coolness which they impart, their value as purifiers of the atmosphere is almost incredible. It has been calculated that a good-sized elm, plane or lime tree will produce 7,000,000 leaves, having a united area of 200,000 square feet. The influence of such a large surface in the absorption of deleterious gases and the exhalation of oxygen must therefore be of immense benefit in overcrowded and unhealthy districts. It is now well known that the plane and other deciduous trees of the same family are the most suitable, as they not only expose a large leaf surface to the atmosphere, but by shedding their bark annually, throw off the result of smoke, acids, and other poisonous fumes which by accumulation would be fatal to the oak or other trees of slower growth and apparently more hardy nature."

3. INDUSTRIAL ELEMENT NEEDED IN SCHOOLS.

Public education should conform to the common needs; should change as these needs change, neither exceeding their requirements, nor falling below them. When public schools first became fairly organized in this country, they met, at that time and for many years, the common needs of the people much better than the present public schools meet the common needs of to-day; for in spite of the great progress which these schools have made in some directions, they have not kept abreast with the times—with the multiplying educational needs of the people as a whole.

If we go back sixty years, we find that reading, spelling, writing and arithmetic were the only things of a purely intellectual character that were then taught in all of the common, or public schools. Grammar and geography were not fully recognised. How is it to-day? In the larger part of these schools but little or nothing more is now taught, all outcries to the contrary notwithstanding.

High schools we do not regard in this connection as common schools; for though they are public, though they are free, yet so slight a percentage of scholars attend them that they can hardly be called common.

But even if we count the high schools, we cannot count them as clear gain, for it is probable that the proportion of American youth who receive a good secondary education now, is not greater than it was two generations ago.

The public education is better, absolutely, than it was fifty or sixty years ago, but much worse, relatively, if we consider the re-

quirements of the varied occupations to which the boys and girls leaving school must devote themselves. This is the truth of the matter. Examine the course of study in these public schools, country or city, which are really common, you find the difference between now and the past is, with slight exception, a difference in the quantity, and not in the character of what is taught. Now it is *more* reading, *more* spelling, *more* arithmetic, *more* geography, *more* grammar, and thus the increased time devoted to school life is consumed.

The studies give no intimation that the boys and girls are expected to do anything after they leave school. There is no industrial element. Good, say those who think it is the business of the public schools to "make men, not workmen," as they phrase it, forgetting that to make a good workman is to make a man, not to spoil one.

We venture to say that, when the foundations of the public school system were laid in this country, if the conditions of life had been such as they are now, the legislators of that day would have made the course of instruction much broader than they did; they would have put into it a marked industrial element in the form of science and art, theoretical and applied. Such an element was not then needed; and because it was not then needed, the conservative thinks it cannot possibly be needed to-day.

Sixty years ago the agricultural John Smith stood in no particular need of chemistry, or botany, for example, as none of his neighbours had such knowledge, and his only competitors were these neighbours. By following the traditional practice of "rule of thumb," he was enabled to hold his own in the community. This is all changed now, and in the cultivation of the soil, brain counts for more than brawn.

Sixty years ago, St. Crispin, like the schoolmaster, boarded around. He went from house to house making shoes and boots for the inmates. He had little need to trouble himself about the beauty of his work, but there must be no lack of durability. Some thirty years ago we began to hear of shoe and boot factories; the itinerant workman gradually disappeared; and taste as well as durability is now demanded by the consumer of leather products.

Sixty years ago almost everybody clothed himself in homespun. Then there were domestic spinning-wheels, looms, and dyeing-pots in the land. The textile products were not of the most artistic kind; but they would keep one warm when enough could be had.

There has been a *revolution* here in taste, and in processes of manufacture. If any Rip Van Winkle doubts it, let him go to the Centennial Exposition and study the subject, and learn that quality now counts for more than quantity in textile fabrics.

Sixty years ago there was almost no American iron-worker besides the cross-roads and village blacksmiths, who could shoe a horse or mend a plough—with here and there a rude foundry. Many of these solitary forges have now expanded into immense establishments, each giving employment to hundreds in the manufacture of objects that demand a knowledge of chemistry, geometry, and art.

Sixty years ago the carpenter built houses, very few or none of which anybody is now anxious to preserve, since they lack both comfort and beauty. Here and there are seen indications of better architectural things to come. We believe the future homes of the working people of America are to be vastly better than anything of the kind the world has yet seen. We know what the homes of many of the rich have already become. The clumsy workman of the past, without taste, without a knowledge of drawing, cannot meet the requirements of such building construction.

Sixty years ago the ship-building industry was as rude as any other. Science and art have revolutionized that. Not long ago one of the most successful ship-builders of Bath, Me., said: "Once we built vessels without the aid of the draughtsman. Relying upon the eye alone, we put up the ends of the vessel, and then filled in between as best we could. A few years before the Crimean War, a graduate of West Point came to Bath, and taught us how to draught vessels. We have kept that art alive among us, and for years every part of a vessel has been made from a drawing. To draughting was largely due the fine quality of our ships, which make the name of Bath so well known in almost every port of the world." Not less, but greater knowledge of science and art is every day demanded of those engaged in ship-building.

If to the few industries already named we add pottery, plough and waggon-making, tanning, brick-making, and grist-grinding, we shall have nearly catalogued the industries of sixty years ago. Not only were they few, but exceedingly rude. The founders of the common school system did not need to take them into consideration. Now they are almost beyond numbers, while they have so changed in character, and competition has become so intense, that they cannot be successfully prosecuted without the aid of science and art. Technically educated heads to direct, and techni-

cally educated hands to execute, are now both required. Hence, popular education needs now to be characterized by industrial features, sufficient to give, at least, clear intimations of what the boys and girls are to do after they quit school.—*N. E. Journal of Education.*

4. THE UTILIZATION OF SOLAR FORCE.

A great deal of attention has of late years been devoted by French Scientists to the perfection of devices for utilizing solar force for economic purposes. It is a well accepted opinion that the most wonderful effects might be produced, if a means could be invented of employing the enormous power contained in the sun's rays, by the concentration of their energy upon a sufficiently large scale. The most careful calculations, which have been made to determine the amount of this power which our earth receives, show that the total quantity emanating from the sun and expended upon every acre of the earth's surface, or in the atmosphere above it, is equal to that represented by the continuous labour of one thousand horses. This force is partly employed in evaporating water, and producing atmospheric changes; it is partly absorbed by the organs of vegetation, and stored in the tissue of plants, and a part remains as heat in the surface of the ground to be radiated again into space when the night comes or the season changes. But although many experiments have been tried, no practical method has yet been devised for intercepting and utilizing this force at once on its arrival by applying it to mechanical purposes. Many scientific men, however, and especially the naval engineer, Ericsson, believe that this will some day be done, and that we shall cease to be dependent, as now, on the stored force received from the sun in former ages. Experiments have been made with a view to ascertain the practicability of so gathering and concentrating the solar radiance as to make it applicable to the purpose of driving machinery. Such concentration is necessary; for, though a force equal to that of a thousand horses is received within the area of an acre, that which would be included in any small area, like that occupied by the fixtures of a steam engine, would be too small to produce any mechanical effect. A few years ago a French mechanic succeeded by the use of reflectors in so collecting the sun's rays as to drive a small hot air engine by the heat derived from them. An American savant long ago demonstrated that the beams which fall on the roofs of houses in Philadelphia alone would suffice, if applied to heating engine boilers, to set in motion five thousand locomotives of 20-horse power each. A Frenchman, M. Mouchot has gone a few steps further towards solving the problem. He has already constructed and set up at Tours a new solar boiling machine, the uses of which were described the other day to the Paris Academy of Sciences. It consists of a brass cylinder, or, in French phraseology, an inverted skylight, measuring eight feet in diameter at its upper end, and three feet at the lower end, the distance between the top of it and the bottom being rather more than 2 feet. The convex sides of this gigantic kettle drum are plated so as to shine most brilliantly, and it is arranged so as to catch the full rays of the sun directly within its circumference. From the shining sides of the vessel they are, of course, reflected towards its centre, where there is placed upright a smaller brass cylinder filled with water, and protected by a bell-shaped glass dome, which allows the heat to enter, but not to go out again. With this machine there was obtained one hot day last July, a supply of more than thirty gallons of steam a minute, having a pressure of $\frac{1}{2}$ horse-power. Another use has been found, too, for the new heating agent. A saucepan can be put in the place of the smaller cylinder, and in a few minutes soup was obtained, free from all chance of smokiness and all taste of wood or coal fire. And if a cylinder of soup, why not other savoury messes? In the present overpowering heat the suggestion is full of interest. If we could but utilize a portion of the enormous surplus energy coming down from the meridian sun for culinary uses, how much more conducive to household comfort as well as economy in fuel. A great social question which at present vexes many would need no further solution.—*London Free Press.*

5. COMPARATIVE SIZE OF COUNTRIES.

Greece is about the size of Vermont.
Palestine is about one-fourth the size of New York.
Hindustan is more than a hundred times as large as Palestine.
The Great Desert of Africa has nearly the present dimensions of the United States.
The Red Sea would reach from Washington to Colorado, and it is three times as wide as Lake Ontario.
The English Channel is nearly as large as Lake Superior.
The Mediterranean, if placed across North America, would make sea navigation from San Diego to Baltimore.

The Caspian Sea would stretch from New York to St. Augustine, and is as wide as from New York to Rochester.

Great Britain is about two-thirds the size of Hindostan; one-twelfth of China, and one-twenty-fifth of the United States.

The Gulf of Mexico is about ten times the size of Lake Superior, and about as large as the Sea of Kamschatka, Bay of Bengal, China Sea, Okhotsk or Japan Sea; Lake Ontario would go in each of them more than fifty times.

The following bodies of water are about the same size: German Ocean, Black Sea, Yellow Sea; Hudson Bay is rather larger. The Baltic, Adriatic, Persian Gulf, and Ægean Sea, half as large, and somewhat larger than Lake Superior.

6. A BATCH OF WEATHER SIGNS.

In response to a circular sent to all the station observers by the chief signal officer, asking for the signs preceding storms, signal service observer Dumont has recently sent to Washington a report for his locality, based upon his own observations and the weather notes which Major Ingersoll had kept for several years, and foreman Allin's record. After detailing the action of the instruments before storms, the reporter gives the weather signs by which the approach of a storm is heralded, and these, by the way, are considered more reliable than the instrumental signs. Old weather prophets will be interested in comparing these rules with the maxims which they have drawn from their own observations. We append the signs:

1. As a rule, if the wind touches north-east or east for two or three days, it is a sure indication of rain.
2. Dense smoke and haze in early morning portend falling weather.
3. Summer showers of light character often follow two or three days of smoke and haze.
4. Fog, frost, and dew precede rain from twenty-four to forty-eight hours, except fog at close of a storm.
5. Wind veering from north or west to south and south-east, precedes falling weather.
6. Haloes, lunar and solar, also fairly defined and brilliant auroras, precede rain twenty-four to sixty hours.
7. Barometer rising or falling considerably away from its mean, forebodes falling weather, subject to modifying influences from the neighbouring ranges of mountains or hills.

7. HOW TO MAKE ENTOMOLOGISTS.

It is well known that in agricultural districts too little attention is paid to the thorough knowledge of the structure, habits and transformations of insects. Not until the potato beetle had committed vast depredations could the country be aroused to a sense of its mischievous power. In every garden and on every farm are numberless enemies to destroy the crops we have worked hard for and hoped to reap. Following their tracks are parasites that live on those same insects and help to save one's fruit or grain, flowers or root crops. How shall we, who have so many cares, rid ourselves of the pests and encourage the useful scavengers? The question is one of importance, and my answer to those interested is, engage the children in the matter, and give them credit for any discovery they may make in their researches. In every family are surely some members who best know the use of their eyes, and who have an inherent taste for natural history. Offer your children a prize for the best collection they may make during a summer, and you will be surprised to see the zest with which they will work.

There is nothing better than empty cigar boxes, a few small pieces of cork and a package of pins to make a boy's heart glad if he is inclined to catch and classify the beautiful butterflies that flit in every sunny garden. An old broom handle and a yard of mosquito netting are all that is required for a net; and it is astonishing to see with what alacrity children will run, when once fairly interested, to get "Harris on Insects," to learn the name or destructive nature of each new captive. An outbuilding would not be any the worse were a few well-known chrysalides to take up winter quarters therein. When the moth emerges from its prison children look upon it as one of life's miracles, and learn from mystery a pleasant and instructive lesson. There is nothing that escapes their observation, if early taught to use their eyes in this way, and many things are saved that would be destroyed and unobserved in our busy days if we had no young entomologists.

8. TEACHING KINDNESS TO ANIMALS.

BY M. DE SAILLY.

Wishing to aid, by the humble means in my power, the noble efforts of the societies whose mission is to improve the condition of mankind by protecting animals, I have undertaken, by bringing

my method of teaching before the public, to show the best way of introducing into schools feelings of kindness and justice towards the creatures which God has made subject to us.

I have always tried, in my forty-six years' experience as school-master, to teach children habits of kindness to them. I well know that early impressions are never forgotten, and that a child who is taught humanity to animals will, in later years, learn to love his fellow-men. I have, therefore, taken pains to develop the affections of the children under my care, and to sow the fruitful seeds of kindness, gentleness and justice towards domestic animals, which are, and always will be, the farmer's chief wealth, and also towards others, which, although in a wild state, are no less useful in agriculture, though ignorantly treated as enemies. In this last category are such as the hedgehog, the shrew-mouse, the bat, the toad, the frog and the lizard, all of them great destroyers of noxious insects—the mole, which carries on a continual war with the larvæ of beetles and caterpillars, and which should be allowed to live in peace, if not in gardens, at least in meadows, where the light and fertilizing soil of the hillocks that it raises, so far from being injurious to the production of grass, in reality favours its growth in a remarkable manner, provided care is taken to turn over freshly-raised earth with a spade—the nocturnal birds of prey, for which agriculture cannot be too thankful, which are ten times better than the best cats, for, without stealing the roast or the cheese, they wage a bitter war against rats and mice, and destroy, in the fields, great quantities of various kinds of field mice and dormice, which, without these nocturnal hunters, would become an intolerable scourge—and lastly there are the small birds, those indispensable auxiliaries, which hold a first rank for the services they render; those innocent and charming little creatures, which are the best guardians of our gardens, our orchards and our fields, by their incessant and fierce warfare with the innumerable legions of destructive insects which, for the most part, birds alone find out and destroy.

I have long been convinced that kindness to animals is productive of great results, and that it is not only the most powerful cause of material prosperity, but also the beginning of moral perfection. I therefore began my work in 1851, and at the same time introduced agriculture into my school; for I saw the close connection between the doctrine of kindness to animals and the important science of agriculture, since there can be no profitable farming unless animals are well kept, well fed, and well treated. And besides, how can children better learn the pleasures of country life than by understanding the importance of agriculture, the methods in use in their own country, and the profit which may be derived from intelligent farming and kind treatment of animals? Do they not become attached to country life? Do they not feel kindly towards all dumb creatures? Do they not receive ideas of order and domestic economy? Do they not love Mother Earth, who pays us so freely and so generously for our work? And does not this love tend to check the growing evil of emigration from the country to the city?

My method of teaching kindness to animals has the advantage of in no way interfering with the regular routine of my school. Two days in the week all our lessons are conducted with reference to this subject. For instance, in the reading class, I choose a book upon animals, and always find time for useful instruction and good advice. My "copies" for writing are facts in natural history, and impress upon the pupils ideas of justice and kindness towards useful animals.

In written exercises in spelling and composition, I teach the good care which should be taken of domestic animals, and the kindness which should be shown them. I prove that, by not overworking them, and by keeping them in clean and roomy stables, feeding them well, and treating them kindly and gently, a greater profit and larger crops may be obtained than by abusing them. I also speak, in this connection, of certain small animals which, although in a wild state, are very useful to farmers.

In arithmetic, I give examples in domestic and rural economy, and thus show the children, in exact figures, the amount which may be made by farming when domestic animals are kindly treated.

Besides all this, we have a practical conversation on two afternoons in the week, when I often explain the law against cruelty to animals.

The results of my instruction have been, and are, exceedingly satisfactory. My ideas have deeply impressed my pupils, and have exercised the best influence upon their lives and characters. Ever since I have introduced the subject into my school I have found the children less disorderly, but instead, more gentle and affectionate towards each other. They feel more and more kindly towards animals, and have entirely given up the cruel practice of robbing nests and killing small birds. They are touched by the suffering and misery of animals, and the pain which they feel when

they see them cruelly used has been the means of exciting other persons to pity and compassion.

My lessons reach adults through the example and advice of the children, and also by the following method. My pupils have a book containing "Talks about Useful Animals." By my advice, the book is taken home, and is read with interest in the winter evenings, giving rise to the best effects. In my evening class I also teach adults principles of kindness, in the same manner as in my day-school, and with the same success.

The best proof of the good effects of my teaching is the constitution of a little society formed by my pupils, who have pledged themselves to put in practice the principles which they have learned, and to spread them abroad.

I close this letter with the hope that principles of kindness and compassion to animals will soon be taught in every school. *Our Dumb Animals.*

9. SCHOOLS OF ART.

Lord Beaconsfield made a speech lately at the Royal Academy banquet, and in the course of his remarks he touched upon several institutions, besides the pursuits and influence of the Academy, as tending to cultivate the tastes of the English people, and contribute to their prosperity. He seems to anticipate a high position for the English School of Painting, and from the evidence it affords of independence and originality, the promise of an honourable immortality is encouraging. He compares this school of English birth and growth with several of the Continental, and shows that the mannerism peculiar to each is not found in the English, but instead of a slavish imitation of the leading characteristics of the founders, as seen in those of Venice, Bologna and Rome, the English artist strikes out boldly on his account, and while he cultivates his taste, cultivates powers of invention also. This is pretty much a national trait of character carried into the domain of art, and shows its effects there as it does in many of the other pursuits in which the people of England are engaged. Mr. Disraeli admits with proper regret that he is not an artist; but from what we know of him in his writings, rather than from his speech, it is plain he has seen much of the best works of art, studied their various excellencies, their points of coincidence and divergence, and seems quite capable of judging of and appreciating their respective beauties. It is something to know from such a man that the English artist occupies a very respectable position in the field of European art. He says, in his speech at this banquet, that—"Any one who has travelled, and every one in this room probably has travelled, must have been moved with pride in foreign galleries, when he has found that some of the chief beauties of these galleries were the productions of the Royal Academicians who have either left us or are still living among us." This is no mean tribute to English art; and if some of the finest specimens in foreign galleries are the production of English genius, then the common belief that high art is not to be looked upon as attainable by the English student is an unfounded one. But the most interesting part in the remarks of the English Prime Minister is that in which he alludes to schools of a much humbler kind than that of the Royal Academy. He gives the Government of the country, past and present, credit for having established schools of art in various parts of Great Britain. These humbler institutions, while not challenging public admiration by their display in a national gallery, have contributed in no mean degree to the success of English manufactures. There are now, Mr. Disraeli tells us, 140 schools of art in England, and their pupils number nearer to 30,000 than 20,000, and he very justly asserts that it is impossible to calculate what has been the effect of these schools upon the public taste of the country. It is certain that such a number of students, though many of them may have made no very great proficiency in the studies pursued in such institutions, must do much in improving the national taste and in bringing this improved taste to bear upon the manufactures of the country in every branch, and the Premier is quite justified in claiming credit to the Government for what it has done in this respect. Schools of art and design were at one time much more common in some parts of the Continent than in England, and their effect upon the taste and beauty displayed in many varieties of manufacture was quite visible, and told upon the interests of England. The large and rapid strides lately made in this direction have changed these relations, and placed the British products at less disadvantage as respects beauty of design and finish than formerly. But while we take pleasure in these æsthetic improvements in the Fatherland, what has Canada done in the same field? Where are the agencies which are to create and cultivate the element of taste, as Canadian society improves in material wealth and intelligence? That native talent is not wanting is the opinion of those best qualified to judge, and who take pleasure in attending periodically at those exhibitions

designed to call forth and reward Canadian talent in the various fields in which it is found. But while these exhibitions do something in bringing the different specimens of art before the country, in inspiring a spirit of emulation among our amateurs, enabling each to improve in the light of good-natured, if not very skilful, criticism, what has been done of an organized kind to draw forth the talent of the country, and cultivate this talent to at least such a degree as would make it useful and profitable? Some little was done under the care of Dr. Ryerson; after long and persevering efforts, some imitations in plaster of ancient and modern statuary, and some copies of pictures, many of which are said to be pretty well executed, have been collected. But how few have an opportunity of seeing these, and how confined their influence for good even at the best? It is true we are too young a country to require much in this department; and too poor, in one respect, to afford the patronage necessary to support art and artists as they ought to be sustained. Still we are aware that large sums are annually invested in productions of this kind; that this sort of expenditure will go on yearly increasing, and it is highly desirable that the little that is done should be of such a character as would improve and cultivate rather than vitiate the taste. The Ontario Government might easily make a worse use of a portion of the surplus than in opening and endowing one or two good schools of art, so that they who wish to devote their time and talent to this pursuit might have the advantage of such instruction as would at least start them on the right road. In future, Ontario will never be without a class of amateur artists; when these shall reach the dignity of professionals it is difficult to say; but there is no difficulty in saying, that while the class is here it would repay the country to improve it.

10. ART EDUCATION.

The House of Commons in England has recently had under discussion the merits and demerits of the Royal Academy and the subject of art education. There comes a time in the life of every nation when the advantage of fostering art and directing its progress becomes evident, and when it is realised that by leaving it uncared for, to grow as best it may, the growth is uncertain and unsteady, and the result a wild flower or a weed. There have been during the civilized ages of the world various sources from which art has derived that nourishment which made its existence possible. In one era it has been the Church, in another the Court, that has administered the fostering aid. In the days when the Church was an ameliorating influence in the midst of rugged and barbaric life it was natural that art should find its first friends in the cloister, and should spread only as lawlessness declined and civilization grew. Every nation has taken its own time to turn aside from harsher things to notice the flower that struggled for life amidst rebellions and conquests and kingdoms overthrown. In centuries gone by, when art in England was to its present development as a child's drawing to a figure by Leighton, it had in Italy already made such progress as to have established itself in the position and with the consideration attaching to it of a living and important interest. The love of art and the desire to possess its treasures spread slowly northward, and it is only within a lifetime that public interest in England has manifested in its popular advancement and culture. The great painters of the Stuarts' time were not Englishmen, though the names of some of them are so intimately associated with English galleries; and others of the Georgian era, Gainsborough, Reynolds, Hogarth, and others whose names are household words, sprung up of themselves and, like Topsy, may be said to have "grewed." But in the time of George III. an attempt was made to do something for the promotion of art by means of an art organization, and with the assistance of that monarch the present Royal Academy was founded. It has answered the purpose indifferently well. Of itself it has not done much, by reason that it became of commercial value, and has since been kept, as far as possible, a close borough by those who could force their way into it. But it drew public attention to art, it made patrons for art, it excited emulation among artists, and amongst those who desired to buy the works of artists who could make for themselves a reputation, it begat a love for art in its twin forms, painting and sculpture, and it drew so much interest upon the subject that rivals for public favour appeared, and the popular demand for investigation and amendment of the first institution was heard on several occasions in the House of Commons. Such institutions, as they grow old and prosperous, are apt to fall behind the requirements of the time, and the present moment finds a fitting champion of development in that energetic reformer, Sir Charles Dilke. It is not only in painting and sculpture that England during the past generation has been moving with slow steps to perfect her art. In music the fostering institution has been rather more or direct tuition, and some whose reputation as musicians is

world-wide, owe much of their success to the aid they have derived from its timely encouragement.

It is time that we looked around in Canada to see what prospect exists of our taking our proper place in art, as we do in commerce and manufacture. We have not to live through centuries of darkness and barbarism, as had the European nations. England has lived through her barbaric times not merely for herself, but for all those communities sprung from her people. Her experience is ours; we know, or should know, as much—no more, no less—as she knows; and when we find the question in art recurring in her Parliaments, we may ask ourselves whether it be not time to cast our thoughts in that direction ourselves. We have in Ontario a "Society of Artists," which, though established in 1872, is beginning to do good work. It is as yet entirely a private society, and having had to establish itself by the merit of its works, it is in a more healthy condition than it would probably have attained had it at first depended upon Government aid. The Society has held an annual exhibition, sometimes in one building, sometimes in another, and gradually public attention has been drawn to the institution. Its object is to encourage and foster original art in Canada, and membership is open to all who may follow any of the various branches of delineatory art as a profession. The Ontario Government have this year granted the Society \$1,000, which has been expended by them in fitting an Art Gallery in the new building now in course of erection on King street, a few doors west of Yonge. The Gallery is sixty by thirty feet. Adjoining it are rooms to be let as studios, and in the main gallery will be the room for the School of Art in connection with the Society. Any person, on paying certain moderate fees, can here study drawing under the direction of the artists of the Society, who, in return for the assistance they have received, purpose to give their services gratuitously. The Society of Arts' building is rapidly approaching completion, and this year the Society will hold their next exhibition in their new gallery. In connection with this exhibition is an Art Union, the prizes of which, instead of being chromos and prints, are original sketches by Canadian artists. This Society is the nucleus required in Canada. It starts as did the Royal Academy in England, and there is no reason why it should not journey, if not on the same plane, at least in the same direction. Much, however, will depend upon the artists themselves. Other things being equal, their work will be preferred to that of painters of scenes less familiar to the people of the country. There is abundant scope for an artist in choice of subject, and his principal drawback is the shortness of the season. This should affect quantity rather than quality. If the work sent to the Society's gallery is good—and it should be the best the artist can produce—the public will quickly afford that patronage for which art in its early youth had to seek from the Church and the Throne. The Society has commenced well, and is doing a good work; it is probable that with occasional and judicious assistance, when that may be necessary to further the Society's efforts in the public service—such, for example, as the development of their School of Art—a thriving and, in its own sphere, admirable institution may be established in Canada. We think, however, that Canadian scenery, the natural existence of which is so quickly passing away, and Canadian figures are yet to create a market for themselves if artists will give such study and painstaking as will produce really good work. Canada has shown that in some manufactures she does not require a lifetime to push into the front rank: let the same spirit actuate her in art.—*Globe*.

VII. Books Received.

From BELFORD BROTHERS, Toronto:—

The Gold Thread. By the late Norman Macleod, D. D. A beautifully illustrated Juvenile.

The Old Lieutenant and His Son. By the late Norman Macleod, D. D. Reprinted from *Good Words*.

The Starling. By the late Norman Macleod, D. D. Reprinted from *Good Words*.

Wee Davie. By Norman Macleod, D. D.

St. Elmo. A Novel. By Augusta J. Evans Wilson.

Their Wedding Journey. By W. D. Howells.

Helen's Babies. With some account of their days; innocent, crafty, angelic, impish, witching and repulsive. By their latest victim.

The Adventures of Tom Sawyer. By Mark Twain.

From WILLING & WILLIAMSON, Toronto:—

Lectures on the Study of Words. By R. C. Trench, D. D., Archbishop of Dublin. (London: Macmillan & Co.)

From COPP, CLARK & Co., Toronto:—

History of Canada, for the use of Schools and General Readers. By Wm. H. Withrow, M.A.

From ADAM, STEVENSON & Co., Toronto:—

The First Book of the Odes of Horace, with notes, critical and explanatory, and references to the Grammar of Dr. A. Harkness. Edited by Samuel Wood, M.A.

From J. B. MAGURN, Toronto:—

Best Thoughts and Discourses of D. L. Moody. By Abbie Clemens Morrow.

From HARPER BROTHERS, New York; HART & RAWLINSON, Toronto:—

The Rhyme of the Ancient Mariner. By Samuel Taylor Coleridge. Illustrated by Gustave Doré. This volume is a large folio, issued in sumptuous style by the publishers.

Mediæval and Modern Saints and Miracles. Not ab uno e Societate Jesu.

Daniel Deronda. Vol. II. By George Eliot.

The Laurel Bush. An old fashioned Love Story. By Miss Mulock, the Author of "John Halifax, Gentleman."

A Long Time Ago. A Story. By Meta Orred.

From LOVELL, ADAM, WESSON & Co., New York:—

The splendid advantages of being a Woman, and other Erratic Essays. By Charles J. Dunphie.

Ye Outside Fools! Glimpses inside the London Stock Exchange. By Erastus Pints, Broker.

From A. S. BARNES & Co., New York:—

The History of Liberty. A paper read before the New York Historical Society. By John F. Aiken. With selected notes.

From RELIGIOUS TRACT SOCIETY, London:—

A Universal Geography, in four parts: Historical, Mathematical, Physical and Political. By the Rev. Thomas Milner, M.A. Revised and brought down to the present time, by Keith Johnston, F.R.G.S.

Natural History Prints. With letter press descriptions.

VIII. Departmental Notices.

1. THE JOURNAL OF EDUCATION FOR ONTARIO.

It is proposed that *The Journal* be continued as a publication for the following objects:—

1. Departmental notices and proceedings.
2. Regulations of the Education Department and Orders in Council respecting educational matters.
3. Explanatory papers for the information of Inspectors, Masters and Teachers.
4. Legal decisions on educational points.
5. Proceedings of Teachers' Institutes, Associations and Conventions.
6. Matters connected with local administration.
7. Communications (See Notice).
8. Extracts from periodicals, &c., upon educational subjects.
9. Acknowledgement of books.
10. Advertisements on educational subjects will be inserted in *The Journal*.

ADAM CROOKS,
Minister of Education.

EDUCATION DEPARTMENT,
Toronto, 15th March, 1876.

2. CENTRAL COMMITTEE OF EXAMINERS.

The Chairman of the Central Committee of Examiners desires that an intimation may be given in the *Journal*, that communications or certificates, examinations and other matters relating to the work of the Committee, should be addressed to the Education Office, and not to individual members of the Committee, as the Committee does not desire to receive any letters except such as may be referred to it by the Department.

3. COMMUNICATIONS TO THE JOURNAL.

While communications on educational subjects of general interest are invited, they must be considered as expressing the views of the writer. Political discussions are to be avoided. The essentials of each communication should be conciseness, and a sub-

ject-matter relating to school management, discipline, progress, teaching and other questions of administration.

Inspectors, Trustees and Teachers, as well as all others interested in education, are invited to avail themselves of *The Journal* for this purpose.

4. STATUTE LABOUR BY TEACHERS.

Teachers frequently write to the Department, remonstrating against their being required to perform Statute Labour, or to pay any equivalent for it. As the obligation arises under the Assessment, and not under the School Law, the Department has no jurisdiction in the matter, and cannot therefore interfere in it.

5. NORMAL, PUBLIC AND HIGH SCHOOL EXAMINATION PAPERS.

The sets of Examination Papers used in the Normal School during the 20th, 21st, 22nd, 23rd and 24th sessions can be sent free of postage on receipt of 30 cents each. Those of the 25th, 26th, 27th, 28th, 31st, 33rd, 38th, 39th, 40th, 41st, 42nd, and 44th sessions, at 40 cents each, and those of the 45th, 47th, 48th, 49th, 50th, 51st and 54th sessions, at 50 cents each.

The entire sets of Examination Papers for First, Second and Third Class Teachers for July, 1873, December, 1873, or July, 1875 or July 1876, neatly stitched, can be sent free of postage on receipt of 55 cents per set. Those used at the County Examination for Second and Third Class Teachers for July, 1871, July, 1872, or December, 1873, can be sent, free of postage, on receipt of 50 cents per set.

The High School Entrance Examination Papers for the following years can be supplied, free of postage, at 15 cents per set:—Autumn 1873, January, 1874, June, 1874, December, 1874, June, 1875, December, 1875, or June 1876; also the Intermediate Examination Papers for June 1876.

IX. Advertisements.

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See Advertisement in the May number of this Journal.

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