

CHATHAM. The semi-annual convention of the Chatham District Teachers' Association will be held on Thursday and Friday, the 13th and 14th inst., in the Central School, Chatham. Programme, *Thursday*—10 to 10.30 a.m., Routine business, 10.30 to 11.15 a.m., Mental Arithmetic, illustrative teaching with a class of children, Mr. E. Best, 11.15 to 12 noon, "How to Strengthen the Power of Observation, as a means of teaching Orthography," W. M. Nichols, B.A., P.S.I., 1.30 to 2.15 p.m., "How to make Grammar Attractive," Mr. W. H. Shaw, Vice-President, 2.15 to 2.30 p.m., Receiving questions for Question Drawer, 2.30 to 3.30 p.m., "Development of Character in the School-room," Rev. J. R. Battisby, 3.30 to 4.15 p.m., Report of Committee on School Diplomas, *Friday* 9 to 9.45 a.m., President's Report of Ontario Teachers' Convention, 9.45 to 10.30 a.m., Geography, illustrative teaching with a class of children, Mr. S. Knight, 10.30 to 11 a.m., Registration of members, Secretary and Treasurer, 11 to 12 noon, Lecture on Elocution, Miss Lewis, Elocutionist, Toronto, 1.30 to 2.30 p.m., "On the Principles and Uses of Models and Diagrams in School," W. E. Hamilton, B.A., T.C., D., 2.30 to 3 p.m., Answers to Questions in the Question Drawer, 3 to 4 p.m., "Facts and Dates of English History (Memoria Technica), J. Donovan, Esq. A literary and musical entertainment will be given on Friday evening, in the Temperance Hall, Seane's Block. Readings by Miss Lewis, Teacher of Elocution, Toronto. W. H. Coles, Esq., President, in the chair.

WEST LAMBTON. The next regular meeting of the West Lambton Teachers' Association will be held at Petrolia, on Thursday and Friday, the 13th and 14th inst. Programme, *Thursday* 9.30 to 10, Business meeting, 10 to 11, Arithmetic, Decimals, Hugh Beaton, 11 to 12, Composition, Miss Langton, 2 to 3, Reading, Second Class, R. McWhorter, 3 to 4, "The Judicial Functions of the Teacher," G. W. Ross, 4 to 5, "How may our Association be made more efficient," James McLurg, *Friday* 9 to 10, Canadian History, W. S. Howell, 10 to 11, Hygiene in Schools, Wm. Sinclair, B.A., 11 to 12, Query Drawer, Messrs. Hunter, Wark and McLurg, 2 to 3, History, Intermediate, J. P. Balfour, 3 to 4, Dictation and Spelling, J. B. Wynn, G. W. Ross, M.P., will deliver a lecture on Thursday evening. Each teacher must come prepared to discuss the subject marked in programme sent him. All questions for Query Drawer to be handed in during the first day. John Brebner, President; John Johnstone, Secretary.

WEST MIDDLESEX. The next regular meeting of the West Middlesex Teachers' Association will be held in the basement of the Presbyterian Church, in the Town of Strathroy, on Thursday and Friday, the 13th and 14th inst. Programme, *Thursday*—1.30 to 2, President's Address, Mr. A. L. Leitch, 2 to 3, Canadian History, Mr. R. McLean, 3 to 3.30, Class Movements and Manners, Mr. M. Swartout, 3.30 to 4, Abbreviations in Grammar, Mr. H. D. Johnson; 4 to 5, Writing, First and Second Classes, Mr. L. Welch. Evening Session, 7.30 to 10, A debate of the subject: "Resolved, That there should be free instruction for those passing entrance to the High Schools." Messrs. Wood and Dunsmore affirm; Messrs. Johnson and Leitch, deny. Each speech will be followed by music or recitation. *Friday* 9 to 9.30, Report on delegate to Provincial Association, 9.30 to 10, How to teach the Simple Rules of Arithmetic, Mr. J. S. Carson, 10 to 10.30, A paper on the Relation of Teachers to their Profession, Rev. J. M. Clarke, 11 to 11.30, Report of Committee on Promotion, Mr. A. B. Gilbert; 1 to 2, Grammar, Third Class, Mr. A. Toal, 2 to 3, Structure of the British Parliament, Mr. A. Toal; 3 to 4, General business. The roll will be called at the opening and close of each session. A. L. Leitch, President, A. B. Gilbert, Secretary.

WEST BRUCE. The next meeting of the West Bruce Teachers' Association will be held in the Central School, Kincardine, on Friday and Saturday, the 14th and 15th inst. The following is the programme. President's address (time 15 minutes); Readings—Misses M. Morrison, R. J. Millar, Tina, Murray and Jessie McLean, Messrs. Freer and Alexander (5 minutes each); Essays—Miss E. Ross, Messrs. J. Glass, D. Thompson, W. J. Huston, Thos. Smith and S. Marshall (15 minutes each); Case, A. A. McKee and T. C. Graham (15 minutes each); Agricultural Education, T. Froule (20 minutes), Infinitives and Participles, H. B. McKay and B. Freer (15 minutes each), Short Methods in Arithmetic, A. H. Smith (30 minutes); How to Secure Regular Attendance, a discussion, led by Neil A. McKinnon (40 minutes); Vulgar Fractions, R. D. Hall and Ewen McKenzie (20 minutes each); Canadian History, R. Johnstone and D. Ross (20 minutes each), Geography, to end of Third Book work, G. W. Ross (40 minutes), Algebra, G. W. Priest and H. McLean (20 minutes each); How to deal with Indolent Pupils, G. W. Ross (40 minutes); School Routine, G. W. Ross (40 minutes); Report of the Delegation to Toronto (15 minutes); Question Drawer, to be answered by a committee (20 minutes). The Library for the Association has been secured, and will be ready for distribution. On Friday evening G. W. Ross, M.P., will deliver a lecture, entitled "Elements of National Power." F. C. Powell, President; Robert Johnstone, Secretary.

DUFFERIN.—The semi-annual meeting of the Dufferin Teachers' Association will be held in the Model School, Orangeville, on Friday and

Saturday, the 14th and 15th inst. Programme—Opening Address, N. Gordon, Esq., P.S.I., Dufferin, Essay on Teaching and Telling, W. J. Allison; Tablet Class, James McClinton; Mathematical Geography, John Tait, Esq., Collingwood Collegiate Institute; Geography to Beginners, Smecon Kelly, "Spell It," D. P. Clapp, Esq., B.A., P.S.I., North Wellington. Arithmetic to Beginners, Miss Lawson; How to Teach English History, John Tait, Esq., Collingwood Collegiate Institute; A Reading, Wm. McKenzie; Analysis and Parsing of "The Deserted Village," as contained in the Fifth Reader, Alex. Steele, Esq., B.A., H. M. Orangeville H. S., Tomc Sol-fa System, J. L. Hughes, Esq., P.S.I., Toronto, Senior Arithmetic, John Tait, Esq., Collingwood Collegiate Institute. Class II, Part I. Reader, Miss C. Fields; Algebra to Beginners, Alex. Steele, Esq., B.A., H. M. Orangeville H. S.; Essay on Elocution, J. T. V. Varcoe; How to Teach Canadian History, J. L. Hughes, Esq., P. S. I., Toronto. Third Class, Reading Lesson, Miss Banks; Drawing, J. L. Hughes, Esq., P. S. I., Toronto. On Friday evening, the 14th inst., J. Laughlin Hughes, Esq., P. S. I., Toronto, will lecture in the Town Hall, on "School-room Humor." F. C. Stewart, Esq., Warden of Dufferin County, has kindly consented to occupy the chair. Doors open at 7.30, Lecture to commence at 8 p.m. N. Gordon, P.S.I., President; F. B. Denton, Secretary.

HALDIMAND.—The semi-annual meeting of the Haldimand Teachers' Association will be held in the Central School, Dunnville, on Friday and Saturday, the 21st and 22nd inst., commencing at 9 o'clock a.m. Programme, *Friday* Reading Minutes of previous meeting; President's Inaugural Address, Miss Dalton, President; The Higher Education of Women, H. E. Kennedy, B.A., Junior Arithmetic, William Ayers; Cleanings, Miss M. J. Davis, School Management, How to Teach the Tablets, G. W. Ross, Esq., M.P.; Literature, its Origin and Benefits, Rev. G. Johnstone. *Saturday* Mistakes in Reading, School Routine, How to deal with Indolent Pupils, G. W. Ross, Esq., M.P.; The English we Use, C. Kemp, B.A.; The Study of Agriculture in Schools, J. A. Murphy, The Relation of Literary Men to Christianity, Rev. J. E. Lancelley. Question Drawer, Answer on School Law, C. Moses, P. S. I.; on Grammar, C. W. Harrison, M.A.; on Discipline, R. G. Cavanagh; Professional Topics. On Friday evening G. W. Ross, Esq., M.P., will deliver his celebrated Lecture, entitled "Intellectual Forces," under the auspices of the Haldimand Teachers' Association. Admission to the Lecture 10 cents. Doors open at half-past Seven. It is hoped that every teacher in the County will be present. A cordial invitation is extended to Trustees and all friends of Education. R. P. Echlin, M.A., President; W. R. Telford, Secretary.

EAST LAMBTON.—The Association met in Forest on Friday and Saturday, the 16th and 17th ult. Mr. Barnes, P. S. Inspector, occupied the chair, and filled it in a very able manner. Mr. A. Macdonald introduced the subject of Canadian History. This led to an animated discussion, the prevailing opinion being that text-books on this subject should be used by the pupils at home, not at school. Mr. D. Mosher showed his method of teaching "First Lessons in Factoring." Mr. White presented an exhaustive report of the proceedings at the Provincial Convention. Mr. D. McAlpine, with the aid of blocks and diagrams, illustrated his method of teaching Reduction. His explanations were clear and concise. G. W. Ross, M.P., conducted a long and most instructive discussion on "Mistakes in Reading." The teachers were thoroughly interested, and cannot fail to teach better as the result of this exercise. On Friday evening Mr. Ross delivered a very thoughtful lecture on "Intellectual Forces." No abstract could do justice to the lecture. On Saturday President Barnes explained fully in detail the method of keeping Registers and making out Annual Reports; and Mr. Ross occupied the remainder of the time in giving practical hints on the method of teaching Reading in Primary Classes.

REVIEWS.

ELEMENTS OF QUATERNION, by A. S. HARDY, PH. D., PROFESSOR OF MATHEMATICS, DARTMOUTH COLLEGE. Ginn, Heath & Co., Boston.—The author of this treatise has shown a thorough mastery of the Quaternion Calculus, and has anticipated and removed many of the difficulties which beset the student of Mathematics, in his endeavor to make use of this elegant and powerful instrument of analytical research. The work possesses more than ordinary merit, and is a credit at once to the author and to the publishers. The explanations are exhaustive, concise and clear, and many examples are given which illustrate admirably the simplicity and brevity of the Quaternion Method. A greater number of examples and problems, with answers and short hints as to their solution, would be appreciated by most students, and especially by those who do not possess the advantages of attendance on lectures, and would we think add to the usefulness of the work. The publishers have sent out the book in a neat form—the paper, type and binding are all that could be desired.