

**ASSOCIATION OF ONTARIO LAND SURVEYORS—  
ANNUAL MEETING, 1895.**

The association held its tenth annual meeting at the Canadian Institute, Toronto, on 26th, 27th and 28th February, 1895, the president, M. J. Butler, presiding.

In addition to the usual routine business, thirteen papers, by members of the association, were read.

Paper by D. D. James, Toronto, on "Indexing Office Information," contained a description of a useful method of classifying in atlas form the notes, plans, etc., relating to the several districts into which the practitioner's territory may, for convenience of reference, be divided.

A paper by C. C. Fairchild, Brantford, gave a graphic description of "Flood Prevention Work at Brantford," and was accompanied by a diagram showing the positions of the various works.

J. F. Whitson, Toronto, read a paper on the "Rainy River District," setting forth in chronological order the explorations and discoveries which have been made in that region from the early days of the Hudson Bay and North-West fur-trading companies up to the present, with the vast resources, mineral and agricultural, of the district concisely represented.

"The Eightieth Meridian," from its intersection with the north shore of Lake Erie to the most northerly point known, was dealt with in a lengthy paper, full of interest, by Willis Chipman, of Toronto. Mr. Chipman divided this line, for the purposes of discussion, into four main sections, each of which was further subdivided, and under the several heads gave a large amount of information as to the climate, products, etc., of the country traversed, and succeeded in arousing the interest of his audience in the possibilities of further discoveries which may be made in the far north.

W. A. Browne, Toronto, read an interesting paper on "The Dawson Route," filling in many blanks in the history of the survey of that great highway and giving reminiscences of the famous Red River Expedition of 1869.

An inexpensive, but effective "Drain Gradient Instrument," contrived by himself, was described in a paper by A. R. Davis, Napanee, who illustrated its working by a model. The advantages which farmers may derive from the use of this contrivance are readily understood by those who know of the amount of labor and expense wasted in improperly laid farm drains throughout the country.

A paper by Otto J. Klotz, of the International Boundary Commission, Ottawa, contained a comparison of the various styles of "Aneroids," with a compilation of the results from their use in Alaskan surveys and elsewhere.

H. K. Wicksteed's paper on "Triangulation Work on Topographical Surveys" described a particular case in which, by the adoption of this method, he had been enabled to reduce the labor and arrive at better results than could have been possible in the ordinary methods of traversing. A diagram of the work will be found of service to surveyors unaccustomed to that class of work.

"Co-efficient of Refraction" was treated of in a paper by Otto J. Klotz, Ottawa, and included the results of careful observations made in photo-topographical surveying in Alaska.

A paper on "The Cradle Theodolite," by J. M. O. Cromwell, Perth, contained a description of that instrument, with comparisons of its merits with those of other instruments past and present.

The subject of "Highway Bridges" was the text of a paper by P. S. Gibson, Willowdale, and embraced descriptions of bridges in town and country, setting forth more particularly the advantages of a system of small timbers properly joined as compared with the more cumbersome, heavy timber style, in point of durability and expense.

H. J. Bowman, Berlin, contributed an interesting and useful paper on "Good Streets," which contained information upon a subdivision of the much discussed topic of "Good Roads."

A paper on "Mining," by J. D. Evans, Trenton, was read as sequel to his former paper on "Mining in the Sudbury District," already well known to readers of the annual report.

Among the visitors during the meeting were W. F. King, D.T.S., Dominion astronomer, Arthur Harvey, president of the Canadian Institute; J. McDougall, engineer for York County, and others.

The annual dinner, which took place on the evening of the 27th, met with such general approval that it may in future be included in the routine business of the yearly programme.

Through the courtesy of the Alumni Society, the members of the association, with their friends, were treated to a most enjoyable evening at the School of Practical Science, on Thursday evening,

28th, the programme combining interesting stereopticon views, with instructive tests of various materials, in addition to the attractions of the mineral collection room.

The meeting of '95 was considered by all in attendance as the most successful yet held.



MAURICE GAVILLER, PRES. ELECT ASSOCN. OF ONT. LAND SURVEYORS.

MAURICE GAVILLER, president elect of the Association of Ontario Land Surveyors, is a graduate of McGill College, Montreal, having passed as a Bachelor of Applied Science in 1863. After practising as a civil engineer for a time, he qualified as a Provincial land surveyor in 1865. Mr. Gaviller is now a member of the board of examiners of the association. He has not only had a varied experience in his profession in Canada, but has travelled extensively throughout the world. He is now engaged in practice of his profession, with offices in Collingwood and Barrie, Ont. Mr. Gaviller is personally held in high esteem among the members of his profession, and at few elections in the history of the association has the choice of president met with a better reception.



WILLIS CHIPMAN, VICE-PRES. ASSOCN. OF ONT. LAND SURVEYORS.

WILLIS CHIPMAN, C.E., was born near Brockville in 1855, his ancestors being among the pioneers of settlement in Eastern Ontario. His great grandfather settled a few miles north of Brockville in 1795. Mr. Chipman, who is an only son of an only son, graduated at McGill College in 1876 as a Bachelor of Applied Science, taking first-class honours in Natural Science. After graduating he was first employed on Toronto waterworks in 1876, and after a short time in Toronto he moved to Napanee, where he was appointed teacher of mathematics in the Napanee High School. He held this position for three years and then went to Montreal, where, in 1880, he was appointed to the staff of the Montreal Harbor Commission. In the latter part of that year, and the following year, he served in Manitoba on the surveys, and passed as land surveyor in the latter year. In December, 1881, he opened an office in Brockville as civil engineer and land surveyor. In 1887 he was appointed town engineer, a position he held up till 1892. While holding this position he also planned the construction of the Goderich waterworks in 1888, and the Barrie waterworks in 1889, which latter works were completed in 1891. From 1882 to 1883 he served on several surveying expeditions in Algoma for the Ontario Government. Since opening his office in Toronto, in 1889, Mr. Chipman has designed or superintended waterworks, sewage works, or hydraulic improvement works for a number of towns in Ontario besides those just mentioned, among others those in Galt, Gananoque, Pembroke,