ENGINEERING SOCIETIES.

Canadian Society of Civil Engineers.—President, Ernest Marceau, Montreal; treasurer, H. Irwin; secretary, C. H. McLeod, rooms 877, Dorchester St., Montreal. Annual meeting will be held in Toronto during the fourth week in January, 1906.

Canadian Mining Institute.—President, George R. Smith, Thetford Mines, Quebec; secretary, H. Mortimer Land, Victoria, B. C.; treasurer, J. Stevenson Brown, Montreal.

Engineers' Society S.P.S.—President, J. P. Charlebois; recording secretary, E. C. Ash; treasurer, B. W. Marrs; corresponding secretary, C. S. Shirriss.

Engineers' Club of Toronto.—President, R. F. Tate; treasurer, W. J. Bowers; secretary, Willis Chipman. Rooms: King St. West, Toronto.

Canadian Railway Club.—President, S. King, Montreal; secretary, James Powell, Montreal; treasurer, S. S. Underwood, Montreal.

Marine Engineers.—Grand President, E. J. Henning, Toronto; grand secretary, Neil J. Morrison, St. John, N. B.

Canadian Association of Stationary Engineers.—President, W. A. Sweet; vice-president, Joseph Ironside, Hamilton; secretary, D. Outhwaite, Toronto; treasurer, A. M. Dixon, Toronto.

Toronto Branch American Institute of Electrical Engineers.—Chairman, H. A. Moore; vice-chairman, R. G. Black; secretary, R. T. McKeen.

Canadian Electrical Association.—President, A. A. Wright; first vice-president, R. G. Black; second vice-president, John Murphy; secretary-treasurer, C. H. Mortimer.

CANADIAN ASSOCIATION STATIONARY ENGINEERS.

Toronto, No. 1.

At the monthly open meeting on Wednesday evening, December 20th, Mr. James Milne, of the Underfeed Stoker Co., Limited, Toronto, gave a very interesting and instructive address, illustrated by black board sketches and mathematical demonstrations, on "Water Required for Condensing Purposes: Cost of Heating by Electricity." Mr. Milne dealt very comprehensively with his subject, dealing with the question of steam and electricity as used for power and heating purposes quite extensively.

The meeting was well attended, and it was manifest from the attention given the speaker that the subject was fully appreciated.

ENGINEERS' CLUB OF TORONTO.

Lecture on "Cobalt."

(Reported by our Special Correspondent, P. W. B.)

On Thursday evening, December 14th, Prof. Willett G. Miller, Provincial Geologist for Ontario, lectured before the Engineers' Club of Toronto on "Cobalt." The discourse was illustrated with lantern slides, showing the geology and configuration of the Temiscaming District, together with interesting pictures of mining scenes and incidents in the newly-opened region.

The discovery of this district as a mining section was chiefly due to the location chosen for a new railroad. Had the Engineers chosen the route first contemplated, the mineral wealth would doubtless have remained undiscovered for years. The district had been "lumbered" a few years before the advent of the railroad, and during the operations a slide was so placed that the logs tore into the decomposed ore at the surface of a large vein. At that time, no thought of its commercial value was entertained. In 1903, however, a railroad construction gang, attracted by the pink color of the cobalt bloom, conceived the idea that the ore bed exposed might be of economic value, and drew the attention of the Bureau of Mines to the interesting find. Prof. Miller —the lecturer—examined several samples and realized the importance of the discovery. A geological survey was made, therefore, and the mining possibilities at once made known to the public. The map (Fig. 2) exhibited by Prof. Miller, indicated clearly the various geological areas. In one respect this district is peculiar, for the strata found in other cobalt regions are missing here, and the ores are found very near the surface.

General Geology.

The geological formations of the district and their distribution are shown on Fig. 1, which is copied from map by Prof. Miller. The formations are named in accordance with the report of the International Committee, which met last year to secure unformity in names on both sides of the boundary, and are given in the legend in the order of age—oldest first.

The Keewatin is an old greenstone. It is most probably composed of surface volcanics, but is so much metamorphosed that its original character is hard to determine. It exhibits the textures characteristic of the Keewatin in the Lake Superior region, ellipsoidal parting, stretching, etc., and is probably properly correlated with it. It is well mineralized with arsenical iron and copper pyrite.

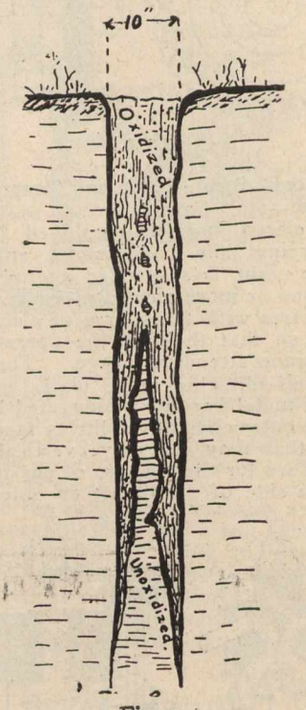

Fig. 1.

The Laurentian granite is intrusive in the Keewatin. It is a very fresh looking pink granite with a coarse texture, appearing to be the same as the coarse granites which are seen to the southwest in the Temagami district.

The Lower Huronian is the oldest sedimentary rock found in the district. It contains pebbles of what appear to be still older sediments, but these older formations are nowhere identified in place as yet. The Lower Huronian is extremely variable in its lower horizons, indicating that the conditions of its deposition were very irregular. It is apparent to one who has travelled over the country at all thoroughly that it was deposited in the irregular depressions of a rugged surface; exactly the condition which would make its lower horizon vary from place to place. We find a coarse conglomerate at the base in one section, and a mile or so away an even grained grey quartzite occupying that position. On the south end of the property of the Nipissing Mining Company (No. 11 on map), and at the Temiscaming Cobalt mine (No. 18), we find exactly the same order of succession. There is a coarse conglomerate at the base grading up into grey quartzite, and then a well banded slate with a second conglomerate above that, and finally, above the second conglomerate, an unknown thickness of fine grained grey or red banded slate. On the Quebec side of Temiscaming, about ten miles to the east, the succession is entirely different.

In the central part of the district only the horizons below the upper slate are found, and show a probable thickness of not much over 300 feet. The upper banded slate occupies the area east and west of the centre, indicating a broad anticlinal structure. The Huronian rocks in the vicinity of the ore deposits are either horizontal or dip at low angles. About six miles north of Haileybury they become steeply inclined, in places being nearly on edge.

The Middle Huronian is a yellowish grey feldspathic quartzite of coarse texture; an arkose. It occurs to the east