

CONDITIONS IN NORTHERN ONTARIO.

The Canadian Northern Railway engineers engaged on construction work in Northern Ontario, have found where the maps had shown them "The Height of Land" nothing in the way of rockwork at all. The Height of Land, it is stated, is not high at all, but is really a low-lying swamp. The big plateau, which is the highest part of Ontario, is well wooded with a fine quality of white pine. The cutting of timber in this country is not a good proposition commercially, for the reason that logs skidded into the rivers north of the Divide, would find their way into James Bay. With the building of the railway this difficulty has been overcome. The Canadian Northern will make possible the marketing of the timber in the big markets of the south.

PERSONAL.

Mr. R. D. Brown has been appointed to the position of city engineer for the municipality of St. Catharines, Ont.

Mr. Hugh. D. Lumsden, formerly chief engineer of the G.T.P. Transcontinental railway, and latterly with the C.P. R., has been appointed to the position of chief engineer of the Toronto Harbor Commission.

Mr. J. O. Meadows, sanitary engineer for the Provincial Board of Health, Province of Quebec, has been appointed chief expert in charge of the new filtration plant of the Montreal Water & Power Company. Mr. Meadows is well known in this province, having been brought on some two years ago by the Board of Health to investigate for them the water supplies of the province generally. Mr. Meadows graduated in Science from the University of Wisconsin in 1906. From 1906 to 1907 he was assistant in the United States Department of Agriculture, co-operating with the Ohio State Board of Health in the examination of filtration plants. From 1907 to 1909 he was employed by the United States Government on the Isthmian Canal Commission in charge of the sanitary control of the water supplies of the Canal Zone.

CLEVELAND ENGINEERING SOCIETY.

Various phases of water purification were discussed at a meeting of the Cleveland Engineering Society on November 14th. Mr. R. Winthrop Pratt gave an illustrated talk on the purification of water by filtration, in which he summarized the average cost, per 1,000,000 gal. daily capacity, of mechanical filters at \$9,000 to \$17,000. The cost of the Cincinnati plant was \$50,000 per 1,000,000 gal. Operating costs run from \$2.50 to \$12.50 per 1,000,000 gal.

Dr. R. G. Perkins spoke briefly on the theory of sterilization by chloride of lime and ozone. He discussed the conditions at Cleveland, and explained that the present water sterilizing plant at Kirtland Street had been installed to avoid an impending typhoid fever epidemic. In his opinion the water supply of the city was periodically threatened with gross pollution, principally from the discharge of the Cuyahoga River. At present 0.8 part per 1,000,000 of available chlorine is being used. Taste is noticeable at the pumping station and at the houses located near it. The chemical is applied to correspond with the operation of the pumps. The question of taste and smell, said Dr. Perkins, was a matter of time and temperature, the degree of taste being proportional to the time elapsing after the application of the chemical. In warm weather taste disappears more rapidly than in cold.

"Purification by Ozone," a paper by Mr. R. M. Leggett, described the Ann Arbor plant, in which three ozonizers are treating the water from a roughing filter. The claim was made that the ozone process was economical with sterilized water, and that the cost at the Ann Arbor plant was \$2.75 per 1,000,000 gal. treated.

Mr. D. D. Vincent read a paper on a patented process for the electrolytic production of aluminum hydrate by passing an electric current between aluminum plates, the water then being filtered through a mechanical filter.

So far it has been found much cheaper to add the sulphate of aluminum than to make aluminum hydrate electrolytically. Filtration is necessary, and there is no value in the electric current as such.

AMERICAN ASSOCIATION FOR ADVANCEMENT OF SCIENCE.

The following information relative to the meetings of Section D of the American Association for the Advancement of Science, to be devoted to highway engineering and held in Washington, D.C., on December 29th and 30th, will be of interest. The papers to be presented on December 29th are:

"History of the Washington Bituminous Concrete Pavements." Captain Martin Brooke, Engineering Commissioner of the District of Columbia, Washington, D.C.

"History of Tar Concrete Pavements in Ontario." W. A. McLean, Provincial Engineer of Highways of Ontario, Canada.

"Surface Treatment of Park Roads." Col. Spencer Cosby, Colonel U.S. Army, in charge of Buildings and Grounds, Washington, D.C.

"Oyster Shell Roads." Maj. Walter W. Crosby, Chief Engineer, State Roads Commission, Baltimore, Md.

"The Chemistry of Modern Highway Engineering." Prevost Hubbard, Chief, Division of Roads and Pavements, The Institute of Industrial Research, Washington, D.C.

"A Review of the Use of Bituminous Materials in the Construction and Maintenance of American Highways During 1911." Arthur H. Blanchard, Professor in Highway Engineering, Columbia University, New York City.

"Organization of the Highway Maintenance Department of the Borough of The Bronx." William H. Connell, Assistant Commissioner of Public Works, Borough of The Bronx, New York City.

"Organization of the Engineering Department of Coleman du Pont Road, Inc." Frank M. Williams, Chief Engineer, Coleman du Pont Road, Delaware.

"Organization of Convict Labor on the Virginia State Highways." P. St. J. Wilson, State Highway Commissioner of Virginia, Richmond, Va.

"Cost of Road Building with Convict Labor." Dr. Joseph H. Pratt, State Geologist of North Carolina, Chapel Hill, N.C.

"Utilization of Motor Truck Train in the Maintenance of Trunk Highways." Logan Waller Page, Director, Office of Public Roads, Washington, D.C.

"Pipe System in Streets." C. E. Bolling, City Engineer of Richmond, Va.

"Street Asphalt Paving Mixtures." H. B. Pullar, Chief Chemist, The American Asphaltum and Rubber Company, Chicago.

"Some Limitations of Distributing Machines." Henry B. Drowne, Instructor in Highway Engineering, Columbia University, New York City.

"Impact Testing Machines for Bituminous Binders." Walter H. Fulweiler, Engineer in the Department of Research, United Gas Improvement Company, Philadelphia.