

inches. This caused considerable inconvenience at international points, and resulted in the laying of a third rail on several portions of the line. In 1872 it was decided to change the gauge of the G.T.R. This was done in three sections, and in such a way as to affect traffic but little.

During the past sixteen years it has been the policy of the system to eliminate steep grades and sharp curvatures. This work was commented upon to some extent by the speaker.

The Grand Trunk Pacific has been linked up from Moncton, N.B., to Prince Rupert, B.C., a distance of about 3,550 miles, with the exception of the Quebec bridge. Branches will extend this total to 5,000 miles. Mr. McNab referred briefly to the permanent nature of construction, to the motive power and rolling stock.

The lantern slides included views of early construction and operation, among which might be mentioned a view of the first train in Canada. This view had been taken in 1836 on the line from La Prairie, Quebec, to St. John's, Que. Others pointed out the characteristic features of earlier and modern types of locomotives. Views of elevators, trestles and bridges, including the Saskatoon, Clover Bar and Battle River bridges were given, together with many views of picturesque scenery along the line.

A hearty vote of thanks was extended to the speaker upon the motion of Mr. Speight, seconded by Mr. Loudon. The attendance at the meeting was in the neighborhood of 150.

CANADIAN SOCIETY OF CIVIL ENGINEERS.

A meeting of the general section of the Society was held in Montreal on February 18th. Mr. R. De L. French read a paper by Mr. A. C. D. Blanchard on the Lethbridge Sewage Disposal Works. The paper, which was illustrated by slides, dealt with the design, construction and maintenance of the plant. An abstract of this paper appeared in *The Canadian Engineer* for January 28th, 1914.

An informal talk, illustrated by lantern slides, was given by Col. L. R. Johnson, the subject being "Heavy Guns Used in the Field."

UNIVERSITY OF MANITOBA ENGINEERING HONOR ROLL.

The Canadian forces at the front or on the way include the following, who were students or graduates of the engineering course in the University of Manitoba: Cameron, F. C., 1912, 2nd Contingent, Engineers, 2nd Field Troop; Mitchell, C. N., 1912, 2nd Contingent, Engineers, 2nd Field Troop; Shanks, G. L., 1912, 2nd Contingent, Engineers, 2nd Field Troop; Taunton, A. J., 1912, 3rd Contingent, 100th Regiment; Urie, H. R., 1913, 1st Contingent, Engineers, 3rd Field Troop; Collins, W. S., 1914, 1st Contingent, Engineers, 3rd Field Troop; Jones, W. H., 1914, 2nd Contingent, Engineers, 2nd Field Troop; Richardson, W. H., 1914, 2nd Contingent, Engineers, 2nd Field Troop; Tait, V., 1914, 1st Contingent, Engineers, 2nd Field Troop; Hicks, E. D., 1916, 2nd Contingent, Princess Patricia Volunteers; Levinson, H., 1917, 2nd Contingent, Engineers, 2nd Field Troop; Mitchel, J. C., 1917, 2nd Contingent, 106th Regiment; Murphy, J. W., 1917, 2nd Contingent, 106th Regiment; Stevenson, R. L., 1917, 1st Contingent, Engineers, 2nd Field Troop; Wootton, F. E., 1917, 2nd Contingent, 13th Field Battery; Leathers, J. F., 1918, 2nd Contingent, 13th Field Battery.

DEGREES FOR MEN IN SERVICE.

Last week a special convocation of the University of Toronto was held for the granting of degrees to a number of its men about to leave for the front. These included the degree of B.A.Sc., granted to the following fourth year men of the Faculty of Applied Science and Engineering: F. D. Austin, Royal Canadian Engineers, now in training at Lansdowne Park, Ottawa; N. H. Daniel, Cycle Corps, now training at Exhibition Grounds, Toronto; W. E. Lockhart, Royal Canadian Engineers, Ottawa; W. B. Redman, Royal Canadian Engineers, Ottawa, and L. B. Tillson, Eaton Battery, Exhibition Grounds, Toronto.

COMING MEETINGS.

ANNUAL CONVENTION SASKATCHEWAN RURAL MUNICIPALITIES' ASSOCIATION.—To be held in Saskatoon, March 10th, 11th, and 12th. Secretary-Treasurer, E. Hingley, Regina.

CANADIAN MINING INSTITUTE.—Seventeenth annual meeting, to be held in Toronto, March 3rd, 4th and 5th. Secretary, H. Mortimer-Lamb, Ritz-Carlton Hotel, Montreal.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Annual meeting to be held in Chicago, March 16th to 18th, 1915. Secretary, E. H. Fritch, 900 South Michigan Avenue, Chicago.

CANADIAN AND INTERNATIONAL GOOD ROADS CONGRESS.—Second Annual Convention, Toronto, March 22 to 26, 1915. Secretary, Geo. A. McNamee, Dominion Good Roads Association, Montreal.

TORONTO ELECTRICAL SHOW.—The second annual exhibition, to be held in the Arena, Toronto, April 12th to 17th. Secretary, Mr. E. M. Wilcox, 62 Temperance Street, Toronto.

AMERICAN WATERWORKS ASSOCIATION.—The 35th annual convention, to be held in Cincinnati, Ohio, May 10th to 14th, 1915. Secretary, J. M. Diven, 47 State Street, Troy, N.Y.

SOCIETY FOR THE PROMOTION OF ENGINEERING EDUCATION.—Annual meeting to be held at the Iowa State College, Ames, Iowa, June 22nd to 25th, 1915. Secretary, F. L. Bishop, University of Pittsburgh, Pittsburgh, Pa.

NEW INCORPORATIONS.

Prince Albert, Sask.—The Harphill Building, Limited, \$25,000.

Regina, Sask.—O. W. Smith Construction and Engineering Co., Limited, \$10,000.

Montreal, Que.—The Crushed Stone Co. Limited, \$20,000. C. E. Vigneault, L. Bergeron, T. Richard.

Lucknow, Ont.—The Sepoy Manufacturing Co., Limited, \$20,000. F. Tait, W. G. Andrew, G. H. Smith.

Orillia, Ont.—The Orillia Hardware Company, Limited, \$40,000. S. L. Mullett, W. B. Wright, D. W. Elder.

Doon, Ont.—The Dominion Fibre Company, Limited, \$40,000. M. J. Huber, H. V. Huber, Viola V. Huber.

Vancouver, B.C.—Vancouver Shingle Mills, Limited, \$10,000. British Columbia Shingle Co., Limited, \$100,000.

Ottawa, Ont.—The Canadian Brown Scientific Tube and Accessories, Limited, \$50,000. J. A. Brennan, D. E. Winter, W. J. Wallace.