

end of each day's work, a blue-print chart was posted on the order board, showing the daily progress, the total number of turnouts laid, the miles of French track repaired, the miles of loops or new track laid, etc.

In 44 consecutive days ending October 12th, 1918, 24.94 miles of main line, 4.9 miles of siding, 44 turnouts and 2 diamond crossings were reconstructed between Hazebrouck and Armentieres stations.

On October 20th, 1918, 2½ miles of French track and one turnout were laid between Perenchies and St. Andre.

The total for 19 consecutive days ending November 1st, 1918, was 16.43 miles of track and 16 turnouts.

The accompanying chart includes the time required for repairing or clearing the wreckage of bridges. Some of these bridges had massive, concrete-filled floors. Obstructions were cut by the oxy-acetylene torch, aided by liberal charges of gun cotton.

Very few supplies could be salvaged locally for this work, as the territory had been evacuated very recently by



LIGHT RAILWAY BUILT BY THE 277TH CONSTRUCTION COMPANY

the enemy, who stripped the country of practically all useful material.

The Nord railway reconstruction was part of the programme carried out under the general direction of Lt.-Col. G. H. Harding, D.S.O., R.E., Railway Construction Engineer No. 3, and Col. David Lyall, D.S.O., R.E., Chief Railway Construction Engineer, G.H.Q.

### NEW SUPPLY FIRM IN TORONTO

ANOTHER machinery supply firm has been organized in Toronto, E. S. Boynton and E. J. Williams having formed a partnership under the trade name of Boynton & Williams, to deal in machinery, mill supplies, contractors' equipment, pipe, valves and fittings, plumbers' supplies, etc. The firm has opened offices in the National Life Bldg., 25 Toronto St.

Mr. Boynton was a pilot in the Royal Naval Air Service from 1915 until September, 1918. For several months he was in a squadron which was engaged in English coast defence, flying both night and day, and was then sent to the Mediterranean where he took part in thirty-one raids over Bulgaria and Turkey, twenty-four of which were accomplished within twenty-six days. Before enlistment, Mr. Boynton was sales manager of the Gidley Boat Co., and for eight years previously had been connected with the Toronto branch of the Canadian Fairbanks-Morse Co.

Mr. Williams has been engaged in steam and hydraulic engineering, both commercially and professionally, for the past twenty years, both in England and Canada. His experience in Canada has been confined to the Gurney Foundry Co., with whom he spent seven years, and the Standard Sanitary Co., two years.

### CANADA'S ROAD-BUILDING ERA\*

BY A. W. CAMPBELL

*Dominion Highways Commissioner*

MANY changes have occurred since I first became affiliated with the Ontario Good Roads Association, 25 years ago. I was appointed to meet many municipal councils, to inspect personally their roads and to offer suggestions for improvements.

Statute labor was chiefly instrumental in building many of the roads at that time. Wonders were performed by its aid. The system was brought into disrepute by certain men who had charge, and who did not care, or who had no interest in the work. In later years, statute labor was greatly improved and partially superseded by voluntary labor on the part of farmers and municipalities.

#### Joint Jurisdiction in Future

I have been in 75% of the townships and in all the counties of Ontario, have attended meetings held in school houses and in any kind of houses, and have met the local men, perhaps only a few in each place but each man a hard and earnest worker for good roads. I have advised them to the best of my ability.

I cannot understand why local municipalities have had to build and maintain at their own expense, so many of the roads that the farmers use to carry their products to town and that the city people use to carry their trade and their pleasure cars into the country.

In the future there should be joint jurisdiction, joint labor and co-operation between urban and rural districts. A tax should be levied on all who benefit by the roads. Until the urban municipalities pay their share of these taxes for rural roads, the 47% of the population of this country who live in the urban centres will continue to impose on the rural district. This contribution should be in the form of provincial and Federal taxation.

I made suggestions along this line 25 years ago and was told by a farmer then, that my hair would be gray before "his" roads would be built. Well, my hair may be getting gray, but I hope to live for another 33 years and come back to your semi-centennial convention and announce that my work is completed.

Road construction methods are simple, but must be followed to the letter to get results. If this be done, the results will mean better roads, and they will repay you greater than any other public works.

Twenty-five years ago I had great ambitions regarding roads, but time and experience have brought my ideas to a more practical and a saner policy. Let us keep our feet on the ground and simply argue and reason how we are going to make better roads. For my part, I do not consider "government," "provincial" or "suburban" roads. I just consider *better roads* and think that the earth road in the back corner of some township, serving the last few farmers, is just as much worthy of its share of improvement as is the high-grade bituminous or concrete road.

#### Highways as Feeders

The waterways and the railways are the main arteries of any country, but without proper feeders, they would sink into oblivion. These feeders are the wagon roads—the main trunk lines—which must in turn be fed by the lesser roads.

Plan wisely, construct skilfully, maintain diligently.

Take your congested districts—the centres of your counties,—build and maintain your first roads there,—perhaps a mile each year, and radiate these roads toward the next nearest town. That town will be doing the same, and eventually you will meet with a finished and permanent road.

Ontario is the home of good roads. The Ontario Good Roads Association was the first of its kind, and the movement is now spreading all over Canada.

\*Informal speech delivered March 7th at the 17th Annual Meeting of the Ontario Good Roads Association.