

of Irrigation Systems," "Irrigation as Applied to Forestry," and kindred subjects were discussed and resolved.

With a delightful steamboat trip down the lake to Penticton, touching at Summerland, Peachland, Naramata and other points, and a monster banquet, tendered by the citizens of the town of Penticton, at the new Incola Hotel, the convention adjourned to meet in August, 1913, in the ambitious city of Lethbridge, Southern Alberta. So keen was the interest shown in future conventions of the association that bidding for the 1914 and 1915 conventions has already commenced. In 1914 it will again meet in British Columbia, and in 1915 in Alberta, thus carrying out the accustomed procedure of the association to hold its conventions alternately in the two provinces.

The following officers were elected for the ensuing year: Hon. President, the Hon. G. A. V. Bulyea, Lieutenant-Governor, Province of Alberta; president, Hon. Duncan Marshall, Minister Agriculture, Alberta; vice-president, W. C. Ricardo, manager Coldstream ranch, Vernon, B.C.; vice-president and chairman, J. S. Dennis, assistant to president C.P.R., Calgary, Alberta.

#### Executive Committee.

West of Mountains.—Thomas Bulman, Kelowna, B.C.; F. K. Fulton, K.C., Kamloops, B.C.; J. A. Mackelvie, Vernon, B.C.; C. W. Dickson, Kelowna, B.C.

East of Mountains.—A. S. Dawson, Calgary, Alta.; W. H. Fairfield, Lethbridge; Wm. Pearce, Calgary, Alta.; Prof. W. J. Elliott, Strathmore, Alta.

Official word has been received from Lethbridge that "The Ambitious City" proposes to make the 1913 convention the most interesting and attractive in the history of the association.

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### APPRENTICES ON THE CANADIAN PACIFIC RAILWAY.

The education of the apprentices on different classes of work is demanding more and more attention from the employer of labor. The railroads have appreciated the necessity of providing such education before other branches of industry. In an article in a recent issue of "Railway and Locomotive Engineering" Mr. E. E. Bailey, the supervisor of apprentices on the western lines of the Canadian Pacific Railway, outlines this company's methods of approaching the question. Mr. Bailey says that considerable attention is paid to careful and systematic education, both practical and theoretical, in the various trades required for the production of the shops at Winnipeg. A well-organized apprentice instruction department, in charge of a supervisor of apprentices under the direction of the superintendent of shops, controls the hundred apprentices employed at Weston, both in their shop training and in their instruction classes. Those learning the machinist trade, about two-thirds of the total number, have also a shop instructor, who is employed to devote his time to showing the boys how to handle their various jobs, and who is responsible for passing them efficiently through the many branches of their trade in due order, scheduled periods for each being allotted. The remainder, including boilermakers, blacksmiths, moulders, pipefitters, tinsmiths, carpenters and patternmakers, are under direct control of their respective foremen. A careful record of their progress, behavior and aptitude is returned to the supervisor, particular attention being paid to inculcating the habit of good timekeeping; twice late per month, or a total of twelve per annum, only being allowed, together with a total loss of time each year of a hundred hours, this being allowance for vacation. Any time over this has to be

made up before the boy can receive his increase of pay, which rises automatically from 13 cents the first year to 17 cents the second, 20 cents the third, 23 cents the fourth, and 26 cents the fifth, after which, on receipt of a satisfactory certificate of apprenticeship, they step at once to the schedule rates as tradesmen.

The technical or theoretical training, rightly considered as of great importance, is developed by means of classes conducted by the supervisor, fifteen boys being the average per class. In arithmetic all are taken through fractions, decimals, proportion, averages and roots and powers, and concluding with mensuration. In drawing they are instructed first in freehand, to be applied later in their training to the making of shop sketches. Then geometry, projections, intersections and developments of surfaces, and finally to the making and reading of shop or mechanical drawings, each trade being given, as far as is possible, subjects bearing on their own class of work.

Beyond this any apprentice who elects to pay a small sum per month may continue his studies in more advanced subjects, such as algebra, logarithms, trigonometry, advanced mechanical drawing, steam and kindred subjects, the company's object being as much to enable the boys to realize the advantages of extending their technical knowledge as it is to give all a good training in the rudiments.

During their first year as apprentices, when they must be sixteen years of age or over, they receive two hours' instruction per week; from then for the following two years, four hours per week is given, divided into two sessions of two hours each. At the end of the third year their theoretical training ceases, unless, as stated above, they wish to advance further, when they may continue to attend special classes until they have completed the branch of study chosen, or until they have completed their apprenticeship.

A monthly record of school and shop progress is sent to each boy's parent or guardian, and copies are kept charted up in the Instruction Room for friendly rivalry and emulation. Each December an examination on the general progress of the classes is held, scholarships being presented to the five boys with the highest marks. All apprentices are also eligible to compete for the two scholarships offered by the company covering four years' free tuition in the Faculty of Applied Science of McGill University.

It will thus be seen that generous encouragement is given to every boy entering the Winnipeg shops as an apprentice, and that no effort is spared to turn out in the finished article a thoroughly well-trained and useful member of a trade, and it must be said that the boys themselves appreciate the efforts of the company to this end, and evince a willingness to learn, and an interest in their work, to go far to justify the trouble and money expended upon their training, and finally result to their own particular advantage in the coming years.

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### THE NEW QUEBEC BRIDGE.

Work is progressing rapidly on the new Quebec bridge. Last year the debris of the fallen structure, a vast mass of tangled steel, partly above the water and partly submerged, was removed and new caissons were sunk, so that the work on the substructure may be considered well enough advanced to predict a completion of the new bridge in 1915. The bridge when finished will be one of the greatest of its kind in the world. Pending its completion, trains of the new Transcontinental will be transferred across the St. Lawrence by ferries.