

motion to make a change will be given at the next meeting of the club, on May 13.

It was decided that two papers be read at the next meeting—one by T. McHattie, Master Mechanic G.T.R., Montreal, on modern locomotive management, and one by R. R. Neild, of the C.P.R. shops, Montreal, on the manufacture of iron and steel, also, on the chemistry of metals, and why a mechanic should know something of these important subjects.

Recent Quebec Legislation.

The following acts affecting railway, shipping, telegraph and kindred interests were passed at the recent session of the Quebec Legislature:

Granting certain powers to municipal corporations (permission to subscribe for stock in Montreal Bridge Co.)

Authorizing the erection of a toll bridge across the St. Francis river, between Richmond and Melbourne.

Incorporating the Matane and Gaspé Ry. Co.

Incorporating the Levis County Ry. Co.

Ratifying the sale of lands in the township of Gosford by the Quebec and Lake St. John Ry. Co., to the Quebec and Lake St. John Ry. Lumbering and Trading Co.

Amending the law relating to civil engineers.

Amending the charter of the County of Montmorency Telephone Co.

Respecting the Provincial Light, Heat and Power Co.

Incorporating the Kamou-Tem Littoral Electrique Co.

Incorporating the Shawinigan Falls Terminal Ry. Co.

Incorporating the Sorel Electric Co.

Incorporating the St. Lawrence and Megantic Ry. Co.

Respecting certain subsidies.

May Birthdays.

Many happy returns of the day to

Garnet Vliet, Assistant Master Mechanic G.T.R., at Portland, Me., born at Milwaukee, Wis., May 5, 1854.

W. R. Baker, Assistant to 2nd Vice-President, C.P.R., at Montreal, born at York, Eng., May 25, 1852.

S. Barker, M.P., President Muskoka Navigation Co., Hamilton, Ont., born at Kingston, Ont., May 25, 1839.

F. T. Byrne, Commercial Agent G.T.R., at St. Louis, Mo., born at Albany, N.Y., May 3, 1859.

G. S. Cantlie, Superintendent Car Service, C.P.R., at Montreal, born there May 2, 1867.

M. Donaldson, General Superintendent, Canada Atlantic Ry., at Ottawa, Ont., born near Edinburgh, Scotland, May 1, 1851.

W. C. Edwards, M.P., Timiskaming Steamboat Co., Rockland, Ont., born at Clarence, Ont., May 7, 1844.

J. D. Evans, Engineer Central Ontario Ry., at Trenton, Ont., born at Goderich, Ont., May 27, 1843.

E. T. Galt, President Alberta Ry. and Coal Co., and Great Falls and Canada Ry. Co., at Lethbridge, Alta., born at Sherbrooke, Que., May 24, 1850.

A. Hardy, General Freight and Passenger Agent, Quebec and Lake St. John Ry., at Quebec, born there May 12, 1855.

W. T. Huggan, Treasurer and Auditor Prince Edward Island Ry. at Charlottetown, P.E.I., born at Halifax, N.S., May 24, 1851.

J. Hunter, Vice-President and General Superintendent Esquimalt and Nanaimo Ry., at Victoria, B.C., born at Aberdeen, Scotland, May 7, 1839.

W. S. Kinnear, Assistant Superintendent Canada Southern Division, Michigan Central

Rd., at St. Thomas, Ont., born at Circleville, Ohio, May 25, 1864.

G. A. Parker, Auditor Dominion Atlantic Ry., at Kentville, N.S., born at Walton, N.S., May 1, 1855.

N. J. Power, Auditor of Disbursements, G.T.R., at Montreal, born at Rochester, N.Y., May 19, 1843.

H. B. Sherwood, Superintendent Bay of Quinte Ry. and Navigation Co., at Deseronto, Ont., born at Auburn, N.Y., May 25, 1847.

E. Tiffin, Traffic Manager, I.C.R., at Moncton, N.B., born at Hamilton, Ont., May 5, 1849.

J. H. Walsh, General Freight and Passenger Agent, Quebec Central Ry., at Sherbrooke, Que., born at Quebec May 12, 1860.

H. K. Wicksteed, engineer in charge of surveys, Halifax and South Western Ry., born at Quebec May 25, 1855.

James Yeo, ex-Roadmaster Intercolonial Ry., Rivière du Loup, Que., born at Bideford, Devonshire, Eng., May 1, 1830.

Standard Box Cars.

S. King, Master Car Builder, Intercolonial Ry., Moncton, N.B., read the following paper at the last meeting of the Canadian Railway Club in Montreal:

When requested by your Executive Committee to prepare a short paper on some subject relative to cars, I considered that a subject which we could discuss with interest to-night is "The advantages and disadvantages of the standard box car which has been adopted by the American Railway Association as viewed from a common standpoint." In presenting this subject, I wish to explain that my intention is simply to outline without elaboration some of the arguments for and against the standard car, and of drawing out a general discussion from the membership. It is not many years since, when any activity on the part of a railway official, in the way of speaking at clubs or before societies would have been frowned upon by a great number of his associates, and he would probably have been dubbed as "one of those theoretical fellows." This feeling, I am glad to note, is fast disappearing, and all matters of importance are now fully and freely discussed by the various clubs, and by this means we are able to arrive at the best solution of the various problems as they come before us.

Technically educated men find it of advantage to give and take, to interchange ideas and experience in oral and written discussions and to encourage others to do the same. Now we find the men who have been doing the most and best speaking and writing forging ahead into the best positions. They are the wideawake men who think and observe, read and discuss. Men who are up with the times are wanted. Of course this rule has its exceptions on both sides, but we only require to look over the changes that have been made in official positions to prove this rule.

As many of you are aware, the question of size and capacity of freight cars has been a disputed point for years, I might almost say, as long ago as when the interchange of freight cars between railways began. Various attempts were made by local interests to arrive at a standard, but failed. The M.C.B. Association discussed the matter in convention, and although they can as a rule agree upon important points, and adopt and maintain standards, they failed in this particular. One reason of this was, that they did not have the assistance and support of the traffic and transportation departments that might have been expected. Another reason was from the fact that one railway would endeavour to outstrip its competitors in the so-called advantages which it could offer its patrons by way of larger cars and thus secure the freight. Of course, two or more could play at the

game, hence the difficulty. It was therefore a great point gained when the American Railway Association took the matter in hand, and after considerable labor obtained statistics and data as to the actual requirements of the majority of the railways, and the size which would accommodate the greatest assortment of freight with the least amount of waste space, and decided on Oct. 23, 1901, to adopt a standard box car as regards the inside dimensions, and to form such resolutions that made it practically a loss to the railway to build and operate any car of greater or less dimensions.

It is well to note, that as far as the height and width is concerned, the dimensions adopted are as great as can be operated on a number of the principal railways on account of the clearance limit. They therefore very wisely requested the M.C.B. Association to consider and adopt the required external dimensions of the standard box car, based upon the internal dimensions prescribed by them.

It is universally admitted, that one of the greatest aims of the leading railway men today, is to reduce to a minimum the operating expenses of the railway under their charge, and in the accomplishment of that purpose many factors enter into the result. Competition has become so keen, and freight rates so low, that it has become the imperative duty of all railways seeking success and large receipts, to put into service a car that will yield the largest profits consistent with operating expenses. In adopting a standard box car, an end was put to the undue competition among certain railway representatives, whose great object was to get the freight to handle at any cost, and in its place to form a basis upon which a legitimate charge for haulage could be made, and which would give a satisfactory return beneficial in every respect.

Another point which may or may not be considered an advantage is the width of the door openings. To increase the width of the door openings to 6 ft. is to invite a weakness in construction at that point, and it necessarily follows that the door posts and grain doors must be considerably strengthened in order to prevent bulging of the sides of the car, accompanied with all the unfavorable results such as the binding of the side doors, and damage done to them in consequence by irresponsible shippers. I notice that some car builders have provided against this weakness by using a flitched door post, which, though not a very sightly affair, will no doubt assist materially in overcoming the stresses at that point, due to increased width and height.

It may be argued that a considerable quantity of the freight carried does not press heavily against the sides of the car, and the apparent defect will only apply to grain and coal carrying railways. On the other hand, we all know that any car is liable to be loaded and interchanged with a grain or coal carrying railway, and it is at the option of such railway to reload it with such merchandise as is common to it, in order that it may be used to a profit when returning it to its owner, so that it is absolutely necessary to provide for all contingencies of this kind.

The extra weight of the grain door due to increased size and necessarily heavier construction will also tend to a more speedy destruction of the door. It seems to be a foregone conclusion among a certain class of shippers that permanent grain doors are only put into cars to be broken up and thrown out when occasion requires, hence some railways have ceased to equip cars with permanent grain doors, and simply use cheap and rough lumber when occasion requires. The increased cost in such cases, on account of the increased width of door opening, will be in proportion to the increased thickness and length of the material required.

The increased inside and outside dimensions require that a stiffer frame be constructed to