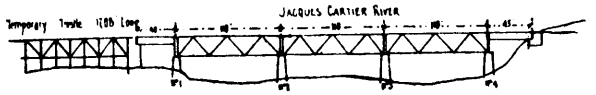
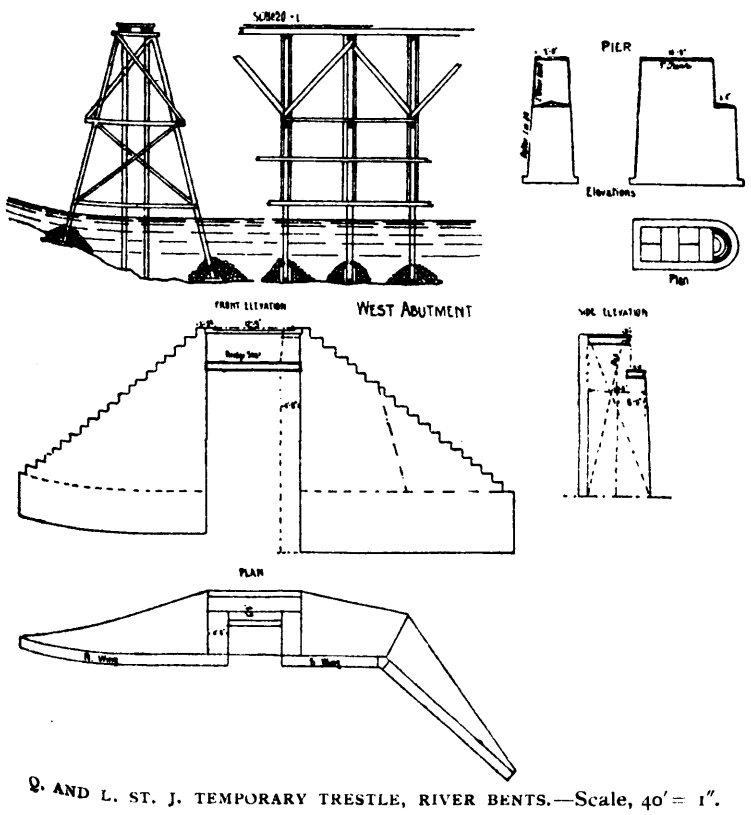
some, though it had the full force of the current, which was, however, previously headed off by an outside sheeting, part of which afterwards formed the outside wall of the coffer dam to contain the puddle. Pier 3 was perhaps the most interesting of all, being in 10 ft. of water in the upstream side and decreasing down stream towards the island. A bottomless caisson was built of 12 in. by 12 in. timber, of a section to suit the river bottom, and rolled into position with a shelf inside on which boulders were loaded to sink it. It was then sheet piled with 9 in. tongued and grooved 1½ in. stuff, and on being pumped proved leaky, necessitating another row of sheet piling placed 5 ft. outside and filled with puddle. It may be interesting to note that a successful method of stopping leaks under the puddle was found by removing the clay at the leaky spot to within 18 in. of the bottom, ramming it well, then loading with heavy boulders and sand, then filling with 18 in. of clay, ramming and loading till the wall was complete. The dimensions of piers and abutments are shown on the plans, the western abutment being a wing one, the north wing being at right angles to track, while the south one follows the river. The wings are turretted on top, being rock faced on three sides. The eastern one was an ordinary "U" abutment. Pier 4 was built the same as the others on top, being 7 ft. by 15 ft., with a batter on each side of ½ in. to the foot. The metal of the superstructure is of rolled steel throughout, consisting of three 110 ft. spans, composing the main bridge, built exactly alike, being 107 ft. centre to centre of end pins, there being 6 panels in each 17 ft.-10 ft. from panel point to panel point, and 10 ft. centre to centre of trusses. The trusses are calculated for class 1, typical consolidation engine and tender, as specified by the Department of Railways, 1899. The eastern and western approaches are plate girder spans 44 and 39 ft. respectively, over all, the girders being 8 ft. c—c of girders. The webs are 84 in. by ⅜ in.

The culverts, three in number, are of the usual masonry box type. The fencing is of the anchor type, 9 strands, 4 ft. high and 12 ft. between posts, with two cross wires fastened at the junction of the horizontal ones by clamps. The farm gates consist of a frame made of 2 in. by 4 in. timber. They are 13 ft. long and 4 ft. 6 in. high, filled in with six strands wire and two vertical wires, forming a light gate and easily handled. The rails are of English manufacture and weigh 70 lbs to the yard. The web is 9-16 in., the head 2⅜ in., the base 4¾ in., and height of rail 4¾ in. The fastenings are double angle bars with a base which rests on the tie, making a total base of 7½ in. at the joint. The station, 34 ft. by 19 ft. 6 in., is a two story building, with balconied gabled windows, front and rear, and bay windows on ground floor. The entire building is surrounded by a weather shelter, the whole being of neat appearance and suited to the locality. The ground floor is partitioned to form waiting-room, operator's office and baggage-room, while at the rear are kitchen and parlor. The upper story is divided into five rooms, the whole forming a building convenient in the double purpose of station and agent's house. The whole work was carried out by J. Paquet, contractor, Levis, Que.—Canadian Engineer.



QUEBEC AND LAKE ST. JOHN RY. BRIDGE.



Q. AND L. ST. J. TEMPORARY TRESTLE, RIVER BENTS.—Scale, 40′ = 1″.

Canadian Freight Association.

The general summer meeting was held at Sault Ste. Marie, Ont., July 8. Most of the members went from Windsor, Ont., and Detroit, Mich., by the str. King Edward, of the Algoma Central Ry.'s steamship line, others joining them when the boat touched at Sarnia and Parry Sound, while a few went by other routes. As the King Edward was a day late the committees met on board and had their work completed when the Sault was reached.

President J. Pullen presided at the meeting at the International Hotel July 8.

The following were elected active members:—J. H. Sorley, D. F. A., Ottawa Northern and Western Ry., Ottawa; A. R. Evans, G. F. A., Midland Ry., Truro, N. S.; W. Phillips, General Eastern Agent, Canadian Northern Ry., Toronto; J. E. Duval, Car Service Agent, Canada Atlantic Ry., Ottawa. R. Dowle, charter member, was elected an honorary life member.

The Car Service Committee presented its statistical report for the quarter ended May 31, respecting which it said:—"The statistical reports show increased business, and increased collections. The detentions to cars, however, compare favorably with the corresponding period last year. Serious delays to cars continue at large places such as Montreal, Quebec, Ottawa, Toronto, Hamilton, Brantford and London, the prevailing reasons given being insufficient siding room, lack of engine power, later arrivals placed first, cars bunched, etc. The chief cause of delay, however, is said to be on account of later arrivals being placed in preference to older arrivals. This is, no doubt, done to save a little extra shunting, but the result is that it practically paralyzes car service regulations. Rule No. 17 provides as follows:

> The placing of cars shall be considered to have been effected when such cars have been placed on the designated delivery tracks or sidings, or if such tracks or sidings contain cars belonging to the same consignee, and which have been detained over the limit of free time, at the time the railway company could have placed the cars had the condition of such tracks or sidings permitted, consignees requiring cars placed on a designated track or siding and having more cars on hand or arriving than their facilities allow them to handle on said track or siding, must pay car service charges for all cars detained beyond the time limit on that account, one shunt per day being considered reasonable service.

"It will be seen that if a consignee has a number of cars waiting to be placed, and other cars are placed as they arrive, nothing can be collected for the delay to the older cars. The attention of superintendents should be called to this important matter so as to arrange better shunting regulations, especially in view of the serious results which will now be manifest after the adoption of the new per diem arrangement. Agents should also be held to a more strict account for delays to cars, as many of them still appear to act as if car service rules were not meant seriously, and that consignees should not be annoyed by being asked for car service, if by any means whatever that can be avoided. The committee also recommends that the present rules be amended so that two days will be the limit of free time for all traffic."

In pursuance of the above report it was unanimously recommended that the attention of the operating department of each of the railway companies, members of the Association, be specially called to the advisability of arranging that all cars be invariably placed for delivery to consignees in the order of their arrival, unless consignee orders to the contrary, instead of such cars as may be most available or may have arrived at a later date, which appears to be the practice in many cases at the present time. The change suggested would undoubtedly overcome difficulties which now exist, necessitating the presentation of claims, and would tend to a more satisfactory enforcement of car service rules. While it is recognized that this may at times involve additional switching or handling of cars at terminal points, it is considered to be in the best interests of all concerned.

It was also resolved that whereas it has been drawn to the attention of the Car Service Committee that car service rules are not enforced at all points; resolved, that in view of the per diem arrangement now in force the attention of superintendents or others now concerned in the handling of cars be drawn to the necessity of the strict enforcement of car service rules, whether competitive or non-competitive, reporting or non-reporting points.

The Classification Committee reported that it had agreed upon several additions and amendments to the classification, which would be embodied in a ruling circular, proofs of which would be sent to the members previous to being issued. If approved, said circular to be issued soon as possible. The Chairman also indicated that, according to previous understanding, he was engaged on a revision of the classification with a view to an index for the same, and that as soon as complete proofs could be obtained, special meetings of the Committee would be called for consideration of the new classification so that it might be