four in each case, connecting to the sills of the car. The centre angles have a leg turned upward, this leg attached to the wood filler of the centre sill, and the outer angles with a leg downward, the other leg being attached to the lower face of the side sill. The angles on the step side are given an offset.

30 Westinghouse 1,200 volt passenger equipments, 125 h.p. motors, multiple unit field control, for cars already in operation, from Canadian Westinghouse Co.

65 semi-convertible city p.a.y.e. cars, single ended, 30 ft. body, 44 ft. long over all, for 1913 delivery, from Preston Car and Coach Co.

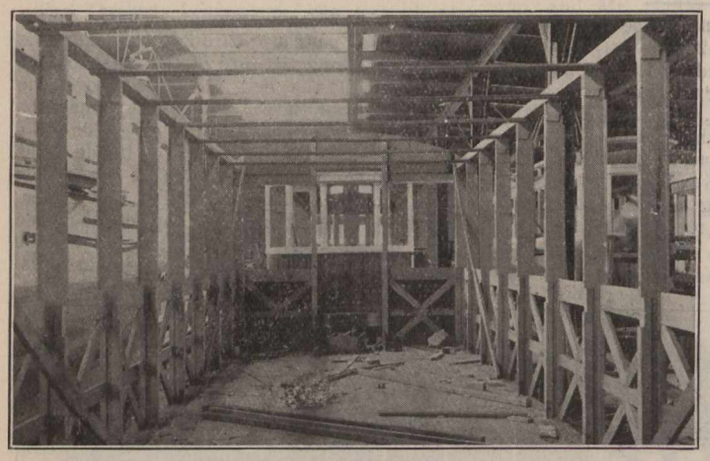

Fig. 4.—Skeleton Framework of Car Interior.

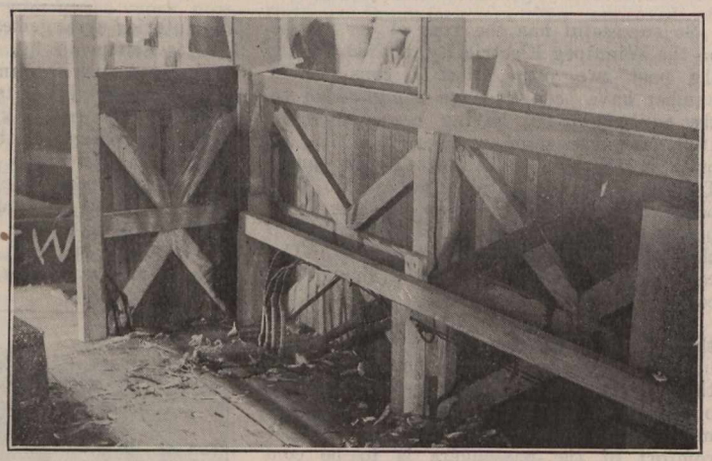

Fig. 5.—Detail View of Car Corner Framing.

The car is mounted on Brill trucks, on each of which there are two G80 motors, 40 h.p. each, operated by the motorman through a K6 controller. The car is equipped with air brakes, supplied from a motor driven air compressor unit under the car. In the front vestibule, to the left of the motorman, is located the hot air heater, above which is mounted a bell ringing transformer, connected to the push buttons in the window posts of the car, so that no batteries or dry cells are required to be carried, power being drawn from the line.

The foregoing information was obtained through the courtesy of Wilson Phillips, Superintendent, and G. Garrett, Master Mechanic, Winnipeg Electric Ry.

British Columbia Electric Railway Company's Equipment Orders.

The January issue of Canadian Railway and Marine World contained mention of rolling stock orders placed by the British Columbia Electric Ry., consequent on the increase of mileage put into operation, and the increased traffic generally. Following is a complete list of the rolling stock ordered in 1912, some items of which are for delivery in 1913, as mentioned in our last issue:—

22 closed, 40 ft. body, interurban cars, 51 ft. long over all, multiple unit control; and 6 similar cars, with toilet room added, from St. Louis Car Co.

35 semi-convertible, p.a.y.e. city cars, 30 ft. body, 43 ft. long over all, single end trucks and bodies; one closed stepless car, 34 ft. body, 44 ft. long over all; one near side city car, from J. G. Brill Co.

4 interurban baggage and express cars, 54 ft. long over all, multiple unit control, from Niles Car Co.

70 freight box cars, 60,000 lbs. capacity, 40 ft. long over all; 45 flat cars, 60,000 lbs. capacity, 41 ft. long over all, from Seattle Car and Mfg. Co.

6 Hart-Otis dump cars, all steel, 60,000 lbs. capacity, 28 ft. long over all, from Hart-Otis Car Co., Montreal.

2 double broom snow sweepers, single truck, 28 ft. long over all, from Ottawa Car Co.

5 electric locomotives, 60 tons capacity, 1,000 h.p., 600-1200 volt, 33 ft. long over all, from Westinghouse Co.

The Toronto Suburban Railway.

During 1912 substantial progress was made in the construction of the extensions planned, but work was delayed considerably by the scarcity of labor, by the difficulty in getting delivery of materials, and by wet weather. The whole of the extensions have been surveyed, and are under contract to be constructed. Grading on the Woodbridge extension is nearly complete, and grading is progressing vigorously on the Toronto to Cooksville, Georgetown and Guelph lines.

The present terminus of the existing railway lines is situated well within the limits of Toronto at Bathurst St., where the company's lines connect with the Toronto Ry. From this terminus the company's line runs northwesterly to Weston and Lambton Mills, and it is being extended from Weston to Woodbridge, and from Lambton Mills to Guelph, serving and connecting Islington, Summerville, Dixie, Cooksville, Erindale, Streetsville, Meadowvale, Churchville, Huttonville, Norval, Georgetown, Glen Williams, Acton, Milton, Brampton and Guelph. These extensions will be constructed for the most part upon private right of way. When they are completed the company will own a fully equipped electric railway of approximately 90 miles.

In addition to the terminal of the present lines in the west end of Toronto, the company has, under its franchise rights, secured right of way from the present terminal easterly to a point in the central portion of the city near St. George St. It is proposed that a terminal will be provided adjoining the C.P.R.'s North Toronto station and the terminus of the Toronto and York Radial Ry., and one of the principal Canadian Northern Ry. stations. This right of way into the city will enable passengers to transfer from the company's line to six different lines of the Toronto Ry. running north and south, thus affording every facility to passengers entering Toronto on the company's lines to reach any part of the city within a few minutes.

The company has already in operation, or in course of erection, 30 miles of transmission lines in Toronto and surrounding districts. Electric current for light, heating and power purposes is obtained from one of the large Niagara water power companies. The company intends to utilize the right of way in connection with the railway for the purpose of extending its transmission lines and taking advantage of the large demand for electric current for lighting, heating and power purposes in the districts which will be served by the railway.

From their knowledge of the districts to be served, the directors anticipate a profitable revenue immediately on the opening of the new lines, which are expected to be completed this year. Although only a small portion of the total railway mileage mentioned above is yet in operation, the results are entirely satisfactory. For the year ended June 30, 1912, the number of passengers carried was 1,462,656, compared with 1,047,191 for the previous year, an increase of 39.67%, and the gross earnings per mile of railway were $6,389.64 a mile, compared with $5,484 for the previous year. It is anticipated that when the proposed lines are completed and the business fully developed, the gross earnings from the railway alone should amount to $500,000 a year, in addition to which a substantial revenue should be derived from the light, heat and power business. However, taking the figures on the basis of the results already obtained with only a small portion of the system in operation, the gross earnings would amount to $460,800 a year; the working expenses are estimated at $275,000, leaving estimated net earnings of $185,800.

The directors are Sir Wm. Mackenzie, President; A. H. Royce, Vice President; L. W. Mitchell, F. H. Phippen, G. C. Royce, Toronto; R. M. Horne-Payne, London, Eng.

Turnstiles on Prepayment Type of Street Cars have been prohibited in Dayton, Ohio, by the Ohio Public Service Commission. The Commission began, in May, an investigation of the safety and security of operation of the People's Ry., especially in the matter of the use of turnstiles at the points of car entrance. It was found that the turnstiles were wood and metal devices used for registering the number of persons entering the cars. These were attached to the vestibules of the cars so as to form a rigid obstacle and an impassable barrier in the way of passengers or persons seeking to enter or leave the car until the machinery was released, allowing the arms to turn or fall. It was found that this at times resulted in bruising or injuring passengers attempting to enter when passenger and conductor failed to act in exact unison. It was also found that the turnstiles created an additional element of danger in case of accident or other emergency necessitating prompt unloading of passengers.