

posite side of the transfer table, the policy adopted being that of storing sufficient wheels during the slack period to provide for the exigencies of the rush season.

The old machine shop has been rearranged so as to form enlarged blacksmith and boiler shops. The boiler shop contains a boiler plate roll and a double punch and shear, while the blacksmith shop contains, apart from the special departments, six fires and anvils, and a 600 and a 1,600 lb. steam hammer. The spring shop, a department of the blacksmith shop, contains a spring furnace, iron table and tank. The tube shop contains a tube furnace, tube welder, and a tube cutter, with a flue ratter just outside an adjacent door, served by a shop track that connects with the outside, over a small turntable.

The shops have been in operation about a year, long enough to develop normal con-

ditions of production. The normal monthly output is 8 locomotives a month, and it is expected that this will be still further bettered as improved methods are introduced from time to time. A number of time saving devices are in use, several of which have appeared from time to time in the Railway Mechanical Methods and Devices section of Canadian Railway and Marine World. In addition to the heavy locomotive repairs, running repairs are handled for the locomotive house. Conditions in such a shop are somewhat different from those in the usual back shop, as all the machine shop work for the car department is also handled, one section of the shop being entirely reserved, as explained, for car wheel work. The shop is in charge of A. H. Kendall, General Foreman, to whom we are indebted for the information on which this article is based.

on the inside, while it decreased on curves laid with ordinary rails. Some members spoke of getting the same result by shifting worn rails from the outer to the inner side of the curve, but it was pointed out that in such cases the weight of the wheel comes on the overhanging side of the rail head and not directly over the web, as in the special narrow-head rail. Consequently this shifting of worn rails or curves was hardly desirable for track with heavy traffic and high speeds.

Clearing and Policing Right-of-Way.—This report was read by J. P. Corcoran, Chicago & Alton Rd. It dealt with such work as the cutting of weeds and grass, removing old rails and ties, the handling of scrap, maintenance of ditches and fences, and the clearing of yards and station grounds. Trackwalking and bridge inspection were included also. The report recommended the old practice of requiring the trackwalker to do all kinds of miscellaneous work during his trip, but this was objected to in the discussion. It is better for him to be simply an inspector, doing only such work as is essential to the safety of the track. The miscellaneous work of driving loose spikes, repairing fences, etc., can be done to better advantage in periodical trips of the entire section gang.

Officers for 1914-15 were elected as follows: President, P. J. McAndrews, C. & N.W. Ry., Belle Plaine, Ia.; Secretary, L. C. Ryan, C. & N. W. Ry., Sterling, Ill. The next meeting will be held at Chicago in Sept., 1915.

Roadmasters and Maintenance of Way Association Convention.

At the annual convention at Chicago recently, the attendance was large, and there was an exhibit of track materials, tools and appliances. Following are abstracts of the committees' reports:

Power-Operated Track Tools and Appliances.—This report, presented by J. W. Dahl, N. Y. Central Rd., opened with an explanation of the increasing use of machinery in track work, owing to its economy as compared with hand labor and to the increased weight and size of many parts used in track construction. Motor cars in place of hand cars save time and energy of the track men, and enable the same number of men in a gang to do more work or a smaller number of men to do the same amount of work as when equipped with hand cars. Rail handling machines for loading rails on cars and distributing new rails from cars not only do the work more expeditiously but eliminate the rough handling which may result in damage or fracture of the rails. For rail renewals, there are machines which, with three to six men, do the work otherwise requiring a large gang of men to handle long and heavy rails.

Other uses of machinery are in such heavy work as ditching, the distribution of ballast, and the spreading of filling material; and also in such light work as drilling and cutting rails, boring and dressing ties, driving screw spikes, tamping ballast, etc.

Rail Renewals.—This report was presented by A. M. Clough, N. Y. Central Rd., and was discussed at great length in regard to the various phases of the work. There was considerable discussion as to whether or not ties should be respaced when new rails are laid, and the general opinion was that this is not necessary, while eliminating the work greatly reduces the time consumed. Several railways now leave the ties alone, simply dressing them at the rail seat where necessary, and adjusting them to give proper support at the joints. The report submitted the organization for a rail renewal force, but some members were inclined to object to this, since no two roads would have the same conditions or use exactly the same force.

Organization of Labor and Material for Track Maintenance.—This report was presented by P. J. McAndrews, Chicago & Northwestern Ry. It showed the great amount of money expended under the direction of the track department (averaging \$10,000 a month per roadmaster), and advocated a system of organization in which the work of all the roadmasters of any one division would be under the supervision of

some official who would direct the work of the division as a whole. This would avoid the trouble and expense due to operating separate work trains, rail-renewal gangs, extra gangs, etc., on each roadmaster's district. The report recommended the maximum length of line for the roadmasters or supervisors as follows: 50 miles of double track, 100 miles of single track with heavy traffic or 125 miles in easy country with light traffic.

Another important recommendation was that track forces should be maintained permanently, throughout the year. At present, every railway cuts its force to a minimum in winter and increases it in the spring, when the supply of efficient men does not equal the sudden demand. This results in loss of time and money due to the continual employment of new and inexperienced men. Much of the work can be done as well in winter as in summer, and the work as a whole would be done better and at lower cost if spread over the year instead of concentrated in a few months, as under the present system. There was general agreement with the suggested system, but it did not appear that any roads have yet introduced it, the economies of track labor not being comprehended as a rule by railway officers.

Track Accessories.—This report, which was presented by M. Donahoe, Chicago & Alton Rd., dealt with a variety of matters, and the first of these were discussed in such detail that the remainder of the report was accepted as information, without discussion. In regard to rail joints, the committee recommended 24-in. angle bars, with four bolts, supplemented by a base or bridge plate where traffic is heavy. For frog guard-rails an 8-ft. length was recommended, but this was struck out, as there was a general opinion that longer rails are preferable, and that it is not desirable to specify the length.

There was considerable discussion as to whether bolts or clamps are the better for securing the guard rail to the track rail, and as to the use of tie-plates and rail braces at guard rails. Cast manganese guard rails were mentioned, but the members present had little experience with these. Other matters covered by the report were switches, frogs, switchstands, tie-plates, rail anchors or anti-creepers, screw spikes and drive spikes, track bolts of nickel-chrome steel, and the narrow-head "frictionless" rail for curves.

As to this last, only one member had experience, and he spoke of tests showing that with a train on a heavy grade the speed increased on curves having this rail

Birthdays of Transportation Men in November.

Many happy returns of the day to—

F. W. Alexander, A.M. Can. Soc. C.E., Division Engineer, Alberta Division, C.P.R., Calgary, born at Fredericton Jct., N.B., Nov. 22, 1878.

J. O. Apps, General Baggage Agent, C.P.R., Montreal, born at Tara, Ont., Nov. 9, 1877.

A. B. Atwater, Assistant to President, lines west of Detroit and St. Clair Rivers, G.T.R., Detroit, Mich., born at Sheffield, Ohio, Nov., 1845.

G. B. Burchell, ex-General Manager, Maritime Coal Ry. and Power Co., Montreal, born at Sydney, N.S., Nov. 1, 1877.

J. R. Cameron, Assistant General Manager, Canadian Northern Ry., Winnipeg, born at Truro, N.S., Nov. 5, 1865.

L. D. Chetham, City Passenger Agent, C.P.R., and District Passenger Agent, Esquimalt and Nanaimo Ry., Victoria, born at Matlock, Eng., Nov. 5, 1869.

F. H. Clendinning, Division Freight Agent, B.C. Coast Service and Ocean Steamship Lines, C.P.R., Vancouver, B.C., born at Montreal, Nov. 9, 1881.

F. Conway, City Freight and Passenger Agent, C.P.R., Kingston, Ont., born at Ernestown, Ont., Nov. 19, 1850.

A. S. Cook, Inspecting Engineer, National Transcontinental Ry., Ottawa, born at Penobscus, N.B., Nov. 20, 1873.

W. L. Crighton, Advertising Agent, Canadian Government Railways, Moncton, N.B., born at Derby, Eng., Nov. 9, 1871.

W. B. Cronk, ex-General Superintendent, National Transcontinental Ry., now of Toronto, born at Footville, Wis., Nov. 11, 1862.

A. C. Douglas, Purchasing Agent, British Columbia Division, C.P.R., Vancouver, born at Montreal, Nov. 10, 1881.

W. Downie, ex-General Superintendent, Atlantic Division, C.P.R., born at Rock Currie, Ireland, Nov. 12, 1850.

Jos. Dubrule, jr., Manager, Canadian Paci-