

Mechanical Engineer and Manager of Rolling Stock. Other positions held by him are, Engineer, to report on the Longitudinal Ry., Chili, for the Chilean Government; Chief Consulting Engineer, Hamburg South American Steamship Co.; Honorary Engineer, Customs Department, Rio Grande de Sul, Brazil; Assistant Manager and Chief Engineer, Rasselpur Tea Co., Sylket, India.

J. H. CALLAGHAN, General Storekeeper, C.P.R. Eastern Lines, Montreal, who died recently, was buried at Brownville Jct., Me., July 3, when the funeral was attended by chiefs of the operating department from various points. C. Murphy, General Superintendent of Transportation represented the management, L. R. Johnson, General Superintendent, Angus Shops District, the locomotive and car departments; G. E. Hall, Assistant General Storekeeper, the stores department; H. Ferguson, the purchasing department, and C. Malcolm, the audit department. W. Downie, General Superintendent, Atlantic Division, and H. C. Grout, Superintendent, Montreal, also attended. Mr. Callaghan entered C.P.R. service 26 years ago, as storekeeper during the construction of the road through Maine, being the first resident storekeeper at Brownville Jct. He was afterwards moved to McAdam Jct., N.B., then Farnham, Que., and later to Montreal, where he eventually became General Storekeeper. He was widely known throughout Canada and the U.S.

LACEY R. JOHNSON, M. Can. Soc. C.E., who has been appointed General Superintendent Angus Shops District, C.P.R., Montreal, and whose portrait appears in this issue, was born at Abingdon, Berks, Eng., June 22, 1855, and educated at the Grammar School, there. He entered railway service as an apprentice at the Great Western Ry. works, Swindon, Wilts., June 1, 1870, and was Chief Engineer and Foreman of Mechanics at the Woolwich Arsenal, Jan. 1 to Aug. 1876, and fitter and erector Sept. 1876 to Nov. 1878; Manager, Davis and Sons' engineering works, London and Abingdon, Nov. 1878 to Aug. 1879. In Sept. 1879 he went to India as draughtsman on the Scinde, Punjab and Delhi Ry., and was subsequently foreman of machine and erecting shops there. He left India on account of health, Mar. 1882, and entered G.T.R. service at Montreal as draughtsman, June 1882, and joined the C.P.R., Nov. 2, 1882, since when he has been, to Nov. 1885, General Foreman at Carleton Jct.; Nov. 1885 to May, 1886, Assistant Master Mechanic, Eastern Division, Chisleau, Ont.; May 1886 to Apr. 1901, Master Mechanic, Pacific Division, Vancouver, B.C.; and from the commencement of the trans-Pacific service, his jurisdiction extended over the engineering department of the vessels, during which time he spent three winters in Hong Kong superintending alterations and repairs to the company's vessels; Apr. to Sept. 1901, on the purchase of the Canadian Pacific Navigation Co. by the C.P.R., he was Superintending Engineer, of the combined fleets, which position was severed from the locomotive and car department; Sept. 1, 1901 to July 1, 1912, Assistant Superintendent of Motive Power, C.P.R., Montreal.

Willard Kitchen Co., Ltd., railway contractors, Grand Falls, N.B., writes:—"We think The Railway and Marine World a first-class paper."

The steamboat Columbia, engaged in the coal trade between Oswego, N.Y., and Montreal, was destroyed by fire at Ogdensburg, July 6.

The British steamship Wilhelmina, bound from Quebec to Yarmouth, Eng., ran on the rocks at Peter's River, Nfld., June 30, and became a total wreck.

The name of Dredge No. 4, formerly owned by the Montreal Harbor Commissioners, has been changed by order in council to Manley and Co. No. 1.

Surveying Instruments-

By W. L. Mackenzie, M. Can. Soc. C. E., Bridge Engineer, Canadian Northern Ry.

Following is a summary of an address delivered before the Engineering Society, Manitoba University:—

The best tripod head is that which is strongest to resist torsional stress. The lugs should extend well down between the cheeks; the legs should fit close together when folded, and each should preferably be of one solid piece of wood.

The levelling screws should be of large diameter and easily accessible. They can with advantage be covered with chamois in winter. Personally, I prefer a 4 screw instrument on account of the increased rigidity it offers. For 3 screw instruments wing nuts should be used to clamp the screws when levelled up. Keep the levelling screws and centres clean and free from grit, using a little of the best watch oil for this purpose. In winter it is best to remove all oil.

For all ordinary purposes, including railway work, a circle graduated to minutes is sufficient, and if further accuracy



A. C. Gray,
Superintendent of Motive Power, Reid Newfoundland Co.

is required, it may be obtained by repetition. The compass needle is little used except for checking deflections; a thin, light needle is desirable. The U type of standard is the most rigid; it should be very firmly fastened.

Inverting telescopes are decidedly better than erecting, giving more light, longer focus and better definition. Stadia hairs should be fixed and not adjustable. In examining an instrument, always test the object glass slide. It should be ground to an accurate fit, and if it is found to shake, good work cannot be done. The object glass should be achromatic and free from spherical aberration. The telescope should be tested for power. The sensitiveness of the plate bubbles should not be less than 1-10th inch for one minute of arc.

For a vertical circle a good type is a 60° arc attached to the outside of the standard and a vernier arm attached to the end of the horizontal arms. If a whole vertical circle is used, and it becomes bent, the whole instrument is put out of commission until the circle has been removed and straightened.

Many of the above remarks apply to

levels also. The dumpy, although a little more troublesome to adjust, is much to be preferred to the wye level, which is easier to adjust, but usually needs adjusting oftener. I would refer those requiring further information to Prof. I. O. Baker's comprehensive book on Surveying Instruments.—Manitoba Engineer.

Railway Finance, Meetings, Etc.

Atlantic and Lake Superior Ry.—A meeting of the holders of certificates of participation in the A. and L.S. Ry. Trust Fund was held in Montreal, July 18, to authorize the trustees to be represented and to vote in favor of resolutions submitted at a meeting of shareholders of the Quebec Oriental Ry. (Matapedia section), called for July 18; to authorize the trustees to appoint the first committees of the bondholders in accordance with the respective trust deeds; to make alterations in constitution for the management of the trust fund by authorizing the election of a Vice Chairman, and to enable general meetings to be held in Paris, France; and to appoint an additional member to the committee of management.

Kingston and Pembroke Ry.—After the transaction of the regular business at the annual meeting of shareholders at Kingston, Ont., Aug. 14, a special meeting will be held to consider the expediency of leasing the line to the C.P.R., to approve of the terms, conditions and form of lease; and to decide upon the means to be adopted for raising funds to retire outstanding mortgage debentures; to authorize an issue of bonds and to approve of the terms of mortgage to secure the repayment of any bonds that the directors may be authorized to issue.

Morrissey, Fernie and Michel Ry.—Press reports state that the operations of the Crows Nest Pass Coal Co., for 1911, showed a net loss of \$200,654. The company owns the M.F. and M. Ry., and it is said that the result of the operation of the line for 1911 showed a net loss of \$18,299. The amount of bonds outstanding is \$27,500, against \$37,500, at the end of 1910.

Rutland Rd.—The United States Supreme Court at New York gave a decision July 5, continuing the temporary injunction restraining the New York, New Haven and Hartford Rd. from acquiring the majority stock of the Rutland Rd. from the New York Central and Hudson River Rd. The court is of opinion that the proposed transfer is in violation of the Sherman law.

Temiscouata Ry.—Gross earnings for April, \$21,148; expenses, \$14,381; net earnings, \$6,767.

An Ottawa press dispatch of July 11, states that the Dominion Government has decided to call for tenders, shortly, for the construction of important harbor improvements at Victoria. It is stated that the work will cost over \$1,000,000.

The recent newspaper report that J. T. Davie and Son, Levis, had disposed of their shipbuilding and repair plant, is incorrect. The salvage plant, consisting of the steamboat Lord Strathcona, the schooner G.T.D., with pumps, etc., were sold to the Quebec Salvage and Wrecking Co., Ltd., Montreal, as mentioned in a previous issue.

The Fort William Elevator Co., Ltd., has been incorporated under the Dominion Companies Act, with \$500,000 capital and office in Winnipeg, to carry on a general elevator and grain warehouse business, and in connection therewith to own and operate steam and other vessels, and to conduct a general navigation business. The incorporators are, D. Horne, H. E. Swift, G. H. Yule, W. E. Davidson, M. M. Perdue, Winnipeg.