

Even in cities where the rate is fixed by the public utility commissions and individual meters are compulsory, district meters are essential to provide an efficient and economical system. With both individual meters and self-recording district meters the quantity of water necessary to satisfy all requirements should not exceed 50 gallons per head per day, except in special cases where the industrial consumption is abnormally high.

The financial situation as estimated in the foregoing illustrations will be as follows:—

Individual Meters.

Cost of operation...\$11,900	Saving in fuel\$1,200
	Value of water saved 1,277
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	\$2,477

District Meters.

Cost of operation...\$ 5,400	Saving in fuel\$1,800
	Value of water saved 1,914
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	\$3,714

The difference between the estimated cost of operating the two methods and the savings effected by them are \$9,423 and \$1,786 respectively, or the extra cost per water-paying consumer per annum is \$2.70 and 52 cents.

Coast to Coast

St. John, N.B.—More than 450 applications have been received from railway men for the new C.P.R. corps of engineers to be mobilized for war service.

Purple Springs, Alta.—At a mass meeting of farmers, Mr. J. J. McLellan presented a resolution to petition the minister of interior for government irrigation, or the extension of the C.P.R. system of irrigation, which was accepted.

Victoria, B.C.—Sir Richard McBride, says a dispatch, will ask the people of British Columbia to support his railway policy, which may include further assistance to Mackenzie and Mann to complete the Alberta-Victoria line on Vancouver Island.

Toronto, Ont.—A measure has been introduced by Mr. G. H. Gooderham, M.P.P., in the Ontario Legislature which will make owners of heavy motor trucks and wagons liable for rutted roads, and will give municipal corporations power to recover the amount of the damage from them by appeal to a county judge.

Vancouver, B.C.—In the suit of J. McIlwee & Sons, of Denver, against Foley, Welch and Stewart for \$500,000 damages, judgment was given for plaintiffs for \$31,000 and costs. The judge held that the plaintiffs should have gone back to work when they were offered a chance after the first dispute between contractors and sub-contractors occurred.

The Pas, Man.—Three thousand men will be wanted next month for construction work on the Hudson Bay Railway, says a dispatch. The right-of-way has been cleared of trees to within 40 miles of Port Nelson, and the grading work will be carried to this point by October. Supply caches are established from Split Lake to the bay with food for 5,000 men. The government's end of the work requires an additional force of 1,000 men, made up of engineers, rodmen, surveyors, bridge erectors, skilled labor and teamsters.

PERSONAL.

F. McARTHUR has resigned his position as city engineer of Regina, Sask. L. A. Thornton is now both city commissioner and city engineer.

T. A. RUSSELL has been appointed head of a school of military transport for the training of mechanical transport men at Exhibition Camp, Toronto.

M. WEIR, of Montreal, has been elected president of the Canada Foundries and Forgings Company, Limited, Brockville, Ont., in succession to John McGill.

ALLAN PURVES, superintendent at Chilliwack of the British Columbia Electric Railway, succeeds Robert King as superintendent of the London division.

THOMAS VILLENEUVE has been appointed sanitary inspector for Cobalt, in succession to Mr. Robert Sharpe, who has left for the front. There were 45 candidates for the position.

C. R. BURT, who has been factory manager of the Russell Motor Car Company, Limited, Toronto, for some time, has been appointed assistant general manager and elected to the directorate.

WILLIAM MAUND, travelling auditor of the Temiskaming and Northern Ontario Railway, has been appointed secretary-treasurer of the road in succession to Mr. A. J. McGee, deceased.

PROF. H. T. KALMUS, Queen's University, has resigned and is leaving to take up his residence in Boston. He lectured in metallurgy and also conducted experiments in Cobalt for the Government.

W. F. BRENDON RUBIDGE, '10, O.L.S., A.M. Can.Soc.C.E., is resident engineer on the construction of the Rosedale section of the Bloor St. viaduct for the Dominion Bridge Co., who are the general contractors.

W. H. PUGSLEY, reeve of Richmond Hill, has been elected chairman of the York County Highways Commission. The other members of the commission are Controller Foster, vice-chairman; Alderman David Spence and Warden Johnathan Nigh.

KENNETH J. DUNSTAN, manager of the Toronto Exchange of the Bell Telephone Co., has been appointed division manager, in charge of the Ontario division, with headquarters at Toronto. Frank Kennedy is appointed assistant manager of the Toronto exchange.

W. A. McLEAN, of the Ontario Highways Commission, speaking on international highways and good roads before the Canadian Club of London, proposed a national highway to commemorate the memory of Canadians who fall in the European war.

W. H. DAY, B.A., professor of physics, Ontario Agricultural College, reminds *The Canadian Engineer* that for a number of years the College has been making drainage surveys for farmers free of charge, except for travelling expenses. This offer is again renewed. Farmers having drainage difficulties may secure assistance by writing the department of physics, Ontario Agricultural College, Guelph, for information and regular application forms.

J. R. GRANT, M.Can.Soc.C.E., and secretary-treasurer of the Vancouver branch of the Society, was dined by representative engineers prior to his departure for the front where he will serve with the Royal Engineers. Mr. F. C. Gamble, chief engineer of the department of railways, Ottawa, the president of the Canadian Society, was in the chair, and the vice-chairman was Mr. G. R. G. Conway, chief engineer of the British Columbia Electric