

of the contract and the notice received on April 3 to make good damage to cement, which was attributed to frost. Mr. McLeod says also that on May 12, the city protested to him to go on with and make good the work said to have been damaged by frost, and repudiating his charges of defective foundations. The following serious errors in the design of the structure are named by Mr. McLeod: 1. In regard to the original irregularity of the surface of the ground, which necessitated lowering high places and filling in low ones, thus offering unequal bearing capacity for the foundations, the structure should have been designed to provide for footings of proportionate bearing capacity to prevent unequal settlement. 2. That the structural features of the building should have been designed to be separate and distinct from those features dictated particularly by the object for which the building is to be used, the footings and piers being carried down to a firm foundation separate or otherwise, supported with due regard to the nature of the material on which the structure is to be founded and independent of the floor. 3. The construction and design of the arch system is such as to have aggravated any damage or disturbance beyond what would ordinarily occur. 4. The floors and walls should have been designed to be absolutely watertight in view of the fact that even so small an amount of leakage as that allowed by the specifications into soil of the nature in question will undoubtedly cause settlement or subsidence, which must result in the cracking of the floor walls and the certain failure of the structure.

Ottawa, Ont.—At the sittings of the Board of Railway Commissioners to be held in Ottawa on Tuesday, June 17th next, the board will take into consideration the proposition that, by limiting the height of freight cars operated on railways subject to its jurisdiction to 13 feet 6 inches from the top of rail to the running board, trainmen would be safeguarded, and grade separation facilitated; also of the proposals submitted by the Canadian Freight Association in conformity with the suggestion that this object would be promoted by basing the minimum weights of the Canadian freight classification for light and bulky articles on the cubical capacity of box cars, instead of on their length, as at present.

Ottawa, Ont.—The Government has decided to institute a new departure in connection with the forestry branch which will undertake the work of investigating the possibilities of conserving our forests by reducing waste in manufacture, by prolonging the life of forest products used in construction, and developing uses for products now wasted for the lack of knowledge as to how they may be employed. To take charge of this work Hon. W. J. Roche, Minister of Interior, has selected A. G. MacIntyre, at present editor of the "Pulp and Paper Magazine," and acting secretary of the Pulp and Paper Association. Mr. MacIntyre is a graduate of Acadia University, and he also graduated from McGill University in chemical engineering. He was chemical engineer of the Jonquiere Pulp Company, where he had charge of the water power, water discharge measurements, etc., and he put in a bleaching system of his own design, saving in the value of the paper. He was also engineer in charge of construction for Price Bros. at Kenagami, Que., and did the investigation for the new sulphite mill. His special qualifications should assure the successful carrying out of the project. The work will be carried on at present in co-operation with McGill University. The various classes of investigation to be carried out will be as follows: Wood tests, timber physics, wood preservation, wood distillation, and wood pulp. This is an advanced step on the part of the Department of the Interior. The forestry branch is one in which Dr. Roche has been particularly interested, and

this new step is along the lines of modern scientific forestry work in Germany and other European countries. To fulfil the prime object of forestry, which is to preserve and conserve our forests, it is felt this line of development must be undertaken.

Calgary, Alta.—That it will be inadvisable to establish a filtration plant on a large scale until Calgary definitely settles the question of source of water supply is the emphatic statement of Waterworks Engineer A. Ellison Fawkes. Mr. Fawkes discussed the situation at some length after having consulted Saturday with T. Aird Murray, of Toronto, one of the recognized authorities on water supply in America. At the present time Mr Fawkes is having erected a temporary chemical purification plant which will be part of the pumping station supplying water from the Bow River as a standby to the Elbow River gravity system. This pump will afford a 20,000,000 gallon supply daily from the Bow River, and the water will be treated with hypochloride and sulphate of aluminum. At the present time, the water taken from the Bow is treated only with hypochloride, which effectually kills all germicidal life. The addition of aluminum sulphate to the water, however, will also remove suspended matter and the chemical precipitates, giving a clarity of about 75 per cent. The hypochloride makes the water practically pure so far as typhoid and the like are concerned, having an efficiency of about 98 per cent. The by-law carried an appropriation for \$50,000 for the establishment of a turbidity filtration system in connection with the Bow pumping station, but Mr. Fawkes decided that it would be impossible to erect a proper filtration system at this point under a cost of \$400,000. To spend such a sum on a filtration plant when the city is as yet undecided whether the supply shall ultimately be obtained by gravity from mountain streams or lake in the Rocky Mountains, the waterworks engineer considers foolish. He discussed these points with Mr. Murray when that expert looked over the water situation here, and Mr. Murray agreed that the temporary chemical treatment of the water is the best solution of the problem at present. It costs less than \$500 to install the chemical treating apparatus at the Bow River station, and it will soon be in working order. According to Mr. Fawkes, the aluminum sulphate not only removes suspended particles from the water, but also removes the chemicals after their work is done. When added to the water, the aluminum sulphate spreads out in a glutinous form and collects the infinitesimal particles of suspended matter, the dead germicidal matter which has been killed by the hypo-sulphide, and also the precipitate formed by the hydro-sulphide after the chemical reaction takes the addition of the aluminum sulphate and is then strained out through a series of screens. The water comes out 98 per cent. pure, so far as germ life is concerned, and 75 per cent. clear of suspended matter as silt, clay and the like.

Port Coquitlam, B.C.—Engineers for the cities and municipalities on the route of the proposed highway to Port Coquitlam have begun preliminary surveys of the grades with a view of estimating the cost. It is probable that a new road will be built between the North road and Port Moody on an easier grade than that of the present highway. The engineers forming the party were: City Engineer Fellows, Vancouver; Engineer McPherson, Burnaby; Col. Davis, Port Moody; Engineer Kilmer, Port Coquitlam. In addition to the new road from the North road to Port Moody, City Engineer Fellows believes that there ought to be a new route from the Vancouver city boundary to Barnet to eliminate some of the heavy grades on Hastings Street. He also advocates that Pender Street be made the main route out of the city because of Hastings Street being a car line thoroughfare. Profiles will be drawn of the various sections and another meeting will be held later. The plan will then