

the moral to be learned from those century-old works of the Royal Engineers and Colonel By.

Under the industrial system the stress of competition must be held responsible for tremendous waste and lack of combined effort. Work and study have suffered through undue haste. Efficiency has been subordinated to expediency. But the error has been recognized. There would appear to be a growing movement in favour of engineering service organized by the state. Such a service may be found in France known as the Société de Ponts et Chaussées; in India and Egypt where vast engineering projects are carried out by the civil servants. In the United States the Army Engineers are responsible for the design and construction of federal works — harbours, waterways and canals; the engineering staff of the Panama canal has proven such an efficient body, it is suggested that the entire organization should be retained and employed upon a great national undertaking in the Mississippi valley.

In Canada the various public service departments have each a staff of engineers, but each Department works entirely independent of the others. Practically no steps are taken toward co-operation or systematic organization of the state engineers. In such a magnificent domain, awaiting development, with great engineering problems to be faced and solved, the day has arrived when some move ought to be made in the direction of the scientific handling of national projects. There is great need for a Supreme Court of Engineering.

Amongst the eight million inhabitants of Canada to-day there is ample material for the formation of such a body. The great works of construction already in existence is good evidence of the nation's ability to accomplish any undertaking. National development could be reduced to an exact science by the organized efforts of experienced, farseeing men, acting in co-operation; acquiring and recording information systematically.

It would not be proposed to make a revolutionary sweep of the present intricate system of departmental engineering, rather to form a nucleus around which the twentieth century organization could be gradually built up. Studying the history of industrial civilization all roads seem to lead to the principle of combination, evolution from distinct units to corporate organization. The world's captains of industry appear to have worked out an unassailable method of assuring economic efficiency. Without aiming to effect a corner in technical experts—nationalization of the engineering profession is not yet above the horizon of possibility—it would be possible to draw together and form into,—let it be termed, a Board of Engineering Control; a number of engineers with experience and ability sufficient to pronounce with authority upon any engineering project. It would be essential that such a Board be entirely non-political, as the Supreme Court of Justice is intended to be. In the engineering profession there is an abundance of public spirited men doing faithful service in Canada and actuated entirely by love of their work.

In personnel the suggested National Board of Control could consist of five directors, equivalent to president and vice-presidents of a corporation. In the first formation directors might be appointed by a Royal Commission after due investigation of all conditions relating to the engineering expansion of Canada. The Board should have power to fill all vacancies in future, either by promotion or appointment; also power to select from amongst themselves the permanent chairman of the Board. The appointment of director should be for an unlimited period with retiring pension after a specified period of service.

As with the present system of Auditor General the Board of Engineering Control should be responsible to Parliament alone. The Board should have power to dismiss or appoint any subordinate and have authority to sus-