

ture was put into the moulds with the main mass and tamped so that the two formed a monolith.

Between the up-stream and down-stream walls of the wharf, over 1,000,000 cubic yards of dredging material was filled in. Although the walls, even without a backing, successfully resisted the ice shoves of six seasons, while the work was going on, it was decided to give them additional strength, before handing the wharf over, by anchoring them to cement blocks placed midway between them. Accordingly some 52 blocks of concrete, each weighing 20 tons, were buried along the centre of the wharf, and, by means of steel rods, the walls of the wharf were anchored to them. This would add 1,040 tons to the weight of concrete used in the wharf, making a total of 39,640 tons. In addition to this, were used 26 million feet, b.m., of timber, and two million pounds of iron, in bolts. The quantity of broken stone used for all purposes was 200,000 cubic yards, and the quantity of cement 65,000 barrels.

NEW PRESIDENT OF ELECTRICAL ASSOCIATION.

Mr. R. S. Kelsch is the choice of the Canadian Electrical Association for the position of president. The other officers elected at the meeting held in Montreal were W. N. Ryerson, Ontario Power Company, first vice-president; and R. M.



Mr. R. S. Kelsch, C.E., newly-elected President of the Canadian Electrical Association.

Wilson, of the Montreal Light, Heat and Power Company, second vice-president; T. S. Young, Confederation Life Building Toronto, secretary.

Mr. Kelsch is well deserving of the honour he has received. He has had some 20 years' experience in electrical engineering work, half of which was gained in the city of Chicago. In 1907 he came to Montreal to erect and operate the Lachine Hydraulic system, and when that company was absorbed by the Montreal Light, Heat and Power Company he opened an office as consulting engineer and was retained by the M. L. H. & P. Co. to consolidate the two systems. The systems differed vastly from each other, one being three-phase 60-cycle system and the other a two-phase 66-cycle system.

Mr. Kelsch has also paid considerable attention to the problem of frazil ice, and has designed a number of power

plants, among which are the following: The Kaministiquia Power Co., Fort William; The Ottawa and Hull Power and Manufacturing Co.; The Sherbrooke Power Light Heat Co.; The Quebec Railway Light and Power Co.; and Brantford Electric Light Co. Mr. Kelsch was prominently connected with the organization and carrying out of the Canadian Electrical Exhibition Co., being its vice-president and managing-director.

MUNICIPAL ENGINEERS.

Goderich, Ont., Sept. 25th, 1907.

Editor Canadian Engineer:—

Sir,—No doubt many of your readers would have hailed with delight your timely reference in a recent number to the position of municipal engineers in relation to councils employing them in a professional capacity and afterwards dictating to those experts who have made their profession a life-long study the manner in which their duties should be performed. Could anything be more humiliating to a member of the engineering profession than to have a board of men, selected from the ranks of the trades and industrial classes, preside over his deliberations in formulating plans which call for the display of the utmost scientific skill and ingenuity on his part? We seldom hear of a case where a doctor has been called upon to change his prescription or a surgeon criticized by the patient for the manner in which his skill enables him to perform a successful operation,—and when a lawyer sets his seal to a document there is an end of all strife, but not so with the unfortunate engineer, whose best efforts are continually assailed with friendly suggestions as to the cheapest and most practical way of performing the work. The time is now opportune when municipal authorities should be put in possession of facts in regard to what our engineering societies have done for the profession, in raising its standard and excluding from its ranks the untrustworthy and incompetent,—thereby placing at the service of corporations men who are capable of being entrusted with the economic expenditure of money in the construction of public works. Our engineering societies are well organized to cope with the hazards of the situation in question, but the writer knows of no legislation which protects the public from being imposed upon when the question arises of employing the services of a competent engineer. Unfortunately, too frequently, the situation is swayed by political influences, or perhaps personal ill-feeling from some petty cause, such as the question of social distinction, or it may be the inadvertent maladministration of public affairs. These are circumstances over which legislation has evidently no control, and as the engineer is pretty much in the same position as the doctor or lawyer in respect of being left free to accept engagements when called upon, the public will always be to some extent in ignorance of the professional standing of the men who are entrusted with their affairs. It may so happen frequently, notwithstanding all this uncertainty that the right man may be procured, but he may not always find himself in the right place. To preserve harmony and sustain a clear reputation, he may be called upon, under these circumstances, to exercise those qualities which have ennobled the profession and made it the virtuous handmaid of science and genius, notwithstanding the humiliations to which he may be subjected.

We have arrived at an age in the history of this country which calls for a display of the utmost ingenuity and skill on the part of its engineers, and one often wonders if the period will be of transmutation of a purely metallic form or a retrogression to that of a composite type. Although this is pre-eminently the steel age our best efforts are nevertheless frequently attended with disaster, not so much the result of miscalculation in directing the forces in nature as in our misconception of the nature of the materials which contain them.

We occasionally hear mutterings of the possibility of the public losing confidence in the ability of our engineers to cope with the great problems of the age. I may say right here that it will be a woeful day for the progress of the countries when confidence is lost in the members of the engineering profession, who have always been foremost as pioneers of