

The Canadian Engineer

Established 1893

A Weekly Paper for Civil Engineers and Contractors

Terms of Subscription, postpaid to any address:

One Year	Six Months	Three Months	Single Copies
\$3.00	\$1.75	\$1.00	10c.

Published every Thursday by

The Monetary Times Printing Co. of Canada, Limited

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MODERN MACHINERY SUPERSEDING LABOR

POWER-DRIVEN machinery is being manufactured with ever-increasing capacities, reducing labor costs (in hours, at least, if not always in dollars, owing to increasing wages) per unit of work done, permitting larger jobs to be completed within the same time, reducing the important item of "interest during construction," and providing the engineer with more powerful weapons with which to overcome obstacles and to harness the forces of nature.

A striking example of the utility of big plant for big work, is the Queenston-Chippawa power canal, the progress of which is described in this issue. The amount of earth and rock being handled by a comparatively small force, constitutes a record previously unknown in the construction world. The daily removal of over 20,000 cu. yds. of earth and rock, in addition to the accomplishment of a great amount of other work such as railroad construction, bridge-building, etc., all with an average daily payroll of considerably less than 2,000 men, is a feat that could not have been performed a few years ago without expenditures for plant that would have been enormously out of proportion to the value of the work being done. This feat has been made possible by the development of economical machines that are giants in comparison with the machines of a decade ago.

The construction undertakings of the past were not large enough, with but few exceptions, to permit of huge investments in construction plant, and in many cases where unusually powerful equipment could have been used, it was not designed owing to the recognized impossibility of finding a market for it after the work had been completed. To-day there is almost invariably a market for all construction equipment that is in good condition, regardless of its size.

The power-shovel manufacturers and the builders of large crushers are, in a great measure, responsible for the

improved methods of handling rock, and they predict that within a very short time they will be selling 10-yd. shovels, 84-in. by 120-in. jaw crushers and 84-in. gyratory crushers. On the Queenston-Chippawa job there are 8-yd. shovels and a 60-in. by 84-in. jaw crusher. Since this job was started, 66-in. by 86-in. jaw crushers and 60-in. gyratory crushers have been built and placed in successful operation.

The evolution of huge shovels and crushers has been slow but steady and sure. Sizes of crushers built thirty years ago, and at that time considered large, to-day are not manufactured excepting for laboratory work, as their operation is no longer economical.

ARE YOU AN UNRESPONSIVE CITIZEN?

ONE of the greatest statesmen in the United States, whose name, it is said, cannot be disclosed, recently made the following statement concerning the activities of the United States Engineering Council:—

"Your task is appalling. You have been elected to lead engineers into a political reform. They are the most unresponsive citizens that we have. Your organization has a praiseworthy purpose, but if it were sponsored by almost any other group of reputable men than engineers there would be more promise of success. If your organization succeeds, I believe you will find that it will not be the engineers who have carried through. Their aloofness and indifference in all matters outside of their own professional sphere, are among the unexplainable things in our political life."

This statement, we consider, is a totally unmerited condemnation of engineers as public-spirited citizens. They are not "unresponsive citizens." To the contrary, they are among the hardest-working, most unselfish, modest members of society. Because they do not toot their own horns like professional politicians, those politicians, it seems, are prone to consider them "unresponsive." Had the statesman substituted the words "self-effacing" for the word "unresponsive," his summing-up of the situation would have been far more accurate and truthful—all but the last sentence. The last sentence should read:—

"Their hesitation in participating in matters outside of their own professional sphere is explained by the conditions now existing in our political life, whereby lawyers in high places appoint fellow lawyers to all positions of trust and prominence, almost wholly regardless of the special technical knowledge required for a proper fulfillment of the duties of those positions."

But perhaps the statement doesn't warrant our getting agitated. It is an anonymous statement. The man who made it should sign it and stand behind it, otherwise it must be classed with anonymous letters. The American Association of Engineers has forwarded a circular to all of its members calling their attention to this statement, and apparently attaching great importance to it. The inference made by the association's circular, in describing the statesman as "one of the greatest," is that President Wilson made the statement, because in Washington there is an unwritten law among newspaper men and others that the president must not ever be directly quoted. This rule does not apply to any other statesman. The inference that can thus be taken is undoubtedly unjust to President Wilson, because that great statesman has better sense and a keener insight into all professions than to make the mistake of interpreting the engineer's retiring disposition as indifference or unresponsiveness to the call of public duty, wherever or whenever it may be heard.

The Asphalt Association has decided to open an office in Toronto, and has appointed Capt. Bruce Aldrich as district engineer. Capt. Aldrich has resigned as deputy works commissioner of Baltimore, Md., where he had seven asphalt plants under his jurisdiction. He organized and equipped the municipal laboratory at Baltimore, and supervised the construction of more than 3,000,000 sq. yds. of sheet asphalt and bituminous concrete.