

the relative cost of water and steam power, as used at the Montreal Water Works, and the most of them have been engaged in the construction of other Water Works, which, in some cases, demanded the use of water, and in others steam power; and are, therefore, far more familiar with the application of each, in its appropriate place, than the

authors of the pamphlet who have no experience in either.

While perusing the pamphlet, I made endorsements thereon, which I intend to submit in reply to the minor allegations therein made.

Respectfully submitted.
(Signed,) WM. J. McALPINE.

EXTRACTS FROM, AND ENDORSEMENTS MADE ON THE PAMPHLET OF MESSRS. COOKE & PLUNKETT.

Page 3—"The chief feature of Mr. McAlpine's report, and that which will strike any one as remarkable in an engineering document, is the masterly way he confines his observations, with a few exceptions, to general statements, and avoids committing himself to particulars, and, above all, to figures. To such an extent does he carry his caution in this respect, that although he strongly advocates an open canal somewhat like that proposed by Mr. Lesage, yet he completely abstains from giving any opinion respecting two of its most important features."

"Even on the very important question of cost, Mr. McAlpine gives no estimate whatever. It thus appears that the gist of the report merely consists of a general recommendation to build an open canal, of which the form of prism, details of the protections and form of the entrance and cost of construction are still undetermined and unknown."

It is not customary for consulting engineers to make up the details of plans and estimates unless specially requested. This course was followed by Messrs. Shanly and Francis, and, I believe, by Mr. Keefer.

The committee evidently did not expect from me such details or estimates, for they requested me to report within a few weeks, knowing that the preparation of such details would have occupied the time of a staff for several months.

My report was in the hands of the Committee several months, without any intimation that they desired from me any more than it furnished.

The writers of the pamphlet have, therefore, arrogated to themselves the right to censure not alone me, but also the Committee.

The following extracts from my report will show that even on this point they are somewhat mistaken:—

"From the foregoing discussion, it would follow that the plan of an enlarged canal

on a new route is the proper one to adopt. Its dimensions and particulars of construction will be the next subject for examination."

"The plan of Mr. Shanly or Mr. Lesage, and particularly the latter, is the one recommended, and the location (with a slight modification at the entrance,) and the dimensions proposed by Mr. Lesage are proper."

"In conducting this examination, I have had occasion to make estimates of the cost of the various plans, and calculations in regard thereto, which were sufficiently accurate for the purpose required, and for the comparisons made in the argument; but, as the data furnished me were not complete, it would not be advisable to insert these estimates in this communication."

"I have, to a considerable extent, relied upon the estimates made by Messrs. Keefer, Shanly and Lesage, modifying them where my opinions, in regard to the plans or cost of the work, differed from those gentlemen."

"In regard to the prism of the new canal, I have followed the opinions of Messrs. Lesage and Sipple, in making the estimates of its cost and capacity. The experience of these gentlemen, on the effect of the rigorous climate upon canals, so similar to the one proposed, entitle their opinions to great weight. Before new works are commenced, it may be advisable to have the question of the form of the prism again carefully examined."

"Before I could advise in regard to the details of the protections and form of the entrance to the new canal, it would be necessary to obtain more information than I now have of the action of the ice and frazil, which pass down the river at that place."

"Whenever you shall have determined upon the general plans of the new works, I will be happy to furnish your engineer with some further suggestions in regard to the