

gation works, many opportunities occur for the collaboration of architect and engineer. When the drawings were being prepared in the office of James Mansergh for those wonderful dams in the Elan Valley for the supply of water for Birmingham, Mr. Mansergh asked Professor Pite and Sir Alfred East, the one an architect, the other an artist, to study the site and make suggestions to him upon their architectural treatment. The result is magnificent, and no one who has seen those works since their completion can fail to be impressed with the beautiful designs and their fitness with the surroundings. In this case, and also in the case of the Vyrnwy Dam for the storage of water for Liverpool, the utilitarian work of the engineer has created a beauty spot accessible to tourists. The large works recently carried out by the Irrigation and Reclamation Departments of the United States include a number of great dams which, together with the work of the Boards



Intake Tower, Coquitlam Lake, New Westminster Waterworks, B.C.

of Water Supply for New York City and Boston, set examples that can with advantage be followed in many other places. With many dams, such as the simple reinforced concrete type, no attempt at architectural decoration beyond perhaps a carefully designed parapet is required. In the Bassano dam,<sup>†</sup> which is a very massive structure, it is to be regretted that the gate-houses have been designed in the domestic half-timbered style—a style which seems singularly out of place when forming an integral part of what is a magnificent concrete structure. The influence of the architect is not always satisfactory, even when his collaboration is sought by the engineer. As an illustration of this, the reader is reminded of the building of the Assouan Dam in Egypt, and of some remarks

made by Sir Benjamin Baker, the engineer, to the effect that after the drawings of the dam had been completed they had been turned over to an architectural department, and the architect, having returned from Egypt saturated with Egyptian temples, had covered the design with details of Egyptian architecture. Sir Benjamin Baker told the contractors who were tendering upon the work to take no notice of the architectural ornament as he did not want the dam to imitate a temple built four or five thousand years before. When the dam was in progress, tourists of all professions—artists, architects, and engineers—all of whom had been dosed with Egyptian temples themselves and had their ideas of how a great dam built across the Nile should look—visited the works. Sir Benjamin Baker told the contractors to have full size models made of the suggested adornment and placed on some of the completed parts of the dam so as to make the suggestors ashamed of themselves. These models frightened Lord Cromer who told Sir Benjamin that he could have all the money he needed to make the dam safe, but that he was not going to spend a hundred and fifty thousand or two hundred thousand pounds for architectural details. Sir Benjamin told Lord Cromer there was no intention of doing so, that he had put up the models to show how the ornament would look in strong sun-light with deep shadows. The result was that everyone agreed that what might look all right and proper on paper for a limited length would be madness applied to a cornice  $2\frac{1}{2}$  miles long, and here perhaps is an instance where collaboration with architects not understanding the character of the dam would have led the engineer astray in designing such a structure.

**Power Houses.**—Canada, in proportion to her population, has in recent years made enormous strides in the development of water power, and from the Atlantic to the Pacific great developments have taken place. In the design of water power plants there is a great opportunity for the engineer to dignify his work by paying more attention to the design of power house buildings and their surroundings. Often these power plants are situated amidst magnificent scenery, and the only blots upon the landscape are the buildings and pipe lines. There are, of course, notable exceptions such as the power houses at Niagara (on the Canadian side) where an attempt has been made to harmonize these plants in such a way as not to detract from the beauty of the Falls. But too little consideration has been given so far by power companies to the erection of buildings that will be a delight to the public. The Water Power Branch of the Department of the Interior has recently taken a great interest in this particular matter, and has been encouraging the idea by offering prizes for the best designs for proposed power houses on the Bow and Winnipeg Rivers. This is an excellent step forward, and I think when plans are forwarded to the Government Department for approval the question of the design of power house exteriors should also be considered by the responsible officials. That the architect can successfully make a beautiful power house, even if constructed of reinforced concrete without other materials, is shown in the design of Lake Buntzen Power House No. 2 (illustrated herewith). This plant has been built upon a site visible for seven or eight miles on an arm of the sea that is a favorite yachting resort, and the design is an imposing one from every point of view, the simple lines and massive proportions harmonizing with the precipitous mountains in the background. This matter is largely in the hands of the engineer who is not often hampered in his desire to produce a fine building, and in many cases by a careful study of proportions and the economical use of material, no extra cost will be incurred.

<sup>†</sup>See *The Canadian Engineer* for January 1st, 1914, and September 30th, 1915.