

present when the Chief Engineer advised that oblique braces to the north side of the coffer-dam should be placed with the lower ends of the braces as low down as possible, and that, notwithstanding my repeated reminders to the contractors, they were not put nearly as low as they might have been, as the accompanying photograph shows.

A photograph sent with my letter of 4th March, 1880, also shows that the buttress piles broke in two where the lower ends of the braces thrust against them, which could not have been the case had the braces been placed lower down as advised.

The contractors, in their letter of 31st May, 1880, advanced certain arguments in favor of their theory that the nature of the bottom was unknown, which theory, I believe, was disproved in my report of 5th June, 1880.

In the letter now under consideration, the contractors return to the same theory, with the same or similar arguments, and I presume it is unnecessary for me to quote from my former letter on the subject.

The contractors also repeat their proposal to form a new coffer-dam outside the north side of the wrecked one, "as is consented to for east and west sides."

I am not aware of any consent being given to form another dam outside the present one on the east side; indeed, a moment's consideration shows that it would be impracticable, as the present coffer-dam joins the present Aqueduct so near the south archway that another dam in front of it would terminate in the south archway, which idea is preposterous.

It is true, as the contractors state, that the most contracted part of the channel is at the north-west corner of the dam, where the second attempt at forming a coffer-dam was made, outside the first attempt, and narrowed the channel to the extent of the area occupied by the second dam. It must, however, be remembered that since the waterway was narrowed as just stated, we have had no ice worth mentioning, with high water, or very serious consequences might have resulted, and to propose building a third coffer-dam still further into the river and diminishing the waterway still more seems unreasonable.

The contractors also say that "the dam on the north side is so close to pier foundation as to give no support to piles, &c., &c."

In the contractors' letter to the Department, dated May 31st, 1880, they propose to form a new coffer-dam by driving oak piles 45 feet long and 14 inches deep, so as to stand six feet above water, and to go 12 feet below bottom of excavation and ice, in what may be termed a supplementary letter, dated June 3rd, 1880, the contractors inform the Department that the plan which they propose is in accordance with the advice of the most experienced hydraulic engineers, outside the Department, in the country.

It would appear, therefore, that the contractors have abandoned the advice of the above mentioned experienced hydraulic engineers, and are not now prepared to carry out their recommendations as expressed in their letters to the Department dated May 31st and June 3rd.

That such really is the case is proved by the fact, already reported, that since the contractors commenced work upon the third attempt at a coffer-dam they have been driving pine piles 12 by 12, and only 30 feet long, instead of oak piles 45 feet long and 14 inches deep, as recommended above.

With reference to the contractors' proposal to proceed at once to form the north side of the coffer-dam, so as to include the fourth pier and arch, I would say that a proposal to change the design laid down in the contract comes with rather bad taste from the parties who are now making slow progress in a third attempt to form a coffer-dam in which to build the first section of the Aqueduct.

In the last clause but one of the letter under consideration, the contractors say: "Our plan for the proposed new coffer-dam having been approved of, we would be glad to have an Inspector placed over this work, to see to its proper execution."

The above paragraph, which speaks of the contractors' plan (so-called) being approved of, is not in accord with other portions of the letter, and the appointment of an Inspector to see to the proper execution of the coffer-dams, implies either that the contractors have not confidence in their own ability to carry out their work, or