

On the 10th of December, the water in the coffer dam had been lowered nine feet, and the following day the river rose two feet, the water coming in under the frozen clay faster than the pumps could discharge it.

The pumps were continued working, and men employed digging out frozen clay, and replacing it, until December 9th, when no headway being made the contractors stopped pumping and the water soon rose in the coffer-dam to the same height as in the river.

At this stage of the work, the contractors commenced to drive stay piles inside the coffer dam to assist in strengthening the north side, but to do this, a pile driver, that could be worked on the dam, had to be built.

Shortly after work was commenced with this pile driver, one of the guys gave way, allowing the pile driver to fall and be shattered, and sending the hammer into twenty feet of water, where several days were spent in searching for it, a new one having to be got at last.

During the time when the stay piles were being driven, men were constantly employed in removing frozen puddle from the coffer dam, and endeavoring to substitute good puddle.

Driving stay piles was discontinued January 18th, 1879, and by January 27th, additional tie rods and some braces were in position when the pumps were started.

The water was drawn down rapidly until the evening of January 30th, when only four feet of water remained in the coffer-dam.

The pumps were stopped for repairs, and the following day the river began to rise, developing leaks in the dam which continued increasing until February 2nd, when the coffer-dam was again full or nearly so.

On the 6th of February, the pumps were started again; on the 10th February, 1879, the first section of the aqueduct coffer-dam was unwatered for the first time.

The contractors at once commenced putting a plank road into the aqueduct foundation pit, and a start at the excavation was about made, when a rise in the river again filled the coffer-dam on the 9th of March.

On the 17th of March, the pumps were again started, and on the 20th of the month, the water was lowered sufficiently to admit the roads being got into shape again for continuing the excavation.

From the 20th to the 29th of March, 1879, a small force was employed at intervals, excavating in the aqueduct pit, and on March 30th the water again came in and stopped the work for two days.

The pit was then unwatered again, and remained unwatered until April 10th, when the water was let in by my directions to guard against a threatened break in the canal bank, as I telegraphed to you the same day.

It will therefore, be seen, that up to April 10th, 1879, the work done in the foundation pit was small in consequence of the repeated failures of the coffer-dam due to imperfect construction, and for which the contractors are responsible.

The letter goes on to say: "We were not permitted to unwater the foundation again until the latter part of October of that year (1879), since when we have worked in the preparation of the foundation when it was possible to do so, with all the force and appliances that could be used, and when permitted by the Engineer in charge. At present we are refused to proceed with the excavation of that portion of the foundation nearest the present canal embankment." It was not until the 20th of October, 1879, that the south oblique wall, connecting the present and contemplated Aqueduct was sufficiently advanced, and the mortar set, to make it desirable for the weight of the canal bank to be borne by it, and I therefore required the water to be left in the coffer-dam until that date, as the removal of the water would have withdrawn the support from one side of the pit in which the oblique wall was built, and have thrown the weight of the canal bank upon a green wall.

It is true that I have not permitted the contractors to remove all the material directly in front of the oblique wall at present for this reason:

The oblique wall is built as you are aware, on a bed of concrete 2½ feet in thickness, and in consequence of the oak sheet piles which were driven in front of it, not