

arches are sometimes nearly in regular curves, and sometimes quite irregular. They often have the appearance of having been forced, while in a semi fluid state, from a regular arch in which they had been previously formed, by a superincumbent weight, or some other force. The upper stratum varies in thickness apparently from four to ten feet or more. The inferior strata are generally much thinner than the upper, and more irregular. Some of these arches are extremely curious, particularly one which is intersected by the rail road, near where it crosses the Potomac, and others of a similar character in that vicinity, which are intersected by the canal.

We finished our day's journey at so late an hour, as to be obliged to defer our visit to the canal basin to the next morning. This will be formed in the central part of the town, and indeed the town is apparently built in great measure in reference to it. There will in fact, I suppose, be two basins—one an enlargement of the upper level of the canal itself, upon the borders of which, or of branch canals leading into it, merchandise may be loaded and unloaded upon boats there lying; and the basin or reservoir to be formed above, by a dam to be erected across the Potomac, a short distance below the discharge into it of Wills's creek, one of its most important branches. The foundations of this dam are already laid, extending across the river, embedded upon the rocky bottom of it. The wings of this dam are also built, in one of which is the sluice way for the supply of water to the canal, and also a lock for the transfer of boats from the canal to the basin above, and from the basin to the canal. This structure, like the other masonry, is of great strength, and of excellent materials and workmanship. I do not now recollect the proposed height of the dam, but it will be such as to afford a sufficient depth, in the reservoir thus formed, for the floating of loaded boats, over a very large space, and a sufficient fall to create a power for manufacturing purposes, from the surplus water of the river. It will in fact create a slack water navigation, extending along the main branch of the Potomac, if I mistake not, for some miles, upon which rail roads from the mines may, if it should be judged expedient, discharge their loaded cars.

I find it necessary, notwithstanding my efforts to curtail the narrative, to defer the account of our visit to the Mount Savage Iron Works, and the Coal Mines, to another letter.

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Boston, Nov. 18, 1845.

Having taxed your patience with a much longer narrative of the excursion of our party on the canal, the sole object of which narrative was to afford some distinct notion of the state of the canal, the prospect of its completion, the durability of the work, and its capabilities for doing the business for which it was designed. I proceed now to give a short account of a hasty visit which we made to the Mount Savage Iron Works, and to several of the coal mines in the vicinity of Cumberland.