does credit to his engineering skill. Some blasting was done in the harder portions, but most of the work was performed with gads and picks, as the sandstone was soft and friable.

Some time in the latter part of 1833 the tower was completed, so that shot could be made, and John Metcalf was for many years the regular shot-dropper. Referring to the account-books of the company kept by Metcalf from September to November, 1833, we find every indication of activity at Helena, and this is probably very nearly the time when operations at the tower were commenced. Besides Metcalf, there were five men employed, Thomas B. Shaunce, B. Smith, J. Wallis, B. Gardepie, and Mills.

¹ John Metcalf was born in Rhode Island in 1788, and died at Baraboo, Wis., Jan. 22, 1864. Educated at Boston, at the age of nineteen he began the practice of law in New York. His health failing him, he went to Pennsylvania and worked in the pineries a few years. Thence he went to Missouri, in the interest of a stock company that had purchased land there. Thinking it unlikely that the small French town of St. Louis would ever develop into a business center, he located at Hercula neum, where he built and ran two stores and was connected with a shot-tower. He next purchased a farm in Jefferson county, Mo., where he resided for many years, holding the office of sheriff for a number of terms. In 1831 Daniel Whitney hired him to take charge of his business at the portage; and some years later, probably 1839, he was given the management of the Helena shot-tower, which position he held till 1847. In 1843 he bought a third interest in the Shot-Tower Company, which in 1847 he sold to Washburn & Woodman. In December, the same year, he bought of Alvah Culver a half interest in a sawmill at Baraboo (Sauk Co. Deeds, Vol. A, p. 438). Out of this investment was later evolved the firm of Metcalf, Paddock & Waterman. (See Canfield, Baraboo and its Water Powers, p. 12.) Metcalf was a gentleman of the old school, a man without an enemy, a thoroughly upright and honorable character. Such is the unvarying testimony of all who knew him during his sixtythree years of residence in Wisconsin. With Daniel Whitney he is to be remembered as one of the founders of the shot-making industry in our State, as well as one of the first lumbermen on the Wisconsin river. His account-book, and many other of his papers, are in the possession of the Wisconsin Historical Society.

² In Metcalf's account-book, Shaunce is credited (Sept., 1833) with 187 days' previous work. This probably expresses quite accurately the time spent in excavating the tower shafts.