



Lee Badger, Gothic Revival Clock Tower. Photo, Sutter Photography

This Gothic Revival clock tower displays an historic clock that served for many years in the steeple of St. Michael's Church in Rochester, New York. Fully operational and historically correct in its new home, the clockworks rest on an elegantly painted cast iron chassis in the base of the tower. A brass drive shaft operates the original clock faces above. Clock enthusiasts recognize it as an E. Howard Company #2 Tower Clock with three separate weight-driven trains for timekeeping, for hour striking and for Westminster chimes at the quarter hours. The five bronze bells behind the dials were cast by Taylor in London.

The design concept for the new steel and cast iron tower was a collaboration between architect/designer Lee Pharr, clock restoration specialist Durward Center and the owner of the clock. Lee Badger was commissioned to bring the design into reality at Arvil Works studio in Hedgesville, West Virginia. Constructing the tower was more than a fabrication project. It was an exercise in creative collaboration, construction coordination and metal working versatility. Badger was regularly in touch with the design collaborators to assure that the tower met its functional and aesthetic requirements. The clock specialist provided a full-scale maquette of the clock works to work out mechanical details and came to oversee the critical placement of pulleys and bearing supports. Badger and the architect/designer conferred often to adjust and adapt structural and ornamental details.

The greatest challenges during construction were in managing a myriad of details and in combining a diversity of ironworking processes. The Gothic Revival design required hand forged pieces to coordinate with ornamental castings and structural steel. Many different castings needed to be divided, re-combined and assembled to fit the tower's proportions and dimensions. Badger used a wide variety of different cutting, bending, forming, welding and joining techniques to achieve the necessary combinations. Steel tube, sheets and plates formed the structure. The tower was constructed in two sections for transportation to the owner's site. Overhead conditions in the interior space required a delicate dance between two forklifts to place the upper section onto the lower legs and base. The tower project took eight working months to complete. The clock specialist and the clock's owner spent several more months perfecting the operational installation of the clock and detailing the tower with gilding and a polished hardwood floor.