

HISTORIC OTTERBEIN

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Gist's Shot Tower at Eutaw and Conway

by David Safier

Gist's Shot Tower, pictured in this ad from the 1845 Baltimore guide, towered over the neighborhood from 1833 to 1851. It was on Eutaw between Conway and Barre Streets, which would have put it in the right field stands of Orioles Park at Camden Yards, just inside the west wall of the B&O Warehouse. I wasn't able to find the tower's exact height, but based on the height of the two other Baltimore shot towers, it was probably between 150 and 200 feet. That's about twice the height of the B&O Warehouse, which I estimate to be about 90 feet tall. I superimposed an image of the shot tower from the old ad onto a photo of the stadium to give some sense of its location and size.

The first Baltimore shot tower was on Gay Street near Fayette, built in 1823. The second, the Phoenix Shot works built in 1828, still stands at Fayette and Front Street. Its 234 foot height made it the



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tallest structure of any kind in the country when it was built.

It wasn't as important as "the shot heard round the world" in the Revolutionary War, but "the shot tower seen round the city" played a small role in the pro-slavery/anti-slavery political battles in Baltimore before the Civil War. Because of their height, shot towers could be seen from a considerable distance. During the 1844 presidential election, Democrats, who tended to be pro-slavery, hung political banners on the side of the Phoenix Shot Tower supporting their candidate, James Polk. This infuriated members of the Whig Party which leaned anti-slavery. A group of them bought Gist's Shot Tower so they could draw business away from the Phoenix Tower, and renamed it the Merchants Shot Tower. One of the buyers was Asa Needham who lived in the neighborhood (See [The Needham House](#) for more information) and was active in the Whig Party. Polk ended up winning the presidential election.

The shot tower was dismantled in 1851 to make room for the Camden Yards railroad station. Its bricks were used to build five warehouses on West Baltimore Street.

How a Shot Tower Works

A shot tower's purpose was to create lead shot. Lead was melted at the top of the tower, then poured through a sieve. The molten lead came through the holes as teardrops, but as they fell, the drops became spherical. They landed in a pool of water at the bottom of the tower, cooling instantly.

Below is part of an article from an 1847 issue of *The Baltimore Sun* describing the how a shot tower works along with a diagram from a [Five Minute History youtube video](#) by Baltimore Heritage about the Shot Tower at Fayette and Front Street.

The metal is melted at the top of the building, and is poured through a vessel with a perforated bottom, the perforations being of a size corresponding with that of the shot required; the descending streams are parted by their continually accelerating velocity, into the quantity of metal required to form each shot, which immediately assumes the spherical form and maintains it until, cooled by its rapid passage through the atmosphere, it becomes permanent before reaching the base of the tower, where it is received in a reservoir of water, which serves to destroy the velocity of its descent without altering its form. The descending rain of lead enters the water almost with the velocity that it would leave the muzzle of a gun, the height of the tower being two hundred and fifty feet, the shot will have acquired the velocity of 1268 feet per second, in falling from that altitude, and performs its downward journey in something less than four seconds of time. There will be a difference amounting to three sizes in the shot in the receiving tub; these sizes are separated by means of sieves formed of steel plates accurately perforated with holes of the size of the shot which it is intended to separate. Passing successively through a series of sieves, the smaller shot is separated from the larger, each number remaining in the corresponding sieve. The irregularly formed shot are separated from the perfect ones by means of an inclined table, the spherical ones running freely down the inclination, while the faulty ones remain on the head of the board or straggle to its edges.

The operation of finishing the shot, by giving them the brilliant polish observed upon the superior article manufactured at these works, is performed by putting a certain quantity into a revolving cask, with a small quantity of plumbago, (black lead;) the motion causes the shot to polish each other by the constant attrition produced by the motion of the vessel. It is then packed in bags, neatly labeled and numbered, when it is ready for market. The bar lead manufactured here is of a very superior quality, and is certainly formed into the neatest shaped bars of any that we have ever seen.

