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Out of the Attic

Prism, prism: Light through a lens

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Image: The Fresnel lenses that once sat at the Jones Point Lighthouse are now at Alexandria's History Museum at the Lyceum, where they serve as a reminder of Alexandria's maritime history. Photo courtesy Office of Historic Alexandria.

Visitors to Alexandria's new Waterfront Park will be drawn to the public art installation "Mirror, Mirror," an artist's take on the Fresnel lenses that once sat at the Jones Point Lighthouse. The lenses are now at Alexandria's History Museum at the Lyceum, where they serve as a reminder of Alexandria's maritime history.

French physicist Augustin-Jean Fresnel was credited with inventing the lens in 1822. With his study of prisms, Fresnel proved the wave theory of light, and because of that, created a lens that used multiple prisms to focus scattered beams of light. One of its many benefits is that ships could see the lighthouse from much farther away than they could have with a conventional smooth lens.

Another advantage is that Fresnel developed a modular design, making it out of many smaller lenses rather than one large piece of glass. This allowed producers to build the lens in one location and then ship it to another location disassembled. It also made repair simpler and cheaper because parts of the lens could be repaired without having to repair or replace the entire lens.

The lenses were installed when the Jones Point Lighthouse was built in 1855-1856. As was appropriate for riverside lighthouses, as opposed to those by the sea, the lenses on display are of the fourth and fifth order. First order lenses are the largest, measuring more than eight feet in height. Fourth order lenses are to be 2.4 feet tall, and fifth orders measure slightly more than 1.75 feet in height.

The Jones Point Lighthouse was first deeded to the Mount Vernon Chapter of the Daughters of the American Revolution in 1926, after its use as a river navigational aid had waned. The Fresnel Lens was restored in 2008, and it has been at Alexandria's History Museum at the Lyceum since then. A formal loan agreement was signed in 2010.

You can see the historic Fresnel Lens at Alexandria's History Museum at the Lyceum at 201 S. Washington Street. "Mirror, Mirror" is on exhibit at Waterfront Park at 1 King Street until November.



"Out of the Attic" is published each week in the Alexandria Times newspaper. The column began in September 2007 as "Marking Time" and explored Alexandria's history through collection items, historical images and architectural representations. Within the first year, it evolved into "Out of the Attic" and featured historical photographs of Alexandria.



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