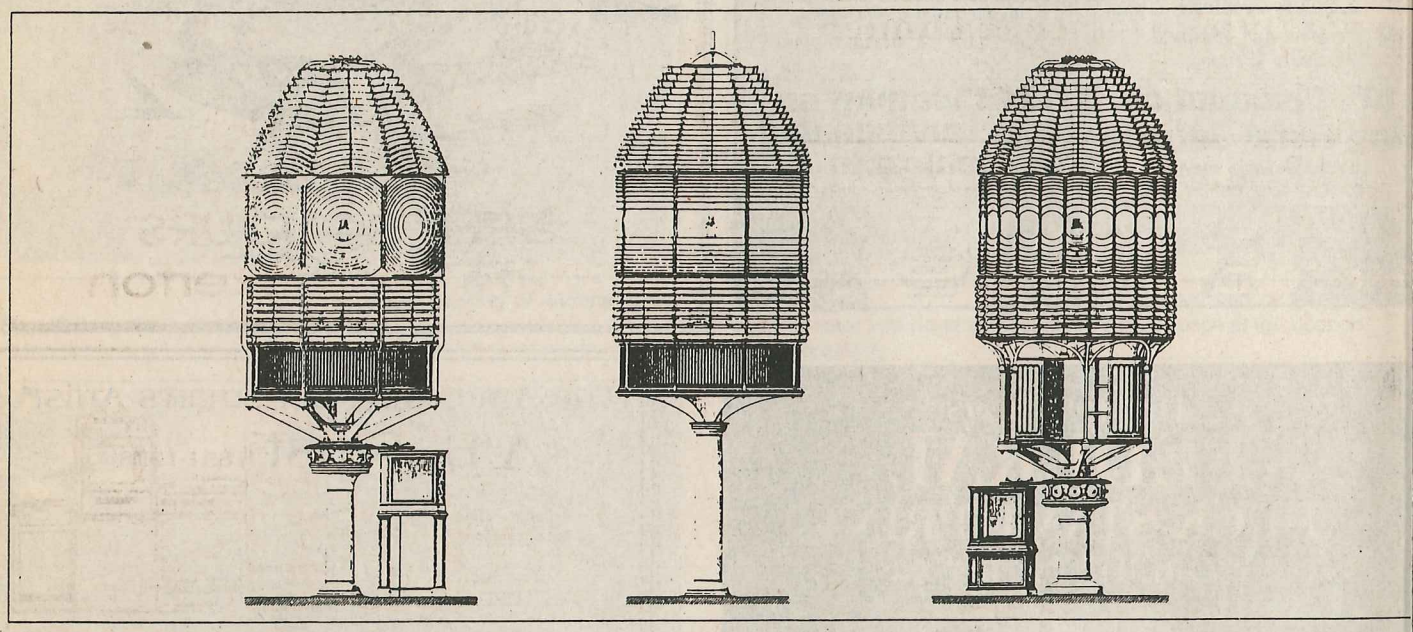
FRESNEL LENS

At the July 12th Groundbreaking Ceremony, Congressman Jim Saxton, R-3rd District), announced th an agreement with the US Coast Guard was finalized, that would allow the Baymen's Museum to borro "on permanent loan" the 3rd Order Fresnel Lens from the recently decommissioned Brandywine Shoa Lighthouse in Delaware Bay to be used in the soon-to-be- built replica of the Tucker's Island Lighthou at the Tuckerton Seaport. It took a lot of hard work and perseverance on the part of the Congressman an his staff to locate and obtain this valuable Fresnel Lens. Thank you!

The original Fresnel Lens at Tucker's Island Lighthouse was a 4th Order Lens, with the unusu combination of both the fixed and rotating characteristic. Fresnel lenses resembled huge glass bee hive Fourth order lenses were used to mark prominent points, headlands or shoals in large bays, inlets sounds. Third order lenses were required in bays that were of considerable width and navigation hazar



THE THREE BASIC TYPES OF FRESNEL LENSES

LEFT — FVF (Fixed Varied with Flash). The bottom, straight catadioptric prisms produce a steady fixe light all around the horizon as the lens rotates. The center bullseyes, flanking dioptric prisms, and upp catadioptric prisms produce a flash when the center of each section passes the mariner's eye. Thus, th mariner sees a steady white light, occasionally interrupted by a flash.

CENTER — Fixed Lens. This lens produces a steady light all around the horizon.

RIGHT — Flashing lens. The bullseyes and dioptric prisms of the center section and the catadioptr prisms of the top and bottom sections produce a flash as the lens rotates. The lens (or lighthouse) appea dark between flashes.

Note the clockworks mechanisms to the side of the left and right lenses. Descending weights power clockworks arrangement located in each of the boxes. The left and right lenses rotate on chariot wheel Other styles of lenses rotate on ball bearings or mercury floats. Drawings from US Lighthouse Socie archives.