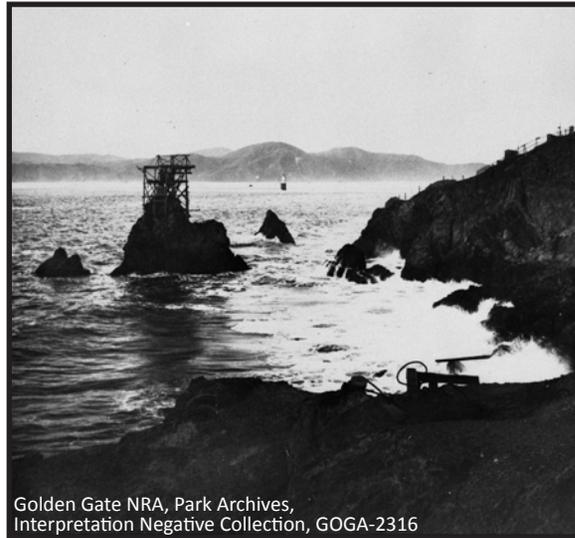


VESTIGES of Lands End



Golden Gate NRA, Park Archives,
Interpretation Negative Collection, GOGA-2316



Golden Gate NRA, Park Archives,
Interpretation Negative Collection, GOGA-2316



D. Shew 2012

Left: Holland's wave motor, ca. 1890s; *Center:* The motor with a view of the nearby coastline; *Right:* Modern view of the former location of Holland's motor.

Wave Motors

Harnessing the power of the ocean with wave motors at Lands End has been attempted at least five times. The first was in 1886 by E. Stern who constructed his wave motor a few hundred yards north of the Cliff House near the shore of the southern entrance to the Golden Gate on land leased from Adolph Sutro. Stern tinkered with his motor for several years, but by 1891 it was gone, apparently washed away into the cold ocean waters.

A second motor was constructed in 1891 by Henry P. Holland in the same location as Stern's. Holland's motor stayed in place for 59 years. Two other motors were built by unknown inventors in the early 1890s. The final attempt was made in 1948 by Lewis Reece, who erected his device in the ocean about 50 ft. north of the Cliff House observation platform.

Each motor was different in its construction. A description of the first wave motor was published in the *San Francisco Examiner* in 1891: "That (machine) operated in a wiggle-waggle sort of way depending on the pushing power of the waves against a broad surface, something like the centerboard of a flat-bottomed vessel."

None of the wave motors proved successful as a source of power. However, the ideas of these pioneering inventors have not been forgotten, and research into wave-generated energy for the San Francisco Bay area continues today.