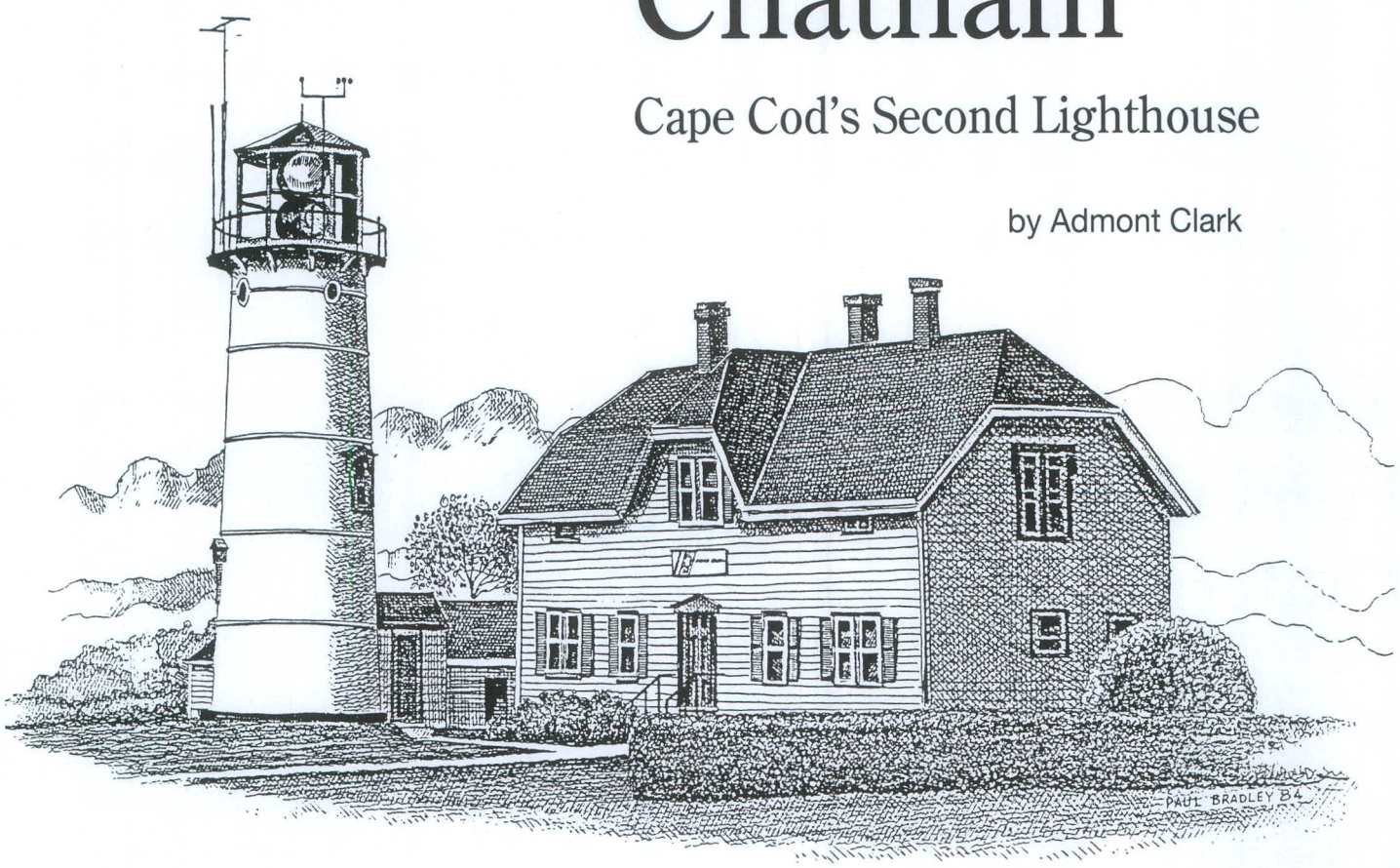
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Chatham

Cape Cod's Second Lighthouse

by Admont Clark



Drawing by Paul Bradley

The history of Cape Cod's second lighthouse is (as with the first at Highland) that of encroaching seas. Since 1808 its position has twice retreated before winter storm induced erosion.

The next logical location for a lighthouse on Cape Cod, after the Cape Cod station at Highland, was along the Chatham shore. A light at this location would assist mariners make the passage from Nantucket Sound around the cape. Because there was no efficient manner at that time to distinguish one lighthouse from another (they all showed fixed white lights), the government decided to construct twin lighthouse towers on James Bluff, at the south end of the village of Chatham.

The contractor for the Chatham lighthouse had originally planned to use local rock for the towers. However, he was unsuccessful in locating a local source and resorted to wood. Obviously he was not familiar with the geology of Cape Cod: the southern half is one large sand pile, a runoff from the farthest advance of the glaciers that dredged up Cape Cod from the Atlantic. He reported plaintively in June, 1806: "There are no stones to be had so the towers will have to be of wood."

Then someone suggested that wooden towers could be made moveable and act as a set of range lights for the shifting shoals of the Chatham Harbor entrance. Thus the lights from the two towers would serve to distinguish that light station from the single Cape Cod light, further down the Cape.

And, they would also, when properly aligned, show the safe path into Chatham Harbor. When the entrance channel shifted, the towers could also be shifted to show the new direction of the channel [ed. - for an explanation of range lights see Keeper's Log, Vol 2 #1).

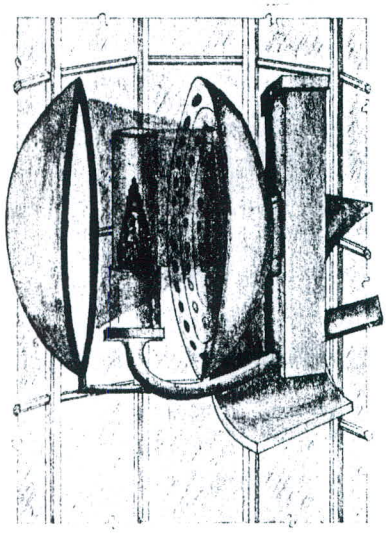
On June 18, 1807 the *Columbian Sentinal* published revised specifications. The towers, it stated, "shall be of wood and the form octagon" to be set on heavy skids of wood and placed to form a range. They were to be: "of good oak or white pine timber without sap, and to be 22 feet in diameter at the commencement. The height of the pyramid to be 40 feet from the stonework foundation to the floor of the lantern where the diameter is to be 8 feet."

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The specifications also called for the construction of a 17 by 26 foot dwelling house with cellar. The house consisted of three rooms: parlor, kitchen and bedroom. The chamber above was left unfinished and there were two fireplaces. On this basis the first Chatham twins were erected. Each tower was outfitted with six oil lamps backed by 8 1/2" parabolic reflectors.

On October 7, 1808 President Jefferson appointed Samuel Nye the first keeper and thereby pleased 150 Chatham citizens who had signed a petition on his behalf.

Joseph Loveland, the next keeper, was succeeded by Samuel Stinson of Eastham, who apparently didn't take his job too seriously. Several times during 1832 he was reported for neglect of duty and warned by the local superintendent. He resigned soon after the last admonishment and then asked to be reimbursed for the addition he had added to the keeper's house. As he had not received authority to accomplish the work, his plea was denied.

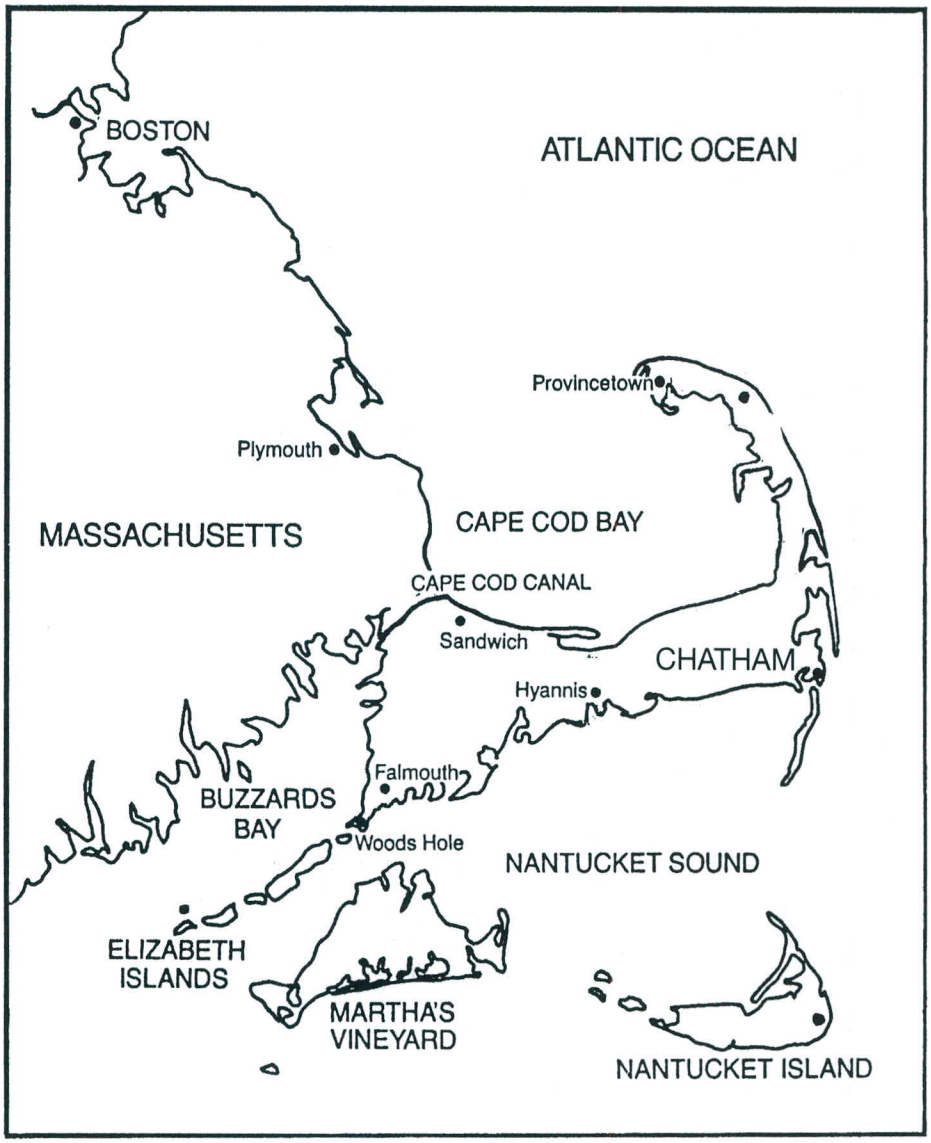


The Lewis reflector system with green "lens."

The original wooden Chatham towers lasted 33 years, until 1841, when they were abandoned as a result of an inspection by Captain Edward Carpenter, who described them as, "very much shaken and decayed, so as to make it dangerous to ascend them in windy weather. They each contain 6 lamps, with 8 1/2 inch reflectors, and with plano-convex lenses of green glass, 9 inches [in diameter] in front of them."

These green "lenses" were an innovation of Winslow Lewis (see the last Keeper's Log) that actually reduced the candlepower from the lamps. He had received U.S. Patent Number 1305 for his "reflecting and magnifying lantern." The lamp and reflector apparatus was based on an invention of the Swiss scientist Amee Argand who had coupled a hollow wick oil lamp with a parabolic reflector. However, Winslow Lewis's reflectors were described by detractors as being "as parabolic as a barber's wash basin." and made of a light gauge of metal covered with a very thin coating of silver. What parabola the reflectors initially had was soon warped out of true by uneducated keepers polishing the reflectors. Similarly the thin silver soon wore away leaving a much reduced reflection off the dull brass under surface.

In any event, an unknowing government gave Winslow Lewis a $60,000 contract (a heady sum in those days) "for fitting up and keeping in repair, any or all the lighthouses in the United States of the territories thereof for seven years." He had to guarantee that the lights would be more brilliant than before and would save more than half the oil previously used per year. Although his lamps did reduce the consumption of oil, it's doubtful that the government made any comparisons between the old system of spider lamps and the new "improved reflector system" as to brilliancy.



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Winslow Lewis

The government was so enamored with Lewis that, despite the interruption of the war of 1812, his contract was renewed in 1816 for another seven years. And Winslow did well. As an example, in 1816 he paid $1.12 1/2 cents a gallon for sperm whale oil and he made a net profit of $12,472.38 – more than twice the pay of the Secretary of the Treasury and almost half that of the President. During his career he constructed numerous lighthouses and fitted and refitted more than 90. Many of his towers collapsed within a few years due to shoddy workmanship and/or inferior materials.

When he died at the age of eighty this shrewd, resourceful Cape Codder received an unusual tribute in the form of an editorial obituary in the *Boston Journal*, which said in part:

"The services which he has rendered the government and our mercantile interests...have been incalculable, and will cause his name to be long held in respect and veneration by all who have business on the great ocean." (Others have held Winslow Lewis in far less esteem.)

Captain Carpenter went on in his report to note the low reputation of the Chatham twins, largely because of keeper neglect:

"I visited them late in the afternoon, and found them in as bad order as they well could be...nothing done to them from the previous night...a sly attempt was made by the keeper to have them prepared through his son; but what were partially done only served to show plainly the condition of the remainder."

In 1841 new 40 foot high brick towers were constructed farther back from the edge of the eroding bluff, and nine lamps with 14 inch reflectors were mounted in each tower in iron frames. Collins Howes, who had lost a leg in a fishing accident, was the first keeper of the new lights; but since lighthouse keepers jobs, in those days, were subject to federal patronage he was "fired" in 1845 when James Polk became President. However, Howes did not give up without a fight.

His successor, Simeon Nickerson, died in 1848 leaving a destitute widow and family. Because Angeline Nickerson, like most keeper's wives, had assisted her husband with his duties she was appointed keeper. But ex-keeper Howes did his best to have her fired and himself reappointed by starting a letter campaign to Washington.

This was a little too much for Joshua Nickerson of Chatham (the town was founded by Nickerson and the name still abounds). He wrote a letter to the President dated April 19, 1849 which defended Angeline:

"The appointment of his [Simeon's] widow, so far as I know, gave general satisfaction, – of one thing, I am certain, which is, that she had discharged the duties devolving upon her as keeper of the light, in a most careful and faithful manner, and no charge of neglect or want of fidelity can be sustained against her."

Mrs. Nickerson stayed on as keeper for many more years.

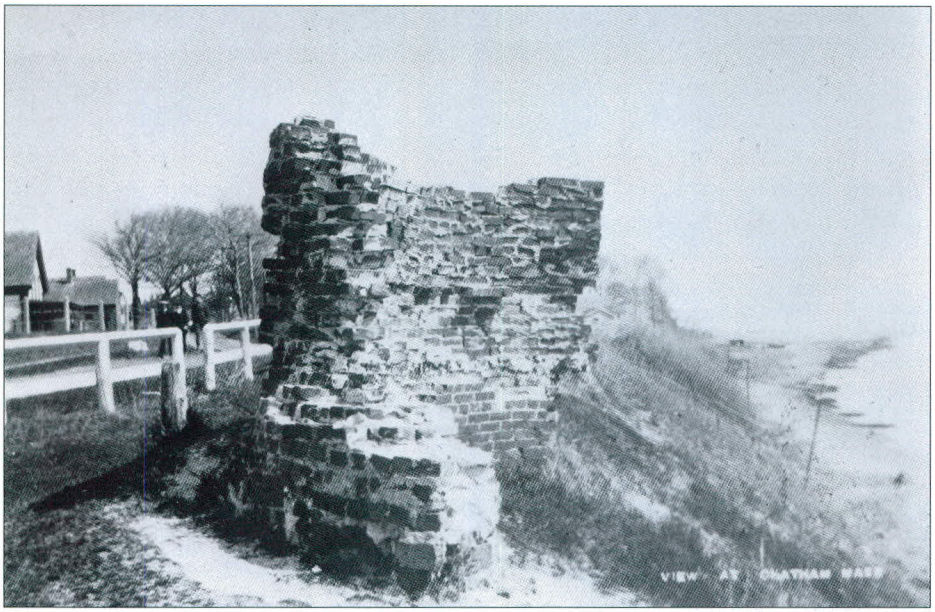
In 1857, when a Charles Smith was keeper, the parabolic reflectors were replaced by the vastly superior Fresnel lens. A fixed 4th Order lens was installed in each tower and they remained the optic until well into this century. When the station was changed from two to one tower, a revolving 4th order lens was installed that produced a Group Flashing White characteristic (4 flashes every 30 seconds).



Second Chatham twins circa 1860's. Note the Fresnel lenses in the lantern rooms. Photo courtesy of Mrs. Irving Henderson

Although the Chatham twins had been rebuilt further from the bluff, the sea was not yet finished with this station.

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Ruins of one of the second Chatham twin towers. Note the steep bluff at right. Mrs. Irving Henderson photo.

Captain Josiah Hardy II, who assumed his duties as keeper on December 6, 1872, watched and recorded the inroads of the waves on the fifty foot high cliff. The changes were drastic and sudden.

In the 1860's the mainland tended well out beyond the towers, and the coast was very bold. But on November 15, 1870, a terrible storm broke through the outer beaches and destroyed the piers in the harbor. The twin towers were then 228 feet from the edge of the bluff, but from then on (after the breech of the outer barrier) it was just a matter of time until they toppled into the sea.

On December 21, 1874 Captain Hardy wrote in his log: "The distance was measured today, from foot of south tower to edge of bank was 190 feet." In four years 38 feet of a 50 foot high cliff had eroded away.

The pace of erosion increased. Just over two years later the log records a mere 95 feet–half the previous measurement. Ten months later, on December 31, 1877, the distance was halved again–to 48 feet 9 inches. Finally on December 15, 1879, at 1:00 p.m. the south tower slid to its destruction, followed over the next fifteen months by the north tower and the keeper's house. In nine years the sea had carved away 76 yards of a 50 foot high bluff.

Helpless to stop the erosion, the government constructed new towers well back from the bluff. On September 7, 1877 the original lenses were relocated to the new tower (two years prior to the loss of the south tower). The new structures were of the very latest design–curved cast iron plates bolted together and lined with brick. This durable design remains today in as good condition as when the towers were constructed, over 111 years ago. Modifications of this design can be seen at East Chop on Marthas Vineyard, MA, other Massachusetts locations, Cape Neddick (the Nubble), ME, along the Hudson River, Point Montara, CA and in other areas.

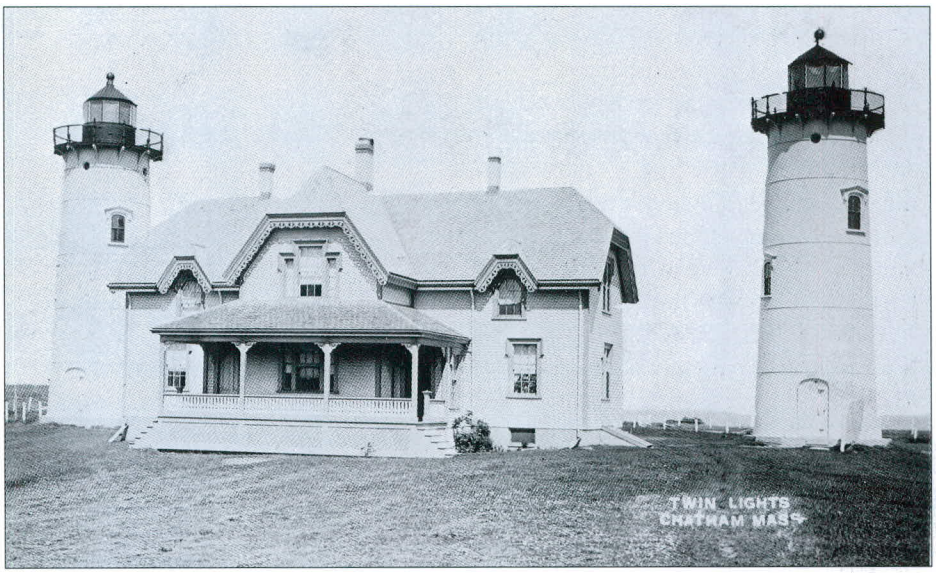
Keeper Handy moved his family to the new quarters constructed between the two towers. The lamps still used lard oil but the next year, in July, they were converted to kerosene.

After 28 years of service Josiah Hardy retired, leaving a priceless record of his years of duty recorded in the station Log. As an example, he used a whole page of his keeper's log to record the progress of the railroad coming to Chatham with entries like:

"Wednesday May 18, 1887 - The first shovelful of sand was broken and thrown out on the commencement of the Chatham to Harwich Rail Road by the President the Hon. Marceillas Eldredge Mayor of Portsmouth and formally a resident of this Town Chatham

"October 18, 1887 the laying of the Streight Rails of the Chatham R Road from Harwich was completed So that the Engine come to Chatham depot @ 12 M in commemoration of the Event Church and School bells were rung & steam Whistle blown in great Dexterity.

"November 19, 1887 P.M. the first Passenger Train come down from the Old colony with 10 Passengers Monday 21st the Passenger Train commence to Run Regular. A free Ride is given all Day to & from Harwich..."



The third Chatham twins circa 1890. From the William Vale collection.

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Keeper Hardy was no hermit for he knew what was going on in town, along the shore and kept abreast of national events. In the rear of each annual Log book he recorded the deaths that occurred in the area:

"June 29, 1875 - Mrs. Albert Smith committed suicide at 4 am with a knife in her own house."

National events were also recorded, along with information on wrecks and rescues and the usual weather observations.

"Sept 19, 1881 - @ 10:35 pm James A. Garfield, President of the U.S., departed this life from wound received from the hands of Guiteau on July 3, 1881, 78 days from the time he was hot and six months and 15 days from his Inaugeration."

Some of the 1882 entries:

"Saterday, 24 June SW fresh all day latter part thick fog. @6 pm, the Schooner I.D. Hart from Bangor for Providence Lumber Ladened Grover Master came on shore near the lights in thick fog. Schooner a total wreck full of water.

"Friday - 30 June SW to south cloudy unsettled weather. Guiteau Charles J. Guiteau, the Presidential assassin was hung today in Washington, D.C. for shooting President Garfield.

"Wednesday - July 5th NE fresh gales and Rain all day Latter part fog the sea nocked the old Lumber Schooner all to pieces. She was sold to David Gould for $7.00.

"Monday 31 from SE to NE fine weather Visited by the Inspector

July 31st 1882 Inspected - Excellent Order, W.S. Schley, Cdmr. Inspector."

Although the spelling is crude, reading Josiah Hardy's Logs is a real pleasure, for he reveals much about life in his era. How, did he know on the day that it happened, just how much the wreckers received ($1,800) for getting a vessel off the beach? and why record it, except for his lively interest in everything. He recorded the death of Vice President Hendrick in Indianapolis, IN "of parralysis of the heart." on the day that it occurred. What a colorful contrast to many of the dreary acres of lightouse keeper's journals that recorded nothing but "SSW gales. Rain."

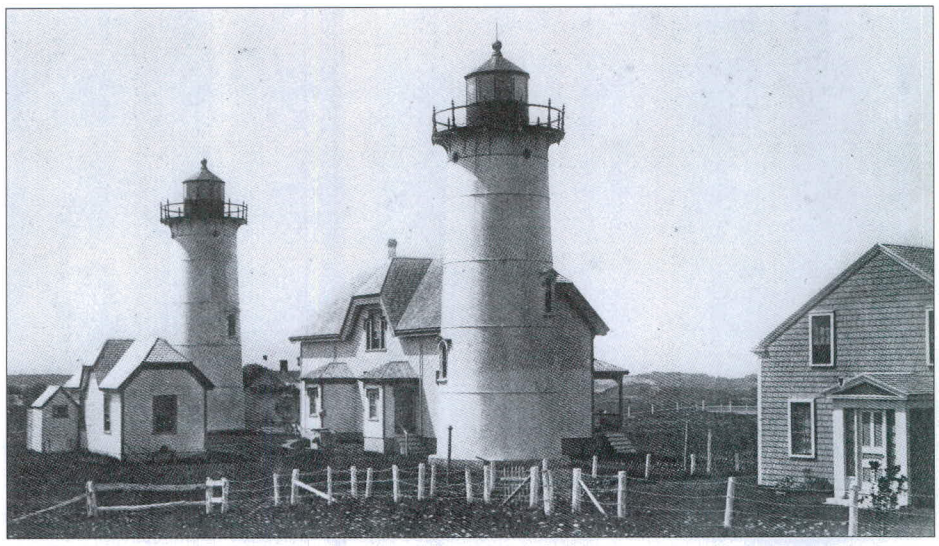
Josiah's final terse entry was on wednesday, June 28, 1897: "WSW fresh breeze, cloudy passing rain. At 4 pm Charles H. Hammond to charge of station."

Keeper Hammond was succeeded by James Allison, who followed by George Woodman. Throughout the long years of nights, through the fogs that roll so often out of Nantucket Sound when the warmer Sound waters meet the cold Atlantic, the keepers stayed at their deadly monotonous - and deadly serious - duty of tending the lamps.

In 1923 the north tower of the twins was dismantled and moved to Nauset Beach, a few miles away, to replace the Three Sisters of Nauset (constructed by Winslow Lewis in 1838). A rotating 4th Order optic replaced the fixed optic in the remaining Chatham tower and an Incandescent Oil Vapor (I.O.V.) was installed that increased the candlepower to 30,000.

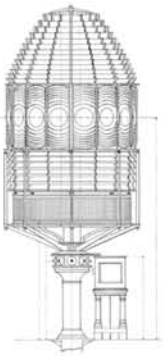
After the Coast Guard absorbed the Lighthouse Service in 1939 the lamp was changed to 1,000 watts increasing the candlpower to 800,000 and an electric motor was installed to replace the old clockworks.

The spring of 1969 brought a major change to the tower. The lens and the entire lantern room was removed to make way for modern aero beacons and then, thankfully, the lantern room was reconstructed to maintain the profile of what a lighthouse should look like. The new, presently installed optic, produces a whopping 2.8 million candlepower, projecting the light out to 25 miles at sea. The keepers house is home to the Coast Guard group commander.



The Chatham (twins) Light Station circa 1905. The building between the towers is a duplex. The hip roofed structure on the left is a duplex store house and the tiny building to the left of that is the "house behind the house." We believe that the house on the right is a private residence. Post Card from the Bill Vale collection.

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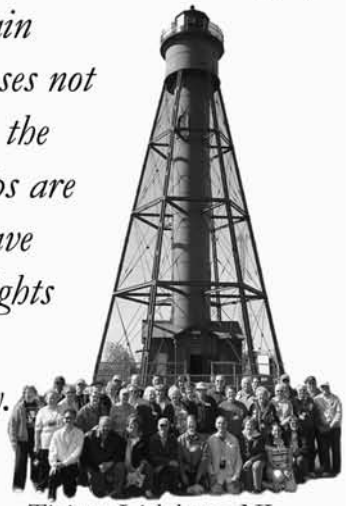
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