

FORT WASHINGTON, FORT WASHINGTON LIGHT
(Fort Washington Fog Bell Tower)
Fort Washington Park
Northeast side of Potomac River at Fort Washington Park
Fort Washington
Prince George's County
Maryland

HABS MD-307-G
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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

REDUCED COPIES OF MEASURED DRAWINGS

HISTORIC AMERICAN BUILDINGS SURVEY
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

HISTORIC AMERICAN BUILDINGS SURVEY
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(Fort Washington Fog Bell Tower)

HABS No. MD-307-G

LOCATION: Northeast side of Potomac River at Fort Washington Park, Fort Washington, Prince Georges County, Maryland

COORDINATES: 38.712275 / 77.036903

DATES OF CONSTRUCTION: 1882, 1904

DESIGNERS: U.S. Light-House Board

BUILDER: U.S. Light-House Board

PRESENT OWNER: National Park Service

PRESENT USE: Historic Site

SIGNIFICANCE: A light and fog signal were located at Fort Washington to guide ships along the Potomac River, an important shipping and transportation route from the Chesapeake Bay to the cities of Alexandria and Washington. The Fort Washington Light is unusual in that it was originally built as a fog bell tower in 1882 and modified to support a light in 1902-04. It is rare for a fog bell tower to support both a light and a fog signal. Once common at many light stations, most wooden fog bell towers became obsolete as fog bells were replaced with other types of fog signals such as sirens, horns, and whistles.

HISTORIAN: Candace Clifford, October 2009

PROJECT DESCRIPTION: The Fort Washington Lighthouse Recording Project was completed during the summer of 2009 under the general direction of Todd Croteau, HAER Maritime Program Coordinator. Drawings were completed by Ashley Walker. Photographs were completed by Renee Bieretz.

Timeline / Chronology

1809

Original Fort constructed.

1814

Fort destroyed under threat of bombardment from British.

1815 - 24

Fort repaired and rebuilt.

1841 – 48

Fort repaired and modified.

1853 – 61

Fort unoccupied until start of Civil War.

1856

The U.S. Light-House Board (USLHB) requested that an aid be placed upon the wharf at Fort Washington. Permission granted by the War Department.

1858

Congress appropriated \$500 for light.

Temporary post and lantern light erected.

1870

Complaints about inadequacy of light motivated USLHB to find ways to improve it. A beacon tower supporting a new lens replaced the temporary post and lantern light.

1872

Obsolete since the Civil War, the fort was abandoned.

1880

The USLHB sought permission from the War Department to store spare buoys and sinkers for use on the Potomac River on the wharf at Fort Washington. The War Department agreed with the understanding that it may become necessary to withdraw them if the fort should again be occupied by troops or engineering operations resumed.¹ (The Lighthouse Service relinquished this privilege in 1935.²)

1882

Fog bell tower erected.

1885

Keeper's dwelling completed.

1896

Fort reactivated during Spanish-American War.

1898

Light temporarily discontinued during Spanish-American War.

1900

Board asked for appropriation of \$1,600 to build a new tower; none was forthcoming.

1902

New light mounted on bell tower and old light extinguished.

1904

Lower section of the fog bell tower received flooring and was encased with siding. Old beacon tower disassembled or destroyed.³

1911

Characteristic of light changed from fixed white to fixed red.

¹ Letter dated June 19 and 22, 1890, found in Letterbook 496, National Archives, Washington, D.C., Record Group 26 (National Archives Building, Washington, D.C., Record Group 26 hereafter cited as NA RG 26)

² Memo dated March 8, 1935, found in NA RG 26 Entry 50 (NC-31) "Correspondence of Bureau of Light-Houses, 1911- 1939" File 902

³ Letters dated July 2 and 14, 1904, found in NA RG 26 Entry 3 (NC-63) "Records of the Fifth Light-House District (Baltimore), 1851 – 1910"

1920

Light electrified on February 1, 1920. Light's illuminant changed from oil to incandescent.

1921

Electric bell striker installed, changing the characteristic from 1 stroke every 15 seconds to 1 stroke every 10 seconds on or about April 12, 1921.

1925

Station dwelling and oil house licensed to War Department for 5 years.

1930

License of the light station to the War Department renewed for another 5 years.

1935

License of the light station to the War Department renewed for another 5 years.

1939

Fort transferred to Department of Interior and becomes a National Park Service historic site.

1942

During WWII, Army again occupied Fort. Dwelling vacated by U.S. Coast Guard personnel at request of Army. Automatic switch installed to control the light.

1950 - 51

The commander of the Fifth Coast Guard District recommended the conversion of the station to automatic unattended operation.

1954

Station was fully automated eliminating need for keeper. The characteristic of the automated light was flashing red.⁴

1970s

⁴ Tilp, Frederick, *This Was Potomac River* (Bladensburg, Md., 1978), p. 97

Bell mechanism broke and was not repaired.

1999

Chesapeake Chapter of the U.S. Lighthouse Society replaced siding and window frames.

2005

Tower turned over to the National Park Service although the U.S. Coast Guard still maintains the modern optic as an active aid to navigation.

2009

The National Park Service's Historic Preservation Training Center performed a major restoration. Ongoing painting and repair work is performed by the Chesapeake Chapter of the U.S. Lighthouse Society. During the Chapter's annual Maryland Lighthouse Challenge, visitors can enter the tower but not climb up to bell platform.

Introduction

Fort Washington, Maryland, is located on the east side of the Potomac River where it intersects with Swan and Piscataway Creeks. The first aid to navigation, a post with a small lantern, was introduced to mark the curve in the Potomac at that point in 1856. The post and lantern were replaced with a beacon structure in 1870. A bell tower was added to the station in 1882 to signal mariners during foggy conditions. In 1901 the light was moved from the obstructed beacon to the bell tower where it has continued in operation to present day.

Current Condition of the Tower

The configuration of the tower reflects the 1904 U.S. Light House Board (USLHB) drawings of the modifications completed to convert the bell tower into a lighthouse. Window placement differs from those in the drawing with two windows on the river or east side; one on the north side and none on the south or east sides. All windows and the door are replacements and do not match the originals in appearance.

Using post and beam construction with diagonal bracing and tie rods at each floor level and in the bell lantern, the tower sits on four brick foundation piers. The tower appears to be constructed of yellow pine with a hip roof sheathed in tin. The flooring appears to be white pine. In 1904 the floor on the first level was enlarged and siding encased the lower portion of the tower to provide an enclosed working and storage area. Although the siding is weatherboard in the drawing, it appears to be German raised-cut or Dutch lap siding.

The bell remains in place, suspended from the top of the tower with the upper third portion encased in the wooden ceiling. The bell inscription reads:

HANE BELL FOUNDRY
Henry McShane & Co.
Baltimore, MD
1881

Aside from a brick-encased weight well beneath the tower, there is little evidence of the bell ringing system. The path for the weights is filled in on the second level where the bell striking apparatus would have been located.

Maritime Transportation on the Potomac River

The Potomac River has long been used for maritime commerce and transportation. Prior to the development of Washington, D.C., the Potomac River served as a transportation route to the port towns of Alexandria and Georgetown. The growth of Washington, D.C. brought increased traffic in the mid-nineteenth century. Lumber and stone were brought in large schooners for building the growing capital city. Other trade goods included flour, salt, grain, coke, pulpwood, wood staves and hoops, firewood, salted fish, sand, bricks, coffee, fruit, and farm products. Records of the Washington Harbor Master

indicated that 14,761 sailing vessels delivered imports from 1892-96; Alexandria reported 5,498 vessels for the same period.⁵

Passengers generally preferred to travel in the faster coastal packets. The heyday for steamboats on the Potomac began in the 1880s and ran until about 1934. Up until 1895 most were propelled by paddlewheel and some were also equipped with masts to carry sail. Steamboats were used for both freight and passengers. Excursions to various sites along the Potomac, including Mount Vernon, were a popular form of entertainment.⁶

The Potomac River has hosted fishing vessels as long as humans have lived along its shores. “By 1897, the commercial fisheries on the Potomac had become the largest of any river along the East Coast.”⁷ One of ten hatcheries established by the U.S. Fish Commission was located at Fort Washington. Imports to the Alexandria, Washington, and Georgetown markets in 1898 totaled 1,051,587 shad, 15,006,940 herring, 340,387 Hickory jacks, and 1,650 sturgeons.⁸ In 1901-02, fifty-two sailing vessels were involved in dredging oysters, with another thirty-three vessels running the oysters and fish to market. The annual catch of oysters on the Potomac in the late 1800s was 1,600,000 bushels.⁹

Aids to navigation played an important role in supporting the maritime commerce traveling up the Potomac River. The U.S. Light-House Board began a nationwide effort to improve America’s system of lighthouses after its formation in 1852. When the Fort Washington Light was established in 1856 there were only four other lights marking the Potomac River. Ships entering the Potomac from the Chesapeake Bay would first see the light at Point Lookout on the north side of the entrance. After 14 miles they would pass Piney Point located on the east side of the river. Further upriver Blakistone or St. Clement’s Island had a light near the entrance to Clement’s Bay. After passing the light at Fort Washington, ships would pass Jones Point Lighthouse on the west side of the river before reaching Alexandria.

By 1882, the year the fog bell tower was constructed at Fort Washington, three more lighthouses had been constructed to mark the Potomac River between Blakistone Island and Fort Washington—Lower Cedar Point, Mathias Point, and Upper Cedar Point. All were on screwpile foundations, a new technology that allowed lighthouses to be built offshore. With the exception of Jones Point, all the Potomac River light stations had fog bells.

In 1901 when the Fort Washington light was moved to the fog bell tower, two additional screwpile towers, one to mark Cobb Point Bar at the entrance to the Wicomico River and the other at Maryland Point, had been constructed as well as three beacons with post lanterns and two buoys. Both of the new lighthouses had fog bells.

⁵ Tilp, Frederick, *This Was Potomac River* (Bladensburg, Maryland, published by author, 1978) pp. 43-44

⁶ Ibid., p. 62

⁷ Ibid., p. 19

⁸ Statistics were reported by Charles Lundington, inspector of marine products for the Washington Board of Health, Ibid.

⁹ Ibid.

Establishment of First Aid to Navigation at Fort Washington

The original fort was constructed in 1809, destroyed in 1814 during the threat of British bombardment during the War of 1812, and rebuilt again between 1815 and 1824. Fort Washington was remodeled in the 1840s but remained inactive from 1853 until the Civil War.¹⁰ (See HABS No. MD-307 for more documentation on Fort Washington)

Fort Washington was located within a curve of the Potomac River so a light was needed to mark the land that protruded into ships' pathways along the river. Since Fort Washington was the property of the War Department, the USLHB had to seek their permission to establish an aid to navigation. On November 7, 1856, Secretary of War Jefferson Davis responded to the Secretary of Treasury's request:

. . . I have the honor to inform you that your request is granted on condition that the light shall be placed upon the wharf and not within any of the fortifications; and that the light keeper shall be subordinate to the military command of the post and public ground in all that relates to police and discipline.¹¹

At the December 1, 1856, meeting of the USLHB, the Board ordered that "the light be exhibited at the earliest possible day."¹² A stake lantern was sent from the General Light-House Depot at Tompkinsville, New York. It essentially consisted of a small oil lantern that was hoisted on to the top of an 18 ½-foot cast-iron pole.

Establishment of the Beacon Light

On September 5, 1868, Keeper Joseph Cameron complained about the light, stating "there is no dependence to be put in the light, which I find to be very uncertain and may go out at any time. It frequently goes out in raising it up to the place on the post, last night I was compelled to lower it down and relight twice before I left the Post, and at best the light is very small . . ." The Superintendent of Lights wrote the USLHB requesting a more suitable light for Fort Washington. He considered the stake lantern "a very small affair for so important a light, and was confident it was insufficient in size for the intended purpose."¹³

In February 1869, a complaint about the light was forwarded to the USLHB from five steamboat captains: "The Light at Fort Washington on the Potomac is so imperfect and dim and so liable to be extinguished from the smallness of the flame . . ." They pointed out that "navigation of the River at that point being difficult; chiefly on [that] point of the bend in the river and the narrowness of the channel"¹⁴ Upon investigation, however, the

¹⁰ National Park Service, "Fort Washington Park: History & Culture" from the web site <www.nps.gov/fowa/historyculture/index.htm> accessed June 27, 2009 and National Register nomination for Fort Washington completed by Dr. Marilyn Nickels, 1985.

¹¹ Letter to Secretary of the Treasury found in NA RG 26, Entry 66 (NC-31) Lighthouse Site File for Fort Washington

¹² Journal of the U.S. Light-House Board found in NA RG 26, Entry 1 (NC-31)

¹³ Letters dated September 5, 1868 and September 25, 1868, found in NA RG 26 Letterbook 229

¹⁴ Letter dated February 26, 1869, on Potomac Ferry Company Letterhead, found in NA RG 26 Letterbook 222

local Superintendent of Lights found “upon strict inquiry of the masters of vessels passing up and down the Potomac” that he could not find “anyone to make any complaint whatever against said light.”¹⁵

Despite these reassurances, Superintendent Jamieson wrote again on April 3, 1869, that the new keeper, Sergeant Edward Kelley also encountered problems with the stake light. Kelley reported that “after giving his lamp a thorough & special cleaning had to lower and raise the light six times to keep it burning, although he had substituted good sperm oil for the inferior lard oil he had heretofore been using.” The Board acknowledged on the back of the letter that they have “directed that a larger lens, inclosed [sic] in a lantern be put up at Ft. Wash. Lt. St.”¹⁶

On April 22, 1869, the Fifth District Lighthouse Engineer reported he planned to replace the light at Fort Washington with a “lens light of the smallest size, enclosed in a suitable lantern.”¹⁷ In November 1869 orders were issued to the Lazaretto Lighthouse Depot workshops in Baltimore, Maryland, to prepare the framework for a beacon light to replace the temporary post and lantern light. On February 1, 1870, the steam tender *Tulip*, “with a work party and necessary supplies and appliances” proceeded to Fort Washington “for the purpose of putting up the beacon. This structure, furnished with a Fresnel lens of the sixth order and a lantern of the portable beacon pattern, was completed on the 18th of February.”¹⁸

The wooden framework for the beacon measured about 6' x 6' x 8' tall, was painted white and included a lightning rod.¹⁹ The sixth order lens was illuminated by a Funcks Hydraulic Float Lamp. A spare lamp and two spare burners were available. The station was equipped with two oil butts that held 50 gallons each; two small butts for waste oil, and two dripping buckets for the oil butts. The butts were placed on a wooden bench to prevent the rusting of the bottoms. There was also a small closet for storing the implements for keeping the light, such as trimming scissors and trays, wicks, chimneys, cleaning supplies, brushes, brooms, and floor cloths.²⁰

In early 1874, a small addition was added to the beacon structure so that the keeper would have a protected place to heat the oil for the light as well as a place to sleep when stormy weather necessitated he stay at the light.²¹

¹⁵ Letter dated December 12, 1867, found in NA RG 26 Letterbook 212

¹⁶ Found in NA RG 26 Letterbook 229

¹⁷ Found in NA RG 26 Letterbook 229

¹⁸ 1870 *Annual Report of the Light-House Board* (Washington, D.C.: U.S. Government Printing Office, 1870)

¹⁹ Described as “eight square about six feet each way” in a 1874 letter in NA RG 26 Letterbook 341

²⁰ 1870 descriptive pamphlet found in NA RG 26 Entry 63 (NC-31) “Descriptive Lists of Lighthouse Stations, 1858 – 1889, 1876 – 1939”

²¹ At this time, the keeper lived about a mile from the lighthouse. Letters dated February 26, and June 22, 1874, found in NA RG 26 Letterbook 314

Fog Bell Tower at Fort Washington

In February 1882 the following petition signed by a number of steamboat captains and pilots was submitted to the USLHB:

We the undersigned do hereby petition for a bell to be attached to Fort Washington Light House and caused to be rung during foggy weather for the improvement of the Navigation of the Potomac River at that dangerous point.²²

The Fifth District Inspector and the USLHB Engineering Secretary supported the petition's request and the USLHB's Committee on Location approved the establishment of a fog signal at Fort Washington.²³ Plans progressed quickly and a fog bell tower, measuring 32' high, 4' square at the top, and 16' square at the base, was constructed at the Lazaretto Depot in April. Most likely it was preassembled at the Depot, inspected and disassembled for transportation to Fort Washington. The tower components, probably shipped on the district tender, arrived on April 15th and erection was completed on the 25th. The bell was struck by machinery at intervals of 15 seconds.²⁴

In 1885, the District Inspector reported that "the weight required to run the fog bell machinery . . . is 600 pounds and that the machinery when wound up will run but one hour and fifteen minutes."²⁵ In response to the Board's request for recommendations to increase the time which the fog bell machinery would run, the District Engineer reported:

The present machine in use at Fort Washington is of the kind formerly made by C. J. Codd & Co.; it runs with a single part of flat linked chain.

The machine was examined yesterday with a view to devising a plan for increasing the time of its running; after carefully oiling it, it was fully wound and allowed to run down, which it did in one hour and six minutes.

By raising the machine two feet, a simple arrangement of blocks may be devised by means of which the weights and chains may be trebled; a wire rope will, however be better than the chain.

With the old arrangement only one third of the drum of the machine is covered when fully wound up, so that with the arrangement proposed only a single layer on the drum will be required.

. . . The sheive nearest the drum is to be arranged to slide on a smoothly turned axle so as to permit the cord from the drum to descend vertically in all positions of the weight.

The connecting rod which leads upward to the hammer will act as before merely by being shortened as much as the machine is raised.

The well into which the weight descends will have to be moved or enlarged as the position of the weight will be somewhat changed.²⁶

The Engineer's plan was approved by the Board.²⁷

²² Found in NA RG 26 Letterbook 558

²³ Letter dated March 15, 1882, found in NA RG 26 Letterbook 539; letter dated March 21, 1882, found in NA RG 26 Letterbook 583.

²⁴ 1882 *Annual Report of the Light-House Board*

²⁵ Letter dated November 25, 1885, found in NA RG 26 E 3

²⁶ Letter dated August 25, 1885, found in NA RG 26 Letterbook 653

Evolution of the Fog Bell

Fog bells such as the one used at Fort Washington were the most common fog signal at light stations during the nineteenth century. The first fog signal in the United States is said to be a canon installed at Boston Light Station, Massachusetts, in 1719. When a ship entered Boston Harbor in foggy weather, its crew fired a canon, and the Boston light keeper responded in kind. This gave the mariner a sense of his position in relation to the harbor. Guns were used at a few stations but, with their brief duration of sound, were later viewed as an inaccurate means to determine direction.²⁸

Funding for one of the earliest fog bell towers was appropriated in 1828 for Poole's Island Lighthouse, Maryland, on the upper Chesapeake Bay. Fog bells were installed at some light stations in Maine during the 1830s. Demand for more bells is apparent in this 1849 petition:

To the Honorable William Meredith, Secretary of the Treasury of the United States.

The undersigned, merchants, importers, and ship owners of Maine, most respectfully represent, that many of the disasters and losses which have been sustained by their shipping upon the coast, would have been prevented, as they believe, by suitable, ALARM or FOG BELLS at Light Houses, and other prominent points along the shore. They are aware that several attempts have been made by the Government, heretofore, to put them in operation, which owing to their complicated machinery, the necessity of constant manual labor, and other causes, have been attended with but partial success. But, that important benefits have resulted from them, far beyond their costs – imperfect and expensive as they have proved to be – all who are acquainted with the extent of our foreign and coasting trade will readily bear testimony.²⁹

The lack of fog signals was addressed by the board created in 1852 to study the efficiency of the lighthouse system.³⁰ Stephen Pleasonton, outgoing administrator of the U.S. Light-House Establishment wrote the Secretary of the Treasury on March 29, 1852:

In reply to the inquiry made by the Lighthouse Board under the date of the 22nd inst. And referred to me for a report thereon, I have the honor to state that the following lighthouses are fitted with fogbells or whistle viz. Maine – Seguin Island, Whitehead, Pond Island, Libby Island and Cape Elizabeth with bells; In Massachusetts Boston a Bell – in Rhode Island – Newport an air whistle to by horsepower; in New York Execution Rocks and Robbins' Reef, bells in New Jersey--Pasaic River and Bergen Point, small bells; and in Delaware – Brandywine Shoal, a bell.

²⁷ Letter dated December 2, 1885, found in NA RG 26 Entry 23 (NC-31) "Letters Sent to District Inspectors and Engineers, 1852 – 1910"

²⁸ Wheeler, Wayne C., "The History of Fog Signals, Part I," *The Keeper's Log*, Summer 1990, page 21

²⁹ NA RG 26, Entry 17G (NC-31) "Correspondence Relating to Early Lighthouses, 1785 – 1853"

³⁰ This board would become the U.S. Light-House Board which administered lighthouses from 1852 until 1910.

That the floating lights are all provided with bells, excepting at Bartletts Reef, in which the air whistle is used.

And that none of the Buoys are or have been fitted with either fog bells or whistles, excepting a small bell on the Buoy Boat near the outer bar of Nantucket.³¹

The first fog bells were rung by hand. Since fog could last for hours, even days, an automatic fog ringing device was sorely needed. In the 1830s, the U.S. Light-House Establishment began experimenting with fog bells. Eventually a clockwork mechanism powered by a descending weight that drove the regulating and striking apparatus was developed. The three primary manufacturers of the bell striker were Gamewell, Stevens, and Daboll. The bell striking machinery was incorporated into the light tower or in a separate bell house or tower.³² The weights of the bell striker had to be wound back up by the keeper. The frequency of winding depended on the characteristic of the bell or signal. A characteristic of two blows every 15 seconds would require more frequent winding than one blow every 30 seconds. Most mechanisms allowed 10,000 strikes of the bell per winding.³³

The published lists of lighthouses in the United States in the first half of the nineteenth century reflect the lack of fog signals; no information on fog signals was provided. Of the 426 lights listed in the *List of Light-Houses, Lighted-Beacons, and Floating Lights*, issued by the U.S. Light-House Board in 1854, the following nineteen stations had fog signals, all of which were listed as bells:

West Quoddy Head, ME
Libby's Island, ME
Petit Manan, ME
Whitehead, ME
Pond Island, ME
Seguin, ME
Cape Elizabeth, ME
Boston, MA
Little Gull Island, NY
Execution Rocks, NY
Robbins Reef, NY
Bergen Point, NJ
Passaic, NJ
Brandywine Shoal, DE
Pool's [*sic*] Island, MD
Point Pinos, CA
Farrallones, CA
Cape Hancock, WA
Waugoshance, MI

³¹ NA RG 26, Entry 6 (NC-31) "Annual Reports, 1820 – 1853"

³² Wheeler, p. 22

³³ Ibid.

There were few fog signals south of the Chesapeake Bay, none in Florida. Although there were a few fog bells initially on the West Coast, they were eventually replaced with the steam-driven signals housed in fog signal buildings.

Of the thirty-nine lights on the Chesapeake Bay and its tributaries included in this 1854 list, only one onshore station, Pooles Island, had a bell. The light vessels marking Willoughby's Spit, Craney Island, Wolf Trap, Windmill Point, Jone's Island, Smith's Point, Hooper Straits, Lower and Upper Cedar Points, and Bowler's Rock, however, all had fog bells.³⁴

Bells were rung by hand in the Chesapeake Bay until the early 1870s. New lighthouses were equipped with bell strikers and machinery was installed in existing lighthouses that used fog bells. Although some steam-driven signals were installed at Bay stations, the most common signal remained the fog bell. In 1926, fifty-two fog bells were in use in the Fifth District (which included the coast of North Carolina in addition to the Chesapeake Bay) along with three steam whistles, five air sirens, three reed horns, and five submerged bells.³⁵

Bells were used on other types of aids to navigation, primarily on buoys where the bell, attached to the top of the buoy, rang through the motion of the waves. In the 1920s and 1930s, the Lighthouse Service experimented with electronic signals and bell strikers, developing a bell striker powered by compressed air.³⁶

Other Types of Fog Signals

In the 1850s and 1860s, the U.S. Light-House Board experimented with many other types of fog signals. Some locations required more powerful signals than could be offered by the fog bell. The Board concluded that steam power could produce a more efficient signal. A steam siren was first tested at the Sandy Hook East Beacon in New Jersey in 1867. West Quoddy Head and Cape Elizabeth, Maine, were provided with the first steam whistles in 1869. The third steam-driven signal was the reed-horn trumpet. All three types were perfected and in use in 1870. Coastal stations, where the signal needed to be heard from greater distances and the wind could cause interference with the sound, generally received the new steam fog signals. Stations at less exposed locations, such as those on the Chesapeake Bay, generally retained their fog bells.³⁷ In 1878, the Board reported that there were fifty-five fog signals operated by steam or hot air and ninety-three bells with automatic striking mechanisms.³⁸

³⁴ All light vessels were equipped with fog bells. Later as building technology evolved, lightships would be replaced with offshore stations that continued the presence of a fog signal.

³⁵ Vojtech, Pat, *Lighting the Bay: Tales of Chesapeake Lighthouses* (Centreville, Maryland: Tidewater Publishers, 1996), pp. 99 – 101

³⁶ Wheeler, Wayne C., "The History of Fog Signals, Part II", *The Keeper's Log*, Fall 1990, p. 16

³⁷ *Ibid.*, p. 11

³⁸ *Ibid.*, p. 13

By the turn of the twentieth century, steam power was slowly being replaced by electricity and in a 1914 the diaphone sound signal was introduced in the U.S. The first radio fog signal or radiobeacon was introduced in 1921.³⁹

Bell Tower Designs

At onshore stations, most mechanized fog bells were hung in wooden towers. There were a few bells attached to square houses but those are the exceptions. The fog bell towers seem to fall into three categories—skeletal, enclosed pyramidal, or a combination of the two. The tower at Fort Washington appears to be one of the hybrid varieties. It is both skeletal and pyramidal. In the state with the most fog bell towers, there appears to have been an evolution from the skeletal type to an encased pyramidal type. One assumes this was to protect the clockwork mechanism from the severe weather. The height of the tower depended on the length of the chains holding the weights of the clockwork mechanism. Bells that were struck by hand were generally hung on shorter open frames.⁴⁰ At offshore stations with no land associated with the station, the bell was generally hung outside a window of the tower with the machinery and weights for striking the bell located inside.

The fog bell tower at Fort Washington is unusual in that it was adapted to support a light. The only other bell tower on the Chesapeake to also be used both as a lighthouse and a fog bell tower was the tower at Fort Carroll. A fourth-order lantern holding a fifth-order Fresnel lens sat on top of a square wooden tower. A fog bell hung below the lantern. The tower was decommissioned after World War II and is now in deteriorated condition.

Transfer of Light to the Bell Tower at Fort Washington

Correspondence relating to moving the beacon and keeper's quarters to make way for a new battery at the fort began in June 1898.⁴¹ Responding to inquiries from the USLHB regarding disposition of the light, the Engineer stated that the station “marks a bend in the course of vessels passing that point and is important, I have deferred action until I could visit the spot and study out a solution of the question raised.”⁴²

A month previously, in May 1898, the Engineer had found the station at Fort Washington to be in fair order:

. . . Tower is in good order. Lens table is not level. Lens bears only on three supports. Keeper reports great condensation of water in the lantern. Probably the result of bad ventilation. Lamp burners were not clean.

Fog Signal. – The tower was in good order. The striking machinery was not clean nor well painted. The friction rolls for striking pawl are worn out. The hammer level is too much worn at fulcrum bearing. Hammer was striking a feeble blow, and it rested on bell after blow. Fixed it.

³⁹ Ibid., p. 13, 16

⁴⁰ These are not considered “towers” so are not included in the list in Appendix I.

⁴¹ Letters dated June 22 and 28, 1898, found in NA RG 26 E 23; letter from Fifth District Engineer to USLHB found in NA RG 26 Letterbook 1193

⁴² Letter dated July 5, 1898, found in NA RG 26 Letterbook 1255

Dwelling was in good order. Needs painting outside, and inside walls need a coat of paint or papering. Windows and doors need easing so they can be raised and lowered and opened and closed.⁴³

In December 1899, the War Department built a warehouse on the wharf that obstructed the light at Fort Washington. Assistant Engineer F. C. Warman interviewed various ship captains and reported:

. . . Capt. Geoghegan of [*Newport News*] . . . stated he had been inconvenienced by the obstruction to the light, which being near the channel edge, and the channel being narrow in the vicinity is regarded as of great importance. In going downstream the light is obscured from the time vessels reach River View until they are nearly abreast of the light. . . . He has not been out in a fog since the obstruction was erected and hence does not know what is its effect upon the sound of the bell.⁴⁴

In addition to the light being obscured by new construction by the War Department, ventilation problems in the light's lantern could not be resolved. In 1900, the Fifth District Engineer indicated the best solution was a new tower, so the USLHB asked him to submit a blueprint and estimate. The Engineer complied, indicating that there were no funds available to undertake its construction.⁴⁵ The 1900 *Annual Report* presented the Board's recommendations:

The lantern of the tower is small and its ventilation is poor. This can be remedied only by a larger lantern placed on another tower. The tower should be built about 6 or 8 feet higher than the present one; that the light may show above a structure which has recently been erected at the military post here by the War Department. It is estimated that a new tower can be built for about \$1,600. The Board therefore recommends that an appropriation be made therefor.

In July 1901, the Engineer reported

Dwelling and fog bell tower and machinery were in excellent order. The light tower was considerably decayed about the bottom, but it will last very well for another year without repairs.⁴⁶

The appropriation for a new tower was not forthcoming so on November 25, 1901, the District Engineer and Inspector issued a joint recommendation:

. . . the old tower and lantern at Fort Washington, Md., be abandoned and the light displayed from the fog signal tower at a greater elevation. The old tower is in a rotten condition around the base and is so cramped for room that we do not deem it advisable to maintain it further.⁴⁷

⁴³ Letter dated May 28, 1898 from the Fifth District Inspector to the USLHB, found in NA RG 26 Letterbook 1193

⁴⁴ Attachment to letter dated January 18, 1900, found in NA RG 26 E 3

⁴⁵ Letters dated March 14, and April 20, 1900, found in NA RG 26 Letterbook 1327

⁴⁶ Letter dated July 8, 1901, found in RG 26 E 3

⁴⁷ Letter dated November 25, 1901, found in NA RG 26 Entry 48 (NC-31) "Correspondence of the U.S. Light-House Board, 1901 - 1910" File 1662 and E 3

The Engineer estimated this “change in the position of the light . . . can be affected at a cost of \$50.00 and paid from funds in hand . . . using labor of the regular employees of the district.”⁴⁸

Although the same request for an appropriation to build a new tower was repeated in the 1901 *Annual Report*, a less costly interim solution was achieved by moving the light to the bell tower.

To increase the range of visibility of this light by placing it at a greater elevation, and as a temporary expedient, four new caps were put on the sills of the fog-bell tower in November, 1901, and a platform was built on them to support a lens lantern.

The following *Notice to Mariners*, was published on January 2, 1902, to advise mariners of the change:

Notice is hereby given that, on or about January 25, 1902, the fixed white light at this station, on the wharf at Fort Washington, easterly side of the Potomac River, will be moved to an exhibited, 28 feet above mean high water, from the fog-bell tower in the immediate vicinity, and will be changed from a sixth-order to a *lens-lantern* light, without other changes.⁴⁹

The lens lantern was made at the U.S. Light-House Board’s General Depot, Tompkinsville, New York. It contained four panels.⁵⁰ In 1908 the keeper provided measurements of the lens, stating that the inside diameter was 11 ½” and the outside, 13 ½”.⁵¹ It appears from a 1903 letter that a “Funck tubular stand lamp” was initially used in the new lens.⁵²

Although the request for an appropriation to build a new tower was repeated in the 1902 and 1903 *Annual Reports*, it was withdrawn in the 1904 *Annual Report*. Both the district engineer and the USLHB Committee on Location felt this temporary solution was a satisfactory one and it became permanent.⁵³ The light at Fort Washington has been displayed on the bell tower from 1902 to present day.

Soon after the light was transferred to the bell tower, the District Engineer was authorized to purchase a Gamewell fog bell striking machine for Fort Washington at a cost of \$500.⁵⁴ In 1903, a new characteristic wheel for a single blow every 15 seconds was provided by W. E. Decrow, whose letterhead described him as an “agent of the Gamewell Fire-Alarm Telegraph Company.”⁵⁵ The 1909 descriptive list, however listed the

⁴⁸ Letter dated December 4, 1901, found in NA RG 26 E 3

⁴⁹ Found in NA RG 26 Entry 5 (A-1) “Light-House Service Publications, 1838 – 1942”

⁵⁰ 1909 descriptive pamphlet found in NA RG 26 E 63

⁵¹ Letter dated June 1, 1908, found in NA RG 26 E 3

⁵² This lamp apparently gave out but the letter does not indicate whether it was replaced with the same type. The keeper initially had trouble getting the new lamp to work in the bell tower due to wind burning it out and had to revert to using it in the old beacon structure. The problem was apparently with the chimneys and not the lamp itself. Letter dated August 31, 1903, found in NA RG 26 E 3

⁵³ Letter dated September 26, 1904, found in NA RG 26 E 48 File 1662

⁵⁴ Form dated June 6, 1902, found in NA RG 26 E 3

⁵⁵ Letter dated May 14, 1903, found in NA RG 26 E 3

apparatus as a “Bell and Martin” made by E. J. Codd, Baltimore, Maryland. The Codd machinery is also referenced in an 1898 letter.⁵⁶

After the Board decided the temporary solution of placing the light on the fog bell tower was a permanent one, it approved “the materials and labors necessary to floor and incase [sic] the lower section of the bell tower.” The work was completed in 1904 by Mr. Lewis Hatton of Fort Washington, Md., for \$268.67.⁵⁷ Now that the lower section of the bell tower was enclosed and supplies for the light could be stored within it, the old beacon structure was no longer needed and was dismantled.

Operational Changes

During the Spanish-American War, orders were given to temporarily discontinue the Fort Washington light and fog bell at night. The same order was given for the lights in the Patapsco River, below Lazaretto Point.⁵⁸ A *Notice to Mariners* was published on June 1, 1898:

Owing to the planting of submarine mines in the Potomac River and the prohibition of navigation at night, the light and fog signal at this station, on the wharf at Fort Washington, have been discontinued between the hours of 8 p.m. and 4 a.m., since May 2, until further notice.⁵⁹

Although it appears no *Notice to Mariners* was published rescinding this order, it is assumed that navigation was reopened at the end of the four-month war.

The war also led the War Department to install another battery at Fort Washington, the field of fire of which was considerably obstructed by the beacon and dwelling belonging to the USLHB. In June 1898, the U.S. Engineer Office wrote that they did not “see how it will be possible to avoid having those structures moved from where they now are. After the war shall be over I presume that they can be moved back if desirable to do so.”⁶⁰

The keeper suggested changes to the steps and trap door within the tower and the platform on the lower frame of the bell tower in 1904.⁶¹

In 1909, the light continued to have a fixed white characteristic. The tower was located 30’ inland from the high water mark. There was a steamboat landing at the station; the nearest post office was ¼ mile and the nearest town 7 miles by boat.⁶²

⁵⁶ Letter dated January 22, 1898, referenced “a new wheel for the Codd fog bell machine.” Letter found in NA RG 26 E 3

⁵⁷ Letters dated July 18 and 19, 1904, found in NA RG 26 E 3

⁵⁸ Letters dated May 3, 1898, from the Fifth District Inspector to the USLHB, found in NA RG 26 Letterbook 1173

⁵⁹ Found in NA RG 26 E 5

⁶⁰ It does not appear that this order was carried out in that discussions were still underway in July and by then the four-month war was just about over. Letter dated June 20, 1898, found in NA RG 26 E 3

⁶¹ Letter dated May 26, 1904, found in NA RG 26 E 3

⁶² 1909 descriptive pamphlet found in NA RG 26 E 63

In 1909 the bell tower was described as a square-, framed, pyramidal structure painted white. It measured 32'-8" tall and was 13' square at the base. There was a wood stairway with one landing. Two windows measuring 20" x 36" had panes measuring 8" x 10". A lightning conductor made of spiral copper, slipped over the head of the galvanized-iron spindle, fastened to the roof, and ran down the side of the house. Oil was stored on the first floor of the tower in 5-gallon cans. When seen from the water, the background behind the tower was woods.⁶³

In 1909 the striking apparatus was described as a "Bell and Martin" made by C. J. Codd Co., Baltimore, Maryland. The characteristic remained a single blow every 15 seconds and the mechanism would run 1 ½ hours after winding. The bell was 1400 lbs., constructed of bell metal, and measured 38" in diameter and 32" in height.⁶⁴

Around April 15, 1911, the light was changed from a fixed white characteristic to a red one so that it could be distinguished from the electric lights maintained on the wharf by the War Department and from the light maintained on a beacon in the river.⁶⁵

The light station was electrified in 1920, changing the light's illuminant from oil to electric incandescent. This increased the intensity of the light from 50 to 550 candle power. A *Notice to Mariners* was issued on February 1, 1920. Although the lens remained the same, the lamp was changed to a "C – regular – 200 watt, 110 volts P.S. 30 bulb Mazda lamp." The keeper was retained to take care of the fog signal and instructed to substitute the oil lamp whenever the electric power failed.⁶⁶

The fog signal was electrified in 1921 after an electric bell striker was received from the General Depot. With its installation the characteristic was changed about April 12, 1921, from one stroke every 15 seconds to one stroke every 10 seconds.⁶⁷

It is not known when the lens lantern was removed and replaced with a modern optic. It is now on exhibit at the Oyster and Maritime Museum in Chincoteague, Virginia. In 2009, the light continued as an active aid to navigation and daymark. The lens appears to be a solar-powered VRB optic. According to the 2004 *Light List*, the characteristic is a red flash every 6 seconds and the range is 6 miles. A large orange triangle with "80" prominently displayed serves as a daymark.

Keepers and Their Duties

The first keeper at Fort Washington was Joseph Cameron.⁶⁸ His initial salary was \$120 per annum but at some point it was raised to \$180 per annum. In addition to keeping the

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ Letters dated March 7 and 8, 1911, found in NA RG 26 E 50 File 902 and *Notice to Mariners* issued March 17, 1911 found in NA RG 26 E 5. It appears that electric lights were installed on the wharf in 1904. They are referenced in a letters dated May 16 and 21, 1904, found in NA RG 26 E 3

⁶⁶ Recommendation dated January 13, 1920, and memo dated January 27, 1920, found in NA RG 26 E 50 File 902

⁶⁷ Recommendation dated March 23, 1921, found in NA RG 26 E 50 File 902 and *Notice to Mariners* issued March 25, 1921, found in NA RG 26 E 5

temperamental stake lantern, he was also required in April 1860 to make meteorological observations. Cameron resigned in April 1869; he was replaced by Edward Kelly. On April 16, 1869, Kelley requested the following supplies:

- 1 Expenditure Book
- 8 Quarterly Returns
- 1 dozen Pens & Ink
- Postage Stamps
- Letter Paper
- Towels
- 2 dozen Envelopes (large)
- 2 dozen Envelopes (small)
- Some Good Oil⁶⁹

Keeper Kelley was also referred to as “Sergeant Kelley” and was listed as a resident of the Fort.⁷⁰ In 1870 Kelley requested an increase in salary. He was supported by the local Superintendent of Lights who wrote the USLHB:

I most respectfully recommend that your Hon. body raise the pay of the Light House Keeper at Fort Washington, Md, from one hundred & eighty dollars (\$180) per annum to three hundred (\$300) per An. I doubt whether there is a light station on the Potomac river that requires more labor & attention to keep clean & in order than the Light at Fort Washington, and as this light is a very important one, I most earnestly recommend that a salary sufficient to secure an efficient Keeper be allowed. . .⁷¹

The increase was granted; however, in 1872 Kelley asked for another raise—\$40 per month (\$480 per year)—based on the fact that he has to “visit the Light 2 & three time a night in every kind of weather. That my house is over a quarter of a mile from the Light House where I have to Heat Oil and Clean all things that belong to the Keeping of the Light in the winter when every thing is frozen. If the honorable Chairman will not accede to this application I beg to tender my resignation.”⁷² Apparently his request was not granted; Kelley resigned in May 1872. Kelley’s replacement, Louis Phillips also petitioned for an increase in salary, was denied, and he also resigned after a year in service. The District Engineer then inquired as to the propriety of an ordnance officer acting as keeper.⁷³

Some continuity returned with the appointment of Henry M. Wills on June 14, 1873. He remained in the position until he was removed in 1882. His replacement John M. Howell resigned after four months and his successor, Thomas L. Hannon, was removed in less than three weeks when he was found “unqualified for the position.”⁷⁴

⁶⁸ Cameron was recommended to the Secretary of the Treasury to be keeper in a letter dated March 31, 1857, found in NA RG 26 Entry 31 (NC-31) “Letters Sent to the Secretary of the Treasury, 1852 – 1908”

⁶⁹ Found in NA RG 26 Letterbook 229

⁷⁰ 1870 descriptive pamphlet found in NA RG 26 E 63

⁷¹ Found in NA RG 26 E 31

⁷² Letter dated May 24, 1872, found in NA RG 26 Letterbook 291

⁷³ Correspondence summaries found in NA RG 26 E 38

⁷⁴ Letter dated April 2, 1883, found in RG 26 E 23

Lighting and extinguishing the light were routine duties of the lighthouse keeper. Fog, however, was unpredictable. After the fog bell was installed in 1882, the keeper was required to remain at his post when there were chances of fog so that he could wind up bell machinery that operated the bell striker. Since the Fort Washington keeper had no assistant, this could prevent him from leaving his station for days. In cases when the mechanism broke down, the keeper was forced to ring the bell by hand.

Until the completion of a keeper's dwelling in 1885, the keeper either lived in a private residence some distance from the light or in housing provided by the fort. In 1883, a small brick building belonging to the Fort was used by the keeper for his dwelling. "The building furnishes but two rooms, a basement, used as a kitchen, and one other room, furnishing poor, damp, and unhealthy quarters."⁷⁵

With his increased duties with the fog bell, the necessity of a keeper having a permanent dwelling nearby became apparent. A seven-room keeper's dwelling was completed in 1885. Other improvements were made that same year. The Engineer reported that there was "no water closet, cistern or other means of getting fresh water, except from the river, which is, at times, almost poison."⁷⁶ In August, the USLHB's Engineering Secretary suggested digging a well and in December was instructed to build a water closet at the station.⁷⁷ The driven well was sunk in November and a new pump and sink supplied.⁷⁸

On August 12, 1886, the Inspector recommended an increase in the keeper's salary, and it was raised from \$300 to \$500 per annum.⁷⁹ That same day, Jonathan Pierpont, who had served as keeper since 1883, was dismissed for being out of uniform and allowing the station to be in "filthy condition."⁸⁰ His replacement, William T. Davis, served until 1889, when he resigned and Daniel McCahan was appointed in his place.

In 1888, the Fifth District Inspector recommended that the station be "allowed fuel at the rate of 3 tons of coal and 2 cords of wood per year . . . The distance of these station from a fuel market and the consequent difficulty and expense of obtaining fuel render it proper in my judgment that this allowance be granted."⁸¹

In 1890 Daniel McCahan was reprimanded for failing to salute the lighthouse tender *Jessamine* on July 7th and 8th and for not being in uniform on either occasion.⁸² In 1896, McCahan was found "physically incapacitated for the performance of his duties, and that the station is not in a satisfactory condition."⁸³ Samuel Jones was appointed in his place. In 1898 the district engineer reported that

Lamp burners were not clean.

⁷⁵ Letter dated November 3, 1883, found in NA RG 31

⁷⁶ Found in NA RG 26 E 3

⁷⁷ Letters dated August 26 and December 3, 1885, found in NA RG 26 E 3

⁷⁸ 1886 *Annual Report of the Light-House Board*

⁷⁹ Letter dated August 14, 1886, found in NA RG 26 E 23

⁸⁰ Found in NA RG 26 Letterbook 709 and letter dated August 4, 1886, found in NA RG 26 E 31

⁸¹ Letter dated September 17, 1888, found in NA RG 26 Letterbook 786

⁸² Letter dated July 22, 1890, found in NA RG 26 E 23

⁸³ Letter dated June 1, 1896, found in NA RG 26 E 31

Dwelling needs painting outside, and inside walls need a coat of paint or papering.

Fog Signal.—The striking machinery was not clean nor well painted.⁸⁴

In 1900 Jones received a letter censuring him for “his unfaithfulness to his duties”; he turned in his resignation a few weeks later.⁸⁵

W.S. Stinchcomb was transferred to Fort Washington from Greenbury Point Shoal Light Station in 1900 to replace Samuel Jones. Stinchcomb started his career in the Lighthouse Service at the age of 37 as assistant keeper at Sandy Point in December 1896. He was promoted to keeper of Sharps Island in April 1896 and served that station until December 1897 and then at Greenbury Point from April 1897 to 1900. At Fort Washington, his salary started \$500 per annum and after a year increased to \$560, “the amount paid at similar shore stations having a fog bell and but one keeper.”⁸⁶

Despite the increase in salary, it appears that Stinchcomb supplemented his income with renting out rooms in the keeper’s dwelling. On November 23, 1901, the District Engineer reported:

Dwelling was not cleanly kept, and in some disorder, evidently as a result of keeping boarders. Keeper stated to me that he was authorized to do this by the Inspector of the district.⁸⁷

Apparently a few months later, Stinchcomb decided to spruce up the dwelling without authorization and submitted a bill of \$10.20 for papering the dining room. After scolding the keeper, the Engineer decided to “overlook the irregularity” since it was “a good job at a reasonable price” but advised him “to be much more careful in future dealings with the Government.”⁸⁸

The keeper was charged with maintaining all structures on his station. Some repairs he was expected to perform himself; the more difficult tasks would be assigned to lighthouse personnel or to local contractors. On May 26, 1904, Stinchcomb wrote that he would engage a carpenter to take off the glass frame on top of the old beacon tower and have the tower torn down, using the material to build a “platform for the lamp and frame.” He also indicated that the oil house needed new sills and new shingles.⁸⁹

One of the major chores for lighthouse keepers was painting the buildings on their station. In spring 1906, Keeper Stinchcomb requested three gallons of paint for the interior woodwork of the dwelling house. He also asked for two fire buckets.⁹⁰ Apparently Stinchcomb tackled painting the exterior of the dwelling in 1908, asking approval for hiring a helper to handle the ladders and assist with the painting for \$1.50

⁸⁴ Letter dated May 28, 1898, found in NA RG 26 E 3

⁸⁵ Letters dated March 17 and June 29, 1900, found in NA RG 26 E 23

⁸⁶ Letter dated June 7, 1900 from Fifth District Lighthouse Engineer, found in NA RG 26 Letterbook 1299; and letters dated April 3 and 10, 1901, found in NA RG 26 E 23

⁸⁷ Found in NA RG 26 E 3

⁸⁸ Letter dated February 14, 1908, found in NA RG 26 E 3

⁸⁹ Letter dated May 26, 1904, found in NA RG 26 E 3

⁹⁰ Letter dated March? 1, 1906, found in NA RG 26 E 3

per day.⁹¹ The Inspector noted that the labor cost should not exceed \$1.15 per day. The keeper sought approval for buying a scraper and wire brushes and also arranged the transportation of the paint. It was sent via U.S. Tug *Cushing*, from Frostbergs Wharf, foot of K Street, S.W., in Washington, D.C.⁹² In the spring of 1909, Stinchcomb asked permission to purchase lime to make whitewash for the outbuildings and brick foundation around the dwelling.⁹³

In December 1906 Stinchcomb reported that he “overhauled the Fog bell machinery and have succeeded in getting it to run on time.”⁹⁴ Apparently this was done periodically; in 1908 he again reported adjusting the fog bell and having it striking on time.⁹⁵

The USLHB provided keepers with means of heating the oil for the light and stoves for cooking. On October 17, 1904, the keeper indicated that he tried to use an attachment to heat water with the stove but was unsuccessful so bought new “Baltimore made stove” for \$21. He reported that after attaching the hot water pipes, it gave “perfect satisfaction”⁹⁶ The inspector was uncertain as to whether he could reimburse Stinchcomb for the new stove.

In 1905 the keepers were surveyed regarding the number of school age children at the station. At more isolated locations, keepers often boarded their children in nearby towns where they could attend school. At Fort Washington, Stinchcomb reported that he had three school-aged children attending a school five miles from the station. Under “means of reaching the school,” Stinchcomb wrote “through heavy muddy roads frequented by Soldiers and Negroes.”⁹⁷

Keepers often kept track of nearby minor aids to navigation and reported any problems to the inspector. On April 4, 1907, Stinchcomb wrote “the first black buoy below Fort Washington light on the Virginia side is missing. I missed it first this A.M.” The Inspector noted that this was the Sheridan Point Shoal Middle Buoy #33 and arranged that it be replaced by the lighthouse tender *Violet*.⁹⁸

In addition to a daily journal, lighthouse keepers were required to complete various paperwork including property returns. In a letter dated August 4, 1907, Stinchcomb apologized for failing to include lanterns and lamps in his reports and stated that he had two lens lamps, one tubular stand lamp, one hand lamp, and one lantern on hand.⁹⁹ He was also required to submit monthly vouchers for all his pay and expenses. On September 9, 1907, he begged the inspector’s pardon for neglecting this task indicating that “Mrs. Stinchcomb was very ill and I was worried so that I could not think of any

⁹¹ Letter dated April 2, 1908, found in NA RG 26 E 3

⁹² Letter dated April 27, 1908, found in NA RG 26 E 3

⁹³ Letter dated March 26, 1909, found in NA RG 26 E 3

⁹⁴ Found in NA RG 25 E 3

⁹⁵ Letter dated August 1, 1908, found in NA RG 26 E 3

⁹⁶ Found in NA RG 26 E 3

⁹⁷ Form letter dated January 19, 1905, found in NA RG 26 E 3

⁹⁸ Found in NA RG 26 E 3

⁹⁹ Found in NA RG 26 E 3

thing”¹⁰⁰ In 1910, when asked about quarterly reports, Keeper Stinchcomb insisted that he mailed them after being asked to make some corrections and suggested that they were lost in the mail or mislaid.¹⁰¹

In 1914, Keeper Stinchcomb asked the U.S. Lighthouse Bureau¹⁰² to obtain permission for him to purchase groceries and supplies at the Post Commissary.¹⁰³ The War Department did not comply with the request.¹⁰⁴

In 1916 suggestions to electrify the keeper’s dwelling were overruled because the probable electrification of the light and fog signal would eliminate the necessity to maintain the keeper’s dwelling.¹⁰⁵ The station did subsequently receive electricity in 1920.

In 1919, Keeper Gary E. Powell requested that a telephone be installed in the dwelling house. “It would do away with our using Q.M. [Quartermaster’s] phone on wharf and thus interfering with the Govt. & commercial business of that phone.”¹⁰⁶ His request was granted as long the Department of Commerce¹⁰⁷ did not bear the cost of installation.¹⁰⁸

Also that year, the fuel allowance for Fort Washington Light Station was increased from four tons of coal and two cords of wood to five tons of coal and two cords of wood. The superintendent noted “The dwelling at Fort Washington is one of the largest and pretentious in the District, and the fuel allowance is in the minimum.”¹⁰⁹

The keeper’s duties were considerably lessened when the station was electrified in 1920. No longer would he have to maintain the oil lamps and wind the clockwork mechanism controlling the bell striker. This new freedom may have led to Keeper Powell to seek permission to run the post office for Fort Washington “in one room of the lighthouse” in 1921.¹¹⁰ The Bureau responded that they had no objection as long as these duties did not interfere with his duties as keeper and with the understanding that “the combined amount of his salary shall not exceed the sum of \$2,000 per annum.”¹¹¹

Powell’s name is not listed among the postmasters who served at Fort Washington; however, the names of several other keepers are in those records. Joseph Cameron is listed as having been appointed in 1851, several years before his appointment as keeper. The postmaster position was discontinued from 1853 to 1861, when Cameron resumed as

¹⁰⁰ Ibid.

¹⁰¹ Letter dated January 26, 1910, found in NA RG 26 E 3

¹⁰² In 1911, the administration of lighthouses transitioned from the USLHB to U.S. Bureau of Lighthouses, also called the Lighthouse Service.

¹⁰³ Letter dated September 30, 1914, found in NA RG 26 E 50 File 902

¹⁰⁴ Letter dated October 9, 1914, found in NA RG 26 E 50 File 902

¹⁰⁵ Memo dated August 11, 1916, found in NA RG 26 E 50 File 902

¹⁰⁶ Letter dated November 1, 1919, found in NA RG 26 E 50 File 902

¹⁰⁷ The administration of lighthouses was transferred from the U.S. Treasury to the Department of Commerce in 1901. The U.S. Light-House Board became the U.S. Bureau of Lighthouses in 1911.

¹⁰⁸ Memo dated February 16, 1920, found in NA RG 26 E 50 File 902

¹⁰⁹ Letter dated December 17, 1919, found in NA RG 26 E 50 File 902

¹¹⁰ Letter dated October 8, 1921, found in NA RG 26 E 50 File 902

¹¹¹ Memo dated October 10, 1921, found in NA RG 26 E 50 File 902

postmaster while serving as keeper of the beacon light. After he resigned as keeper in 1869, Cameron continued as postmaster until 1873. Keepers Henry M. Wills, John Howell, Thomas Hannon, Jonathan Pierpont, William Davis, and Samuel Jones, all did stints as postmaster around the time they served as keepers. Since the steamboat landing, where the mail was delivered to the fort, was located near the light station, it would have been an appropriate job for the keeper.

According to a secondary source, in 1921, Keeper Powell was warned about being a “go-between” for the soldiers and supplying sugar to local moonshiners.¹¹² Later that year, Keeper Powell’s son was arrested for entering and destroying private property belonging to a constable at Fort Washington.¹¹³ Relations between the keeper and the Fort remained tense. In 1924, the War Department requested that Keeper Powell be transferred and that care of light be turned over to the military command. The Lighthouse Service agreed to this request based on the fact that “during the past few years both the light and fog bell have been electrified at this station so that the actual work involved in the operation of these aids is almost negligible, the one indispensable requirement being faithfulness of watch to be sure that the light is invariably switch on at sundown and that the fog bell motor is promptly started with every occurrence of fog or snow.”¹¹⁴

Keeper Powell was transferred to Cedar Point Light Station in early 1925 and the station property was turned over to the Quartermaster Department of the U.S. Army. The dwelling was licensed to the War Department and the light was kept by the War Department beginning April 1, 1925.¹¹⁵ The license was for a period of five years.

Almost immediately complaints were received regarding the quality of the light under the care of the War Department. One steamboat captain reported:

Since the light has been in the care of the War Dept. it has been practically useless as it cannot be seen but a very short distance whereas when tended by a keeper it was seen a long distance, and very useful to the steamers as it could be picked up at lower end of the Alexandria shipyard. I noted the small white lights on the wharf long before I saw the red light. Capt. Novel says this light is very useful to him especially in thick weather if it can be made as intense as it was.¹¹⁶

Upon investigation, it was discovered that a 100-watt headlight lamp had been substituted for the 150-watt special lightship lamp when it burned out. The Lighthouse Service provided a new supply of 150-watt lamps and the light was reportedly improved.¹¹⁷

It is unclear how long the light remained in the care of the Fort. In 1938 it was under the care of a Sergeant C. M. Richardson, but subsequent letters identify him as retired from

¹¹² Tilp, Frederick, *This Was Potomac River*, p. 97

¹¹³ Memo dated September 29, 1922, found in NA RG 26 E 50 File 902

¹¹⁴ Memo dated August 19, 1924, found in NA RG 26 E 50 File 902

¹¹⁵ Memo dated March 31, 1925, found in NA RG 26 E 50 File 902

¹¹⁶ Memo dated May 26, 1925, found in NA RG 26 E 50 File 902

¹¹⁷ Memos dated May 29 and June 12, 1925, found in NA RG 26 E 50 File 902

the military and an employee of the U.S. Coast Guard.¹¹⁸ The following communication was received from a Sergeant Richardson in 1938:

You wanted to know why I did not have the fog bell on when the Navy boat passed on November 10th.

I turned the bell on at 3:30 o'clock and it continued to ring until 7:30 o'clock. The fog had cleared so I could see about a mile up and down the River. I turned it off to go home for my breakfast.

The boat did not blow as it came up the River. It only gave three blasts about a mile below Fort Washington. There wasn't any fog at the wharf after 7:30 o'clock.¹¹⁹

The Fort was discontinued in 1939, the same year the U.S. Coast Guard took over the administration of lighthouses.

Lamplighter C.M. Richardson was still a resident of the keeper's dwelling in 1942 when he was asked to vacate the premises and the care of light and fog bell was to be assigned to the guard detail at the Fort.

The District Coast Guard Officer . . . has directed Mr. Richardson to vacate the dwelling, which he now occupies, as soon as possible. His removal from that location will make necessary other arrangements for the operation of the light and fog bell . . . It is understood . . . that this duty will be assumed by the guard detail at Fort Washington . . . and that in performing this duty the guard will be governed by the procedure which is now followed by Mr. Richardson in the case of both aids. It is probable that an automatic time switch will be later installed to control the light so that manual operation will not be required after that installation is completed. It will be necessary, however, for the guard to continue to observe fog conditions and to operate the fog bell whenever there is need of such operation.¹²⁰

At the end of World War II, the Army probably returned the use of the dwelling to the Coast Guard because in 1948 U.S. Coast Guard personnel once again kept the light and fog signal. Their duties included "the operation of the light and fog bell at Fort Washington, and the servicing of 21 lights and 5 lighted buoys in the Potomac River from Haines Point, D.C. to Woodbridge, Virginia. The servicing trip is made once a week using the 23' motor launch assigned to the station. The round trip is approximately 40 miles, and requires from one to three days to complete depending on the amount of work to be done at each light."¹²¹

¹¹⁸ Letter dated March 10, 1942, found in NA RG 26 Entry 82C (A-1) (formerly Entry 283C) "Correspondence of the U.S. Coast Guard"

¹¹⁹ Letter dated November 14, 1938, found in NA RG 26 E 50 File 902

¹²⁰ Letter dated March 30, 1942, found in NA RG 26 E 82C. It can be assumed that the shortage of housing during WWII prompted the Army's request for the dwelling

¹²¹ Memo dated November 18, 1948, from Chief, Shore Units Division (USCG) to Chief, Aids to Navigation Division, found in Fort Washington Lighthouse file at U.S. Coast Guard Historian's Office, Washington, D.C.

Previously Existing Structures

Although only the light and fog bell tower survives at Fort Washington, it once was part of a larger complex of buildings that comprised the station.

Keeper's Dwelling

Construction of a seven-room, framed keeper's dwelling was begun in on October 16, 1884, and completed on January 14, 1885, at a cost of \$10,053.46.¹²² The Board queried the District Engineer regarding the cost. Apparently similar dwellings at Fort Point, California, cost only \$8,186.27 and one at Rock Island station on the St. Lawrence River in New York, cost \$4,200.66. The Secretary of War requested that the dwelling be erected in the immediate vicinity of the building now used by the light-keeper.¹²³ According to a 1908 letter from the keeper, the dwelling was painted green with a brown roof and shutters.¹²⁴

A few years prior to the construction of the dwelling the keeper was provided with post housing. In 1915 there was correspondence between the Lighthouse Service and the War Department regarding an old brick dwelling house whose jurisdiction cannot be determined. The district inspector states

The status of this old brick dwelling has been the cause of some little friction between the keeper of this light station and the military authorities at Fort Washington. It is, moreover, unsightly and in an unsanitary condition . . . the Lighthouse Service should give up any claim to it, especially as the building is not particularly needed for lighthouse purposes, and no funds are available to put it in condition.¹²⁵

In 1924 the dwelling was painted by War Department using green color scheme.¹²⁶ The following year the keeper's dwelling and the oil house were licensed to the War Department to use for military purposes. The license, good for five years, was renewed in 1930 and 1935.¹²⁷ Before and after World War II the dwelling housed U.S. Coast Guard personnel.

¹²²1885 *Annual Report of the Light-House Board* and "Estimate of expense of construction of Keeper's dwelling at Fort Washington Light Station, Maryland," found in NA RG 26 Entry 7 (UD) "Lighthouse Work Orders, ca 1875 - 1922." This figure did not include the cost of the use of the tender *Jessamine* for one and a half months which would have brought the cost up to \$11,666.71.

¹²³ Letter to District Engineer from Engineer Secretary dated November 23, 1883, found in NA RG 26 E 23. Location is indicated on 1925 site plan.

¹²⁴ Letter dated May 21, 1908, found in NA RG 26 E 3

¹²⁵ Letter dated June 28, 1915, found in NA RG 26 E 50 File 902. There is a reference to an 1882 letter from the Secretary of War granting permission for the keeper to occupy one of the buildings at the post in a letter dated November 8, 1915, found in NA RG 26 E 50 File 902

¹²⁶ Memo dated July 12, 1924, found in NA RG 26 E 50 File 902

¹²⁷ Lighthouse site file found in NA RG 26 and letter dated November 13, 1935, in NA RG 26 E 50 File 902

According to a 1944 plot plan, the land on which the dwelling stood was transferred to the National Park Service “with all improvements.”¹²⁸ The house was still extant in 1948. Apparently some time after automation of the station in 1954, it was dismantled or destroyed.

Outbuildings

When the dwelling was constructed in 1885, one white outhouse or “water closet” was constructed nearby.¹²⁹

In 1887, the Engineering Secretary instructed the District Engineer to remove an old shed a few feet from the dwelling because of “great danger of a fire from the kitchen chimney.”¹³⁰ Apparently the shed was used to store worthless cement.

In 1904, the keeper described the oil house as having been built “right on the ground”¹³¹ Apparently the original oil house was destroyed in a fire and in 1913, the Assistant Secretary of the Treasury wrote the Secretary of War to request authority to build another one that would “probably take up an area not to exceed twenty feet square” and be fireproof.¹³² Permission was granted and the new 7’ x 9’ oil house was built of concrete for an estimated cost of \$380 which included \$190 for hired labor.¹³³

Wharf & Boathouse

The wharf located about 30’ from the lighthouse was owned by the War Department; however, it was used by the lighthouse service tender when delivering supplies or equipment. In 1880, the USLHB received permission from the War Department to store spare buoys and sinkers on the wharf. In 1924, a violent wind storm damaged the wharf shed. The wharf shed was demolished causing damage to the tower.¹³⁴

In 1948 the Fort Washington Light Station consisted of “a light and fog bell mounted on a pyramidal wood tower on shore; a seven room, modern, frame dwelling; a timber dock and a framed boat house.”¹³⁵ Both the boat house and dock had been damaged by ice action and were in deteriorated condition.

¹²⁸ The 1944 plot plan was found in the cartographic branch of the National Archives, College Park, Maryland

¹²⁹ Letter dated December 3, 1885, found in NA RG 26 E 23

¹³⁰ Letter dated April 7, 1887, found in NA RG 26 E 23

¹³¹ Letter dated May 26, 1904, found in NA RG 26 E 3

¹³² Letter dated July 11, 1913, found in NA RG 26 E 50 File 902

¹³³ Letters dated July 26, 1913, and April 29, 1925, and requisition dated November 9, 1912 found in NA RG 26 E 50 File 902

¹³⁴ Letter dated July 27, 1924, found in NA RG 26 E 50 File 902

¹³⁵ Memo dated November 18, 1948, from Chief, Shore Units Division (USCG) to Chief, Aids to Navigation Division, found in Fort Washington Lighthouse file at U.S. Coast Guard Historian’s Office, Washington, D.C.

Landscaping & Grounds

In 1896, about 125' of plank walk was laid at the station and some 30 running feet of picket fence was built in the rear of the dwelling and whitewashed. That same year a brick cistern was built to supply the keeper with drinking water.¹³⁶ In 1902, the keeper's dwelling was apparently enclosed with a "simple fence" and two iron gates.¹³⁷ In 1911 650 paving bricks were ordered for repairing the walks.¹³⁸

Although most lighthouse keepers were encouraged to cultivate gardens on their stations, apparently this was initially discouraged by the War Department. In 1884 the keeper's request for permission to cultivate a garden was denied;¹³⁹ however, in April 1903, the keeper was furnished with

- One Snowball, common.
- Three Altheas, red.
- One double-flowering Peach, red.
- One Pyrus (Bechtel)
- One double-flowering Cherry.
- One-half dozen Assorted Roses.¹⁴⁰

In August 1903 the keeper was provided with a lawn mower and 50' of ¾" hose with nozzle.¹⁴¹ The following year the keeper Stinchcomb asked permission to purchase from Thomson's nursery in Falls Church, Virginia, four cherry trees and four apricot trees to use as shade trees in the side yard. In the same letter he indicated he had "received the flower seed and will put forth every effort to beautify the grounds with them."¹⁴²

In the summer of 1922 Keeper Powell expected a large number of visitors and he requested that the Bureau provide him with different types of plants to make the "grounds as attractive as possible"¹⁴³ After trying to unsuccessfully obtain plant donations from the Department of Agriculture, the Bureau noted that maybe the commanding officer of the post might provide some free of charge.¹⁴⁴

Both a 1925 and a 1940 site plan show a concrete walkway ending at the wharf.

¹³⁶ 1896 *Annual Report of the Light-House Board*

¹³⁷ Letters dated November 25, 1901, April 22, 1902, and June 19, 1902, found in NA RG 26 E 3

¹³⁸ Form 80 dated February 21, 1911, found in NA RG 26 E 50 File 902

¹³⁹ Letter dated March 28, 1884, found in NA RG 26 E 23. Letter dated March 13, 1902, found in NA RG 26 E 3, initially denied permission to plant fruit trees but this must have eventually overturned.

¹⁴⁰ Letter dated April 22, 1902, found in NA RG 26 E 3

¹⁴¹ Apparently the keeper had been borrowing a lawn mower and hose from the Quartermaster's Department. Letters dated April 23, 1903 and August 22 and 28, 1903, found in NA RG 26 E 3

¹⁴² Letter dated March 4, 1903, found in NA RG 26 E 3

¹⁴³ Letter dated January 26, 1922, found in NA RG 26 E 50 File 902

¹⁴⁴ Memo dated January 27, 1922, found in NA RG 26 E 50 File 902

Conclusion

Approximately 100 wooden fog bell towers were built in the United States from the mid-nineteenth century to the early twentieth century.¹⁴⁵ Fort Washington is one of about dozen that survive. The tower at Fort Washington, originally built as a fog bell tower in 1882 and modified to support a light in 1902-04, is unusual in supporting both a light and a fog bell. Although the bell has been silenced, Fort Washington Light continues as an active aid to navigation and can be viewed by boaters along the Potomac River and visitors to Fort Washington Park.

¹⁴⁵ This is only an estimate based on existing fog bell towers in the late nineteenth century. Fog bells may have preceded the steam fog signals at many stations.

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Entry 3 (NC-63) "Records of the Fifth Light-House District (Baltimore), 1851-1912"

Entry 5 (A-1) "Light-House Service Publications, 1838-1942" (These include *Light Lists* and *Notice to Mariners*)

Entry 6 (NC-31) "Annual Reports, 1820 – 1853"

Entry 7 (UD) "Lighthouse Work Orders, ca. 1875-1922"

Entry 13 (NC-63) "Clippings Relating to Light-Houses, ca. 1800-1939" (These include excerpts from U.S. Light-House Board Annual Reports)

Entry 23 (NC-31) "Letters Sent to District Inspectors and Engineers, October 1852-July 1910"

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Appendix I: Fog Bell Towers Built at Light or Fog Signal Stations in the United States¹⁴⁶

State	Name of Station	Description of Tower	Surviving?
AL	Sand Island	Square, white, pyramidal	No
CA	Ballast Point		No, station no longer exists
CA	Farralon(es) Island		No
CA	Point Pinos		No
CA	Roe Island	Small square white structure	No, station no longer exists
CA	Yerba Buena		No
CT	Stratford Point	Skeletal with house on ground level	No, replaced with fog signal building
DE	Fort Mifflin Fog Signal	Open frame	No, station no longer exists
LA	Amite River	White square pyramidal	No, station no longer exists
LA	Cubits Gap	White square pyramidal bell tower with lantern	No, station no longer exists
LA	Head of Passes	White square pyramidal	No
LA	New Canal	White square pyramidal	No
LA	Pass Manchac	White square pyramidal	No
LA	Southwest Reef	Pyramidal	No
LA	Tchefunte River Rear Range	White pyramidal	No
MA	Baker Island	White skeletal	No, replaced with fog signal building
MA	Bishop & Clerks	Square attached to tower	No, station no longer exists
MA	Dumpling Rock	House within skeletal frame	No, station no longer exists
MA	Eastern Point	Small white house in skeletal frame	No, replaced with fog signal building
MA	Long Point	House within skeletal frame	No
MA	Nobska Point	House within skeletal frame	No
MA	Palmer Island	White pyramidal	No
MA	Plymouth	White pyramidal	No
MA	Tarpaulin Cove	Pyramidal shingled	No, destroyed 1938
MD	Blakistone Island	Brown	No
MD	Cedar Point	Square, middle section shingled, natural color, remainder white	No
MD	Cove Point	Brown	No, bell currently suspended in front of rectangular house
MD	Fort Carroll	Square tower with cast iron lantern	Earlier tower replaced with combination fog bell / light tower now in deteriorated condition
MD	Fort Washington	White frame pyramidal, open at the top	Yes
MD	Lazaretto Point	Brown frame	No, station no longer exists
MD	Piney Point	White	No

¹⁴⁶ This list is based on the 1892, 1901, and 1908 *List of Lights and Fog Signals on the Atlantic and Gulf Coasts of the United States*, the 1892, 1901, and 1908 *List of Lights and Fog Signals on the Pacific Coast of the United States*, and 1892, 1901 and 1908 *List of Lights and Fog-Signals of the United States on the Northern Lakes and Rivers* (Washington: Government Printing Office, 1892, 1901 and 1908). Earlier *Light Lists* do not consistently list fog signals or include fog bell towers in station descriptions. Historic images and postcards were also used. Information on surviving Great Lakes fog bell towers provided September 15, 2009, by Terry Pepper, Great Lakes Lighthouse Keepers Association.

MD	Point Lookout	White square frame tower	Yes, moved to Chesapeake Bay Maritime Museum
MD	Pooles Island	Brown frame	No
MD	Turkey Point	Light List says tower but photo shows house	No
ME	Avery Rock	White skeletal w/house at ground level	No, station no longer exists
ME	Bass Harbor Head	White pyramidal	No, replaced with bell attached to fog signal building
ME	Bear Island	White pyramidal	No
ME	Blue Hill Bay	White pyramidal	No
ME	Boon Island	Skeletal	No, replaced with fog signal building
ME	Browns Head	White pyramidal	No
ME	Burnt Coat Harbor	Square pyramidal	Yes
ME	Burnt Island	White pyramidal	No
ME	Cape Elizabeth	Skeletal	No, replaced with fog signal building
ME	Cape Neddick	Originally housed in skeletal framework; later enclosed white pyramidal	No
ME	Deer Island Thorofare	House within skeletal framework	No
ME	Egg Rock	Elevated white pyramidal	No, replaced with fog signal building
ME	Fiddler's Reach (1914)	White pyramidal	Yes
ME	Fort Point	White pyramidal	Yes
ME	Fort Popham	White pyramidal	No
ME	Goat Island	White pyramidal	No
ME	Halfway Rock	Elevated house with pyramidal skeleton	No
ME	Hendricks Head	Elevated white house	Yes
ME	Libby Island	Skeletal encasing small house	No, replaced with fog signal building
ME	Little River	White pyramidal	No
ME	Marshall Point	White pyramidal	No
ME	Matinicus Rock	Skeletal	No, replaced with fog signal building
ME	Mount Desert	Skeletal encasing small house	No, replaced with fog signal building
ME	Nash Island	White pyramidal	No
ME	Owls Head	White pyramidal	No
ME	Pemaquid	Wooden pyramidal tower attached to brick house	Yes
ME	Perkins Island	White pyramidal	Yes
ME	Petit Manan	Skeletal	No, replaced with fog signal building
ME	Pond Island	Bell hung from elevated house on cliff	No
ME	Portland Head	Skeletal, possibly replaced with pyramidal	No, replaced with fog signal building
ME	Saddleback Ledge	Skeletal	No
ME	St. Croix	Elevated house within skeletal frame	No, station no longer exists
ME	Tenants Harbor	White pyramidal	Yes
ME	West Quoddy Head	Skeletal	No, replaced with fog signal building

ME	Whitehead Island	Square skeletal	No, replaced with fog signal building
ME	Whitlocks Mill	White pyramidal	Yes
ME	Wood Island	White elevated pyramidal	No
MI	Cheboygan Crib	White square frame	No
MI	Escanaba (Sand Point)	White frame	No
MI	Frankfort Pierhead	Pyramidal with enclosed base	No
MI	Little Traverse (Harbor Point)	Square pyramidal, lower part enclosed	Yes, restored with bell in place
MI	Point Iroquois	Square house on skeleton structure	No, moved to Grand Marais
MI	South Manitou Island		No
MI	Thunder Bay Island?		No, replaced by fog signal building
NH	Isle of Shoals	White pyramidal	No, washed away in 1991 storm
NJ	Sandy Hook Fog Bell	White, wedge-shaped skeleton structure	No, station no longer exists
NY	Cedar Island	Skeleton frame	No
NY	Coney Island		Unknown
NY	Fort Lafayette Fog Signal	White square structure with shingled roof, natural color, bell hung from gallows frame on roof	No, station no longer exists
NY	Fort Wadsworth Fog Signal	Lead colored, wedge-shaped skeleton structure with small house at base	No, station no longer exists
NY	Governors Island East End Fog Signal	Drab, square, pyramidal, skeleton, surmounted by small white house	No, station no longer exists
NY	North Brother Island	Wedge shaped	No, station no longer exists
NY	Stony Point	White pyramidal bell tower surmounted by lantern	No
NY	West Point	House below and in front of tower; house, lower part white, upper part, shingled, natural color	No, station no longer exists
OR	Warrior Rock	White square pyramidal	No
PA	Fort Mifflin Fog Signal	Open frame	No, station no longer exists
PA	Presque Isle Pierhead	White square pyramidal	No, station no longer exists
RI	Fort Adams Fog Signal	Square pyramidal frame tower, base white, upper part shingled, natural color	No, station no longer exists
RI	Newport Harbor	Bell suspended above square house	No
RI	Prudence Island	House within skeletal frame	No
RI	Rose Island	House within skeletal frame	No, replace with fog signal building
SC	Fort Sumter Front Range	Light-green skeletal	No, station no longer exists
VA	Old Point Comfort	Elevated frame with brown house	No
WA	Cape Hancock (Cape Disappointment)	Unknown	No
WA	Ediz Hook	Pyramidal frame, painted white	No, station no longer exists
WA	Point No Point	Square pyramidal house elevated on skeletal frame	No
WI	Racine Pierhead	Frame	No
WI	Sherwood Point	White square pyramidal (originally separate structure but now with radio room attached)	Yes

Appendix 2: Keepers at Fort Washington

1857 – 1869	Joseph Cameron
1869 – 1872	Edward Kelley
1872 – 1873	Louis Phillips
1873 – 1882	Henry M. Wills
1882 – 1883	John M. Howell
1883 – 1883	T. L. Hannon
1883 – 1886	Jonathan Pierpont
1886 – 1889	William T. Davis
1889 – 1896	Daniel McCahan
1896 – 1900	Samuel Jones
1900 – [1914]	W.S. Stinchcomb
1919 – 1925	Gary E. Powell
1925 – ??	War Department personnel
[1938] – 1942	C. M. Richardson
1942 -	U.S. Army personnel
[1948]	U.S. Coast Guard personnel
1951	Jean Marie Roest ¹⁴⁷
1954 - ??	Mrs. Josephine Ekland ¹⁴⁸

¹⁴⁷ Tilp, Frederick, p. 97

¹⁴⁸ Ibid.

Appendix 3: Figure Pages

The following pages illustrate the historic features and character of Fort Washington Light.

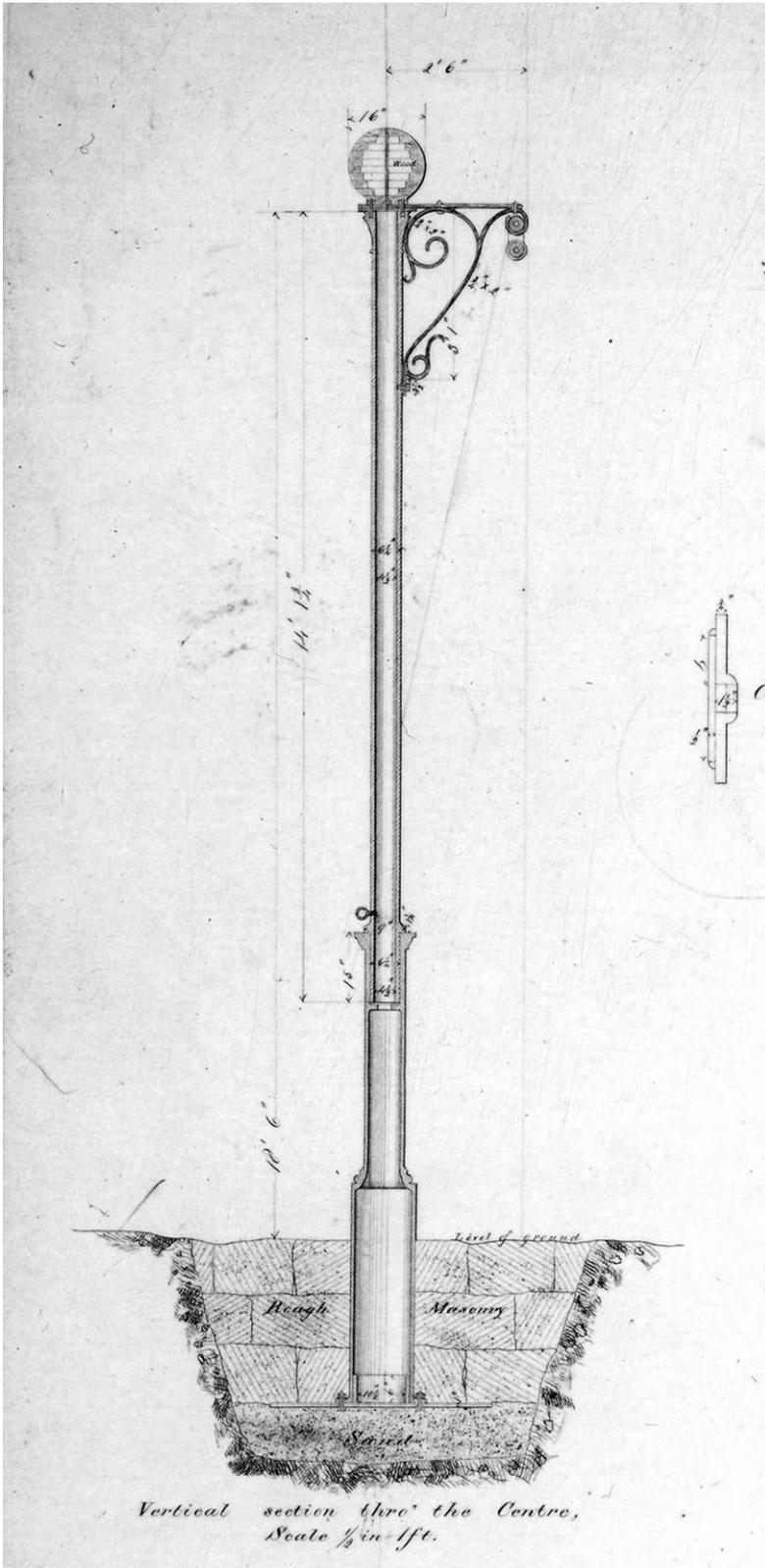


Figure 1. Original post light at Fort Washington. Drawing courtesy of National Archives Record Group 26.



Figure 2. Fort Washington Light in 1913 with Keeper's Dwelling in background. Photo courtesy of U.S. Coast Guard Historian's Office.



Figure 3. Fort Washington from the Potomac River, ca. 1920, showing wharves and buoy shed. National Archives photo from Record Group 111.



Figure 4. 1952 aerial view of station showing boathouse at upper right. Photo courtesy of U.S. Coast Guard Historian's Office.



Figure 5. Pre-1938 aerial view of Fort Washington with tower barely visible at lower left. National Archives photo from Record Group 111.

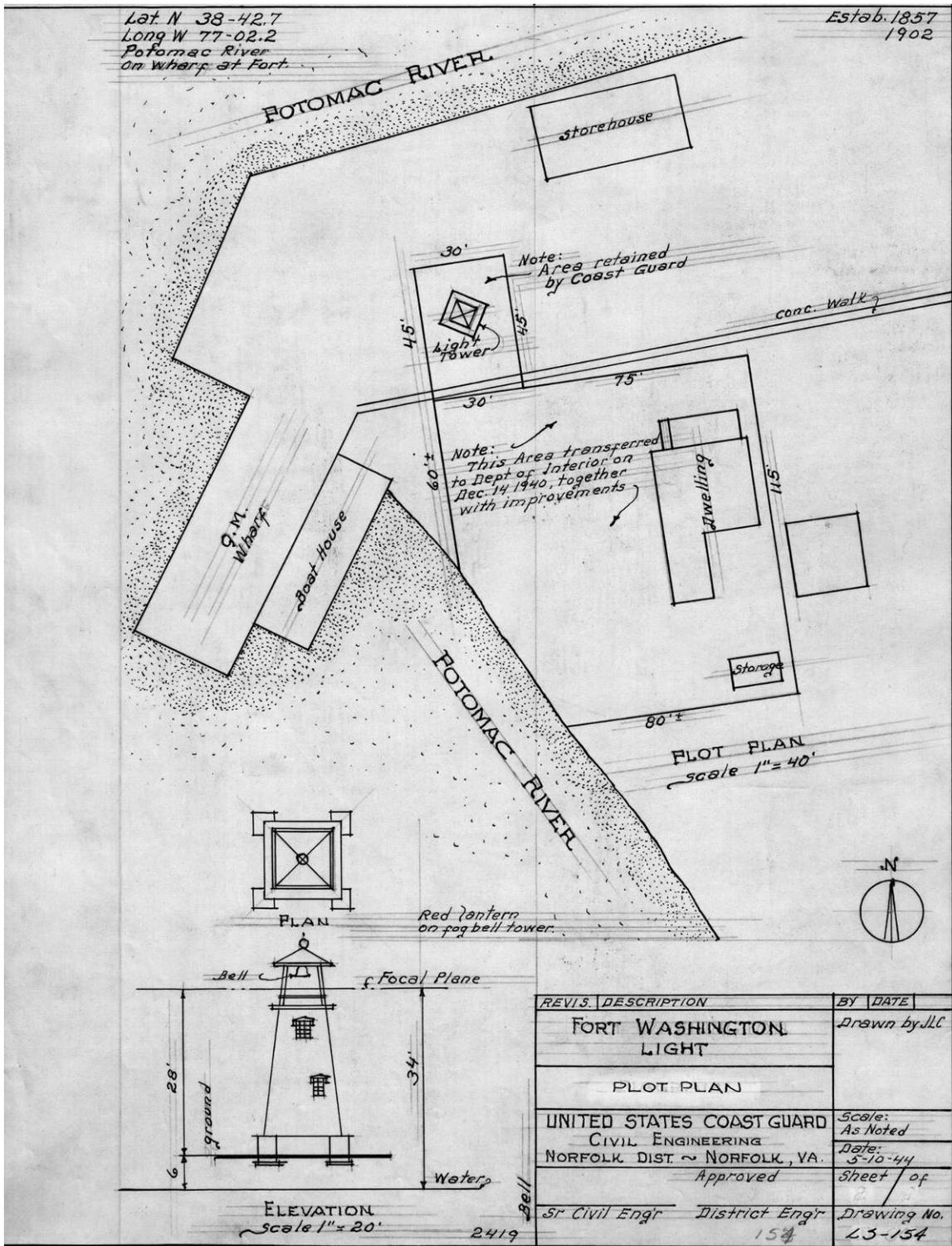


Figure 6. 1944 plot plan of the station from National Archives Record Group 26.

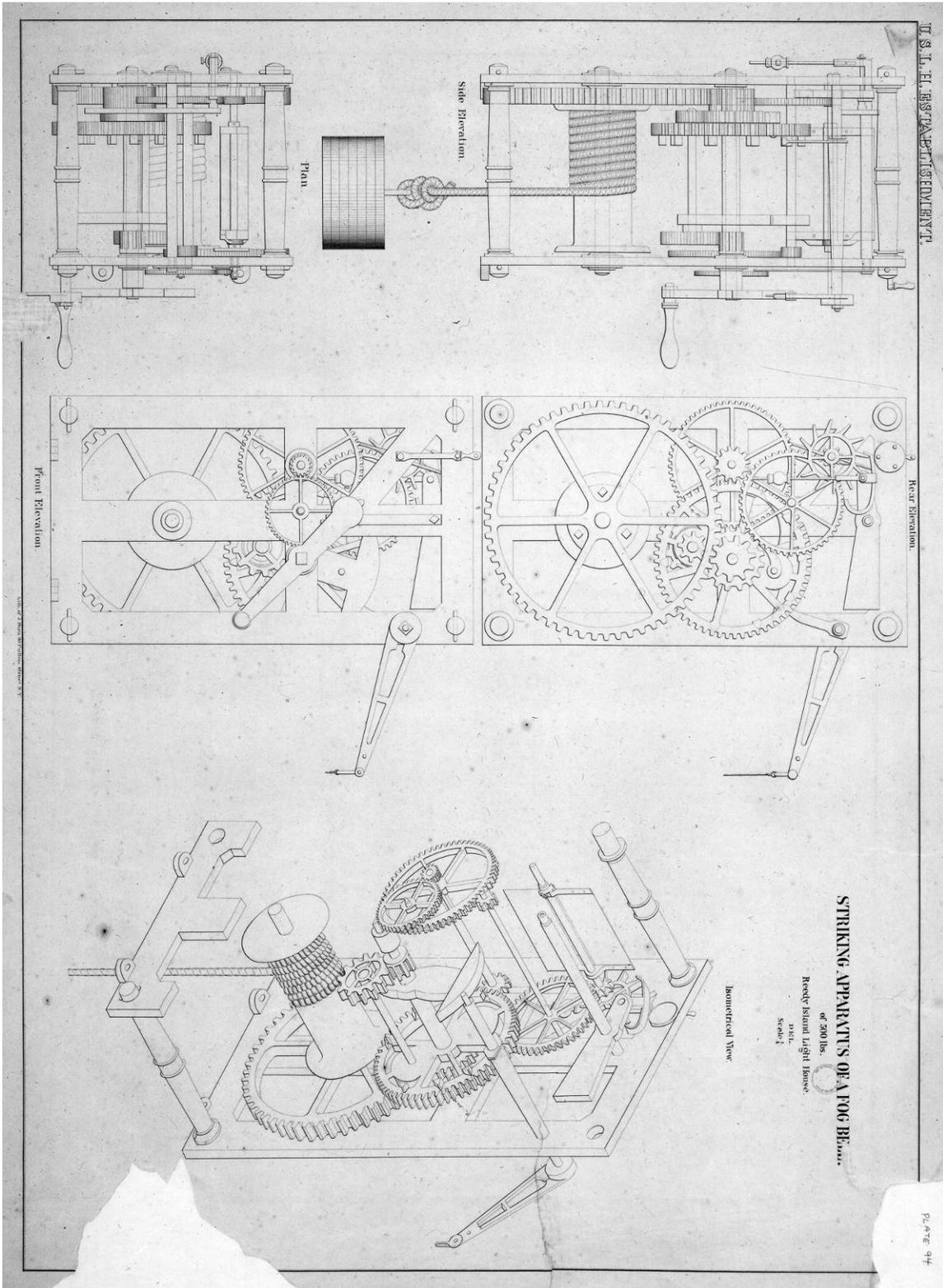


Figure 7. Diagram of fog bell striking apparatus from National Archives Record Group 26.



Figure 8. Historic view of Fort Carroll Lighthouse, Maryland, one of the few examples of a combination light and fog bell tower. Photo courtesy U.S. Coast Guard Historian's Office.



Figure 9. Early bell tower at Whitehead Light Station, Maine, ca. 1858. Photo courtesy of U.S. Coast Guard Historian's Office.

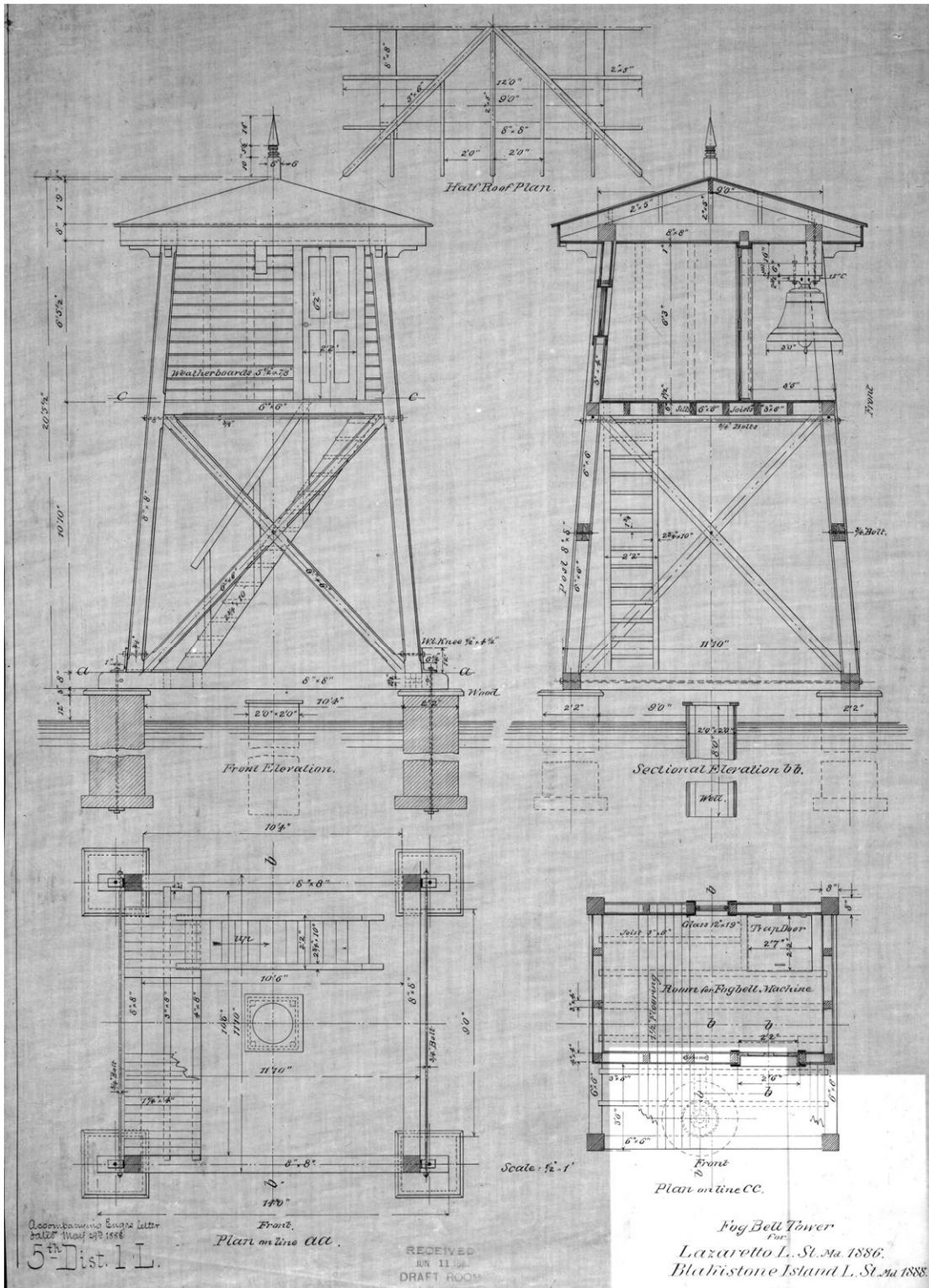


Figure 10. Drawing of fog bell tower built at Lazaretto and Blakistone Island Light Stations, both in Maryland. National Archives Record Group 26.

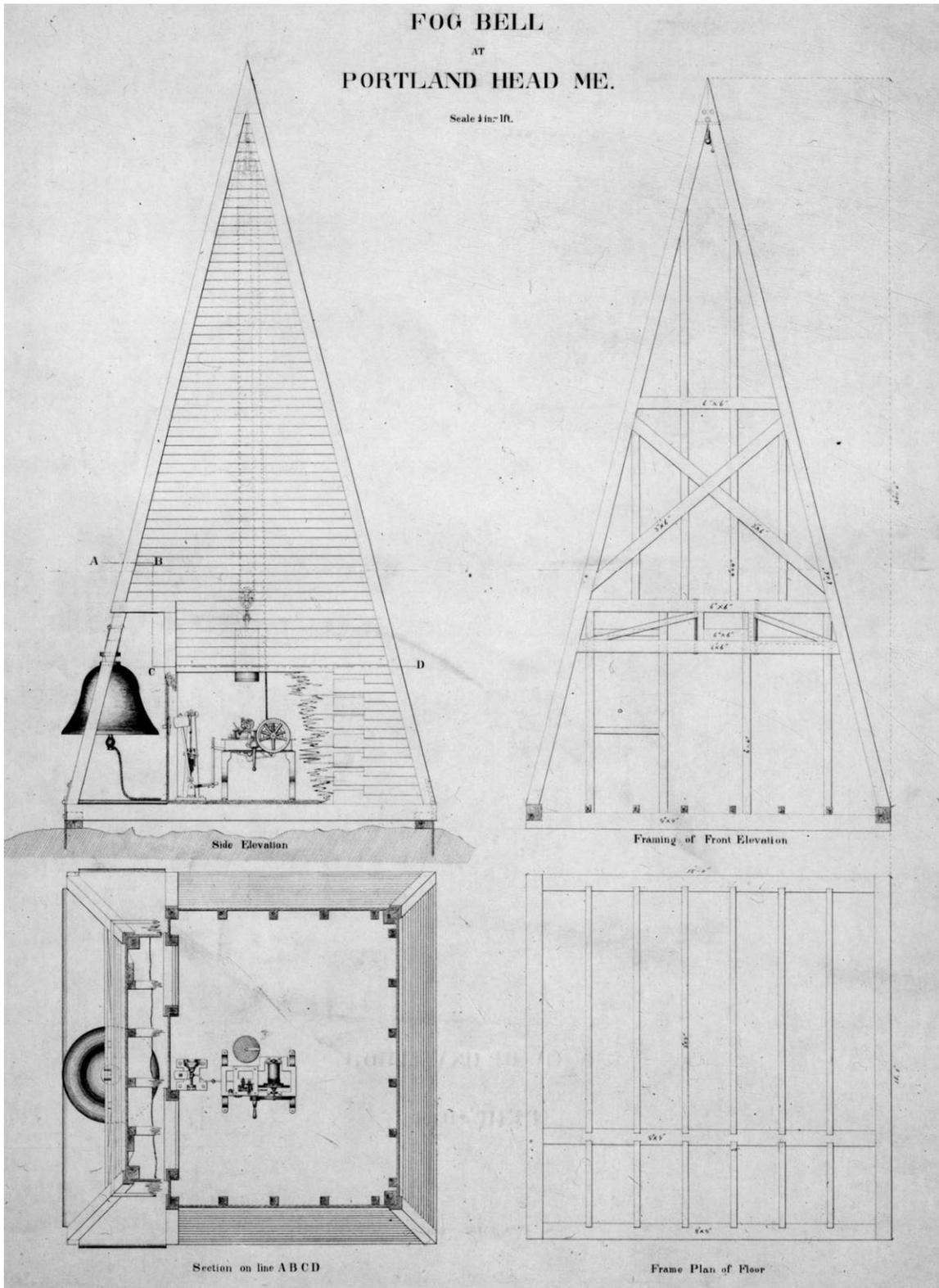


Figure 11. Drawing of a pyramidal bell tower, a design commonly used at Maine light stations. National Archives Record Group 26.



Figure 12. Pyramidal bell tower at Goat Island Station, Maine. Photo courtesy U.S. Coast Guard Historian's Office.