EXAMINATION—LIGHT-HOUSE ESTABLISHMENT.

LETTER

FROM

THE SECRETARY OF THE TREASURY,

TRANSMITTING

A report from I. W. P. Lewis, civil engineer, upon the condition of the light-houses, beacons, buoys, and navigation, upon the coasts of Maine, New Hampshire, and Massachusetts.

FEBRUARY 25, 1843.

Read, and laid upon the table.

TREASURY DEPARTMENT, *February* 24, 1843.

SIR: I have the honor to transmit, herewith, in compliance with the resolution of the House of Representatives of the 23d of December last, the report of I. W. P. Lewis, civil engineer, on the examination of the light-house establishment of the United States so far as it has progressed, and which comprehends the description of seventy establishments in the States of Maine, New Hampshire, and Massachusetts, being one-third of all the lights on the seaboard, and also the correspondence relative to this examination.

The light-house establishment having become a prominent branch of expenditure committed to the supervision of this Department, my attention was arrested by an examination of the annual cost of maintenance, and the very large increase of expenditure devoted to this object for several years past. Believing that there must be some defect in the system of building, and that the large sums annually required for repairs pointed to such a cause, it was deemed proper to institute a special survey and examination, for the future guidance of this Department.

The points on which the Department required information are expressed in the letter of instructions to Mr. Lewis, to which the attention of the House is respectfully requested.

Impressed with the value of our light-house establishment, in its intimate connexion with the safety and security of commerce, and of the revenues dependent thereon, and believing that a greater degree of system in its details, and economy in its administration, are demanded by the public interests, I have to submit to the consideration of Congress the following suggestions, with the fullest confidence in their importance and necessity.

1st. That no appropriation shall be made hereafter, for the erection of a

No. 9.

DICE'S HEAD.

Third class harbor beacon light.

Fixed light of ten lamps; established in 1828.

Condition of buildings.

Tower. *Tower* of rubble masonry, 40 feet high, laid up in lime mortar of bad quality; walls opened by frost, and pointing cracked out; interior coated with ice during winter; soapstone roof on deck, disjointed, loose, and leaky; wood work (viz: staircase, window frames and sashes, and lintels) all rotten; stairs unsafe to use. Base of tower rests on the natural surface of a ledge, without regard to level.

Keeper's house. *Dwelling-house* of rubble masonry, laid up in lime mortar of bad quality; walls cracked and leaky; shingled roof leaky and rotted; windows leaky; chimneys smoky; out of repair altogether. House contains three rooms on the first floor, and two chambers in the attic; no well of water, nor rain-water cistern.

Lantern. *Lantern octagonal;* wrought iron frame and coppered dome; height of side, 7 feet 4 inches; diameter at angles, 7 feet 10 inches, glazed with impure glass, 10 by 12 inches; sash bars 1 inch wide; angle posts 3½ inches wide; 10 lamps, with 1-inch burners, placed on two circular iron frames, 30 inches in diameter, six on the lower and four on the upper series; reflectors 14 inches diameter; seven reflectors out of perpendicular half an inch; position of burners, as to apex of reflectors, varies from 2½ to 3 inches.

Ventilation. *Ventilation.* For ingress of air, floor scuttle; for egress, 7 square inches.

Height of light. *Centre of this light* is 129 feet above the level of mean high water; and it should be seen 15½ miles in clear weather, if the nature of the apparatus admitted of it, which it does not.

Location. *Location.* As a harbor light for the port of Castine, this is useful. As a bay light, it is of little utility, though standing at the head of Penobscot bay; yet the site is so far east of the central line of said bay, that the light is intercepted by projecting land, and can only be seen in a certain direction and limited distance. Were it placed at the west side of Dice's head, it would then have a clear range down the bay to its limit of visibility. In its present position, one lamp of a proper form is all the navigation requires, instead of ten lamps, now used.

Dice's Head, Castine harbor. *Statement of Benjamin Harriman, keeper of Dice's Head light-house, July 18, 1842.*

B. Harriman, keeper, salary $350. I, Benjamin Harriman, was appointed keeper of this light, July 6, 1841, upon a salary of $350. There are three acres of land belonging to this estate, none of which is capable of

cultivation. My family consists of seven persons. The dwelling-house is built of stone rough laid, and shingled roof; contains three lower rooms and two chambers. The house is leaky and walls cracked by frost. Lintels of the windows are rotten, and bad leaks over each window. Cellar walls are also cracked by frost. There is a well of water belonging to the estate, but we cannot use it for domestic purposes, as it is impure. There is no rain-water cistern attached to the premises. I bring all my water, for the family use, a distance of fifty rods. The kitchen sink, with the trunk leading from it, is rotten, and wants renewing. The tower of the light-house is in a worse state than the dwelling-house. The wooden staircase is so rotten, where the steps lead into the wall, as to be unsafe of ascent. The walls of the tower require pointing inside and out, all the joints of the stone work being open; some stones fallen out, and the rain working through to the inside of the tower, making ice upon the walls in winter. Lantern sweats at night, and requires a stove during the winter. I have never found the lamp heaters of any use in keeping the oil fluid during cold weather, and therefore I never use them. There are ten lamps which have consumed, during the last twelve months, two hundred and forty-nine gallons summer and one hundred and three gallons winter oil. I am not allowed any boat. The old fort on the point of the harbor here was formerly allowed to the keeper of this light for pasturage and cultivation of the land about it. Now it has been placed under the care of a citizen of Castine.

Keeper's house. Well useless. No cistern. Tower. Staircase rotten. Lantern.

BENJAMIN HARRIMAN.

No. 10.

NEGRO ISLAND.

Third class harbor beacon light.

Fixed light of eight lamps; established in 1833.

Condition of buildings.

Tower. *Tower* of rubble masonry, 20 feet high, laid up in lime mortar, and resting on the natural surface of a sloping ledge; wall cracked from roof to base by the gale of February, 1842; soapstone roof, and leaky.

Keeper's house. *Keeper's dwelling-house* of rough stone, laid in lime mortar; roof shingled; 3 rooms on lower floor, with small cellar, and 3 chambers in the attic; chimneys smoky; no well nor rain-water cistern; buildings badly constructed.

Lantern. *Lantern octagonal;* wrought iron frame and coppered dome; height of side 7 feet 5 inches; diameter, at angles, 7 feet 8 inches; glazed with 10 by 12 impure glass; 4 panes broken;

8 lamps, ¾-inch burners, with 13-inch reflectors, placed on two circular iron frames, 26 inches diameter; reflectors 7 inches apart, and 7 of them out of perpendicular; position of burners, as to apex of reflectors, varies from 2⅛ to 3¼ inches; two reflectors face over the land.

Ventilation. For ingress of air, floor scuttle; for egress, 7½ square inches. — Ventilation.

Centre of light is 53 feet above the level of mean high water, and should therefore be seen easily, in clear weather, 10 miles. — Height of light.

Location. This light is a beacon to indicate the position of Camden harbor, and serves no other purpose. One lamp of a proper form is alone required here, instead of eight now used. — Location.

Statement of Ephraim S. Fly, keeper of Negro Island light, Camden harbor, July 21, 1842. — Negro island, Camden harbor.

I, Ephraim S. Fly, was appointed keeper of this light July, 1841, upon a salary of $350. — E. S. Fly, keeper; salary $350.

This island contains about ten acres surface; half an acre is cultivated; the rest woodland and rocks. The house is built of rough stone, with shingled roof, and cellar under part of it; the tower is also of rough stone, and was badly cracked from top to bottom during the gale of February last. — Tower.

I have no well of spring water fit for use, and the rain-water cisterns supplied by the contractor who erected the house are all useless; consequently, I am frequently obliged to procure water from the main land. — No well or cisterns.

The lantern was repaired this spring, previous to which it leaked very badly. — Lantern.

My oil has been good. I have built a landing pier at my own expense, there being no safe place previously where supplies could be taken on shore. This pier cost me about $25.

EPHRAIM S. FLY.

No. 11.

FORT POINT. — Fourth class river light.

Fixed light of eight lamps; established in 1836.

Condition of buildings.

Tower of rubble masonry, twenty-three feet seven inches high, laid up in lime mortar of bad quality; walls cracked from roof to base, and all the joints open to the weather. Base rests upon the natural surface of an uneven rock; soapstone roof or deck disjointed; loose and leaky; wood work decayed; interior coated with ice in winter. — Tower.

Dwelling-house of rubble masonry, laid up in lime mortar of bad quality; walls cracked on all four sides; roof shingled double, but leaks in every storm; chimneys smoky; timber framing decayed; three rooms on the first floor, and three chambers in the attic. — Keeper's house.

Lantern octagonal; wrought iron frame, and coppered dome; height of side seven feet three and a half inches; diameter, at angles seven feet eight inches; glazed with eleven by twelve impure glass; sash bars three-fourths of an inch wide; angles three inches wide; eight lamps, ¾-inch burners, with 13-inch reflectors, placed on two circular frames of twenty-six inches diameter, four on each series. Seven reflectors out of perpendicular. Position of burners as to apex of reflectors varies from two and one-eighth to three inches. — Lantern.

Ventilation. For ingress of air, floor scuttle; egress, 7½ square inches. — Ventilation.

Centre of this light is 99 feet above the mean level of high water, and it should therefore be seen 13½ miles in clear weather. — Height of light.

Location. On a projecting point of land at the mouth of the Penobscot river, and the site of Fort Pownall, known in the early history of Maine as a place of some importance. The uses of Fort Point light being confined to the river navigation. But one lamp of a proper form is required here instead of eight now used. — Location.

Statement of William Clewley, keeper of Fort Point light-house, Penobscot river, July 19, 1842. — Fort point, Penobscot river.

I, William Clewley, was appointed keeper of this light, August, 1836, upon a salary of $350. The land belonging to Government on this estate is estimated at six acres, with a road leading to the landing, also belonging to Government; about four acres of the land is capable of cultivation. The place takes its name from a fort formerly called Fort Pownall, supposed to have been erected more than a hundred years since. — W. Clewly, keeper; salary $350.

The light-house here is intended to guide vessels up the river to Bucksport. My dwelling-house is very much out of repair. The walls are of stone, and, owing to defective building, have cracked on all four sides, so much so as to cause continued leakage in wet weather. The roof also leaks so much that we are obliged to take up the carpets and swab the floors. I swabbed up twelve buckets of water off the floor of the sitting-room. The cellar way walls have been thrown by the frost, and will fall down unless rebuilt. — Stone dwelling-house.

The house contains six rooms, with a cellar. There are three rain-water tanks. A well was dug when the house was erected, but the spring failed, and I was obliged to dig another one myself, from which I have a constant supply. I have also erected a barn upon the premises.