(Built at Baltimore, Md., in 1887-'88. Tonnage 417.20 gross)

Appropriated by act of Congress, for building
a steam-tender for the Fourth
Lt.-ho. District, - - - Aug. 4, 1886, $68,300.

A twin-screw propeller, built at Baltimore, Md., in 1887-'88. Contract with Ramsay & Son, dated 12 Feb'y 1887, for $66,900.

Some months after the time named in the contract for the completion of the vessel, the contractors made an assignment and the L.H. B'd took possession, finished the construction and placed her on duty in the 4th Dist., 12 Nov.'88.

The actual sums paid for building this vessel are as follows:

Paid H. A. Ramsay & Son three payments - -	$36,126.
Cost of completion after forfeiture of contract,	26,354.10
Superintendence, etc., after vessel should have been completed, - -	3,693.20
Total - - -	$66,173.30

Material of hull, mild steel; fastenings, rivets.
Length 150'; breadth 27'; depth of hold 12'.
Draft forward, light 6' 7"; loaded 8' 6".
" aft, light 8' 7"; loaded 8' 7".
Tonnage 417.20 gross; 330.56 net or registered.

Engines: two, fore and aft double expansion.
Diameter of cylinders 15" and 28"; stroke of piston 27".
Built by Ramsay & Sons, Baltimore, Md., in 1887-'88.
Last repaired, Feb'y 1897, at Wilmington, Del.

Boiler: one Scotch return tubular.
Length 13'; diameter 10'.
Built by Pusey, Jones & Co., Wilmington, Del., Oct.'93.

1888 *The Zizania.*—On August 4, 1886, an appropriation of $68,300 was made for building a new steam-tender for service in this light-house district. A contract was made after due advertisement with the lowest rather than the best bidder. The firm to which the contract was awarded had done much work for the Light-House Board, a part of which was of such character as made it undesirable to employ them further, but under the law it was necessary to give the contract to them as they were the lowest bidders. The result was that eight months after the expiration of the contract the steamer was still uncompleted, and owing to the financial failure of the contractors it was turned over to the Light-House Establishment, and is now being finished under its orders. Part of the work which had been done was of so poor a character that it had to be done over, which added largely to the expense of finishing the boat, and increased the time required for that purpose. It is now hoped that she will be ready for duty by October. Had the contract been given to the best rather than the lowest bidder, the Government would have had the services of this steamer more than a year before it can now have them, and would have had a much better vessel for the money expended.

1889 *The Zizania.*—On November 21 and 22, 1888, the officers and crew of the tender *Geranium* proceeded to Baltimore, Md., to take charge of the steam-tender *Zizania*. After coaling and receiving provisions, she left Baltimore for Edgemoor light-house depot, on November 23, and after a stormy passage she arrived on November 28. In the first effort to weigh the anchor after leaving Baltimore the bed-plate casting to which the windlass was secured broke and allowed the windlass to fall to the deck, rendering it useless. During the early part of December the vessel was sent out to take up can and nun buoys and replace them with spars for the winter. While thus engaged bad leaks were developed in her boiler and pipe connections, the joints of the safety-valves were blown out, with bad leaks in the throttle valves, which for safety necessitated her return for repairs before completing the work. After completing the repairs found necessary during the early part of December the vessel was again sent out for service, and on January 12, 1889, was obliged to lay up for repairs to her boiler, in which bad leaks had developed. In order to properly care for the crew, thirteen men, it was found necessary to enlarge the forecastle, which had berths for ten men only, and no space for a mess table. The water-tight bulkhead at the after end of the forecastle was moved back 6 feet, and additional berths put in. By making this change the crew have good quarters as to room, but not proper ventilation. Repairs were made from time to time to the boiler and engine, the bulkhead was altered, the windlass repaired, new water tanks were put in, etc., at a cost of $2,789.61. An auxiliary boiler was furnished and connected with the radiators, hoisting engine, etc., at a cost of $1,078.

1890

The Zizania.—This steamer was on duty during the year except the twenty-four days she was laid up for repairs. She replaced 26 buoys, changed 111, and painted 137. She also painted Cape Henlopen Day Beacon once, nine post-lights on Delaware River between Philadelphia and Bordentown twice, and Christiana Gas Beacon once during the year. She landed 124 tons of coal and some 12 cords of wood at twenty-one light-houses and 125 tons of coal and some 3 cords of wood at five light-vessels. Her crew were at work sixty-one days at Edgemoor Supply and Buoy Depot. She delivered the annual allowance of provisions to five light-vessels and ten light-stations. She also conveyed the inspector to the light-stations of the District for the purpose of inspection and she delivered the necessary supplies to the stations. In doing this work she steamed 9,282 miles and consumed about 750 tons of coal. During the year she was docked and the bottom cleaned and painted. The boiler and engines were repaired and are now in good serviceable condition. The boiler, pipes, etc., were covered with asbestos.

1891

The Zizania.—The ventilator to the forecastle of this steamer was altered to increase the ventilation. Spray pipes, of brass, for cooling the engine bearings, were furnished and fitted. On October 23, 1890, she was taken on the dock and the bottom was thoroughly cleaned and painted with two coats of germicide paint. Her bottom was found to be in good condition, as was the red and white lead paint put on December, 1889. In March, 1891, the tender was again hauled out, the composition propellers and bearings were removed, and iron ones were substituted. Upon examination of the paint on the bottom it was found that the germicide paint, put on in October, 1890, was worn off in many places. Six gallons of paint were purchased and the bottom touched up where necessary. The tender was engaged in attending to the buoyage of the district, towing light-vessels to and from stations, delivering fuel and supplies to light-houses, etc. Two trips were made to the general depot, at Tompkinsville, N. Y., for supplies, buoys, and for the schooner *Drift*. The tender was on duty throughout the year, except the seventy-six days during which she was laid up for repairs.

She replaced 28 buoys; changed 101; painted 136; and placed 7. She also painted Christiana gas beacon, the Fort Mifflin fog-signal tower and house, and Fishers Point post-lights. She landed 107 tons of coal and 9 cords of wood at twenty-one light-stations, and 128 tons of coal and 8 cords of wood at four light-vessels. Her crew were at work fifty days at Edgemoor supply and buoy depot. She delivered the annual allowance of provisions to four light-vessels and eleven light-stations. She also conveyed the inspector to the light-stations of the district, for the purpose of inspecting, and she delivered the necessary supplies to the stations. In doing this work she steamed some 10,243 miles, and consumed about 747 tons of coal. In May last, while steaming down the Delaware River at moderate speed, the crank of the port low-pressure engine broke and the bedplate cracked. Upon examination it was found that the forging was defective. The vessel was taken to Wilmington, Del., where she was repaired, and was again in commission on June 30, 1891. Necessary supplies, such as rope, oil, etc., were furnished.

1892 *The Zizania.*—This steamer was on duty throughout the year, except 39 days, during which she was laid up for repairs. In January, 1892, while overhauling and cleaning the vessel, it was found that the back leg of the boiler was almost entirely gone. Bids were received to repair the boiler, and the lowest was accepted. The work was well done, and on February 13, 1892, the ship was again placed on duty. On April 30, 1892, she was docked, and the bottom, which was found to be in good condition, was thoroughly cleaned and painted with two coats of germicide paint. The change from composition to iron propellers was effective in preventing further injury from galvanic action about the stern. The sternposts suffered no further injury. The tender was engaged in attending to the buoyage of the district, towing light-vessels to and from the stations, and delivering fuel and supplies to light-houses throughout the year. One trip was made to the general light-house depot at Tompkinsville, N. Y., for supplies and buoys. On June 30, 1892, she started with the schooner *Drift* in tow for Portsmouth, Va., buoy depot. She replaced 34 buoys, changed 182, painted 4, placed 10, shifted 3, and removed 6. She also painted Fishers Point post lights. She landed some 111 tons of coal and some 11 cords of wood at 19 light-stations and some 136 tons of coal and 4 cords of wood at 4 light-vessels. The crew was employed 80 days at Edgemoor buoy depot. She delivered the annual allowance of provisions to 4 light-vessels and 11 light-stations. She also conveyed the Light-House Inspector to the light-stations of the district to inspect them, and she delivered the needed supplies to the light-stations. In doing this work she steamed some 14,000 miles and consumed about 834 tons of coal and 8 cords of wood. Supplies, such as rope, oil, waste, soda, paint, baskets for coaling stations, packing, etc., were furnished.

1893 *The Zizania.*—This steamer was on duty throughout the year, except twenty-five days during which she was laid up for repairs. On May 27, 1893, she was taken out on a railway and the bottom thoroughly cleaned and painted with two coats of germicide paint. A careful inspection of her bottom before and after cleaning showed that there was little remaining of the germicide paint which was put on in May, 1892. The bottom shows no deterioration and is in good condition. The stern posts and the plates about them have suffered no deterioration since iron propellers were substituted for the composition ones in March, 1891. The tender was engaged on the buoyage of the district, in towing light-vessels to and from stations, in towing the schooner *Drift* to the Portsmouth buoy and supply depot, Va., and in delivering fuel and supplies to light-houses. One trip was made to the general depot at Tompkinsville, N. Y., for supplies and buoys. She replaced 48 buoys, changed 194, painted 3, placed 8, shifted 8, and removed 6. She landed 109 tons of coal and 9½ cords of wood at 19 light-stations and 253 tons of coal and 2½ cords of wood at 5 light-vessels. The crew was employed 103 days at Edgemoor supply and buoy depot. She delivered the annual allowance of provisions to 4 light-vessels and 11 light-stations. She also conveyed the inspector to the light-stations of the district for the purpose of inspection, and she delivered the necessary supplies to the stations. In doing all this she steamed 11,677 miles and consumed about 773½ tons of coal and 5 cords of wood. Necessary supplies, such as rope, oil, waste, soda, paint, baskets for coaling stations,

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1893 contd.

packing, etc., were furnished. The following repairs to her hull were made: The iron sheathing and wood filling of two buoy gangways were taken off, the hull was cleaned and painted, new wood filling was put in and iron sheathing replaced, the rail of the port buoy gangway was repaired and a new brass casting was put on; four deadlights were put in the main deck, forward; new wearing plank of the side fenders was fitted and the chafing iron was replaced; the doors and sash of the pilot house were refitted; storm panes of galvanized iron were fitted to the gangway doors, the forward rail in wake of the sinker stoppers was renewed. The repairs to the engine were a cast-iron collar for the thrust bearing, new pins for the air-pump connections, valves in the feed pumps, 3 feet of 4-inch copper feed pipe renewed, and two new bonnets furnished for the check valves. On April 13, 1893, a contract was made to remove the old boiler and to furnish and put in, ready for service, a steel boiler with all the necessary appurtenances, including a fresh-water tank.

1894

The Zizania.—This steamer was employed throughout the year, except during 61 days, while she was laid up for repairs. On October 7, 1893, the crank of the low-pressure starboard engine broke, and the vessel was laid up for repairs. The new boiler, etc., being built was completed in October, 1893. While the repairs to the crank were in progress, the old boiler was removed and the new one, with appurtenances, placed in the vessel and the necessary connections were made. The repairs were completed, and the tender went into service November 13, 1893.

On April 23, 1894, cracks developed in both slabs of the cranks of the high-pressure engines, so as to render them unsafe, and two new cranks were put in. The vessel on May 19, 1894, resumed her regular duties.

The tender was engaged in attending to the buoyage of the district, towing light-vessels to and from their stations, and in delivering fuel and supplies to light-houses, light-vessels, and post lights. Four trips were made to the general depot, Tompkinsville, N. Y., for supplies and buoys. She replaced and restored 44 buoys, changed 125, placed 8, painted 6, shifted 4, and 2 were removed. She landed 132 tons of coal and some 16 cords of wood at 25 light-stations, and 146 tons of coal and 4 cords of wood at 4 light-vessels, and 6 tons of coal at one fog signal. The crew was employed 68 days at Edgemoor light-house depot and at the iron pier at Lewes. She delivered the annual allowance of provisions to 4 light-vessels and 11 light-stations. She also conveyed the inspector to the light-stations of the district to inspect them, and she delivered the necessary supplies to the stations. In doing this she steamed some 16,056 miles and consumed about 901 tons of coal and 6 cords of wood. Necessary supplies, such as rope, oil, waste, soda, paint, baskets for coaling stations, packing, etc., were furnished.

The new boiler has so far proved satisfactory.

(over)

1895

The Zizania.—This steel twin-screw steamer was constantly employed, except during 49 days, when she was laid up for repairs. On May 10, 1895, while off Hereford Inlet, New Jersey, the starboard propeller was lost. The following-named repairs were made: New bearings for the grate bars were fitted; packing was placed in the high-pressure pistons; a guard was furnished for the feed pump; a collar was supplied for the thrust bearing; linings were supplied for the furnace fronts; new propeller wheels were supplied; brass sleeves were fitted on the shafts; the stern bearings were refitted; new grate bars, new check valves, and the like, were supplied.

On August 8, 1894, the *Zizania* was docked, and her bottom was cleaned and painted with two coats of red lead and white zinc. Upon examination of the rudder the pintles and gudgeons were found to be badly corroded and worn. To remedy this defect, six steel sleeves were fitted on the pintles and bushings on the saucers. On May 28, 1895, the vessel was docked, and two new iron propellers were put on. The vessel resumed her duties on June 11, 1895.

The tender was engaged in attending to the buoyage of the district, towing light-vessels to and from their stations, and in delivering fuel and supplies to light-houses, light-vessels, and post lights. Two trips were made to the general light-house depot for supplies and buoys.

She replaced and restored 20 buoys, changed 168, placed 9, painted 11, removed 7, renewed 65, and recovered 12 buoys. She landed 112 tons of coal and 8½ cords of wood at light-houses, and 177 tons of coal and 5¼ cords of wood at four light-vessels. The crew was employed 70 days at Edgemoor light-house depot and at the iron pier at Lewes, Del.

She delivered the annual allowance of provisions to four light-vessels and eleven light-stations. She also conveyed the inspector to the light-stations of the district for the purpose of inspection, and she delivered the necessary supplies to the stations. In doing the above work she steamed 15,372 miles, and consumed about 916 tons of coal and some 4 cords of wood.

Necessary supplies, such as rope, oil, waste, soda, paint, packing, baskets for coaling stations, rations, dishes, etc., were furnished.

The naphtha launch assigned for the use of this district in July, 1894, was used on works of repair, etc., principally at Egg Island, Cohansey, Maurice River, and Christiana light-stations, and at the Edgemoor depot.

1896

The Zizania.—This steel twin-screw steamer was employed throughout the year, except during 32 days when she was laid up for repairs, in attending to the buoyage of the district, towing light-vessels to and from their stations, and relief light-vessel No. 9 from Winter Quarter Shoal station to Tompkinsville, N. Y., and in delivering fuel and supplies to light-houses, light-vessels, and post lights. She replaced and restored 8 buoys, changed 274, placed 11, removed 10, lifted and painted 17, renewed 34, and recovered 7 buoys. She landed 109 tons of coal and 10¼ cords of wood at light-houses and 219 tons of coal and 4¾ cords of wood at light-vessels. The crew was employed 46 days at Edgemoor light-house depot and the iron pier at Lewes, Del. She delivered the annual allowance of provisions to 4 light-vessels and 11 light-stations. She also conveyed the inspector to the light-stations of the district for

(over.)

1896 contd

the purpose of inspection, and she delivered the necessary supplies to the stations. In doing this work she steamed some 14,392 miles, and consumed about 1,022 tons of coal and 5 cords of wood. On August 3, 1895, the *Zizania* in coming up the Delaware Bay collided with the fishing schooner *Addie Ludington*. The schooner was towed by the *Zizania* to a place of safety. Necessary supplies, such as rope, oil for lubricating, waste, soda, paint, packing, baskets for coaling stations, medicine, provisions, etc., were furnished. Various repairs were made. A new hoisting engine and a new steam-steering engine were put in. The upper deck was re-covered with canvas.

1897

The Zizania.—This steel twin-screw steamer was employed throughout the year, except 52 days during which she was laid up for repairs, in attending to the buoyage of the district, in towing light-vessels to and from their stations, and in delivering fuel and supplies to light-houses, light-vessels, and post lights. She replaced and renewed 25 buoys, restored 2, lifted, repaired, and painted 16, placed 13, removed 12, changed 125, recovered 2, and made three trips to gas buoys. She delivered 107 tons of coal and 16½ cords of wood to light-stations, and 135½ tons of coal and 3 cords of wood to light-vessels. The crew was employed 28 days at Edgemoor light-house depot and the iron pier at Lewes, Del. She delivered the annual allowance of provisions to 4 light-vessels and 11 light-stations. She also conveyed the Inspector of the district to the light-stations of the district for the purpose of inspection, and she delivered the necessary supplies to the light-stations. In doing the above work she steamed about 11,485 miles and consumed some 830 tons of coal and 4 cords of wood.

A new plank shear was put on the hurricane deck, new awning stanchions of galvanized iron, new rail of 1½-inch galvanized pipe was put on. Two iron cleats for the main sheet were fitted, windows and doors of the pilot house were thoroughly overhauled and repaired, old sash weights were removed, and were replaced with new and improved sash lifters. The master's room aft of the pilot house was lengthened 4 feet at the after end. The hoisting engine was fitted so as to be worked forward and backward, a new shaft for falls was put in, rotten woodwork over the forward gangway doors was removed and replaced with new. New boat davits were furnished. The coaming of the boiler hatch was repaired. The plank shear on the main deck in the inspector's cabin was repaired, and new stanchions between the main rail and the hurricane deck aft were fitted. New lead treads on the stairway, etc., were furnished and fitted. Two new water tanks of white pine, connected with the galley and engine room, were furnished and fitted. Bell wires were thoroughly overhauled. The distilling apparatus was removed from the galley, and in its place a locker was constructed and fitted with shelves, etc., and a new brass pump was supplied. An iron bilge box was made and located in the bilge near the bulkhead, and to which the manifold valves for the several compartments were transferred and connections made. The circulating pump was repaired. New brass rings were put in for thrust bearings. New brasses were fitted to the connecting rod for the air pump at outboard end. A sanitary pump was furnished and fitted to supply water to the several closets and bath tub. Stern bearings of both shafts were taken out and bushed anew with lignum-vitæ. One boat was repaired. The tender made two trips to Tompkinsville, N. Y., for the purpose of receiving supplies for the Fourth district, when she took part in the ceremonies for the dedication of the Grant tomb, on April 27, 1897.

1898

The Zizania.—This steel twin-screw steamer was employed, except for 44 days while she was laid up for repairs, in attending to the buoyage of the district, in towing light-vessels to and from their stations, in delivering fuel and supplies to the light-vessels and to the stations and the like. She replaced and renewed 19 buoys, changed 117, restored 7, shifted 2, lifted and painted 18, removed 9, placed 16, and recovered 5 buoys. One bell buoy was examined and repaired, and one trip was made to the Brigantine whistling buoy, which had incorrectly been reported as out of order. One trip was made for the recovery of a gas buoy, dragged from its station by ice. The tender delivered 134 tons of coal to light-vessels, and 123 tons of coal and some 8 cords of wood to light-houses. She also delivered provisions to 4 light-vessels and 10 light-houses, and conveyed the inspector of the district to the light-stations to make 196 inspections, and she delivered supplies to vessels and stations. Four trips were made to the general depot; one in August, 1897, and one in April, 1898, were for the purpose of obtaining buoys and appendages due the district, and the deliveries of the tender were in each case made to the Edgemoor Buoy and Supply Depot. In June, 1898, the tender, in obtaining and delivering the annual supplies to vessels and stations in the district, made two trips to the General Light-House Depot, taking on board a full cargo of oil and supplies at each visit. All the deliveries, except at a few coast stations, where the use of the tender's boats in the transportation of supplies was deemed hazardous, were made by her. In doing this work she steamed 12,767 miles, consuming about 907 tons of coal, and about 5 cords of wood. Some 29 days' work was done at Edgemoor Light-House Depot and at the iron pier at Lewes, Del. The following-named repairs were made: The boiler-room ventilators were lengthened and arranged to turn from below, and new bell tops were put on; the thrust rings of the engine were renewed and the connecting rod was straightened; a new strainer was put in the water tank; a new yoke was supplied and repairs were made to the pump, as were new pins for the high-pressure links; high-pressure link blocks were refitted; new bridge wall castings were supplied for each fire box, and new liners for the furnace doors; the steam gauge in the fire room was overhauled; a new manhole ring was put in the back of the boiler outside; the fire tools were overhauled; hangers and a supporting rod to the steam steering gear were renewed; the furnace was calked, and soft patches on the ends of the boiler were altered; high-pressure piston rings were repaired, and the circulating pipes to the boiler were taken out and patched. Radiators in cabin were rebronzed; the forward rail on the starboard side was covered with galvanized sheet iron; new foremast, and a set of galvanized iron wire rigging was set up, and new coamings were supplied for the forward hatch; one set heavy iron bits was put in place, and the rubbers of the port lights were renewed. On April 1, 1898, while lying at Philadelphia, the starboard circulating pipe in the back connection blew out from its connection to the boiler shell, filling the fire room with hot water and steam, instantly killing fireman George McCulloch and seriously scalding mess boy Clarence E. Maag. Lubricating oil, soap, waste, lanterns, grate bars, sails for small boat, crockery, rope, paints, brooms, etc., were supplied.

1899

Zizania.—This steel twin-screw steamer was built in 1887, and is of 331 net tons burden. She was employed throughout the year, except thirty-four days when she was laid up for repairs, in attending to buoyage, in towing light-vessels to and from their stations, in delivering fuel and supplies to light-vessels and stations, and the like. She replaced and renewed 24 buoys, changed 124, restored 8, shifted 1, lifted and painted 15, removed 7, placed 5, and recovered 5 buoys. She delivered some 196 tons of coal and about 10 cords of wood to light-vessels, and about 133 tons of coal and 10 cords of wood to light-houses. She also delivered the annual allowance of provisions to five light-vessels and ten light-houses, and conveyed the light-house inspector to light vessels and stations for their inspection, and delivered supplies to vessels and stations. Two trips were made to the Portsmouth, Va., buoy depot during the year—one in September, when she left Philadelphia at 6.30 a. m. on the 20th, and arrived at the Edgemoor depot with light-vessel No. 46 at 5.30 p. m. on the 23d; the other in June, when she left this district at 6 a. m. on the 26th, and was lying at Portsmouth, June 30, 1899, waiting for relief light-vessel No. 16. One trip was made to the general light-house depot, Tompkinsville, N. Y., for towing light-vessel No. 47, on December 5, arriving on December 6, 1898. On that day she left Staten Island for the Fourth district and resumed her regular duties on the next day. In doing this work she steamed about 10,951 miles and consumed some 820 tons of coal and some 6 cords of wood. Eight and one-half days' work was done at Edgemoor depot and the iron pier at Lewes, Del. Various repairs were made to the tender. Lubricating oil, soap, waste, grate bars, crockery, rope, paint, brooms, etc., were supplied.

1900

Zizania.—This steel twin-screw steamer was built in 1887, and is of about 417 tons gross burden. She was employed, except during the 42 days while she was laid up for repairs, in attending to the buoyage of the district, in towing 4 light-vessels to and from their stations when they came in for repairs, and in delivering fuel and supplies to light-vessels and light-stations. She replaced and renewed 18 buoys, changed 173, lifted and painted 50, restored 9, shifted 3, recovered 2, placed 17, and removed 14 buoys. She delivered 154 tons of coal and 8 cords of wood to light-vessels, and 121 tons of coal and 11¼ cords of wood to light-stations. She also delivered provisions to 5 light-vessels and 10 light-stations, and necessary supplies to light-vessels and all light-stations. She conveyed the inspector upon his regular inspection. Two trips were made to the general light-house depot during the year, the first on September 30, 1899, for supplies, arriving at Edgemoor supply and buoy depot on October 6, 1899, and the second on December 22, 1899, with light-vessel No. 16 in tow. Supplies were received and the tender arrived at Edgemoor supply and buoy depot on December 24, 1899. In doing the above work she steamed about 9,928 miles, consuming about 796 tons of coal and 5 cords of wood. Some 109 hours' work was done at the Edgemoor light-house depot and at the Iron Pier, Lewes, Del. Her bottom was cleaned and painted; 4 plates on keel were renewed; 22 butts were calked; 12 feet of stern rail were renewed; 10 feet of fore-and-aft carling and sheer plank were renewed; 2 doors were put into the pilot house; window sash was rehung in the master's room and the chart room; an anchor davit was placed amidships; an iron stanchion was placed, and 6 feet of iron covering was put on the rail. The steam pipe to the radiator was renewed; a brass check valve was placed and suction valves were added to the feed pump; 4 cast-iron floor plates were placed in the fire room; strainers were added for the suction pipes to bilges; a bottom was put into the combustion chamber of the boiler; back-bearing bars were added for grate bars; new flooring, ceiling, and sheathing were put into 2 coal bunkers; 10 through bolts in soft patches were renewed; and the boiler iron-protection plate in front of boiler was renewed. An electrical plant was installed, the vessel being wired for 80 16-candle-power 100-volt lamps. A 12-inch search light of the pilot-house pattern was furnished. All running lights are now electric. Lubricating and lard oil, coal baskets, paint, brooms, rope, tallow, canvas, soap, mineral oil, grate bars, waste, fire bricks, packing, lumber, incandescent lamps, fire and deck hose, gaskets, gum valves, flags, table and bed linen, engineer supplies, etc., were furnished. A ship's caboose was installed.

Zizania,--tender.

(Built at Baltimore in 1887-88. Tonnage 458.)

1887. "Twin-screw propeller. Length 150 ft., breadth of beam 27 ft., depth of hold 12 ft., draft forward light 6', aft 8' 7", speed 8 knots, tonnage 458.
Engines, two, fore and aft, double expansion.
Surface condenser. Diameter of cylinder 15" & 28".
Stroke of piston 36".
Boiler, Marine return flue, length 21' 6", diam. 8' 6".

She was built under special appropriation, (4 Aug. 1886,) for $68,300. Contract with Ramsay & Son (12 Feb'y 1887,) for $66,900. Some months after the time named in the contract for the completion of the vessel, the contractors made an assignment and the L.H. B'd took possession, finished the con-
1888. struction, and placed her on duty in the 4th district, 12 Nov. 1888.

The actual sums paid for building this vessel are as follows:--

Paid H.A. Ramsay & Son three payments - --	$36,126.00
Cost of completion after forfeiture of contract - - - - - - - -	26,354.10
Superintendence, etc., after vessel should have been completed - - - -	3,693.20
	$66,173.30"

The Zizania.—On August 4, 1886, an appropriation of $68,300 was made for building a new steam-tender for service in this light-house district. A contract was made after due advertisement with the lowest rather than the best bidder. The firm to which the contract was awarded had done much work for the Light-House Board, a part of which was of such character as made it undesirable to employ them further, but under the law it was necessary to give the contract to them as they were the lowest bidders. The result was that eight months after the expiration of the contract the steamer was still uncompleted, and owing to the financial failure of the contractors it was turned over to the Light-House Establishment, and is now being finished under its orders. Part of the work which had been done was of so poor a character that it had to be done over, which added largely to the expense of finishing the boat, and increased the time required for that purpose. It is now hoped that she will be ready for duty by October. Had the contract been given to the best rather than the lowest bidder, the Government would have had the services of this steamer more than a year before it can now have them, and would have had a much better vessel for the money expended.

An. Rep. 1888.

4th Dist.

An. Rep. 1889.

The Zizania.—On November 21 and 22, 1888, the officers and crew of the tender *Geranium* proceeded to Baltimore, Md., to take charge of the steam-tender *Zizania*. After coaling and receiving provisions, she left Baltimore for Edgemoor light-house depot, on November 23, and after a stormy passage she arrived on November 28. In the first effort to weigh the anchor after leaving Baltimore the bed-plate casting to which the windlass was secured broke and allowed the windlass to fall to the deck, rendering it useless. During the early part of December the vessel was sent out to take up can and nun buoys and replace them with spars for the winter. While thus engaged bad leaks were developed in her boiler and pipe connections, the joints of the safety-valves were blown out, with bad leaks in the throttle valves, which for safety necessitated her return for repairs before completing the work. After completing the repairs found necessary during the early part of December the vessel was again sent out for service, and on January 12, 1889, was obliged to lay up for repairs to her boiler, in which bad leaks had developed. In order to properly care for the crew, thirteen men, it was found necessary to enlarge the forecastle, which had berths for ten men only, and no space for a mess table. The water-tight bulkhead at the after end of the forecastle was moved back 6 feet, and additional berths put in. By making this change the crew have good quarters as to room, but not proper ventilation. Repairs were made from time to time to the boiler and engine, the bulkhead was altered, the windlass repaired, new water tanks were put in, etc., at a cost of $2,789.61. An auxiliary boiler was furnished and connected with the radiators, hoisting engine, etc., at a cost of $1,078.

4th Dist.

1890

The Zizania.—This steamer was on duty during the year except the twenty-four days she was laid up for repairs. She replaced 26 buoys, changed 111, and painted 137. She also painted Cape Henlopen Day Beacon once, nine post-lights on Delaware River between Philadelphia and Bordentown twice, and Christiana Gas Beacon once during the year. She landed 124 tons of coal and some 12 cords of wood at twenty-one light-houses and 125 tons of coal and some 3 cords of wood at five light-vessels. Her crew were at work sixty-one days at Edgemoor Supply and Buoy Depot. She delivered the annual allowance of provisions to five light-vessels and ten light-stations. She also conveyed the inspector to the light-stations of the District for the purpose of inspection and she delivered the necessary supplies to the stations. In doing this work she steamed 9,282 miles and consumed about 750 tons of coal. During the year she was docked and the bottom cleaned and painted. The boiler and engines were repaired and are now in good serviceable condition. The boiler, pipes, etc., were covered with asbestos.

Do.

1891,

The Zizania.—The ventilator to the forecastle of this steamer was altered to increase the ventilation. Spray pipes, of brass, for cooling the engine bearings, were furnished and fitted. On October 23, 1890, she was taken on the dock and the bottom was thoroughly cleaned and painted with two coats of germicide paint. Her bottom was found to be in good condition, as was the red and white lead paint put on December, 1889. In March, 1891, the tender was again hauled out, the composition propellers and bearings were removed, and iron ones were substituted. Upon examination of the paint on the bottom it was found that the germicide paint, put on in October, 1890, was worn off in many places. Six gallons of paint were purchased and the bottom touched up where necessary. The tender was engaged in attending to the buoyage of the district, towing light-vessels to and from stations, delivering fuel and supplies to light-houses, etc. Two trips were made to the general depot, at Tompkinsville, N. Y., for supplies, buoys, and for the schooner *Drift*. The tender was on duty throughout the year, except the seventy-six days during which she was laid up for repairs.

4th Dist.

She replaced 28 buoys; changed 101; painted 136; and placed 7. She also painted Christiana gas beacon, the Fort Mifflin fog-signal tower and house, and Fishers Point post-lights. She landed 107 tons of coal and 9 cords of wood at twenty-one light-stations, and 128 tons of coal and 8 cords of wood at four light-vessels. Her crew were at work fifty days at Edgemoor supply and buoy depot. She delivered the annual allowance of provisions to four light-vessels and eleven light-stations. She also conveyed the inspector to the light-stations of the district, for the purpose of inspecting, and she delivered the necessary supplies to the stations. In doing this work she steamed some 10,243 miles, and consumed about 747 tons of coal. In May last, while steaming down the Delaware River at moderate speed, the crank of the port low-pressure engine broke and the bedplate cracked. Upon examination it was found that the forging was defective. The vessel was taken to Wilmington, Del., where she was repaired, and was again in commission on June 30, 1891. Necessary supplies, such as rope, oil, etc., were furnished.

1892

The Zizania.—This steamer was on duty throughout the year, except 39 days, during which she was laid up for repairs. In January, 1892, while overhauling and cleaning the vessel, it was found that the back leg of the boiler was almost entirely gone. Bids were received to repair the boiler, and the lowest was accepted. The work was well done, and on February 13, 1892, the ship was again placed on duty. On April 30, 1892, she was docked, and the bottom, which was found to be in good condition, was thoroughly cleaned and painted with two coats of germicide paint. The change from composition to iron propellers was effective in preventing further injury from galvanic action about the stern. The sternposts suffered no further injury. The tender was engaged in attending to the buoyage of the district, towing light-vessels to and from the stations, and delivering fuel and supplies to light-houses throughout the year. One trip was made to the general light-house depot at Tompkinsville, N. Y., for supplies and buoys. On June 30, 1892, she started with the schooner *Drift* in tow for Portsmouth,

Do. do.

1892 Contd.

Va., buoy depot. She replaced 34 buoys, changed 182, painted 4, placed 10, shifted 3, and removed 6. She also painted Fishers Point post lights. She landed some 111 tons of coal and some 11 cords of wood at 19 light-stations and some 136 tons of coal and 4 cords of wood at 4 light-vessels. The crew was employed 80 days at Edgemoor buoy depot. She delivered the annual allowance of provisions to 4 light-vessels and 11 light-stations. She also conveyed the Light-House Inspector to the light-stations of the district to inspect them, and she delivered the needed supplies to the light-stations. In doing this work she steamed some 14,000 miles and consumed about 834 tons of coal and 8 cords of wood. Supplies, such as rope, oil, waste, soda, paint, baskets for coaling stations, packing, etc., were furnished.

4th Dist.

1893

The Zizania.—This steamer was on duty throughout the year, except twenty-five days during which she was laid up for repairs. On May 27, 1893, she was taken out on a railway and the bottom thoroughly cleaned and painted with two coats of germicide paint. A careful inspection of her bottom before and after cleaning showed that there was little remaining of the germicide paint which was put on in May, 1892. The bottom shows no deterioration and is in good condition. The stern posts and the plates about them have suffered no deterioration since iron propellers were substituted for the composition ones in March, 1891. The tender was engaged on the buoyage of the district, in towing light-vessels to and from stations, in towing the schooner *Drift* to the Portsmouth buoy and supply depot, Va., and in delivering fuel and supplies to light-houses. One trip was made to the general depot at Tompkinsville, N. Y., for supplies and buoys. She replaced 48 buoys, changed 194, painted 3, placed 8, shifted 8, and removed 6. She landed 109 tons of coal and 9½ cords of wood at 19 light-stations and 253 tons of coal and 2½ cords of wood at 5 light-vessels. The crew was employed 103 days at Edgemoor supply and buoy depot. She delivered the annual allowance of provisions to 4 light-vessels and 11 light-stations. She also conveyed the inspector to the light-stations of the district for the purpose of inspection, and she delivered the necessary supplies to the stations. In doing all this she steamed 11,677 miles and consumed about 773½ tons of coal and 5 cords of wood. Necessary supplies, such as rope, oil, waste, soda, paint, baskets for coaling stations, packing, etc., were furnished. The following repairs to her hull were made: The iron sheathing and wood filling of two buoy gangways were taken off, the hull was cleaned and painted, new wood filling was put in and iron sheathing replaced, the rail of the port buoy gangway was repaired and a new brass casting was put on; four deadlights were put in the main deck, forward; new wearing plank of the side fenders was fitted and the chafing iron was replaced; the doors and sash of the pilot house were refitted; storm panes of galvanized iron were fitted to the gangway doors, the forward rail in wake of the sinker stoppers was renewed. The repairs to the engine were a cast-iron collar for the thrust bearing, new pins for the air-pump connections, valves in the feed pumps, 3 feet of 4-inch copper feed pipe renewed, and two new bonnets furnished for the check valves. On April 13, 1893, a contract was made to remove the old boiler and to furnish and put in, ready for service, a steel boiler with all the necessary appurtenances, including a fresh-water tank.

Do. do.

1894

The Zizania.—This steamer was employed throughout the year, except during 61 days, while she was laid up for repairs. On October 7, 1893, the crank of the low-pressure starboard engine broke, and the vessel was laid up for repairs. The new boiler, etc., being built was completed in October, 1893. While the repairs to the crank were in progress, the old boiler was removed and the new one, with appurtenances, placed in the vessel and the necessary connections were made. The repairs were completed, and the tender went into service November 13, 1893.

On April 23, 1894, cracks developed in both slabs of the cranks of the high-pressure engines, so as to render them unsafe, and two new cranks were put in. The vessel on May 19, 1894, resumed her regular duties.

The tender was engaged in attending to the buoyage of the district, towing light-vessels to and from their stations, and in delivering fuel and supplies to light-houses, light-vessels, and post lights. Four trips were made to the general depot, Tompkinsville, N. Y., for supplies and buoys. She replaced and restored 44 buoys, changed 125, placed 8, painted 6, shifted 4, and 2 were removed. She landed 132 tons of coal and some 16 cords of wood at 25 light-stations, and 146 tons of coal and 4 cords of wood at 4 light-vessels, and 6 tons of coal at one fog signal. The crew was employed 68 days at Edgemoor light-house depot and at the iron pier at Lewes. She delivered the annual allowance of provisions to 4 light-vessels and 11 light-stations. She also conveyed the inspector to the light-stations of the district to inspect them, and she delivered the necessary supplies to the stations. In doing this she steamed some 16,056 miles and consumed about 901 tons of coal and 6 cords of wood. Necessary supplies, such as rope, oil, waste, soda, paint, baskets for coaling stations, packing, etc., were furnished.

The new boiler has so far proved satisfactory.

1895

The Zizania.—This steel twin-screw steamer was constantly employed, except during 49 days, when she was laid up for repairs. On May 10, 1895, while off Hereford Inlet, New Jersey, the starboard propeller was lost. The following-named repairs were made: New bearings for the grate bars were fitted; packing was placed in the high-pressure pistons; a guard was furnished for the feed pump; a collar was supplied for the thrust bearing; linings were supplied for the furnace fronts; new propeller wheels were supplied; brass sleeves were fitted on the shafts; the stern bearings were refitted; new grate bars, new check valves, and the like, were supplied.

On August 8, 1894, the *Zizania* was docked, and her bottom was cleaned and painted with two coats of red lead and white zinc. Upon examination of the rudder the pintles and gudgeons were found to be badly corroded and worn. To remedy this defect, six steel sleeves were fitted on the pintles and bushings on the saucers. On May 28, 1895, the vessel was docked, and two new iron propellers were put on. The vessel resumed her duties on June 11, 1895.

The tender was engaged in attending to the buoyage of the district, towing light-vessels to and from their stations, and in delivering fuel and supplies to light-houses, light-vessels, and post lights. Two trips were made to the general light-house depot for supplies and buoys.

4th Dist.

over

10

1901

Zizania.—This steel twin-screw steamer was built in 1887 and is of about 417 tons gross burden. Except during the 24 days she was laid up for repairs and the 8 days employed cleaning her boiler, she was employed in attending to the buoyage of the district, in delivering rations, fuel, and supplies to light-vessels and light-stations, and in conveying the inspector on inspection duty. She replaced and renewed 22 buoys, changed 135, lifted and painted 21, restored 5, shifted 3, placed 3, removed 6, discontinued 4, renumbered 5, and recovered 5 buoys. She delivered some 383 tons of coal and 7 cords of wood to light-vessels, and some 140 tons of coal and 9 cords of wood to light-stations. She also delivered provisions to 5 light-vessels and 10 light-stations, and necessary supplies to all light-vessels and light-stations. She conveyed the inspector upon his regular inspections. On October 5, 1900, she was sent to the general light-house depot for supplies, and on October 11, 1900, she returned with them to Edgemoor light-house depot. On December 18, 1900, she left Edgemoor with light-vessel No. 58 in tow, and on December 21, 1900, delivered her to the light-house tender *Verbena* at Newport, R. I., arriving again at Edgemoor on December 23, 1900. On June 29, 1901, she made a second

trip to the general light-house depot for the purpose of towing light-vessel No. 11 to the Fourth light-house district, arriving June 30, 1901. In doing this work she steamed about 12,289 miles, consuming about 965 tons of coal and 6 cords of wood. About 329 gallons of lubricating oil were used. Some 113 hours' work was done at the Edgemoor light-house depot and at the Iron Pier, Lewes, Del. Repairs were made to her as follows: Her bottom was cleaned and painted; a half-inch iron knee was made and fastened to her rail, bulwarks, and deck; the rail on her starboard side was refastened; 55 feet of white-oak guard was renewed and the guard iron was replaced; the pilot house and mess room were regrained and varnished; the saloon was painted and regrained; the ice box was relined, and a new set of gratings was furnished; an electric light was installed on her main truck; 1 electric light was installed, 1 electric bell was renewed, and all wires were overhauled; a damper rod to the smokestack was renewed; 2 connecting shackles were fitted to her starboard chain, and her port boat was repaired; sleeves were fitted to the propeller end of her port shaft; her stern bearings were refilled with lignum-vitæ; 4 crank-pin brasses were refilled with magnolia metal; 2 high-pressure link bars were replaned; 8 brace bolts in the back of the boiler were renewed; 2 soft patches were put on the seams of her boiler; 2 hard patches on the fronts of the furnaces; springs were fitted for high-pressure cylinders and for low-pressure slide valves; angle irons in the feed pumps were renewed; seats in both feed pumps were refastened; her donkey boiler was connected to the electric plant; 4 floor plates in the fire room were renewed; the steam pipes to the radiators were renewed, and the steam and exhaust pipes to the steering engine were repaired. An alco-vapor launch, 30 feet in length, of 7-horsepower was furnished. Paint, electrical supplies, dynamo oil, new wheel rope, kitchen and table ware, crockery, coal baskets, tallow, soap, mineral oil, grate bars, waste, lumber, stove fittings, galvanized buckets, hose, ores, a new gang plank, cylinder, lard and lubricating oils, brooms, brushes, bunting, one set code flags and book, canvas, new fire tools, bed linen, tools, manila rope, carpet, packing, gaskets, and engineer supplies were furnished.

1902

Zizania.—This steel twin-screw steamer was built in 1887–88 and is of about 417 tons gross burden. She went into commission in December, 1888. Except for the 25 days she was laid up for repairs, she was employed in attending to the buoyage of the district, in delivering rations, fuel, and supplies to light-vessels and light-stations, and in conveying the inspector on inspection duty. She replaced and renewed 44 buoys, changed 171, lifted and painted 6, restored 3, shifted 2, established 21, removed 6, recovered 14, and repaired 1. Six trips were made for the purpose of relighting gas buoys which had been accidentally extinguished. She delivered some 524 tons of coal and 5 cords of wood to light-vessels and 138 tons of coal and 6½ cords of wood to light-stations. She also delivered provisions to 5 light-vessels and 10 light-stations and necessary supplies to all light-vessels and light-stations. She conveyed the inspector upon his regular inspections. On July 2, 1901, she towed Relief light-vessel, No. 11, to Fenwick Island Shoal station and relieved light-vessel No. 52, which she brought to Philadelphia. On August 23 she towed light-vessel No. 52 to her station and relieved light-vessel No. 11, which she towed to Northeast End station and relieved light-vessel No. 44. On August 24 she towed light-vessel No. 44 to Wilmington, Del. On September 24 she was sent to the general light-house depot, Tompkinsville, N. Y., for supplies, and on September 27 she returned with them to Edgemoor supply and buoy depot. On October 3 she towed light-vessel No. 44 to her station and relieved light-vessel No. 11, which she towed to Five-Fathom Bank station, relieving light-vessel No. 40 on October 4, when she towed light-vessel No. 40 to Philadelphia. On November 16 she towed light-vessel No. 40 to her station and relieved light-vessel No. 11, which she towed to Winter Quarter Shoal station on November 17, relieving light-vessel No. 45, which she brought to Philadelphia. On December 16 she towed light-vessel No. 45 to her station and relieved light-vessel No. 11, which she then towed to the general light-house depot, Tompkinsville, N. Y., delivering her to the inspector of the Third light-house district on December 19, 1901. After taking on supplies she proceeded the same day to Edgemoor light-house depot, where she arrived on December 20, 1901. On April 18, 1902, she was again sent to the general light-house depot for supplies, and on April 19 she returned with them to Edgemoor light-house depot. In doing this work she steamed about 13,874 miles, consuming about 1,223 tons of egg coal and 6½ cords of pine wood. Some 325 gallons of lubricating oil were used. Some 271 hours' work was done at the Edgemoor light-house depot and at the iron pier, Lewes, Del. She was docked, her bottom was cleaned and coated with one coat of brush and trowel cement and one coat of red and white lead in equal parts; 24 feet of the main rail on the port side, aft, was renewed; the chock on the rail was refastened and the brass covering was renewed; 6 feet of iron bulwark on the port side, aft, were straightened, and about 11 feet of the waist of white pine were renewed; the after end of the port side of the deck house was renewed; the upper deck was re-covered with canvas; the iron shoe on the rails was renewed where needed; she was supplied with a sink in the galley and new rudder chains; new wire rope was fitted to the steering gear and new main rigging and backstays to the foremast; the sea valves were overhauled and a new hot-water tank was fitted for the bathroom; large davits were fitted to carry the vapor launch; sheathing plates were fitted on both sides of outboard keels; and two new chafing plates were put on the forward ends of the side keels. The cargo boat was repaired. New collars were fitted to the thrust bearings; new valve seats and new valves and angle irons were fitted to the feed pumps, and the suction valves were turned off; the condenser was repacked; the hoods for the driving wheels were repaired; new stems for the pass-over and bilge suction valves were fitted; the steam ends of the circulating donkey pumps were overhauled; the lagging on the cylinders and steam chests was repaired; the main and auxiliary steam pipes in the upper fire and engine rooms were re-covered; the high-pressure cross-head brasses were planed and counterbored; the stuffing box on the winch steam pipe was renewed; new surface and bottom blow valves were fitted; the seams of the combustion chamber were calked; 8 new brace bolts were put in the main boiler; new back bearing bars were put in the furnace, main boiler; two soft patches were put on the main boiler and one on the donkey boiler; a new smokestack was furnished and fitted, and a new head was put in the condenser. Grate bars, rope, coal baskets, carpet, fire bricks, clay, lubricating oil, blocks for davits, hose, lantern globes, brushes, valves, packing, one upper-deck awning, medicine, paint, etc., were supplied.

1903
Insp. Duty.

Zizania.—This steel, twin-screw steamer was built in 1887–88, and is of about 417 tons gross burden. She went into commission on December, 1888. Except during the 27 days she was laid up for repairs she was employed in attending to the buoyage of the district, in delivering rations, fuel, and supplies to light-vessels and light-stations, and in conveying the inspector on inspection duty. She established 9 buoys, changed 142, replaced and restored 14, renewed 25, lifted and painted 24, repaired 1, shifted 1, removed 4, and recovered 5 buoys. Five trips were made for the purpose of relighting gas buoys which had been accidentally extinguished. She delivered some 607 tons of coal and 6 cords of wood to light-vessels, and about 153 tons of coal and 10 cords of wood to light-stations, also the annual allowance of provisions to 5 light-vessels and 10 light-stations, and all the necessary extra supplies to vessels and stations. She conveyed the inspector upon his regular inspection trips. On January 29, 1903, she was sent to the general light-house depot at Tompkinsville, N. Y., for supplies, and on February 1 she returned with them to Edgemoor light-house depot. On April 29, 1903, she brought Winter Quarter Shoal light-vessel, No. 45, from her station for repairs, towing her to Edgemoor light-house depot, thence to Philadelphia, and after the completion of the repairs returned her to her station on June 15, 1903. In doing this work she steamed about 11,786 miles, consuming some 1,093 tons of egg coal, 5¾ cords of pine wood, and 305 gallons of lubricating oil. Some 58 hours of work was done at Edgemoor light-house depot, and some 47 hours of work at the iron pier at Lewes, Del.

1904

Zizania.—This steel twin-screw steamer was built in 1887–88, and is of about 417 tons gross burden. Except during the 81 days she was laid up for repairs, she was employed in attending to the buoyage of the district, in delivering rations, fuel, and supplies to light-vessels and light-stations, and in conveying the inspector on inspection duty. She established 7 buoys, changed 191, replaced and restored 24, renewed 31, lifted and painted 29, shifted 2, removed 10, and recovered 2 buoys. One trip was made for the purpose of relighting a gas buoy which had been accidentally extinguished. She delivered some 634 tons of coal and 4½ cords of wood to light-vessels, and some 153 tons of coal and 10 cords of wood to light-stations; also the annual allowance of provisions to 5 light-vessels and 11 light-stations and all necessary extra supplies to vessels and stations. On July 16, 1903, she went to the general light-house depot at Tompkinsville, N. Y., returning on July 17, with relief light-vessel No. 16 in tow, to replace light-vessel No. 52 on Fenwick Island Shoal Station. On July 20, 1903, she removed light-vessel No. 52 from her station for repairs, bringing her to Edgemoor light-house depot. On September 3, 1903, she returned light-vessel No. 52 to her station, and towed relief light-vessel No. 16 to the general light-house depot, returning with supplies on September 7, 1903. On May 6, 1904, she removed Northeast End light-vessel, No. 44, from her station, for repairs, and, on June 24, 1904, she returned light-vessel No. 44, taking light-vessel No. 16 in tow and proceeding to the general light-house depot, whence she arrived at Edgemoor light-house depot, with supplies, on June 26, 1904. In doing this work, she steamed about 12,326 miles, consuming some 1,071 tons of egg coal, 8¼ cords of pine wood, and 337 gallons of lubricating oil. Some 45 hours' work was done at Edgemoor light-house depot, and some 55 hours' work at the Iron Pier, Lewes, Del. Various repairs were made.

Tender for the inspection and maintenance of the lights and buoy service in the Fourth light-house district.—The following statement was made in the Board's last annual report:

> There is needed in this district a stanch seagoing steamer, able to take care of herself, and the light-vessels she may have in tow, in any weather. The tender *Zizania* now on duty in this district, which was built in 1887–88, is no longer sufficiently seaworthy to send safely with a light-vessel in tow to the ocean light-vessel stations off Cape May, Winter Quarter Shoal, and the other light-vessel stations off the ocean coast of New Jersey, and with or for gas buoys around to the general light-house depot at Staten Island. The last survey of the *Zizania* showed that it would take about 50 per cent of her cost to put her in such condition as would enable her temporarily to do her work with safety. The Board does not think it would be economical to rebuild her under such conditions. Meantime, whenever the *Zizania* goes to the ocean coast, the lives of her officers and crew are put in hazard. If the appropriation asked is made at this session of Congress, the new tender can hardly be ready for duty before the *Zizania* will have gone out of use. It is estimated that a tender suitable to take the place of the *Zizania* can be built for $125,000, and the Board recommends that an appropriation of this amount be made therefor.

over

Zizania

The act approved on April 28, 1904, appropriated $50,000 for this tender, and authorized a contract not to exceed $125,000 for its com-

1904 pletion. The Board therefore recommends that an appropriation of $75,000 be made to satisfy this contract.

1905 *Zizania.*—This steel twin-screw steamer was built in 1887–88, and is of about 417 tons gross burden. Except during the 78 days while being repaired, she was employed in attending to the buoyage of the district, in delivering rations, fuel, and supplies to light-vessels and light-stations, and on inspection duty. She established 13 buoys, changed 114, replaced and restored 25, renewed 23, removed 9, and recovered 5 buoys. Six trips were made for relighting gas buoys. She delivered 668 tons of coal and 6 cords of wood to light-vessels and some 142 tons of coal and 7½ cords of wood to light-stations; also the annual allowance of provisions to 5 light-vessels and 11 light-stations, and all necessary extra supplies to vessels and stations. In doing this work she steamed about 11,117 miles, consuming about 1,046 tons of coal, 9 cords of pine wood, and 350 gallons of lubricating oil. Some 39 hours' work was done at Edgemoor light-house depot and some 23 hours' work at the iron pier. She received needed fitments, repairs, and supplies.

1906 *Zizania.*—This steel twin-screw steamer was built in 1887–88, and is of about 417 tons gross burden. Except during the 34 days she was laid up for repairs she was employed on inspections, in delivering rations, fuel, and supplies to light-vessels and light-stations, and in attending to the buoyage of the district. She established 5 buoys, removed and discontinued 17, renewed 19, replaced and restored 15, changed 186, lifted and painted 7, shifted 10, and recovered 3 buoys. Five trips were made for the exclusive purpose of relighting buoys which had become extinguished. She delivered some 630 tons of coal and 7 cords of wood to light-vessels and some 142 tons of coal and 7 cords of wood to light-stations, also the annual allowance of provisions to 5 light-vessels and 11 light-stations and all the necessary extra supplies to vessels and stations. She steamed about 13,358 miles, consuming some 1,165 tons of anthracite coal, 7 cords of wood, and 470 gallons of lubricating oil. She received needed supplies and fitments.

1907 *Zizania.*—This steel twin-screw steamer was built in 1887–88, and is of about 417 tons gross burden. Except during the eight days she was laid up for repairs, she was employed in conveying the inspector on inspection duty, towing light-vessels to and from stations, delivering rations, fuel, and supplies to light-vessels and light-stations, and in attending to the buoyage of the district. She established 8 buoys, removed 11, replaced, renewed, and restored 42, changed 175, lifted and painted 13, and recovered 4. She delivered some 636 tons of coal and 10 cords of wood to light-vessels and some 149 tons of coal and 11 cords of wood to light-stations, also the annual allowances of provisions to 5 light-vessels and 11 light-stations, and all the necessary extra supplies to vessels and stations.

In doing this work she steamed about 11,316 miles, consuming about 1,030 tons of anthracite coal, 5 cords of wood, and 410 gallons of lubricating oil. Some 39 hours' work was done on buoys by the crew at the iron pier near Lewes and at Edgemoor light-house depot. She made one trip to the general light-house depot at Tompkinsville, N. Y., for supplies for the district and towing light-vessel No. 16 from Fenwick Island Shoal station. She was transferred on April 10, 1907, to the engineer of the Fourth light-house district. For 17 days she was laid up for repairs, and for 10 days she was used by the light-house inspector for the emergency coaling of light-vessels and the placing of buoys in shallow water. She was employed after her transfer in the inspection, construction, repair, and maintenance of lights, signals, beacons, and other aids, in removal of old piers at Schuylkill River Range light-station, Pennsylvania, and in the shipment and delivery of stores, materials, and lens apparatus. She also assisted in making test borings for the sites of new light-stations in Delaware Bay. In the performance of these duties since April 10, 1907, she steamed about 1,958 miles, with a consumption of some 180

The act approved on April 28, 1904, appropriated $50,000 for this tender, and authorized a contract not to exceed $125,000 for its completion. The Board therefore recommends that an appropriation of $75,000 be made to satisfy this contract.

1904

Zizania.—This steel twin-screw steamer was built in 1887–88, and is of about 417 tons gross burden. Except during the 78 days while being repaired, she was employed in attending to the buoyage of the district, in delivering rations, fuel, and supplies to light-vessels and light-stations, and on inspection duty. She established 13 buoys, changed 114, replaced and restored 25, renewed 23, removed 9, and recovered 5 buoys. Six trips were made for relighting gas buoys. She delivered 668 tons of coal and 6 cords of wood to light-vessels and some 142 tons of coal and 7½ cords of wood to light-stations; also the annual allowance of provisions to 5 light-vessels and 11 light-stations, and all necessary extra supplies to vessels and stations. In doing this work she steamed about 11,117 miles, consuming about 1,046 tons of coal, 9 cords of pine wood, and 350 gallons of lubricating oil. Some 39 hours' work was done at Edgemoor light-house depot and some 23 hours' work at the iron pier. She received needed fitments, repairs, and supplies.

1905

Zizania.—This steel twin-screw steamer was built in 1887–88, and is of about 417 tons gross burden. Except during the 34 days she was laid up for repairs she was employed on inspections, in delivering rations, fuel, and supplies to light-vessels and light-stations, and in attending to the buoyage of the district. She established 5 buoys, removed and discontinued 17, renewed 19, replaced and restored 15, changed 186, lifted and painted 7, shifted 10, and recovered 3 buoys. Five trips were made for the exclusive purpose of relighting buoys which had become extinguished. She delivered some 630 tons of coal and 7 cords of wood to light-vessels and some 142 tons of coal and 7 cords of wood to light-stations, also the annual allowance of provisions to 5 light-vessels and 11 light-stations and all the necessary extra supplies to vessels and stations. She steamed about 13,358 miles, consuming some 1,165 tons of anthracite coal, 7 cords of wood, and 470 gallons of lubricating oil. She received needed supplies and fitments.

1906

TENDERS.

1907

Zizania.—This steel twin-screw steamer was built in 1887–88, and is of about 417 tons gross burden. Except during the eight days she was laid up for repairs, she was employed in conveying the inspector on inspection duty, towing light-vessels to and from stations, delivering rations, fuel, and supplies to light-vessels and light-stations, and in attending to the buoyage of the district. She established 8 buoys, removed 11, replaced, renewed, and restored 42, changed 175, lifted and painted 13, and recovered 4. She delivered some 636 tons of coal and 10 cords of wood to light-vessels and some 149 tons of coal and 11 cords of wood to light-stations, also the annual allowances of provisions to 5 light-vessels and 11 light-stations, and all the necessary extra supplies to vessels and stations.

In doing this work she steamed about 11,316 miles, consuming about 1,030 tons of anthracite coal, 5 cords of wood, and 410 gallons of lubricating oil. Some 39 hours' work was done on buoys by the crew at the iron pier near Lewes and at Edgemoor light-house depot. She made one trip to the general light-house depot at Tompkinsville, N. Y., for supplies for the district and towing light-vessel No. 16 from Fenwick Island Shoal station. She was transferred on April 10, 1907, to the engineer of the Fourth light-house district. For 17 days she was laid up for repairs, and for 10 days she was used by the light-house inspector for the emergency coaling of light-vessels and the placing of buoys in shallow water. She was employed after her transfer in the inspection, construction, repair, and maintenance of lights, signals, beacons, and other aids, in removal of old piers at Schuylkill River Range light-station, Pennsylvania, and in the shipment and delivery of stores, materials, and lens apparatus. She also assisted in making test borings for the sites of new light-stations in Delaware Bay. In the performance of these duties since April 10, 1907, she steamed about 1,958 miles, with a consumption of some 180 tons of coal and 1½ cords of wood. She received necessary repairs, fitments, and supplies, but she still needs extensive repairs.

(ZIZINIA)

126-E - 1923 Series
(Nov 5-1924)

Zizinia - 1st L.H. Dist.
Portland, Me

Built in 1888 cost
Baltimore, Md 48,729.00

126-E- 1923 Series - (Nov 18/1924)
To be placed out of Comm
Dec 3, 1924

Jan 16, 1925
Feb 7, 1925

Sale -

Bidder John J. Burke
27 Maple St - Brighton Mass
Boston Mass on Feb 3, 25
$5,179

6/53
Edw