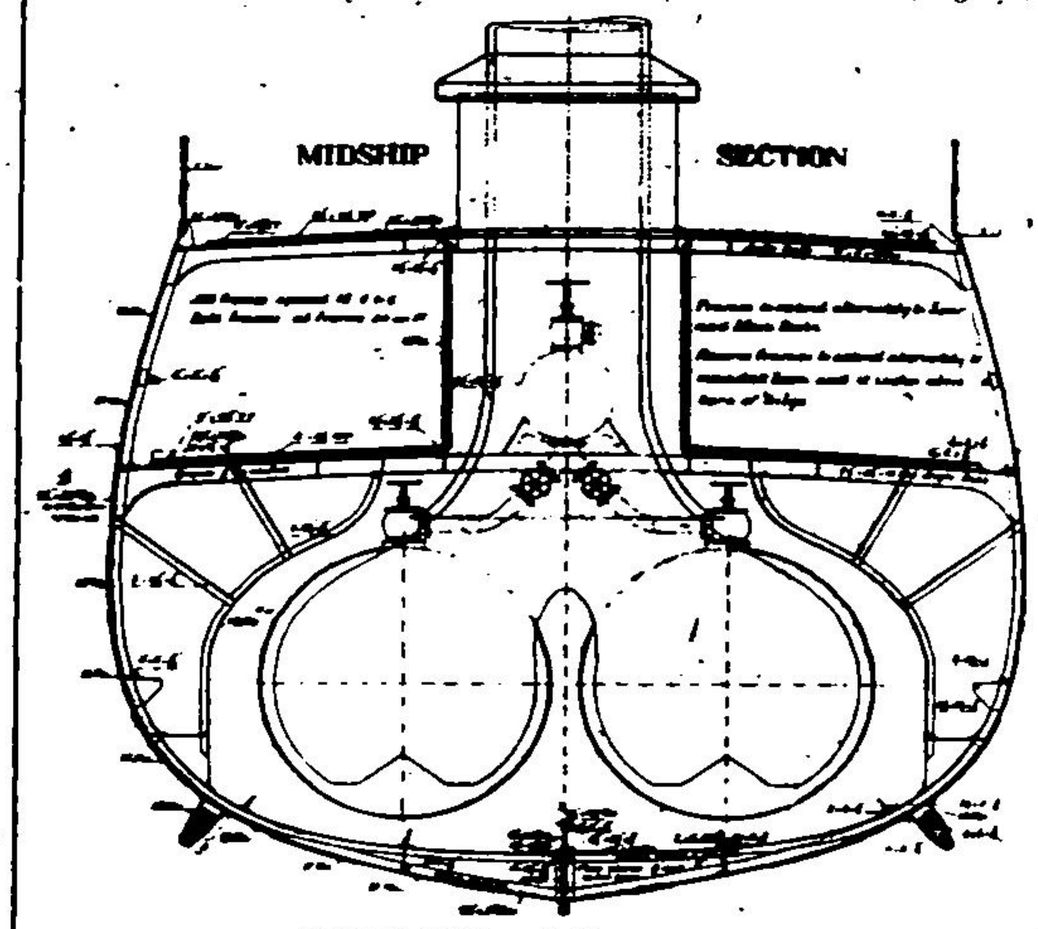
A MODERN LIGHT-SHIP.

CONTRACT TO BE AWARDED BY THE UNITED STATES LIGHT-HOUSE BOARD FOR THE CONSTRUCTION OF A STEEL STEAM VESSEL FOR SERVICE NEAR PORTSMOUTH, VA.—ANOTHER THOROUGHLY MODERN VESSEL WITH THE BEST OF EQUIPMENT IN EVERY RESPECT.

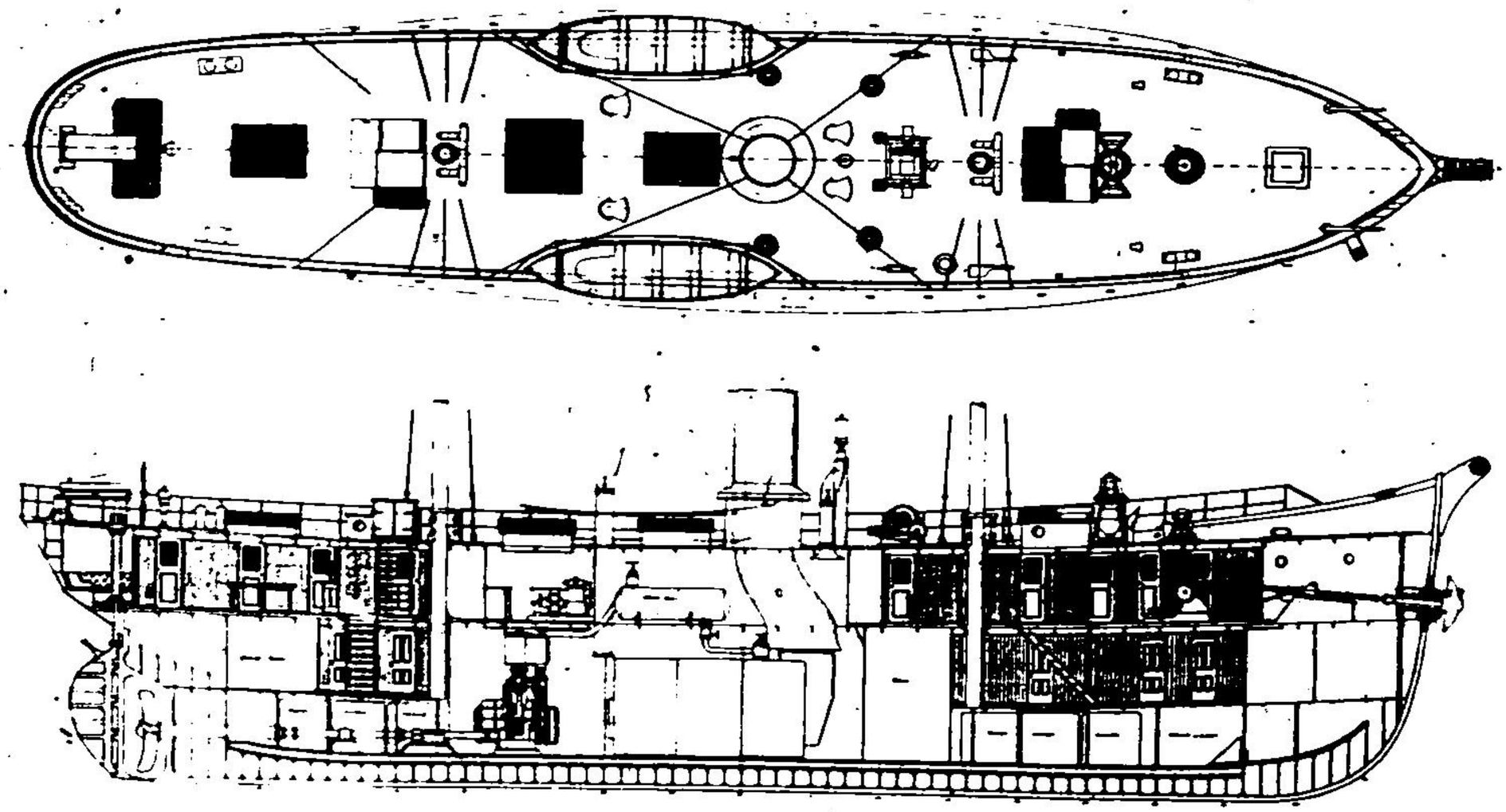
Specifications have been issued by the United States light-house-board for the construction of a light-ship of first-class type, bids upon which will be received until June 10, 1899. The vessel, which is designed for service in the vicinity of Portsmouth, Va., will be 112 feet in length between perpendiculars, from the inside of stem to inside of rudder post; 28 feet 6 inches breadth, molded, and 14 feet 10½ inches depth of hold from top of keel to top of main deck beam amidship. The hull will be of steel throughout, and there will be three decks, the main and spar decks being continuous and the lower deck extending from the stem to the coal-bunker bulkhead, and from the sternpost to the engine bulkhead. The ship will be divided by water-tight steel bulkheads into five compartments. Each of the bulkheads will have sluice valves, with the exception of the forward collision bulkhead, in which there will be no openings whatever. Accommodations for officers will be located on the main deck, there being four staterooms, one pantry, one chart room and a water closet. Dynamos and engines for the electric plant will also be located on the main deck within the engine and boiler casing. Accommodations for the crew will be forward on the main deck, and will consist of five staterooms with two beds in each room together with pantry, galley, lockers, wash room, water closets, etc., and a mess room amidships, between the staterooms. Forward will be built a lamp room, together with shelves and lockers. The vessel will have two hollow steel masts, and the lights will consist of a cluster of three on each top, adapted for both electricity and oil lamps. The fog signal will be operated by steam, and the cut-off worked by a steam engine designed for the purpose. All workmanship must be fully up to the requirements of the American Ship Masters' Association. All deck planks are to be clear and thoroughly seasoned Maine or Michigan white pine. Ceilings in the holds will be yellow pine.

The vessel will be fitted with one inverted surface-condensing single-cylinder engine, with a stroke of 22 inches and a cylinder 23 inches in diameter, driving one right-handed four-bladed cast-iron propeller of the solid type, about 7 feet 8 inches in diameter and with suitable pitch of screw. Steam will be furnished by two cylindrical straight-tubular boilers, designed for a working pressure of 100 pounds per square inch, the diameter being 9 feet and the length 16 feet 7½ inches. The condenser will contain 875 square feet of cooling surface. Valves will be operated by the Stephenson double-bar link motion. The air pu will be of the vertical duplex type of Worthington or Blake manufacture. Boilers will be fitted with Fox corrugated furnaces, the diameter of which inside the corrugations will be 40 inches. The equipment is to be modern in all respects, including a steam windlass and an anchor weighing 2,000 pounds. The vessel will be heated throughout with steam and will be fitted with eighteen tanks, having an aggregate capacity of about 12,000 gallons. Six tanks will be stowed in the after hold and twelve tanks in the forward hold. A feature of the equipment will be the provision of a double-cylinder steam hoister, capable of lifting easily 2,500 pounds. The vessel will be fitted with two whaleboats, each 26 feet in length and 6 feet beam.

As before stated there will be two masts, each to be built of steel having a tensile strength ranging from 55,000 to 60,000 pounds. The distance from the 12 feet water line to the focus of the lights will be 59 feet. The greatest diameter of the masts will be 15 inches outside, the topmast to be of wood. At the mastheads will be built a gallery to surround the electric lanterns and serve as day marks. Specifications for the electric lighting plant provide that engines and generators of the General Electric Co. type of manufacture shall be provided. The vessel is to be wired for eighty 16-candle-power incandescent lamps and eight 100-candle-power lamps, four on each mast. Each of the lanterns on the masts will have a marine water-tight switch and receptacle, so that it can be turned off or on independently of the rest.



MIDSHIP SECTION—VIEW OF LIGHT-SHIP.



INBOARD AND DECK PLANS OF THE LIGHT SHIP TO BE BUILT FOR THE UNITED STATES GOVERNMENT.

Nearly all the ship building yards at Nantes and Chantenay, France, are in full activity. At the Chantiers de la Loire the stocks seem never to be empty. Several large vessels have been launched in the course of the year, and others, including torpedo boats for the French government, are in course of construction. Under the fostering care of the government this industry has made immense strides, and finds its sequel in the important shipping companies which have sprung up in the last few years, and which are paying their shareholders splendid dividends. It must be borne in mind that the government bounty is in itself a handsome profit.

Among firms well known to Marine Review readers that had interesting and creditable exhibits at the Electrical Exposition at New York were the Stirling Co. of Chicago, John A. Roebling's Sons & Co., and the Jos. Dixon Crucible Co.