

## THE MONITORS OF TO-DAY.

ESSENTIALLY AN AMERICAN TYPE OF WAR-VESSEL.

CONSTRUCTED ON THE GENERAL PRINCIPLE OF ERICSSON'S PLAN—HISTORY OF THOSE NOW IN THE AMERICAN NAVY.

An editorial in *The Tribune* a few days ago quoted the following sentence from the writing of one of the leading officers of the Engineer Corps of the Navy upon the structure and performance of the monitor *Amphitrite* in a cruise at sea: "No other type of war-vessel is so essentially American or so essential to the maintenance of our defensive naval policy." The history of the modernized monitor—the *Puritan*, the *Terror*, the *Miantonomoh*, the *Amphitrite* and the *Monadnock*—is an interesting one. There is, naturally, much difference of opinion relative to the monitor type of armored vessels; but there is not much among the practical experts of the Navy as to their value for real fighting purposes. Those who lived during the period of the Civil War and were old enough to take an active interest in it will not forget that the first of the National ironclads was a monitor, less effective, to be sure, than the later craft—the five mentioned—constructed on the same general principle, but nevertheless an engine remarkable for her fighting qualities. While it was under construction Captain Ericsson was ridiculed by the press; his success was doubted so strongly by many naval officers who could not see in a mastless iron vessel any characteristic of what they thought a war-vessel should be that the project was strongly opposed by them. Hence there was a clause put into the contract which required that the Monitor be fitted with masts and sails sufficient to propel her at the rate of six knots an hour in a fair wind, without aid from the engines. But the contrary opinion of such men as Chief Engineer Alban C. Stiners and John Newton prevailed, and there were no masts or sails fitted. The Monitor's performance at Hampton Roads in March, 1862, when she turned the tide of war in her contest with the Confederate ram *Virginia* (*Merrimac*) reversed the adverse criticisms of the press, and partially quieted the Navy carpenter. So complete was this victory over non-expert opinions that the Navy Department at once proceeded with the construction of a veritable fleet of steam turret batteries, which, with the exception of a few built on Western rivers upon designs of other engineers, were from Ericsson's plans.

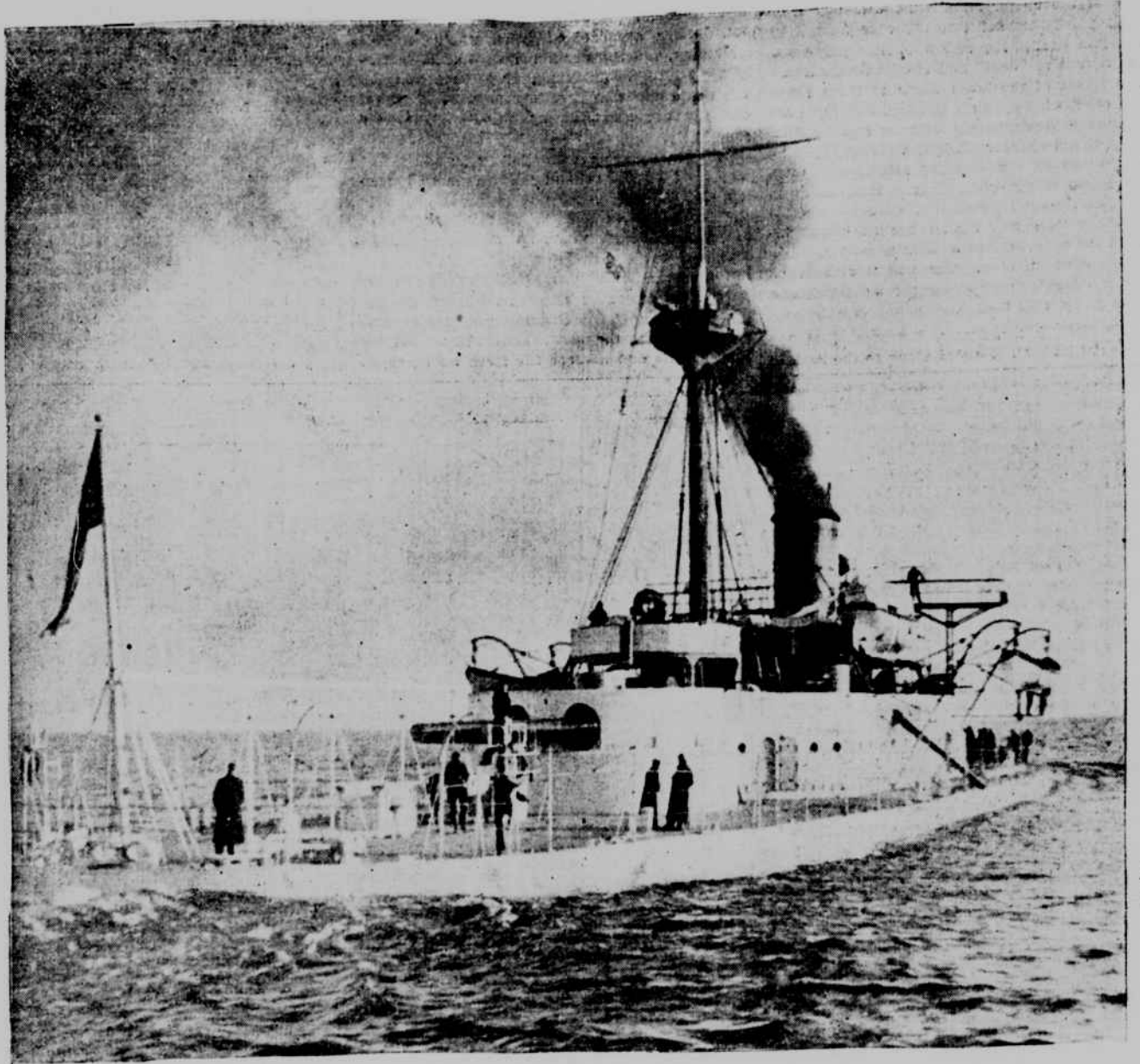
So much has been said upon the subject that the consensus of opinion to-day is that the monitor is a purely American idea, and the armorclad a European fallacy.

### THE REVOLVING TURRET.

It was on the Monitor that the revolving turret earliest demonstrated its usefulness, that the advantages of the low freeboard and heavy iron plating were fairly tested, and the possibility of making the ram an efficient implement of offence was convincingly revealed. There are left thirteen of the original fleet of single-turreted monitors, those of the design of the original Monitor, five of these—the *Ajax*, the *Canonicus*, the *Mahopac*, the *Manhattan* and the *Wyandotte*—of 2,100 tons displacement each, and the others—the *Comanche*, the *Catskill*, the *Jason*, the *Lehigh*, the *Montauk*, the *Nahant*, the *Nantucket* and the *Passaic*—of 1,875 tons each. All of these have a very low freeboard, which renders them a difficult mark for an enemy to hit. In addition, this low freeboard, as Rear-Admiral Edward Simpson once expressed it, "is intended to contribute to the steadiness of the hull as a gun platform by offering no resistance to the waves that are expected to wash freely over the vessel's deck." Another advantage is that they are of light draught, and could in a few moments steam into shallow water, where they would be beyond the reach of heavy sea-going cruisers. A few years ago, Senator Chandler, ex-Secretary of the Navy, in an argument in Congress declared that vessels of the monitor type are the ideal ships for the defence of the coasts and harbors of America, and that "the time has not yet arrived, if indeed it will ever come, for the construction by the United States of the ponderous, unwieldy and costly broadside armored vessels with which European nations are making experiments of at least doubtful value." He maintained, and upon the authority of naval officers of war experience, that "the advantages of the monitor type are that it presents to the enemy a minimum target while allowing the greatest possible concentration of armor upon this narrow, exposed side, and also that it secures stability by allowing the waves to sweep freely over the deck, instead of offering a resistance such as in the high armored battleship inevitably causes much rolling."

### FEATURES OF THE PURITAN.

Compared with the "Yankee cheesebox on a raft," as the original Monitor was called, the vessel which wrought so bravely in Hampton Roads, are the five double-turreted monitors, laid out on substantially the plans prepared by the late Captain Ericsson—plans which revolutionized methods of modern marine warfare as nothing has done since the introduction of steam as a motive agent. They are much larger and more powerful than any vessel put in commission during the Civil War. The largest of this fleet is the *Puritan*, which was also the largest monitor ever built, and was contracted for with Captain Ericsson and was named by him the *Protektor*; but the Navy Department changed the



THE UNITED STATES MONITOR PURITAN.

name to the *Puritan*. The original plan was for a single-screw vessel of nearly five thousand tons displacement, with one huge turret for two 20-inch guns. The Navy Department compelled the adoption of two turrets and two screws, though Captain Ericsson opposed these changes. His idea was one powerfully armed turret, with all-around fire, and so determined was he in this idea that in a letter to Gustavus V. Fox, Assistant Secretary of the Navy, he said: "The day is not far distant when two turrets on a vessel will be admitted to have the same advantages as two heads on the human body, or two suns in the same heavens."

The *Puritan* was launched in July, 1864, two years following the beginning of her construction at Greenpoint, now a part of Brooklyn. Her machinery was built by the Allaire Works, then situated near the Grand-st. ferry, where had been built the engines for the *Shamrock* and other new warships. The end of the Civil War found her unfinished, and the work upon her and several other vessels was stopped, the policy then being to reduce the fleet. Ten years later, under the cloak of "repairs," which system identified itself with Secretary Robeson's administration, and added several new vessels to the Navy list, the building of a new *Puritan* around the old name was begun under a contract with John Roach, to whom the old vessel was handed over at a valuation of about \$43,000. The vessel was broken up for her old material,

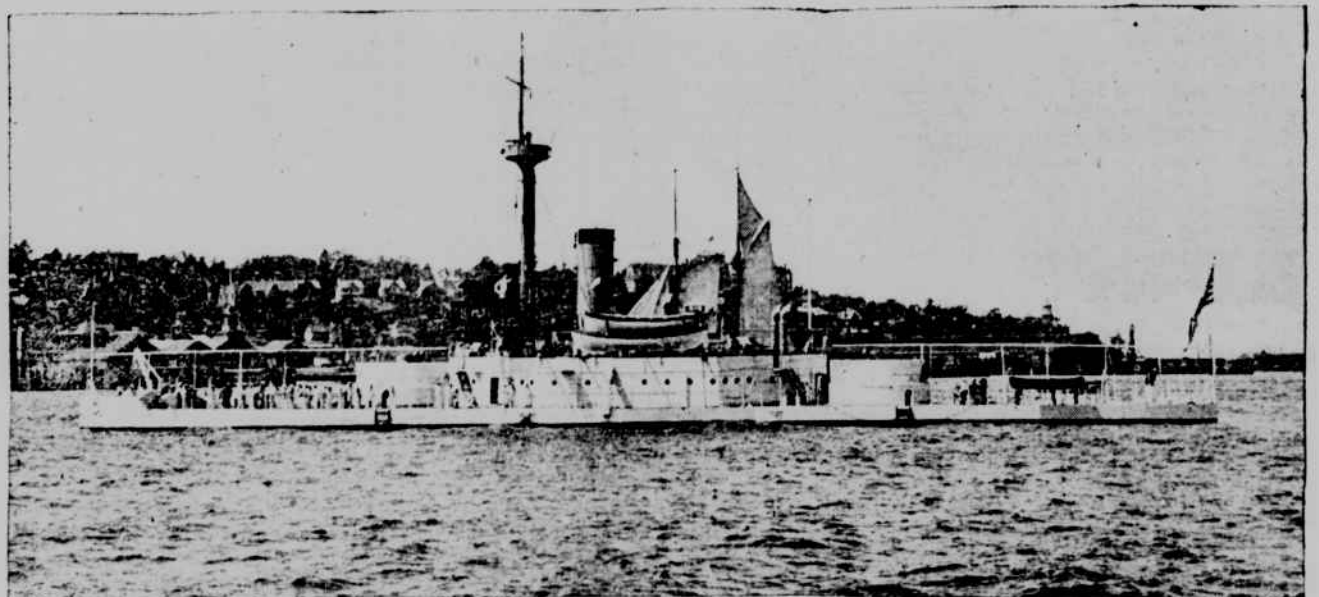
some of which is said to have been used in the new *Puritan*, as was also some of the material from the single-turreted monitors *Casco*, *Chimo*, *Cohoes*, *Modoc*, *Napa*, *Nansett* and *Waxsaw*, all of which had been sold to the Roach works. The new *Puritan* lay idle for another decade until Congress voted money for the construction of vessels for the "new Navy," which included this vessel. She was then lying at the New-York Navy Yard, where the work of completion was resumed, but it was more than another ten years before she was ready for service. Admiral Jouett said of her plans: "She will be the most effective vessel in any navy, and I would go to sea in her confident of being able to vanquish and sink any vessel that might be sent against her."

The *Puritan* is officially termed a barbette turreted ship. Her hull is of iron, protected by an armor belt of nickel steel five feet seven inches deep, fourteen inches thick to a point one foot below the water-line, and thence tapering to six inches at the armor shelf for a length of 160 feet, protecting the engines, boilers, magazines, shell-rooms, etc. This armor is strongly backed by wood lagging, and a system of rigid frames and girders. Her general dimensions are: Length between perpendiculars, 290 feet; breadth of beam, 60 feet 1½ inches; mean draught, 18 feet 2½ inches; displacement, 6,060 tons. In each of her turrets are mounted two 12-inch guns, and her other armament consists

of six 4-inch, two 6-pounder and four 3-pounder rapid firing guns, and four 37-millimetre Hotchkiss revolving cannon, two of them in the top of the military mast. A superstructure has been built on the deck, extending from barbette to barbette, within which are the quarters of the officers and crew. From a military point of view the superstructure is looked upon by officers of the Navy as almost worse than worthless, increasing as it does the size of the target to be fired at, and containing an element of great danger in their liability to burn in action. There are some advantages in the superstructure, however, chief of which are the increased space for the comfortable accommodation of the crew, and the location above deck of the galley and some other necessities.

### CONTRACTS FOR THE OTHERS.

In the same year that the *Puritan* was begun—that is, in 1862—four other large double-turreted monitors were put under construction at navy yards, and machinery was contracted for with private works in New-York and Philadelphia. These vessels are what are known on the Navy Register of 1897 as the *Terror*, the *Miantonomoh*, the *Amphitrite* and the *Monadnock*. The original hulls were of wood, and armored above water, and on deck. The *Terror* was built at the Portsmouth Navy Yard, Kittery, Me., and was originally named the *Agamenticus*, the name being changed in 1869 to the *Terror*. The *Miantom-*



THE UNITED STATES MONITOR AMPHITRITE.