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UNIVERSAL AIMING STAND.

The accompanying picture represents an illustration of an apparatus used in the Russian army for determining the ballistic qualities of military rifles. The test is usually made by crack-shot officers, who try every rifle separately, noting the result on a special printed graduated target. In such a manner the defects of every rifle are definitely ascertained, the ballistic inaccuracies and irregularities of deviation are defined, and the position of the movable sight is corrected.

Each soldier, in receiving his rifle, is also supplied with the record of its peculiarities, printed on a paper target, which serves him as a guide in his rifle practice, and greatly increases his efficiency in the field.

This apparatus was invented by Mr. Livchak, a Russian engineer. In the Russian army alone over 2,000 of these devices are now in use.—*Translated from Russian, the Univ. Illust.*

THE DUGUESCLIN.

A NEW FRENCH IRONCLAD OF THE SECOND CLASS.

The new French ironclad of the second class Duguesclin lately left Rochefort for the high seas.

The Duguesclin is, we believe, the most powerful

vessel that has been built at Rochefort. It measures 276 feet over all, 267 feet at the water line, and 57 feet beam. Its average draught is 23 feet, the draught at the stern being 25 feet, and the displacement, calculated from the plans, is 5,869 tons.

The vessel is brig-rigged, carrying 2,687 square yards of canvas. The compound engines having three

a belt of armor extending to the water line, and having a thickness of 10 inches amidships, 7 inches at the bow, and 6 inches at the stern; the armor on the turret is 8 inches thick, and on the bridge 2 inches.

The armament is composed of four 10 inch guns placed in the turret, six 6 inch in the battery, and two smaller ones on the fore-castle.

The Duguesclin has seven large, tight bulkheads. The plans were drawn by Mr Lebelin, of Dionne, one of our best naval engineers.

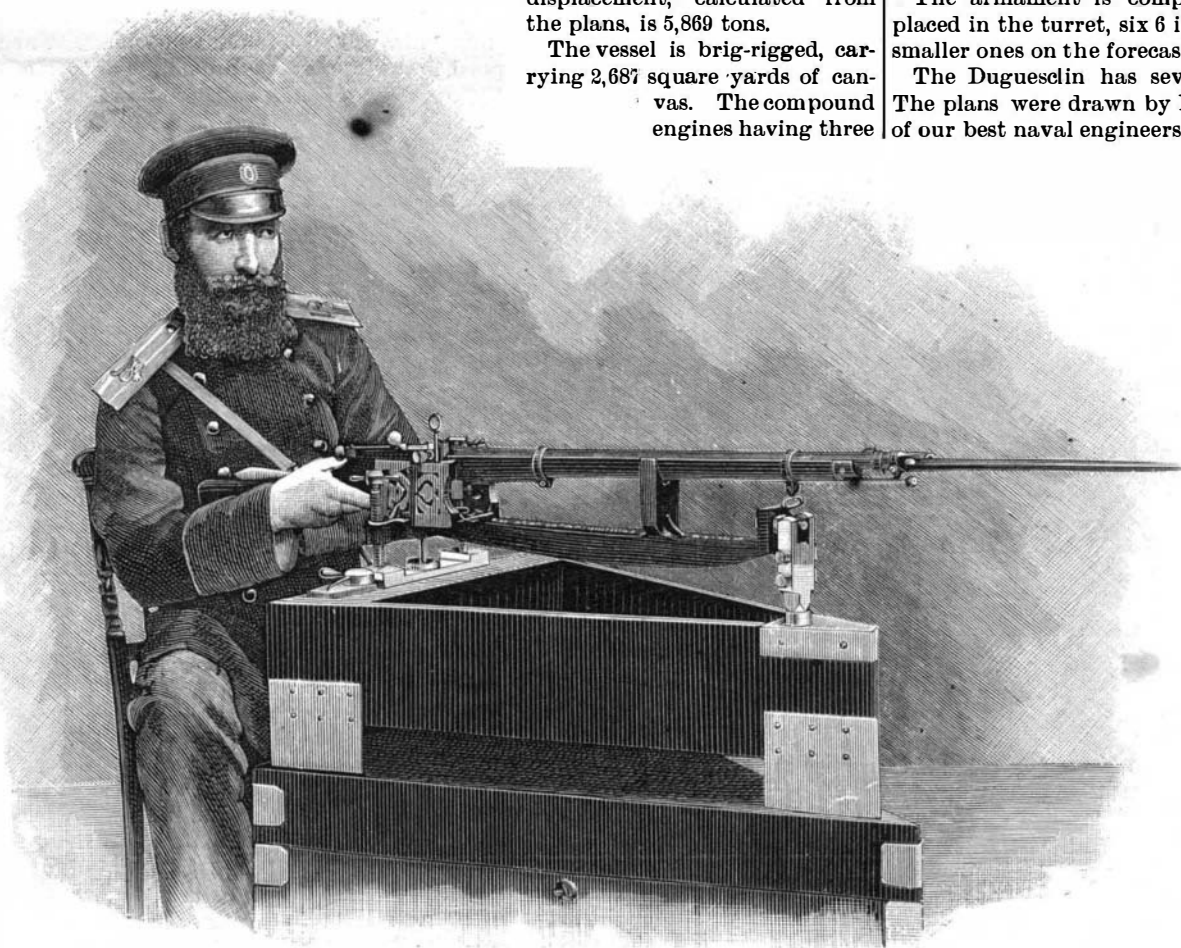
A characteristic detail of this construction is that the armor rests on a bed of wood secured to the iron sides of the ship, and a sheathing of wood covered with copper extends a little above the water line over this armor.

The ironclad is bound for distant stations. Its construction cost, material and work, about \$1,050,000.—*L'Illustration.*

Grand Medal of Honor.

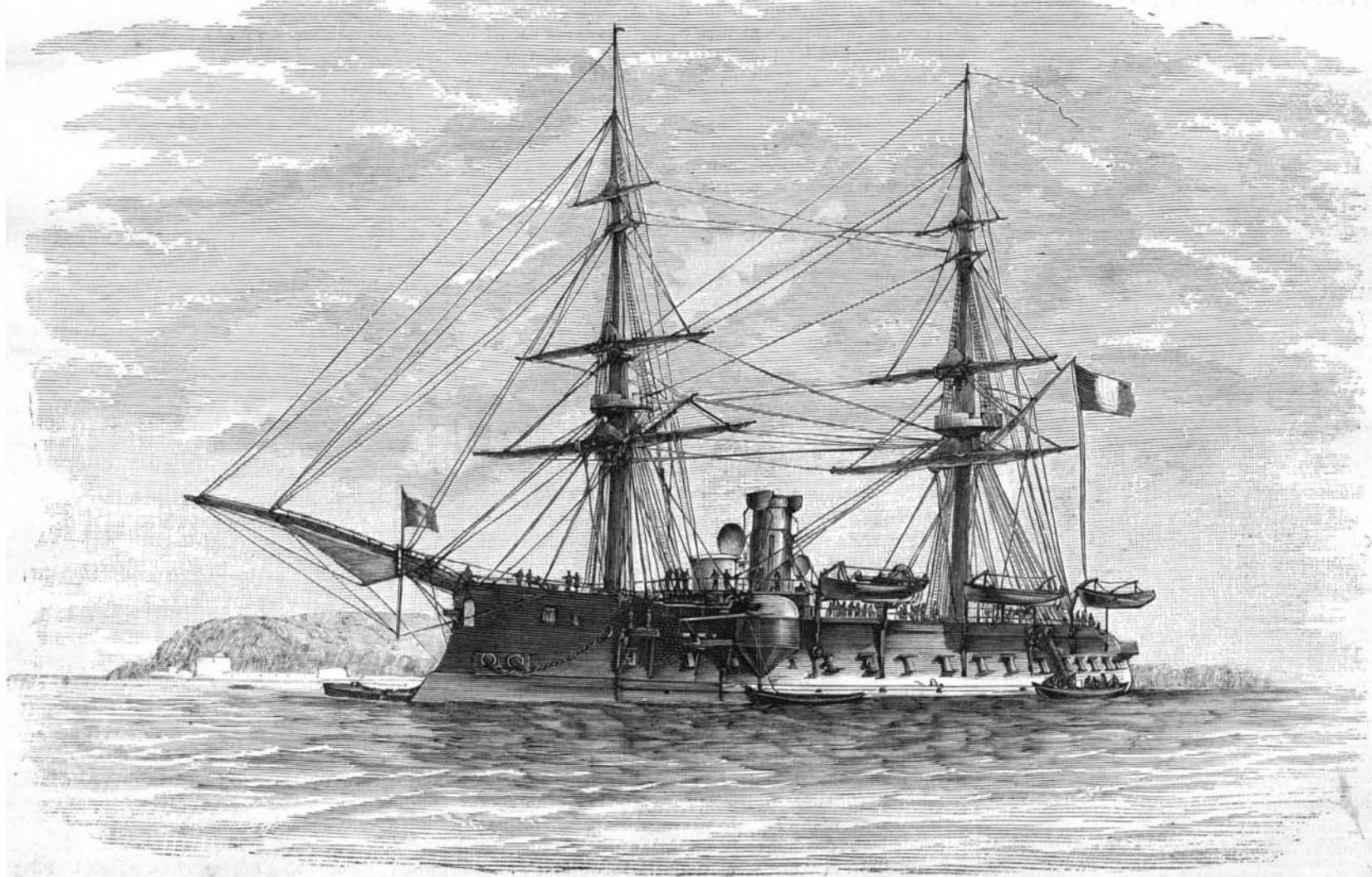
The Board of Judges appointed by the Franklin Institute, Philadelphia, after a thorough examination into the state of the art, has recommended that the grand medal of honor be awarded to Thaddeus S. C. Lowe, of Norristown, Pa., for his substantial improvements in the manufacture of water gas, and for his numerous improvements in methods and

appliances for the utilization of water gas as a fuel for domestic and industrial purposes, and as an illuminating agent.



UNIVERSAL AIMING STAND.

vertical cylinders were made in the works at Indret. There are eight boilers, with sixteen fireplaces, and two propeller screws. The Duguesclin is protected by



THE DUGUESCLIN, A NEW FRENCH IRONCLAD OF THE SECOND CLASS.