

The Evolution of our Navy

AMERICA for two centuries has led the world in naval progress, the novel products of Yankee ingenuity devised to meet the diverse conditions of the nation's rapid advancement having continually forced the other maritime powers to modify their systems of navigable offense and defense in accordance with the lines adopted on this side of the Atlantic. The revolving turret of the original monitor which displaced the broadside batteries of every battle-line ship on the globe was only one conspicuous instance of the permanence of the American idea which has been manifested in armor protection, rapid-fire guns, ram bows, twin and triple screws, straight water-tube boilers, mobile torpedoes, submarine boats, fire proofing and hundreds of other devices evolved from the practical experience and farsightedness of American naval officers.

The Navy Department has just been enriched by a series of handsome paintings, prepared under the direction of Admiral Hichborn and mounted in the arches above the doors and windows of the chief constructor's office, depicting the evolution and apothesis of what must be called the national naval architecture of this country from its earliest modest beginnings to its very latest triumphs, presenting chronologically and artistically an accurate representative of each famous type.

Beginning with the historic fleet of Columbus—the Santa Maria, Nina and Pinta—the first vessels with the exception of the semi-mythical Norse boats that crossed the ocean and floated in our waters, and which involved the principles underlying the existing navy of the United States, it will be seen that while they were great ships in their day, the largest of them is a mere cockle shell alongside of the modern cruiser. The Santa Maria, the largest of the discoverer's fleet, was

is 175 feet long, 45 feet wide and when ready for sea drew 20 feet of water with 230 tons displacement. No American needs to be told her history, which, as Secretary Long has recently said, is the cornerstone of our naval glory. From the days of the Constitution and



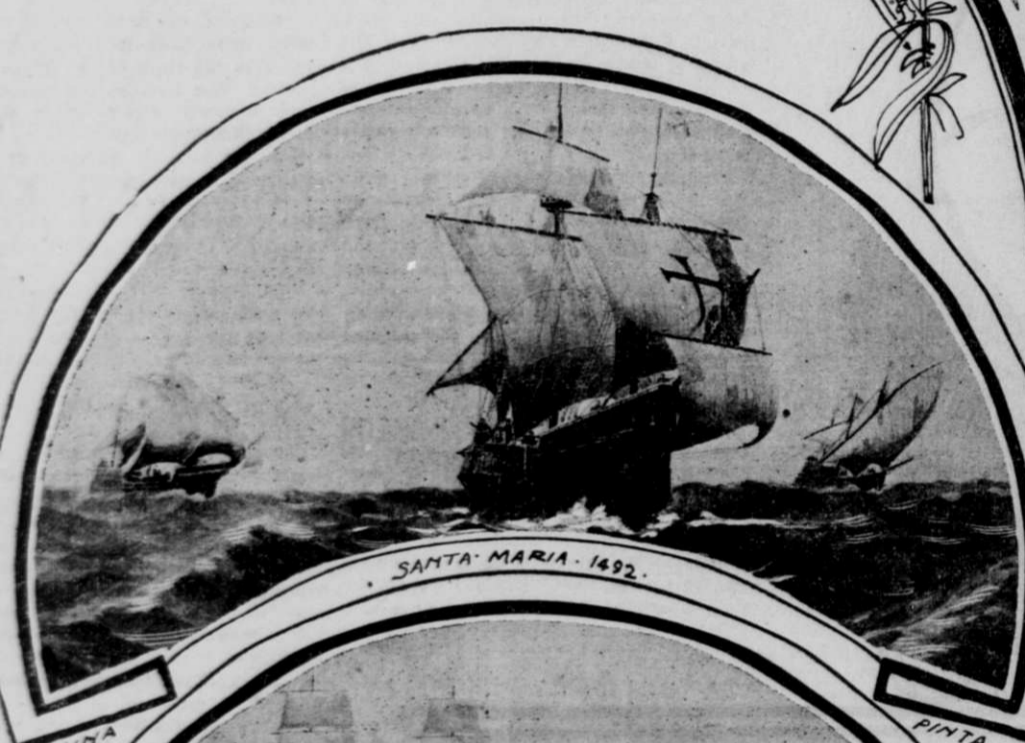
U.S.S. CONSTITUTION. 1797.

Island navy yard in 1895, and is 110 feet long, twenty-five feet wide and at ten feet draft displaces 345 tons.

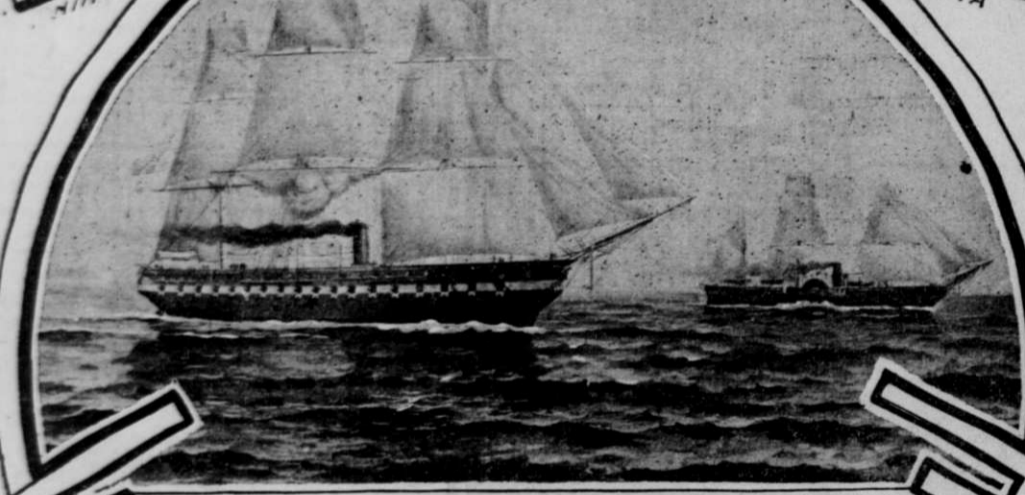
The final painting of the series, representing the culmination of sea power progress shows the first-class seagoing battleship of the Pennsylvania class for which designs have just been completed, and the new Maine with the torpedo boat destroyer Farragut. The Pennsylvania class will be of 14,000 tons displacement, or more than seven times that of the Constitution, and a speed of nineteen knots per hour. Their principal dimensions are: Length, load water line, 435 feet, beam seventy-six feet and draft twenty-four feet. The Maine, Missouri and Ohio are being constructed from identical plans, respectively at Philadelphia, Newport News and San Francisco. They are each 388 feet long, seventy-two feet two and a half inches wide and have 12,000 tons displacement. The Farragut was commissioned just about a year ago on the Pacific Coast, having been built at the Union Iron Works, to whose skill the triumphs of the Oregon was attributable. She is 213 feet 5 inches long, twenty feet seven and three-quarter inches wide and at six feet draft displaces 273 tons. She is the fastest vessel in the navy, her trial record having been 20.13 knots with 5000 horsepower.

The paintings are from the brush of Frank Muller, who was born at Velle, Denmark, forty-one years ago, and who studied under Karl Neumann in the Royal Academy of Arts at Copenhagen. Muller's father was a Danish artist and he is a nephew of Anton Melby, whose "Eddy-stone Light" and other notable marines are in the national gallery at London. Neumann's best known work is perhaps that of "Clearing the Point." Muller served in the Danish navy and was before

until February, 1864. She is 251 feet long, forty-three feet five inches wide, twenty-one feet deep and at a 15-foot draft displaces 2155 tons. Her turtle-back deck rises only six feet out of water and is armored all over with steel plates aver-

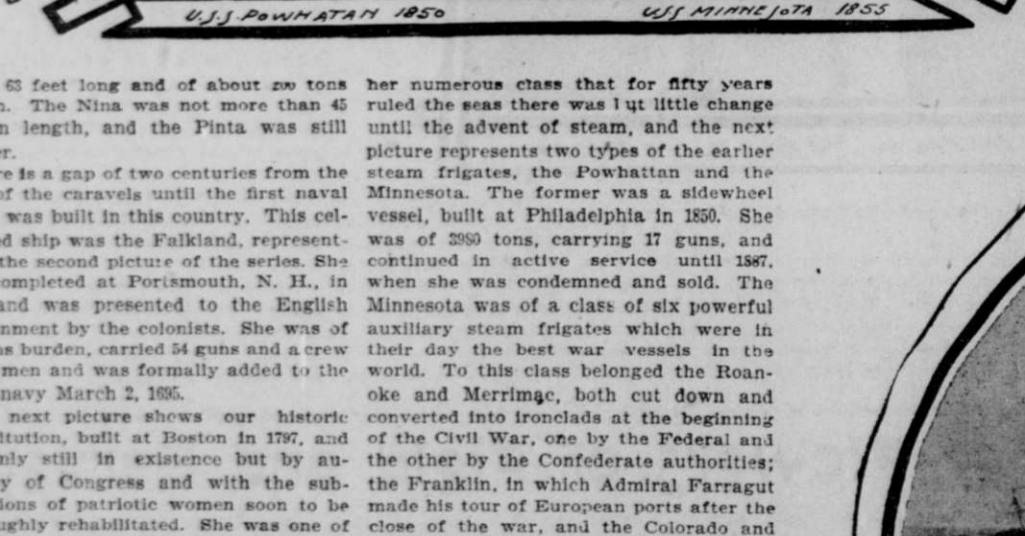


SANTA MARIA. 1492.



NINA

PINTA



U.S.S. POWHATAN 1850

U.S.S. MINNESOTA 1855



H.B.M.S. FALKLAND. 1690



MONITOR ORIGINAL 1861

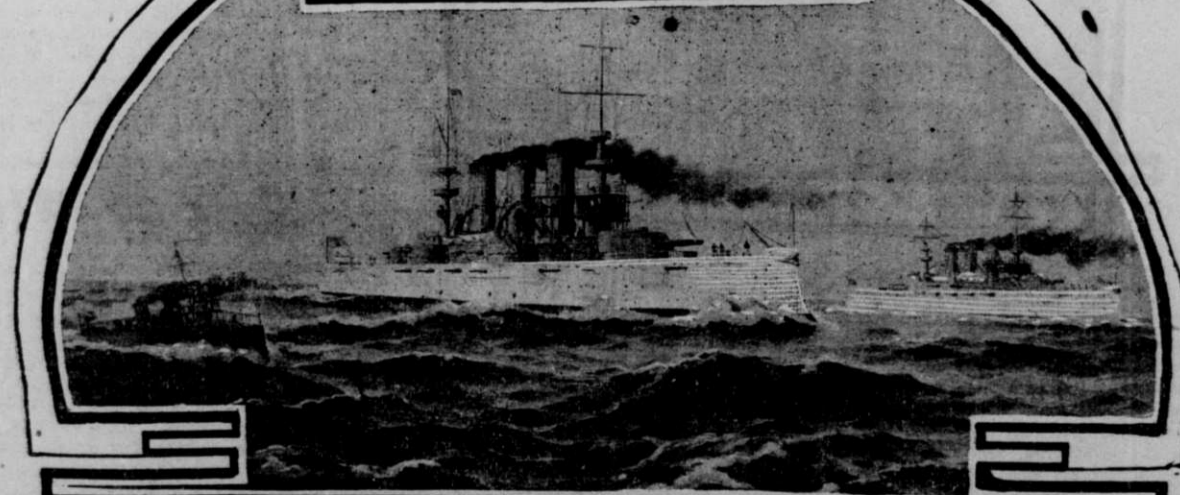
U.S.S. ARKANSAS. 1862

about 63 feet long and of about 20 tons burden. The Nina was not more than 45 feet in length, and the Pinta was still smaller.

There is a gap of two centuries from the time of the caravels until the first naval vessel was built in this country. This celebrated ship was the Falkland, represented in the second picture of the series. She was completed at Portsmouth, N. H., in 1690, and was presented to the English Government by the colonists. She was of 637 tons burden, carried 54 guns and a crew of 226 men and was formally added to the royal navy March 2, 1695.

The next picture shows our historic Constitution, built at Boston in 1797, and not only still in existence but by authority of Congress and with the subscriptions of patriotic women soon to be thoroughly rehabilitated. She was one of the finest frigates afloat in her time and

her numerous class that for fifty years ruled the seas there was but little change until the advent of steam, and the next picture represents two types of the earlier steam frigates, the Powhatan and the Minnesota. The former was a sidewheel vessel, built at Philadelphia in 1850. She was of 2899 tons, carrying 17 guns, and continued in active service until 1867, when she was condemned and sold. The Minnesota was of a class of six powerful auxiliary steam frigates which were in their day the best war vessels in the world. To this class belonged the Roanoke and Merrimac, both cut down and converted into ironclads at the beginning of the Civil War, one by the Federal and the other by the Confederate authorities; the Franklin, in which Admiral Farragut made his tour of European ports after the close of the war, and the Colorado and the Wabash. All were excellent ships and



U.S.S. FARRAGUT.

U.S.S. PENNSYLVANIA (CLASS)

U.S.S. MAINE (NEW)

Now They Make Milk Into Buttons.

The milkmen who supply the city of Baltimore have been planning how to get the most out of the product of the cow, and have recently started a plant which turns the lactical fluid into every compound which can be made from it. The machinery which is used converts the milk as it comes from the cow into what is called clarified milk, for the morning's coffee; into cream, icecream, butter and buttons, as well as combs, paper weights, brush tops and other articles can be made. This is called lactoid.

The plant used is an old skating rink, where the ice was frozen artificially. The milk dealers formed a company, purchased the place and use the refrigerating machinery for cooling purposes and for making icecream. The apparatus is so arranged that from the time the milk is poured from the cans into the receiving vats everything is done automatically, the only hand work being to place the bottles in the cold storage department and delivery wagons; to flavor the icecream and to slice the lactoid before grinding it in the mills for buttons.

The Baltimore plant is the only one of its kind in the United States, and it is claimed that less than 1 per cent of the products of the milk is wasted. The fluid comes in at one end of the building and goes out of the other in various shapes, the only waste being a watery fluid which runs like a drain. The milk for coffee is tested in a laboratory and the proportion of cream it contains stamped on each bottle. The company supplies from 6000 to 10,000 gallons of coffee milk daily, while 200 gallons of icecream an hour are turned out in the freezers operated by steam power. In addition to this nearly three tons of buttons, a half ton of schmeer kase and a ton of lactoid are produced every twenty-four hours. Such has been the success of the plant that the machinery is being increased to handle 5,000 gallons of the raw material every twenty-four hours.

An annex to the plant is a big icecream garden, where hundreds of people enjoy the delicacy every night to the music of an orchestra. This is also operated by the company, and considerably increases the consumption of its icecream.

performed splendid service. The Minnesota was built at the Washington navy yard in 1855 and is still afloat as the practice vessel of the Massachusetts Naval Militia. She is 294 feet 3/4 inches long, 51 feet 4 inches wide and at 23 feet draft of water displaces 4700 tons. She carried originally a battery of 48 guns. Her engines, of 1000 horsepower, were considered only as auxiliary power, her large spread of canvas being mostly relied upon for propulsion.

The most radical departure from precedent in the history of warship construction came while the Minnesota and her class were still new and one of them, the Franklin, unfinished, and is represented in the next painting of the series, which shows the original Monitor, accom-

panied by the latest development of the monitor type, the Arkansas and class now building. The Monitor was built by John Ericsson in 1861, and though individually she was the first crude embodiment of a scheme to meet an emergency, she revolutionized the navies of the world. Her wonderful achievements quickly showed that spars and sails must no longer be regarded as part of a war vessel's means of propulsion and that fighting ships must be protected by armor. While the low freeboard monitor type has passed out of favor as a deep-sea fighter, there are certain phases of national defense for which many authorities consider its latest development as the best vessel that can be devised, and in

aging six inches thick. Her armament comprises only four six-pounder rapid-fire guns and the coamings around these, the armored conning tower and the smokestack and ventilators are the only projections above the deck, except the davits and galleys for stowing the boats. Unfortunately, the Katakhdin had no opportunity to display her qualities during the Spanish war, when she was stationed near Cape Cod to defend Boston from a fleet that never materialized. The other vessel in this picture is the submarine boat, lately purchased by the Government after exhaustive tests, which led also to contracts for six others by authority of Congress. Accompanying these two unique types is the steel tug-boat Unadilla, a type of several which have been constructed in recent years for naval use. She was built at the Mare

the mast in merchant ships for twelve years. He came to Washington for the Department of Agriculture and for seven years painted plants, bugs, etc., for official government publications, but for the past four years he has painted steadily for the Navy Department. His more notable canvasses are "The Mayflower," which was made for Leland Stanford University, "Paul Jones' Victory," which hangs in the Army and Navy Club; "The Loss of the Denmark," executed for the Scandinavian societies of America for presentation to the captain of the Missouri, who effected the rescue of 1200 persons in that memorable disaster; "The Battle Between the Merrimac and the Cumberland," in the Corcoran gallery, and about twenty large paintings of American warships, which are exhibited in the Navy Department.

Odds and Ends From Everywhere.

In nearly every country there exist some superstitions with regard to the treatment of very young children. Some are supposed to bring luck, while others are used to dispel the evil spirit, which is believed to be in the child from birth. In some parts of Ireland a belt of woman's hair worn around the infant's body is supposed to protect it from harm, while the Grecian mother, with the child in its arms, turns three times around before a fire to accomplish the same end. Cruel to be kind seems the Spanish treatment of sweeping a baby's face with a pine bough, that good luck may follow it in life. Another treatment which seems almost barbaric to us is the custom in Holland of putting into the cradle of a newly born child, steak, bread and garlic. Amulets and charms of various kinds seem to the Turks to be the best bringers of luck to their babies, and many quite tiny children are laden with them, so great is the fear of harm to their offspring.

cases still a few drops of brandy are laid on the lips of the child to make it a true Breton. Beside these quaint customs, ours of putting an egg or coin into an infant's hand for luck on first visiting it looks quite insignificant. Some old wives have it that an infant's temper is influenced for life by the person who first kisses it. After all, these old wives' tales are very harmless. After trying every conceivable fabric and leather in the make-up of their "moothing clothes," French chauffeurs have decided that kangaroo leather is the ideal material. It is warm, pliable, sheds the rain and retains its appearance under the most adverse weather conditions. The Pennsylvania Railroad's ferryboats are the only craft around New York on which the law against the carrying of gasoline-driven vehicles is enforced. A saving of fifteen minutes per trip is the result of the New York postoffice officials' recent test of motor vehicles in collecting mails in the downtown districts.