NEW PRACTICE SHIP FOR THE UNITED STATES NAVAL CADETS.

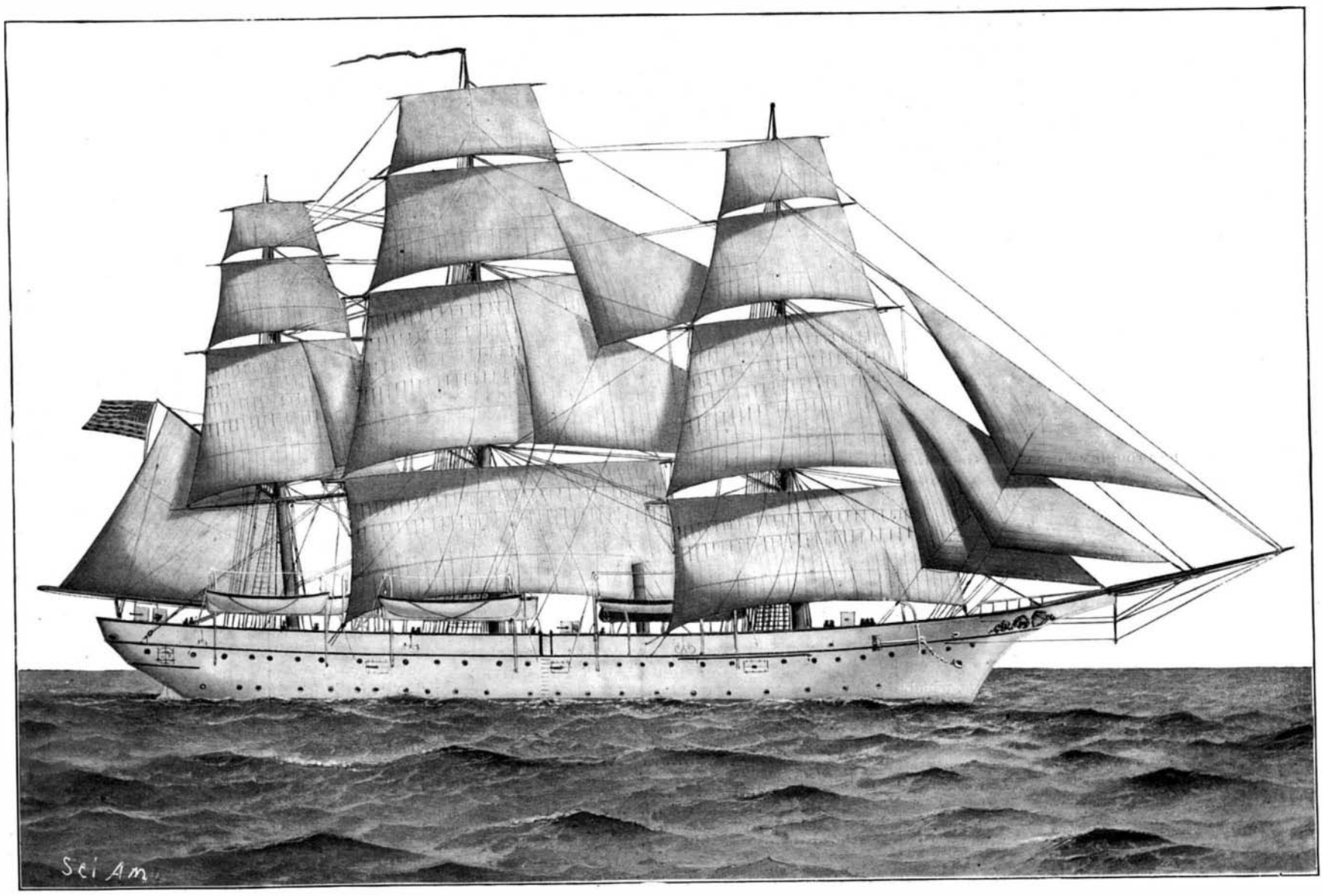
It is a matter of common observation that the coming of steam into the navy has tended to eliminate the old-time sailor as he is recorded in the tales of Captain Marryat and other popular writers of sea stories. We are all of us familiar with the pictures of the old ships-of-line and frigates as represented by the Constitution, with their towering masts and their vast spread of snowy canvas. They were picturesque to the last degree, and in the work of keeping them in first-class order there was at all times abundance of skill and plenty of hard work required of the man-of-war's man. When the first armored battleships made their appearance, they were provided with a full spread of sail, and except for its greater length and its single row of ports there was little to distinguish the side-armored ship of twenty years ago from the wooden frigates of an earlier day. With the increasing speed and the increased destructive power of the lighter guns, naval constructors began to feel the necessity of reducing the amount of tophamper carried by the ships, and in course of time the three masts gave place to two. Even these were in time stripped of their yards and running gear, until now the only representative of the yards and sticks of an earlier day is a couple of straight steel towers to which the name of mast is still given, perhaps by way of courtesy. As a consequence of these changes, there has been a deterioration in the seamanship of the average Jack Tar as compared with his predecessor in the days of the sailing frigate and the three-decker.

It is realized that in order to give our officers the fullest possible training for their duties, it will be of great advantage to the navy to possess a training ship which will be fully equipped with sail power. In his last annual report Captain P. H. Cooper, superintendent of the Naval Academy, says: "It is entirely useless to argue that sufficiently good seamen can be made on board the steamers or auxiliary steamers, for there is an education of the nerves and brain and the habit of command which can only be inculcated in the same school which has reared the greatest naval commanders the world has seen, and that school has been the sailing ship. I cannot urge too strongly my former recommendation that Congress be urged to authorize the building of two moderate sized composite sailing vessels, which should be supplemented by two small brigs for stationary work."

We present in this issue a view of the practice sailing ship which, in response to the foregoing recommendation, is being constructed for the use of the cadets at the United States Naval Academy, Annapolis, Md. The ship was designed by Chief Constructor Hichborn, of the United States navy, and, as will be seen from the illustration, she is a beautifully modeled ship, with fine lines and a considerable sheer both forward and aft. She has a high freeboard, and should render a good account of herself in stormy weather. She will have a total sail spread of about 20,000 square feet, and with her easy lines she will undoubtedly prove to be a speedy craft. The vessel is to be constructed of steel, and the bottom will be sheathed with yellow pine and copper. The captain will have special accommodation in the after part of the vessel, and there will be accommodation for ten wardroom officers, two warrant officers, one hundred and eighty cadets and a crew of ninety men.

It is proposed to make the lower masts and lower yards of steel, the balance of yellow pine or spruce. The proposed arrangement of battery consists six 4-inch rapid fire guns on the gun deck, four 6-pounders and two 1-pounders on the spar deck. The boats carried will be: One 30-foot steam cutter; one 30-foot launch; two 28-foot cutters; one 28-foot whale boat; one 28-foot gig whale boat; one 20-foot dingy. Two small boilers are to be supplied to furnish steam for the steam windlass, steam pumps, heating and for the dynamos, the vessel being wired for electric lighting; steam is also to be furnished to the distilling apparatus and refrigerating plant. General dimensions: Length on water line, 175 feet; breadth at water line, 37 feet; draught, forward, 15 feet 6 inches; draught, aft, 17 feet 6 inches; draught, mean, 16 feet 6 inches; and displacement about 1,195 tons. The vessel is to cost about $141,000.

Those of our readers who are familiar with the rig of a modern ship will notice that the practice ship carries single topsails in place of the customary double yards. This is done with a view to giving her crew of cadets as much exercise as possible, for, of course, the heavy single topsail with three reefs will give the youngsters more work to do than would the lighter double topsails with only one reef, especially when the winds blow high.



NEW PRACTICE SHIP FOR UNITED STATES NAVAL CADETS—DISPLACEMENT 1,195 TONS, SAILSPREAD, 20,000 SQUARE FEET.

The Ethnology of Kissing.

The kiss was unknown, I think, among the aboriginal tribes of America and of Central Africa. From the most ancient times, however, it has been familiar to the Asiatic and European races. The Latins divided it into three forms—the osculum, the basium and the suavium; the first being the kiss of friendship and respect, the second of ceremony and the third of love. The Semites always knew the kiss, and Job speaks of it as part of the sacred rites, as it is to-day in the Roman Church.

The Mongolian kiss, however, is not the same as that which prevails with us. In it the lips do not touch the surface of the person kissed. The nose is brought into light contact with the cheek, forehead or hand; the breath is drawn slowly through the nostrils, and the act ends with a slight smack of the lips. The Chinese consider our mode of kissing full of coarse suggestiveness, and our writers regard their method with equal disdain.

Darwin and other naturalists have attempted to trace back the kiss to the act of the lower animals who seize their prey with their teeth, etc. An interesting recent study of the subject is by M. Paul d'Enjoy in the Bulletin of the Paris Anthropological Society, vol. viii, No. 2.—Dr. Daniel G. Brinton in Science.

Celestine.

There was a production of 40 tons of celestine in the United States in 1897, this having come from Put-in-Bay, Ohio, where there is said to be a vein of the mineral 6 feet in width, says The Engineering and Mining Journal. The existence of this mineral at numerous localities in the United States has been known for a long time. Dana describes its occurrence in the limestones about Lake Huron; at Drummond Island, Strontian Island and Put-in-Bay, Lake Erie; at Chaumont Bay, Lake Ontario; and at Schoharie and Lockport, N. Y. A blue fibrous celestite is found at Bell's Mills, Blair County, Pa. In fact, the localities where specimens of this mineral may be found would make a long list. There are deposits in the vicinity of Burnet, Texas, which are said to be sufficiently large to be workable. The slight value of the crude mineral, however, would prevent its exploitation in a remote locality. The large vein in Put-in-Bay, Ohio, mentioned above, was discovered in 1893 by a German geologist, who found the mineral in crevices around the shores, and subsequently sank a shaft near the center of the island, directly opposite the Perry Cave. It is said that the 40 tons of mineral referred to were shipped to Germany. Pure celestine, or celestite, is sulphate of strontium, containing 56·4 per cent strontia and 43·6 per cent sulphuric anhydride, but it is usually associated with calcium (calciocelestite) or with barium (barytocelestite). It is analogous to barytes, and, like the latter, has a high specific gravity, this ranging from 3·95 to 3·97. It is used for the preparation of nitrate of strontium (red fire), as a pigment like barytes, and in beet sugar refining, the most of the mineral being consumed probably in the last direction. The market value of celestine is very low, probably not in excess of $2.50 per long ton, ex ship at Liverpool or Antwerp. There is a production exceeding 8,000 tons of celestine per annum in England.