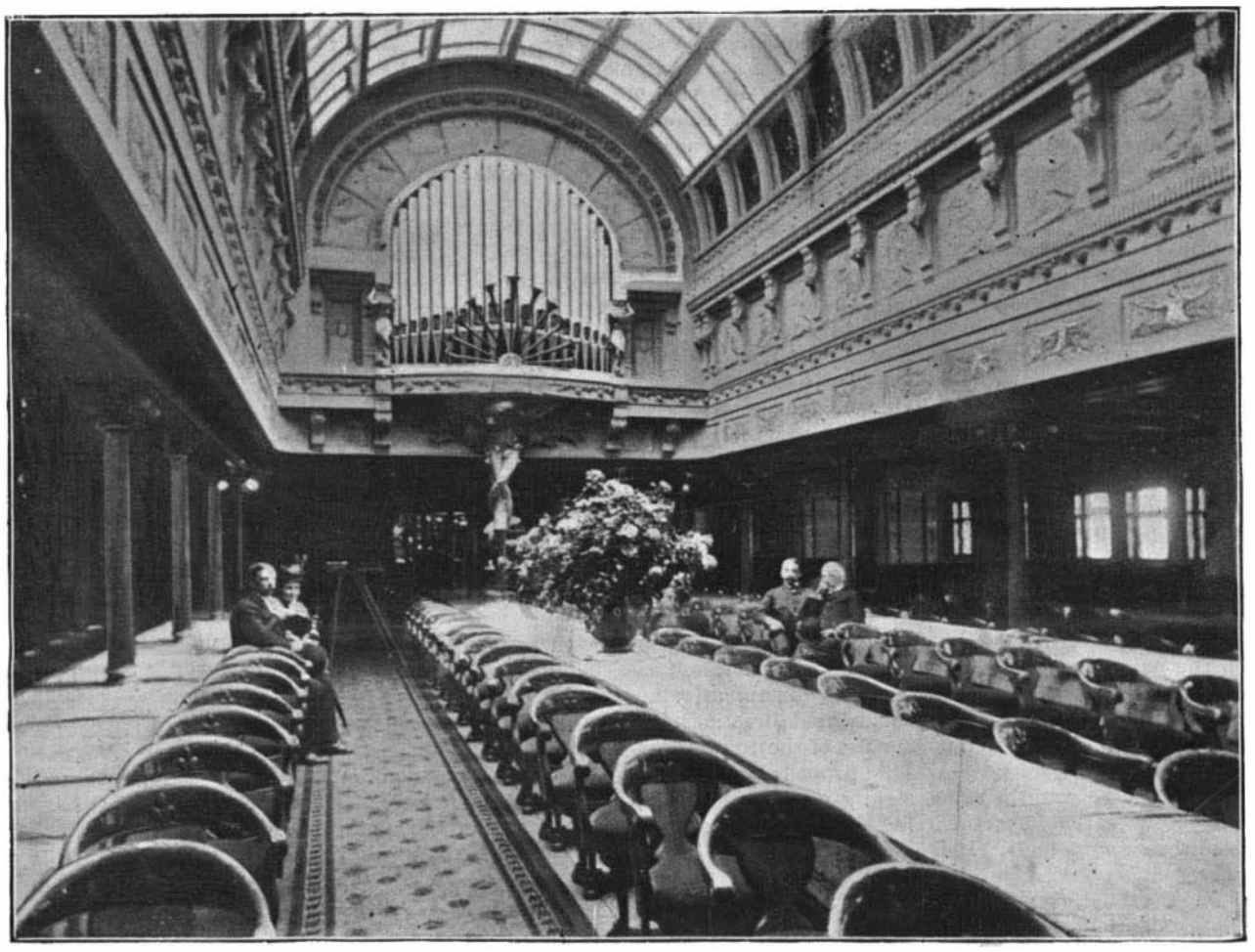
GRAND SALOON OF THE STEAMER ST. LOUIS.

In our last number we gave a photographic representation of the new steamer St. Louis, as she appeared when steaming through the harbor of New York. Her arrival at Southampton is to be the occasion of public demonstrations, as the harbinger of increasing commerce between the old and new world. We present herewith a photographic interior view of the grand saloon of the ship, specially taken for the SCIENTIFIC AMERICAN. Probably no passenger vessel in the world can boast of a more elegant or spacious apartment. It is 110 feet long and 50 feet wide, surmounted by a beautiful dome, steel framed, set with ornamental glass, through which a flood of light illuminates every part of the saloon. Here are located the dining tables, and so generous are the accommodations that the entire corps of first cabin passengers, 350 in number, can be seated at one time.



GRAND SALOON OF THE STEAMER ST. LOUIS.

The saloon is situated in the middle of the ship, so there is a comparative absence of motion. Slender, graceful columns support the dome. Nearly all the available space in the saloon not occupied by woodwork is filled with paneling. The dome contains on the after end two allegorical panels, broken by a separate seated figure of Neptune. At the base of the dome, on the two sides, there is a series of small panels which repeat figures of harp and viol players. At the forward end of the dome is a splendid pipe organ, which is actuated by electricity, both as regards the key mechanism and the blower. The base of the organ rests upon the shoulders of a mermaid. The organ was built by Jardine & Company, of New York. The walls of the saloon are broken into alcoves, which are filled with fish, fowl, and flesh panels. The prevailing wood is Mexican mahogany, and the upholstery is done in a bluish-green plush.

The drawing room and the social hall are equally effective, the drawing room having silk tapestry and silk paneled walls. The tone of the room is yellow. The library is one of the most charming rooms on the steamer, the prevailing color being sepia. The citizens of St. Louis presented the vessel with a noble collection of books, representing the most famous authors. The smoking room has a very rich effect, the woodwork being dark mahogany and the upholstery being in leather. The decorations refer to the Bacchic origin of wine and the Indian origin of tobacco. The staterooms are all handsomely decorated, and have air-filled mattresses, intended to serve as life-preservers in time of need.

The general scheme of decoration was designed by Messrs. Furness & Evans, architects, and was executed by the American Line under the immediate direction of Mr. Furness.

It is expected that the sister ship St. Paul will be ready to sail in September.

THE pepsin sold in chemists' shops is prepared from the gastric juice of the hog's stomach.

A New Insulator.

M. Gentzch prepares an electric insulating material in the following manner: He heats resinous substances, such as ozokerite, amber and asphalt, in a retort, at a temperature of 400° C., until the condensable or gaseous volatile products are liberated. The result is a black residue, having, when cold, the consistency of wax or dry resin, and capable of being used either alone or in conjunction with gutta percha, other resins, mineral powders or with sulphur, as a cable insulator. The material, it is said, has sufficient plasticity to lend itself readily to the turnings and twistings to which the wires of cables are generally subjected. The proportions of the raw substances used should be preferably ozokerite, 50 parts; yellow amber, 45 parts; and asphalt, 5 parts.

THE DIAMETER OF NEPTUNE.—With the Lick telescope and an eyepiece magnifying 1,000 diameters, Prof. Barnard finds the mean angular diameter of Neptune, when reduced to the mean distance from sun 30·0551, to be 2·433″. This corresponds to an actual diameter of 32,900 miles, which is from two to four thousand miles less than that stated in most of our text books.—Astronomical Journal, No. 342.

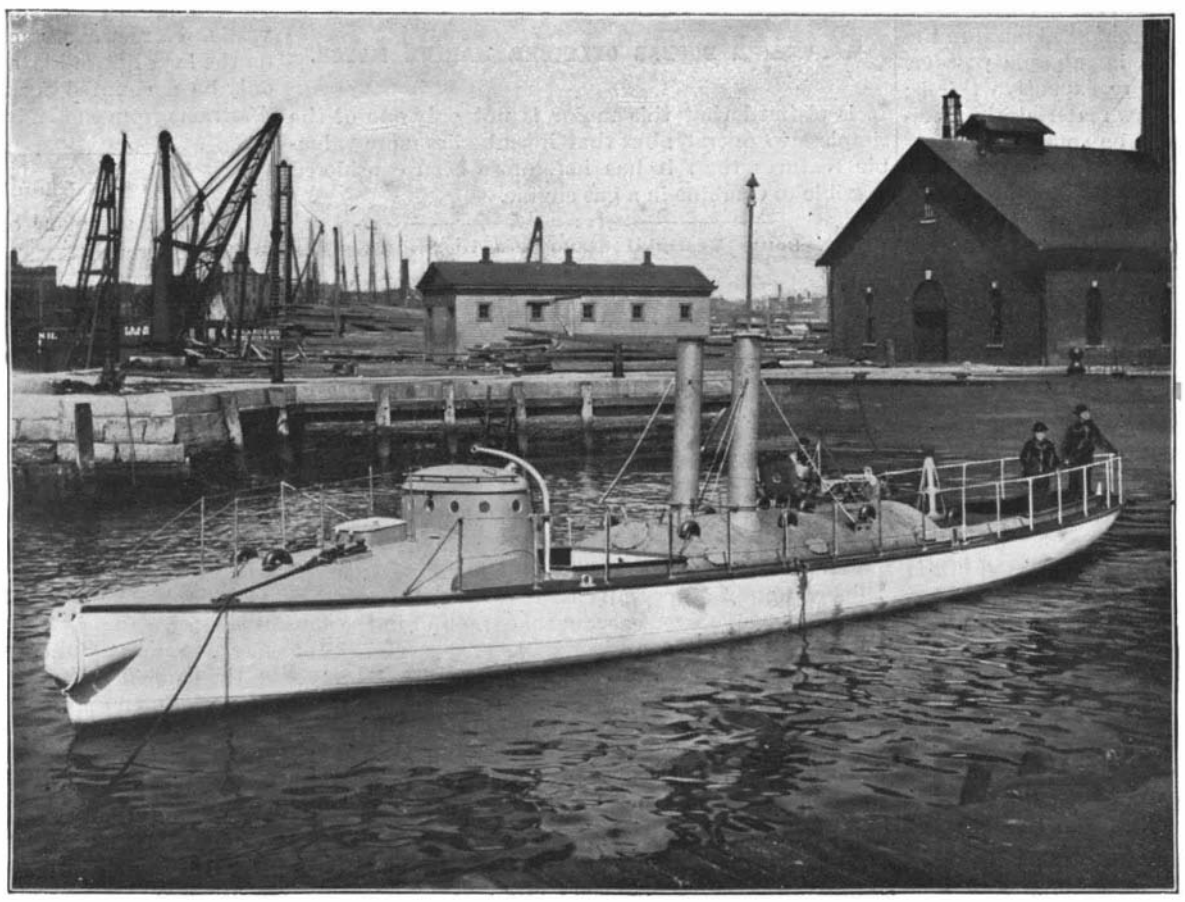
TORPEDO BOAT FOR THE WAR SHIP MAINE.

The recent war between China and Japan has shown the great value of the torpedo boat. English naval constructors and shipbuilders are now devoting their energies to the designing of other boats to destroy torpedo boats. The defense which the small torpedo boats can make is small when pursued or compelled to fight, but what Mr. J. I. Thornycroft says of torpedo boat destroyers is also true of torpedo boats: "The real protection of the vessel is its speed, which enables it to reduce within a very short period the time it is under fire."

The United States navy is deficient in the matter of torpedo boats, so that the coming test of one of the torpedo boats of the cruiser Maine will be looked forward to with interest.

We illustrated the construction of these boats in our issue of January 5, 1895, and we now give a view of one of them which has recently been completed, lying off one of the docks at the New York Navy Yard. It is hoped that the speed will be about 18 knots per hour.

The weight of the vessel without water in the boilers is 28,450 pounds. The torpedo boats for the Maine are technically of the third class. The boats are built as light as possible, so that they can be easily hoisted on board the large vessels. The torpedo boats will be operated entirely from the men-of-war as regards supplies, only a ton of coal at most being carried. The general dimensions of the boats are as follows: Length over all, 61 ft. 8 in.; length on load water line, 58 ft. 6 in.; beam at water line, 9 ft. 1½ in.; freeboard, 2 ft. 5 in.; mean draught, 2 ft. 2 in.; extreme draught, 3 ft. 4 in. Six watertight transverse bulkheads give seven watertight compartments. The general disposition of parts includes an open cockpit aft. Into this the rudder head enters, so that the boat can be steered from this cockpit if the conning tower has to be deserted. Forward of the cockpit comes the engine room, with a quadruple expansion engine. Forward of the engine comes the boiler room arranged for forced draught by the closed fire room system. The boilers are the Mosher tubulous boiler. Next to the boiler room comes another open cockpit, forward of which is the conning tower, which contains a steering wheel mounted on a half bulkhead. In the bows is placed the torpedo tube for discharging a Whitehead torpedo. In the extreme bow and also under the stern cockpit are trimming tanks. On deck aft is to be mounted a one-pounder rapid-firing gun, whose ammunition is carried in a magazine just aft of the engine room.



TORPEDO BOAT FOR THE WAR SHIP MAINE.

Along each side of the boat are coal bunkers, which, as far as their diminutive size permits, may be considered protective. Four heavy eyes are riveted to the sides along the waist, by which the boat is to be hoisted bodily out of the water. The mast of the Maine carries a large steel boom, from whose end the tackle for hoisting the torpedo boats will be worked, the boats being taken in on deck by a steam winch. Cradles are to be provided