

## 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.

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 oc-

cupied 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 consist-

## 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.

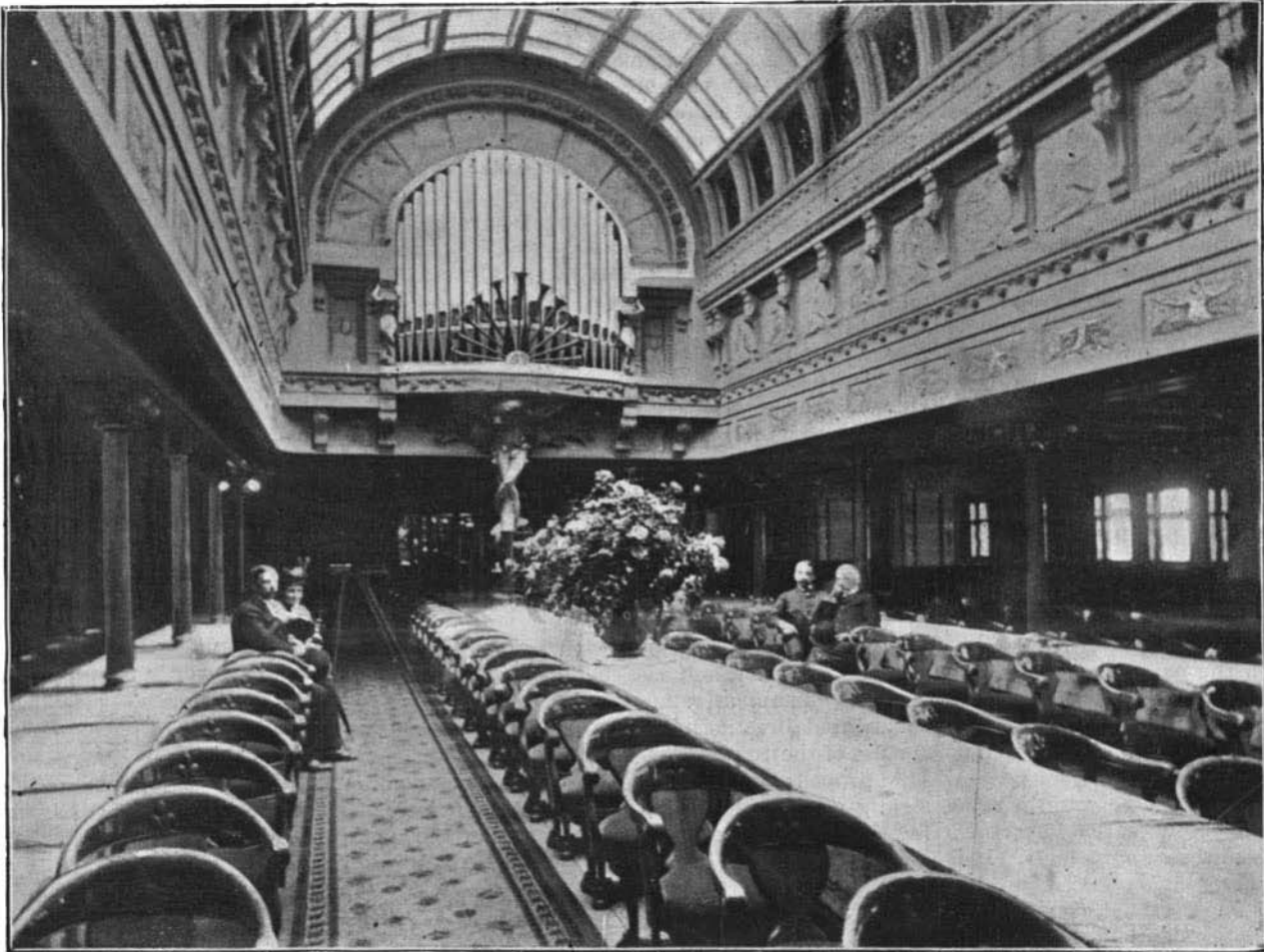
We illustrated the construction of these boats in our issue of January 5, 1895, and we now give a view of one of them which has recently been completed, lying off one of the docks at the New York Navy Yard. It is hoped that the speed will be about 18 knots per hour.

The weight of the vessel without water in the boilers is 23,450 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 compart-

ments. 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.

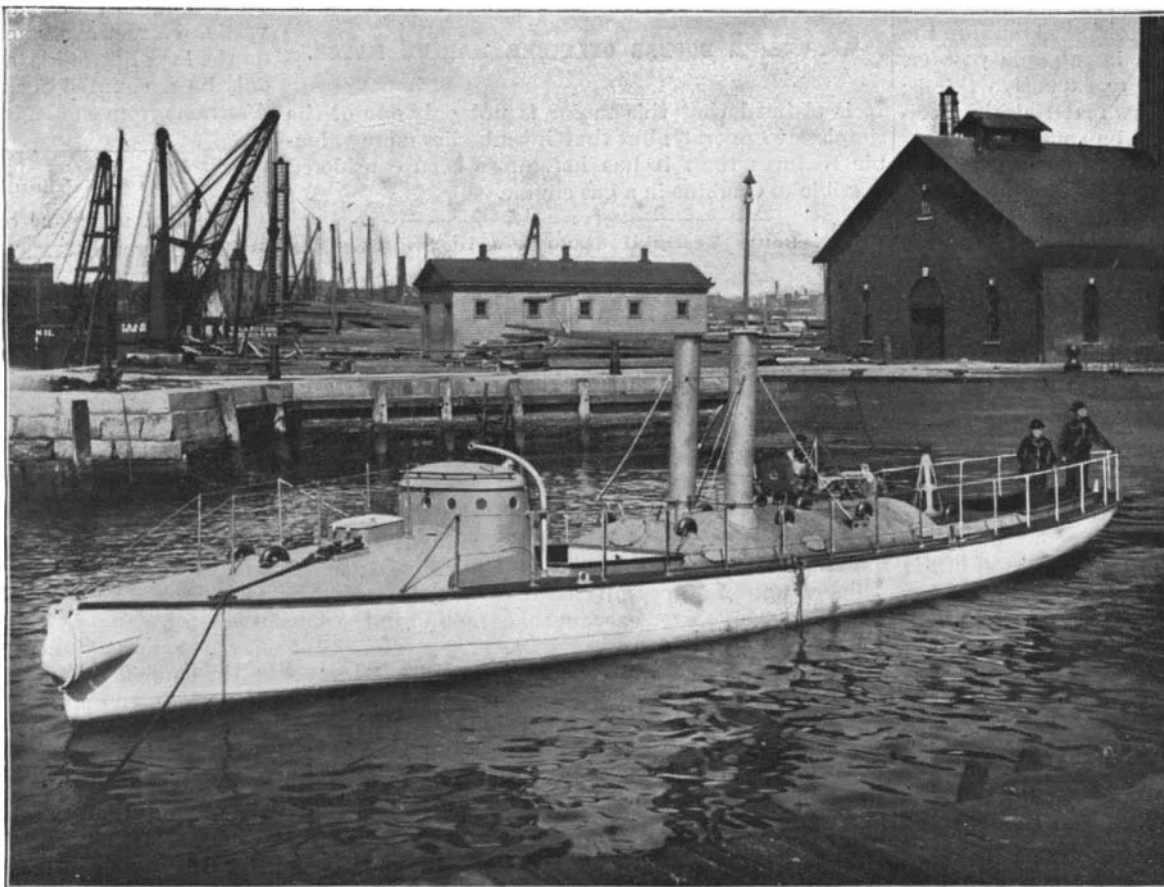
Along each side of the boat are coal bunkers, which, as far as their diminutive size permits, may be considered protective. Four heavy eyes are riveted to the sides along the waist, by which the boat is to be hoisted bodily out of the water. The mast of the Maine carries a large steel boom, from whose 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



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ency 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 tele-



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scope 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.

for them to rest in. The torpedoes will be carried by the Maine, the torpedo boat being able to carry only a single one at a time, which will rest in her tube. The role of action will simply be to get under way with the torpedo ready, then to approach the enemy as close as possible, to discharge the torpedo and run. Her side plates in places are but  $\frac{1}{8}$  of an inch thick, so that she will be practically unprotected.

The crew includes the commander, engineer, firemen and two sailors. The Whitehead torpedo, which is used, weighs rather more than 2,100 pounds, so that stability as well as a measure of protection to the machinery is secured by placing the weights as low as possible. Thus the engine cranks in their stroke work down between the frames almost to the bottom of the vessel.

The results of calculations for stability are as follows: At nominal condition, ready for service, with ammunition, torpedo and crew of five men on board:

Metacentric height (feet).....	1.55
Angle of heel at maximum stability (degrees).....	43
Righting moment at maximum stability (ft. lb.).....	27,135
Angle of vanishing stability (degrees).....	89

In peace the boats will be used as dispatch boats, and will be undoubtedly very serviceable.

#### THE LITTLE KOODOO ANTELOPE IN THE BERLIN ZOOLOGICAL GARDEN.

Since the closing of the Soudan by the marauding

#### Baldness.

The cause of baldness in man is said by Dr. Leslie Phillips to be the fact that he cuts his hair. He says: "In men the hair is habitually cut short from childhood, while in women the converse is almost universally true. In boyhood and manhood, by clipping or cutting the hair, we remove the gentle traction on the bulb and follicle which the natural weight of the hair exercises, and which constitutes the essential and natural stimulus necessary to secure due innervation and vascular supply to the hair-producing structures. Loss of vigor, and finally more or less pronounced atrophy, is the inexorable result, modified or delayed, it may be, by collateral circumstances, predispositions, or conditions." Dr. Phillips warns the "new woman" against wearing her hair short. Almost every theory has some defect, and we might ask Dr. Phillips why men who clip their beard or shave for a long time do not get bald on their chins?—Medical Record.

#### Up-to-Date Photographs.

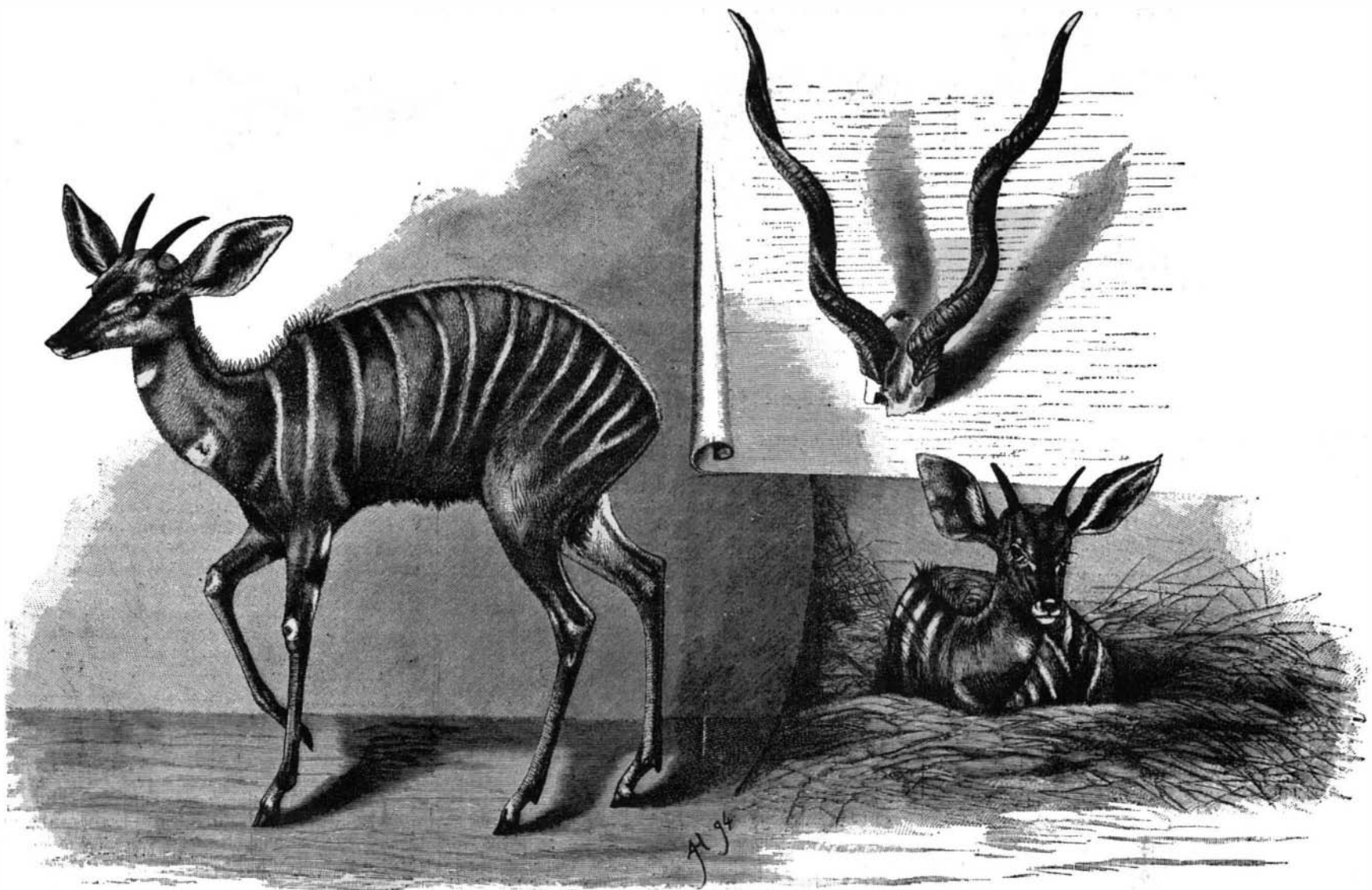
Being photographed nowadays is an elaborate process. Heretofore, when a woman wanted her photograph taken, she went to the studio and arranged about the size of the picture and the number she wanted. She gave a reassuring touch to her hair, sat down before the camera, turned her head a little to the right or to the left, as the artist desired, and, clamped on either temple, gazed fixedly, insipidly or

room, form a charming contrast with her rich brocade gown and beaming face. The scant puffed sleeves set off the rounded arms, the curve of the wrist, the hand that grasps the wheel is like a rare old painting, and the undulating outlines of the figure are suggested, not revealed, by the prim folds of the flowered silk frock.

These latter day photographs are like paintings, and are likely never to grow old fashioned. They have the charm that distinguishes the portrait painters of the old English school; a charm that custom will not stale. They will not become out of date and grotesque, like the photographs of twenty years ago, found in family albums. In those days a woman was hired to put the lights in the eyes, color the cheeks, and paint the ribbon bows and artificial flowers of the ladies and the gay neckties and buttonhole bouquets of the gentlemen. The new photographs, be it a hundred years hence, always will be things of beauty, no matter what evolutions, contractions, or diminutions may befall woman's dress.—N. Y. Sun.

#### The Railroad Kidney.

This complaint is now recognized by medical men. It is caused by an artificial stoppage of the pores of the skin, the dirt of the railroads being responsible for such stoppage. If any person will examine his hand after riding for two or three hours in a train—and this is especially true if he be perspiring—he will



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excursions of the Mahdists, the trade in the exportation of African animals has suffered greatly, so that living giraffes are now counted among the most costly rarities in zoological gardens; but recently Mr. Menges, the dealer in animals, penetrated into that almost unknown region, Somauli, under the guidance of a native hunter. His discoveries tend to show that there is a marked difference between the animals of this region and those of the other parts of the Dark Continent. This difference is illustrated by our engraving, which shows a dwarf of the beautiful Koodoo antelope, which were so numerous on the steppes of Eastern Africa before the invasion of the devastating murrain. The little Koodoo antelopes differ from the larger species in the coloring of the body, which is grayer, with more light bands, and in the absence of the tuft of hair from the throat. They live on the banks of the rivers that flow into the Indian Ocean, going south as far as Tana, and west as far as Lake Baringo, preferring the thick, thorny bushes on the overhanging banks of the rivers and brooks. Here they live in small families, which are led by a buck that is generally dark colored. Our engraving shows a young male in two characteristic positions. The horns of the full-grown animal, which are shown, are very similar to those of the large Koodoo antelope.—Illustrirte Zeitung.

otherwise, at a spot on the wall. Now the subject's "possibilities" are studied in detail. Nothing is left to accident. The fashionable woman carries her various gowns to the studio with her, and tries them on, each in turn, that the artist may decide which suits her best. She pays \$50 for the photographs.

Her hair is arranged by skillful hands in different ways, that a style of coiffure may be chosen which will be appropriate, not only to the contour of her face and head, but to the environments of the picture. The subject's hands and arms are criticised, likewise her throat and neck, to see whether a severe high costume or an evening gown shall be used. The topics of backgrounds and accessories are discussed.

All of these tinted carbon photographs are taken full length. May be the subject will pose as a dame of the First Empire, with skimpy satin gown, elaborate coiffure, jeweled girdle, fan, and vinaigrette. Perhaps she stands half turned about, with her back to the spectator, and her pure profile deftly brought out on a dark velvet curtain. All women would not look charming in such a position. The artist knows whom to choose, and the subject will wonder at her own beauty when she sees the picture.

A willful coquettish girl is posed as a modern Priscilla. The quaint spinning wheel and high backed chair, the small paned window at the back of the colonial

find his hand is dirty. But a closer examination will show the existence of a fine grime, the particles of which, so soon as the perspiration ceases, act as minute corks, stopping up the orifices of the pores. How deeply this grime works into the skin is shown by the fact that after a railroad trip one washes one's hands and face two or three times before they become clean. It is this grime which produces railroad kidney. Of course it is not to be supposed that an ordinarily healthy person will contract this disease in any trip of a day or two. But where a person is already a sufferer from chronic disease of the kidneys, it is possible that a week on railroad trains would aggravate his malady to an appreciable extent.

#### Deep Sea Thermometers.

Thermometers made for taking the temperature in moderately deep waters have the tube incased in a copper cylinder, to protect it from inquisitive fishes and from contact with rocks; there is a ring at the bottom to which sufficient weights may be attached to sink it readily. The cylinder has a long, narrow door in front of the scale, which may be opened for the reading; and this door closes with joints so tight that the cylinder brings up the water from the bottom with its temperature practically unchanged by the waters through which it passes.