New Class of Cruisers Uncle Sam Is Now Building

When Completed They Will Prove an Important Addition to Our Growing Navy.

IN the navies of the world there is no more important class of ship than the armored cruiser. In our own navy we are deficient in this class of vessel, the class being represented by only two such ships, the New York and the Brooklyn.

This deficiency is now being remedied, and there is now under construction for the United States a half-dozen armored cruisers, three on the Atlantic and three on the Pacific coast, which could form squadrons of uniform speed, maneuvering and cruising qualities. Congress, in an act dated March 3, 1899, among other vessels, authorized the construction of three armored cruisers of about 12,000 tons displacement; also in an act dated June 7, 1900, among other vessels, authorized three armored cruisers, making six in all. Through various causes 16 months elapsed before bids could be asked for the first group. This was unfortunate in that the proposed additions to the navy have thereby been delayed for over a year. However, as peace has prevailed, the navy will be the one benefited in the end, as it will be in possession of the means of forming powerful homogeneous squadrons.

The advisability of sheathing war vessels was under the consideration of the navy department at that time, and plans were therefore prepared for cruisers sheathed and unsheathed, as the department might decide. The latter, however, was decided upon, effecting a decrease of $1,000,000 in cost and probable increase in durability of the vessels. All six vessels, for which specifications were prepared, and bids for construction invited at the same time, will have the following characteristics:

Length on load water line, 502 feet.
Extreme breadth at load water line, 69½ feet.
Displacement (all stores on board, fully equipped) about 13,680 tons.
Mean draft at trial displacement, 24½ feet.
Greatest draft, full load, about 26½ feet.
Total coal bunker capacity, 2,000 tons.
Coal carried on trial, 900 tons.
Feed water carried on trial, 75 tons.
Sped not less than 22 knots.

The following will comprise the main battery:

Four eight-inch breech-loading rifles.
Fourteen six-inch rapid-fire guns.

The secondary battery will be comprised of the following pieces:

Eighteen three-inch (3-pounder) rapid-fire guns.
Twelve three-pounder rapid-fire guns.
Four three-pounder automatic guns.
Four one-pounder rapid-fire single shot.
Two machine and six automatic small caliber guns and two three-inch field pieces.

This armament will be disposed of as follows:

The eight-inch guns, in pairs, in two electrically controlled, elliptical balanced turrets, having inclined port plates, one forward and one aft on the keel line and with an arc of fire of 270 degrees. One six-inch gun will be mounted in sponsons at each of the four corners of the superstructure, with an arc of fire of 145 degrees.

Ten six-inch guns will be mounted in broadside on the main deck, five on each side, each with an arc of fire of 110 degrees except the forward pair, which will be sponsoned so as to fire dead ahead. The 14-pounders, 12-pounders, machine and small caliber automatic guns will be distributed to such commanding positions as afford the greatest unobstructed arc of fire. The lower military tops will each contain two one-pounder automatic guns, while the upper tops will each have two single-shot one-pounder rapid-fire guns.

A complete armored belt seven feet six inches in width will protect the water line of the vessels. This belt for 244 feet of its length in the region of the boilers and engines will be of a uniform thickness of six inches from its upper edge downward for a distance of four feet, whence it tapers to five inches at the bottom. Towards bow and stern the thickness will be reduced to 3½ inches. The sides will be protected by armor plate five inches thick, extending for a length of 232 feet from the water line belt to the main deck. To the ends of this side armor transverse armor four inches thick is to be worked, thus forming a closed citadel for the ten six-inch guns. Armor five inches in thickness will protect the four six-inch guns at the corners of the superstructure.

The eight-inch turret and barbette armor will be six inches thick, excepting the port plates, which will be 6½ inches thick, and the top 1½ inches of nickel steel. The ammunition tubes for these turrets will be eight inches thick.

Nine inches of armor will be worked into the conning tower, and its tube will be five inches thick, as will also be the signal tower. A nickel-steel protective deck, 1½ inches on the flat and four inches on slopes, is to extend throughout the vessels, and an obturating belt of cellulose, three feet thick, is to be worked along the sides the full length of the vessel above the protective deck.

To drive the vessels at the required speed of 22 knots, twin-screw engines of 23,000 I. H. P. will be required. These will be of four-cylinder, triple-expansion type, with a common stroke of four feet and running at the rate of about 120 revolutions per minute. Steam will be generated at 250 pounds pressure by 30 water-tube boilers placed in eight water-tight compartments. These boilers will have a grate surface of at least 1,590 square feet, and a heating surface of 68,000 square feet. Four funnels 100 feet in height will carry away the gases.

The use of wood in the construction of these vessels has been reduced to a minimum and such as is used is to be fire-proofed. The main deck, a complete steel deck, will be the only one upon which wood will be laid. The other decks, also of steel, will be covered with linoleum, or other approved material.

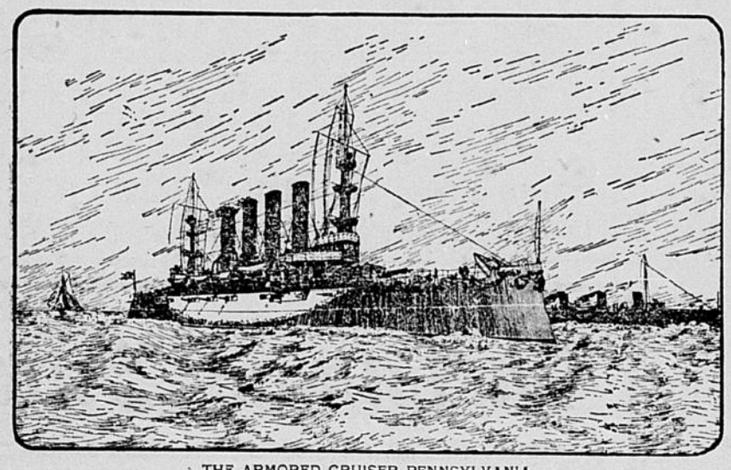
Electricity will be used to a great extent as a drive for such auxiliaries as the turret-turning gear, ammunition hoists, rammers for heavy guns, heavy gun-elevating gear, air compressors for charging torpedo flasks and machinery in the general workshop.

Steam-driven auxiliaries will also be used to a great extent for such as the following purposes: steam steering engine, anchor engine and capstan, ash-hoisting engines in each fire-room, a dense-air ice plant, with a cooling effect of three tons of ice per diem, an evaporating plant to consist of four equal units, having each a capacity of 5,750 gallons of fresh water per diem, a distilling apparatus with a 10,000 gallons of water per diem capacity. There will also be five steam deck-winches of 30 horsepower each, also engines of 50 horsepower for each of the four heavy boat cranes.

Seven units will comprise the electric generating plant, each unit consisting of an engine and dynamo mounted on a combination bed plate. Three of these units will have a rated output of 1,250 amperes each at 80 volts. The total weight of the seven units complete will not exceed 141,000 pounds, while the total weight of the entire electric installation, including engines, bed plates, dyanmos, fittings, wiring, tools, stores, instruments, and six searchlights, will not exceed 158.7 tons.

There will be also on board a workshop fitted with such machines as are necessary for repairs by the ship's force.

Each of the six vessels will be fitted out for use as flagships and ample provision made for the accommodation of a crew of 822 rank and file.



THE ARMORED CRUISER PENNSYLVANIA.
One of the Class of Six Sister Ships That Are Now Being Built.

A Russian View.

The Russian Liberal Review, "Osvobozhdenie," says that Russia has made and is making "enormous and senseless expenditures of men and money in order to create an accursed yellow Rusia," which has no real value to the Russian people. "The Russian cost of the Chinese war was $210,000,000," says this journal. "We have acquired a place where, from the economic point of view, Japan, America and England may conveniently dispose of the surplus products, and as a place where we may become involved with powers whose combined strength is great enough to defeat us on the Pacific as badly as we were at Sabastapol."

Too True a Likeness.

The late Thomas B. Reed's portrait was painted by Sargent during the last year of his services in congress. When it was brought to him he looked at it critically. He noted the protruding lips the faithful reproduction of his florid complexion, of his flabby cheeks, of his ponderous neck. His eyes narrowed between the lids, and there came a cold glint in them. Then, pursing his lips as was his wont, he is said to have remarked: "I hope that my dearest enemy is satisfied now."

THE VAIN JACKDAW.

Find a Peacock.

A Jackdaw, having dressed himself in feathers which had fallen from some Peacocks, strutted about in the company of these birds, and tried to pass himself off as one of them. They soon found him out, and pulled their feathers from him so roughly, and in other ways so battered him, that, when he would have rejoined his fellows, they, in their turn, would have nothing to do with him, and drove him from their society.

Moral—We should live contentedly in our own condition, whatever it may be, without effecting to look bigger than we are by a false or borrowed life.

HIGHWAYMAN WAS HONEST.

Pressing Need of Money Compelled Good Citizen to Negotiate a Forced Loan.

"I knew a man once who did the highwayman act by robbing a citizen of his money at the point of a big six-shooter, and yet the robber was an honest man, and is so considered to-day," said Col. Charles A. Edwards, of Texas, St. Louis and Washington, to a crowd of friends, who listened to his entertaining stories of experiences in the Lone Star state, relates the Washington Post.

"You needn't laugh at my calling him honest after having performed such a Dick Turpin stunt. Attend to my story, and you'll see how peculiar conditions will now and then make a man play a role foreign to his real character. He was a young ranchman, and had fallen in love with a winsome girl—a belle in one of the counties adjacent to San Antonio. The girl was going to school in that ancient town, and right after the spring roundup her lover, with a couple of hundred dollars in his pockets, proceeded to 'Santone' to meet the idol of his soul, whom he had not seen in many moons. He needed the cash to buy the finest suit of store clothes to be had, as he wanted to look his best, and still there would be money enough left to buy all the candy and ice cream one maiden would want.

"He arrived too late in the day to make his purchases, and that night some sleek hotel thief got into his room and abstracted his entire roll. Here was a situation at once desperate and pathetic—a raw, unsophisticated youth from the ranch, still dressed in cowboy costume, despoiled of his last cent, crazy to see his sweetheart and without a friend nearer than 100 miles. The people who could help him couldn't be reached by wire; there was no time for a letter, and he was too shy to ask aid of strangers. Then it was that he meditated a plan which would only have entered his head under such direful conditions.

"The sneak thief had considerately left the pair of big Colt's revolvers that every cowman used to carry in the southwest. With their aid it was possible to get funds, and the victim of robbery would himself become robber. So when night came on he waited in a comparatively dark street the coming of a prosperous looking man. Finally one did come along who 'looked like ready money,' and this citizen, ere he knew it, was looking into the muzzle of one of the 45's. 'I don't mean to steal your money, but you've got to let me have $50, or I'll take it if I have to kill you,' was the stern order, and with sagacious promptitude Mr. Man forked over all his wealth, which was considerably more than the sum specified.

"Taking just $50, the cowboy gave back the surplus, and asked the name and address of the other in the politest sort of way, teling him he would return his money in less than a week. The man was glad to get off with his life, and ambled off to hunt the police, who gave vain chase.

"Just four days later there was one very much surprised man in San Antonio, when an express package containing $50 was handed him. Being a good-natured sort of citizen, he took a lenient view of the affair, and didn't try to put detectives on the track of the party who had made the forced loan. That's all of it, except that not very long afterward there was a wedding in San Patricio county, and the youngster who engineered the holdup, and the pretty girl on whose account he did it, were the principals."

Clever Move.

A Maine farmer who had gone to law with a neighbor, suggested to his lawyer that he send the magistrate a couple of fine ducks.

"Not on your life," said the attorney; "if you do you'll lose the case."

The case came on and was tried, and judgment was given in his favor. Then he turned to the lawyer, and gleefully exclaimed: "I sent the ducks." Astonishment on the lawyer's part changed to admiration when his client continued: "But I sent them in my opponent's name."

OLD AND RARE COIN VALUES.

Errors of the Uninformed Are a Source of Much Trouble to Collectors.

It is a very common error among amateur numismatists that age gives to coin a peculiar value. While this may be true in some instances the fact does not hold good invariably. A well-known collector of rare specimens of the world's coinage remarked recently:

"After the auction sale of every famous collection of coins as the result of an apparently slight error in the published reports as to the date of some of the coins sold we are fairly deluged with letters and personal visits offering coins for sale for which there is little or no premium. But what may seem to be an insignificant mistake makes all the difference in the world in the value of the coin.

"As an instance, at the auction sale in London the other day of the Murdoch collection among the American coins sold was a dollar of 1794. This coin brought $240, which is not an unusual figure for it, as there are not many of them in existence, and it was the first dollar piece to be minted by the United States government. But the dispatch from London, as published, announced that this large premium had been paid for a 1795 dollar, making a mistake, apparently trifling to those unacquainted with the value of coins, of only one year.

"Now, as a matter of fact, there are hundreds of 1795 dollars in existence, many of them being carefully wrapped up in cotton and laid in the bottom of bureau drawers, their owners thinking that they must be extremely valuable on account of their old date, the impression being general that the value of coins entirely depends on their age.

"No sooner did these people see in the papers where their dollars were said to be worth $240 than they dug them out of their hiding places and rushed to the nearest coin dealer.

"And to make matters worse, we were so overwhelmed with letters from out-of-town persons offering their coins for sale that the mail carriers must have thought we had gone into the get-rich-quick business. So many persons called at our rooms, which you see are rather small, but still have always been commodious enough to answer the requirements of ordinary business, that the place was crowded and they had to stand in line and wait their turn for a personal interview.

"I suspected from the unusual rush of business that some mistake had been made and after having been offered dollar after dollar of the 1795 issue I finally came to the conclusion that the best way out of the difficulty would be to address the crowd as a body. So I said that it was the 1794 dollar for which the large premium had been paid, a mistake having been made in the figures, and that their 1795 dollars were worth just $4.

"Our callers at once turned away in disgust and disappointment, but the stream of letters continued for several days longer and indicated the existence of more coins of this date than I had thought to be possible."

When Love Waned.

"You admit," said the attorney for the plaintiff in the breach-of-promise case, "that you were engaged to my client?"

"I do," admitted the defendant.

"And presumably you loved her?"

"I did."

And yet you broke the engagement. Why was that?"

"Love had waned."

"Oh, love had waned, had it? Do you know why?"

"Yes, sir."

"Do you know when it first began to wane?"

"Yes, sir."

"When was that?"

"The first time I saw her adopt the prevailing feminine fashion of riding a horse astride. That smashed a love-dream, sir, and smashed it good and plenty."

The lawyer for the plaintiff gave the jurors a quick look, and he knew then that the case was lost.—Chicago Post.

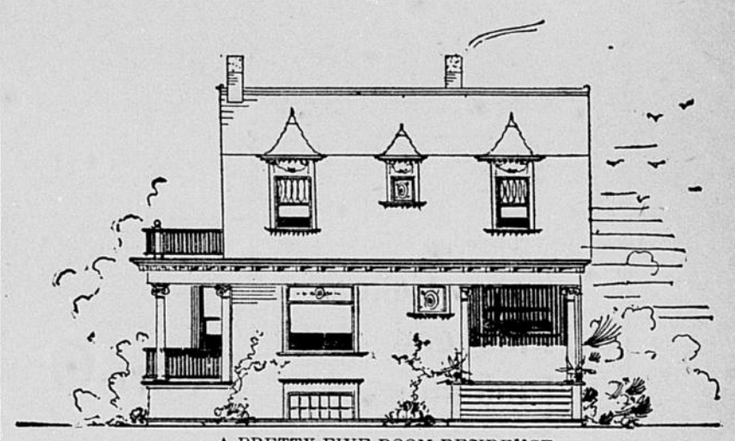
Art in Architecture

Designed and Written Especially for this Paper

THE five room residence here illustrated and described will cost $1,900.

The size of the rooms are:

	Feet.
Living room	14x14
Dining room	12x13
Kitchen	10x12
Reception hall	8x14
Chamber	10x21
Chamber	10x21
Bathroom	5x 7½
Storeroom	6x 7½
Pantry	5x 7½
Vestibule	4x 6
Veranda	7x14
Veranda	6x10
Balcony	7x14



A PRETTY FIVE-ROOM RESIDENCE.

The living room has a fireplace and there is a large half-round veranda reached by a French window from this room. Reception hall is shut off by a large sliding door. The reception hall has a beamed ceiling. There is a grilled opening from stairway into living room.

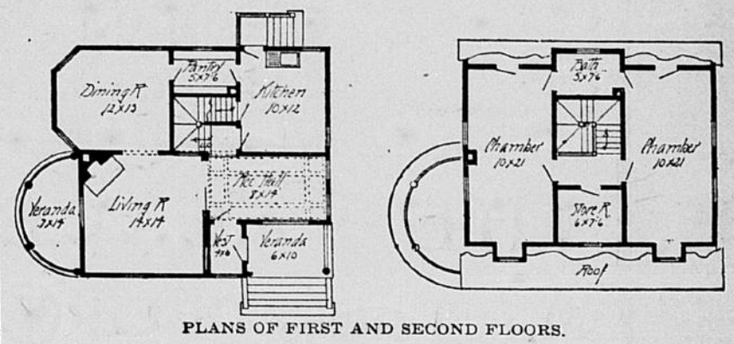
Height of first story is 9½ feet; second story, 9 feet; basement, 7 feet; studding, 2x4; roof rafters, 2x4; joist, 2x10. All floors are double. Sheathing is matched fencing. Siding 4-inch with 1 inch lap. The size of house upon the ground is 28x30 feet, exclusive of bay, veranda or porch.

Shingles are dimension and of cedar. Brick chimneys showing above roof will be painted green to match the olive green shingle stain on roof.

The gables will be shingled, olive green stained.

First story painted cinnamon color. All the trimmings are white.

Art glass as shown on elevation.



PLANS OF FIRST AND SECOND FLOORS.

Finished throughout in Georgia pine. Roof of veranda tinned. Laundry, coal room and vegetable room in basement. Entire house left all clean and ready for occupancy. GEO. A. W. KINTZ.

SLEEPING SICKNESS.

Mysterious Disease That Has Almost Depopulated Uganda Caused by Tsetse Fly.

The investigations by the governmental commission sent to Uganda have resulted in the discovery of the cause of the sleeping sickness, the ravages of which among the natives has been enormous. In the report of the commission several instances of this are given. For example, Buvema island, which had a population of 22,000, has now but 8,000 The southern province of Busoga has been practically depopulated. The first step in the discovery was the observation of trypanosomes in the cerebro-spinal fluid in five cases of the sleeping sickness. A further investigation showed the existence of this parasite in the cerebro-spinal fluid and the circulating blood in nearly all of the cases, from analogy, closely related to the disease of cattle caused by the tsetse fly.

It was suspected that the sleeping sickness was caused in like manner by infection. Then along the lake shore numbers of species of the tsetse fly were found. Experiments demonstrated the fact that these, when fed on sleeping sickness cases, conveyed the disease to healthy monkeys. It was also ascertained that freshly caught flies in the infected areas conveyed the disease without any preliminary artificial feeding. Further investigation proved that this fly, like the tsetse of South Africa, is confined to well-defined areas, which correspond absolutely with the sleeping sickness. The fly which conveys the fatal trypanosoma is the glossina palpalis. The extinction of it, as of the mosquito in malarial areas, together with the discovery of a serum of trypanosomacide, is now looked for to eradicate the disease.

New Era in Telegraphy.

Wilhelm Von Siemens, of the Siemens-Halske company, of Berlin, exhibited before an audience of postal and telegraph experts a new telegraphic apparatus on which he and Dr. Franke, Dr. Thomas and Dr. Ehrhart have been working for several years. Perforated paper ribbon is used in the apparatus and the experiments show that the instrument sends 2,000 words per minute for long distances. The message is received on a strip of sensitized paper which emerges with the letters fully developed. The post office authorities have also made experiments with Poulsen's telegraphone, which combines the use of the ordinary telephone with the telegraph instrument.

Spanking by Machinery.

A spanking machine is in successful operation in the state training school at Red Wing, Minn. The children dread the humiliation of being put in the spanking machine, which, to them, seems a more disgraceful punishment than that administered by hand.

SILK MADE OF WOOD.

A New German Product Which May Revolutionize the World's Dress Goods Market.

The Scientific American makes the following statement concerning a product from wood that has the feel and appearance of silk:

News comes from abroad that an Englishman has patented a method of making imitation silk from wood. A plant erected near Sydowsaue, Germany, is at present turning out 50 pounds of skein silk a day, which product can be increased in quantity to 2,000 pounds. The silk is soft in texture and cream in color. Each thread is made up of 18 single strands; a single strand is hardly perceptible to the naked eye. In strength the real silk is two-thirds stronger than the imitation. When woven into pieces, the new substitute is said to have the appearance of real silk. How this new article will compare with the genuine, in the matter of wear and price, it is impossible at present to state. The manufacturing process is likewise undiscoverable. It is asserted, however, that the pulp undergoes a chemical process and is pressed through very fine tubes, by hydraulic pressure, forming the single strands which go to make up the thread.

WEIGHT OF THE BRAIN.

Cerebral Development Unerringly and Distinctly Follows Differing Lines of Work.

M. Mathiega, an anthropologist of Prague, has just made some interesting experiments with regard to the weight of brain in different branches of the community. Having first ascertained that the male brain weighs on an average 1,400 grammes, and the female brain 1,200 grammes between the ages of 20 and 60, he has gathered the following statistics, based on the study of the brains of 235 persons, differing widely in their occupation and intellectual culture:

	Grammes.
Day laborers	1,400
Workmen and unskilled laborers	1,433
Porters, guardians and watchers	1,438
Mechanics	1,450
Business men	1,468
Physicians and professors	1,500

The manufacturing or sale of alcoholic drinks is not favorable to cerebral development, judging by the light weight of the brains of brewers, saloonkeepers and waiters in cafes. The average weight among this class is only 1,419 grammes, whereas it rises to 1,442 among cabinetmakers, 1,446 among shoemakers, and 1,447 among blacksmiths, locksmiths and other workers in iron and steel.

One Acre of Potatoes.

Under similar circumstances an acre planted with potatoes will yield more than ten, 14 or 17 times as much food material as will one upon which wheat, rye or peas respectively is grown.