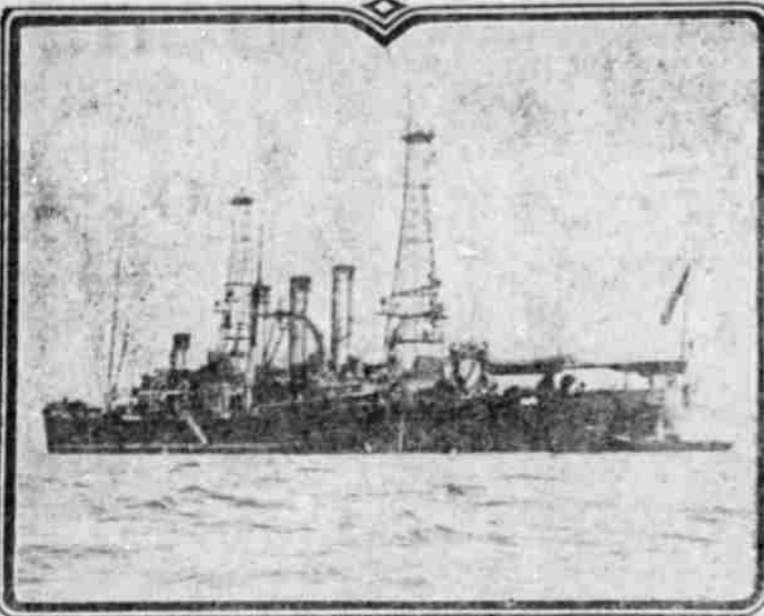
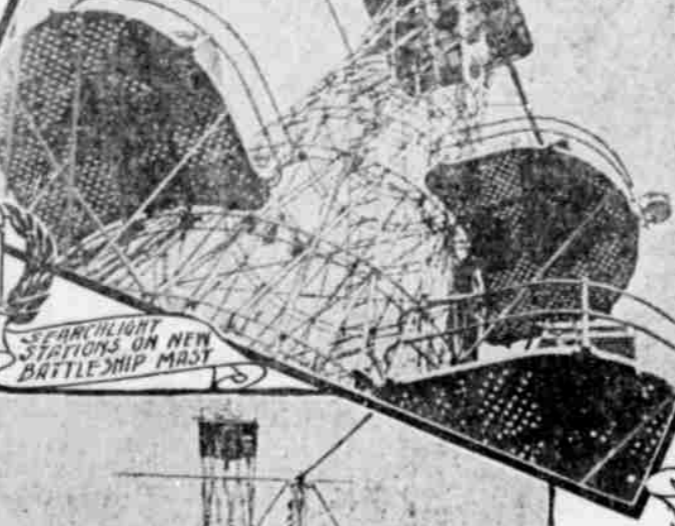


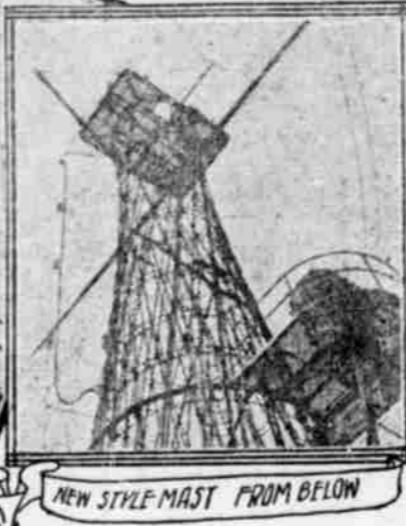
The New Battleship Masts



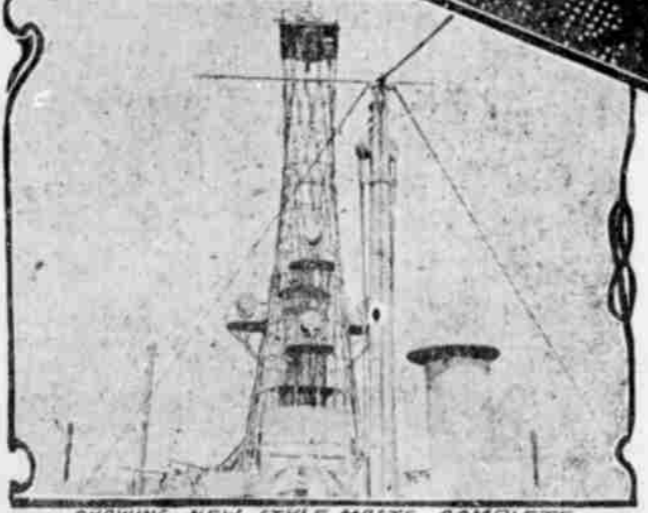
U.S. BATTLESHIP COALING FROM A COLLIER, SHOWING NEW STYLE MASTS



SEARCHLIGHT STATIONS ON NEW BATTLESHIP MAST



NEW STYLE MAST FROM BELOW



SHOWING NEW STYLE MASTS COMPLETE

THE officials who have the say of things at the U. S. navy department have evidently become thorough converts to the advantages of the new style masts, or "fire control towers," as they are technically termed, which have been installed on most of the United States battleships and are now being placed on the others. The government has been experimenting with these new "peach basket" masts for several years now, but it is only lately that there has come evidence that the new wrinkle has been finally and definitely adopted as an adjunct of Uncle Sam's approved type of warships.

The new masts are so unique and so radically new that it is small wonder that the other powers have been prone to go slow in introducing such an innovation. No other nation in the world has anything of this sort on its fighting craft and so naturally Uncle Sam could not profit by the experience of anybody else. Then, too, it costs thousands and thousands of dollars to build and install one of these great skeleton steel structures and naturally the navy department wants to be right ere it goes ahead in the matter. This stage has now been reached.

First of all an experimental mast was rigged up on the monitor Florida, and in order to try out the new invention under actual war conditions the monitor was anchored in Hampton Roads and shells were hurled at the mast by the huge guns on a warship stationed some distance away. The new kind of tower withstood the gunfire well enough to justify many of the claims which had been made for the invention theoretically. Thereupon Uncle Sam went ahead and ordered such masts installed on a number of the old battleships of our navy and on those then building. A total of 22 masts were thus put in service and then a halt was called in order to make thorough exhaustive tests of the new masts under every imaginable condition of sea service. It is this period of probation which has but just now come to an end. There were rumors at one time that the new style mast had been pronounced a failure and would be discontinued, but this proved unfounded. The new invention has been officially endorsed and now the work will

proceed of not only providing such masts on all our battleships but also on the armored cruisers. The new "woven wire" or "peach basket" mast, as they are familiarly called, are primarily observation towers and their function is an integral part of the modern "fire control" system of our battleships—the system for directing and governing the gunnery fire in time of battle. The peculiar construction of the new structures is to be attributed to a desire to safeguard the electrical and other communicative lines upon which the greatest dependency is placed in time of battle—the nerves of the battleship, as it were. For years there was a constantly increasing storm of criticism against the tapering steel tubes known as military masts, with which the battleships were formerly fitted. It was claimed that a single well-placed shot from an enemy's 12-inch gun would sever that style mast and in addition to heavy loss of life would rob the ship of its observatory and searchlight station. On the other hand it is claimed that an enemy

might shoot away fully 75 per cent. of the steel latticework comprising one of the new cylindrical towers without putting it out of commission. Indeed, tests have proven that an enemy would have to sever at least 46 of the steel tubes comprising one of these new style masts ere it would topple over. The average mast or tower as installed on one of our battleships is 90 feet in height and stands 120 feet above the water line. The base of the mast is circular, ranging in diameter from 20 to 26 feet, but all masts have a uniform diameter of 9 feet 6 inches at the top. Each mast is crowned with a platform 10 feet square, the 100 square feet of space thus provided being ample for the observers and the electrical and mechanical signaling devices which enable these lookouts to communicate with the officers on the ship below.

The tower is circular in form—or, to be exact, the shape of the tower might be designated as that of a truncated cone the exterior surfaces, being slightly concave near the top. This outline not only helps the tower to withstand wind strains but makes it possible to employ what is known as the double spiral construction, which makes for stability in the highest degree. By this scheme the steel tubes are arranged in such manner that half of them slant from right to left, while the remainder incline in the opposite direction. Each individual tube terminates at the top platform on exactly the opposite side of the tower from that at which it started at the base. Further stability is contributed by steel rings—double rows of them encircle the framework at intervals from the base to the top. These rings act as braces for the double spiral network of tubing and to insure a uniform distribution of all strains the tubing is fastened to each row of rings.

The American Home

WILLIAM A. RADFORD
Editor

Mr. William A. Radford will answer questions and give advice FREE OF COST on all subjects pertaining to the subject of building for the readers of this paper. On account of his wide experience as Editor, Author and Manufacturer, he is, without doubt, the highest authority on all these subjects. Address all inquiries to William A. Radford, No. 124 Fifth Ave., Chicago, Ill., and only enclose two-cent stamp for reply.

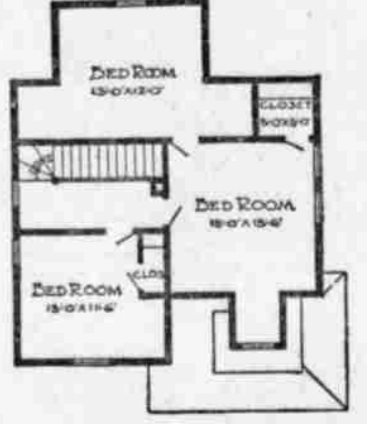
The little house illustrated in the accompanying perspective sketch and floor plans is of a very attractive design that is very popular. A residence should not be too plain and unornamented in its appearance; yet at the same time there is no need of going to extravagant lengths in the pursuit of architectural beauty.

Many try so hard in their desire for an artistic home and in their abhorrence of the plain, box-like houses that the designs they finally work out and follow in building reminds one of a Chinese pagoda, or of a pavilion at the county fair.

It is a good thing to look after the artistic in house designs, but always with moderation. In the house illustrated there are a number of very pleasing features which give the building a distinctive appearance; yet, these are in good taste and the dwelling has a sensible, home-like appearance.

With a good brick or solid concrete foundation, the first story of this house is covered with clapboards, while the second story is finished with cement plaster stucco, divided into panels in the English half timber style. The second story also projects slightly beyond the line of the first, in that way keeping true to the English Elizabethan models. With the woodwork painted a soft

blue with the general character of the design of the house. For the second floor no material is superior to birch, either red or the white. This can be finished in any color and produces a beautifully appearing hardwood trim. For the bedrooms a combination of mahogany and white enamel is the most popular and it is, without doubt, as attractive a style of finishing for such rooms as can be devised. A warm air furnace of proper size



Second Floor Plan.

placed very nearly in the center of the basement will heat this house both up stairs and down very satisfactorily. No one who has any appreciation of convenience or economy would think of building a new house of this kind and not provide a central heating plant. Stoves have shown themselves to be not only costly and inefficient, but dangerous as well. With a good waterproof cemented basement, as



brown and with the stucco panels a yellowish tint, an exceptionally attractive appearance is secured. There are a number of other artistic color combinations that suggest themselves for this house. All of them are on the dark order, in shades of green, brown and red. The white, pale yellow and French gray paints that have been so popular for the finishing of colonial houses are not best to use with a design such as this.

A glance at the floor plans will show the interior of this house arranged conveniently with good light and air in every room. The first floor has a large living room 13x15 feet in size, a dining room 13x13 feet 6 inches and a kitchen 13x12 feet. There is also a pantry of generous dimensions, conveniently located with respect to both kitchen and dining room. Two closets are also provided on the first floor. Upstairs there are three comfortable bedrooms. Two of these seem to be somewhat cut up owing to

called for in the plans of this house, a very satisfactory heating plant can be easily installed.

Deceit in Women.

Many girls of great beauty wonder why it is that they are not so popular as their less attractive friends. Perhaps it is because they are deceitful. I do not mean to infer that beauty and deceit travel together, for this is not necessarily the case. If there is any vice that is loathsome and revolting to man, it is deceit. Man is a broad, honest creature, wholly free from those smaller motives and failings which, unfortunately, so often characterize the gentler sex.

"Know thyself." If you have been false in the past to yourself and friends, try being true blue for a few days; you will have more friends, and life will hold a deeper, more wholesome meaning for you. Remember, girls, a so-called "good fellow" will win out over a mistress of charm and beauty marred and polluted with deceit.

Statesmen in Their Cups.

The deep drinking which was a social custom in the time of the younger Pitt had its influence occasionally on the minister, whose habit it was to indulge liberally with his friends, when free from the occupations of state. An epigram of the time gave the following dialogue between Pitt and his colleague and boon companion, Henry Dundas, afterwards Viscount Melville:

Pitt—I cannot see the speaker, Hal; can you?
Dundas—Not see the speaker, Billy? I see two!—From an Anecdotal History of Parliament.

Diplomatic Major Higginson.

In a signed and published letter, Major Henry L. Higginson thanks the Boston women for taking off their hats so quietly and courteously at the Symphony Orchestra's last concert. "It may not be amiss," he adds, "to remind the ladies that many men are bald and suffer from unavoidable draughts, but do not wear their hats. Perhaps the ladies will draw comfort from the fact that their hair, hereafter to be in view, is at the worst more attractive than their hats, and is often beautiful." That was gallant, diplomatic and truthful.

TRAGEDY OF OLD OCEAN

Disappearance of Captain and Crew Never Was Satisfactorily Explained

THE mystery of what became of the master and crew of the British bark Invernesshire, which sailed from Hamburg for Santa Rosalia, Cal., and was found at anchor and abandoned off the Falkland Islands, recalls vividly to the nautical minds the fate of the brig Mary Celeste of New York, for nearly forty years the prize riddle of the sea, the Bangor (Me.), correspondent of the New York Times writes. The Mary Celeste sailed from New York for Genoa with a cargo of petroleum and alcohol. She was commanded by Capt. Benjamin S. Briggs of Marlon, Mass., with Albert G. Richardson of Stockton, Me., as first mate; Andrew Grilling of New York as second mate and Edward William Head of New York, Volkert Lorenzer, Arlen Harbous, B. Lorenzer and Gottlieb Goodshood, all of Germany, as the crew. The captain's wife and small child were also on board. The brig was in first-class condition, well manned and well equipped in every way, and when she sailed from New York on November 17, 1872, the whole ship's company was happy and contented. Yet none of them was ever again seen, dead or alive. The brig was found on December 4 off the Azores, drifting aimlessly about in light winds, with her head sails set and all her other canvas down. There was nothing to show why she had been abandoned or what had become of her people. She was thus found by the brig Dei Gratia, from New York for the Mediterranean, and after a careful examination Captain Moorehouse of the Dei Gratia put a prize crew on board and sent her into Gibraltar, where she arrived on December 13, 1872, and was turned over to the admiralty court. Her owners refused to pay the heavy salvage demanded and let the salvors take her.

Among the officers' effects which were sent home was the mate's log, and this, with other articles, was returned to the father of the lost sailor, the late Theodore M. Richardson of Stockton. One significant passage, the last written, appeared in the log:

"Fanny, my dear wife."
Whether these words were written by the mate merely as an expression of affection while thinking of home, or in a moment of panic and despair when about to abandon the vessel, can only be conjectured. There was nothing else about the vessel to indicate the state of mind prevailing on board when she was abandoned. The date of this last entry in the mate's log was November 24. When ten days later she was boarded by men from the Dei Gratia her stern boat was gone and it appeared that some food, probably canned goods, had been taken from a locker.

Otherwise everything was in such ship-shape that, but for the date of the last entry in the log, the Dei Gratia's men could have sworn that the vessel had been abandoned within an hour. Her running rigging was all properly made fast and the slack coiled neatly on deck or over the pins. The companionways were open, half-turned music lay upon the rack of the little cabinet organ in the cabin and children's toys were scattered upon the floor. In the captain's stateroom his gold watch hung at the head of his berth and in his wife's room the impress of a child's head was distinct upon the pillow.

In the cook's galley the coppers were on the stove, and meat in process of preparation was on the table. In the fore-cabin the men had not disturbed their chests, no clothing was missing, and even money had been left behind. It was plain that the crew had left her very suddenly. That the boat was lowered away in a hurry and with some confusion was indicated by a broken davit.

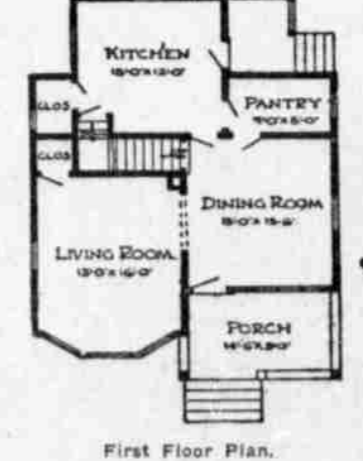
In the 38 years that have elapsed since the Mary Celeste was abandoned countless stories, all more or less fanciful, have been written about her, and numerous theories have been advanced in explanation of this greatest of sea riddles. Mutiny, disease and piracy have been suggested. In 1877 a story was circulated to the effect that Mate Richardson had been seen hiding in the West Indies, and that he and members of the crew had murdered the captain and stolen many thousands of dollars that the vessel was carrying.

As a matter of fact, the Mary Celeste carried no money of any amount.

As late as 1897 another yarn was published to the effect that a sailor, who claimed to have been the mate of the Dei Gratia, had made a death-bed confession in Iquique, saying that when he boarded the Mary Celeste he found that all hands, except Captain Briggs, his wife and the cook, had died of smallpox, and that he, Jacob Howell, the confessor, had thrown all three of the survivors overboard, taken \$8,000 in gold that Mate Richardson had been carrying for the purpose of "going into business in Africa," and then had returned to the Dei Gratia with the report that the Mary Celeste had been found completely abandoned. This absurd story was first published in San Francisco and later found its way to Maine. It was, on the face of it, a pure invention, like the story of the murder of the captain.

The only reasonable explanation is that her master and crew became alarmed by the rumbling of the cargo and, fearing that her decks would be blown off by the accumulation of confined gas from the petroleum and alcohol, got out of her in a hurry. It is well known that oil cargoes confined under tightly battened hatches will generate gases, especially when the vessel is pitching and rolling in heavy weather, and that these gases, thus confined, will cause a loud rumbling noise like distant thunder. The log of the Mary Celeste contains numerous allusions to rumblings below decks, and indicates a fear among her officers and crew that an explosion would take place. Evidently, if this theory holds, Captain Briggs did not know that the danger might have been averted by removing the hatches and allowing the gases to escape, as is often done.

Assuming that the Mary Celeste's people left her in a great hurry, alarmed at the danger of an explosion, the question arises, "What became of them?" The theory generally accepted by sea-faring men is that they tried to make a landing on the Azores, and that the boat was capsized in the heavy surf, although there is no record of either the boat or any of the bodies ever having been found.



First Floor Plan.

the way the roof is formed; yet, these extra spaces are by no means disadvantages. The small balcony over the front porch and opening from the large dormer window is a feature that is both ornamental and useful.

The cost of this comfortable dwelling is estimated at \$2,200. This would provide for oak floors for the living room and dining room, maple floors for the kitchen and pantry and first quality yellow pine edge grain flooring on the second floor. The living room and dining room should be finished in red oak, stained, the interior trim to be of a square cut fashion to harmon-