

LAUNCHING OF THE MOST PERFECT OF MODERN SHIPS OF WAR

New Cruiser Des Moines Christened by Miss Elsie Macomber—Typical of a New Class of Naval Architecture—A Commerce Protector Rather Than a Destroyer—Able to Enter Small Island Harbors.

A RADICAL departure was made from the previous practice of the Navy Department, when on March 3, 1899, Congress authorized the building of six new cruisers of the Des Moines class which should in every respect be up to date and fit for all the requirements of the new American navy. One striking feature, for example, was to be the wooden sheathing and the copper bottom which should cover the steel hulls. For many years Chief Constructor Elchorn stood almost alone in his advocacy of sheathing for ships' bottoms; but persistent argument, combined with object lessons from the reports of ships in service, at last overcame the prejudice against it.

Typical of a New Class.

So the United States protected cruiser Des Moines, which was launched at the yard of the Fore River company yesterday afternoon, is typical of a new class of naval vessels in her construction, and is equally distinctive in many other respects. She is about the size of the Cincinnati and Raleigh, but improved and modernized. These earlier vessels were designed at a time when the craze for speed at all costs reached its maximum, and to attain this speed—which could only be maintained for a few weeks after they were docked and cleaned on account of their rapidly fouling unshathed bottoms—many other qualities were sacrificed.

In the Des Moines it seemed desirable to have a type of cruiser which should be a commerce protector instead of a commerce destroyer, and which should not be too large to follow the flag into the island harbors of the Pacific. For this service a good sea boat was desirable which should show an economy of fuel and a large steaming radius at a reasonable speed; and because such a vessel might spend much of her time in Southern harbors where docking facilities are not obtainable, it was deemed especially necessary to provide the copper bottom to which barnacles and obstructive sea growth would not adhere.

Specification for the Cruiser.

With these requirements and the limit of cost in mind the Navy Department spent some weeks drawing plans and then began to publish books about the new cruiser. These books contained many thousand specifications telling in detail how the hull and engines should be built, what sort of material should be used, and enumerating everything down to a paper of screws or a whetstone that the builder would be expected to furnish. Hundreds of dollars' worth of paper were required for the specifications, and finally

after the various builders had made their bids, the contract for the Des Moines was given to the Fore River Ship and Engine



MISS ELSIE MACOMBER, of Des Moines, The Iowa Representative Who Will Christen the New Cruiser.

Company—the new yard in Boston Harbor—in December of the same year. The contract called for a cruiser, fore and aft rigged, with two masts and two

smokestacks, with a straight bow and an overhanging stern—altogether a boat that without the guns would look not unlike a passenger steamer. With a length on the water line of 292 feet and an extreme breadth of 41 feet, she should have a draught of less than 16 feet, which would let her into many a barlocked harbor which the deeper war vessel could not enter. The specifications gave the new cruiser twin screws and vertical triple expansion engines, capable of forcing the hull, which it was estimated would have a full load displacement of 3,500 tons, through the water at the rate of ten and a half knots an hour, a task which, according to the accepted standard of power, would require the combined efforts of 4,700 horses. Although

sumption of coal, while the Des Moines is expected to maintain her designed speed practically indefinitely and without an extravagant use of fuel; and inasmuch as the Raleigh required 10,000 horsepower it has been possible to reduce the weight of the propelling machinery in the new cruiser by more than one-half. To give the cruiser a bunker capacity for 700 tons of coal, an amount sufficient to carry her three times across the Atlantic Ocean without recalling, giving a steaming radius of about 10,000 miles at ten knots or 2,600 miles at full speed, was merely an everyday problem in naval architecture. To burn this coal fast enough it was necessary to provide about 300 square feet of grate surface under the six water tube boilers, and to carry away the smoke in two stacks, each rising seventy feet above the grates.

Work Began at Fore River.

The keel of the cruiser was laid at the Fore River yard two years ago, and plate by plate the steel hull rose from the blocks until it looked like a nearly completed ship. A steel hull is not difficult to build in a modern shipyard, when a hundred pneumatic riveters are at work and the dark corners of the interior are thoroughly illuminated by portable electric lights, but when it became necessary to cover the lower half of the hull with a sheathing of Georgia pine planks, which shall conform so perfectly not only to the lines of the ship, but to every little irregularity of the plating that water cannot find its way between the wood and the steel, the task was one requiring much patience and skill.

It is the peculiar quality of copper that it "exfoliates," or scales off, under the action of salt water, and consequently maintains a permanently clean surface, since each exfoliation relieves the ship's bottom of barnacles and other growths which would retard her speed. If the copper could be attached directly to the steel plating the shipbuilder's problem would be a simple one, but if this were done on the bottom of a ship the galvanic action of the sea water upon the copper and steel would soon eat away the steel plates, leaving the copper unsupported. It is therefore necessary to use pine planking as a means of insulation and to take the utmost pains to prevent the sea water from finding its way from the copper sheathing to the steel plating.

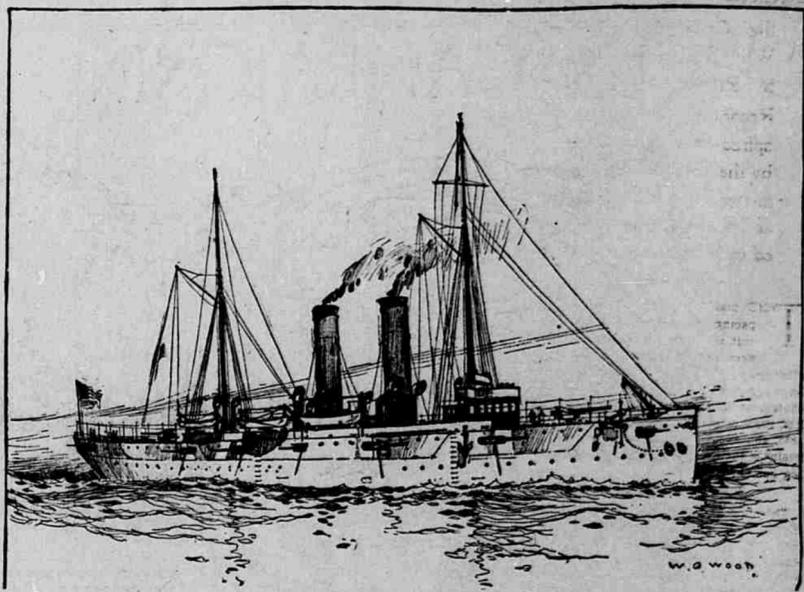
Guarding Against Corrosion.

Therefore the planks were fastened to the Des Moines with the greatest care, and to perfect the insulation 28,000 bronze bolts were used in fastening this sheathing to the steel hull. Further to guard against corrosion, the stem and stern castings are of bronze, the rudder, which is as high as the second story of a house, is made with a bronze frame filled in with white pine and covered with bronze plates, and the propeller wheels, sea-cocks, and all outboard fittings are of non-corrosive metal.

There is no armor on the Des Moines, since she is not intended for work in a pitched battle of naval forces, but she has a protective deck rising from the water line, like the shell of a turtle, with two-inch nickel steel on the slopes, which will turn small shot and safeguard to a considerable extent the ship's machinery. The cruiser is expected to stand off vessels of her own size with her powerful armament of rapid fire guns, all designed for the use of smokeless powder. Her main battery will comprise ten 5-inch breech-loading rapid fire guns, and her second battery includes eight 6-pounder and two 1-pounder rapid fire guns, besides four Colt's automatic machine guns, all of which will combine to make her an extremely disagreeable customer at close range.

Water Line the Danger Point.

Being unarmored her greatest danger is from a shot along the water line, which might cause her to fill and sink. This contingency is guarded against by water tight compartments and a protective belt of corn-pith cellulose. In addition there are about a hundred water tight compartments in the ship, each of which has been carefully tested by pumping it full of water. The corn-pith cellulose, which is packed between the outer and inner skin of the hull, is something of a novelty. Should water rush in through a hole made by a shot, it would cause this corn-pith



The U. S. Cruiser "Des Moines."

Launched at Fore River, Boston Harbor, on September 20. From a Drawing Studied from the Official Specifications.

to swell so rapidly that it would automatically stop a leak until permanent repairs could be made. The pith comes from the cornfields of the great West in briquettes, and 6,720 cubic feet of 47,000 pounds have been required for the Des Moines. It would be interesting to know how many acres of cornfields

it has taken to contribute this great amount of pith.

To guard against fire all the joist work on the ship is made of fire-proofed wood, and is used sparingly at that, so that steel decks and bulkheads are the rule; and to prevent "sweating" when the cold air outside strikes the steel

plates and condenses the warm air inside, the steel is coated with ground cork, which is mixed with white paint and acts as a non-conductor. The ship's compasses will be protected from unnecessary magnetic influences by the construction of the pilot house, which will be entirely of bronze.

The Complement of the Cruiser.

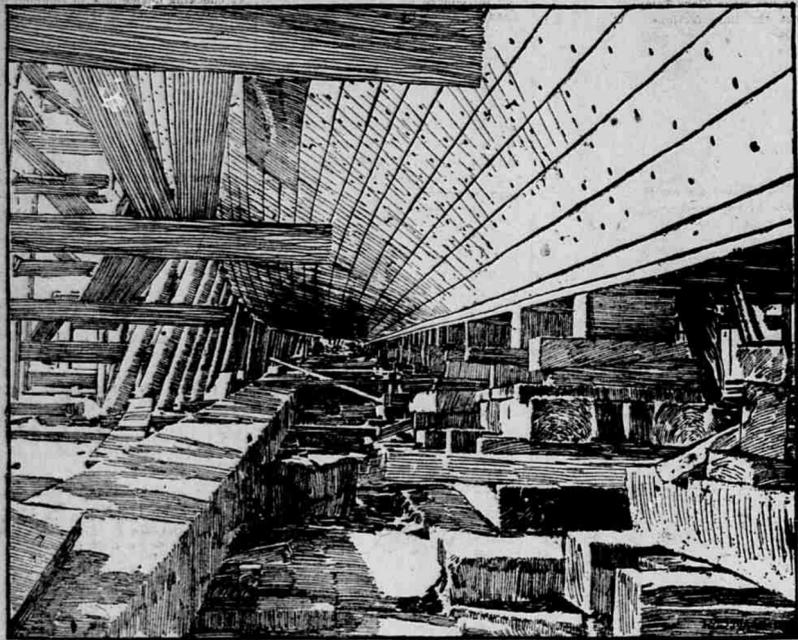
The complement of the cruiser will be thirty officers and 263 men, and the Des Moines is large enough to give them all comfortable quarters. For the reason that most of the cruising will be done in the tropics, the ship will be equipped with ice-making machinery, with a plant for purifying water by evaporation, and with electric fans for cabins and state-rooms. The electrical equipment, indeed, is unusually elaborate, the power being provided by four direct-connected generators. There will be two electric winches for hoisting purposes, an electric motor for turning over the engines, and ten electric motors for the ammunition hoists, four arc lights in the engine room, and about 300 incandescent lamps, including truck lights, night signaling sets, diving lanterns, battle lanterns, and searchlights. Electricity will operate the whistle, ventilate the whole ship from stem to stern, hoist the ammunition, and connect all parts of the vessel by means of signals and automatic indicators. About half a mile of wire is used in making the electric connections on shipboard, and in addition there are numerous voice tubes, ventilating pipes, drain pipes, steam pipes, and water pipes, which, if placed end to end, would aggregate two miles in length. The signaling equipment will also include a system of wireless telegraphy for sending messages at sea. Also, the Des Moines will carry nine boats ranging in size from a thirty-foot steam launch to an eighteen-foot dingy, and these boats, if moored end to end, would reach 242 feet.

Modern Warship Complicated.

It is a complicated business to build a modern warship, and the Government keeps a large force of inspectors employed to see that nothing is slighted or forgotten. In former times when a ship was launched she was considered practically complete, but today, although the great engines are built in the machine shops while the hull is being erected on the beach, months are required for installing the machinery and finishing all the detail work. The plans for the launching are made when the ship exists only on paper, and the foundations of Quincy granite upon which the launching ways were built for the new cruiser were in the ground two years before the cruiser's sponsors could break the bottle of champagne upon her lowering bow and christen her "Des Moines," or with a hatchet made from the ship's own material cut the single rope which allowed the huge structure to glide into the bright waters of the Weymouth Fore River.



MISS CLARA N. CARLETON, The Massachusetts Representative at the Launching of the "Des Moines."



Looking Under the "Des Moines" Along Her Bilge Keel, Showing the Wooden Sheathing Ready for the Copper Bottom.

A PARADISE FOR ORNITHOLOGISTS

The birds of Long Island are worthy of study. The peculiar situation of the island, offering as it does a home both for land and sea birds, has made ornithology a popular pursuit there. It was once asked in the Oyster Bay region who in all those parts would be likely to know the most of native ornithology. The answer was, "A man who was pretty busy at that time"—no other than President Roosevelt himself. It seems that he is not only exceedingly fond of the birds, but is a master of knowledge pertaining to them.

Long Island is full of birds. Sportsmen think of and see only the game birds, the great variety of ducks, the most common of which are the "old wives," the broad bill, which give fair shooting; the teal, the black duck and the butter balls. In the winter time great flocks of Canada geese pass over the island. Then of course, there are the partridges and

quiet quail and all kinds of hard hunted snipe. With these sport has been made famous on the island.

Large birds of the "useless" kind also abound, such as a great variety of hawks, which the farmer imagines must be always killed on sight; with no more mercy than is given snakes; the sparrow hawk, which is very common; the red shouldered and red headed hawk, which is more or less common, and the fishhawk that is being exterminated. Owls also form an important family, a few of which genus are the screech owl, the ocean, or great horned owl, and the barn owl. It is said that once in a great while the snowy owl is seen on the northern part of the island. Not long ago President Roosevelt added one to his collection.

Headhanded eagles were seen two years ago in Oyster Bay. Southern turkey buzzards have also passed over the island, but without deigning to stop a moment to pay a visit. Gulls, of course,

are found here in multitudes, for this is but a jut of dryness in the midst of the sea. Great clouds of gulls come up in the winter time, the rugged billed and heron gulls with the others of their numerous consins.

The heron family is rather exclusive, and it takes some patience to get an acquaintance with them. They are the American bittern, the great blue heron, or, as it is commonly called, the blue crane, though there are no cranes really; the little green heron and the black crowned night heron the last two varieties being quite common. On Lake Ronkonkoma sometimes is seen the crazy loon, which imagines everybody is hunting for him, so dives now and again into the lake and comes up at an unexpected spot, when he laughs at the echo of his amusement. The pheasant is a rare avis. It has been killed off unmercifully, and is fast becoming a memory of the fathers.

WOMEN WHO SECURE DIVORCES TO REMARRY

By KATE THYSON MARR, Author of "Confessions of a Grass Widow," "Bound by the Law," Etc.

THIS may be a one-sided affair, from the fact that as many men seek divorces that will license them to marry other women, as when the sex is reversed and the woman seeks to throw off one bunch of matrimonial troubles that she knows all about to invest in another brand of which she knows absolutely nothing.

There seems a wide margin for doubt as to the perfect justice of charges preferred in spectacular cases where they seem more thoroughly tinged with selfish desire to indulge pure selfishness than from any real provocation founded on facts.

Society women, who in former years would have thought divorce and disgrace inseparably allied, are at the present time the most conspicuous figures in such proceedings, and the more offensive the case may be as it unwraps its soiled and ragged linen from the bones of the family skeleton, the more glaringly will each and every shred be flaunted to the raving public that always has its nostrils distended to scent the pungent odor of scandal.

Divorce laws need amending, and amending of such a nature as will make it impossible to keep up a play of justice which is little less than licensing vice. A man or woman who rushes at breakneck speed to the another matrimonial knot before the frayed edges of

the other are fairly unkind simply publishes to the world a confession of guilt and brazenly forces the issue.

If a national law refused to sanction the marriage between defendant and co-respondent until after the expiration of at least one year the infatuation would have time to undergo a refrigerating process, and the parties most concerned being still free, the chances of reconciliation between the former husband and wife would be greater, but the absurdity of many divorce laws are only too apparent.

In New York State, the defendant is forbidden to marry during the life of the plaintiff, but the law only has force in the State, which the man laughs at, and takes the ferry up Hoboken, the Sound steamer, or a few miles of railroad, which will take him to Putnam, Connecticut, where a minister or magistrate is always ready to link the chains of matrimony and misery for a small consideration.

A woman who is a wife and mother, and yet who, despite the sacredness of those obligations, allows herself to become the party of a liaison that will end only in disgrace, is not such a woman as would be true to another man.

A woman who is deeply ingulfed in domestic trouble, if she is the right stamp of woman, is too humiliated and crushed by the disappointment of her life to allow a new love to enter into it, while the old is tugging at her heart strings with agonizing probes.

Women of wealth having no fear of the strenuous bread riot in the event of the dissolution of the marriage tie have less hesitancy in forcing a climax than the woman who, being without resources, is called upon to bear uncomplainingly the cruelties of fate. It is

this financial independence that robs divorce of much of its terrors, and makes it the vehicle of whims and fads and fancies rather than the blessing of its original intent and purpose.

The absence of all sense of decency in the rushing through of a divorce, and the greater rush into another matrimonial noose bears the stamp of crime and intrigue on its face, and it is only the woman of wealth and fashion who dares defy public opinion by an exhibition of brazen effrontery that would ruin her less favored sister forever.

The society woman is the divorcee par excellence. The surplus leisure she has on her hands, and the energy she must tax to pass time along the tempestuous, temptation-strewn paths of pleasure leaves her so exhausted that her only vent seems through getting into mischief. The man whose wife is on the other side buying gowns is also in the getting-into-mischief business, and when these two varieties of pleasure have a lot of snout to dispose of start to assist one another in the disposal, there is sure to be a large and elegant scandal born of the contact that the divorcee judge is called upon to decide on as to its merits. Now, the divorce is practically what many women want. It opens the switch whereby to shift the matrimonial cargo to newer, greener pastures. A man who wantonly desecrates the home of a quondam friend as is generally the case in those fashionable escapades, seems rather to lay a large and generous layer of flatteringunction to his soul; not only in the matter of having won a woman from her allegiance, but also that he has made the only amende honorable by the sanction of marriage.

When a rich man dishonors a poor man's home he rarely feels that honor

enters into the matter, and the woman who has been foolish enough to forfeit a husband's love and protection in exchange for a few wooing, cooling compliments generally weeps alone when cast off with the same careless whim as a child tosses aside the toy of which it has wearied.

If a national law prevented the consummation of marriage of either a defendant or co-respondent, of a divorce suit within a year the infatuation would in all probability die through its own mal-nutrition. The principals would have time to cool off and a little sober thought intruding might have an effect that would end happily for all parties.

But divorce that simply sanctions a marriage between two parties acknowledgedly criminal and leaves the injured one heartbroken and without means of support is horrible perversion of justice.

It is the abuse of divorce laws that makes them ridiculous.

The man or woman who rushes into matrimony to ragtime music, before the bells that knelled the death of an old love have hushed their echoes, publishes to the world a story of infamy, and is not the one deserving sympathy or countenance.

A man or woman who has loved and has known the bitterness of disappointment, is not so eager to be caught in another matrimonial lasso, particularly a woman. If she has been cruelly deceived, and her life has known only the thorns instead of the roses, she cannot forget. Experience has taught her fear—and fear is her safeguard. She does not want to marry for a long time to come—if at all. In fact she has taken her matrimonial lesson to heart—and knows when she has had enough.