

CONSTRUCTION OF MODERN BATTLESHIPS

Designs of Recent Battleships and Cruisers --Interesting Illustrations from Ship Building in Boston Harbor.

It is an old complaint against American naval architecture that they are overladen with guns and heavier guns than they ought to carry. This was the criticism launched by British officers against the wooden frigate Constitution in the years before the war of 1812. Now it is heard again against the steel ships of the Maine is eagerly hailed as proof that this criticism is a just one--that the hulls of our warships are not strong enough for the weight and stress which they must bear.

As a matter of fact, such mishaps as that to the Maine are extremely rare in the United States naval service--more rare, perhaps, in that country than in any other in the world. The fleet which boasts the Oregon has not been plagued by windings.

Since the battle of Santiago a wonderful advance has been wrought in the power of the armorial naval guns. The 12-inch 45-ton rifle, for instance, five years ago this weapon, with the powder train in use, sent its projectile rushing out of the gun muzzle at a velocity equal to 2100 feet a second, and with a muzzle energy of 46,000 foot-pounds.

There are ingenious devices to "take up" the enormous recoil of one of these high-power rifles. But even then the shock transmitted to the deck on which

cal tests of great severity. Indeed, so important is this inspection regarded that the navy department issues a book of general instructions for the construction of guns and other ordnance. Each object must be marked with four separate stamps--first the stamp of the inspector, second the stamp of the manufacturer, third the identification number, and fourth the regulation government stamp; and no material is allowed to go into a navy ship unless it bears all these four. Even after the steel has been inspected and approved, it may be rejected at the building or the navy yards. Standard medium steel must have a tensile strength of at least 60,000 pounds and hard steel of 75,000 pounds, and a piece of steel eight inches long must stand an elongation of 25 per cent. at rupture. Steel rods from which rivets are made must be capable of bending over flat on themselves without showing any cracks or flaws on the outer surface. Castings for steam, stern, turret, turret tracks and so on weighing more than 1,000 pounds must be raised to a height of at least 10 feet and be allowed to fall freely upon a concrete or macadamized road surface; while castings weighing less than 1,000 and more than 500 pounds must be let fall from a height of not less than 12 feet. After the material has passed this rough-and-ready test, it is suspended in chains "and hammered all over with a heavy sledge-hammer," and almost ironically: "No cracks, flaws, defects or weakness must appear after such a treatment."

Every lot of steel which is being worked at Fore River into the Rhode Island and New Jersey guns, are given a thorough-going navy department test. It is in spite of these precautions, however, that the Rhode Island and New Jersey guns are found to be defective in some particulars. It is in the case of the Rhode Island gun that the government insists upon precautions which seem almost extravagant. Special inspectors are stationed at the mill where the steel plates, beams and so on are produced, and all this steel is subjected to both chemical and mechanical tests.

The great gun stands in a severe one. Something more is required to meet this shock, the massiveness of construction. The materials that are to be worked into these battleships must be of the highest quality. The Rhode Island gun is a 12-inch 45-ton rifle, which weighs 46,000 foot-pounds. This new weapon is built of a heavier material than the 12-inch 30-ton rifle, which weighs 32,000 foot-pounds. Of course, this increased weight and muzzle energy increased strain upon the steel hull that must bear such terrific artillery. The "stress" due to a 46,000 foot-pound gun is now about one-quarter greater than it was in the Spanish war. But on the other hand, of course, these new guns are subject to less wear and more destruction to an enemy.

What is true of the great 12-inch rifle is true of the smaller 6-inch rifle. The gun which make up the broadside battery of the latest battleships which are being built for the navy are 6-inch rifles, which in 1888 weighed about five tons, now weigh eight tons. Such a gun is now built about 2,000 feet long. It is now 25 feet. The muzzle velocity of the 100-pound projectile of a 6-inch rifle in 1888 was equal to 2,000 feet a second, and its muzzle energy to 2,000 foot-pounds. The muzzle velocity of the new 6-inch rifle is 2,500 feet a second, and its muzzle energy to 2,500 foot-pounds. This is an increase of 25 per cent. in muzzle energy no less than 5,000 foot-pounds.

This immensely enlarged power is due not only to longer and better rifles, but to a more powerful propellant. The composition and of greater strength. Of the naval designers and the shipbuilders of the country, it is really dealing with a tremendous power which is now being put into the Rhode Island and New Jersey ships. The Rhode Island and New Jersey ships are being built with a 12-inch 45-ton rifle, which weighs 46,000 foot-pounds. The muzzle velocity of the 100-pound projectile of a 6-inch rifle in 1888 was equal to 2,000 feet a second, and its muzzle energy to 2,000 foot-pounds. The muzzle velocity of the new 6-inch rifle is 2,500 feet a second, and its muzzle energy to 2,500 foot-pounds. This is an increase of 25 per cent. in muzzle energy no less than 5,000 foot-pounds.

In view of the difficulty with the Maine, it may be interesting to note the extraordinary precautions which Uncle Sam takes in his newest ships to see that his mighty guns are securely fastened to the vessels that must bear them. Battleships like the Rhode Island and New Jersey are practically as well as theoretically floating forts, and must furnish a stable and well-protected gun platforms. The heavy protective deck, a "turtle-back" of nickel steel, serves as the foundation of the fort, but also as the foundation for the gun mounts. The novel super-turret, each containing two 12-inch and two 8-inch rifles, rise from the main deck, but turn on a cylindrical steel foundation which rests upon the protective deck. The protective deck also rises the turrets, cylindrical steel foundations which protect the turning gear and the machinery. The amidship bar and the eight-inch rifles are supported by bulkheads which rest upon the main deck. For the most massive of the novel super-turret, turrets mounted on the two main 12-inch turrets, and 12-inch rifles in their turrets.

So also with the broadside guns of the Rhode Island and New Jersey. They are lighter weapons, it is true, but they are mounted on a steel foundation beneath them, to which the guns are also tenderly removed. The Rhode Island and New Jersey ships are practically as well as theoretically floating forts, and must furnish a stable and well-protected gun platforms. The heavy protective deck, a "turtle-back" of nickel steel, serves as the foundation of the fort, but also as the foundation for the gun mounts. The novel super-turret, each containing two 12-inch and two 8-inch rifles, rise from the main deck, but turn on a cylindrical steel foundation which rests upon the protective deck. The protective deck also rises the turrets, cylindrical steel foundations which protect the turning gear and the machinery. The amidship bar and the eight-inch rifles are supported by bulkheads which rest upon the main deck. For the most massive of the novel super-turret, turrets mounted on the two main 12-inch turrets, and 12-inch rifles in their turrets.

After about three months he became an Art Critic and sure-enough Connoisseur. He knew it because a great many Dealers took him into the Back Room and told him so.

Then they would throw the Light on a Creation that had been in the Salon for years. The artist would be destroyed by fire early this morning. The loss will be \$20,000. There was no insurance. The Kilpatrick estate and J. W. Coburn are the chief losers.

The Crofton smelter has closed down because the fuel from the American gas works is not satisfactory. The Crofton smelter has closed down because the fuel from the American gas works is not satisfactory. The Crofton smelter has closed down because the fuel from the American gas works is not satisfactory.

From Our Own Correspondent. Nanning, June 1. The Ladysmith Lumber Company's mill was totally destroyed by fire early this morning. The loss will be \$20,000. There was no insurance. The Kilpatrick estate and J. W. Coburn are the chief losers.

Mainland News of Day

Meeting of Liberal Executive at Terminal City Postponed For Present.

Sir Hibbert Tupper Intimates Intention to Get into Local Politics.

Leading Citizens Approve of Party Lines For This Province.

From Our Own Correspondent. Vancouver, June 2. The meeting of the Liberal executive, to consider the calling of another convention, was postponed today owing to members being delayed by late train.

A resolution was passed by the Board of Trade, suggesting the Dominion government to bonus the projected V. V. & E. railway.

The Board of Trade and City Council have been asked to memorialize the Dominion government to aid the projected Coast-Kootenay Railway.

The executive of the Liberal Association will meet yesterday regarding the political situation. They were unanimous in expressing their wish that the next election be held in Vancouver.

The City Council last night passed a by-law to close pool rooms in the city. By some strange oversight, pool rooms were not included in the Sunday Closing Bill.

The local branch of the Bank of Montreal has received word that all employees will receive a bonus of 20 per cent. of their salaries.

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After Many Days. Wreckage Coming Ashore From Vessel Foundered Last Fall.

Kingston, June 1. Correspondent at Michipicoten, reports that wreckage from the ill-fated "Bannockburn," which foundered in Lake Superior last fall, is coming ashore at Gourlay's Bay.

Another Idiot. Mariner Starts Across Atlantic in an Eleven-Foot Boat.

Halifax, June 1. Captain E. T. Waive, a native of the United States, started from Sydney today to cross the Atlantic in a boat 11 feet nine inches being the smallest boat ever used for an undertaking of this kind.

Pioneer Lumberman Dead. Alexander Fraser, Full of Years and Much Money Passes Away.

Ottawa, June 1. Alexander Fraser, the millionaire lumberman, died at 12:15 this afternoon after months of illness, aged 74. He was the pioneer Ottawa lumberman, and his wealth was variously estimated at from six to ten million dollars.

Onton Mills Resumes. Four Thousand Operators Return to Work in Lowell.

Lowell, Mass., June 1. The gates of the Massachusetts, Merimac, Boole, Tremont and Suffolk, Hamilton and Appleton cotton mills, which have been closed for nine weeks by reason of labor troubles, were re-opened today. The Lawrence mills, which were partially closed, also resumed work. About 4,000 operators reported out of about 18,000 who had been idle.

Hon. Mr. Stratton Is to Resign Will Ask a Verdict From His Own Constituents in Any Event.

Winipeg, June 1. The Grand Trunk Pacific railway officials have established offices in the Grain Exchange building from which general Western surveying operations for the new route will be directed.

George Riddle, the former amateur author of the "Hundred Years War," probably take part in the C. W. A. races at Vancouver, in the professional class.

EMBEZZLER FROM MANILA Who Arrived on the Tartar was Arrested by the U. S. Marshal.

When the steamer Tartar arrived here Deputy U. S. Marshal Stricker met her to arrest Ed. L. Waite, who is wanted in Manila for embezzlement. Waite left Manila with his wife, it is alleged, on the 8,000 of the money of Col. Newberry's military commission.

Cap Sullivan returned to Toronto and will appear before the legislative committee on the subject of the proposed cable from England says Judge Armour is in a serious condition.

Charles Irwin, who was crossing the railway tracks from the docks at the foot of Yonge street tonight when he was struck by a passing car. Irwin was killed, and his wife bruised.

Frank Gnos, of Port Arthur, passed away at Grace hospital today about 1 o'clock.

Principal Rivers Wilson, accompanied by Lady Wilson and other members of the Grand Trunk officials, arrived this morning from Niagara on a special train. The president expressed himself as entirely satisfied with the tour of inspection.

Official Estimate Places Loss of Lives at Half-Fifteen British. London, June 1. The British consular at Brereton reports that an official estimate places the number of persons killed in the earthquake at 15,000.

MOVING EASTWARD. President Roosevelt Reaches Grand Island, Nebraska.

Grand Island, Neb., June 2. President Roosevelt's train reached Grand Island at 11 o'clock last night. A large crowd was at the station to greet the President, but the company will be at least the run from North Platte.

CLERGYMEN THREATENED. Bishop of London to Take Action Against Remarrying of Divorces.

London, June 1. The Bishop of London in an open notice, reiterating his view, there is no official objection upon the clergy to remarry divorces and discouraging the marriage in church, even of innocent divorcees, threatens action in the ecclesiastical courts against officiating clergymen.

WANTS MORE COAL. Reading Miners Who Cannot Make Good to Be Discharged.

Philadelphia, June 2. President Boer, of the Reading company, has issued orders that miners who are not out enough coal to keep the breaker in operation nine hours a day are to be discharged. He says if the present system is kept up, the company will be at least 1,500,000 tons behind its output at the end of the year beginning with April.

COLONEL HERBERT'S PRAISE OF CANADA Term as Commanding Officer Were the Happiest of His Life.

Toronto, June 2. The News' London special says: Colonel Ivor Herbert was interviewed today. He is now the Liberal candidate for Monmouth in the House of Commons. He was formerly the commanding officer of the 1st Battalion of the Buffs. He expressed his view that Col. Kitson's criticism of Canada's defenses were unjustified. He considered that the Buffs were being unfairly protected. He is delighted with the increase in the mounted troops of the British Empire. He has been continuously advocated during his term in command, but in vain. "However," he declared, "that has been the severest lesson of the late war learned."

In reply to a question as to the reason why he had not accepted a commission between British officers and colonial governments, Col. Herbert stated that he was subordinate to a cabinet representative, and that he was not a non-military officer. He said that the five years he spent in the Dominion, Colonel Herbert said, were the happiest of his life.

STRENGTH AND ENDURANCE. Are Factors of the Greatest Success. No person can do full justice to himself without them.

It is noted in Le Petit Journal of Paris that Miss E. Lowe, daughter of Sir H. Lowe, the former governor of Madras, during the captivity at Washington, recently celebrated her eighty-fifth birthday. She has lived in Madras for many years, and has no recollection of having seen the Emperor.

OUTPUT DOMINION COAL CO. Glace Bay, June 2. The output of the different collieries of the Dominion Coal Company for May amounted to 231,811 tons.

HEAR ABOUT THE TERRIBLE AFFLICTION that our friend Blank had last night? See how much he has suffered. He is now suffering from a suppressed cholera.

SORE THROAT AND HOARSENESS. With their attendant dangers may be cured by the use of the new French Remedy. It is a remarkably short time, often a few days only, before the throat is cured.

THE NEW FRENCH REMEDY. THERAPION. This successful and highly popular remedy, as employed by the most distinguished medical authorities, is a remarkable short time, often a few days only, before the throat is cured.

IMMIGRANTS AT WINNIPEG. Two Thousand in One Party Arrived Yesterday for Western Points.

From Our Own Correspondent. Winnipeg, June 2. A train of 16 coaches of immigrants arrived in Winnipeg this morning. The party consists mainly of Germans and Russians, and will locate at various farming points west of Winnipeg. About 2,000 immigrants were the party.

Seeds the Kind that Leads. WEAK PARTS OF THE BODY ENLARGED AND STRENGTHENED. Vigorous, Natural Conditions established and maintained by the use of the new French Remedy.