## NEW BATTLE SHIPS OF LIGHT DRAFT

NEW ENGLAND'S

Borrowed From the Experiments of the United States and Other Countries.

From the best information obtainable it is ascreed that the light draught new British ships, it is understood, will feature of the new British ships has be constructed with special reference been secured by incorporating the to strength. The armor will be placed prominent ideas which prevalled in the on the outer skin, and this when back-Russian yacht Lividia.

Lividia should be built so as to possess with water. the maximum degree of steadiness. The first of the new British battle-

dla were: Length, 190 feet; beam, 120 class is expected to be finished in one feet, and extreme draught, about 12 year bence. feet. The hull proper resembled an The new Maine is now building at oval. Around this oval was built a the yards of the Cramps at Philadelcofferdam, which was secured to the phia. Owing to the trouble at present been placed the whole was inclosed curing prompt delivery of steel it is with sheathing.

height of twenty feet above the water, conservative estimate places the com-On the upper deck was built a super- pletion of the Maine at early in the structure in salient form. Powerful summer of 1991. engines were fitted, and despite the eval shape of the hull the under-water AFTER PACIFIC COAST BUSINESS lines had been so well laid off that a speed of 15 knots an hour was actually

The light draught of the Lividia was The jobbers of St. Louis and Chicago supported by the additional flotation have brought suit before the Interstate power of the cofferiam. This coffer- Commerce Commission against the dam was divided into longitudinal and transcontinental railroads, the purpose

were carried in the cofferdam. The out- Commission can be pursuaded to comside shell, as it might be termed, serva ply with the request of the Eastern ed wholly to break the force of 'the jobbers the trade of Pacific coast jobwaves and to lighten and steady the bers will largely fall into the hands of ship. Even with the cofferdam pierced the Eastern firms. The St. Louis and and with every cell filled with water, Chicago jobbers made their claim for the draught of the Lividia is increased equal rates last year before the transonly twenty-two inches, while at the continental railroad companies and same time the ship is rendered sten- were defeated. The advantage of lower rates to carload shippers than to the

The Lividia encountered a terrible retail trade is about all that enables thirty degrees from the vertical.

taught the value of the cofferdam ar-rangement, while additional ideas were about distinction between carload and gleaned as to the best methods for se- package shipment. curing to the hull proper the outside protection.

In the new British battleship the designs, it is said, first call for a hull proper with very pronounced aloping of the main deck.

The cofferdam is expected to serve the same as would pontoons if lashed lected to take his place. alongside. When a vessels draught is to great to permit her crossing a bar or shallow spot a common recourse is to lash pontoons alongside filled with water. When firmly secured the pon-Toons are pumped out and the additional flotation power causes the vessel to rise in the water.

A vessel's draught is lessened when the beam is increased. In their new design the British architects have built a vessel proper acording to standard rules, though with perhaps more slope to the sides than would be the case were no outside hull provided. The steadiness of the ship has been increased by building a jog in the underwater hull on each side, which serves the same purpose as blige keels. A bilge keel, it should be known, acts as a steadying power much the same as a balance pole does for the tight- pound, at the Parlor.

rope walker. In adopting the "break-in-the-hull" feature the English designers have appropriated an essential American idea. It was Ericason, the inventor of the made of pure cream, The Parior, Monitor, who originally incorporated a projecting overhang to a hull in order to secure greater righting qualities, sheeps tongue, etc., at the National In the ill-fated British warship Captain Cafe. the English designers attempted a low verhang stability is secured by build- lcn. Alex Gilbert, sole agent for Astoria. Telephone 83.

tig high sides. high-sided ship, which is further her attery well above an ordinary sea, are all the go. a sea moderate height.

Additional data regarding the new British battleships give the length of each craft as 425 feet, beam 85 feet and draught 22 feet. The displacement will be about 13,000 tons. The engines, it is said, will develope about 18,000 horse power, and it is expected that the speed will approach closely to nineteen knots.

MODEL The reported horse-power development planned for the new British ships is a great advance on the power generally planned for battleships. The engines of the new Maine are calculated to develop 16,000 horse power more than the engines of the Indiana, Massachusetts and Oregon type.

In the case of the Lividia the outer cell compartment was made of comparatively light material. It was intended to take up the vibratory effects of each wave shock, while at the same time adding to the flocation qualities of the

The cofferdam arrangements of the ed at the water line vicinity with corn The Lividia was built in Scotland for pith serves to close any opening octhe imperial Russian household. As casioned by the entrance of a shot. the prince who was most directly in- This is effected through the medium terested in that craft was easily ren- of the expansive properties of the corn dered seasick, it was ordered that the pith matter when brought in contact

Everything was sacrificed to comfort. ships will be laid down in about four The principal dimensions of the Livi- weeks time. The prototype of the

buil. After the cofferdam had experienced in the United States in sefeared that the Maine will be delayed The sides of the Lividia rose to a fully six months in her completion. A Resident Agents.

San Francisco Bulletin.

assured by the great beam of the craft, through the St. Louis Traffic Bureau for small shipments as for carload No stores or weights of any kind shipments. If the Interstate Commerce

storm in the Bay of Biscay while en local jobbers in any section of the from Brest to Ferrol. The country to hold a trade that is often steadiness of the ship was remarkable, secured at a considerable outlay. If The greatest angle of roll recorded was the St. Louis or Chicago jobber is given four degrees, and the greatest angle the same rates for hundred-pour pitch five degrees. This is trifling shipments that the jobber has for a when compared with the thirty degrees carload, the former can supply retail angle of roll each way from the ver- dealers right up to the doors of the tical which has frequently been record- jobbers. The Pacific coast jobbers and ed on naval ships. During the block- the Eastern or Middle West jobbers ade of Havana it was a common sight buy in the same market and the cost of to see the small gun versels during transportation is the principal factor in the prevalence of a fresh trade blow determining points of supply. The suit rolling, many of them, from twenty to commenced by the Middle West jobbers is an attanck upon Pacific coast In point of steadiness and seaworthi- business all along the line, and will ness the Lividia demonstrated that she doubtless unite Pacific coast jobbers in was a remarkable craft. The exper- defense. The railroad companies are ience gained in the Bay of Biscay storm not nominally defendants, as the prop-

Frank Braugwin of Londen, who was recently elected a member of the Pittsburg Carnegie Institute internasides. Around this hull will be placed tional Art Jury, has cabled that he will for domestic and export trade. a cofferdam construction, reaching be unable to come to America at this from well below the water to the level time. William Stott, of Oldham, the eminent English painter, has been se-

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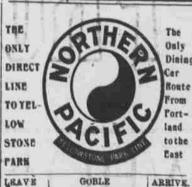
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