

Part 4-6 Pages

WASHINGTON, D. C., SUNDAY MORNING, FEBRUARY 13, 1921.

Making the United States Navy Into the World's Greatest Fighting Force

N accordance with the naval pro-

ing about \$38,000,000 each; ten scout ing about \$38,000,000 each; ten scout cruisers, costing approximately \$7,-500,000 each, and twelve fleet sub-marines, costing in the neighborhood of \$4,000,000 each. Some smaller craft are included in the program, but the above mentioned vessels comprise the

are included in the program, but the above mentioned vessels comprise the big features of the new work. These vessels will all be the very last word in naval architecture, arm-ament, speed and comfort. Nowhere in all the world will there be any tighting vessels that can equal or ex-cel them in any manner whatsoever. In designing and constructing these fighting marvels, the naval authorities have take advantage of every lesson taught by the world war. This neces-sarily required many changes from the original designs. The six battle cruisers were in-cluded in the three-year program au-thorized by the act of August 29, 1916, four of them to be begun ag soon as practicable. The beginning of the fifth was ordered in the act of March 4 1917. This vessel was as

soon as practicable. The beginning of the fifth was ordered in the act of March 4. 1917. This vessel was as-signed to the naval yard. Philad-l-phia, on March 16, 1917, and contracts were placed during April and May

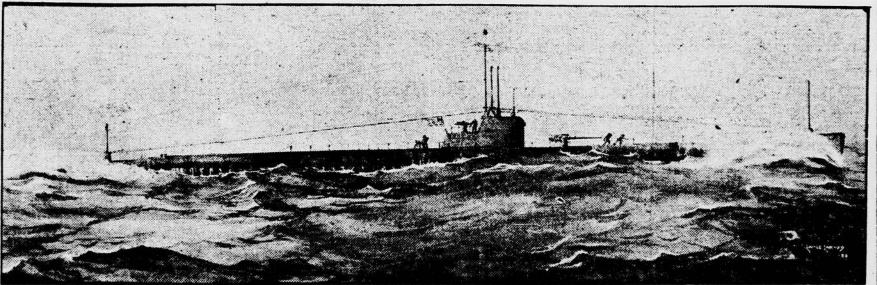
armistice, and it was then determined to reconsider their design, which had originally contemplated vessels of about 33.300 tons and thirty-five knots speed, so as to provide greater protection against attack and other chips

ost powerful electric drive instal gram adopted by Congress in 1916, the battle cruisers, 180,000 horsepower there will be added to the American Navy in the comparative near fu-ure six battle cruisers, costing about \$39,000,000 each; six battleships, cost-ing about \$29,000,000 each; six battleships, cost-irrespective of the type of motive

phia, on March 16, 1917, and contracts were placed during April and May for the first four vessels. * * * * OWING to the necessity for con-centrating the work of ship building upon destroyers and other smaller craft, no work on the battle cruisers was undertaken prior to the a city of 700,000 population. One of these cruisers, for instance, if an-chored in the Potomac river, would generate almost twice as much cur-rent as is required to take care of the demands of the whole city of Wash-ington. And the astonishing part of it is that these vessels not only gen-

chois speed, so as to provide greater would operate mity in generation against attack and other ships. The design of the electric installa-tion for the battle cruisers is under the direction of W. L. R. Emmet, con-sulting engineer of the General Elec-tric Company and pioneer in the de-velopment of the electric drive. Mr.

THE Construction of Vessels That Will Be the Very Last Word in Naval Architecture, Armament and Comfort-The Building Program-Interesting Comparisons of the Great Fighting Vessels-Masses of Steel and Armor That Go Through the Water at a Tremendous Rate of Speed-The Langley, a Unique Vessel-The New Fleet Submarines and Their Great Size.



TWELVE FLEET SUBMARINES OF THIS TYPE HAVE BEEN AUTHORIZED. THEY WILL COST ABOUT \$4,000,000 EACH.

face operations consists of two main with only one ewport News Shipbuilding Company; Massachusetts, at Bethlehem Ship-building Company, Quincy, Mass. The principal characteristics of The principal cha these battleships are: characteristics of

Length between perpendiculars Length over all Breadth, extreme Mean draft, about

speed, estimated

Armament:

Displacement, about Shaft horsepower, estimated

a powerful storage battery. It is estimated that the surface speed un-der full power will exceed twenty knots an hour and that nearly half Twelve 16-inch guns, in four turrets. Tweive to not gais. Four 3 inch gais (anti-aircraft). Two 21-inch submerged torpedo tubes. Two 21-inch submerges torpes will be oil All of these vessels will be oil the electric drive. Their that speed will be attainable in sub-merged condition. The fuel capacity of the ship is such as to provide for burners, with electric drive. Their complements will include about seva radius of action of approximately 10.000 miles, the vessel being entirely

enty officers and about 1.500 chief self-supporting during that time. Though an American built the first practical submarine and Americans petty officers, enlisted men and marines. Following are the names assigned

to the ten scout cruisers, construction of which was authorized by Congress in the 1916 building program. Mil-waukee, Cincinnati, Raleigh, Detroit, Richmond, Concord, Trenton, Marble-head and Memphis. have been foremost in its developmave been foremost in its develop-ment, the Diesel engine, which made possible the modern, ocean-going type of submersible, is the invention of a German. The German navy refused head and Memphis. The new scout cruisers are 555 feet to adopt the submarine so long as there was only gasoline to propel it on the surface. The U-1, forerunner of the long line of U-boats, which was 6 inches in length over all; breadth at water line, 55 feet; displacement. 7.500 tons; draft, 14 feet 3 inches: at water line, 55 feet; displacement, 7.500 tons; draft, 14 feet 3 inches; battery, twelve six-inch guns; two three-inch anti-aircraft guns, two three-pounders; saluting guns, two torpedo tubes (twin twenty-one inch); shaft horsepower, estimated 90,066 (turbine reduction gear), and speed about 33.7 knots.

The new fleet submarines will make all others look small. Just a few land startied all America by coming the Allantic and landing the fleet submarines. The busies of the piston of a gaso-transport of the starting of the starting of the starting of the starting of the submarines. The starting of the starting of the submarines three submarines will make all others look small. Just a few land startied all America by coming the Allantic and landing at the startied all America by coming the startied all A The new fleet submarines will make less dangerous. Il others look small. Just a few four strokes of Three out of every

over American sailors have the rep-utation 'of being well housed. The queerest looking boat of the entire Navy will be the Langley, for-merly known as the Jupiter. The Iangley (so named in honor of the isgned for the purpose of carrying aircraft at sea. All of the coal-handling gear has been removed from the boat and in its place is being erected a flying deck, which will be located about fifty-six feet above the stern, a length of about 525 feet and with a width amidships of about sixty-five feet. This deck will be facilitate landing. Catapults for projecting the planes to give then the necessary speed for flight will also be provided on this deck forwart and aft. An elevator will be installed for hysing deck, and around this elevator a palisade will be provided to form a wind-break for projection to the planes while being assembled.

a palisade will be provided to form a wind-break for protection to the planes while being assembled.

Great Britain, 1.588.442 tons, in a total of 538 ships. United States, 779.192 tons, in a total of 330 ships. Two cranes with large outreach. one on each side of the vessel, will be provided to hoist aircraft out of the of 330 ships. Japan, 340.596 tons. in a total of 43 ships. The tonnage and number of ships in the authorized building programs fol-

provided to hoist aircraft out of the water and land them on the hangar deck, which is the deck next below the flying deck. Beneath the flying deck traveling cranes will be pro-vided for hoisting planes out of the hold and for transferring them fore and aft to the shop spaces and eleva-tor. Shop facilities for repairing the planes will include machine shop, wing repairing shop, molding spaces, metal shop and various storeroems.

The authorized Field for the authorized Field for the authorized Field for the authorized Japan, 323,460 tons, in a total of 41 ships. In the case of Japan, 368,370 tons of 68 ships are projected and have been approved by the government, but so far as known no appropriations have been made for these ships. If com-pleted, Japan would have a total ton-nage of 691,830, with 109 ships. From this it is seen that if we commetal shop and various storerooms.

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THE hold spaces are being refitted for the stowage of aircraft and their accessories, aircraft ammuniion, including bombs and torpedoes: From this it is seen that if we com-plete our present program and Great Britain does not further increase her ship's ammunition. fuel oil, gasoline building program, and if Japan com-pletes her projected program for com-pletion in 1927, the tonnages would b

as follows Great Britain, 1.665.332. United States, 1.621.202. Janan 664.056

To this must be added 368.270 ten projected by Japan for completion 1927, but not yet authorized, making grand total for that country of 032,426 tons

Names of Months.

THE names of the twelve months carry the mind back to Roman imes. January comes from Janus. He was a Roman deity and was worshiped as the god of doors and gates He also presided over the opening of each day and had an important hand. so the old Romans believed, in the commencement of all human under takings. He was represented as be ing two-faced because he looked into the past and into the future. Hence when Julius Caesar rearranged the Roman calendar, which calendar we have inherited, he named the first month, or the "opening" month, in

honor of Janus—or, as he was called in Latin—Januarius. February has sometimes been called the 'fever month' because at that time of year the Roman marshes were thought to be especially unhealthy. But the fact is sthat February is not related to "febris," or fever, from which we get also the words "febril" and "febrifuge." The month of Feb-ruary was named from "februus," which means cleansing or explation, because at that period it was the hab-it of many Romans to hold a festival ally- unnealthy

of explation. March, before Julius Caesar made





sponding loss of speed. The act of July 1. 1918, directed the beginning of the sixth battle cruiser, which was assigned to the navy yard, Philadelphia, on the day following, under the same conditions as those which preceded it. Revised plans of the vessels were approved but the department and were issued but the department and were issued

generator operating four motors must drive the battle cruisers at nineteen

The state of the

and the second states

BOTH types of ships, in addition to by the department and were issued to the contractors and to the navy yard on September 5, 1919, providing the following characteristics:

eigth between perpendiculars Length over all Breadth, extreme . Mean draft, about

Sateen 6-inch guns. Four 3-inch (anti-aircraft).

Four 21-inch submerged torpedo tubes. Four 21-inch above-water torpedo tubes.

knots, two generators operating four motors at 19.25 knots and four gen-erators and eight motors at from 25 to full speed, or 33.6 knots. The vessels will be oil burners, with electric drives and auxiliaries. Accommodations will be provided for about sixty-five officers and 1.250 The battle cruisers will each be equipped with no less than four tur-bine generator units driven by steam

men. Construction ress, as follows: Lexington, at Bethlehem Ship-Lexington, at Bethlehem Shipress, as follows: Lexington, at Bethlehem Ship-building Corporation, Quincy, Mass.; Constellation, at Newport News Ship-building Company; Saratoga, at New York Shipbuilding Corporation, Cam-the turbine generators have a rating of 5.000 volts each and revolve at the tremendous speed of 1.770 revolutions **n**, N. J.; Ranger, at Newport News **ber** minute. **The** six battleships of the North

den, N. J.; Ranger, at Newport News Shipbuilding Company; Constitution, at navy yard, Phila-United States, at navy yard, Phila-telphia, Pa. So large will be these cruisers that 145 men, 6 feet in height, lying in a row head to feet, would represent row head to feet would represent their length. Twenty-one five-foot persons, lying in a row, would repre-sent the extreme width. When the average Washingtonian, and the hun-dreds of thousands of visitors to the Vational Capital gaze at the Wash.

National Capital gaze at the Washington Monument, or walk up and down its many steps, they get the im pression that it is one of the biggest things in existence. In this assump-tion, however, they are considerably mistaken. If one of these new battle cruisers could be stood on its nose alongside of the Washington Monunt, the other end of it would tower 319 feet above the apex.

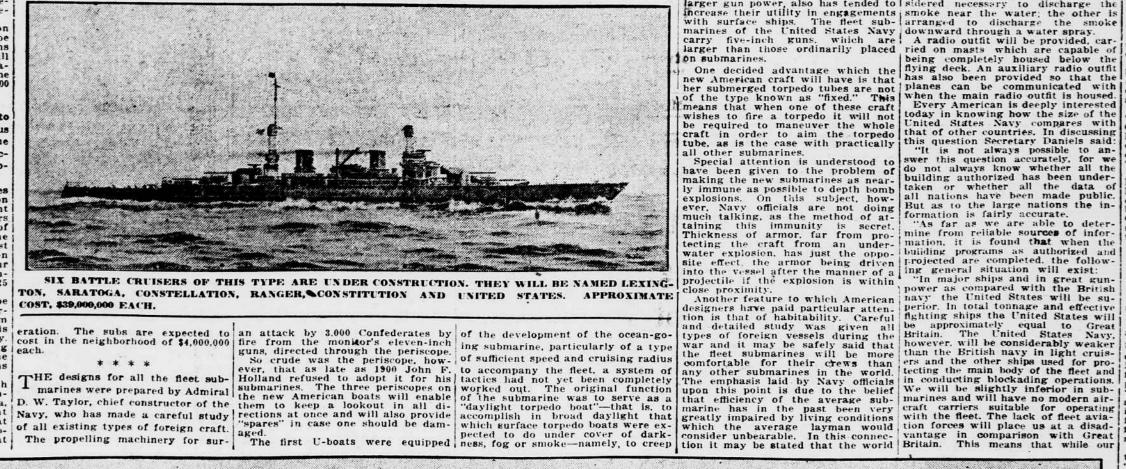
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THE Capitol of the United States is generally looked upon as a building of monster dimensions. Nevertheless, if it were possible to do a little land cruising with one of these new boats and the captain dropped enchor on the plaza in front of the Capitol, it would be seen that the Capitol was 122 feet shorter than the

The electrical operation of these six battle cruisers will represent, accord-ing to Rear Admiral R. S. Griffin, chief, of the bureau of engineering, "the greatest horsepower per shaft that has ever been projected in any marine installation, irrespective of the type

of motive power." Speaking of these war vessels and of the six new battleships, also part of the program, and emphasizing what this means in making the United States pre-eminent among all nations in marine engineering, Admiral Grif. said:

case of the new battleships, the installations represent an increase of



of the type known as "fixed." This means that when one of these craft wishes to fire a torpedo it will not be required to maneuver the whole craft in order to aim the torpedo tube, as is the case with practically all other submarines. Special attention is understood to have been given to the problem of making the new submarines as near-ly immune as possible to depth bomb explosions. On this subject, how-aver Naw officials are not doing anton shave been made public.

making the new submarines as near-ly immune as possible to depth bomb explosions. On this subject, how-ever, Navy officials are not doing

over the calendar, was the first month of the Roman year, and, having such a prominent place in the calendar, it was honored with the name of one of THE LANGLEY, AN AIRCRAFT CARRIER, ONE OF THE ODDEST LOOKING VESSELS OF THE NEW FLEET. was honored with the name of one of the most prominent Roman gods. Martius, or Mars, the god of war. April is thought to be a contraction of "aprills," a Latin word meaning "to open," and this being representative, erhaps of the opening of buds and he beginning of the growing season. May comes from the goddess Mala, who ruled over the growth of vegeta-ion in general, very much as Mistress Deres ruled over the growth of those grains which because of "Ceres" we attempted a quick "porpoise dive" up to the surface and down again in an effort to locate her enemy. This time she was given a broadside and a shell tore a great hole through her deck. Owing to the comparative recency Wing to the comparative recency Owing to the comparative recency Owing to the comparative recency Owing to the comparative recency The deck. One decided advantage which the resubmerged torpedo tubes are not of the type known as "fixed." This means that when one of thes craft wishes to fire a torpedo it will not the resubmerged torpedo it will not to the type known as "fixed." This when the main radio outfit is housed. Every American is deeply interested today in knowing how the size of the torpedo se carified and the greater power of the submerged torpedo tubes are not of the type known as "fixed." This when the main radio outfit is housed. Every American is deeply interested today in knowing how the size of the torpedo se the torpedo it will not to the type known as "fixed." This when the main radio outfit is housed. grains which because of "Ceres" we

"all "cereals." June, which had been the fourth month, had its name changed in honor

of Junius. July, which for many centuries had been called Quintilis, or fifth month (counting from March), had its name changed by order of Julius Caesar as a memorial to him.

a memorial to him. August was called by the Romans "Sextilis" or sixth month until August Caesar was crowned Emperor of Rome, when the Roman senate direct-ed that the name of the month be changed to Augustus, hence we get "August"

"August. September, October, November and December retain the very ancient Roman names signifying the seventh, eighth, ninth and tenth months, though because of the manner in which Julius Caesar altered the calendar they are But as to the large nations the in-formation is fairly accurate. now really the ninth, tenth, eleventh and

twelfth months.

'About "Normalcy."

PRESIDENT-ELECT HARDING did not coin the word "normalcy." though he brought that form of the world "normal" into public notice and made it familiar. It may be found in more than one of the older dictionaries, and in Davies & Peck's Mathematical Dictionary one will find this: "The co-ordinates of the Mathematical Dictionary one will find this: "The co-ordinates of the point of contact and normalcy." "Normalcy" may be found even in some of the later dictionaries, where it is defined as the quality, state or

fact of being normal. You also will find the words "normality." "nor-malization" and "normalize." This brings up some interesting things about the much-used word "normal." Back in the days of the old Bomans classic carbenters and "normal." Back in the days of the old Romans classic carpenters and masons used a form of that tool which we call a "square." They used it, as our carpenters and masons do, for testing or proving the trueness of their work. The Roman name for that tool was "norma." Soon "norma" came to stand for a rule or pattern or a standard of work. From that the Latins made the word "northe Latins made the word "nor-malis," which meant that which was in accordance with rule. Centuries in accordance with rule. Centuries ago the English language took over the word "norma" and changed it to "norm," meaning by it a right and proper standard, and out of the Roman word "normalis" we made the word "normal," which stands for that which conforms to a certain standard established by law or usage.

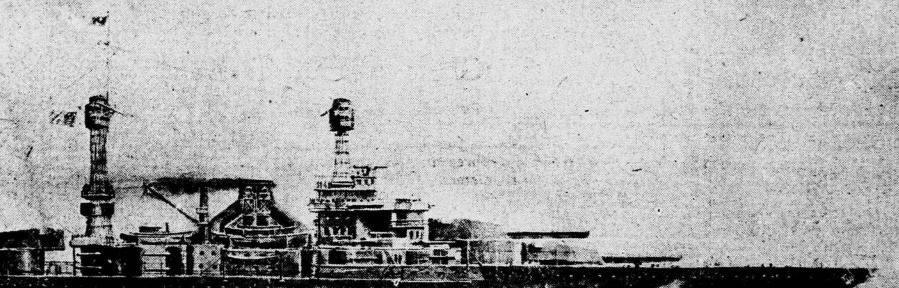
Shameless Adolf.

A N Army officer was talking about Germany's latest attempt to get out of . treaty obligations.

"The war," he said, "has taught the Germans nothing. They're as bad as they used to be. They're as shameless, 100. 1

"They're like Adolf, a handsome youth of twenty-three years, who was paying court to the rich sixtyyear-old widow, Mrs. John Copperqueen.

queen. "'Look here, Adolf.' a girl said to him reproachfully one evening, 'you wouldn't marry Mrs, John Copper-queen for her money, would you?" "But how else can I get it? maid Adolf."



SIX BATTLESHIPS OF THIS NORTH CAROLINA CLASS ARE UNDER CONSTRUCTION, COSTING APPROXIMATELY \$38,000,000 EACH. THEY WILL BE NAMED SOUTH DAKOTA, INDIANA, MONTANA, NORTH CAROLINA IOWA AND MASSACHUSETTS