

THE NAVY WIRELESS SCHOOL.

BY WALTER L. BEANLEY.

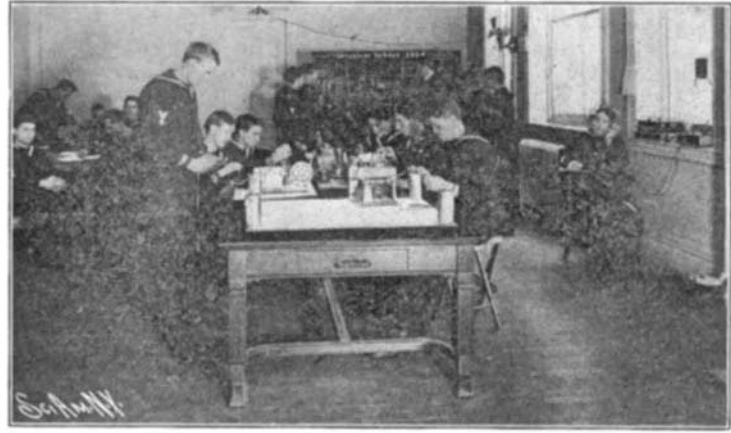
The latest department of instruction in the United States navy is the wireless school in the Brooklyn navy yard. The practical training of young sailor electricians for this new and important branch of the service is the outcome of the rapid development and the extensive application to be made by the navy of this subtle system of communication, both on battleships and coast stations.

The wireless school is quartered in the second story of the Bureau of

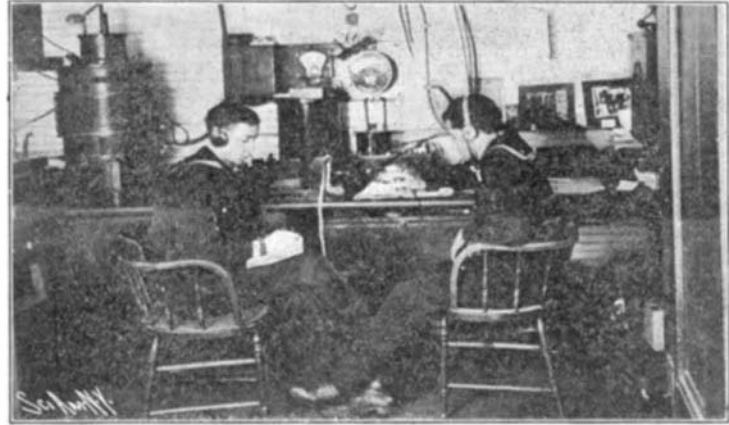
Equipment building in the Brooklyn navy yard, and is housed on board the receiving ship "Hancock." Lieut. W. A. Edgar, U. S. N., is executive officer of the electrical and wireless school. Chief Electrician Bean, in charge of the navy yard wireless station, is the main instructor, and Chief Electrician Delany is assistant. The class now being drilled have come up from the electrical class located below, where for three months they have been put through a course of electricity in general, which is especially applicable to ship and station requirements, where they are destined to be sent for future duty. In the general electrical class, actual work is given in the handling of electrical machinery, dynamos, and the manipulating of the electrical switchboard, which regulates the interior communication of a modern battleship. A facsimile of those used on a man-of-war is installed in the room, and sections are daily drilled in the operating of the numerous switches, etc. After twelve weeks' preliminary work in general electrical school, they receive their finishing touches by going through a month's practical instruction in the wireless class. After completing four months of thorough and systematic instruction, having obtained in this interval a fair knowledge of adjusting and manipulating the apparatus, they are prepared to graduate. An interesting and picturesque sight is afforded by a peep into Uncle Sam's wireless schoolroom. Passing down the long corridor of the Equipment Building, one hears a series of loud buzzing sounds. On entering the spacious classroom, the visitor is plunged into a veritable beehive community of bustle and sound. Seated around three tables are some twenty-five bright-appearing young sailors, each deeply absorbed in mastering the wireless process. For a limited time each boy is drilled at the sending key; the remainder at the table with pen and paper are engaged in receiving and translating the sounds of the buzzer, the key of the latter being connected to a small battery. The wireless navy code alphabet is made up of a series of dots and dashes of relative length. These are indicated by buzzes received in the ear 'phone, which must be accurately learned by the beginner. They are also printed by the automatic Morse recorder on a tape line. Receiving by ear is, however, the most speedy, and the method generally employed in active service by operators on ship and shore stations.



Class Observing Aerial Wires for Receiving and Sending on a Battleship.



Navy Wireless Class at Work.



Receiving Wireless Messages at Brooklyn Navy Yard.

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Fridays are examination days, when the instructors test the ability of each individual of the class, and they are marked and rated accordingly. Ten to twelve

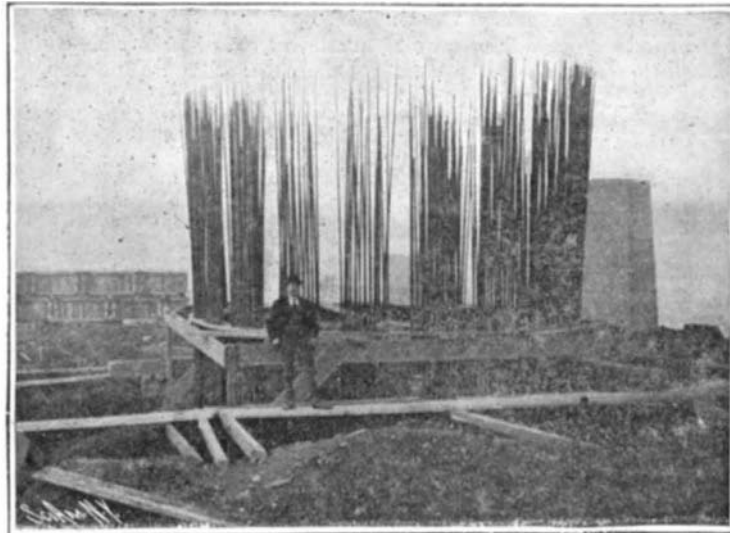
of them, to remote localities, where they must depend entirely upon their own technical skill in the case, and making repairs of any breakdown of their apparatus, which is most likely to occur. A novel sight to see is a section of the class high aloft on one of the fighting masts of some of the battleships now at the navy yard, being taken up by the wireless officer for an object lesson in examining the method of arranging the aerial wires.

During the thirty-day term, through constant application and daily practice of six hours, and through the scientific and systematic drilling of Chiefs Bean and Delany, the class of wireless aspirants have been so perfected in the art, that they are qualified to graduate, and are competent to enter any ship or shore station of the navy, and to flash a message from one to two hundred miles distance, and receive and translate the same. In order to get a fine body of operators, the government offers liberal pay inducements, including rations, far in excess of the remuneration given to ordinary seamen recruits. The latter receive only \$16 per month, while the electrical boy, who enlists and passes the preliminary examination in electricity, is rated as third-class electrician, at \$30 per month. Advancement is certain, if accompanied by conscientious and ambitious labor, up to second class, bringing \$40, and thence to first class, at \$50 per month. The highest rating of chief electrician amounts to \$70. The high efficiency of government wireless telegraphs is strikingly illustrated by the Cape Nome and Fort St. Michael stations, which Gen. A. W. Greely, Chief Signal Officer, states transmit 5,000 words easily in an afternoon across the 107 miles of waterway.

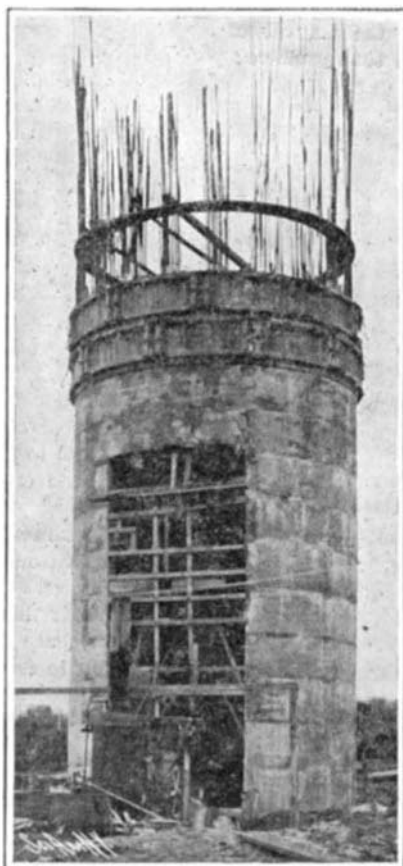
TALLEST CONCRETE CHIMNEY EVER CONSTRUCTED.

Tacoma, Wash., claims to include among its objects of interest the loftiest concrete chimney in the world. It belongs to the Tacoma Smelter Company, and has just been completed.

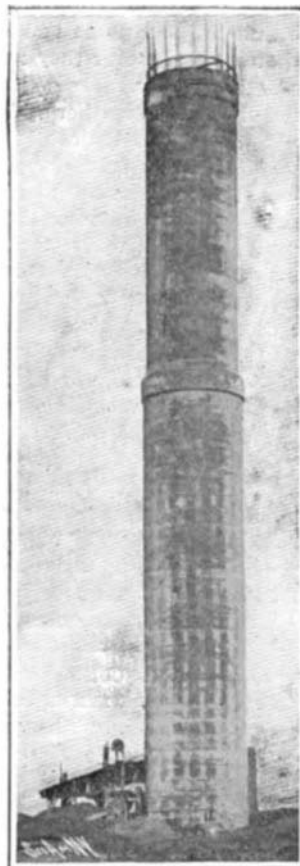
From the base of the foundation to the top of the chimney is 307 feet 6 3/4 inches, and the cost was \$28,000. The stack was built to carry away the poisonous fumes from the smelting works at Tacoma. In its construction 1,225 barrels of cement were used, in addition to which the structure contains 105,000 pounds of T iron, 705 cubic yards of sand, and 231 cubic yards of gravel. Towering more than one hundred yards



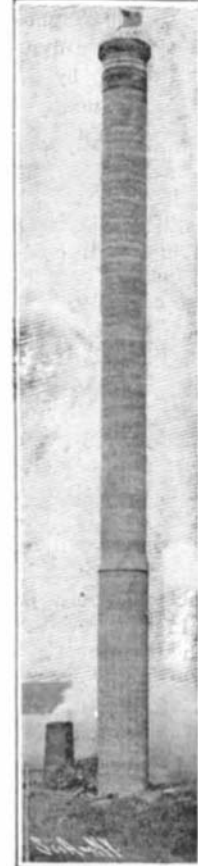
Foundation Completed. First Shell in Place.



On February 21, 1905, the Height was 39 Feet.



On March 28, 1905, the Chimney Had Been Built up to 156 Feet.



The Chimney on May 28, 1905. 307 Feet 6 3/4 Inches.

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