

DAMAGE BY SPANISH SHELLS ON THE CRUISER "BROOKLYN."

Whatever may be said about Admiral Schley as a tactician, there is one significant fact in the naval campaign in the West Indies which his detractors would do well to keep in mind, a fact of a kind which is popularly supposed to bring more glory to him whom it concerns than do any other of the happenings of battle.

Admiral Schley's ship, the "Brooklyn," came out of the campaign carrying more of the scars of battle than were left by the war upon any other ship in the whole American navy. After the Santiago fight she showed more shot holes than the "Oregon," "Indiana," "Iowa," "Texas," "Gloucester," and "New York" combined, and in the number of separate hits recorded she was exceeded by only one of the Spanish cruisers, the "Almirante Oquendo."

When the Spanish fleet left the harbor and turned to the westward, the "Brooklyn" was the only ship that stood directly in their way, and, in accordance with a prearranged plan, the fire of the Spaniards was concentrated upon her in the hope of

"winging" our fastest vessel, and so enabling the fleet to escape. She was thus exposed to the united attack of the Spanish ships at the only period of the fight when they seemed to have had the range of our vessels; that is to say, during the first exchange of shots. For it is a curious and very significant fact that when our men went aboard the Spanish cruisers after the surrender the sights on their guns were found to be still set at the 4,000 to 5,000 yards range at which the enemy opened fire. It is evident that the excitable Spanish gunners completely lost their heads, and failed to make the necessary changes in the sights as the ships closed in on each other.

This error on the part of the gunners, coupled with their own statement that the "Brooklyn" was the object of their first and concentrated attack, goes far to explain the severe punishment of this vessel compared with the comparative immunity of the other ships of our fleet. When Schley saw the "Vizcaya" alter her course so as to head directly for his ship, he naturally supposed that it was the intention of the Spaniards to close in and sink him with the ram (a matter easy of accomplishment where it is a case of four vessels against one), and with excellent judgment he swung his vessel to starboard, making a complete half turn, and took up a position for a running fight down the coast with the flying Spanish vessels.

Now, if the reader who is interested in the subject will turn to a table published in our issue of September 10, in which we analyzed the gun fire of our ships at Santiago, he will find that in the larger rapid-fire calibers the greatest number of hits was made by the 5-inch gun, the "Teresa" being hit by 3, the "Oquendo" by 3, the "Colon" by 2, and the "Vizcaya" by 7 5-inch shells. As the "Brooklyn" was the only ship that carried this caliber, these hits must have been made by her gunners.

This, then, is the record of Admiral Schley's ship in that four hour engagement: She was the first under fire, she was the leading ship in the chase, she made the best practice with her guns, and she carried more of the honorable scars of battle out of the fight than were to be found on all the other ships of the squadron combined.

We think that the gallant admiral may well rest on his laurels as a fighter, and treat the criticisms of his tactics with the dignified silence which has characterized his bearing throughout the war.

The accompanying illustration of a group of mutilated plates that were cut out of the ship at the Brooklyn navy yard speaks for itself. Some of the holes were made by the shells themselves at the point where they first struck the ship and others were made by the flying fragments after the shells exploded. The general testimony of our officers is that the Spanish shells burst with great efficiency, flying into numerous frag-

ments, each of which cut its way destructively through the partitions, bulkheads, etc., of our ships. Our own shells, owing to the excellent quality of the steel, did not burst effectively, that is to say, the steel was too strong for the powder to fracture it into small pieces. This will be remedied in the future.

The fragments numbered 11, 15, 16, 18, 19, and 20 were taken out of the smokestack casing on the berth deck. This casing is built of 1/4-inch steel and extends from the protective to the berth deck. In the event of the protective deck being flooded, it would prevent the water from flowing down into the boiler room. The holes were made by the fragments of a 4.7 or a 6-inch shell which passed through the side of the ship and burst on the slope of the protective deck, the fragments

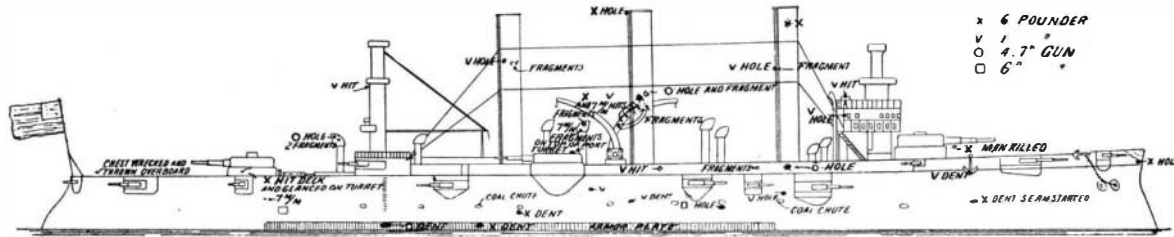
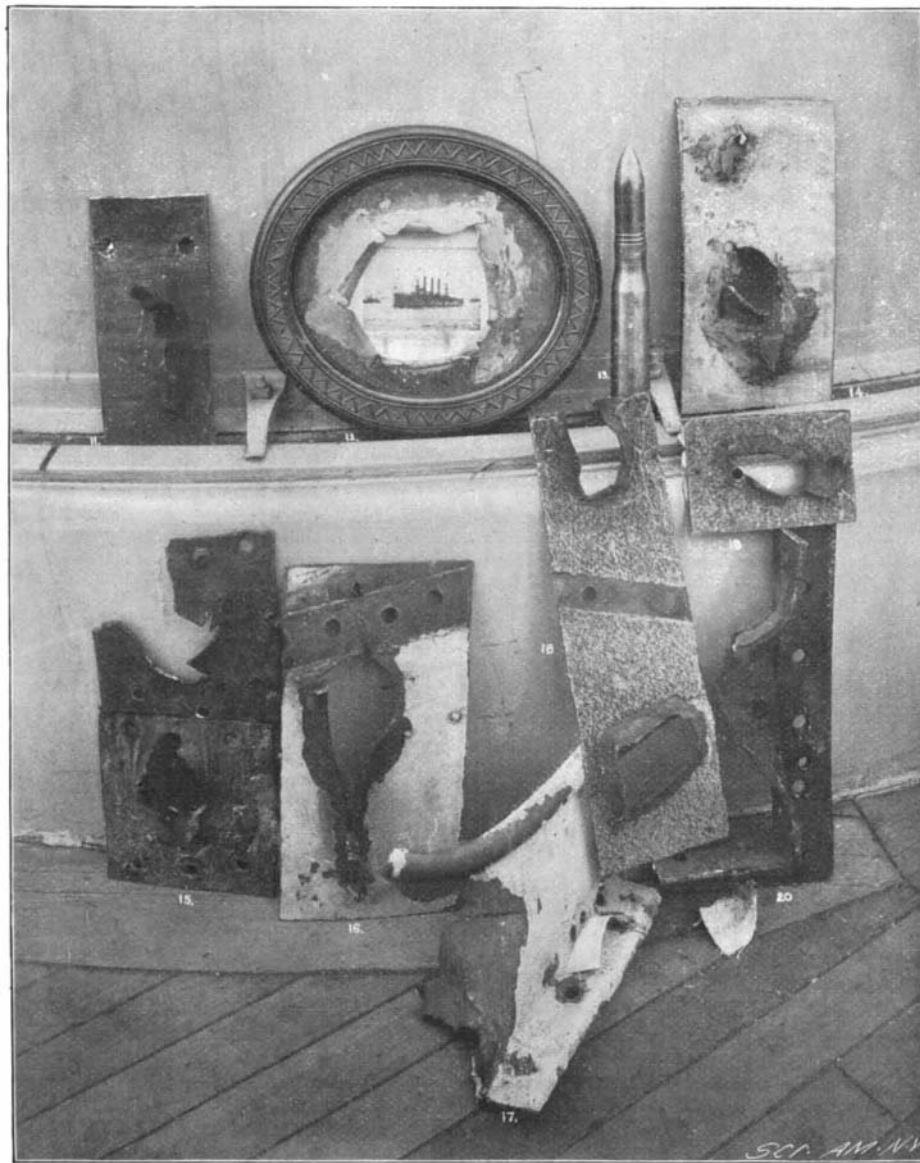


DIAGRAM SHOWING LOCATION AND NUMBER OF HITS RECEIVED BY THE "BROOKLYN" IN THE SANTIAGO ENGAGEMENT.

being deflected upward and tearing their way through the casing.

No. 12 is a portion of an engine room ventilator which stood on the quarter deck. No. 14 shows the effect of a little 6-pounder shell which struck and passed through the 3/8-inch plates of the hammock netting. No. 17 is a portion of one of the beams of the berth deck on the

About half way up this corridor is the entrance to the Vatican library, which was built by the architect Fontana, under Sixtus V. Pope Nicholas V. was the founder of the Vatican library, which has been increased by many popes. The libraries of the Duke of Urbino, of the Elector Palatine, of Christina of Sweden, of the family Ottoboni, and others, have been added to it. It contains 80,000 printed volumes and 24,000 MSS., of which 5,000 are in Greek, 16,000 in Latin, and 3,000 in the Oriental languages. Partial catalogues of this great store of learning have been published by Asemani, Marini, Mai, and other librarians. The museum or collection of works of art, mostly of ancient sculpture, was begun by Clement XIII. and Clement XIV., and greatly increased by Pius VI., who was a man of taste, and who gave it the name of "Museo Pio Clementino." It was illustrated by Gio. Batta Visconti and his son, Ennio L. Visconti, in seven volumes folio, with plates, Rome, 1782. Pius VII., during his troubled pontificate, began a new collection, to which has been given the name of "Museo Chiaramonti." The two together, which are distributed along the court, garden and palace of Belvedere, constitute the richest museum in Europe. Another and more extensive garden belonging to the Pope is annexed to the Vatican palace, and extends along the brow of the hill.—The Architect.



12, engine room ventilator; 13, Spanish 6-pounder shell from "Reina Mercedes"; 14, plate from hammock netting, penetrated by 6-pounder shell; 17, portion of deck beam on berth deck; 11, 15, 16, 18, 19, 20, smokestack casing on berth deck, pierced by fragments of 4.7-inch shell.

EFFECT OF SPANISH SHELLS UPON THE "BROOKLYN."

starboard side of the ship, the metal of which was from 3/8 to 1/2 inch in thickness.

The "Brooklyn" was placed in dry dock soon after her arrival at New York, where all the injured plates and other scars of active service were removed or else covered up by a new coat of paint. When she left the yard not a trace of the 47 wounds and scratches she received could be noticed by the casual observer.

THE Spanish vessels "Isla de Cuba" and "Isla de Luzon," sunk in the battle of Manila on May 1, have been raised and will be put into serviceable condition. The "Isla de Cuba," a vessel of 1,030 tons displacement and 2,200 indicated horse power, reached Hong Kong under her own steam.

The Vatican.

The assemblage of buildings called by the name of "The Vatican," and which extends in an oblong, irregular mass north of St. Peter's as far as the town walls, consists mainly of (1) the Papal palace, (2) the court and garden of Belvedere, (3) the Library, (4) the Museum. The Papal palace contains, among other remarkable objects, the Sistine and Pauline chapels, painted by Michelangelo. The Sistine Chapel contains the painting of the "Last Judgment;" the four "stanze," or apartments, painted by Raphael; and the "logge," or open galleries, painted by Raphael's pupils under his direction. There are numerous other apartments, with paintings and other objects worthy of notice, which are described in the guide-

books. The principal staircase, made by Bernini, is a splendid work of art. The Vatican is said to contain altogether eight great staircases, more than twenty courts, twelve great halls, and several thousand apartments large and small. A corridor, about 1,000 feet long, joins the Papal palace to the building called "Belvedere," which serves as a museum.

The Current Supplement.

The current SUPPLEMENT contains many articles of more than usual interest. "A Design for an Electric Launch Motor," by C. T. Child, is an important paper, accompanied by nineteen illustrations and working drawings. With the aid of these working drawings any mechanic can make and fit up an electric motor for a launch. "The Tactical Applicability of the Maxim Machine Gun" is an interesting and important paper by Lieut.-Gen. A. v. Boguslawski, of the German army. "The Saint Gobain Plate Glass Manufactory" describes a great French industry. "Sodor" describes and illustrates a siphon for the instantaneous preparation of soda water. Sir Joseph Norman Lockyer's "A Short History of Scientific Instruction" is concluded.

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