THE DOWNFALL OF SPAIN

NAVAL HISTORY

OF

THE SPANISH-AMERICAN WAR

Frontispiece.

ADMIRAL DEWEY.

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THE
DOWNFALL OF SPAIN

NAVAL HISTORY
OF
THE SPANISH-AMERICAN WAR

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WITH ILLUSTRATIONS, MAPS, AND BATTLE PLANS

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PREFACE

INNUMERABLE works have already been written upon the Spanish-American War. I can only plead as my excuse for adding one to the number, that the present work was almost completed in the autumn of 1898, before this flood of books and articles had issued from the press. It was, however, delayed from time to time by the necessity of re-writing first this and then that portion, in the light of fresh evidence. Thus the book has been written twice—in some chapters thrice—over.

The interest of this war lies in the complete information which we possess on the American side. The United States Navy Department gives to the world freely what it knows, and does not hide its secrets away in confidential reports. On no other naval war as yet waged have we such a wealth of evidence; and hence the history of this three months' struggle is far more instructive than might a year ago have been expected. That a free and intelligent nation gains by publishing the facts cannot be disputed. The most insignificant naval incidents seem to be followed with interest by the press

and public of the United States. We can well understand this interest. If the American Army was unprepared, the Navy was ready when the struggle came; it was free from political jobbery; it did its work splendidly; and its fine achievements have endeared it to the heart of the people.

And, whilst the spectacle of our kinsmen winning such brilliant victories upon the element which we have always claimed, rightly or wrongly, as our own, appealed to us as a nation in a peculiar degree, we can yet feel deep sympathy with and compassion for Spain. There was infinite tragedy in the spectacle of a people going to certain defeat, because national pride would not permit it to abandon its colonies at the dictate of a stronger Power. We can best learn what the thoughts of Spaniards were by interrogating our own hearts as to what ours would have been under such circumstances. There is something pitiful and moving in the very poverty and resourcelessness of that unhappy squadron which the council of Spanish admirals sent to perish on the far-off beaches of Cuba; something that appeals to us with especial force in the useless heroism and devotion of the weak, ill-fed garrison of Santiago.

With her mediæval organisation and eighteenth-century methods, Spain was, indeed, bound to succumb. In this hour of her defeat she produced not a man. What credit in the war was won by her sons, was won by her soldiers and seamen, not by her generals and admirals.

Cervera was personally brave; he was chivalrous to a degree; and he was badly used by the politicians, yet he cannot be described as a great or commanding figure.

As an Englishman, who will hardly be accused of any political bias in American affairs, I cannot refrain from expressing surprise at the unjust and cruel attacks which have been made in the American press upon Admiral Sampson, or from expressing admiration for the dignity, self-restraint, and nobility of heart with which he has borne himself under them. To Englishmen his ceaseless vigilance, his wise dispositions, his correct and accurate judgment, and his high courage seem to have deserved another recompense. And that I believe is the opinion of all Americans worthy the name.

In this volume are incorporated small portions of various articles which I have written upon the war for the *National Review*, *United Service Magazine*, *Harper's Magazine*, *Army and Navy Journal* of New York, and others, but in no case have the articles from these sources been incorporated whole. They have been re-written and re-cast, since much in them has been affected by later evidence. The description of the American ships is taken from *Ironclads in Action*, edition 5, corrected and brought up to date. The loss of the *Maine*, which is a naval incident of the utmost interest, has been included as it logically should be in a history of the naval war.

My object being to print matter which shall be useful to the naval student, I have, as far as possible, given

important orders, dispositions, and descriptions in the words of the first-hand authorities—irritating though such interpolations may seem to some who hold that the writer should tell his own story. Some passages in translations, prepared for the American Navy Department, I have altered to make the English more intelligible, but without affecting the sense.

I have to thank Mr. Hearst of the New York *Journal* for his great kindness in permitting me to reproduce as many as I liked of his most interesting and valuable photographs, taken during the war. The United States' Navy Department and the *Scientific American* have also kindly allowed the reproduction of illustrations of which they hold the copyright.

H. W. WILSON.

144, Elgin Avenue, London, W.

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THE DOWNFALL OF SPAIN

NAVAL HISTORY OF THE SPANISH-AMERICAN WAR

CHAPTER I

THE DESTRUCTION OF THE *MAINE*

In December 1897 the growing tension between Spain and the United States inspired the American Government with anxiety for the safety of its numerous citizens in Havana.[1] Accordingly the second-class battleship *Maine*, Captain C. D. Sigsbee, was ordered south from Norfolk to Key West.[2] Captain Sigsbee was

[1] *Century* (Captain Sigsbee), 57. 674, etc., etc. *Destruction of United States Battleship Maine.* Report of Court of Inquiry (cited as *Inquiry*), Washington, 1898. Files of *Sun* and *Army and Navy Journal.*

[2] The *Maine* was a twin-screw ship of 6682 tons. On the water-line she had a belt of armour six to eleven inches thick and 180 feet long. She had two turrets with 8-inch armour, resting upon redoubts of 10 to 12-inch armour, and these again stood upon the protective deck, which was from two to four inches thick. The turrets were disposed *en échelon*, the forward one to starboard and the after one to port. In each was mounted a pair of 10-inch guns. Six 6-inch guns were mounted on the ship's superstructure. The boilers were eight in number, placed in two boiler-rooms. There were two masts and two funnels. The ship was 318 feet long, fifty-seven feet in beam, and drew twenty-one and a half feet. On trial she steamed eighteen knots.

informed that in case of serious disturbances at Havana, he was to take his ship to that place and protect American interests. General Lee, the United States Consul-General for Cuba, was to give the word when he considered the presence of the ship necessary. Such a visit, even where strained relations exist, is in no way contrary to international usage, though under the circumstances the despatch of so exceedingly powerful a ship as the *Maine* to the capital of Cuba had in it something very like a note of menace.

On January 15, 1898, and the following days there were riots at Havana, accompanied by hostile demonstrations on the part of the Spanish volunteers against the United States. On the 24th Consul-General Lee was informed by the American Government that it was intended to "resume the friendly naval visits at Cuban ports," and was told that the *Maine* would reach Havana in a day or two. Armed with the telegram, Consul Lee interviewed the Spanish authorities on the afternoon of the 24th. They not unnaturally protested, insisting that the United States must have ulterior objects in sending the ship. They asked that, as delay did not matter, if the visit was really for friendly purposes, the despatch of the *Maine* should be postponed until Madrid could be consulted. General Lee had himself, before this interview, telegraphed that the visit should not take place for six or seven days, to allow the excitement in the town to cool down. But the ship had already started, leaving Key West on the evening of the 24th; and even if the authorities at Washington had desired to delay her, it is doubtful whether they could have succeeded in doing so.

About 11 a.m. of the 25th the *Maine* arrived off the entrance to Havana harbour. A Spanish pilot was forthwith sent off to her; he brought her in, and conducted her to Buoy No. 4. It was noted, when her bearings had been accurately determined, that Buoy No. 4 was not quite in its charted position, and it was afterwards stated by Captain Stevens, of the American mail steamer, *City of Washington*, that he had never known a man-of-war to be anchored at this buoy, and that it was the least used one in the harbour.[1] The *Maine* was placed 250 yards from the Spanish cruiser ALFONSO XII, and 400 yards from the German warship *Gneisenau*. Subsequently other ships arrived, and were moored at distances of over 200 yards from her. Room had, of course, to be given for the vessels to swing at their buoys, so that there was nothing suspicious in this. The American officers maintained fairly friendly relations with the Autonomist Government, then recently established at Havana, but were very coldly received by the Spanish officers. Only five or six of these visited the ship, and they showed no cordiality.

The *Maine* had apparently been selected for this mission because of the tact and experience of Captain Sigsbee and the excellent discipline of her crew. As relations between Spain and the United States were exceedingly strained—almost to the point of rupture—great precautions were very rightly taken on board her to prevent an external attack or surprise. Extra sentries

[1] This was hearsay evidence, given by Captain Sigsbee. Captain Stevens was examined by the Court, but not on this point, which seems extraordinary.

were placed on the forecastle and poop with loaded rifles; one-fourth of the watch was kept on deck ready to go to quarters, and a small quantity of ammunition for the quick-firers was stored in the chart-house. Steam was kept up to work the turret guns in case they should be required. The sentries were directed to warn off all unauthorised boats approaching the ship. To prevent infernal machines being placed on board by visitors, all persons who came up the ship's side were carefully watched, especially when they had packages; they were accompanied below, if they went below; and after they had gone the places where they had been were examined. Extreme vigilance was required of the ship's company.

A few days after the *Maine's* arrival a proclamation was circulated—not, of course, by the Spanish authorities—calling upon Spaniards to avenge the insult of the Yankees in sending a man-of-war of their "rotten squadron" to Havana, and concluding, "Death to the Americans!" There was also on one occasion a hostile demonstration by a crowd crossing the harbour in a ferry-boat. Such incidents at least showed the necessity of caution. It was obviously impossible to sweep the harbour about the ship for mines, nor could the search-lights of the *Maine* be employed at night, as this would have been an act calculated to offend the Spanish authorities. Captain Sigsbee notes that in the harbour the *Maine* looked much bigger than her real size; she seemed enormous, and the populace believed that she was the finest vessel in the American Navy.

On the night of February 15, when the disaster occurred, the Spanish ships ALFONSO XII and LEGAZPI

were moored to starboard, about 200 or 250 yards away from the *Maine;* and the American mail steamer *City of Washington*, Captain Stevens, about 200 yards astern. The night was a calm and still one, very dark. All the evening the *Maine* had swung steadily in one direction, and that a somewhat unusual direction. It was not, however, the only time that she had headed thus.[1] What is perhaps significant is, that her position on this particular night and at this particular hour was precisely that which she would have occupied to engage the shore batteries had she been inside the harbour during war. The sentries noticed no boats, and there had been nothing to cause any suspicion of foul play. The officer of the watch was on deck; Captain Sigsbee was in his cabin letter-writing; the other officers were either sitting on deck, in the ward-room, or in their cabins; the crew, 328 in number, were all on board, and except the watch on deck had turned in; at the starboard boom rode one of the ship's steam launches, with steam up and a watch on board.

At 9.40 the catastrophe occurred. Observers, sitting on deck in the *City of Washington*, heard what sounded like the noise of a shot. They looked, and saw the *Maine's* bow, as it seemed to them, rise a little out of the water. An instant later there came a terrible rush of fire and smoke, accompanied by an appalling and prolonged concussion from rather forward of the ship's centre. The middle of the ship seemed to fly back, and as darkness again settled over the water she sank. There appears to have been some shock conveyed by

[1] *Inquiry*, 115.

the water at the first explosion, since the captain of a British vessel in the harbour deposed that he "thought his ship had been collided with." All the observers outside the *Maine* who gave evidence agreed on the two explosions, the first sounding like a gun-shot.

The evidence of the survivors on board is, as we should expect, much more confused. In such moments of extreme strain the mind is peculiarly apt to accept inaccurate impressions, and its estimates of time cannot be accepted as correct. Under the stimulant of a great shock an instant becomes many seconds or even minutes; acts become sub-conscious, and men afterwards as little remember what they felt or did, as a sleep-walker after waking knows what he has done in his sleep. This explains many discrepancies in the evidence of obviously honest witnesses. Moreover, the shock of the second explosion (if there were two) was so violent as to exert a stunning and numbing effect upon the brain in many of the men on board. To Captain Sigsbee it seemed that there was one prolonged, bursting, crashing roar, followed by the metallic sound of falling debris. To Lieutenant-Commander Wainwright there only appeared one very heavy shock, which half-stunned him by its violence. He noticed no list till after the explosion. Chaplain Chidwick speaks of one loud report, after which "everything became dark." Lieutenant Holman felt first a "low grumbling," and then a "heavy booming explosion." His first thought was that the ship had been destroyed by a very heavy mine. He noticed no list of the ship. Cadet Cluverius experienced a slight shock like the concussion of a 6-pounder gun, followed by a very great

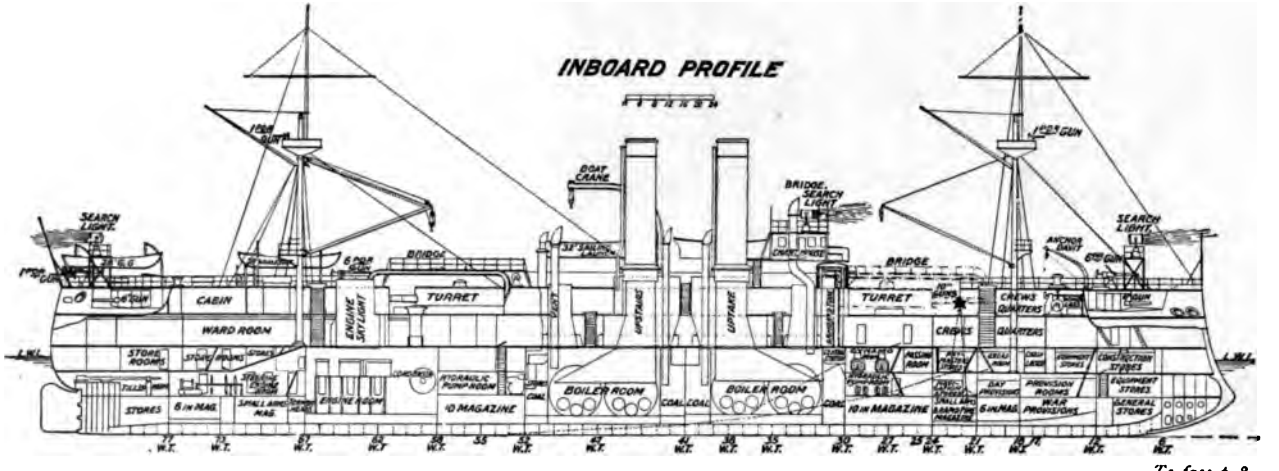
vibration and a very heavy shock. Cadet Holden, standing by the side of Commander Wainwright at the time of the explosion, felt first a shock of considerable force, and then a terrible and most violent explosion. At the first shock the ship was lifted and thrown considerably over to starboard. Chief-Engineer Howell felt a shock, and then a continued series of convulsions, accompanied by a noise like the rending of the ship in pieces, and followed by a tremendous crash. After the explosions came a list to port. Paymaster Ray remembered only one violent upheaval, and this was also the experience of Surgeon Henneberger. The surgeon observed also a list to port. Lieutenant Blow felt first the shock of a gun—of a very heavy gun—and then a terrific concussion. Lieutenant Jungen was conscious, not of an explosion, but of a dull roar followed by a terrific crash. Lieutenant Catlin of the Marines felt only one violent shock, at which all the lights went out. Cadet Bronson first felt something like the shock of a salute—or of a very small gun—and thereafter, or simultaneously, a tremendous shock. Cadet Boyd remembered a "crashing booming," and was half-stunned. It was preceded by a shock which resembled that of the coupling up of "a large freight train." This would exactly agree with the sensation caused by "a 10-inch gun fired close aboard," with which Lieutenant Blow compares the first shock.

All these officers were below in the after part of the ship. On the quarter-deck or poop it seemed to Lieutenant Blandin, officer of the watch, that there were two explosions. He was all but knocked down, and

died some months later of the mental shock. He saw no water thrown up. To Lieutenant Hood, sitting on the port side of the deck, it appeared that there was first a big under-water explosion, felt rather than heard. At this he turned and looked forward, and saw the whole starboard side of the deck fly upwards, like the edge of the crater of a volcano. Flames rose, and there was a violent explosion. He thinks that a portion of the superstructure of the ship was in the air when he first looked, and that the first explosion opened up the ship. Private Anthony of the Marines, on sentry duty on the quarter-deck, noticed first "a trembling and buckling of the decks, and then a prolonged roar." The ship instantly dipped forward to port, broke in the middle, and seemed to cant over to port. A sheet of flame rose to the sky. Boatswain Larkin remembers an explosion, but was stunned. Private McKay felt one shock, accompanied by an upheaval of the ship, and was "hit in the face" by a flash of fire. Assistant-Engineer Morris "saw fire and felt the ship going from underneath him." Apprentice Ham heard a sharp report and saw a flash of light, then felt a second explosion, when the ship lifted right out of the water. Seamen Larsen and Moriniere felt a heavy jar, saw flame, and were thrown in the air. Coal-passer Melville, close to these two, and slightly forward of the after-turret, felt an "electric shock" right under his feet, followed by a heavy explosion. Seaman McCann, swinging in his hammock on the quarter-deck, felt a jar and saw a flash, followed by a heavy explosion.

It should now be explained that the *Maine* had three superstructures, rising from the main-deck. There was

The U.S. *Maine.*



To face p. 8.

The black star forward shows the height to which the keel at frame 17 was driven up.

one forward; then a clear space and the forward turret to starboard; then the midships superstructure, with two funnels and two boat-cranes, the funnels fore and aft on its centre-line, the cranes on either side rising from the main-deck abreast the after funnel. At the forward end of the superstructure was the conning-tower, with the chart-house above it; at the after end, inside the superstructure, on the port side, the galley, and on the starboard side the armoury. Abaft the midships superstructure and between it and the after superstructure, well over to port, was the after-turret. In the after superstructure were Captain Sigsbee's quarters; above it the mainmast and a search-light platform. Rising from the forward superstructure was the foremast. The crew was berthed in the forward and midships superstructure, and underneath the main-deck, on the berth-deck, forward, and amidships. The officers were berthed aft, where were the ward-room and the gun-room.

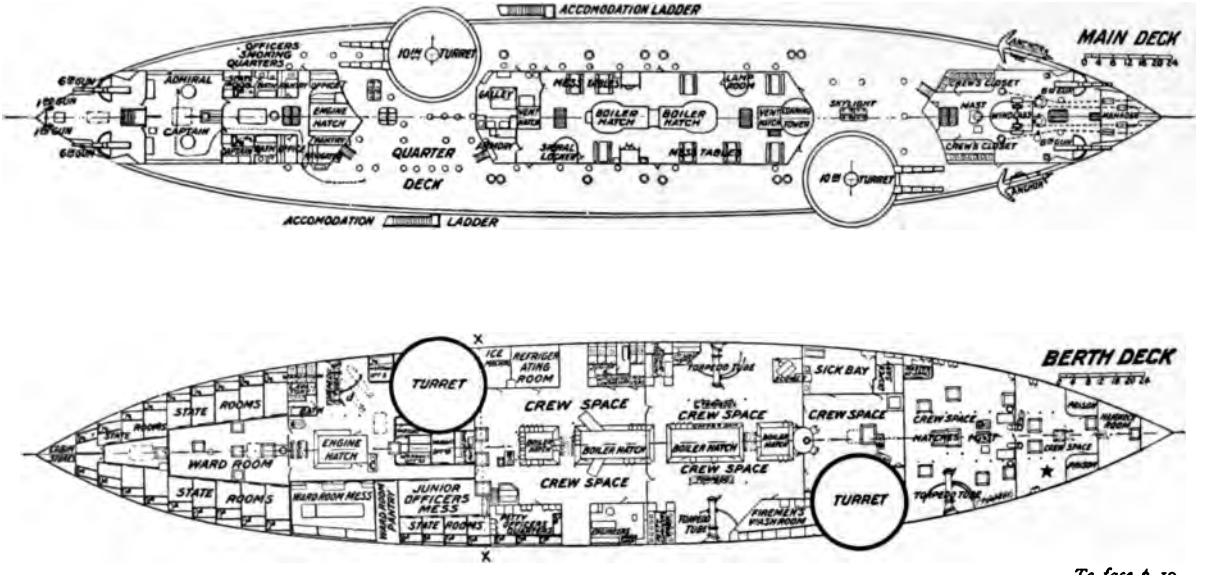
It will be observed, that as the explosion was obviously located forward, the survivors suffered from the shock more and more the further forward they were situated. The after-turret and awnings spread over the quarter-deck screened from the concussion most of the officers and men abaft the turret. Seaman Reden, sleeping in the after-turret, as we should expect, felt no shock behind the thick armour, but woke to a blaze of fire and the rush of water entering the turret. Much forward of this turret very few men escaped, and their narratives are of exceptional interest. Corporal Thompson, swinging in his hammock on the port side of the superstructure,

twenty feet forward of the turret, was thrown in the air through the awning above him and was stunned. His first recollections were darkness, steam, agonised cries, and the thought that the Spaniards had opened fire. Apprentice Dreisler on the midships superstructure was stunned. Sergeant Mehan, abreast the after funnel on the main-deck, was hurled through the air into the water. Master-at-Arms Load and Landsman Kane, standing just inside the after end of the midships superstructure, saw a red flame; "it seemed as if it was a small boat had struck the ship"; then the deck trembled, opened, and in a blaze of fire they fell or rose, and found themselves below with the water pouring upon them, under a heavy weight. A second explosion seemed to lift the weight, and they escaped to the port side of the superstructure. Kane thought that there came first a noise like a gun being fired very close to the ship, "and you heard the roar for a good while afterwards." Landsman Fox, sleeping just forward of the fore funnel inside the superstructure, was thrown in the air, and heard a rattling and a roar. He smelt something like burning cloth. The place in which he had been sleeping, the lamp-room, was turned upside-down. Seaman Mattson, standing on the starboard side of the main-deck abreast the after funnel, saw smoke, went up in the air, and found himself some forty feet away, lying on the quarter-deck.

The men in the steam launch, riding amidships, saw only a flash and heard one great explosion. The launch was struck by debris and upset.

From the forward superstructure only four or five men

The U.S. *Maine.*



To face p. 10.

The star marks the place where Boatswain's Mate Bergman (p. 11) was sleeping.

escaped, and those all wounded. Landsman Lanahan, sleeping there, was thrown through the deck above him and cut on the head. He felt "just a trembling, and everything seemed dumb," but he was not burned. From the berth-deck only two men escaped. One was boatswain's mate Bergman, whose hammock swung well forward, about frame 10. Two men just underneath him were killed. He "heard a terrible crash—an explosion, I suppose it was. Something fell, and then after that I got thrown somewhere in a hot place. . . . I got burned on my legs and arms, and I got my mouth full of ashes and one thing and another. Then the next thing I was in the water."

From the lower part of the ship, below the armour-deck, only one man escaped. This was Fireman Gartrell, who was lying down in the steam-steering room, two decks below the berth-deck. He could see through the door into the engine-room, when all at once a blue flash came by the engine-room lamp; there was a continuous trembling of the ship, and a terrible report. It seemed as if "the whole earth had opened up." Another man with him failed to escape, and that Gartrell got away is simply wonderful.

When Captain Sigsbee felt the explosion his first instinct was to escape. Then, as the mind's domination over the body returned, he groped his way out of the now pitch-dark cabin to the quarter-deck, and ran into Private Anthony, who with admirable coolness reported that the ship was blown up. On deck a group of officers and men had already gathered from the ward-room and gun-room. All behaved with the utmost coolness and

courage, and the discipline was all that could have been expected of a great Navy with splendid traditions. The *Maine's* officers and men had learnt the rule of honour and self-sacrifice, which service in any military force tends to strengthen. Without exception, they thought first, not of their own safety, but of putting the ship in a state of defence against attack, and then of rescuing the wounded, dying, and drowning.

Sentries were posted at once; orders were given to flood the after-magazine; and as fire was showing in the formless heap of debris amidships, and ammunition there exploding constantly, attempts were made to get the flames under. The darkness was so intense that at first it was difficult to be certain what precisely had happened.

Then it was seen that no crowd of men poured up from below; that the ship was fast sinking; and that there were men in the water and on the burning superstructure crying for help. What boats could be launched were promptly manned with officers and men and sent to the rescue. Commander Wainwright, with Lieutenant Hood and Cadet Boyd, climbed forward on the wreckage, in spite of the frequent explosions, and passed to the boats two injured men. The few unwounded survivors amidships also climbed on the awnings and debris to get the wounded away. These had to be thrown into the water to save them from the flames, when the boats picked them up. Cadet Bronson, when a man was thrown some distance away from his boat, bravely leapt into the water, which was "boiling" with the suction of the sinking ship, and filled with all manner of wreckage,

swam to him, and saved him. Certainly this was one of the most gallant acts of that eventful night.

Search-lights from other ships and from the shore were quickly turned upon the wreck; boats from all the ships at hand sped to the rescue. The *Maine's* own boats now returned to the poop, which still remained above water. They reported that all the wounded and unwounded in the ship had been removed. Nothing more could be done, and as Commander Wainwright expressed some fear that the 10-inch magazine might have been carried up and lodged in the burning wreckage, in which case its explosion might be expected every minute, Captain Sigsbee gave orders to abandon the ship. There was a chivalrous scene—two officers offering Sigsbee their arm to step into the boat. But in conformity with naval tradition he declined this help, and was the last to quit his ship. All the night the superstructure and mass of debris continued to burn, and from time to time minor explosions of the small-arms' and other ammunition, which had been placed on deck in readiness for immediate use, occurred.

In this terrible catastrophe perished Lieutenant Jenkins, Assistant-Engineer Merritt, and 252 petty officers and men, whilst 24 officers and 76 of the crew were rescued, of whom 59 were wounded. Seven of these died subsequently. Of the surviving officers, several had hairbreadth escapes. Jenkins was with three other officers in the ward-room, and seems to have struck his head against something. He was seen in the glare of some blazing cellulose to fling up his arms and fall; or it may be that he was carried off his feet by the violent

rush of water. Merritt was sitting by Cadet Boyd in the gun-room, was separated from him by a rush of water and cloud of steam, and was probably lost in the same way as Lieutenant Jenkins. Boyd escaped. Even aft, on the berth-deck, the water rose almost at once to a height of only one foot from the beams of the deck above. Forward and amidships the men in the ship were probably for the most part killed painlessly by the explosion, and knew nothing of what had happened. Yet several of the survivors tell of cries from the marines' compartment, and Captain Sigsbee speaks of "the awful scenes of consternation, despair, and suffering down in the forward compartments of the sinking ship; of men wounded or drowning in the swirl of water, or confined in a close compartment gradually filling with water." Let us at least hope that to the dead death came swiftly and mercifully.

The morning after the disaster the wreck was examined. Lying as it did in shallow water, thirty-three to thirty-six feet deep, on a soft mud bottom, the after superstructure and a great heap of wreckage amidships remained above the surface. The ship was found intact from the after end of the midships superstructure; the after-mast still remained standing. The destruction began just between the funnels, about the middle of the ship. Both funnels had fallen. Forward of this point the superstructure and deck were torn up and folded back. The conning-tower was blown upside down, so that the armoured tube leading down from it and the supports to it protruded in the air. Well forward three portions of wreckage showed above water, and these were identified

by officers of the *Maine* as parts of the berth-deck, of the protective deck, and of the bottom of the ship at frame 17.

The night of the explosion, Captain Sigsbee telegraphed to the Navy Department announcing the catastrophe, and urging that "public opinion should be suspended until further report." He was well aware of the tremendous effect upon American feeling which would be produced by the destruction of a fine battleship in a port that was not altogether friendly. He felt instinctively that her loss would be ascribed to Spanish treachery, and he was above all anxious that his country should not be hurried into an unjust and precipitate war, before it should have been proved that the destruction of the *Maine* was not due to internal causes. On February 19, Captain W. T. Sampson, Captain F. E. Chadwick and Lieutenant-Commander W. P. Potter were ordered to form a Court of Inquiry, and, meeting on the 21st at Havana, commenced their investigation into the causes of her loss. Upon their verdict it was felt by all would depend the question of peace or war. They sat continuously, taking the evidence of survivors, whilst the wreck was carefully examined by divers.

Attention must be drawn to one or two points in the narratives of the survivors. The first explosion was to port, and caused a shiver throughout the ship. In the opinion of one of the officers on deck at the time, the ship's deck forward flew back at the first explosion,[1] when the second and more terrible explosion followed, rather to starboard, opening up the ship like the crater of a volcano. After, or simultaneously with, the first explosion, the

[1] *Inquiry*, 123-4.

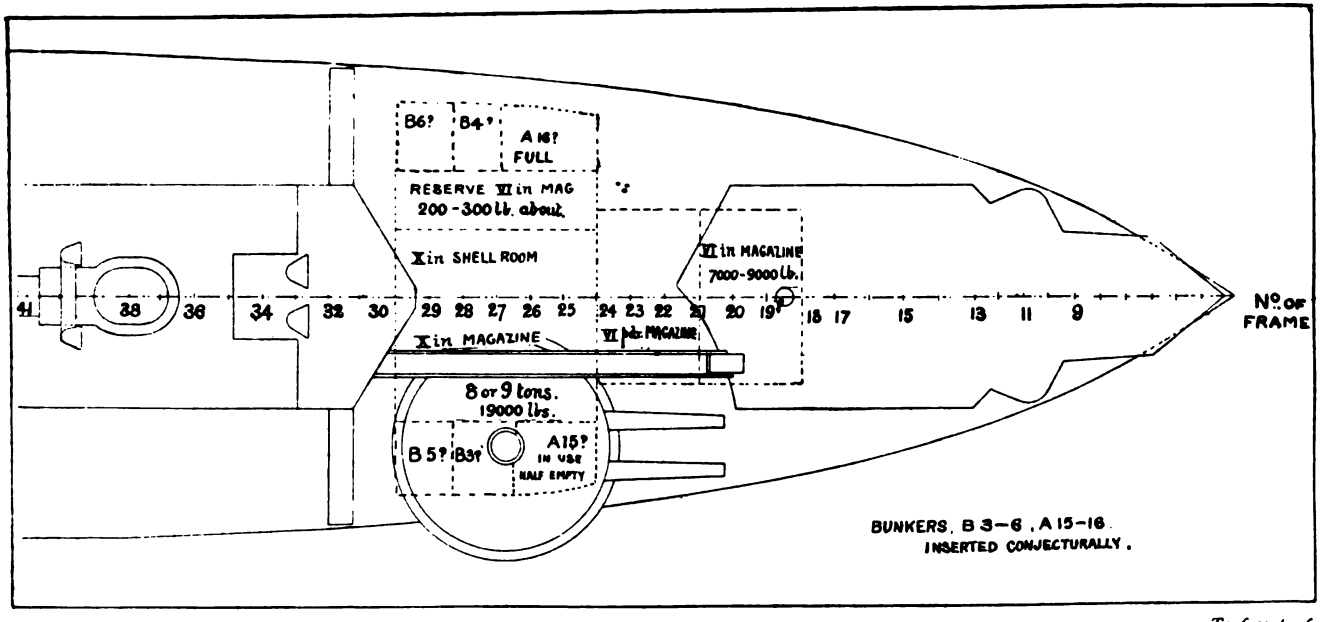
Maine rose in the water, and yet no column of spray was thrown up.[1] The electric lights in the ship had burnt steadily all the evening, and did not flare up before the explosion. The first shock did not affect them,[2] but at the second all went out. Thus it is clear that the dynamos escaped injury in the first explosion, and were destroyed by the second. This is a very important matter, as it helps to fix the place and cause of the two explosions. The witnesses nearest to the centre of the catastrophe hardly distinguish between the two explosions. No one, so far as can be discovered, escaped who was anywhere between frames 16 or 17 and frames 32 or 33, and therefore the presumption is that this was the centre of the explosion.

The position of the two explosions is fairly clearly determined. The first was, as we have seen, well forward, rather to port. The second was more astern, and to starboard, under or near the forward turret. It is noteworthy that several of the witnesses consider that one of the magazines, if not more, must have been involved in the second explosion. Thus Lieutenant Jungen in his evidence states, the second explosion "was more violent than any explosion I had heard, [so] that I could not liken [it] to anything, except possibly the explosion of a magazine."

The forward part of the ship, taking the usual conve-

[1] *Inquiry*, 219.

[2] *Ib.* 134—219, "We saw her raising [rising] *by her lights.*" Contradicted, however, on p. 129 by Lieutenant Blow, who says that all lights were put out by the first explosion. Yet the compiler is inclined to trust the vivid impression of those outside the ship, supported as it is by Lieutenant Jungen (p. 134).



To face p. 16.

Forward Bunkers and Magazines of the *Maine*.

nient means of fixing positions by the number of frames, includes frames No. 1 to 30. The turret was over frames 24 to 30, with the forward 10-inch magazine directly under it. This magazine contained about eight or nine tons of powder in separate metal tanks. On the port side of the 10-inch magazine was the 10-inch shell room ; on the port side of that again the 6-inch reserve magazine containing about 400 or 500 lbs. of powder in tanks. Directly forward of these magazines and shell rooms, between frames 21 and 24, was the 6-pounder magazine with little powder in it ; forward of that again over frames 18 to 21 was the 6-inch magazine containing 7000 to 9000 lbs. of powder.

All these magazines rested on the ship's inner bottom. They were below the armour-deck, and two decks below the berth-deck. Over the 10-inch magazine and shell room and the 6-inch reserve magazine were, on two separate decks, the hydraulic room and the dynamo room, the latter being uppermost. Abaft these magazines was an empty bunker running athwart-ships, and then the forward stokehold. On the outboard side of the 10-inch magazine was a series of small bunkers numbered B5, B3, and A15, going from aft forward. On the outboard side of the 6-inch reserve magazine was a similar series, B6, B5, and A16. The other magazines were not touched by any bunkers. The inquiry narrowed itself down to the condition of this group of magazines and bunkers, since all were in the region of the explosion. The evidence falls into two general heads : that given by officers and men of the *Maine* as to the internal condition of the ship before the explosion ; and the

evidence given by experts, officers and divers as to the condition of the ship and the harbour bottom after the explosions.

The hypotheses which the Court had to examine, before setting aside the possibility of an internal explosion, were these :—

1. Spontaneous combustion, or generation of gas producing an explosion, in the bunkers.

2. Spontaneous explosion of the magazines, or explosion due to carelessness. The cause of such an explosion might be :—

(*a*) High explosives in or near the magazines.

(*b*) Steam pipes causing excessive heat, and leading to spontaneous explosion.

(*c*) Badly-fitted electric lights and wires.

(*d*) Men working in the magazine in unsuitable shoes.

3. Boiler explosion, including coal torpedoes.

4. Inflammable vapour given off by preparations such as xerotine siccative, spirits, naphtha, etc., as in the *Dotterel's* case.

5. Deliberate treachery on the part of some of the officers or crew.

Of these causes the first was the most likely one. Cases of spontaneous combustion in the bunkers have occurred several times in the American Navy. There was one instance in the *New York*, just after the outbreak of war ; there were others just before the *Maine* incident. It is the general opinion of foreign naval authorities, that to this cause must be ascribed the loss of the *Maine*. They disregard the finding of the

American Court, and refer its conclusions to prejudice. But this, though a very simple and easy method of getting over the trouble of studying the evidence, is not a plan which will commend itself to Englishmen or Americans. They will acknowledge that the Court may have been mistaken, but they will not credit the charge of producing a wicked and unnecessary war, when it is brought against officers such as Captains Sampson and Chadwick.

1. The position of the bunkers touching the magazines has already been given. It now remains to study their condition on February 15. B3, B4, B5 and B6 were all empty, and were painted during the days before the explosion, had been thoroughly ventilated, and were inspected the morning of the explosion. Apparently it was necessary to pass through B3 and B5 to get to A15, and through B4 and B6 to get to A16. We are then left with bunkers A15 and A16. A15 was half full, and had been in use during the evening; therefore could not have produced the explosion. A16, on the port side of the ship, abutting inboard against the 6-inch reserve magazine, hydraulic room and dynamo room, as it rose from the bottom of the ship right up to the armour-deck, was full, containing forty tons of soft Pocahontas coal, but had been inspected the morning of the explosion. The bulkheads surrounding it on three sides could be felt by the hand, indeed, *had* to be felt by every one who went by the wing passage into the loading, hydraulic and dynamo rooms, as a narrow passage with a turn in it led round its forward end, and the tendency would be to place the hand on the bulkhead. Moreover, men loafed and lay against

the upper part of the bulkheads of the bunker.[1] Any rise in temperature would therefore be felt at once. Another side which abutted against the empty B6 bunker had been painted just before the explosion, which shows that the coal inside could not have heated. The tanks of powder inside the 6-inch reserve magazine seem to have been stowed in actual contact with the metal of the bulkhead, which was no doubt dangerous,[2] and which, if heating had occurred, might well have caused an explosion. But in the presence of such strong evidence against any heating in the bunker this is not of much importance. All the bunkers were fitted with thermostats, which, though they were liable to give false alarms, would have given warning, and had on previous occasions given warning, of any undue heat. No case of spontaneous combustion had ever occurred on board.

There is nothing whatever to suggest an explosion of coal gas or coal dust in these bunkers. Neither A15 nor A16 were in actual use at the moment of explosion; but another bunker much further aft, abaft the forward stokehold.

2. (*a*) There were no high explosives in or near the magazines involved. No smokeless powder, except a small quantity of ammunition for the small guns in the 6-pounder magazine, and no high explosive shells were in the magazines. The torpedo war-heads, primers, and detonators were in the ship's stern, and certainly did not

[1] This is partially denied by Lieutenant Holman, *Inquiry*, 37; but he thought any heating of the bunker would have been felt in the dynamo room.

[2] Yet this evidence on p. 144 is contradicted on p. 24, where it is stated that the tanks did *not* touch the bulkhead.

explode, else no officers would have lived to tell the tale. The powder stored was the ordinary brown prismatic explosive, which is chemically stable and trustworthy.

(*b*) On board the French battleship *Duperré* a dangerous explosion, details of which have been suppressed, occurred through the heating of a magazine containing some of the new explosives, by a steam pipe. There were no steam pipes in any of the *Maine's* forward magazines. The temperature was duly recorded and the magazines regularly inspected. In hot weather the after 10-inch magazine, which certainly did not explode, had at times shown a temperature of 112 degrees. This is nothing very abnormal, and certainly not dangerous, where there are no high explosives. The forward magazines were cooler.

(*c*) The magazines were properly lighted, and there were no dangerous wires. The electric lights were in light-boxes, and they and the wires supplying the current were separated from the magazines by a double plating of glass.

(*d*) There were no men working at the time in the magazines, which were locked, and the keys in Captain Sigsbee's state-room. There was no loose powder about, and proper shoes were always worn by working-parties in the magazines. The gunner was an exceptionally careful officer.

3. The boilers in use at the time of the explosion were the after pair, far away from the magazines. They were in good condition, and were working at a relatively low pressure. There is only one piece of evidence in the report which lends the slightest colour to the supposition

that they did explode, and this is Fireman Gartrell's statement, already given, that he saw a blue flash "right by the lamps in the engine-room," and even this does not involve as its explanation a boiler explosion.

Had the first explosion occurred in the boiler-room, the dynamo would have ceased working and the lights have gone out at once, whereas we have seen that they were extinguished only at the second explosion. If the after pair of boilers had exploded and fired a magazine, it would have been the after and not the forward group of magazines, and in that case no officer would have escaped. These reasons preclude the idea of a coal torpedo, or mine, made to look like a lump of coal, charged with high explosive, and fired either by the heat of the boiler furnaces, or by clock-work. It is not likely that such a coal torpedo could have been in bunker A16, as this had been filled some time before—it would seem from the evidence a month—and properly inspected. A large torpedo, containing a charge sufficiently powerful to explode the magazines, would almost certainly have attracted the men's notice in coaling. The coal at Key West was examined for such machines immediately after the catastrophe and was found to contain none. Moreover, if an infernal machine of this type was employed, it was probably employed by Spanish agency, though no one would accuse the Spanish Government of complicity; and therefore little is gained by advocates who insist upon the internal torpedo theory.

4. All driers of the xerotine siccative type were in proper tanks on deck. Alcohol, whiskies, and all inflammable surgeon's stores, with the exception of a bottle

or two, were aft, under the ward-room. Oily cotton waste, which has been known to take fire spontaneously —though not to explode—was kept in a metal case and thrown overboard regularly.

5. The supposition that a criminal lunatic was to be found amongst the officers and men of the *Maine*, and that such a lunatic would be allowed by his shipmates to explode one of the magazines and destroy the ship, is so improbable that it may be dismissed. It belongs to the same limbo of extravagant imaginations as a French Admiral's statement that all American officers are liars, and that the *Maine* Court of Inquiry was a deliberate attempt to establish a falsehood.

Spanish stories of American indiscipline, and tales that all the officers were dining on board the *City of Washington*, are the most impudent and idle fabrications. American ideas of discipline are not altogether our ideas, but there is every reason for believing the statement of Lieutenant-Commander Wainwright—a well-known and able officer —that the crew were good and obedient. Moreover, the general behaviour after the explosion corroborates, in the most striking and satisfactory manner, his testimony on this point.

All known internal causes were therefore eliminated. It remains possible that some unknown and unsuspected cause might have been responsible, but at least this is very improbable. If magazines are liable to be exploded by such causes, then the seaman's lot is indeed "not a happy one," and no modern ship, with every precaution, is at any moment safe. Such mysterious explosions have never occurred before in ships, and

therefore the presumption is strong against an unknown cause.

The divers' evidence was of great interest and importance. Yet owing to the mud on the harbour bottom, which was stirred up by their movements and rendered the water so thick that they had to rely mainly upon the sense of touch, and could see little, this evidence was by no means decisive or clear. They did their work under difficulties, as they cannot but have felt a very natural anxiety lest the air-pipes and life-lines should foul the wreckage. They were seamen or petty officers, and had not much technical knowledge, which makes their reports all the harder to understand, though it did not, as has been suggested, render them altogether fallacious and untrustworthy. On examination they found the part of the ship between frames 23 and 30 almost completely destroyed. The keel emerged from a heap of debris about frame 23, and bent sharply upwards to frame 17 or 18. Then it dropped again, making thus an inverted V, to the ram and forward part of the ship, which was nearly intact, but which was bent sharply down and sunk in the mud. At the port side of the ship, abreast of the apex of the inverted V in the keel, was a hole seven feet deep and about fifteen feet in diameter.[1] The bottom in this hole was harder mud than was found elsewhere. The stem of the ship was turned almost at right angles to the rest of the hull, and the ram lay in this hole, or near it, for the evidence was not clear on this point.

Thus, appearances indicated that some force drove up

[1] Diver Dwyer (p. 276) contradicted this, and denied that there was any hole.

By permission of Mr. W. R. Hearst.

To face p. 24.

Wreck of the *Maine*.

the keel at this point, scooped a hole in the mud, and broke the ship's back. In settling, after the explosion, the hull might move some little distance, which may account for the hole not being immediately under the ship. The cavity, however, is capable of explanation without supposing a mine. The impact of the heavy ram descending would scoop up the mud and produce if not an actual hole, at least the appearance of a hole. A hole in the mud was found at the ship's stern, a fact which favours this explanation.

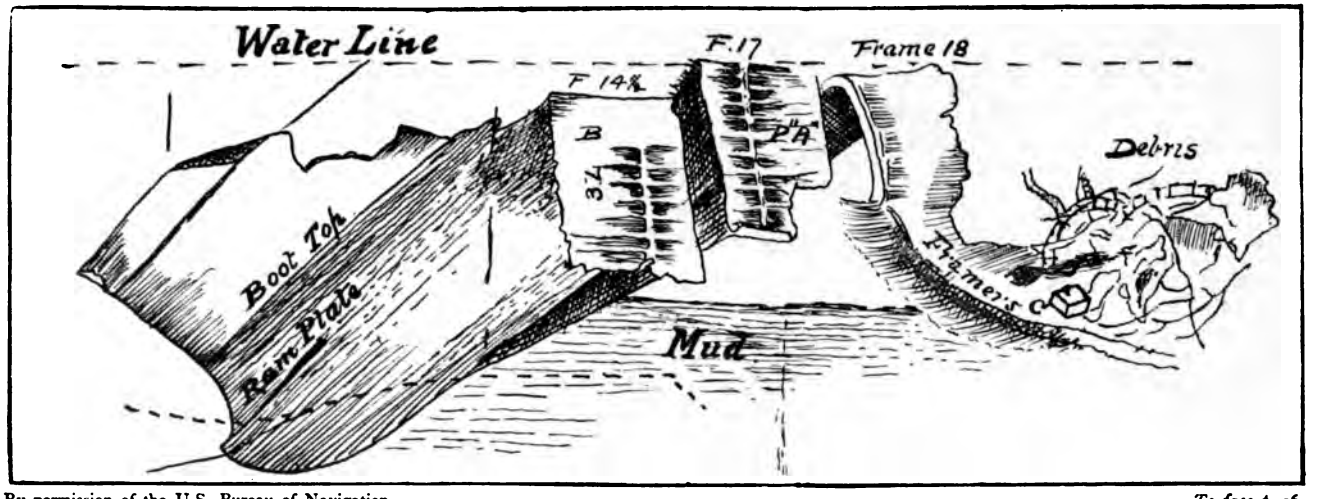
The side plating of the ship above the armour had disappeared forward of frame 41 (between the two funnels) both on the port and starboard sides. On the port side, at the point where the break began aft, the armour appeared to have been driven inward with great violence, as the backing was splintered with the splinters pointing inward and the plating bent in. Where there was no armour the side plating near the gap was bent very sharply in, "making an acute angle with the water-ways,"[1] and the edges were sharp and ragged. Aft again of this point, and a few feet forward of the after turret, the plating on the water-ways was blown outwards. On the starboard side the forward turret could not be found, and must have been blown clean away; the break in the ship corresponded with that on the port side, but here the edges were blown outwards, and the general appearance was as if this side of the ship had been driven out

[1] The want of plans and drawings, and the fact that much of the evidence was given by the witnesses indicating points on plans which are not included in the Report of the Inquiry, have no doubt increased the difficulty of understanding what the divers meant, and made the investigation of the affair much more obscure.

by some very violent force within. The armour on this side at its lowest level was flush with the side; at its upper level it leant outwards very sharply.

Examining the ship's wreck in the locality of the magazines, some indications were found to show that the 10-inch magazine had exploded. Its starboard bulkhead was bent over outwards till it was nearly horizontal, but curiously enough an electric-light box in it was in good state, with the glass broken but only very slightly bent. The rubber gasket of its water-tight cover was not burned. A man-hole plate in the bulkhead was, however, burned and damaged. On the other hand, woodwork from the magazine was sent up to the surface and showed no trace of fire, whilst a magazine swab was picked up uninjured. In the magazine floor was a big opening three feet wide, with ragged edges bent neither up nor down, leading into the double bottom. Here some unburned 10-inch breech-obturators were discovered. Powder-cases from the 10-inch and 6-inch magazines were found on the bottom; in some instances the charges had possibly exploded; in other instances the cases contained the cloth in which the powder is packed; and a dark deposit was noticed in the mud, and a little of it sent up, dried, and examined. It was evidently powder sediment, and thus it is clear that if the magazines did explode, all the powder in them was not involved. As each charge is isolated from the others and in a separate metal case, it is quite possible for a few charges only to explode. Scattered about were 10-inch shells, 6-inch shells, 6-pounder cartridge-cases—some exploded—and projectiles in the wildest confusion.

The protective deck on the port side from frame 30 to



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To face p. 26.

Forward portion of the *Maine* after the explosion.

Sketched from Divers' reports.

frame 41 was blown up and folded over towards the ship's stern; the main-deck for the same distance was folded over towards the stern, but slightly to starboard. About frames 29 and 30 the protective deck stood straight up, out of water; on the starboard side, and over the forward starboard boiler it had been driven up about three feet. The forward boilers were examined and found in fair condition. What thwartship bulkheads remained between frames 30 to 40 were found buckled and bent heavily aft. Evidently the weight of the turret had held back the explosive force of the powder to starboard, and kept down the armour-deck for a time, whilst to port, as there was no such weight, the explosion had exerted more force upwards.

What remained of the ship's bottom near the apex of the inverted V could be examined. The plates were found to be bulged in between the frames, as if by some external but gently applied pressure. The force, that is to say, was cushioned, and it was conjectured by Ensign Powelson, in charge of the divers, that the effect had been produced by a mine much further aft, transmitting its force through the water. It would, he thought, fail to drive up the ship's hull where the framing was reinforced by the armour belt, giving great stiffness to the structure, but would so act forward of the armour, where the framing was weak.

Only one expert in torpedoes and submarine mines was called by the Court. This was Commander Converse. He held that the explosion of the magazines could not have lifted the ship or produced the distortion of her keel. A large mine placed near the ship's bottom would both

lift her and blow the bottom in. Such a mine, containing lower explosives, and placed some distance off the bottom of the ship, might be expected to cause the peculiar inverted V. This effect on the keel could not have been produced by the explosion of the magazines, first destroying a large part of the ship, and then causing the two ends of the ship to sink and buckle up the keel. As to whether such a mine could have exploded one of the magazines—the 6-inch, over frames 18 to 21, and in the immediate neighbourhood of the inverted V, was mentioned—Captain Converse expressed no opinion. But he thought the explosion of some and not all of the powder in the magazine more likely to occur when there was water in the magazine as the result of previous injury by a mine. It was an important question whether the 6-inch magazine had exploded. Against this was the fact, which Captain Sigsbee thought decisive, that Bergman, sleeping about frame 10 on the berth-deck, had escaped. Captain Converse, however, did not consider that incompatible with the magazine's explosion.

The verdict of the Court was that a mine had been exploded under the bottom of the ship, about frame 18, somewhat to port, and that this had involved the partial explosion of two or more of the *Maine's* forward magazines. It did not attempt to fix the guilt or determine the agent.

The justice of this verdict has since been much canvassed. It was reached by the process of elimination, confirmed by certain indications in the wreck and certain antecedent probabilities. No summing-up of the evidence was published, and the Court abstained from giving

the reasons for its decision. In an episode of this international importance, it would have been better had they been clearly stated. Perhaps the most startling fact is the absence of any suggestion as to how a submarine mine could have been placed under the *Maine*.

The facts which seem to have had most influence in the decision were the clear evidence against any internal cause of explosion; the divers' testimony that the port side of the ship was driven in; the fact that the inverted V in the keel was well away from the centre of the most violent explosion in the magazine system, which would be the 10-inch magazine with its eight or nine tons of powder, and not the 6-inch magazine with its three or four tons. If the 6-inch magazine, exploding, had uplifted the keel in its immediate neighbourhood, the 10-inch magazine with two to three times as much powder in it might well be expected to do the same in even a more marked manner. And therefore the Court probably concluded that the explosion of the 6-inch magazine was not the *vera causa* of the inverted V, inasmuch as the effect was wanting in the *locus* of the 10-inch magazine explosion. Other suspicious circumstances were the uplifting of the ship, and the preliminary explosion, which does not seem to have been internal. There can be no doubt that the second explosion, with its prolonged, rending roar, was caused by the firing in quick succession of two or more of the forward group of magazines—probably the 6-inch, 6-pounder, and 10-inch.

The difficulties in the mine theory must now be discussed. They are these:—1. The first explosion, as described, is not altogether characteristic of a submarine

mine. A dull heavy concussion, not a sharp report, would be expected. Some of the witnesses do, however, describe it as such. Thus Seaman Larsen likens it to "a jar, shaking all over." Seaman Moriniere "heard a jar." Cadet Boyd's description of it as "the coupling up of a heavy freight train," would be peculiarly apposite to the shiver produced in a water-borne metallic structure by the explosion of a mine underneath; and if those witnesses who compared it to the firing of a gun were thinking rather of the shock produced than of the noise, we should get over the difficulty. The firing of a heavy gun, of course, causes a violent vibration; and even a 6-pounder a very distinct shock, though only locally. Cadet Cluverius speaks of "*a slight shock*, as if a 6-pounder gun had been fired somewhere about the deck." Lieutenant Blow's impression, already quoted, was that the first explosion was under the ship in the water.

2. A second difficulty is the apparent absence of any upheaval of water. No witness testifies to one. Before the Senate Committee on Foreign Relations, however, Admiral Irwin, who had had great experience in submarine mining work, gave evidence, that whilst the explosion of a mine at less than six feet from the surface will throw up a noticeable column of water, at fifteen feet or more there will be hardly a bubbling on the surface.[1] British experience would not altogether bear this evidence out. At depths of twenty-four to thirty feet a dome-shaped upheaval is to be expected. But if a column of water was thrown up by the first explosion in the *Maine*, it may have been hidden from view by the dense cloud of

[1] *Army and Navy Journal*, New York, April 23, 1898.

fire and smoke which followed almost immediately with the second explosion. It is also possible, as has been suggested, that the mine, if placed just under and fairly close to the ship's bottom, would expend all its energy on driving up the hull and none in throwing water about.

3. A third difficulty is that many of the witnesses do not speak of any upheaval of the ship at the first explosion. We should expect, with a mine under the port bow, that the ship would be thrown violently over to starboard and considerably lifted. Many witnesses allude to an upheaval at the second and main explosion; only one (Cadet Holden) to an uplifting to starboard at the first. The upheaval at the second explosion seems to have been caused by the lifting of the stern as the water rushed in amidships and depressed the forward part of the ship. Here, however, there is great obscurity in the evidence, owing to the fact that witnesses indicated on plans, not published in the report, which part of the *Maine* rose in the air.[1] We cannot now ascertain which part of the ship they indicated, and no help is given by the Court. The only method of explaining this absence of upheaval is to suppose that the mine, close to the bottom of the ship, cut a section clean out of it instead of uplifting the whole ship. But this rather presupposes a high explosive, whereas the other circumstances posit a low explosive.

4. Again, there is the apparent absence of any shock transmitted by the water to ships in the harbour. Observers in the *City of Washington* felt no shock at the

[1] *Inquiry*, 65, one of the worst examples of the recording of evidence.

first explosion.[1] Captain Teasdale of the British ship *Deva*, about 600 yards from the *Maine*, records, however, a shock immediately after this explosion and before the second. He thought his ship "had been collided with."[2] Possibly the *City of Washington*, lying so very close to the *Maine*, felt nothing, because the shock was swallowed up in the terrific concussion of the second explosion.

5. The absence of dead fish in the harbour after the explosion is very curious and difficult to explain. It is suggested that fish left the harbour at night, and that fish are usually only stunned by submarine explosions. Admiral Irwin's evidence before the Senate Committee on this point was that in four weeks' work with submarine mines in Mobile Bay, a fine fish-producing water, he did not see one dead fish. In the firing of bomb torpedoes in the Mare Island Straits, in California, he never saw one.

6. There is no instance known in which an external mine or torpedo has exploded a ship's magazine. This may be because the crucial experiment of firing a very heavy mine right under a ship's magazine has never been tried, in peace or war. We have, to a great extent, to depend upon guess-work and induction. A 500 lb. mine might, and probably would, have quite different effects from a 200 lb. or 50 lb. mine. And if it be said that the explosion of the *Maine's* magazines by a mine reveals to us startling dangers, hitherto undreamed of, we may reply that their explosion by an undiscoverable internal cause would be even more alarming.

[1] *Inquiry*, 220, 63. [2] *Ib.* 53, 54.

7. How could a mine have been placed in such a position as to destroy the *Maine?* It is not at all likely that a harbour which was used by Spanish and foreign—English and German—men-of-war would be filled indiscriminately with submarine mines. The answer to this is, that a mine could have been placed in position between the news of her coming reaching the Spaniards and her actual arrival, and might have been laid as a military precaution. It would, then, be of the type which can be controlled from the shore, and which is innocuous until a firing battery is put into action by an observer ashore, when he sees that a shutter has been dropped by the contact of a hostile ship with the mine.[1]

A little consideration will show that the Spanish authorities might have been justified in placing such a safe form of mine at the berth to be occupied by the *Maine.* War was quite possible, and if war came this powerful armoured ship inside the harbour might have been the most dangerous of enemies. We do not suppose that the American Government had the remotest intention of acting in a treacherous manner, but the Spaniard, naturally enough, would not see with British or American eyes. With a mine, the *Maine* could, on the outbreak of war, be disabled if she did not withdraw. The firing of the mine under the circumstances involved treachery on the part, probably, of some unauthorised person, who gained access to the mine-station, and either short-circuited the firing key, thus converting the mine into an electric contact one—one,

[1] Sleeman, *Torpedoes*, edition ii. p. 49.

that is to say, which would explode instantaneously on being touched by the ship,—or depressed the key when on that fateful night the shutter dropped and showed the ship was over the mine.

From the afternoon of the 24th, when Consul Lee gave notice to the Havana authorities, to the morning of the 25th, there was time to lay a mine had such been in possession of the Spaniards. That mines were in their possession the statement of Vice-Admiral Berenger, ex-Minister of Marine in Spain, and the experience of the subsequent war, leaves no reasonable doubt.[1]

Another possible supposition is that a dirigible torpedo of the Brennan or other pattern was used. There is no evidence on this subject. It is also just possible that at some point ashore near the ship a torpedo tube of the ordinary pattern had been mounted, and that a Whitehead was deliberately fired at her from this. She was under 800 yards, within easy range for an 18-inch Whitehead, from more than one point of the shore. Had a torpedo-tube, or dirigible torpedo, however, been thus employed the risk of detection must have been very great, and treachery must have been shown by some very high officials, since such a tube or such a dirigible torpedo could only be found in the hands of the responsible military or naval authorities. There is every reason for acquitting them of any complicity. Moreover, the watch officer of the *Maine* would, probably, have seen something suspicious.

Captain Sigsbee suggests that an electric contact mine might have been dropped by a steam lighter, crossing

[1] *Century*, 57, 393.

the area through which the *Maine* swung. Lighters were constantly passing the *Maine*, so this is certainly possible. No observer could have detected the laying of the mine, but there must have been on board the lighter at least twelve people in the secret. Great precautions were taken by the Spanish Government to prevent the importation and ownership of explosives, so that, even accepting this theory, there must have been some one of authority in the plot.

Of all the theories the first seems the most probable, and involves the minimum of treachery. The destruction of the *Maine* could then be ascribed to the madness and criminal wickedness of a single individual, who would be certain to keep the secret for the safety of his own skin.

That no wires or connections were discovered may be explained by the softness of the mud in the harbour. Two experts whom we have questioned gave diametrically opposite answers on this point, one holding that the cable would not sink, and the other that it might. It therefore seems safe to consider that such a thing is, if unlikely, not impossible. If a drifting mine were used there would be less difficulty, but in such a harbour as Havana, where there is practically no tide and much shipping, it does not seem probable that a drifting mine could be employed. That the *Maine* was considered, in unofficial Spanish circles in Havana, to have been blown up by a Spaniard, is shown by the fact of which the author was informed by a friend, resident then and now in Havana, that on the night of her destruction, and on the following day, the health

of the men who destroyed her was being drunk in the *cafés* by Spaniards. This, of course, is not evidence, but it is an indication of the bitterness which prevailed, and so is important. There is some talk of the same nature in the evidence taken before the American Court of Inquiry.

8. A serious difficulty has always been to find the motive which led to her destruction. When the American Court pronounced that she had been sunk by a mine, it was virtually a declaration of war. Any educated Spaniard, one would think, must have seen that an act of treachery at a time of tension would precipitate a struggle, which could only issue in one way. Yet there was certainly a party in Havana which wanted war, which above all resented the presence of the *Maine* in the harbour, and which may have imagined that by destroying her the American fleet would be so far weakened as to render it inferior to the Spanish naval forces. There were judges in England who held that the loss of the *Maine* had placed the United States in a position of inferiority. Even Admiral Colomb, as will be seen later, expected on April 18 a desultory naval war, as he thought neither country strong enough to attack the other.

Thus in pronouncing a final verdict we are given a choice between difficulties. One fact which the Court held to point in the direction of a mine—the inverted V in the keel—is thus, however, explained by an English expert naval officer. He holds that on an explosion taking place on board such a ship as the *Maine*, the gas first drives out the bottom, and then, encountering a

layer of water supported downwards by the bottom, and at the sides by the pressure of thirty or forty feet of water, is forced back, so that to find an outlet it returns through the ship, carrying the outer skin up. On the return the heavy turret, which has hitherto confined the explosion below, is driven up. This officer states that experiments on a small scale at Portsmouth have reproduced the uplifting of the keel with an internal explosion.

It will readily be acknowledged that the evidence of the American inquiry is far from being absolutely conclusive. Still it does seem to the author to have established the probability that the *Maine* was destroyed by a mine. Under the circumstances any people would have gone to war, and the Americans showed no exceptional forbearance.[1]

The American evidence was not issued to the public till March 28, but its general purport was known to

[1] Whilst the American Court of Inquiry was sitting a Spanish official investigation took place, which resulted in the following verdict:—

"(1) On the night of February 15 last an explosion occurred in the forward magazines of the *Maine*, causing the destruction of that portion of the vessel and resulting in her sinking at her anchorage.

"(2) It is shown by the ship's plans that these magazines contained other explosives than powder and shells of various kinds.

"(3) The same plans show that the said magazines were surrounded on the starboard side by bunkers containing coal, and those who witnessed the explosion are agreed in saying that it was due to a purely accidental cause."

The statements in (2) are absolutely contradicted in the American evidence, and were probably founded upon an old and incorrect plan of the *Maine*, which showed the gun-cotton and torpedo-detonator magazines in proximity to the group of magazines which probably did explode.

responsible people far earlier. On March 8 Congress voted £10,000,000 for defensive measures, and war preparations began. On April 19 came the final breach, in the shape of Congress' resolution declaring Cuba independent, and directing the President to use the forces of the United States to compel Spain's withdrawal from the island. Next day an ultimatum to this effect was telegraphed to Madrid, and the Spanish minister at Washington demanded his passports. On the 21st the Spanish Government notified the American minister at Madrid that diplomatic relations were suspended.

CHAPTER II

STRENGTH OF THE TWO FLEETS

AT the outbreak of the war the American ships ready for sea were as follows :—

Battleships, 5—*Texas*, *Indiana*, *Massachusetts*, *Oregon*,* *Iowa*.

Monitors, 6—*Amphitrite*, *Miantonomoh*, *Monadnock*,* *Terror*, *Puritan*, *Monterey*.*

Armoured Cruisers, 2—*New York*, *Brooklyn*.

Protected Cruisers, 8—*Boston*,* *Raleigh*,* *Cincinnati*, *Baltimore*,* *San Francisco*, *Olympia*,* *Columbia*,† *Minneapolis*.†

Small Cruisers, 9—*Yorktown*,* *Concord*,* *Bennington*,* *Dolphin*, *Montgomery*, *Marblehead*, *Detroit*, *Machias*, *Castine*.

Ram, 1—*Katahdin*.

Dynamite Gunboat, 1—*Vesuvius*.

Torpedo craft, 6—*Porter*, *Dupont*, *Foote*, *Winslow*, *Ericsson*, *Cushing*.

Gunboats, 10—*Nashville*, *Wilmington*, *Helena*, *Marietta*,* *Annapolis*, *Vicksburg*, *Newport*, *Princeton*, *Petrel*,* *Bancroft*.

To these were added during the course of the war :—

Protected Cruisers, 4—*New Orleans*, *Newark*, *Philadelphia*,* *Charleston*.*

Torpedo Boats, 4—*Somers*, *Gwin*, *Rodgers*, *Talbot*.

Gunboat, 1—*Topeka*.

All the above had been specially built for war service. Particulars of these ships may now be given.

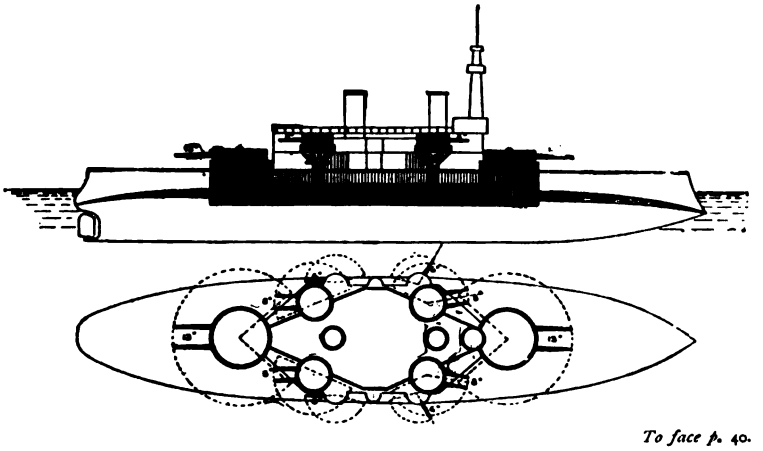
The *Texas*, laid down in 1889 and launched in 1892,

* Pacific. † Not fully manned.

is of the "*écheloned*" turret-ship type, having a diagonal breastwork across the ship plated with 12-inch armour, on which stand the two turrets, similarly protected, and each armed with one 12-inch gun. The breastwork does not descend to the armour-deck, or to the belt which, twelve inches thick, covers one-half of the water-line; but coal-bunkers afford a measure of safety. The disposition of the heavy guns is faulty, as, in spite of the diagonal arrangement, only one 12-inch weapon can fire right ahead or right astern, and on either broadside the arc of one gun is very limited. Four 6-inch guns are placed in separate sponsons, one on each bow and quarter, and two more are carried on the superstructure. There are two military masts and one funnel; the speed is seventeen knots. The hull of the ship has proved too weak, some of her frames having buckled up in dock. In 1896 her bulkheads were found to be far from watertight, and she sank in dry dock, whilst in the present war her structure suffered a good deal from her own gun-fire. Still she has done excellent service in spite of her weaknesses. Before the war her turrets were so altered that the heavy guns could be loaded in any position, a great improvement on the old single position for loading, to which the guns had always to be brought back after each round.

The three large battleships, *Indiana*, *Oregon*, and *Massachusetts*, were laid down in 1891; officially classed as "coast-line battleships," they may for all practical purposes be regarded as sea-going. They displace 10,300 tons, and were expressly designed to face "vessels carrying the heaviest guns and armour." The battery

Elevation and Deck plan of the *Indiana*, *Massachusetts*, and *Oregon*.



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Aft guns show maximum fire as originally proposed. Forward guns show maximum fire as finally modified.

with which they are armed is a very powerful one, though, as is the case with certain of the United States cruisers, there is an unnecessary multiplicity of calibres. All the guns of any size are very thoroughly protected by armour. Fore and aft are two pairs of 13-inch 60-ton guns in turrets, with a command of seventeen and a half feet. The weapons can be loaded in any position, and need not, as in our *Royal Sovereign*, be brought back to a fixed position. On the superstructure between these turrets, at a height of twenty-four and three-quarter feet from the water, are four more turrets, each containing a pair of 8-inch guns; and on the main-deck are four 6-inch weapons in casemates, which are protected by 5-inch armour. This disposition of the artillery enables a very heavy fire to be concentrated upon any given point, as these figures will show:—

		13-inch.	8-inch.	6-inch.
Guns bearing	Ahead or astern . .	2	0	0
	Broadside . .	4	4	2
	Bow or quarter . .	2	2	1

Originally four 8-inch and two 6-inch guns, besides the 13-inch weapons, trained ahead or astern, but on experiment this disposition had to be modified. An observer was placed at the sighting-hood of the *Indiana's* turret containing the 13-inch guns, and then the 8-inch weapons were fired at various angles forward. Between fifty and seventy degrees forward from the beam the effect of their blast was decidedly unpleasant; at eighty degrees it was sufficient to show that with a greater angle it would be practically impossible to lay the 13-inch guns. Though no material injury was

inflicted upon the observer, he recommended that stops should be fitted to the 8-inch turrets to prevent a greater train than eighty degrees. Thus the four 8-inch guns lost their axial fire, but they still command a wide angle. Another experiment was the training of the 13-inch weapons in the after turret at the extreme angle forward, thus firing past one of the 6-inch casemates, whilst the 6-inch gun was trained right ahead. The effect of this shot would have been to kill or injure the crew of the 6-inch gun, had men been stationed there. To get rid of the danger the 6-inch weapons were deprived of their fore and aft fire.

The defensive qualities of the *Indiana* are fully equal to, if indeed they do not exceed, her offensive qualities. The 13-inch turrets are plated with 17-inch Harveyed steel, and the redoubts upon which they stand with 15-inch; the 8-inch guns are behind 6-inch plates, and rest on 8-inch plated redoubts. As the 8-inch turrets do not, like the turrets for the heavier guns, stand upon cylindrical redoubts descending to the protective deck, their bases are plated with 2-inch steel, and there is a 3-inch ammunition shaft to the magazine directly below that deck. On the water-line is a steel belt 196 feet long, seven and a half feet wide, and eighteen inches thick at its upper edge, but tapering below the water-line. On this is placed a $2\frac{3}{4}$-inch armour-deck ;[1] and to protect the upper works of the ship a belt of 5-inch steel with ten feet of coal behind it is carried up to the level of the upper deck between the main turrets. Care has been taken to keep the muzzles of the heavy guns quite clear of

[1] At the ends of the ship 3-inch.

the deck, and thus to enable them to fire ahead with a minimum of damage to the ship. There is one military mast with a stairway and ammunition hoist, placed forward above the conning-tower. The coal-bunkers are large enough to contain 1550 tons, though the normal supply is only 400 tons; the sea speed is fourteen knots, and the coal endurance 3720 miles.

The *Massachusetts'* trial speed was 16·2 knots, and her coal endurance 4500 miles; the *Oregon*, the fastest and best ship of the three, covered 16·7 knots, and has an actual tested endurance of 5500 miles at ten knots.

The defects of this redoubtable class appear to be: first, the low freeboard, which is only twelve feet forward, and which would prevent the foremost 13-inch guns from firing ahead in anything of a sea; second, the low speed, which is yet lower when a full supply of coal is on board; third, the absence of a powerful quick-firing armament of medium calibre, such as is carried in all modern battleships;[1] fourth, the ventilation, which is very bad in the ammunition passages on the orlop deck. "At ordinary drills," says the *Oregon's* surgeon, "lasting less than an hour, the men stationed there soon became exhausted from the combined effects of the foul air and heat. I do not think it is possible for men to endure the wretched conditions existing in these passages for much longer than an hour and be capable of effective work. The importance of this grave defect is at once recognised when it is known that all the ammunition for the 8-inch

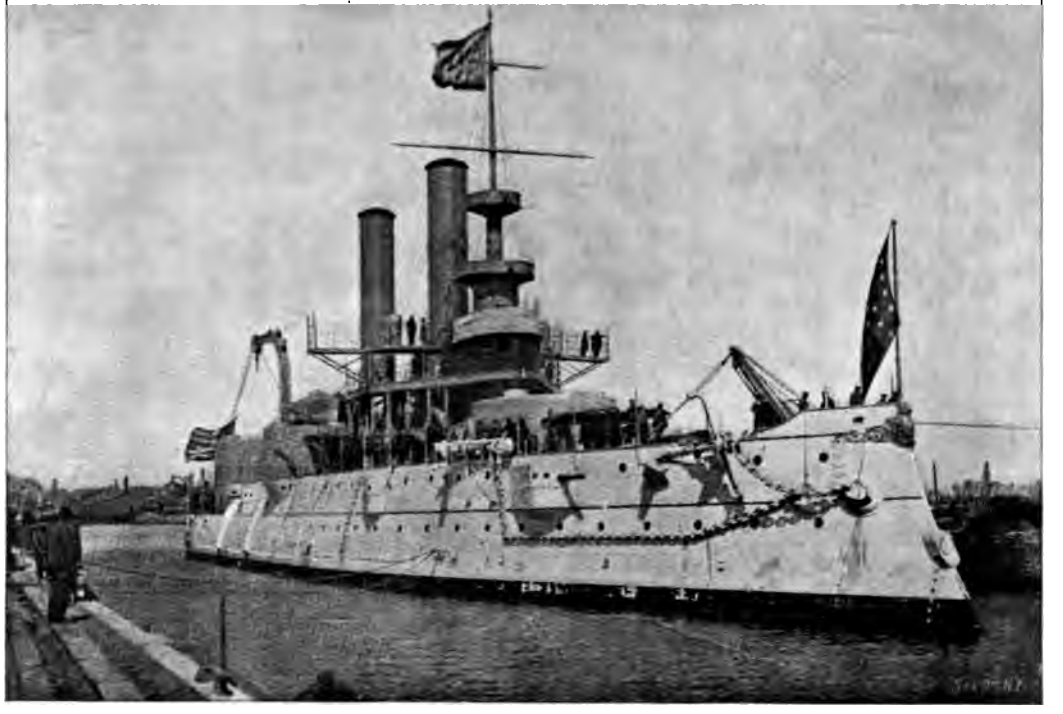
[1] Since the war the slow-firing 6-inch and 8-inch guns have been replaced with quick-firers.

and 6-inch guns and for the secondary battery is handled in these passages."[1]

The *Iowa*, laid down in 1893 and completed in 1897, differs from the *Indiana* class in these respects: she has a higher freeboard forward; her heavy guns are 12-inch in calibre instead of 13-inch; the four 6-inch weapons give way to six 4-inch quick-firers; the extent of water-line protected is greater, being 77½ per cent. against the *Indiana's* 66; the coal-supply and displacement are augmented; and the side armour, owing to the satisfactory results given by experiments with Harveyed plates, is reduced in thickness from 18-inch to 14-inch. The high military mast becomes a stunted tower, the two funnels on the contrary grow taller; and the 8-inch turrets are moved a little nearer the ship's side, and a little further from the keel-line. The six 4-inch guns are mounted, two in casemates forward, two in casemates amidships, and two on the after end of the superstructure, behind shields. Her trial speed was over one knot higher than the *Indiana's*, reaching 17·08 knots. She is a really sea-going ship. In action it was found that the blast of her heavy guns interfered with the men at the 6-pounders, some of whom were blown off their feet, and had their ear-drums split.

The *Monterey*, of 4130 tons, laid down in 1889, is a low freeboard monitor, carrying two turrets plated with 8-inch and 7½-inch armour, and standing upon redoubts armoured with fourteen inches and eleven and a half inches of steel. The fore turret contains two 12-inch, the after turret two 10-inch guns. There is a complete

[1] Surgeon-General's (United States Navy) report, 1898, 81.



The First-class sea-going U.S. Battleship *Iowa*.

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belt of armour on the water-line, tapering from eighteen inches amidships to six inches at the ends, a 3-inch deck, and large water ballast tanks which render it easy to lower her freeboard for battle. Her speed on trial was very moderate, only reaching 13·6 knots, but she is a most formidable vessel for coast defence work. On her voyage across the Pacific to Manila she showed all the characteristic weakness of her type. At a very moderate speed the water tanks on her decks retarding her grievously, whilst her small coal-supply and uncomfortable and unhealthy accommodation for her crew are additional disadvantages.

The following five double-turret monitors are new ships built on old hulls. After remaining for years on the stocks they were taken vigorously in hand in 1886, and, being remodelled entirely, were converted into powerful vessels for coast defence. The *Amphitrite*, *Miantonomoh*, *Monadnock*, and *Terror*, each displace 3990 tons, and carry four 10-inch breech-loaders in two turrets behind 11½-inch plating, the first and the third having in addition two 4-inch quick-firers. The speed on trial varied from ten to fourteen knots with the new engines supplied, but in service does not exceed seven or eight knots. The *Puritan*, of 6060 tons, carries four 12-inch guns in two turrets behind 14-inch armour, has six 4-inch quick-firers on the superstructure, and steams twelve knots. All these ships are very wet at sea, and in warm weather are apt to be very hot and uncomfortable. Their ventilation was originally extremely bad, so that their crews were grilled alive, but great improvements in this direction have decreased the discomfort.

The armoured cruiser *New York*, commenced in 1890, is a twin-screw vessel of 8150 tons, with a trial speed of twenty-one knots, and a powerful and well-protected armament. Fore and aft she has two pairs of 8-inch guns mounted in turrets behind 5½-inch armour, standing upon small redoubts plated with 10-inch steel, and connected by armoured tubes with the magazines. Amidships, on either beam, is an 8-inch gun sponsoned out, and protected only by a shield. Thus four 8-inch guns fire axially and five on the broadside. On the main-deck are twelve 4-inch quick-firers in sponsons, with 4-inch steel shields, four firing ahead or astern and six on the broadside. There are three funnels and two military masts, with three tops on the foremast and one on the mainmast. Two other tops on this mast were removed just before the war. Protection on the water-line is given by a belt of nickel steel five inches thick, including the inner skin, for 170 feet amidships, and this is supplemented by cofferdams. The armour-deck is six inches thick on the slope and three inches on the flat. The vessel verges on the battleship; she has been called a cruiser destroyer, and with reason, as she is faster and stronger than most vessels of her size and class. The radius of action is 5000 miles.

The weakness of her quick-fire battery was much criticised in England before and during the war. It should, however, be noted that she brings five 8-inch guns to bear on the broadside, which no English ship of her size does. Now that her 8-inch guns are being converted to the quick-firing pattern there is small fault to be found with her.

The *Brooklyn*, laid down in 1893, is an improvement upon the *New York*, and displaces 9100 tons. Her main armament is composed of eight 8-inch guns mounted in four turrets behind 8-inch and 5½-inch armour. The turrets are disposed lozenge-wise in the French fashion, and thus six 8-inch guns fire ahead, astern, or on the broadside. As an auxiliary battery there are twelve 5-inch quick-firers in 4-inch armoured casemates, four firing axially and six on the beam. The freeboard is higher than in the *New York*, and there is a forecastle on which is placed the foremost turret. The funnels, three in number, are immensely tall, rising one hundred feet from the furnaces, but the masts are dwarfed into two low iron towers each with two tops, thus somewhat injuring the appearance of the ship. On the water-line is a belt of steel 170 feet long and 4·2 inches thick, including the inner skin. The deck is of the same thickness as on the *New York*. The speed on trial was 21·9 knots, with a displacement of about 8000 tons; her coal endurance is 5100 miles.

The harbour defence ram *Katahdin*, generally similar to the *Polyphemus*, was laid down in 1891. She displaces 2183 tons, and was designed to steam seventeen knots an hour, a speed which, in practice, she has failed to attain. Her freeboard is low, and she must be an uncomfortable craft, as she has no superstructure in which to house her crew. She has a curving upper deck six inches thick on the slope and two and a half inches on the flat, but is, when her ballast tanks are filled, almost flush with the water. On her conning-tower is 18-inch armour, and her funnel and ventilator shafts are

also protected. She carries neither heavy guns nor torpedo tubes, trusting solely to her chisel-shaped ram for offence. It is not obvious how a comparatively slow vessel is to ram modern battleships faster than herself. The fact that she was not employed on active service during the war does not say much for her value.

The *Boston*, laid down in 1883, is a partially protected cruiser, displacing 3000 tons, and propelled by a single screw. She is fully rigged, without poop or forecastle, and with a superstructure amidships. Two 8-inch guns are mounted in as many barbettes of 2-inch steel, placed fore and aft of the superstructure, but not in the centre line, the fore barbette being to port and the after barbette to starboard, which gives room for one 6-inch gun with axial fire to be mounted at each end of the superstructure. This disposition was novel, but it has not been repeated, and it must manifestly tend to strain the ship. In the superstructure are four more 6-inch weapons in addition to the guns firing axially. There is a 1½-inch steel deck over, and a double bottom under, the boilers and engines. There are nine main water-tight compartments. The trial speed was 15·5 knots. A sister ship, the *Atlanta*, was undergoing reconstruction when the war broke out, and was not employed.

The *Charleston*, laid down in 1887, was built to an Elswick design, reproducing with a lighter armament and an enlarged displacement the features of the famous *Esmeralda*. She is of 4040 tons, and 18·2 knots. Her battery consists of two 8-inch guns mounted fore and aft dehind 2-inch shields, and six 6-inch guns amidships on sponsons, two firing ahead and two astern. She has a

complete protective deck from three to two inches thick, coal-bunkers round the vitals, and a cellular system above the water-line. The ship has one funnel and two military masts, each with one top.

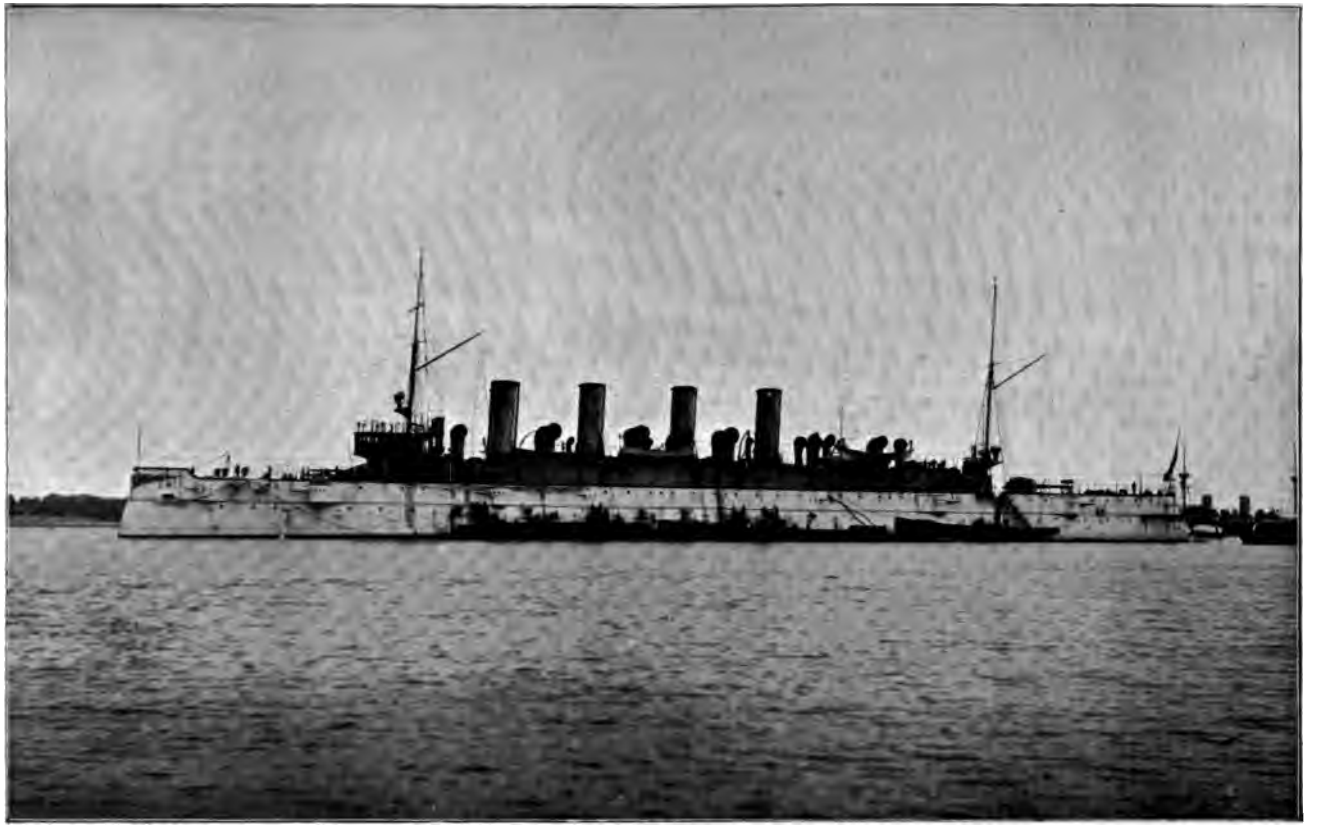
The *Baltimore*, also laid down in 1887, is larger, displacing 4600 tons. Her deck is much thicker, reaching four inches on the slope, and remaining at two and a half inches on the flat and at the ends; her speed is higher, being 20·09 knots on trial, and her coal-supply is greatly augmented. Her battery includes four 8-inch guns, two on the forecastle and two on the poop, and six 6-inch guns mounted on sponsons in the waist of the ship. Two 8-inch and two 6-inch guns fire axially, and two 8-inch and three 6-inch guns on the broadside. There are two military masts and two funnels.

The *San Francisco* and *Newark*, laid down in 1888, are smaller by 500 tons. Their armament consists in each case of twelve 6-inch guns, all mounted on sponsons and protected by shields, six firing on the broadside and four axially. They have a continuous double bottom, a steel deck three inches and two inches thick, and a cellular system above it, whilst there are two pole masts in the *Newark*, and three rigged masts in the *San Francisco*. The *Newark's* speed on trial was 19·2 knots; the *San Francisco's* 19·5.

The *Philadelphia*, laid down in the same year as the above, is of 4324 tons, and very similar design. She is armed with twelve 6-inch guns, of which four fire ahead and astern, and six on the broadside. She has a steel deck four inches thick on the slope and two and a half inches thick on the flat; her trial speed was 19·7 knots.

Two smaller sister ships, the *Raleigh* and *Cincinnati*, commenced in 1889 and 1890, followed. They are of 3183 tons, with a speed of nineteen knots; their battery consists of one 6-inch gun and ten 5-inch quick-firers, of which the 6-inch and two 5-inch guns fire ahead, the 6-inch and five 5-inch on the broadside, and four 5-inch astern. The deck is two and a half inches on the slope and one inch on the flat. The coal-supply is very insufficient, the heat in the engine and boiler rooms is excessive, the machinery is too delicate for hard work, and the type has been severely criticised by American naval officers.

Perhaps the finest unarmoured cruiser possessed by the United States is the *Olympia*, laid down in 1890. She displaces 5800 tons, and combines in a high degree offensive and defensive qualities. Forward and aft, in two hooded barbettes, plated with 4-inch steel, are four 8-inch guns mounted in pairs twenty-six feet above the water, and between them, in a high superstructure behind 2-inch steel, are ten 5-inch quick-firers, firing four ahead or astern and five on the broadside. There are two fixed and four training torpedo tubes; two masts, each with two tops and a light fore and aft rig; and a protective deck four and three-quarter inches thick on the slope amidships, and elsewhere from three inches to two inches. The 8-inch barbettes are connected with this deck by tubes of 3-inch steel. From the armour-deck to a height of four feet above the water-line is a series of cofferdams packed with cellulose. The trial speed was twenty-one and a quarter knots, with about 17,000 horse-power, so that at sea she is good for



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The U.S. Cruiser *Columbia.*

nineteen or twenty knots. Of coal 1300 tons are stowed, which is sufficient for 13,000 knots steaming. There is a double bottom throughout; and the accommodation for officers and men is excellent.

The *Columbia* and *Minneapolis*, of a type known as commerce-destroyers or "pirates," were laid down in 1890 and 1891. As their names denote, their primary object is to prey upon trade, and they are given an armament so feeble that they can scarcely hope to encounter any ordinary protected cruiser of their size with success. As a consequence of their weak battery, and to overtake merchant steamers, they have very powerful engines, triple screws, and a high nominal speed. The *Columbia* has done 22·8 knots, and the *Minneapolis* 23·07 on trial; on a voyage across the Atlantic the *Columbia* maintained a continuous sea-speed of eighteen and a half knots, which is a very good figure for a cruiser. They are ships of 8050 tons displacement and 411½ feet length. Except for their armament and protective deck, they resemble very closely in build an Atlantic liner. They have light masts without tops, and a battery of two 6-inch guns placed forward and firing right ahead, one 8-inch gun astern, and eight 4-inch quick-firers in sponsons, four firing ahead, astern, or on either broadside. The protective deck is four inches thick on the slope and two and a half inches on the flat; there is also a cellulose-packed cofferdam surrounding the ship. The horse-power is 21,000, and 2450 tons of coal can be stowed, giving a very large radius of action.[1] The type has been sharply criticised,

[1] 6300 miles in the *Minneapolis*, and 7200 miles in the *Columbia*.

that it can discharge shells loaded with the highest explosives with great speed and perfect safety from premature explosions in the gun. Compressed air is the propulsive agent. The shells can be fired at the rate of one a minute or rather less, and are of four sizes, containing respectively 500 lbs., 350 lbs., 200 lbs., and 100 lbs. of explosive. In a preliminary trial during May 1891, against a stationary target, the *Vesuvius*, moving slowly, made seventy-eight per cent. of hits, rejecting errors due to a bad system of firing; and when the target was towed at the rate of ten knots across her bows the practice was good, though the *Vesuvius* herself was steaming seventeen knots. In a later trial against a target representing the *Philadelphia*, at ranges varying from 2000 to 1000 yards, the average for the three guns was forty-four per cent., the practice being best at the longer range. The middle gun, which had received certain improvements, performed far better than the other two. Yet further progress has been achieved since the war, and Admiral Sampson is of opinion that the gun's efficiency will be greatly increased.[1]

The torpedo flotilla was of modern construction, fast and formidable, with the exception of the *Somers*, *Gwin*, and *Talbot*, which were small second-class boats. The other seven displace from 105 to 185 tons, and steam from twenty-two and a half to twenty-seven and a half knots. Each carries three torpedo tubes and three or four 1-pounder guns. They draw from five to six feet when fully loaded, and thus were able to render great service in the shallow water of the Cuban coast. Their artillery

[1] *Century*, vol. 57, 911.

equipment, however, was so inadequate that they could effect little, when unsupported, against the most insignificant Spanish defences. They proved seaworthy craft, the *Porter* distinguishing herself on a long voyage to San Juan. The best of the boats was the *Ericsson*, which was also almost the oldest.

The gunboats were of several different types. The *Nashville*, *Wilmington*, and *Helena* all have 2½-inch steel decks, displace just under 1400 tons, and carry each eight 4-inch quick-firers and ten smaller weapons. On trial they steamed from fourteen to fifteen and three-quarter knots. The *Nashville* differs from the other two in drawing eleven feet of water against their eight feet ten inches. The coal-supply is moderate—275 to 315 tons. These vessels were launched in 1895 or 1896. The *Marietta*, *Wheeling*, *Annapolis*, *Vicksburg*, *Newport*, and *Princeton* all displace about 1000 tons, draw twelve feet of water, steam twelve knots, and carry six 4-inch and eight smaller guns. They are sheathed and coppered to fit them for tropical work. As for the *Topeka*, she was purchased in England from the Thames Iron Works, where she had been fitted for service in the China-Japan war. She displaces 1800 tons, steams sixteen knots, and was armed with six 4·7-inch guns and several smaller weapons.

To the regularly-built warships of the American Navy a host of auxiliary craft, revenue cruisers, yachts, liners, fast steamers, and tugs, was added before and during the war. The purchase or hire of such ships began on March 8, when Congress voted £10,000,000

for defence, and continued far into the war. The revenue cruisers, whose crews are in peace drilled and disciplined, were an especially valuable reinforcement, and two of them, the *McCulloch* and *Hudson*, distinguished themselves in the war. The most important of the vessels taken over from the merchant service were as follows:—

	Tons.	Sea-speed.	Coal. Tons.	Guns.
Harvard (ex-*New York*) *Yale* (ex-*Paris*)	10,800	20	4,500	Each eight 5-inch Q.-F. eight 6-pounders.
St. Louis *St. Paul*	11,600	20	5,000	
Yankee (ex-*El Norte*)	6,888	15	1,500	10 5-inch Q.-F., 6 6-pounders.
Yosemite (ex-*El Sol*)	6,179			10 6-inch, 6 6-pounders.
Dixie (ex-*El Sud*)	6,114			10 5-inch Q.-F., 6 6-pounders.
Prairie (ex-*El Rio*)	6,872			8 6-in., 2 5-in. Q.-F., 6 6-prs.

But in most of the above the full armament was never placed on board. At least three of the big ocean-going steamers started out to scout with nothing heavier than the 6-pounder in their battery. Their high speed and great coal-endurance, however, rendered them most serviceable. One of the four big liners kept the sea continuously for six weeks without coaling. These vessels had American crews, who volunteered for war service when they were taken over. They were navigated by their own officers and crews, but when in action a naval captain, who was on board, with a cadet as aide, and a detachment of marines, took charge. Among the other auxiliary craft acquired the following were of most importance:—

	Tons.	Speed.	Guns.
Mayflower	2,690	18·8	2 5-inch, 12 6-pounders.
Scorpion	627	17·8	4 5-inch, 6 6-pounders.
Gloucester	786	16 to 18	6-pounders, 3-pounders, 1-pounder, and Colt automatics.
Vixen	800		
Eagle	492		
Hawk	545		
Wasp	750		
Solace	3,800	hospital-ship.	
Vulcan	3,500	repair-ship.	
Rainbow	6,200	condensing-ships.	
Iris	6,000		

At the close of the war the Auxiliary Navy numbered 123 ships, of which eleven were fast auxiliary cruisers, twenty-eight yachts converted into gunboats, twenty-eight armed tugs, nineteen colliers, seventeen store, repair, and hospital ships, fifteen revenue-cutters, four lighthouse tenders, and two steamers of the Fish Commission. For the most part these vessels received only small guns—6- and 3-pounders—to protect them against the attacks of privateers. These improvised warships played some part in the minor actions of the war, when engaged in the blockade of the Cuban coast. The large fast liners were employed as transports during July.

Lastly, in this survey of the ships at the disposal of the American Navy Department, thirteen old-fashioned single-turret monitors, dating back to the era of the Civil War, should not be forgotten. One was on the Pacific coast; the other twelve were scattered round the exposed American ports on the Atlantic. Three were hurriedly refitted with water-tube boilers. They only mounted old smooth-bore guns, but they served to reassure the timid and ignorant, who saw in them what had at least the appearance of strength.

The ships which the Spanish Navy had ready for sea, or nominally ready, at the outbreak of war were as follows:—

Armoured cruisers, 4—INFANTA MARIA TERESA, VIZCAYA, ALMIRANTE OQUENDO, CRISTOBAL COLON.

Old cruisers, 12—MARQUES DE LA ENSENADA, ISLA DE CUBA, ISLA DE LUZON, ALFONSO XII, REINA CRISTINA, REINA MERCEDES, CONDE DE VENADITO, DON ANTONIO DE ULLOA, DON JUAN DE AUSTRIA, ISABEL II, VELASCO, CASTILLA.

Torpedo gunboats, 5—FILIPINAS, NUEVA ESPAÑA, MARQUES DE MOLINS, MARTIN ALONZO PINZON, TEMERARIO.

Destroyers, 3—FUROR, TERROR, PLUTON.

Torpedo boats, 3—ARIETE, AZOR, RAYO.

Gunboats, 4—DON JORGE JUAN, CANO, GENERAL LEZO, GENERAL CONCHA.

But such was the state of Spain's Navy, that it is very doubtful if, outside the four armoured cruisers, three destroyers and three torpedo boats, more than two or three of the others were in an efficient state for service. For instance, the ALFONSO XII, MERCEDES, CASTILLA, ULLOA and VELASCO were all in such a state of disrepair as to be worth very little. There were fifty or sixty small gunboats on the Cuban coast or in the Philippines, which could hardly be reckoned as fighting ships. By the close of the war Spain had added to the above list the following warships, ready for sea:—

Battleship, 1—PELAYO.
Armoured cruiser, 1—CARLOS V.
Old ironclad, 1—NUMANCIA.
Destroyers, 4—DESTRUCTOR, AUDAZ, OSADO, PROSERPINA.

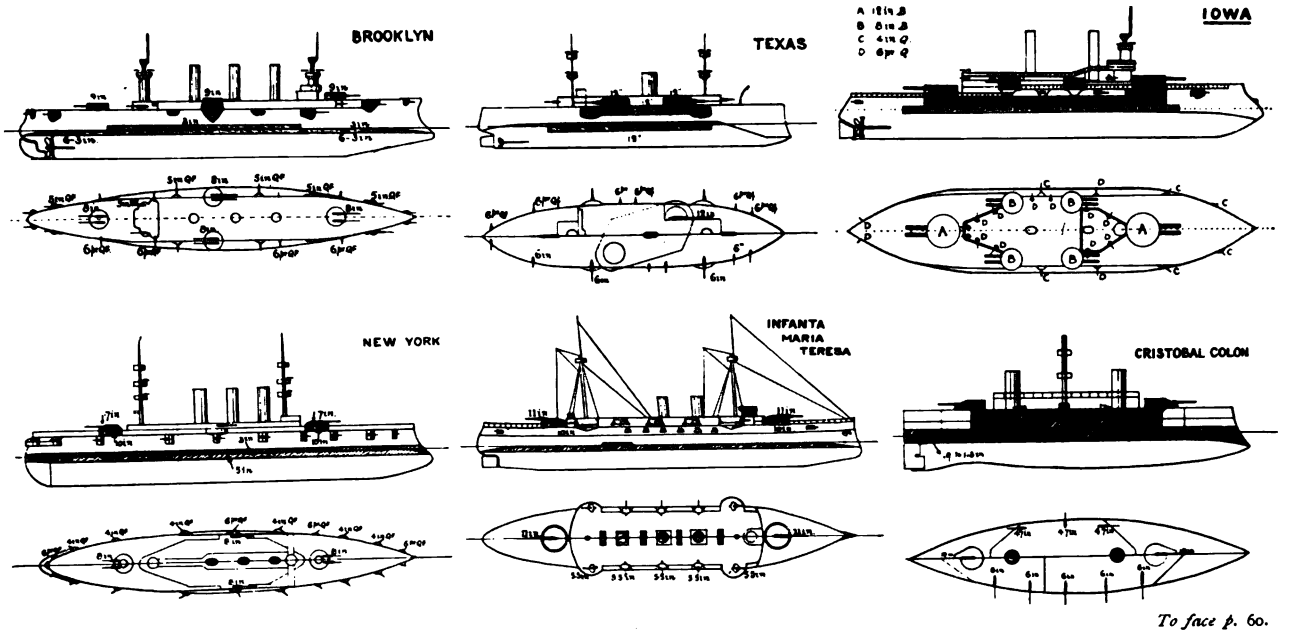
Of the above ships the PELAYO was a sea-going battleship of the French type, carrying four heavy guns in a quadrilateral, much as does the *Marceau* or *Carnot*,

with a battery of quick-firers entirely devoid of protection. She had been re-fitted at La Seyne just before the war, receiving Niclausse boilers and new quick-firers. Her battery consists of two 12½-inch Hontoria guns fore and aft, in 18-inch steel-armoured barbettes, and two 11-inch Hontoria guns sponsoned out on either beam, also in armoured barbettes. Armoured tubes for the passage of ammunition lead down from the guns to the armoured deck, which is at its stoutest point three and a half inches thick. The barbettes could, however, be put out of action by shell bursting beneath. There are nine 5½-inch quick-firers, eighteen smaller guns, and seven torpedo tubes; but the quick-firers were not mounted in April. An armoured redoubt was being constructed to protect them: this was not finished till some weeks after the war began. On the water-line the PELAYO is defended by a narrow belt from twelve to seventeen inches thick at its upper edge. Her speed with her old boilers on trial was 16·7 knots; her displacement 9900 tons; she carried from 800 to 1000 tons of coal as her extreme load.

In military strength the PELAYO as a unit was decidedly superior to the *Texas*, and as decidedly inferior to the *Indiana* class, which was just about as fast, and infinitely better armed and armoured. The want of protection in the Spanish vessel amidships, and the feebleness of her auxiliary battery, when contrasted with the *Indiana's* array of 8-inch, 6-inch, and 6-pounder guns, were such that she could have no chance of success in moderate or calm weather. With her high freeboard, however, she would have had an element of advantage in a heavy sea. No

attempt was made to send her to the West Indies, and we can only conjecture that she was not in a fit state to make a long voyage across the Atlantic. She was the only battleship possessed by the Spanish Navy, and in consequence of this fact was known in that service by the pathetic nickname of EL SOLITARIO.

The EMPERADOR CARLOS V, which was not ready at the outbreak of war, is a large but feebly armed and ill-protected armoured cruiser. On the water-line she has no other defence than that afforded by an armour-deck, ranging from six to two inches in thickness, and deeply curved downwards at the sides. Above this is a stretch of unprotected side, and then side armour two inches thick over the battery amidships. This plating is in two layers, one inch of chrome steel and one inch of Siemens-Martin steel, but it has the disadvantage of being too thin to keep out projectiles of 4-inch calibre or upwards. It is, in a word, so thin as to be positively dangerous. Mounted fore and aft in 10-inch barbettes are two 11-inch Hontoria guns, handled by electricity. The barbettes are not carried down to the armour-deck and are open to attack below. The secondary battery is of a very heterogeneous character, including ten 5½-inch Hontoria quick-firers, four 3·9-inch, two 10-pounders, four 6-pounders, and eight small machine guns. There are six torpedo tubes. Under forced draught the engines developed 18,500 horse-power, giving a speed of twenty and a half knots. The extreme stowage of coal is 1800 tons. This ship was only just ready for sea by the end of June; she was obviously by construction and design fitted to co-operate with the four armoured cruisers of



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Elevations of the *Brooklyn*, *Texas*, *Iowa*, *New York*, MARIA TERESA, and COLON.

Cervera's squadron, and would have been a most valuable reinforcement to them.

The NUMANCIA is a very early ironclad, dating back to 1863, but re-fitted, re-boilered, and re-armed. She has a broad iron belt of 4 to 5-inch armour, and a battery of quick-firers—four 6·3-inch and eight 5½-inch. Her speed being low she was not a very formidable vessel, and was not suited for employment in Cervera's Flying Squadron.

Of the armoured cruisers which constituted the main strength of the latter command, incomparably the finest was the CRISTOBAL COLON. Laid down at Sestri Ponente in Italy in 1895, she represented a type of cruiser in which extraordinary qualities of offence and defence are obtained upon a very moderate displacement. She was an Italian development of the well-known *Dupuy de Lôme*, in which very wide-spread protection by thin armour is given on the one hand, and a very powerful battery of guns on the other. On the water-line she had a complete nickel-steel belt eight and a quarter feet wide, tapering from six inches thick amidships to two inches at the ends, with a protective deck one and a half inches thick. Amidships for 150 feet there rises a citadel of 6-inch steel, with bulkheads of the same thickness, sheltering the bases of two barbettes, which are placed fore and aft and armoured with 5-inch steel. The two barbettes should have carried each one 10-inch Armstrong gun, but these weapons had not been placed on board when the ship was sent to sea. She was thus without armour-piercing guns during the war. Inside the armoured citadel, however, she had ten 6-inch Armstrong quick-firers, five on each broadside. Above the citadel, on the upper deck, were carried six

4·7-inch quick-firers, protected only by shields. The COLON's engines developed 14,000 horse-power with natural, and 15,000 horse-power with forced draught. Her sea-speed in competent hands should have been between eighteen and nineteen knots. Her boilers were of Niclausse type. She had four torpedo tubes above water but in the citadel, and so behind armour, whilst a fifth was submerged at the bow. The coal-supply, exclusive of liquid fuel, was 1200 tons. In rig the ship was curious, having one military mast between her two funnels.

The Americans had no cruiser to compare with the COLON. By the admission of American officers themselves, the *Brooklyn*, though more than 2000 tons larger, was no match for her, and it is difficult to say what she might not have accomplished with competent seamen and good gunners. Virtually she was a small battleship of exceptionally powerful type, and though wanting her heaviest guns, her splendid battery of quick-firers was quite capable of making her an awkward antagonist for the *Indiana* and her sisters. By keeping her side bearing at an angle of thirty-five or forty degrees—no impossible feat, as Admiral Fournier has shown—she could have defied the attack of even the 13-inch gun.

The three sister-ships, INFANTA MARIA TERESA, ALMIRANTE OQUENDO, and VIZCAYA, were also armoured cruisers, but of a type resembling the British *Aurora* class. They were built at Bilbao, and launched in 1890-1. In displacement they were little under 7000 tons. On the water-line they had a narrow belt of compound armour 216 feet long, five and a half feet

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The Spanish Armoured Cruiser VIZCAYA.

broad, and ten to twelve inches thick. They carried two 11-inch Hontoria guns fore and aft in 10-inch barbettes, with domed hoods three inches thick. On the upper deck, and protected only by shields, were ten 5·5-inch quick-firers, five on each broadside. The Spanish authorities filled these ships with unnecessary wood-fittings, placing "tons of timber" in the cabins and state-rooms. Moreover, they installed two ammunition hoists, leading straight down, without any sort of cover or protection, to the 5·5-inch magazines. There was nothing to prevent shells or burning matter from dropping down the hoists into the magazines. The deck was of 2 to 3-inch steel. Each ship had eight 6-pounders and twenty small machine guns. The torpedo tubes were eight in number, all above water, two bow, two stern, and four amidship tubes. Under natural draught ($\frac{3}{16}$-inch air pressure) the horse-power was 9500 and the speed eighteen and a half knots; under forced draught twenty and a quarter knots. This was on trial with only 420 tons of coal on board. The full coal stowage was 1050 tons. These three vessels differed little from protected cruisers; their big guns were too heavy for use against anything but a hostile battleship, yet their want of side armour rendered them incapable of encountering such an enemy.

The old cruisers were for the most part of low fighting quality, with much wood about them, little or no protection and low speed. The ALFONSO XII, CRISTINA, and MERCEDES carried each six 6·2-inch Hontoria guns and seventeen smaller weapons. They were of iron, and steamed on trial, with forced draught, about seventeen knots. The CASTILLA, of about the same size, but built

six years earlier, in 1881, with iron upper works and frames and a wooden hull, steamed only fourteen knots at the best, and carried old pattern Krupp guns. The others in the list of old cruisers were steel or iron vessels of 1100 to 1000 tons, armed with four or six Hontoria 4·7-inch guns each, and steaming at the very best less than sixteen knots.

Of the torpedo craft, the gunboats were of modern construction, with the defects of the type—low speed, poor coal endurance, and want of protection. They carried each two 4·7-inch guns fore and aft. Of the destroyers all except the DESTRUCTOR were of the most recent type, built in England just before the war, and displacing 370 to 400 tons. Their speed was twenty-eight knots on trial for the two 370-ton boats (TERROR and FUROR) and thirty knots for the other four. But in service they were not found capable of more than twenty-one or twenty-two knots, probably because their machinery and boilers were not handled with sufficient care, whilst in a sea-way their thin plates were driven in and their frames bent and broken by the force of the waves. Each destroyer carried two tubes for the 14-inch Schwartzkopf torpedo—unlike the British destroyers, which carry the 18-inch tube. The coal capacity was 100 tons, and was found to be insufficient to take them across the Atlantic. The DESTRUCTOR, of 386 tons and twenty knots, was an older vessel, launched in 1886. As for the three torpedo boats, they were built in 1887, were of the large sea-going class, and steamed twenty-four to twenty-six knots on trial. The AZOR had three tubes; the other two, two each. All three had old boilers, and were in poor order.

Comparing the two fleets before the war began, it appeared that there was little to choose, so far as ships went, though the United States were somewhat stronger. This was because the actual unreadiness or unfitness for sea of many of the Spanish ships was not known. A table will best show the difference between the apparent strength of the two combatants on April 20, and the actual strength at about that date.

	Apparent.		Actual.	
	United States.	Spain.	United States.	Spain.
Battleships .	5	1	5	0
Monitors . .	6	0	6	0
Armoured Cruisers	2	7	2	4
Old Ironclad .	0	1	0	0
Protected Cruisers	14	3	8	0
Other Cruisers .	9	14	9	12
Torpedo Gunboats	1	11	1	5
Destroyers . .	0	7	0	3
Torpedo boats .	6	12	6	3

The "apparent" list was one of the estimates actually published in America before the war. Had the Spanish Navy been able to send to sea with trained crews, all the vessels that figure in it, the issue might well have remained in doubt for months. On deducting ships either under repair or not sufficiently completed for work in war, the position of the United States vastly improves. The dangerous weakness in torpedo craft disappears; the inferiority in armoured cruisers is vastly reduced; whilst the superiority in protected cruisers is emphasised. Nor should it be overlooked, that in ships actually ready for sea the United States had the more modern fleet. Only nine of the American ships in the table, as against thirty-two of the Spanish ships, were launched before 1890.

The Spanish Navy was to a great extent a paper force, whereas the American Navy was generally under- rather than over-estimated, even in America. Spain especially lacked heavy armoured ships of the battleship class, without which she could scarcely hope for success in pitched battles. Her slight advantage in torpedo craft would be reduced or converted into a positive disadvantage as the war went on, since the United States had building or completing no less than eighteen torpedo boats or destroyers of 100 feet length and upwards.

In her merchant marine Spain had no such reserve of fast ships available as had the United States. Most of the steamers of the Compañia Transatlantica were taken over for service, either as cruisers or transports, before the war, whilst three fast vessels of great displacement were purchased from Germany. The following are the details of these ships:—

	Tons.	Speed. Knots.	
Patriota (ex-*Normannia*)	10,500	19	each 4 6·3-in., 4 4·7-in., 2
Rapido (ex-*Columbia*)	9500	19	3·2-in., and 4 machine guns.
Meteoro (ex-*Havel*)	6963	19	
Magallanes	6932	17	
Alfonso XIII	4381	16	
Reina Cristina	4381	16	
Santo Domingo	5400	14	
Alfonso XII	5063	15	
Leon XIII	5186	15	
Principe de Satrustagui	4713	15	
Montevideo	5096	14½	
Buenos Aires	5311	14	
Ciudad de Cadiz	3084	13½	
Mindanao	4195	13½	
Isla de Panay	3636	13½	
Isla de Luzon	4252	13	

It does not appear that any of these vessels were employed in naval operations. Three or four of them received guns, but they were not put to the use for which they were best adapted—the harrying of the enemy's commerce and coast. The PATRIOTA, RAPIDO, and METEORO were not ready for sea before June.

The *personnel* of the two Navies was, on paper, as follows in 1897 :—

	Spain.	United States. 1897.	United States, August 1898.	
Admirals	22	18	963[1]+348[2]	Total strength officers and men, 30,247.[4]
Captains	61	45		
Commanders	87	85		
Lieutenants and Ensigns	622	573		
Cadets, etc.	168	310	24,123[3]	
Warrant Officers and Seamen	14,000	12,750		
Marines	8,500	2,670		

Of the Spanish force perhaps 1500 were in the Far East and another 1500 in Cuba manning the small gunboats and cruisers on the station. That should have left an available total of 11,000 seamen. Yet we know that Cervera's squadron of four armoured cruisers and three destroyers was not properly manned, so far as the engine-room complements were concerned, and that the utmost difficulty was experienced in finding crews for the PELAYO, CARLOS V, and the vessels which in June were despatched on the aimless voyage to Manila. It would therefore appear that the effective strength of the Spanish *personnel* was very much below the paper strength. In the American Navy, on the other hand,

[1] Permanently commissioned officers, July 1, 1898.
[2] Appointed only during continuance of hostilities.
[3] August 15, 1898. [4] Lieutenant-Commander Beehler.

the effective strength was considerably above the nominal strength, as at the prospect of war men were recruited vigorously.

In training, discipline, education and seamanship there was no comparison between the two forces. They were thus contrasted in August 1898, by a Madrid periodical:—"The Americans have for a year been preparing for war, and for three months there was not a day that they did not fire all their guns. We have had but one target practice, and that over a year ago. This was limited to expending the least possible amount of ammunition. Half our vessels had not cleaned their bottoms for a year, and all had been anchored in Cuban waters for about two months. The Americans are constantly making voyages in all seas with their vessels, so that they have a trained *personnel* for the machinery. We have the greatest scarcity of engineers, and hardly any stokers at all."

The American naval officer has a world-wide reputation for professional knowledge and capacity. The American seaman—though not always recruited on the long-service system as in England—is intelligent, brave and resourceful. Coming from a nation of engineers, the engineering staff on board the warships was of remarkable efficiency, and as a consequence breakdowns were very few and far between, whilst such performances as the fast steaming of the *Oregon* and *Texas* at Santiago indicated the trustworthiness of American machinery in skilled hands. The American Navy generally had been constantly exercised at sea, and not only in the mere cruising which gives seamanship if

not tactical knowledge, but also in such evolutions as the blockade of a supposed hostile port. During the early months of 1897 the North Atlantic squadron was required to blockade Charleston, which it did with great skill and success. Much attention was devoted to target practice. "Men in general service on board cruising ships," says the Report of the Bureau of Navigation, issued after the war, "had received, during the nine months preceding the outbreak of the war, better training and more experience at target practice than had been the case for many years previous. The old regulations for target practice which had been in force for years were superseded on July 22, 1897, by a new set of regulations, which practically doubled the frequency of regular practice, making the practice simpler and less irksome, systematising and increasing the facilities for preliminary training and subcaliber practice, and adapting the whole system to the conditions demanded by the accuracy of the modern rifle of the United States Navy."

Thus, though apparently weak on paper, the American Navy had achieved practical efficiency of the very highest type, and was a vastly more formidable force than its insignificant numbers seemed to show. Yet how enormous was its superiority to the Spanish Navy could not be altogether grasped, even by Americans, without the actual test of battle. It is safe to say that most Englishmen—with their knowledge of 1812 and the feats of the Civil War—confidently expected the Americans to win. It is equally safe to say that no one anticipated that two important victories would be secured at the cost of but one American life. To the trained *personnel* of the

American Navy should be added 1000 men enlisted for three years' service in the revenue cruisers, and little inferior to the blue-jackets of the Navy.

To supplement the regular enlisted force of the United States Navy no reserve of the true kind was available. But fifteen of the maritime States, in January 1898, possessed enrolled bodies of men known as Naval Militia, mustering 200 officers and 3700 men. These bodies were organised purely for local defence, and could not be compelled in time of war to serve outside the United States. Thus the New York Naval Militia could only be employed on the United States coast, and could not be sent to Cuba or Puerto Rico. Just before the outbreak of war Naval Militia corps were embodied in two other States, making a total of seventeen separate bodies with about 4400 officers and men.

For the most part the Naval Militia was composed of intelligent, well-educated, and well-to-do men. It mustered in its ranks, in the blue-jacket ratings, university graduates, doctors, lawyers, clergymen, engineers and yachtsmen. It was representative of the best intelligence and highest patriotism of the country. But its training and sea experience had been small. Boat and camp exercise, and an occasional short cruise in an old man-of-war represented the sum-total of its practical knowledge. It was similar, in fact, in training to the British Naval Volunteers, a force which was abolished some years ago. "Men holding the ordinary blue-jacket ratings were of a class entirely unsuited to perform the duties that of necessity fall to the blue-jacket. Men who had been clerks, lawyers, professional men, whilst

they might have been able to camp on shore and look out for themselves and their surroundings, found it a much more difficult matter on board a crowded ship, where only a thorough understanding of how to make the best of everything would make their position bearable."[1]

Yet in the want of officers and men the Navy had to fall back upon this force. To get over the difficulty as to employing the organisations outside the United States, and to eliminate the dual control, by the State and the United States authorities, they were called upon to enlist in the "United States Auxiliary Naval Force," and were mustered into that service with the consent of the State governors. They were informed that as far as possible they would be employed for coast defence, but that in case of emergency the Navy Department would reserve the right to send them upon foreign service. In all 196 executive officers and 3832 men were enlisted for the Navy and the "Auxiliary Naval Force" from the Naval Militia. The response to the call was prompt and satisfactory, a battalion of New York Naval Militia reporting, armed, uniformed, equipped, and ready for duty in six hours after receiving notice, and the Massachusetts contingent reporting at the New York Navy Yard in twenty hours from the call. All displayed great zeal and enthusiasm, university graduates eagerly undertaking coal-trimmers' and stokers' work that they might thereby be sent on foreign service.

When called out, the Naval Militia was employed for the following purposes :—

[1] Bureau of Navigation Report, 8.

(1) Signal service ashore, where their work was "most satisfactorily" performed, to quote the words of the Official Reports.

(2) The manning of harbour defence vessels, such as the old single-turret monitors, and armed tugs employed in harbour service and patrolling mine-fields. The monitors were taken over in a very dirty and dilapidated state. They had all lain for thirty years or more at the various Navy yards with very little repairs. They were put in working order at the dockyards, but their crews had to do a great deal to fit them for service. When ready, they cruised from port to port, and the men were regularly exercised at target practice with the old 15-inch smooth-bores. No mishaps occurred, and the vessels were handled with skill and care. At the close of the war they were brought back to be put out of commission in excellent order, after fourteen weeks' service. In the management of the small tugs the officers and men also showed great aptitude.

(3) Four of the oldest organisations were called upon to furnish complete crews for the cruisers *Yankee*, *Yosemite*, *Prairie* and *Dixie*. Massachusetts manned the *Prairie*, Michigan the *Yosemite*, New York the *Yankee*, and Maryland the *Dixie*. The *Yankee* was at sea only eleven days after her crew had been mustered into the Navy. She took part in several of the minor actions of the war, and Admiral Sampson himself expressed the warmest satisfaction with her men in the following report:—

"As the Commander-in-Chief of the American Naval Squadron blockading Santiago and the Cuban coast, the

auxiliary cruiser *Yankee*, manned by the New York Naval Reserves, came immediately under my observation, and it is a pleasure for me to speak of the spirit and efficiency shown by the officers and crew during their stay under my command.

"The young men forming the ship's company of the *Yankee* were called into service several weeks prior to any other Naval Reserve battalion; they came from all walks of civil life, and their minds, devoted to peaceful pursuits, were suddenly diverted to the needs and requirements and the usages of naval routine.

"Notwithstanding this radical change, they have made the name of their ship a household word throughout the country, and have proved that the average American, whether he be clerk or physician, broker, lawyer, or merchant, can, on the spur of the moment, prove a capable fighter for his country, even amid such strange and novel surroundings as obtain in the naval service. These young men have especially upheld the American supremacy in the art of gunnery, and have on all occasions proved brave and efficient.

"The conclusion of the Spanish-American War released them from their voluntarily assumed positions in the regular Navy, but when they returned to civil life they carried with them the consciousness of duty well done at Santiago and Cienfuegos, and wherever their guns were used in hostile action. In a word, the Naval Reserves manning the *Yankee*, in common with those on board other vessels in the service, have proved their aptitude for sea duty, and made apparent the wisdom of the Government in calling them into active service."

Yet it was not all plain sailing. There was some friction with the Michigan detachment when they found that they were going to be placed under the orders of United States naval officers, and complaints were made. Similar difficulties occurred with the New Jersey Militia. But on the whole the men accepted hardship and discomfort with honourable alacrity.

(4) Detachments were furnished by the Illinois Naval Militia to many of the warships of Admiral Sampson's squadron. Thus the *Indiana* and *Newark* received each seventeen men; the *Oregon* and *Cincinnati* each sixty; the *Montgomery* twenty; the *Newport* twenty-six; the *Wilmington* thirteen, and several of the torpedo boats two to three men each. All volunteered for this special work. "Possessing a high average of education and intelligence," says the Assistant Secretary of the Navy's report,[1] "they picked up their duties quickly, especially in those cases where they were surrounded by trained men-of-war's men, and when the war ended were becoming quite efficient in their various grades and stations." Yet from the very nature of things they could not be expected to fill the place or to do the work of the trained seaman. At best they were a makeshift, and the necessity of a national naval reserve to supplement the active force is one of the first lessons of the war. "For the actual needs of warships and such auxiliaries as were required for deep-sea work," says the Assistant Secretary, "there was needed a reserve which could be promptly mobilised."[2] And this reserve, it is added, must not be too dependent upon the merchant service, the demands

[1] p. 54. [2] Report, p. 13.

on which for transport are likely to be enormous. In these words lies a suggestion of great value to England.

It is difficult to say whether the want of trained men did in any degree seriously hamper the American Navy. It looks as though the *Minneapolis* and *Columbia*, both of which had some trouble with their machinery, and both of which were weakly manned, did suffer from this cause. They were not ready for work at the outset. In most of the other ships the normal crews were augmented; in their case the crews were reduced. The figures given in the Surgeon-General's report on this head are interesting.[1]

Ships with crews above normal complement :—

Name.	War-crew.	Excess.	Name.	War-crew.	Excess.
Amphitrite	200	40	*Miantonomoh*	175	15
Annapolis	139	17	*Montgomery*	281	4
Bancroft	143	13	*Nashville*	179	29
Brooklyn	552	52	*New Orleans*	411	111
Dolphin	125	15	*Newport*	142	20
Helena	183	33	*New York*	652	86
Indiana	571	101	*Oregon*	524	51
Iowa	587	101	*Puritan*	233	3
Katahdin	101	3	*San Francisco*	372	72
Marietta	144	32	*Texas*	433	53
Massachusetts	480	10	*Vesuvius*	78	2

Ships with crews below normal complement :—

Name.	War-crew.	Deficiency.
Castine	146	22
Columbia	450	50
Detroit	252	25
Machias	158	10
Marblehead	267	10
Minneapolis	427	73
Terror	167	13

[1] pp. 187-8.

It will be noted that the battleships and armoured cruisers, which did by far the hardest work, were given by far the greatest augmentations to their crews. The engine-room complements in the large ships were strengthened by drafts of mechanics. Thus the *New York* alone received an addition of sixty. Eighteen of these were machine-shop hands from small towns, and though without warship knowledge and in some cases without any experience with any form of steam-engine, they proved very useful, from their adaptability and skill in improvising methods of repairs with inadequate tools. The engine-room and machinists' force was run in three watches.[1]

To the Spanish *personnel* the converse of all that has been said in favour of the American seamen and engineers may be applied without much injustice. The officers showed small professional capacity during the war, and the state of discipline may be guessed from a general order of Cervera's on leaving Spain. "I need not," ran this order, "call upon you to give proof of conscientiousness in your attention to duty, especially that of watch-keeping, a task often irksome." No British or American Admiral would exhort his officers and men to keep watch vigilantly, any more than he would exhort them to eat, breathe or sleep. The Spanish engineer was of poor quality; Scotchmen had kept the machinery in order before the outbreak of war, and it does not appear that their place was properly filled. As for the Spanish seaman he displayed heroic courage, but he was unintelligent, awkward, and in many instances of bad

[1] P. A. Engineer Bennett in *Cassier*, 1898, ii. 219.

physique. The war training of the Spanish Navy was thoroughly defective. Gunnery was an almost unknown art; manœuvres were never held; even drill and evolutions were neglected, as Captain Sigsbee of the *Maine* records that during some weeks' stay in Havana harbour he saw "very little drilling of any kind on board the Spanish men-of-war." The VIZCAYA and OQUENDO, two crack ships, when they reached Havana and lay there after the *Maine's* destruction, did not drill their crews, though war was then imminent. There was little opportunity afforded of learning seamanship. Essentially the Spanish Navy in 1898 stood where it had been in 1779, in 1796, and 1804, when British seamen regarded it with humorous contempt. To ascertain which side was likely to win, and to foretell the disasters of Manila and Santiago, we have only to go back to the pages of our own naval history.

In all our past wars the Americans are the people who have most seriously challenged our claim to be lords of the sea. Paul Jones, Hull, and Decatur are the names to us of men who were the equals of our great sea-captains. The Spaniards, on the other hand, since the days of Drake and Hawkins, have been the enemies we have feared least.

Rodney, in the war of American Independence, defeated them with scarcely an effort, and time after time British frigates captured Spanish frigates with absurdly small loss to our crews. It is curious to note that in his *Life of Rodney*, Mr. Hannay speaks of "the extraordinary fatuity which has distinguished the modern Spanish Admiral and General." "Extraordinary fatuity"

is the one phrase for Spain's course of action in the present war. "A war with Spain," says Brenton, "was always popular with our sailors, who despised her for her want of skill." In our fight for life of 1796—1808, the battle of St. Vincent serves to illustrate once more the hopeless feebleness of the Spanish Navy. Nelson[1] and our great captains looked upon "the Dons" with undisguised contempt. "A Spanish ship chased is a Spanish ship taken," was a saying of those days, which seems still to hold true. Of all things, national character changes most slowly, and what Spaniards were in the last century they still remain, whilst the introduction of steam and machinery into naval war has yet further handicapped them. They lack mechanical aptitude as a race, and have, to judge by the records of the present war, failed to make the best use of the admirable weapons with which English and Italian designers have supplied them. Bad as they were in handling sailing-ships—when it would take them twenty-four hours to form line of battle,[2] a manœuvre which British seamen executed in as many minutes—they are yet worse in husbanding the frail structures of steel and the complicated engines and machinery which make up the modern ship of war.

The maintenance of a modern fleet in good and serviceable order is a very expensive matter, and Spain, being desperately poor, exhausted by the protracted

[1] He said "the Dons may make fine ships—they cannot, however, make men."—*Despatches*, i. 309.

[2] The fact that the Spaniards took twenty-four hours to form line of battle is noted in Nelson's *Despatches*, i. 312.

struggle with the Cuban insurgents, and by the war with the Philippine rebels, had not the funds to provide her ships in peace time with the proper material for war. Her dockyards were without stores and appliances required by the fleet. "We are extenuated, absolutely penniless," writes Admiral Cervera in his tragic correspondence with the Madrid authorities. "In this Arsenal [Cadiz] we have not been able to coal, and at Barcelona and Cadiz we could obtain only half the biscuit we wanted, and that only because I had ordered 8000 kilos [about eight tons] to be made here." This was in February 1898. He notes further a want of charts of American waters. There was an extraordinary lack of ammunition, and of machinery for its manufacture. The COLON could not engage in target practice because there were no appliances for the re-annealing and re-charging of the empty cases, and there was no money with which to purchase reserve ammunition abroad. The MARIA TERESA had only thirty sound cartridge cases for her ten 5·5-inch quick-firers, instead of 1000, and, adds the Admiral in a letter dated March 16, "it is to be supposed that the magazines of the VIZCAYA and OQUENDO are no better supplied." Orders were given in Spain for more, but the best output of the manufacturers was only one hundred rounds per week, which would have meant something like thirty weeks before the three ships were properly supplied, whilst the first deliveries, though due in January, had not been effected by the middle of March. Even the guns were in bad condition. The VIZCAYA had a 5·5-inch gun in which the breech plug had been declared defective in

1897, but which does not appear to have been changed before she left for the West Indies. There were complaints of the breech-actions of all the 5·5-inch Hontoria guns; and, if Cervera can be believed, these weapons were practically useless from this cause and from the want of proper ammunition noted above. Such was the exhaustion of the arsenals that a broken awning line in the MARIA TERESA could not be replaced for days, whilst the changing of certain tubes in the boiler of her steam-launch had been demanded early in February, but had not been carried out late in March. The armoured cruiser CATALUÑA had been eight years in hand at Cadiz, and yet in 1898 was nowhere near completion. "We have nothing at all," Cervera wrote in March to Madrid. The VIZCAYA from want of docking, and from continuous service in warm waters, was so foul that her speed did not exceed thirteen knots.

The condition of the Spanish Navy was indeed vastly worse than that of the Italian Navy before Lissa or of the French Navy in the revolutionary war. Troude and Chevalier's complaints of ill-trained *personnel* and unreliable material contain no such revelation of disgraceful inefficiency as Cervera's letters. Even the Chinese fleet when it put out to battle, laden with cast-iron shells and with sand charges, was better equipped than the unfortunate vessels which the Spanish Cabinet sent forth to destruction. Yet what are we to think of the foresight which could boast in this manner: "We shall conquer at sea, and I will tell you why. In the first place, because of the admirable discipline which is found in our ships; in the second, because as

soon as action begins the nondescript crews of the American warships will desert. And therefore we need have no fears of defeat, ship to ship. . . . The squadron at the Cape Verdes, and particularly the destroyers, . . . have nothing to fear from the American fleet."[1]

Such was the utterance of a responsible Spanish official, who must have known the substance of Cervera's letters, and who, having been himself Minister of Marine, was well acquainted with the resourcelessness of the Spanish Navy. His talk was echoed by well-educated, thoughtful Spaniards of the writer's acquaintance; it even found some acceptance in British newspapers. It must be remembered, in fairness to the latter, that in peace time it is excessively difficult for those without inside knowledge to gauge the efficiency of military or naval forces. There were plenty of people who in 1870 foretold the triumph of France.

One fact must be noticed here out of its historical order. It is that no one in Spain has as yet been punished for the shameful inefficiency and corruption of the naval administration. The French Revolutionists would have beheaded both guilty ministers and innocent admirals; even calm England, judging by the precedent of Byng, and the warning of Sir Vesey Hamilton, would, whilst sparing the politicians, have shot an admiral or two to appease popular indignation. In Spain the politicians have been allowed with impunity to send brave men to wholesale massacre and torture, and no one has been punished. No words of condemnation can be too strong for the ministers who wilfully and knowingly

[1] Madrid, *Heraldo*, April 6, 1898, in Reports 28.

despatch an inadequate, ill-equipped force to certain destruction, because they have not the moral courage to resist the ill-advised demands of an uninformed public opinion. It is the absence of clearly-defined responsibility which conduces to such acts. Nor should it be forgotten that large sums had been expended on the Spanish Navy in the years before the war. "Thrice the amount of money necessary for building a large fleet was voted, with the greatest enthusiasm, more than nine years ago, and no one knows where most of the money has gone," wrote in May 1898 a Spanish editor. Information as to the real condition of the fleet was withheld from the public. Yet where the Government is democratic, it is essential that the people should know the truth and the whole truth.

And thus the paper comparisons of the two combatant Navies were useless and worthless. There could be no comparison between the two. Whenever an American ship met a Spanish ship of anything like her own size, the American ship was almost bound to win. A well-organized, modern force, vastly superior in numbers, had not the slightest cause to fear a disorganised mediæval force, weak in every imaginable respect. The vigour of initiative, which might for some time have enabled the weaker to puzzle and paralyse the stronger, is wanting in the Spanish character. The Spaniard does not attack, but waits to be attacked.

When war became inevitable, each day's and each hour's delay told in favour of the United States, with their vast industrial, financial, and engineering resources.

The numerous battleships and torpedo boats on the stocks in American yards were pressed actively forward, and had the war continued the *Kearsarge* and *Kentucky*, with a dozen torpedo vessels, would have been ready by the close of 1898. Spain could, perhaps, have sent to sea the ALFONSO XIII and LEPANTO by the same date, though these vessels were so defective in design and speed—having been built in Spain—that they could not be considered very useful items of naval strength. As for the CARDINAL CISNEROS and PRINCESA DE ASTURIAS, armoured cruisers of the VIZCAYA type, though one had been launched in 1897 and the other in 1896, both were in a very backward state, and could not have been counted upon for use before 1900.

To aggravate the weakness of the Spanish Navy, no plan of operations had been prepared beforehand, nor was any carried out during the war. Everything was done at haphazard, in obedience to popular clamour. It is, of course, quite impossible, besides being inadvisable, to settle in peace the exact detail of what each ship and each Admiral and officer is to do during the continuance of a campaign, though it will be well to draw up in outline the plan to be followed on each station. What is required is that the general direction of effort—whether open attack upon the enemy by heavy squadrons, or warfare upon his commerce, or raids upon his coast—should be determined beforehand; ships built in accordance with the direction in which energy is to be exerted; bases prepared at the proper places; arrangements made for speedy mobilisation and for the concentration of vessels at the most favourable points; and above all, a

scheme for the re-coaling of the fleet, or of its scattered ships, worked out. Harmonious co-operation between the Army and Navy has also to be arranged. Nothing of this had been done by the Spanish General Staff. When war came the bases, whether at home or abroad, were without stores, provisions, ammunition and coal, and the commanders without orders or instructions. What ships were in commission were scattered. A victorious engagement, as Admiral Cervera repeatedly points out in his letters, would have meant at the best only the postponement of ultimate, inevitable disaster, since Spain had no resources with which to repair and refit damaged ships, whereas the United States had splendid shipbuilding yards and unlimited money.

CHAPTER III

PLAN OF OPERATIONS IN THE WEST

WHEN war became inevitable each side had to make its plans. The Spanish authorities, as we have seen, had made no preparations or calculations. The first question for them must necessarily have been, whether what ships they possessed should be hazarded at sea or kept in port, as were the German ships in 1870, and the Russian ships in 1854-6, and again in 1877. Such a policy of inactivity may be masterly where the strength of the inactive force is wholly inadequate—as the Spanish fleet actually was—but can rarely be carried out except where there is some strong governing element which does not fear public opinion. Such there was in Prussia in 1870, and in Russia in 1854-6 and 1877. But in Spain, with its pseudo-democratic form of government and its weakly-planted royal house, there was no backbone to resist popular clamour. Moreover, neither Prussia nor Russia had owned distant colonies in which were locked up large forces of troops. The sympathies of the Army—a very powerful factor in Spain—and of the relatives of the soldiers in Cuba and the Philippines, had necessarily to be considered by the Spanish Ministers. As the force in

Cuba was far larger than the force in the Philippines, the former point became the more important to a Government which depended wholly upon public opinion.

The retention of the Spanish fleet in harbour was the course for which Cervera and Captain Concas, a distinguished Spanish naval officer, commanding the MARIA TERESA, pleaded. "To carry out any serious operations in a maritime war, the first thing necessary is to secure control of the sea," wrote the former, "which can only be done by defeating the enemy's fleet, or rendering it powerless by blockading it in its military ports. Can we do this with the United States? It is evident to me that we cannot. And, even if God should grant us a great victory, contrary to our reasonable expectations, how and where could we repair the damage sustained? . . . Even admitting the possibility of retaining Cuba, this island would cost us enormous sacrifices, as we should be compelled to be constantly armed to the teeth. And here the question already suggested by a speaker [1] must be asked: Is the island worth the ruin of Spain? I say nothing of commerce-destruction, because it seems to me that no man acquainted with history can attach any value to such enterprises, which are almost impossible in our days on account of the character of modern vessels. . . . I think it of the utmost importance that the whole council of ministers should be, without exception, fully and clearly informed of our terrible position. . . . I understand that the Government persists in the idea of sending the small torpedo craft to Cuba. This seems to me a very risky adventure, which may cost us very dear, as

[1] Señor Silvela, at Burgos. Cervera, 13.

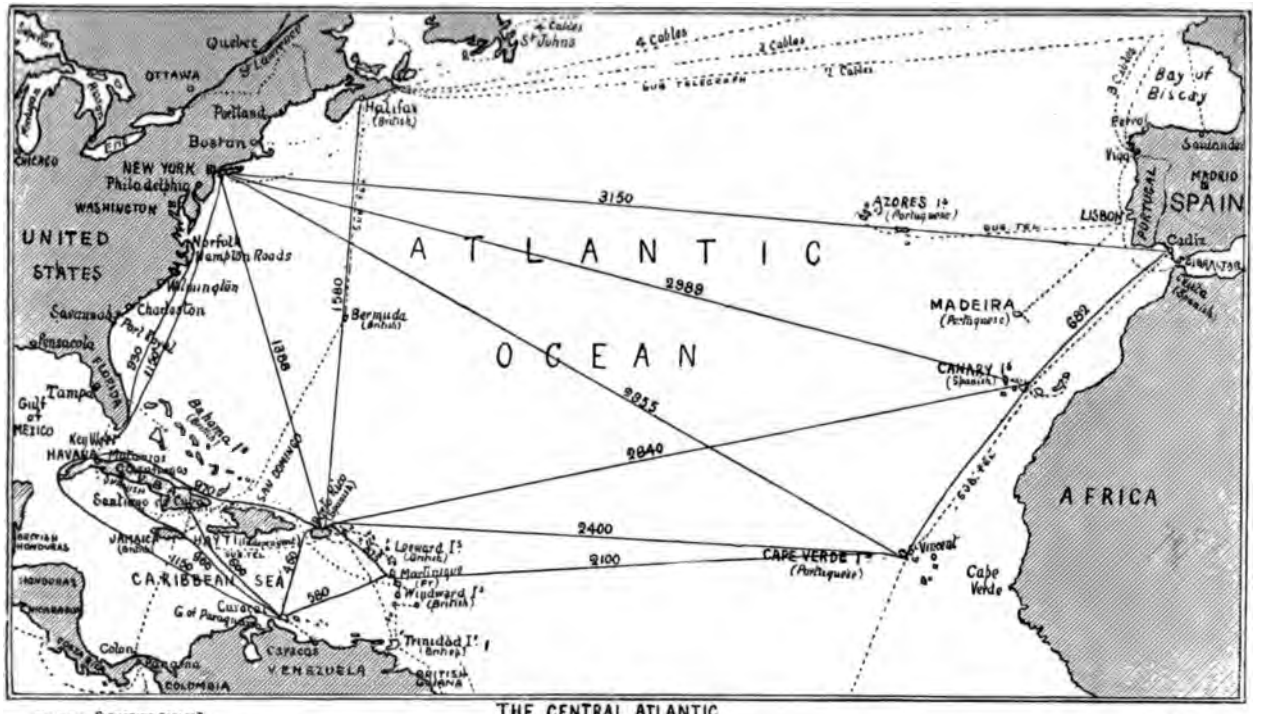
the loss of our squadron and defeat of our division in the Caribbean Sea would entail great danger for the Canaries, and perhaps the bombardment of our sea-coast cities. I say nothing of the fate of Cuba, because I have long since anticipated it. A naval defeat would only precipitate its ultimate loss, whilst, if left to defend itself with its present means, it might cause the Americans some annoyance. . . . I am very much afraid for the Philippines and the Canaries; above all, I fear the possibility of a bombardment of our coast towns, which is not impossible if we remember the audacity of the Yankees, who can count upon four or five vessels of higher speed than ours."

Captain Concas' opinion was as follows:—"The naval forces of the United States are so immensely superior to our own in number and class of ships, armour, artillery, and preparations made, besides the advantage given them by the insurrection in Cuba, the possible insurrection in Puerto Rico, and the still unsuppressed rising in the East, that they have sufficient forces to attack us in the West Indies, in Spain and the adjoining islands, and in the Philippines. . . . Any division of our limited forces and any separation from European waters involves a strategic mistake which would bring war to the Peninsula, a frightful disaster to our coasts, the payment of large ransoms, and perhaps the loss of some island [probably Minorca or one of the Canaries]. As soon as this fleet sails for the West Indies, it is evident, as has already happened more than once, that the American Flying Squadron will leave for Europe, and even if its purpose were only to make a raid or demonstration against our coasts, the well-founded alarm of all Spain would compel

the return of the fleet, though it might be too late. . . . Adding the three battleships [OQUENDO, VIZCAYA, TERESA], and the CRISTOBAL COLON, without her big guns, to the two remaining in the Peninsula [PELAYO and CARLOS V], and to the few and old torpedo boats which we have left, it is possible to defend our coast . . . thanks to the distance of the enemy from his base of operations."

This opinion was given on April 21. It will be observed that both these officers are for the virtual abandonment of Cuba, and for a policy of complete inaction. Neither so much as suggests raids against the American coast-line, the object of each being evidently to keep as far away from the Americans as possible, yet they expect the American Navy to expend all its energy in such raids. With their inner knowledge of the utter rottenness of the Spanish Navy the course which they recommend can be understood. But it is strange that neither mentions the bombardment panic which was at this time very prevalent on the seaboard of the United States, or considers that if public opinion would compel the recall of the Spanish squadron did an American fleet appear off the Spanish coast, it might equally be expected to compel the recall of the American fleet did the Spanish squadron appear off the coast of the United States. It is instructive to note that the American naval authorities felt no little uneasiness as to Spanish raids, as will be shown later.

How far such raids were possible remains an open question. The only Spanish ships capable of effecting them on the outbreak of war were the MARIA TERESA,



THE CENTRAL ATLANTIC

..... SUBMARINE CABLES]
——— Routes. Figures give distance in Nautical miles.

To face p. 88.

OQUENDO, and CRISTOBAL COLON, and two of these were, as we have seen, not properly supplied with ammunition. The VIZCAYA, in the same plight, was too foul to steam fast. Among the ships not ready for sea was the CARLOS V. Had the expeditionary squadron waited till the middle or end of May, she would have been fit for service; the VIZCAYA could have been docked, the COLON could have been furnished with her big guns, and fresh supplies of ammunition for the ships might have been obtained.

A force of three cruisers with only a few rounds of ammunition could obviously not be trusted to effect much on the American coast, and there was further the question of coaling to be considered. But with bunkers full and a deck load, the endurance of the Spanish ships should have been sufficiently great to take them at economical speed 3000 miles, from the Cape Verdes to Boston, or to Portland, and thence, after bombarding or making demonstrations, to Halifax, where they could have demanded coal sufficient to carry them back to Ferrol or Cadiz. Rule 3 of the British neutrality proclamation ran:—"No ship of war of either belligerent shall be permitted to take in any supplies, except provisions and such other things as may be requisite for the subsistence of her crew, and except so much coal only as may be sufficient to carry such vessel to the nearest port of her own country or to some nearer destination;" and ships so supplied were not to receive more coal or provisions in British ports till three months had expired. Under this rule the Spaniards could plainly have claimed fuel sufficient to take them back to Spain. But the

delay at Halifax must have been such that an American blockading squadron would have been able to arrive off the port before they could have got away to sea. Still it appears to the writer that the mere presence of these cruisers on the United States coast-line, would have led to a popular demand for the recall of a part, at least, of Sampson's fleet, since American opinion was quite uninstructed on questions of naval strategy. And if reports had been spread by the Spanish Government to the effect that the VIZCAYA, CARLOS V, and PELAYO were also moving on the American coast—above all, if at the earliest possible date these vessels had been sent ostentatiously to sea, and had then retired to some rendezvous under Cape Blanco, when their whereabouts would have been unknown,—the panic might have been greatly augmented. For the American authorities were obviously ignorant of the complete inefficiency of the Spanish marine, and had to judge by appearances and externals. If there was any chance of six large Spanish ships being concentrated off Halifax or the Maine coast-line, Schley's Flying Squadron might well have appeared too weak to be risked against the enemy, and the recall of Sampson might have become a necessity under the circumstances.

If operations were to be undertaken at once by a weak detachment of the fleet in western waters, it would seem that such a raid by the three cruisers which could be counted upon to steam, was the most promising plan to be followed. It was certainly not more likely to lead to disaster than the despatch of Cervera to the West Indies with four cruisers and three destroyers, which was

finally decided upon by the Government. With delay the practicability of such a raid diminished, as the Americans would either have fortified their ports or despatched a powerful fleet to meet the Spanish squadron. Without an expeditionary force they could have made little use of this respite in the West Indies. Cuba was too powerfully garrisoned to be more than threatened; Puerto Rico was open to attack, and was likely to fall in this case, but the effects of its loss, however serious, could not be compared with those of a defeat of the Spanish squadron. In European waters the Americans would have had to reckon with the PELAYO and—on paper—a formidable torpedo flotilla in addition to the five armoured cruisers, and it is open to question whether they would have ventured to send more than three or four of their fastest scouts.

A second course open to the Spaniards was to seek out and destroy or capture the *Oregon*, then making her way slowly north from the Horn to Key West. In this enterprise three of the Spanish cruisers and the three destroyers might have been employed; the VIZCAYA was too slow to stand any chance of overhauling the American battleship. It is true that with the facts now known one may doubt the possibility of a Spanish victory even when the numerical odds were six to one, but it is self-apparent that if these six ships could not place this one American battleship *hors de combat*, the Spanish Navy could not have the faintest hope of success against Sampson and Schley—for the latter was certain to be sent south the moment the direction of the Spanish movements was ascertained.

A successful attack on the *Oregon* would have had very far-reaching results. It would have been a terrible blow to the United States; it would have caused great exultation in Spain; but above all it would have reconciled the Spanish public to the policy of waiting at Cadiz or the Canaries till the PELAYO and CARLOS V were ready. The Spanish fleet "in being" would then have been a fruitful cause of embarrassment to the strategists of the United States. Looking at the war from the political side, an attack on the *Oregon* must be pronounced to have been the wisest plan of campaign. Nor should there have been much difficulty in ascertaining her whereabouts. Her course, as she steamed up the Brazilian coast, was fairly well known to the world. Captain Clark, her commander, was warned by the American Navy Department that Cervera might be moving against him, and decided upon the tactics to be adopted in the event of encountering the Spaniards.

To waylay the *Oregon*, Cervera's squadron should have been ready to move out on April 22 or 23, when the war began. But the VIZCAYA and OQUENDO, which, as relations between Spain and the United States grew worse, had sailed from Havana to Puerto Rico, and then from Puerto Rico to the Cape Verdes, only arrived at the latter point on the 19th. They had to coal, and to coal in a neutral harbour, where no special facilities were granted, and where, as Cervera said, the Spaniards did not feel at home. The later history of the war, above all the protracted delays at Port Said and Santiago, showed that the Spanish Navy was quite unequal to such feats as have been performed by British crews—for

example, by the *Powerful's* men at Hong Kong, who in an emergency took in 2700 tons of coal in twenty-three hours. The coaling of a Spanish ship seems ordinarily to have required a week. This is only a further instance of the inefficiency and lack of equipment which are to be noted throughout the war in the Peninsular marine, reacting disastrously upon Spain's strategy, and depriving her of her opportunities.

Another course which has to be considered, was that of sending the efficient Spanish ships to the Far East. Had Cervera's squadron succeeded in reaching Manila in May, it is just possible that a success might have been obtained against Admiral Dewey's none too strong squadron. But the difficulties in the way of such a voyage were stupendous. Cervera would have been compelled to depend upon neutral coaling stations for fuel, since from Barcelona to Manila there is not a single Spanish colony, and his ships did not carry a sufficient supply of fuel to enable them to cover the distance without refilling their bunkers. Under the various neutrality proclamations, he would have found no port open to his ships, and would have been compelled to resort to the difficult and dangerous evolution of coaling in the open sea from colliers—an operation demanding appliances which he did not possess, and a degree of seamanship which the Spaniards had certainly not reached. Moreover, the withdrawal of his squadron from the western field of action would have abandoned Cuba and Puerto Rico to their fate, and the coasts of Spain to attack by the Americans. The menace which the fleet in being exerts, would have been removed. Whether he could have

reached Manila before the arrival of the *Charleston*, *Monterey*, and possibly the *Philadelphia*, is at least doubtful, as reinforcements would have been hurried out by the Americans the moment his destination was ascertained. But the *Charleston* had to wait for the ammunition required to replenish Admiral Dewey's magazines, and for various repairs, and thus was not able to leave San Francisco till May 25, so that there was some chance of Cervera arriving before her. In that case Dewey's position might have been dangerous. In war, however, probabilities, not possibilities, have to be considered, and the arrival of a Spanish fleet at Manila before June was not a probability.

If the despatch of the Spanish fleet to the West Indies was decided upon, as it finally was, it was absolutely essential to despatch not a few ill-equipped ships, with no means of re-coaling, but the strongest possible squadron, with magazines and bunkers filled, and with colliers and store-ships in attendance. For that reason it was necessary to wait till the CARLOS V was ready for sea, and till the destroyers AUDAZ, PROSERPINA, and OSADO were able to join the FUROR, TERROR, and PLUTON. In the interval the division of armoured cruisers and the three destroyers might have been brought to Cadiz, docked, cleaned, their woodwork removed, and their defective ammunition exchanged. The presence of the PELAYO with the squadron, remembering her much lower speed and her comparatively low coal-supply, was not desirable. Whilst the squadron was preparing, arrangements for coaling in the West Indies could have been concerted, and colliers placed on the

Venezuelan coast, at Santiago, and at Cienfuegos. Even then the squadron could have had but little prospect of success. Its fighting strength was vastly inferior to that of the four American battleships and two armoured cruisers combined. In the end it must, after a more or less protracted chase, have been beaten or driven into some fortified or neutral harbour and there blockaded. But before this had been accomplished by the Americans it might have done a great amount of mischief. Supposing it had started from the Canaries with bunkers full, and that, without putting in to any harbour connected with the outside world by telegraph, it had repaired to some such point as Cumana or Los Roques to re-coal, its whereabouts would have been quite unknown for many days, and a successful entry into Cienfuegos, after destroying the scattered American cruisers on the southern coast of Cuba, would have been easy. Yet the practical effect of this success on the issue of the war would have been insignificant, though Cienfuegos would never have been captured as was Santiago, and though a blockade of this place might have severely tried the American Navy.

On April 19 the concentration of Cervera's fleet at St. Vincent was completed. That same day Cervera wrote to Madrid:—"The boilers of the ARIETE are practically out of service, so that this vessel, instead of being an element of strength, is the nightmare of the fleet. She can only be used for harbour defence. The boilers of the AZOR are eleven years old and are of the locomotive type. As for the FUROR and TERROR, their bow plates give as soon as they are in a sea-way." On the 21st a council of

know nothing of war. This, in the case of England, the events which led up to the Crimean War showed very clearly. It would appear that Cervera's letters were not laid before the council, and for this the Ministry deserves the utmost censure. Finally, it was most unwise to keep in command an officer who had spent his whole time in protesting, and protesting rightly, against the insane course which the Ministry now ordered him to take. One of the Admirals who had voted for the despatch of the squadron to the West Indies should have been chosen, if not before, at this last moment. Though the sudden replacement of Cervera must have disorganised the squadron, it would on the whole have been a lesser catastrophe than the retention of a commander who despaired of success. Yet as the Ministry had known for months Cervera's attitude, it might perfectly well have chosen another commander in March or early April.

The selection of the Admiral to command in war is a matter of the extremest moment. Reciprocal confidence must exist between him and the Government, yet in this instance Cervera distrusted Madrid, and Madrid appears to have been deaf to Cervera's remonstrances. By his professional attainments Cervera was peculiarly qualified to lead the Spanish Navy. His reputation as an officer was great, and he was admired and trusted by his subordinates. His valour, as subsequent events showed, was above all reproach, whilst his chivalry and tenderness of heart won the regard of his enemies. In warning the Spanish Government persistently and strenuously of the weakness of the Navy, he displayed a high degree of moral

courage.[1] But it is quite evident that he was by nature despondent and a pessimist, of much the same mental temper as Villeneuve or MacClellan, who always saw the defects of the forces they commanded and never those of the enemy; who forgot that, as Abraham Lincoln once said, "God sends his rain upon the unjust as well as the just." He lacked energy and initiative; he was crushed by the terrible circumstances in which he found the Spanish Navy, and he was obviously unfit to command upon a desperately dangerous and risky enterprise. "How," asks a French commentator, "can you make war if you have never believed in war? How lead to victory, if you have always foretold defeat?" The commander must be sanguine and hopeful—a Nelson, not a Byng.

"Surprise," he telegraphed to Madrid, "is well justified [at the order to sail], for nothing can be expected of this expedition except the total destruction of the fleet or its hasty and demoralising return. . . . You speak of plans, but in spite of all my efforts to have such prepared, as was only wise and prudent, my wishes have been disappointed. How can it be said that I have been supplied with everything I asked for? The COLON as

[1] This interesting opinion of Cervera's is cited by Captain Mahan from a Spanish technical magazine:—"A little more than a year ago we visited General Cervera in La Carraca [the Cadiz arsenal], and we said to him: 'You appear to be indicated, by professional opinion, for the command of the squadron in case war is declared.' 'In that case,' he replied, 'I shall accept; knowing, however, that I am going to a Trafalgar.' 'And how could that disaster be avoided?' 'By allowing me to expend beforehand 50,000 tons of coal in evolutions and 10,000 projectiles in target practice. Otherwise we shall go to a Trafalgar. Remember what I say.'"

in this case the Department would suggest that a rigid blockade and employment of our torpedo boats might accomplish the desired object, viz. the destruction of the enemy's vessels, without subjecting unnecessarily our own men-of-war to the fire of the land batteries. There are two reasons for this :—

"1. There may be no United States troops to occupy any captured stronghold, or to protect from riot and arson, until after the dry season begins, about the 1st of October.

"2. The lack of docking facilities makes it particularly desirable that our vessels should not be crippled before the capture or destruction of Spain's most formidable vessels."

To this he replied, strongly urging a direct attack, on April 9 :—

"I sympathise with all you say about guarding our big ships against a possible serious loss whilst the enemy's fleet is still intact. At the same time, I regard it as very important to strike quickly and strike hard as soon as hostilities commence. Havana is well defended by three or four batteries to the eastward of the entrance, mounting guns from 6 to 12-inch calibre. On the western side of the entrance there are three batteries, the guns varying in calibre from 8 to 12-inch, and two mortar batteries. All the batteries face seaward, and those to the west of the entrance are quite near the shore. All are open batteries, with heavy traverses between the guns. The guns and people who serve them are quite unprotected.

"These batteries are well calculated to keep off a fleet from seaward, which approaches to within a moderate

distance of a few thousand yards. I do not think they are well placed to resist an attack (for instance, the western batteries) from the westward and close in shore, where the batteries would be exposed to a flank fire, or to the fire of our big ships at short range, where the secondary batteries would have full effect. Even under these circumstances the ships must have such a heavy fire that the men in the batteries would be overwhelmed by its volume. Before the *Puritan* and *Amphitrite* arrived I was not entirely sanguine of the success of such an attack. Since their arrival yesterday I have little doubt of its success.

"Although the monitors are weak in secondary fire, I expected to put a cruiser with heavy secondary fire in the interval between each two of them. In this way I do not think the Spaniards would be able to fire. They would be driven away from their guns and kept away, whilst the fire of the ships would so injure the guns or mounts that they would be unserviceable. Although the defences west of the entrance are stronger than those east, the first has the advantage for us, that all the projectiles which miss the batteries will fall in the city, and furnish an additional inducement for the surrender of the city.

"In the memorandum which I furnished to the commanding officers of ships I provided, that if our ships were not numerous enough, or the Spaniards proved better than I expected, we were at once to haul off and substitute for the direct attack a close blockade of the port, which was to be extended east and west to adjoining ports as quickly as possible. Having silenced the

western batteries, it would be quite practicable to shell the city, which I would do only after warning given twenty-four hours in advance.

"I see the force of your reasoning that we would have no troops to occupy the city if it did surrender, yet, Mr. Secretary, it will be very unfortunate, besides a great loss of time, if we must delay until the rainy season is over. Probably a close blockade would terminate the trouble before October.

"I shall do my utmost to carry out your wishes as set forth in your letter. At the same time I hope you will consider the plan I have here outlined. I have discussed the matter freely with Captains Evans, Taylor and Chadwick, and all unite with me that the direct attack is sufficiently promising to warrant its trial."

This communication is of great interest, since it shows that Admiral Sampson was prepared to dare and risk everything. But it must be doubted whether there was any real prospect of success against Havana. Parker's and Dupont's attacks upon Charleston; Persano's bombardment of Lissa; Seymour's bombardment of Alexandria; and, in the course of the Spanish-American war, the bombardments of San Juan and Santiago, have shown that ships can rarely be trusted to silence even weak and ill-constructed batteries. The resources and armament of Havana were vastly more formidable than those against which Sampson had to contend in the two latter instances, whilst the naval force available for employment was little greater—if indeed as great. As to the men in the shore batteries being overwhelmed by the violence and volume of the ships' fire, when six

Spanish guns were attacked at Santiago by at least ninety-one guns in the American fleet with one of the most terrific bombardments of the war, we do not learn that the Spanish garrison in the forts was overwhelmed or lost heart.[1] "At San Juan," says Lieutenant Staunton, "whilst the [American] vessels were approaching and firing, the Spanish fire slackened, our shells driving their men away from the guns and under shelter; but as soon as the ships ceased firing and turned, the Spaniards came back to their guns and re-opened fire with energy. It was the first illustration, of which there were a number during the war, of the difference between *silencing* a battery and *destroying* it by artillery fire. The first can be readily effected by superior fire; the second is exceedingly difficult of accomplishment by *any* fire, as it requires the actual destruction of guns or their mounts —*i. e.* they must be actually struck by shell." Granting that one or two of the Havana batteries might have been silenced, it is difficult to see what practical effect this would have produced upon the issue of the war. And almost certainly the American fleet would have had to suffer severely. It could not well afford to lose ships so long as it was possible that a powerful Spanish squadron might at any moment appear in the West Indies, and so long as the exact fighting value of the Spanish Navy was unknown. It was, then, the wisest thing the Navy Department could do to forbid any bombardment or attack of Havana when the war began.

To give a base for the blockading fleet and to open communications with the insurgents, the seizure of

[1] Lieutenant Müller, 30.

Matanzas by a small expeditionary force was planned. It is lucky for the United States that the attempt was never made. Though the whole eastern half of Cuba had practically been abandoned by the Spanish army to the insurgents, in the west the latter had no forces capable of efficiently supporting the American troops. The Spanish army in Havana was exceptionally strong, well armed, well supplied with ammunition, and inured to war. Even with the support of the ships it is doubtful whether the Americans could have long retained Matanzas, whilst on the withdrawal of the ships their posts would have been liable to attack and capture. As this was brought home to the American Government by men who knew Cuba well, the idea of seizing the place was abandoned.

It was suggested in England by Admiral Colomb that troops would be landed in Cuba by the Americans in numerous small vessels. No such attempt was made, and the forecast was probably based upon an erroneous conception of the fighting value of the Cuban. He further suggested that the American fleet might remain concentrated at Key West and the Spanish fleet at Havana, neither fighting the other. This again points to the fact that the Spanish Navy was generally over-estimated and the American Navy under-estimated in Europe as in America.

Many foreign critics and American officers had expected that an American squadron would be sent on the outbreak of war to Europe, to seize a base and make demonstrations against the Spanish coast-line. It will have been observed that this was the course anticipated

by Cervera. The only bases, however, which could have been attacked with any prospect of success were Minorca, Ceuta, or one of the Canaries. Troops, colliers, and storeships would have had to accompany the squadron, and these were not ready in April. Without a secondary base at which to coal and tranship ammunition, the American flotilla could have accomplished little, whilst, as Captain Mahan has pointed out, it is far from certain that desultory bombardments of a few sea-coast towns would have done more than provoke general sympathy for Spain among her European friends. There were political reasons which rendered it inexpedient for the United States to undertake serious operations in Europe until they had gained some striking success, the prestige of which would have rendered the enemies of America unwilling to intervene. These reasons, it is true, did not operate so strongly in the case of the Canaries, and an attack upon these latter was generally anticipated at an early date in the war. At the same time a considerable part of the American Navy, the four monitors in Atlantic waters, were quite unfit for long-distance cruising and open-sea fighting, whilst the *Oregon* had not as yet arrived.

Perhaps it was the exaggerated alarm felt on the sea-coast of the United States that prevented the despatch of a powerful squadron with this object. Such ships as the *New York*, *Brooklyn*, *Iowa*, *Columbia*, and *Minneapolis*, with a large coal-supply and good sea-keeping qualities, might have been spared if the interests of local defence had not retained the vessels forming Commodore Schley's Flying Squadron on the coast-line

of the United States. The American public, being generally ignorant of naval matters, had not grasped the fact that a vigorous offence is the best defence—especially against such a power as Spain. Immense schemes of coast defence, involving the expenditure of tens of millions, and the mounting of hundreds of guns in fixed positions, had occupied the minds of its strategists, and those wise officers who, like Captain Mahan, required a far stronger Navy, had not been able to get their way. In consequence, when war came, every town and village on the seaboard wanted fortifications or ships to defend it. A few guns of moderate calibre might no doubt have been needed to protect important places on the coast against the raids of cruisers. But these inordinate demands, to which, in a democracy, some concession had to be made, hampered the American strategists grievously. "Our sea-coast," said a good judge of public opinion to Captain Mahan, "was in a condition of unreasoning panic, and fought to have little squadrons scattered along it everywhere, according to the theory of defence always favoured by stupid terror." It is instructive for Englishmen to notice that some outcry was raised—with perhaps far more reason—by certain of the British seaboard towns when in the autumn of 1898 the coast and port-guard ships were withdrawn and mobilised—on the eve of what might have been war with France. If it is bad policy in peace time to encourage such claims by stationing ships at fixed points, it is impossible wholly to disregard them in war, however foolish they may be. Those who censure the American Navy Department for

yielding to this clamour forget the weight and influence of public opinion in a free country; forget that the famous report of three British Admirals on the 1888 manœuvres required a reserve fleet always confined to British waters; forget that the strategists who directed the British Navy in the eventful years 1803-5 kept a reserve in the Channel, besides distributing a few cruisers amongst the chief outlying ports. Theoretically, it may be the soundest policy to place every ship in the foremost line, close up to or watching the enemy. Practically, it is impossible unless the public has thoroughly grasped and understood the principles of naval war. As the Press guides and directs opinion, the importance of a censorship not only upon war news, but also upon the comments on war news, is very evident.

But if no squadron could be sent with any serious purpose against the Canaries, or with the object of meeting Cervera's ships the moment they put to sea from the Cape Verdes, it has yet to be considered why no attempt was made to gain touch of the enemy the moment hostilities became inevitable. In the warships *Minneapolis* and *Columbia*, and the auxiliary cruisers *St. Louis*, *St. Paul*, and *Harvard* the United States had scouts which could have shown a clean pair of heels to the Spaniards, and which possessed a large radius of action. Since their fighting qualities were not great, their detachment for the purpose of watching the enemy would not have weakened the battle squadrons. But, starting from New York or Hampton Roads, they could not have reached the Cape Verdes under a fortnight

at economical speed,[1] and as the concentration of Cervera's fleet at the Cape Verdes was only known in the United States on April 20, they could not have appeared off St. Vincent before May 4 or 5, which would have been too late. It was quite uncertain whether Cervera would steer north-west for New York, 2955 miles distant, or west for San Juan, 2400 miles off. In the one case the scouts might easily have missed him; in the other they were not certain to meet him, and their services would thus have been lost at the very time when he was approaching the field of action. On the whole, then, the Department acted for the best in watching only the approaches to the Caribbean and the trade route to New York with its available scouts. Political reasons may have prevented the despatch of a pair of cruisers to St. Vincent before the war.

Another course suggested was an early attack on San Juan, a point of great importance to Spain as the connecting link between the Canaries and Havana, and the only serviceable base for operations against the American coast-line. The fortifications of San Juan were very weak, even so late as the end of April, and the place could probably have been taken without serious loss or injury, had a small military force been available. As an advanced position from which to watch and wait for the approach of Cervera, San Juan had no little value to the United States. That no attack upon it was made, was due in part to the retention in the north of

[1] At full speed they could have reached St. Vincent in seven to eight days, but then they might have been in an awkward position from want of coal, at the most critical moment in the campaign.

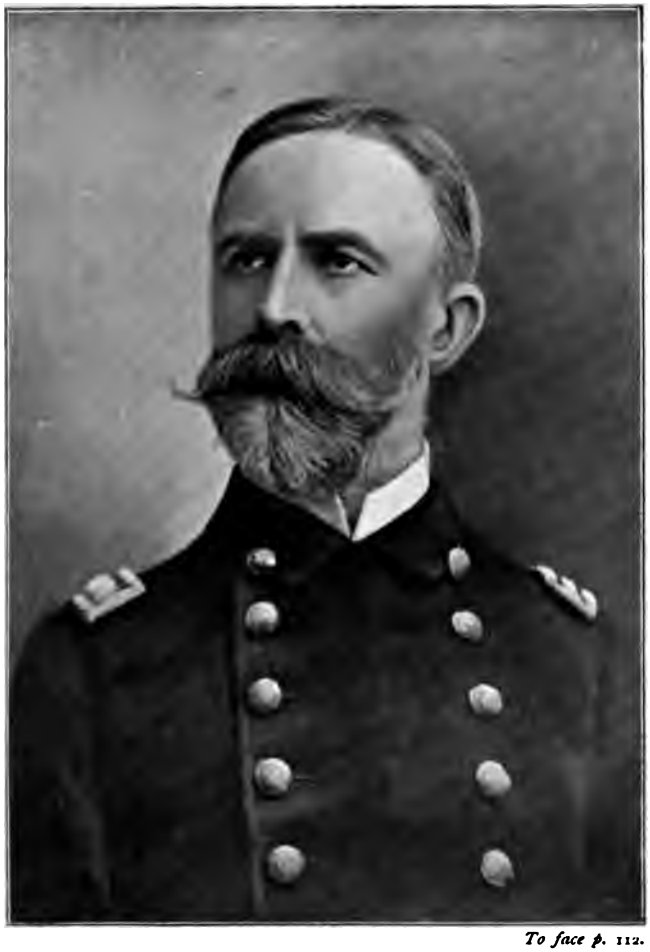
Schley's squadron, which deprived Sampson of the mobility needed to make a quick rush on the place before Cervera appeared; in part to the menace of the enemy's squadron "in being." The Americans, however, would have been quite safe from any such surprise as happened to Persano at Lissa, with Cervera still at St. Vincent, and we now know that on Sampson learning of the supposed return of the Spanish squadron to Cadiz, he decided to seize San Juan, thus showing practically that a fleet in being at great distance has no controlling influence on naval movements. The enemy could not fall upon the Americans as from the clouds, since he had first to cross the Atlantic. If it be said that an attack upon San Juan must have divided the American fleet between Cuba and Puerto Rico, the answer is, that the fleet was so divided towards the end of May, when Cervera was actually in the West Indies.

It should further be noted, that Sampson's presence off San Juan on May 12 led directly up to the Spanish disasters at Santiago by precluding Cervera's access to the best supplied and defended naval base that Spain possessed in the West Indies, after Havana, and that had San Juan been left absolutely open—had Admiral Sampson not decided upon this eastward journey to meet the enemy, as he confidently anticipated—the results might have been serious for the United States. San Juan is, roughly speaking, 1400 miles from New York, 950 from Havana, and 1000 from Cienfuegos. Thus Cervera's arrival at San Juan would have given no trustworthy indication of his future movements, such as his "location" at Curaçao undoubtedly did afford. This

made it all the more urgent to keep a sharp eye upon Puerto Rico.

The plan, then, finally adopted in the west was to blockade Havana, Matanzas, and Bahia Honda, and to retain a sufficient force in the north to meet Cervera if he moved towards the American coast-line. That force was placed at Hampton Roads, an admirably central position, nearer to the West Indies than New York, easier of access in all conditions of weather and tide, and close at hand to the great shipbuilding yard of Newport News. About two-thirds of the available naval strength in the Atlantic was placed under Sampson for the work of blockade; the other third was at Hampton Roads or scattered along the American coast. In the words of the Official Reports—"The whole fleet was ready on April 15—four weeks before Admiral Cervera's fleet reached this side—for any emergency, gathered practically in two fleets, each within striking distance of one of the two points from which attack might come. Four months before the vessels were distributed much as in ordinary times. On April 15 all of the more powerful vessels were fully manned, the legal quota having been exceeded on account of the emergency."

In the selection of an Admiral to command, the Government showed great judgment. Passing over Captains Robeson, Casey, and Schley, it selected Captain Sampson, who stood fourth on the captains' list, with ten commodores and six rear-admirals above him, for the North Atlantic squadron—the squadron which was entrusted with the work of blockade. Captain Sampson, famous as an artillerist, was on the eve of war in



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REAR-ADMIRAL SAMPSON.

command of the *Iowa*. His age was 58, for in the American Navy promotion is exceedingly slow. He is the typical American officer—quiet and undemonstrative in manner, reserved in speech, abundantly endowed with scientific knowledge, cool and cautious in action, yet with all the moral and physical courage required of a leader in war. He was the son of a day-labourer, and had risen to his position by his own indomitable grit and pluck. In England the nomination system would have excluded him from an aristocratic service. He had seen some hot work in the Civil War, and was on board the monitor *Patapsco* when she was blown up by a torpedo at Charleston, and his "cool intrepidity" won his commander's well-merited praise. Admiral Sampson's management of the North Atlantic squadron throughout the naval campaign was such as to confirm his great reputation. His judgment, perhaps, was never very severely tasked, owing to the amazing mistakes of the enemy. But all that he planned and did seems to have been sound and judicious, with the possible exception of his wish to bombard Havana.

To command the Hampton Roads squadron Commodore Schley was chosen. He had a high reputation in his profession, fought well in the Civil War, took part in 1871 in the hostilities on the Corean coast, and in 1884 rescued the survivors of the Greely expedition. Unfortunately, when placed under Admiral Sampson's orders, Schley seems to have been unable to forget that he was first in seniority.

In the eastern field of war there could be little doubt as to the objective, and an early attack upon Manila and

the Spanish squadron there was determined upon. The *Olympia* had received instructions to return to the United States, but she was ordered on February 25 to remain on the Asiatic coast pending events. About the same time Commodore Dewey was directed to keep full of coal, and to enlist all the men he could get. His squadron had been concentrated at Hong Kong by orders of February 25, and was strongly reinforced. Commodore George Dewey had not been specially selected for the command in view of the war, but had been some months on his station. He, like Sampson and Schley, had fought in the Civil War. Under Farragut, he took part in the fierce action of March 21, 1863, at Port Hudson, when his ship, the *Mississippi*, ran aground and was burnt. In the war with Spain he gained fresh distinction by the vigour and dash which he showed at Manila. His work was not, perhaps, difficult, yet it is to his credit that he seems more than any other American officer to have realised the hopeless rottenness of the Spanish Navy and of the Spanish defences. Placed in a trying position after his success, he displayed as much tact and forbearance to neutral powers as he had shown courage in action. He was a great stickler for correctness of etiquette and dress; in fact, something of the "gilded popinjay," at whom in time of peace popular agitators in England and the United States are wont to scoff, but whose sterling qualities all men recognise in war.

Some weeks before the war it was decided to move from the Pacific coast to the Atlantic the fine battleship *Oregon* and the gunboat *Marietta*. The *Oregon*

accordingly left Puget Sound on March 6, and proceeded to San Francisco, which port she left on the 19th for Callao. She arrived at the Peruvian port on April 4, having steamed at an average of 10·7 knots—a very fine performance on a long run of 4726 miles, through tropical waters, where the heat in the engine-rooms and stokeholds was excessive. At Callao she was met by the American gunboat *Marietta*, whose commander had received orders to have coal ready.

On April 7, having filled her bunkers and completed some slight repairs to her engines and boilers, the *Oregon* put to sea once more for Sandy Point in the Straits of Magellan. The *Marietta* was sent on ahead to make sure that 600 tons of coal were ready at this place. The weather was generally good, but there was a very heavy swell, and the ship pitched heavily, the seas sweeping all but the superstructure deck. On April 16, when in Magellan's Straits, a furious gale broke, and the ship had to be anchored. Next day she was off Sandy Point, having completed the run from Callao at an average of 11·7 knots. Four days' stay was made here owing to difficulty in getting at the coal which had been ordered, and which was found stowed in a hulk beneath a cargo of wool. On the 21st she left Sandy Point, and reached Rio de Janeiro on the 30th, having been much delayed by the low speed of the *Marietta*. All preparations were made for disposing of the TEMERARIO in case that vessel showed herself. At Rio the *Oregon* learnt of the declaration of war. She was also informed that the TEMERARIO had left Montevideo for Rio, and that four Spanish armoured cruisers and three destroyers were at sea. At

the same time the purchased ship *Nictheroy*[1] was placed under Captain Clark's orders. She had 6000 tons of coal on board, and from her the *Oregon* filled her bunkers.

Captain Clark appears to have had some apprehension of an attack upon his ship, whilst lying in this neutral port, by the TEMERARIO. He took every precaution against such treachery, and warned the Brazilians that if the Spanish gunboat entered the harbour and approached the *Oregon* he would fire upon her. The *Marietta* was placed near the entrance to the harbour, and directed to order the TEMERARIO, in the event of her appearance, not to approach within half-a-mile of the *Oregon*. The *Marietta* was also to follow her with her search-light. But the Brazilian authorities took every precaution, and the TEMERARIO never appeared.

As the *Oregon* on her way to Key West would necessarily have to pass through waters in which Cervera's fleet might very well be found, the possibility of her encountering this fleet had to be considered. The Navy Department gave Captain Clark an absolutely free hand; it decided against laying down the exact course to be steered with the object of sending reinforcements to some pre-arranged point, if necessary, on the ground that it was impossible to keep a secret in Washington, and that such a measure would simply reveal to Cervera where he could find the quarry. In case the *Oregon* did meet the enemy, the Department was convinced that she would not succumb without crippling Cervera's ships. Captain Clark was perfectly confident, knowing the

[1] Re-named *Buffalo*.

strength of his battleship and the high efficiency of his crew. His plan of action was to make a running fight and string his enemy's squadron out, by compelling a long pursuit, in which one or more of the Spaniards would probably fall behind. He knew that singly Cervera's armoured cruisers were not to be feared. If there had been good leading, however, on the part of the Spanish Admiral all seven vessels would have closed in simultaneously, and used the torpedo.

"What I feared," wrote Captain Clark, "was that he [Cervera] would be able to bring his ships up within range together, supposing that the slowest was faster than the *Oregon;* but there was the chance that their machinery was in different stages of deterioration, and there was also the hope that impetuosity or excitement might after a time make some press on in advance of the others. I, of course, had in mind the tactics of the last of the Horatii, and hopefully referred to them. . . . I knew that the Spaniards might all close to rapid-fire range, overpower all but our turret guns, and then send in their torpedo boats. . . . The torpedo boat was a rattlesnake to me, that I feared would get in his work while I was fighting the tiger; but I felt that the chances were that Cervera was bound to the West Indies, and that the need of the *Oregon* there was so great that the risk of his turning south to meet me should be run; so I hurried to Bahia, and cabled to the Department my opinion of what the *Oregon* might do alone and in a running fight. . . . My object was to add the *Oregon* to our fleet, and not to meet the Spaniards if it could be avoided."

On May 4 the *Oregon* left Rio with the *Marietta* and

Nictheroy in company, but they delayed her so much that at last she parted company with them off Cape Frio, instructing their commanders to run them ashore in case they were attacked by the Spaniards. The separation from the *Marietta*, which carried a powerful quick-fire battery, and upon which Captain Clark had chiefly relied to beat off the destroyers, exposed the *Oregon* to grave risks, but in war risks must always be faced, and the *Oregon* was urgently wanted at this juncture in the Caribbean.

On the 8th the *Oregon* reached Bahia, and gave out that her machinery had broken down, and that some days' delay for repairs would be necessary. This, of course, was done to put Cervera off the track. On the 9th, however, after telegraphing to the Navy Department his confidence that the *Oregon* "could steam fourteen knots for hours, and in a running fight might beat off and even cripple the Spanish fleet," Captain Clark put to sea. The *Marietta* and *Buffalo* (ex-*Nictheroy*) arrived at Bahia on the 11th.

As yet nothing had been heard of Cervera's destination, and it was possible and probable that he meant intercepting the American battleship. Good speed was therefore maintained, the ship cleared for action, and every precaution taken which ingenuity and foresight could suggest. On the night of May 12, when off Cape San Roque, for a moment the *Oregon's* crew supposed that battle was at hand. Four ships were sighted to the south, and the *Oregon* increased speed, preparing to put the plan of stringing out the Spaniards into execution. But the strange vessels showed no curiosity; the *Oregon*

was not followed, and next morning there was no ship to be seen on the horizon. On the 18th Bridgetown, Barbados, was reached, a uniform speed of 11·7 knots having been maintained from Bahia. Here Captain Clark requested to be allowed to take on board 400 tons of coal, and here also he learnt for the first time of the presence of Cervera's fleet in the West Indies. He heard that it had been at Martinique—at least four armoured cruisers and three destroyers strong—and was probably still there, apparently waiting athwart his course. Accordingly he coaled ship till midnight and then put to sea steering west. As soon, however, as he was out of sight of land, he headed the *Oregon* back eastwards, round the north of the island, and kept well out to sea till he reached the latitude of the Bahamas. On May 24, at last, he sighted the Floridian coast at Jupiter Inlet, and communicated to Washington news of the *Oregon's* magnificent performance. He, his officers, and his crew were deservedly congratulated in reply, and the *Oregon* was instructed to proceed to Key West.

On her remarkable voyage from Puget Sound to Jupiter Inlet the *Oregon* covered 14,700 nautical miles in 1299 hours of steaming and a total time of seventy-nine days, including time spent in port shipping stores and coal and waiting for orders. The average speed of the run was 11·6 knots; the highest speed recorded 14·6 and the lowest 10·1 knots. She burnt on this voyage just over 4100 tons of coal. She arrived in a fit and efficient condition, and was able to take her place in Admiral Sampson's fleet after filling up with coal and water. The *Marietta* reached Key West on June 4,

some days after the *Oregon*, having been much delayed by breakdowns on board the *Buffalo*, from which ship she parted company at Para on May 21. The *Buffalo* in due course reached the United States in safety.

CHAPTER IV

THE WAR IN THE EAST

THE opening of 1898 found Commodore George Dewey in command of the American forces on the Asiatic station, which included the protected cruisers *Olympia* and *Boston*, and the gunboats *Petrel* and *Monocacy*.[1] To reinforce him, the protected cruiser *Raleigh* was ordered to join him from the European station, and the gunboat *Concord* from the Bering Sea fishery protection service. On January 27 the Commodore was instructed to retain time-expired men; a month later, on February 25, he was directed to concentrate his force at Hong Kong, with the exception of the old *Monocacy*, a paddle-steamer of no practical value, and he was ordered to keep the *Olympia* with him till further orders. There had been some intention of recalling her. On the 26th he was ordered to "keep full of coal, the best that can be had." A few days later the gunboat *Mohican* was despatched with a quantity of ammunition on board to Honolulu, where she was to meet the protected cruiser *Baltimore*, then

[1] Reports, 65–130; Ellicott (War Notes, No. V.); *Century*, 56. 611 ff.; *Harper*, 98. 476 ff.; *Army and Navy Journal* (New York); New York *Sun*; *An American Cruiser in the East*, 479 ff.

flagship on the Pacific station. The *Baltimore* was to embark the ammunition, and proceed to Hong Kong to reinforce Commodore Dewey. She left Honolulu on March 19, and reached her destination on April 22.

As far back as April 1, Dewey was directed to fill up with provisions. Then on April 4 came instructions, which showed hostilities were near at hand, ordering him to purchase a storeship, and, a day or two later, to land all surplus stores and woodwork. In obedience to these instructions he bought the British collier *Nanshan*, with over 3000 tons of coal on board her, and ordered from the *Monocacy* fifty-three officers and men to act as her crew. On the 9th he purchased another British steamer, the *Zafiro*, with 600 tons of coal on board, and proceeded to fill her with provisions, and with the spare stores of his ships. On April 17 the armed revenue cutter, *Hugh McCulloch*, joined the squadron from Singapore. Two days later the colour of the ships was changed, a slate grey being substituted for the snowy white paint which is the dress of American war-vessels in time of peace. On the 22nd the *Baltimore* came in, and was at once docked, coaled, and repainted.

Next day, the blockade of Cuba having begun the war, the governor of Hong Kong issued a proclamation requesting the withdrawal of the squadron within twenty-four hours. On the 24th, accordingly, the *Boston*, *Concord*, *Petrel*, *McCulloch*, and the two storeships left for Mirs Bay, whither the others followed them as soon as they could get away, on the 25th.

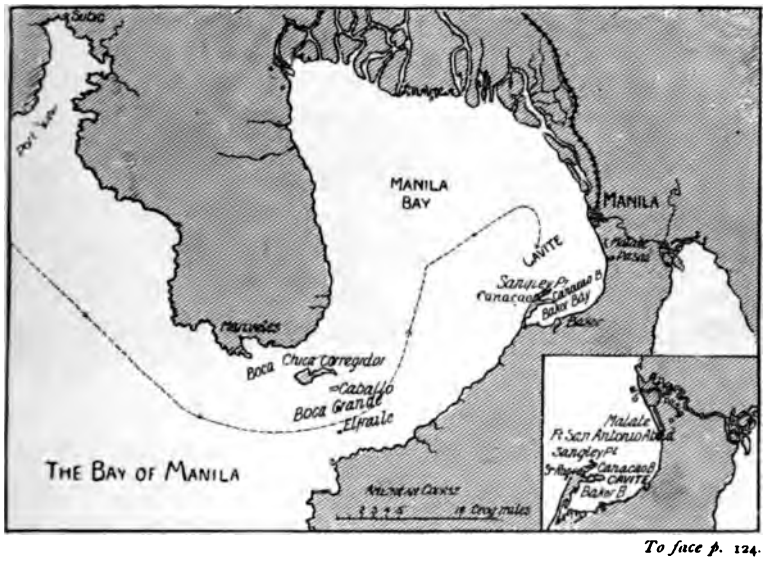
On the 24th Dewey received his orders from the Secretary of the Navy. He was briefly directed to proceed at once to the Philippines, commence operations against the Spanish fleet there, and capture or destroy it. His first intentions were to proceed instantly to Manila, but learning that the American consul at that place, Mr. Williams, was already on his way to Hong Kong, and that he had valuable local information, he decided to wait his arrival and take him with him. At 11 a.m. of the 27th the consul arrived; at 2 p.m. the squadron was under way to open a new chapter of American history. All the days of the stay in Mirs Bay the ships had been drilling, or engaged in Morris tube practice.

The American consul brought reports that the Spaniards were laying mines in the entrance to Manila Bay, and that they were busy improvising defences. He also had detailed information as to the forts which protected Manila, and as to the Spanish ships. As accurate knowledge is of the utmost importance in war, Commodore Dewey showed great wisdom in delaying. It will not derogate from his high reputation if we conjecture that Mr. Williams' account of the disorganisation and unpreparedness prevailing at Manila contributed in no small degree to the bold and decided course adopted by the American commander.

After an uneventful passage at eight knots, on the morning of the 30th the squadron was off Bolinao Point in Luzon, where a stop was made to land a Filipino leader. The ships prepared for battle, stripping all the woodwork and heaving it overboard, where there was

not space to stow it below. Chairs, tables, and chests were remorselessly thrown into the sea. Cables were wound round the ammunition-hoists; the boats were stowed inboard and covered with strong netting; all wooden bulkheads were taken down. Meanwhile the *Boston* and *Concord* were sent in advance to reconnoitre Subic Bay, where the Spaniards were reported to be in position. As a matter of fact, Admiral Montojo had at first intended to fight there, but finding the harbour too badly protected, and the water close inshore so deep that his crews would have found escape difficult if, as he confidently anticipated would be the case, his ships were sunk, had withdrawn to Manila Bay. Before the *Concord* and *Boston* had disappeared on the horizon the *Baltimore* was sent off to support them, and act as linking-ship to the rest of the squadron. They returned, however, with the news that the Spaniards were at Manila. A captains' meeting was at once convened on board the *Olympia* to receive Commodore Dewey's final orders and instructions. At this meeting the Commodore discussed with his officers the plan of forcing his way into Manila Bay at midnight. The fleet slowed to six knots, and no lights were shown at nightfall, with the exception of one screened light on each ship's taff-rail. At 11 p.m. all hands were called to general quarters.

The arrival of the Americans off Bolinao had been signalled to Manila, and therefore there was every reason for Montojo and the commanders of the Spanish forts to be on the alert. The water at the entrance to the bay was so deep as to render the placing of mines


MANILA BAY
MANILA
CAVITE
Sangley Pt.
Canacao
Baker Bay
Mariveles
Boca Chica
Corregidor
Caballo
Boca Grande
El Fraile
Malate
Ft. San Antonio Abad
THE BAY OF MANILA

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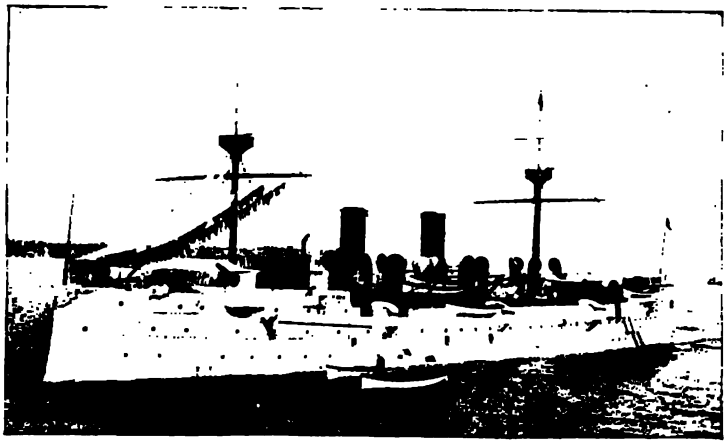
difficult, but numerous powerful contact mines were none the less anchored in the channel by the Spaniards. They were, however, placed with the greatest carelessness at depths far beyond the reach of any ship's hull, and were simply wasted. The Spaniards put great trust in them, and talked very confidently of them to foreigners. It is possible, indeed, that the false sense of security given by the mines led to the relaxation of precautions afloat and ashore. "The entrance to the bay," it was reported by a British steamer coming from Manila, "is commanded by fifty or sixty heavy guns. It would be impossible for the Americans to enter without battleships or a strong land force." American officers with the fleet spoke—before the battle—of "the dangerous pass, guarded by forts and supposed to be planted with mines and torpedoes." The calm way in which Commodore Dewey disregarded these alarming reports, correctly gauged the fighting value of the Spaniards and the efficiency of their appliances, and steamed into the harbour as if there had been no such things as batteries and mines, is his true distinction. He risked much—of this there can be no dispute—for the rottenness of Spanish administration and organisation had not been demonstrated as yet; the stories of prodigious forts and guns were plausible; and if Admiral Montojo had shown any enterprise or vigilance, he might have had to pay dearly for his daring. Leaving, as he did, the forts behind him unsilenced, his line of retreat might be threatened with attack, if not altogether closed, in the event of a failure. Moreover, by entering without delay, at night, when the Spaniards appear to

have imagined navigation of the wide channel impossible to strangers, he made the most of his opportunity, and gave his enemy no respite for preparations in the bay.

The order on entering the bay was single line ahead, as follows:—*Olympia*, *Baltimore*, *Petrel*, *Raleigh*, *Concord*, *Boston*, *McCulloch*, *Nanshan*, *Zafiro*. The six fighting ships led, and of these the two weakest—the *Petrel* and *Concord*—were placed between powerful vessels. The speed was ten knots—the best the *McCulloch* and the colliers could do.

The entrance to the Bay of Manila is ten miles wide. About two miles from the northern coast is the island of Corregidor, rising 600 feet in a lofty cone, with a signal-post upon it, and a fort hastily constructed by the Spaniards in April. In this had been mounted certain guns from the CASTILLA, probably 4·7-inch, 3·4-inch, and 2·9-inch weapons. The guns were placed very high, and could not have been touched by the Americans running past, whilst on the American ships they could direct a plunging fire. To the south of Corregidor the channel is seven miles wide, with the islands of Caballo, 400 feet high, and El Fraile lying in it, the first a mile to the south of Corregidor; the second two miles from the coast of Luzon. Thus between Caballo and El Fraile there is a clear channel about three and a half miles wide. On El Fraile there was a battery. After passing the entrance the bay widens out considerably, forming a great land-locked sheet of water, twenty-two miles long and thirty-two miles wide. The course usually steered by ships follows the channel between Corregidor and the northern coast, and probably this



The U.S. Protected Cruiser *Baltimore*.

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The U.S. Revenue Cutter *McCulloch*.

The first ship fired at by the Spanish in the Battle of Manila Bay, May 1, 1898.

alone was mined. The Americans went in by the southern entrance, and thus may have avoided what danger was to be feared from hastily and imperfectly laid mines.

The fighting ships were abreast of Corregidor, undiscovered, about 11.30. Just as the *McCulloch* neared the island flames from her funnel or the stern-lights of the ships ahead of her, which must have by now showed to the Spaniards in the forts, attracted attention. Rockets went up at once from Corregidor and from the mainland opposite, and a shot was fired from El Fraile. Immediately the *McCulloch* replied with three shots. Two more rounds answered from El Fraile. The *Concord* and *Raleigh* replied to these with two shots, when the order was given from the flagship to cease firing. The squadron then headed up the bay at a low speed for Manila, twenty-two miles away, and the men were allowed to sleep at their stations. The ease with which the bay was entered, and the harmlessness of the shots fired by the Spaniards, had an excellent moral effect upon the crews, who had before been somewhat anxious.

Proceeding slowly up the bay, the squadron detached the *McCulloch*, *Nanshan*, and *Zafiro*, which were to take no part in the fighting, and about 5.15 a.m. of May 1 was off Manila. A shot from the Manila batteries was quickly followed by another from Cavite. The range was excessive; the Spanish projectiles fell short; and the squadron, without making any reply, turned just opposite Manila and headed southwards towards Cavite, where the Spanish fleet had now come into sight. It was moored in an irregular line east and

west; the western extremity in Cañacao Bay, close to the Cavite arsenal, and protected by the guns of Fort St. Philip and Sangley Point; the eastern extremity, on which were placed the CORREO, LEZO, and transport MINDANAO, all three, it is claimed by Spaniards, in an ineffective state, close to shallow water in Bakor Bay, and within distant range of the Malate battery at Manila, which could afford some little support. The position was therefore a fair one, when once the idea of giving battle under steam had been abandoned by Admiral Montojo.

At Manila several powerful Krupps[1] were mounted in well-constructed earthworks, though the gunners serving them would have been exposed to machine-gun fire. At Sangley Point a little to the north of Cavite were two 5·9-inch Ordoñez guns and, it is said by Spanish officers, three 64-pounder muzzle-loading Pallisers. The latter do not seem to have been used, possibly because the range was too great for them. A mile to the south-west of the Sangley Point battery was an earthwork containing a modern 4·7-inch gun. It does not appear that this would bear upon the American ships during their engagement with the Spanish squadron, whilst it is certain that only one of the Ordoñez guns could be brought into action. The Spaniards assert that these guns ashore, which should have proved a valuable asset, were useless for all practical purposes. But if so, Admiral Montojo's mistake in taking shelter under them was all the graver.

[1] In the Luneta work, a little to the north of Malate, were four 9·4-inch weapons; at Fort San Antonio others of as large calibre. These guns would be from 5000 to 8000 yards distant from the American fleet.

Something must now be said of the condition of the Spanish squadron.[1] Its largest vessel, the CASTILLA, a composite cruiser, was helpless from the leaky state of her hull, the dilapidated condition of her boilers, and the fact that the leaks could not be stopped or kept water-tight if the engine was going.[2] She had given great trouble on the voyage to and back from Subic, and was nothing more than a floating battery. Steps were taken to protect her hull on the side turned towards the enemy with sand-bags and lighters filled with sand. The ULLOA was undergoing repairs, and had most of her machinery on shore. She was moored just behind Sangley Point, in Cañacao Bay, with her starboard broadside bearing. Her port guns had been removed, and probably the 4·7-inch weapon in battery south of Sangley Point came from her. The VELASCO was moored off Cavite Arsenal, and had neither guns nor boilers on board. The CRISTINA, Admiral Montojo's flagship, was the best of the squadron, but she was old, carried much wood about her, and was vastly inferior in armament to the *Raleigh* or *Boston* of her own size. She had no protection of any kind beyond shields to her 6·2-inch Hontoria guns. The CUBA and LUZON were small ships, fairly armed for their size, but inferior in most respects to the little American *Petrel*. The other vessels were mere gunboats. The Spaniards had nothing to compare with the magnificent *Olympia*, a

[1] For details of ships see Tables, page 171.

[2] Her port battery was used. Some guns had been removed from her and placed at Corregidor, but as it is uncertain which guns these were she is given her full battery in the Table.

ship which, with her heavy quick-firing armament, was alone far more than a match for Admiral Montojo's scratch assemblage of *rossignols*. The *Olympia* has 4-inch hardened steel on her 8-inch gun barbettes, 3-inch on the ammunition hoists, and 4-inch gun-shields. She has a steel deck, on the slopes 4½ inches thick, a 33-inch cellulose belt, and coal protection. She was therefore virtually invulnerable in her vitals. The enormous number of calibres in the Spanish artillery—there were no less than eleven reckoning upwards from the 6-pounders—placed serious difficulties in the way of ammunition supply, but a large quantity of powder and projectiles arrived on the day before the battle in the MINDANAO. Those vessels, which were afterwards recovered by the Americans, were found to have plenty of ammunition in their magazines. The total weight of the Spanish broadside was about one-third of the American, or even less in actual practice, since the Spaniards had very few quick-fire guns mounted in their ships. The nineteen Spanish torpedo tubes were useless, as Admiral Montojo had no proper torpedoes.[1] It is said, however, that he rigged up two launches of low speed with spar torpedoes.

There were three alternatives open to the Spaniards. They might decide with this miserably heterogeneous collection of ships to land the men, guns and ammunition for use on shore, preparing the hulls of the ships so that these could be burnt, scuttled or blown up on the appearance of the Americans. This course would have averted

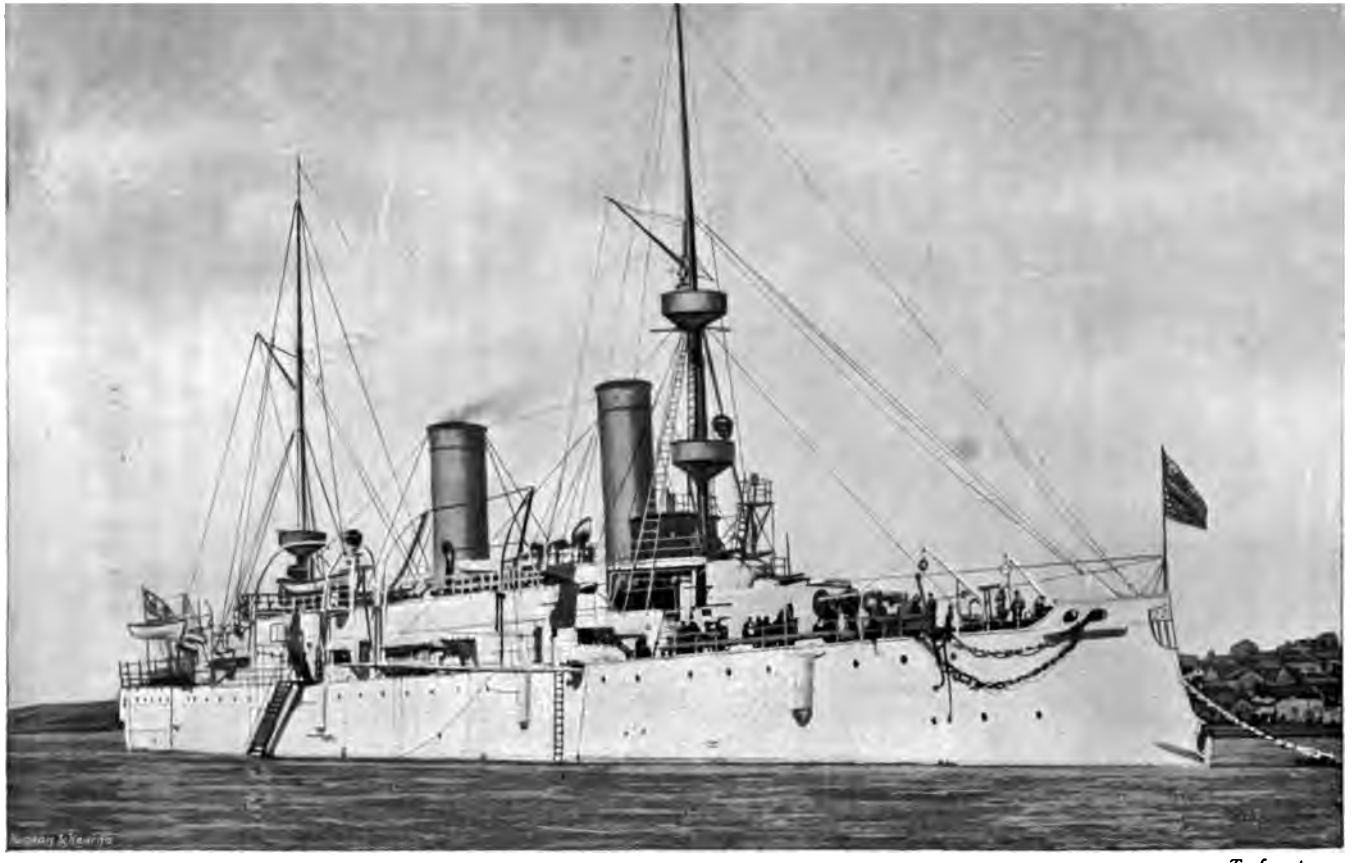
[1] So Spanish contemporary accounts in the Press. But Schwartzkopff 14·2-inch torpedoes—though without war-heads—were found in the raised ships.

a fruitless sacrifice of life and prolonged the defence of Manila, if indeed the ships' guns mounted at the entrance to the bay had not been able altogether to forbid the ingress of Commodore Dewey's squadron. It is said that Montojo's own wishes lay in this direction, but he had been placed under the command of the military governor of the Philippines, who refused his consent, though the actual situation of the Spanish fleet and the utter impossibility of its victory in a sea-fight should have been known to him. The second alternative was to meet the Americans under steam with the four serviceable vessels. Being weak in artillery, without effective torpedoes, and fighting in confined waters, the ram might well have been used. By a sudden onslaught in the darkness, as the American ships were passing Corregidor at low speed, great damage might have been inflicted, and with luck, perhaps one or two of the enemy sunk. Such would probably have been the course selected by a daring and enterprising commander. The third alternative was to fight at anchor under the fort, and this was adopted for most of the ships. In fact, the Cavite fortifications, though weak, exercised the same attractive force on the Spanish squadron as did the obsolete works of Sedan on MacMahon's army in 1870.

At 7 p.m. of April 30 Montojo had learnt of the presence of the American squadron at Subic; at midnight he heard the gun-fire in the entrance to the bay, and sent his men to quarters, whilst fires were spread in all boilers. The ships were cleared for action, with topmasts and yards down, hulls painted a uniform grey, and cables ready

to slip at a moment's notice. The awning stanchions and ridge ropes were not, however, shipped, and many of the boats were left on the davits. The position off Cavite had been chosen to save the city of Manila. Had the Spanish vessels drawn up in front of the latter place, projectiles from the American squadron must have exploded in the city. But though few will blame Montojo for his anxiety to save the civilian population from suffering and injury, it was a military mistake not to take position under the far more powerful batteries of Manila, when the issue of the engagement might have been different. The General or Admiral must in war steel his heart and neglect no advantage.

As the American squadron neared Cavite the Spaniards exploded two mines, at a great distance from the squadron. The mines were fired, not in all probability with any intention of injuring Commodore Dewey's ships, but to free the Spaniards from an embarrassment. They could not move or manœuvre over water in which mines had been planted. Ten minutes later, the Cavite batteries opened on the Americans, long before the latter were within effective range of the old-fashioned 64-pounder and 5·9-inch guns. The Spanish fleet joined in almost immediately, and a furious storm of projectiles lashed the water well ahead of Commodore Dewey's squadron. Still, the strain upon the American seamen's nerves of receiving a heavy fire, to which their ships made no reply, was so great that, by order of Commodore Dewey, at 5.41 a.m., when still 4000 yards from the Spaniards, the *Olympia* opened fire, discharging one of her forward 8-inch guns. Like an echo the batteries



To face p. 132.

The U.S. Protected Cruiser *Olympia*.

of the vessels astern followed her, as the port broadside of each was discharged at the enemy.

The *Olympia* passed slowly down the Spanish front, closing in upon the enemy as much as her heavy draught would allow. Though it was so early in the day the smoke and heat were very trying to the men, and as the sun rose the temperature in some of the magazines went up to 116°. The American shooting was not good at the outset; many shots went wide, but as the action progressed the marksmanship improved. One of the earliest hits was that inflicted by an 8-inch projectile on the CRISTINA'S forecastle. It entered under the break, exploded, put the crews of four small quick-firers out of action, and drove splinters from the foremast as far as the bridge, where the quartermaster was wounded.

The American ships passed in stately procession, perfectly handled by their skilled and cool officers, down the Spanish line, ablaze with the incessant fire of their guns; then turned and retraced their course. The Spanish ships were now firing with extreme vigour, but their cannonade was quite ineffective. Their projectiles either passed clean over Commodore Dewey's squadron, or splashed into the water short of it. Nor were the guns in the Manila forts, which had also opened a fierce fire, served to more purpose. Their projectiles invariably fell short, and the Americans paid no attention whatever to them, till at 7.40, when he hauled off, the masterful Commodore sent an intimation that unless they ceased their waste of ammunition, he would shell the city of Manila. This message at once silenced the Manila batteries.

Five times the Americans steamed up and down the Spanish line, at ranges of 5000 to 2000 yards, using chiefly the heavier guns, and only employing the 6-pounders and lower calibres when the distance was shortest. Some time before the fifth counter-march had begun, it dawned upon Admiral Montojo that his chances were hopeless, unless indeed he could close with or ram one of his enemies. He slipped the CRISTINA's two cables, accordingly, and steamed out towards Admiral Dewey, ordering by signal his other ships to follow his example. As the CRISTINA advanced, however, a fearful fire was turned upon her, and upon two yellow launches, which suddenly darted out from Cavite, and seemed to be closing the *Olympia*. Rightly or wrongly they were taken for torpedo boats. For some seconds the *Olympia's* fire produced no apparent effect on them; then at about 800 yards the rain of 6-pounder shells tore one to pieces, whilst the *Petrel's* small guns made short work of the other and drove her back, riddled and sinking.[1]

Under a rain of projectiles the CRISTINA advanced, with smoke and steam pouring from her forward, amidships, and astern, showing that she was suffering grievously. A shell bursting on the orlop deck had set the seamen's bags on fire. Another large shell swept the bridge, destroyed the starboard search-light, and put the steering-gear out of action; another again struck the

[1] There is some dispute as to these so-called torpedo boats. Admiral Dewey (*Reports*, 70) speaks of two; Captain Gridley (*ib.* 73) and Commander Wood (*ib.* 80) only of one. Mr. Stickney in *Harper*, xcviii. 479, mentions only one, and alludes to and dismisses the report that it was only "an innocent market boat."

stern and killed or wounded nine men; yet another burst in the ward-room, which was crowded with wounded, and put an end to their misery, working horrible devastation; another entered amidships, struck a steam-pipe and killed or wounded thirteen men; the mizzen-truck and gaff with the Admiral's flag and the national ensign were shot away, but the ensign was at once replaced; finally, a heavy projectile exploded in or near the ammunition room, filling it with smoke, and causing a fire which could not be controlled. The magazines had at once to be flooded. Further resistance was hopeless with the vessel in this plight, burning furiously, and with only two men left to fight her broadside guns. She succeeded in turning shorewards, when the order was given to the crew to abandon her and sink her, the CUBA, LUZON and DUERO being signalled to come to the assistance of her men. She had six officers and over 200 men, out of a total crew a little over 400, killed or wounded. Amongst the latter were Montojo, Captain Cadarso, and the flag-lieutenant. Captain Cadarso, who had shown the greatest gallantry throughout, and who delayed to leave his ship till all the survivors of his crew had been rescued, was struck by a shell and instantly killed whilst superintending their transference to the boats.

The ships now left in the Spanish line were the CUBA, LUZON, ULLOA, CASTILLA, and DUERO. The ULLOA had only two serviceable guns left when she was struck upon the water-line by a shell which killed her captain and disabled half her surviving complement. The CASTILLA had been originally moored with her port broadside bearing, and on this side she was protected by

sand-bags and lighters laden with sand. Early in the action her moorings forward were shot away and she swung round, bringing her defenceless starboard broadside to bear. She had all her guns put out of action except one, and suffered very heavy loss. She was riddled with shells and repeatedly set on fire. At last her commander, Captain Algado, ordered her crew to sink and abandon her, and almost at once flames burst forth fore and aft. The survivors were rescued by boats which put off from the shore and by the AUSTRIA, which cruiser came to her aid though seriously wounded and on fire. The LUZON had three of her guns out of action, but had not received any noteworthy injury. The DUERO could use only one engine and only one of her three heavy guns. Such was the terrible plight of the squadron, when the Americans were noticed to be drawing off. Their fire ceased, and they steamed out of range. Admiral Montojo at once gave orders for his remaining vessels to retire to the inmost recesses of Bakor Bay, and there, in the event of a fresh attack, to resist to the last, and sink the ships when nothing more could be done.

The actual reason for this withdrawal is now known to have been anxiety of Commodore Dewey on account of the rapid expenditure of his ammunition. He had been erroneously informed, in answer to a signal, that only 15 per cent. of his squadron's ammunition remained in the magazines. Had this actually been the case the position of the Americans would certainly have been a dangerous one. As yet, little sign of serious injury could be seen in the Spanish squadron, and the American pro-

jectiles had appeared to fall short of, or pass over, the enemy. "It is true," says Mr. Stickney,[1] an observer on board the *Olympia*, "at least three of his [the enemy's] ships had broken into flames, but so had one of ours—the *Boston*. These fires had all been put out without apparent injury to the ships. Generally speaking, nothing of great importance had occurred to show that we had seriously injured any Spanish vessel. They were all steaming about in the bight back of Sangley Point or in Bakor Bay, as actively as when we first sighted them in the early dawn. . . . In a smooth sea we ought to have made a large percentage of hits; yet, so far as we could judge, we had not sensibly crippled the foe. . . . The gloom on the bridge of the *Olympia* was thicker than a London fog in November."

To avoid dispiriting the men, the crews of the ships were informed that the object of the retreat was to take breakfast. This would sound the more plausible as the heat was suffocating, whilst the smoke blowing down the hatchways made the work for the powder divisions below the armoured deck very hard. In the magazines and stokeholds temperatures of from 120° to 160° were registered. It is probable that the withdrawal greatly contributed to the comfort of the engineers and stokers, though the gun crews clamoured to be allowed to finish their work, and shouted, "To hell with breakfast," with a correcter instinct of the results obtained. Yet in the end the retreat was not prejudicial, as, though the Commodore did not know it, the victory was already three parts won. It did, however, temporarily encourage the Spaniards

[1] *Harper's Magazine*, February 1899.

who fancied, naturally enough, that they had repulsed the enemy.

As the ships drew off they cheered each other, and the captains went on board the *Olympia* to confer with the Commodore. We can imagine with what relief and exultation he received from each in turn the news that there was no serious damage to report and no loss of life. The Spanish fire had been so fierce, so steadily maintained, that this sounded incredible. Moreover, on inquiry it turned out that the ammunition in all the ships was far from being so low as Commodore Dewey had supposed. Instead of only 15 per cent. of ammunition remaining, barely 15 per cent. had been expended. Whilst the conference was proceeding a fresh cause of satisfaction was given the Americans. A strong blaze showed from the CRISTINA and from the CASTILLA, and the explosions of ammunition on board them could be heard. It was now clear that the back of the Spanish resistance was broken.

At 11 the battle was resumed by Commodore Dewey. The *Baltimore*, *Olympia*, *Raleigh*, *Boston*, *Concord*, and *Petrel* steamed in one after another, in this order. The *Baltimore* took the lead, as a strange steamer had been made out coming up the bay during the conference, and she had been directed to intercept this craft. She had already started on her errand, and was two miles south of the flagship—and by that distance nearer to Cavite—when the signal to engage a second time was made. The stranger was examined by the *McCulloch*, and proved to be a British merchant steamer. Meantime the *Baltimore* drew in to a position 2800 yards off Sangley

Point, and opened on the DON ANTONIO DE ULLOA, which was lying just behind the point, and on the battery ashore, with her starboard broadside. The distance, going dead slow, she gradually reduced to 2200 yards, and when she had got the range stopped. Her fire was slow, careful, accurate and destructive. The battery was speedily silenced, and the ULLOA was observed to be sinking fast. The *Olympia* gave aid, delivering a full broadside at the Spanish works, whilst the *Boston* played her guns upon the enemy's ships and batteries. She was a good deal hampered by the heating of her guns, which made the breech-plugs hard to work. One of the 8-inch weapons was unavailable for quite twenty minutes after the interval, because of this.

The *Raleigh* came up behind the *Olympia*, and also fired on the battery and on the ULLOA, and then, being directed to enter Bakor Bay, in order to destroy the Spanish vessels which had withdrawn thither, made an attempt to do so, but was at once compelled to retire by the shallowness of the water. The *Concord* and *Petrel*, whose lighter draught fitted them for this work, were immediately sent in behind Sangley Point. The *Concord* opened at 2500 yards upon the Spanish steamer MINDANAO, which was seen in Bakor Bay. At once the Spanish crew deserted their ship and set her on fire, though not before two boats had been despatched from the American vessel with instructions to burn her. At this moment the ULLOA could be made out lying on the bottom just behind Sangley Point, with her upper works showing well above water, and the Spanish flag still flying; the CRISTINA was burning in her upper works,

heaviest figure ever inflicted in a squadron action. The officers killed were seven in the CRISTINA, one in the CASTILLA, and three in the ULLOA. The escape of the CUBA and LUZON with such insignificant loss points to the fact that they took little part in the action. They were on the Spanish right, somewhat to the rear, and were in fairly rapid motion during the engagement, circling together.

"The damage done by our ships," says an American officer, "was frightful. One smoke-stack of the CASTILLA was struck eight times, and the shells through the hull were so many and so close that it is impossible that a Spaniard could have lived on her deck. The other large ship, the CRISTINA, was perforated in the same way. The lesson I draw from the fight is the great utility of target practice. The Spaniard has none; we have it every three months. Strengths of Navies are compared generally ship for ship; the *personnel* is just as important." "The CASTILLA after the action," says a correspondent with the American fleet, "was so littered with pieces of our shells that it was impossible to walk there without displacing some of them."[1] Her upper works were so entirely consumed by fire that traces of many hits must have been effaced. Yet on inspection after the battle the following injuries were discovered. Her forward funnel had fallen to starboard, probably through the explosion beneath it or near it of a large shell. Through it seven small shells had passed, whilst a 5-inch and 6-pounder projectile had perforated the after funnel. A 5-inch shell had dismounted the 1·4-inch gun on the port side of the

[1] Mr. Stickney, *Harper*, March 1899. Ellicott, 7.

forward bridge; another had passed through the shield of the port side 1·4-inch gun on the after bridge, also dismounting the weapon. There were four large holes in the side, from one to four feet in diameter, presumably caused by 8-inch shells. One of these large holes was amidships in the port side, with a corresponding injury to starboard; a second and third were under the after funnel. On the sponsons or on the edges of the gun-ports were the wounds of two 5-inch, one 6-pounder and one 1-pounder shell; whilst the port after 5·9-inch gun-shield showed two small shell-marks. Six 5-inch holes were discovered, mostly in the port side of the ship; through the forward drum-room were several small shots; and over the port forward sponson a 6-inch shell had cut through a beam. From survivors it was learnt that three 8-inch shells had burst on the orlop deck forward, amidships and aft, causing fires. In all forty hits were examined or traced, and there is reason to conclude that at least twice as many projectiles struck the ship.

Some details have already been given of the CRISTINA's injuries.[1] It may here be added, that two 8-inch and two 6-pounder shells had struck the fore funnel; one 8-inch, one 5-inch, and two 6-pounders the after funnel, which had fallen to port owing to the explosion under it of a large shell in the super-heater. Two 6-pounder shells struck a ventilator forward of the fore funnel; six projectiles had pierced the mizzen-mast and one each the fore and main-masts. An 8-inch shell struck the shield of the port forward 6·3-inch gun and exploded just behind it on the left of the gun, shattering

[1] See pp. 134-5.

the elevating gear, and tearing a huge hole in the sheet-iron bulwark arched over the sponson gun-port. A fragment of this shell struck and wrecked the elevating gear on the right of the opposite gun. Thirty-nine hits, of which thirteen were from large projectiles, were traced or discovered, but Admiral Montojo's own estimate of the hits his flagship received was "about seventy."

The DON ANTONIO DE ULLOA had the slings of her fore-yard cut by a shell during the action, and the yard fell on deck. She showed four 8-inch hits. One of these had dismounted her starboard 6-pounder, shattering the mount; the shield of the same gun was perforated by a 6-inch shell. Another 6-inch shell had pierced the after 4·7-inch gun-shield, whilst three 6-pounder shells passed through the mount of the starboard 6-pounder. She is stated by Admiral Montojo to have been struck on the water-line. The number of shell-wounds discovered on what could be seen of her hull was thirty-three. The CUBA showed only five wounds, four from 6-pounder shells. One of the latter had glanced off the shield of her starboard 4·7-inch gun and another had struck the conning-tower. No other injuries could be detected when at the end of 1898 she was raised and sent to Hong Kong.

The LUZON, which ship was also raised after the war, had suffered very little. A large shell disabled her two forward guns; another gun was put out of action by another projectile perforating the gun-shield; and the fore-gaff topping lift was cut by a shell. Her structural injuries, other than those caused by fire, were quite insignificant. The DON JUAN DE AUSTRIA had been struck

by two large, 6- or 8-inch, shells, of which one passed through the superstructure deck and burst in the captain's galley, whilst the other glanced up from the superstructure deck and destroyed the steering-wheel and the engine-room telegraphs. A 5-inch shell entered under the port hawse-pipe, exploded in the forward torpedo-room after carrying off the propeller of a torpedo lying in a rack, and drove two fragments into an unloaded war-head. Another 5-inch projectile exploded in the ash-hoist, a third cut through the mizzen-mast half-way up, and a fourth burst under the top-gallant forecastle. In all the ship was hit thirteen times. The DUERO had been struck on her bow by an 8-inch and a 6-inch shell, which probably exploded under her forecastle, putting her bow gun out of action. In all she showed five hits. The VELASCO, which did not figure in the action, had been hit by a stray shot, whilst the GENERAL LEZO's bow 3·4-inch gun had had its elevating gear damaged by a projectile.

The total number of hits found on the hulls of the Spanish ships after the battle, or mentioned in the accounts of the Spanish survivors, was 141.[1] In forty-eight instances the calibre cannot be even guessed at, and in all cases there must naturally be some uncertainty as to the precise dimensions of the shot. But of the ninety-three hits, the calibre of which is stated in Lieutenant Ellicott's report, fourteen were inflicted by the 8-inch, seven by the 6-inch, twenty-two by the 5-inch, and fifty by the smaller guns. The 8-inch weapon made by far the finest percentage of hits, the figure being 9 per cent. for those hits recorded, whilst, if allowance be made

[1] See Table 8, p. 173.

for hits the traces of which were effaced by fire, explosion, or submersion of the hull, the proportion would probably have to be doubled, giving a record of about 18 per cent.—a very good figure under battle conditions with heavy smoke and at considerable ranges. The 8-inch weapon, of course, has a longer range than the smaller calibres, which would in some degree account for its superior results. Next to the 8-inch comes the 5-inch weapon—a quick-firer—with a percentage of 3·5 hits, which should probably be doubled. The 6-inch slow-firer shot very poorly, whilst the 6-pounder, 3-pounder, and smaller weapons threw away an enormous amount of ammunition for a very few hits.

In general the results observed at Manila coincide closely with those observed in the Santiago battle. Lieutenant Ellicott sums up the lessons of the action thus:[1]—

"1. The sides of iron and steel-built cruisers do not arrest projectiles enough to explode them.

"2. The incendiary effect of bursting 8-inch shells is great, and far greater than would seem proportionate to that of lower calibres.

"3. At ranges over [under?] 2500 yards the gun-shields of cruisers are in no sense a protection, but insure the annihilation of the gun's crew and the disabling of the gun, if struck by a large projectile.

"4. Warships of the present day will generally be placed *hors de combat* by conflagration, and the destruction of their *personnel* before they are sunk by gun-fire."

The third conclusion agrees entirely with the results

[1] Page 13.

of the Yalu and Santiago. Here gun-shields were pierced in four instances, and probably the whole gun-crew killed in each case, whilst only three small projectiles were defeated by the shields. Everything tends to show that armour of less than four inches thick is excessively dangerous. As for the fourth conclusion, it should be remembered that the Spanish ships destroyed were of old and inferior type. In all modern battleships, and most recent cruisers of any size, good protection is afforded to the gun-crews of all the larger weapons. It is possible that in the immediate future the plating on the water-line will be thinned still further, and weight applied to the protection of the smaller weapons, 12- and 6-pounders.

As for water-line hits, some are recorded by the Spaniards, and the hulls of the most severely punished ships, being submerged, could not be examined in this quarter. None of the raised vessels showed any trace of injury on the water-line. But it should not be forgotten that at the Yalu two Chinese ships were sunk by the Japanese gun-fire, whilst at Wei-hai-Wei a single 10-inch shell on the water-line accounted for the *Ching Yuen*.

Both the CASTILLA and CRISTINA were repeatedly set on fire by shells; the AUSTRIA once. The other ships either had less wood about them and a better fire service, or were less severely punished, for they seem to have escaped.

In the American squadron the damage inflicted by the Spanish fire was absurdly small. The *Baltimore* sustained some slight injury. A 4·7-inch armour-piercing

shot from the CUBA struck the ship at the level of the upper deck, exploded two 3-pounder shells lying on the deck, the splinters of which wounded two officers and six men slightly; then it glanced along the deck ranging downwards, penetrated the deck, broke a heavy beam, glanced off it upwards, passed through the engine-room hatchway, flew across the deck, and striking the shield of a 6-inch gun, followed it round, and rebounded towards the side by which it had entered, on its way again striking the deck; finally it brought up in a ventilator, stunning a man. The 6-inch gun was temporarily put out of action, but that more damage was not done is amazing. A second shot struck just above the berth-deck, hitting the exhaust pipe of the starboard blower; a third struck a bunker, two feet above the water-line, and exploded in it, doing no damage; a fourth entered six feet above the berth-deck, and brought up in a clothes-locker; whilst a fifth hit the starboard forward ventilator.[1] The *Boston* had her foremast pierced thirteen and a half feet above the deck by a shell of about 4-inch calibre; she received two 6-pounder shells amidships, one of which, entering fourteen inches above the water-line, exploded in a cabin and started a fire; another 6-pounder shell pierced the hammock-netting, and exploded amongst the hammocks, causing a fire; and yet another projectile grazed the main-topmast. The *Olympia* was hit three times on her hull and ten times in her rigging. She sustained no injury worth mentioning, though the concussion of her after 8-inch guns did a good deal of damage in the cabins below.

[1] Reports, 79–80.

The *Raleigh* was hit once only, on the whale-boat; the *Petrel* was struck once, just below the hawse-pipe; and the *Concord* was not hit at all. Indeed after the battle the ships' hulls exhibited no sign of the stress to which they had been subjected. As the Spaniards are said to have mainly used shrapnel, which would be quite ineffective at long ranges, this is not wonderful.

The American ships had some little trouble with their guns, the breech-blocks of which, when heated, were difficult to handle, and their ammunition did not give entire satisfaction. The electric gear in the *Olympia* caused trouble, the fuse of the forward 8-inch ammunition hoist blowing out. The electric firing arrangements also failed in many of the ships, and the simpler percussion gear was resorted to. The telescopic sights fitted to the heavy guns fully proved their value. The smoke of the firing—for none of the ships were supplied with smokeless powder—was a great hindrance to accurate shooting, and more than once the attack had to be suspended for a few minutes to allow the smoke to clear. The ammunition supply was good; two-thirds of the engine-room and stokehold force on board the ships was employed in the engine-rooms and stokeholds; the other third was added to the powder division. Range-finders were not used, but the ranges were obtained by taking cross-bearings, and measuring off the distances on charts of the bay. The returns of the ammunition expended show that the 8-inch guns were sparingly employed, most of the work being done with the 6-inch, 5-inch, 6-pounder, and 3-pounder. The ten 8-inch weapons fired an average of fifteen rounds apiece; the twenty-three

6-inch guns just over twenty-eight apiece; the twenty 5-inch quick-firers thirty-one rounds; the twenty-eight 6-pounders seventy-six rounds, and the eight 3-pounders eighty-six rounds each. The *Olympia* during the whole action only expended nine rounds for each 8-inch, and twenty-eight rounds for each 5-inch gun, whilst the *Boston*, *Raleigh*, *Baltimore*, *Concord* and *Petrel* at the close of the engagement had an ample supply of ammunition in their magazines—a great deal more than they had fired in the battle. The American squadron was therefore still in a condition to engage any enemy after the surrender of Cavite.[1]

The American loss is said by Spanish officers, "on the strength of German sources of information," to have reached two officers and twenty-three men killed and fifty wounded. This is an absurd exaggeration. The actual losses were two officers and six men very slightly wounded in the *Baltimore* by splinters; one man grazed in the *Boston;* and two men slightly injured in the *Olympia* by the recoil of the guns. Captain Gridley of the *Olympia* was in bad health before the war began, and only his zeal for duty saved him from being invalided home. He died on his passage back to the United States, and is counted in all the Spanish versions of the battle as one of the wounded. If he was in any sense a victim of the battle, it was due to the concussion of the *Olympia's* own heavy guns, and not to the Spanish fire.

Naturally there were many narrow escapes. At the beginning of the battle the Spaniards fired with great

[1] See Tables 6 and 7, pp. 172-3.

rapidity, though the total number of rounds discharged by them is placed by the Spanish authority already quoted at only 750 or 800, and their shots passed close over the American ships. A surgeon in the *Olympia* looking out of one of the sick-bay port-holes saw a large shell coming—apparently straight at him. When near the ship it struck the water, ricochetted, and flew high over the hull. An officer was in the *Boston's* ward-room when a shell burst there, setting fire to some woodwork. Though a splinter of the shell fell close to him he was untouched, and was able to put the fire out. Captain Wilde of the *Boston* on the bridge was narrowly missed by a shell which struck the foremast three feet above his head and went clean through it, covering a quarter-master with splinters. In this ship a 1-pound shell struck a gun-shield, glanced on the deck, and lying there, was picked up and thrown overboard before it could explode. The bravery of the act is not diminished by the reflection that the fuse was probably defective. Commodore Dewey and his staff officers had a narrow escape on the *Olympia's* bridge, a shot passing close over their heads and cutting the signal halyards.

After the battle the *Petrel* and *Concord* were detached to watch Cavite, whilst the other ships anchored off Manila, and demanded the surrender of the city. The demand could scarcely have been more than a bluff, as the American ships had no troops to take possession of the town. It was so regarded by the Spaniards, who declined to talk of surrender. All the night of May 1 fires and explosions were seen on board the half-sunk Spanish ships and in the Cavite Arsenal. Next day

possession was taken of Cavite, and over 200 Spanish wounded were transferred thence to Manila in the launches which the Americans had captured, under cover of the white flag. The scenes in the hospitals were horrible. "Some of the men were fearfully burned; some with limbs freshly amputated, others with their eyes shot out, their features torn away by steel or splinters. . . . The shrieks and groans of the wounded were appalling." There were many bodies to be seen on the wrecks of the Spanish ships.

The battle was thus a military execution rather than a real contest. It must be placed on the same plane with the destruction of the Chinese fleet at Foochow by Admiral Courbet, or with the bombardment of Alexandria. The odds, as we have seen, were against the Spaniards, but their miserable shooting rendered their defeat more terrible and crushing than might have been expected. There was no want of courage. They stood up to be slaughtered in a manner which won the admiration of their enemy. That this enemy escaped without the loss of a life, and with practically no damage to his ships, is nothing less than astonishing. "The Spaniards," says Gunner Evans of the *Boston*, "lacked only the skill to make a good fight. They had had scarcely any target practice. We of the *Boston* had had thirteen practice shoots in a twelvemonth. We husbanded our ammunition during the battle, whilst they poured it prodigally into the bay. They seemed to fire at random. . . . The British naval officers at Hong Kong knew the difference between us and the Spanish in this particular, and when we were leaving port for Manila,

To face p. 152.

ADMIRAL MONTOJO.

the captain of the *Immortalité* shouted to Captain Wildes: 'You will surely win. I have seen too much of your target practice to doubt it.'"

"You have fought us with four very bad ships, not warships," said the captain of the *Boston* to the chief of Montojo's staff. "There was never before braver fighting under such unequal conditions." And Commodore Dewey sent to Montojo a message that he would be glad to shake him by the hand, and congratulate him on the gallantry with which he had fought. This, then, was the verdict of Montojo's enemy. But it is open to question whether the Spanish Admiral made the most of his opportunities before the battle—whether he showed the activity and vigilance which should have been expected of him. At the same time, the Spanish Government cannot escape responsibility for the disaster. They left Montojo with a miserable fleet exposed to attack by a powerful enemy, and they did not dare to give the order, which should have been given, to scuttle the ships, and land the crews and guns; nor did they attempt to send reinforcements before the war broke out. Admiral Montojo and the Governor-General of the Philippines complained that their requests and remonstrances had been uniformly disregarded by the men in power in Spain.

Since the battle somewhat exaggerated claims have been put forward in America, not by naval officers, it is only fair to add. Manila has been ranked with Trafalgar and with the Nile. Senator Lodge, for instance, is inclined to place Manila above the Nile as a great victory. In the first place, the Senator considers that

Admiral Dewey was outnumbered two to one, and had more men against him. But if we examine the Spanish reports, we shall find that the Americans were only opposed by seven effective ships and 1134 men. Even if we count in every armed Spanish ship in the bay, the total number opposed to Admiral Dewey was ten ships, of which only two exceeded 1500 tons in displacement. The Americans had five ships of over 1500 tons, and one ship under that displacement. It has never been held by any competent Admiral or critic that the number of ships in itself spells victory. Nelson's famous saying, "only numbers can annihilate," obviously referred to numbers of the same class of ship. Twenty little ships and gunboats are no match for one battleship. The surest tests of naval strength—apart from *personnel*, which cannot be mathematically evaluated —are displacement and weight of metal: in displacement the Americans had an advantage of 50 per cent.; in weight of metal an advantage of over 150 per cent., besides the superiority which the concentration of this great force in a few ships gives.[1] Six vessels are more easily manœuvred than ten or twelve.

Nelson at the Nile, on the other hand, had thirteen 74's and one 50-gun ship in his squadron. Brueys had one 120, three 80's, nine 74's and four frigates—a numerical equality in ships of the same type as those of the British squadron. In weight of metal the French fleet stood to the British about as 17 to 13. In number of men it had 9820 against Nelson's 7940. If we translate these conditions into their modern equivalents, to face a Spanish

[1] See Table 5, p. 172.

squadron relatively as strong as Nelson encountered at the Nile, the Americans should have had against them the MARIA TERESA, ALFONSO XIII, ALFONSO XII, REINA CRISTINA, CUBA, LUZON and VELASCO. That then they would have won, in spite of the odds, no one can doubt. But when the odds were all in Admiral Dewey's favour, it is absurd to misrepresent the fighting strength of the Spanish force in order to make an extra point. Moreover, the Spaniards have never fought as well as the French at sea. Napoleon regarded two Spanish ships as only the equal of one French vessel.

On the other hand, the Americans at Manila had to fear torpedoes, mines, and batteries. Nelson had no danger of this kind to encounter at the Nile. But he had to take his ships into uncharted, almost unknown waters, and he did actually lose the services of one vessel of the line temporarily, through her running aground. Admiral Dewey possessed what Nelson lacked, precise local information, and, from his knowledge of the nature of the entrance to the bay,[1] and of the Spanish character, could judge that mines and batteries were not likely to be effectively handled. Still it may readily be granted that the three serviceable guns at Cavite should have been a valuable asset to the Spaniards, though it does not appear that they were really more dangerous to the American ships than was the battery on Aboukir Island to Nelson's vessels. Seemingly the Spanish gunners ashore wanted training, whilst the Manila batteries of heavy though old-

[1] Cf. Reports, 100, where he states, "I do not consider submarine mines practicable here on account of great depth and width of bay and entrance."

fashioned Krupps were either too distant to exert any influence on the action, or suffered themselves to be silenced by Commodore Dewey's threat to bombard the town. There is much sense in Admiral Colomb's reminder, that batteries as well as ships become obsolete; and that, unless their gunners are as constantly exercised as those of ships, they will be found all but useless when the day of battle comes.

Nothing that is said here can detract from Admiral Dewey's deserved reputation. It was not his fault that the enemy was not in greater strength, and he did his work excellently well, without a trace of doubt or hesitation. For the Spaniards we can only say, in the words of the unfortunate Admiral Montojo's report—"The inefficiency of the ships composing the small Spanish squadron, the lack of all classes of *personnel*, especially of gun-captains and seamen-gunners, the inaptitude of some of the provisionally engaged engineers, the want of quick-firers, the strong crews of the enemy, and the unprotected nature of the greater part of the Spanish ships, all contributed to make more decided the sacrifice which the squadron offered for its country."

The first news of the battle reached the United States by way of Madrid, before the cable had been cut, and came from Admiral Montojo. It was sent off, apparently, just as the Americans were approaching for the second attack. It stated that there had been two engagements, that the Americans had suffered heavy loss and damage, that the DON JUAN had been severely handled, another vessel burnt, and two more "slightly injured." A second telegram acknowledged the destruction of the CRISTINA

and CASTILLA, and the sinking of several Spanish ships in Bakor Bay. From this it was clear that the Americans had won a decided victory, but the report that their losses had been heavy caused much anxiety, and the Commodore's delay in sending news added to the uneasiness. The cable to Hong Kong was known to have been cut, but it was not understood why Commodore Dewey did not connect the end with his flagship. The explanation now seems to have been, that the Telegraph Company refused to accept messages at its Hong Kong office which were thus sent—an act which would have justified severe reprisals against its property at Manila. The *McCulloch*, the only vessel that could be spared for despatch duty, had further to coal from the *Nanshan* before she could leave. The sweltering heat rendered this work excessively toilsome, and it was not till May 5 that she was ready to start. She reached Hong Kong two days later, and telegraphed the authentic particulars in a short despatch. Immediately the thanks of the President and the nation to the Commodore, his officers, and his men were returned from Washington, and the Commodore was appointed an acting Rear-Admiral. He had asked for ammunition and troops, and directions were at once issued to the cruiser *Charleston* to embark ammunition and prepare for sea, whilst an expeditionary force was assembled and equipped and transports chartered.

At Cavite Admiral Dewey's fleet had now obtained a valuable base, well equipped with machine-shops for small repairs, and with storehouses in which was found a considerable quantity of naval stores. There were

also two slips which proved most useful for repairs to the small vessels captured after the battle. Filipino mechanics and labourers were employed to do the work required.

It has been argued that, because Admiral Dewey so rapidly and so easily possessed himself of the enemy's base, exaggerated stress has been laid in England upon the need of coaling stations and bases to the superior naval power, and that the superior power can always seize what bases it requires. It must, however, be remarked, that the Spaniards had shown exceptional carelessness and negligence in failing to defend Cavite, the entrance to Manila Bay, and the harbour of Subic with good guns. Had the defences been carefully and properly designed the American fleet could have been kept at a distance and compelled to blockade, when its difficulties, thousands of miles from an American port, and from dockyards where its vessels could have been repaired, would have been very great. Some inlet or some secure harbour on the Philippine coast might indeed have been occupied, but in that case there would have been no appliances or machinery for making repairs. It is not everywhere, moreover, that an assailant can expect to have on his side the sympathy of the population, as Admiral Dewey had the good-will and aid of the Filipinos—at all events until the American troops arrived, and it was seen that the Americans intended to be masters, not allies.

On May 3 the *Raleigh* and *Baltimore* were sent down to the entrance of the bay to capture the forts on the islands of El Fraile and Corregidor and sweep the

channel for mines. The forts, isolated from the mainland, followed the example of the Mobile batteries in 1864, and surrendered without giving any trouble. An amusing incident happened when the senior Spanish officer came on board the *Raleigh* to make the surrender. The ship was drifting about in the Boca Chica, and he manifestly grew uneasy and begged to be hurriedly set on shore. So instant was his anxiety that he was pressed to give the reason, whereupon he explained that the *Raleigh* was over a mine-field. However, it afterwards appeared that the mines, instead of being planted at such a depth as to strike the hulls of ships entering, had simply been dropped overboard by the Spaniards, and had gone to the bottom in eighty feet or more of water.

During the early days of May there were general rumours that Cervera was proceeding from the Cape Verdes to the Far East, to destroy the American squadron. Whilst such reports were most improbable, they caused some anxiety, as no reinforcements were available except the protected cruisers *Charleston* and *Philadelphia*, and to take the latter to sea officers and men were wanting. When Cervera was located there was still some uneasiness, as rumours of the sailing of the Spanish Reserve Squadron, including the battleship PELAYO and the large armoured cruiser CARLOS V, to the Far East were prevalent in Madrid. Moreover, the correspondence of the Spanish Minister of War with General Blanco, published since the war, indicates the intention of the Spanish authorities to send Cervera's fleet, had it been possible to withdraw it from Santiago, to Manila.

On May 12 the small Spanish gunboat CALLAO[1] steamed into Manila Bay, and upon a shot being fired by one of the American ships, hoisted the white flag. She had been upon a long cruise amongst the islands, and was unaware that war had begun. She was at once added to Admiral Dewey's fleet.

The presence of the American fleet in the bay cut off all supplies from Manila, whilst on land the insurgent Filipinos hemmed in the Spanish garrison. The position of the Spaniards at Manila was therefore very similar to that of Santiago at the end of June, with this additional source of danger, that the Americans could at any time bombard the city. That no steps were taken by Admiral Dewey to compel its early surrender, was due to the fact that he had no troops to hold the town, and was probably afraid of excesses on the part of the Filipinos, whom he would be unable to restrain. On May 17 the Filipino leader Aguinaldo left Hong Kong on board the *Nanshan*, and arriving in the Bay of Manila, was permitted to organise the Filipino army at Cavite. But Admiral Dewey, with his usual tact and foresight, was careful to give him no assurances or promises. The Official Reports indicate that the Admiral's attitude to the insurgents was one of slightly benevolent neutrality—and nothing more.

Supplies had not been economised in Manila, and the Spaniards were very soon unable to procure any article of food except rice. There was very great scarcity in the city, and the foreign warships, which quickly

[1] One hundred and thirty-seven tons; launched about 1887; two small guns.

assembled in the bay, had to draw their supplies from Hong Kong. Meantime after long delays the reinforcements for Admiral Dewey left the United States. On May 18 the *Charleston* left San Francisco with ammunition for the squadron, but had to return on the 19th owing to an accident to her machinery; she put to sea, however, a few days later. On the 28th the transports *City of Pekin*, *Australia*, and *City of Sydney*, with 2500 troops on board, set sail, and picked up the *Charleston* at Honolulu. On the way the Spanish coaling station of Guam in the Ladrones was seized, on June 20. It offered no resistance. There were no fortifications, the garrison was infinitesmal, and the governor was unaware of the outbreak of war. On June 30 the American convoy reached its destination, after meeting the *Baltimore* off Cape Engano.

The second expedition of 3500 troops on board the *China*, *Senator*, *Zeelandia* and *Colon* sailed without convoy on June 15. They crossed the expanse of the Pacific without sighting a ship after Honolulu, until Cape Engano in Luzon was neared. There the *Boston* was waiting, and on July 16 the convoy was safely in the bay. On June 11 the monitor *Monterey* sailed for Manila in company with a collier, but owing to her low speed and need of coaling at sea, she was overtaken by the transports at Honolulu and left behind. Her arrival at Manila was eagerly expected by Admiral Dewey, as he felt the want of a heavily gunned and armoured ship, not only to meet the armoured ships of the Spanish reserve squadron, but also to make it clear to the German

squadron in the bay that he meant to have his own way, and had strength sufficient to get his own way.

After many delays and false starts the Spanish Reserve Squadron, under Admiral Camara, had at last moved towards the East. It consisted of the battleship PELAYO, armoured cruiser CARLOS V, destroyers AUDAZ, OSADO and PROSERPINA, armed liners BUENOS AIRES, PATRIOTA and RAPIDO, and transports ISLA DE PANAY, COLON, COVADONGA and SAN FRANCISCO. The cruiser ALFONSO XIII and the old battleship NUMANCIA were found to be in an unfit condition to go to sea, and were left behind. On June 16 this force left Cadiz with sealed orders, and a little later was sighted from Gibraltar proceeding eastwards. The troops on board consisted of two infantry regiments and a battalion of marines—about 4000 men in all—and no less than 20,000 tons of coal were carried for the voyage. The fleet touched at Cartagena; on the 21st it was sighted off Pantellaria, and on the 25th put into Port Said. Here it applied for permission to coal. The Egyptian Government, however, as the Spanish ships had ample fuel on board to get back to Spain, declined to permit this, and would not even allow Camara to fill his bunkers from his own colliers. He was requested on June 29 to withdraw his ships from Port Said, since his stay in that harbour had considerably exceeded twenty-four hours. On this he claimed to be allowed to effect certain necessary repairs, but even that was not permitted. On July 1 he sent two of his transports into the Canal, and with his other ships steamed out of the port and proceeded to a point outside territorial waters, where his vessels attempted to transfer

coal by boat from the transports. A heavy sea ran, however, on the 2nd and 3rd, and it is doubtful if he was able materially to add to the quantity of fuel in the bunkers of his warships. What is certain is that he detached the three destroyers and two steamers freighted with coal, the SAN FRANCISCO and LOYOLA, with orders to return to Spain, on which they were permitted to transfer coal at Port Said. He had meantime been reinforced by the transports LUZON and SAN AUGUSTINO. On July 5 and 6 the rest of the fleet passed through the Suez Canal, and was at once served with a notice from the Egyptian Government to quit Suez within twenty-four hours. In conformity with this request he proceeded seven miles out to sea, and lay in the offing, apparently attempting to coal, all the 7th. It was his avowed intention to fill up with fuel and then to proceed without re-coaling the 6300 miles to Manila. But almost at once the shifting, hesitating Government of Spain decided to recall him. On the 8th he entered the Canal upon his return journey ; and next day five of his ships left for Cartagena, whither the rest of the squadron followed on the 11th, having been permitted to take on board 600 tons of coal.

It was the battle of Santiago which compelled this retreat by setting free the American fleet. As soon as the departure of Camara for the Far East was certain, the American Government had ordered the formation of a Flying Squadron, composed of the *Newark* with the flag of Commodore Howell, battleships *Iowa* and *Oregon*, auxiliary cruisers *Yankee*, *Yosemite* and *Dixie*, and four colliers, with the avowed purpose of pursuing him and harassing the Spanish coast. The idea of despatching

such a force to operate against Spain in European waters had constantly occupied the officers of the Navy since the outbreak of the war, and Admiral Sampson's sinking of the *Merrimac* in the neck of the Santiago bottle is ascribed by Captain Evans to the wish to set free sufficient ships for the purpose. But when the *Merrimac* failed to block the channel, the project seems to have been temporarily abandoned. Whether it was seriously entertained at the end of June, or whether the threat to send the squadron was a move in a game of bluff against the Spaniards is uncertain. Commodore Howell would, however, have been much superior in force to Camara.

It has in the same way been doubted whether Camara's fleet was really intended to go to the East. To our mind the passage of the Canal, which meant a cost of £32,000 on each occasion, settles the question. Spain could ill afford to lose this sum, and had her Minister of Marine been merely bluffing, would never have sent her ships beyond Port Said. On the other hand, it is difficult to see how Camara could have reached his destination in sufficient time, or what his ships could have effected. His long delays at Port Said and Suez rendered it practically certain that armoured ships would reinforce Admiral Dewey before he could arrive at Manila. To cover 6300 miles at a steady average of ten knots, twenty-six days would have been required. This would have brought him to Manila on August 2, supposing his start to have been made on July 8. But at least four or five days for coaling at sea must be allowed, the PELAYO'S extreme bunker capacity not exceeding 800 tons, beyond which perhaps 200 tons might have been carried on deck. She had the old-

fashioned compound engines and Niclausse boilers, which burn a good deal of coal, so that her radius could not be placed at more than 3000 or 3500 miles, even if it reached that figure. She would thus have needed fuel twice on her way, unless she was to arrive with little or nothing in her bunkers. This brings the date of Camara's arrival at Manila to August 7, and yet makes no allowance whatever for breakdowns or accidental delays. A higher speed than ten knots would have meant more frequent coalings, and as all neutral ports were closed to the squadron, would only have increased its difficulties.

On August 4 Admiral Dewey was reinforced by the powerful monitor *Monterey*. Had she not arrived, however, and had Camara continued eastward, it was Admiral Dewey's intention to remove the transports, convoying them with his warships to a point north-east of Luzon, and then steam east till he met the *Monterey* and *Monadnock*. With them he would have returned and destroyed Camara after only a few days' absence. General Anderson, in command of the American troops ashore, had determined in the meanwhile to take thirty days' rations, march his men inland to the hills behind Cavite, and there entrenching himself, to await the return of the fleet. It is, however, certain that, had the emergency actually arisen, the Admiral with the *Monterey* would have held his ground. In fighting qualities, given fair weather, the monitor was not much inferior to the PELAYO; the *Olympia* was probably a better ship than the CARLOS V; whilst the *Raleigh*, *Baltimore*, *Charleston*, *Boston*, *Concord* and *Petrel* would have only had armed liners opposed to them, of which they could have made

short work. The difficulty of reinforcing Admiral Dewey with the two monitors, the first of which was nearly two months on her voyage across the Pacific, illustrates once more the strategical weakness of these low-freeboard craft. It may confidently be asserted that a small battleship of 7000 or 8000 tons would have proved immeasurably more valuable, and would have accomplished the voyage in half the time and without any severe trial of her men's health. As for the *Monterey*, she was to have been towed by the collier *Brutus* when coal ran short. This it did five days out from San Diego, California, and a towing cable was sent on board the monitor. It parted almost immediately, and another had to be sent on board, but the delay thus caused was considerable. The monitor had to face a heavy swell, and from her low freeboard her deck was under water continually. The intense heat below in a tropical climate inflicted much hardship upon her men. On August 16 the second monitor, *Monadnock*, arrived at Manila, and Admiral Dewey's fleet was complete. She had taken seven weeks to cover the distance from San Francisco.

Meantime, on June 27, a third expeditionary force left the United States 4000 men strong. In spite of Camara's doubtful movements no convoy was assigned to protect it, but the exact course to be followed was laid down, so that Admiral Dewey could, if he thought fit, meet it at any point. It reached Manila at the end of July and in early August.

Early in July the friction which had arisen between the American and the German squadrons in the Bay of Manila was increased by an unpleasant incident. The German cruiser *Irene* in Subic Bay prevented Aguinaldo

and the Filipinos from capturing Isla Grande. As the Filipinos were to be considered the allies of the United States this act was a great mistake, though it seems to have been humanitarian feelings which influenced the German captain. On July 7, hearing what had happened, Admiral Dewey despatched the *Raleigh* and *Concord* to Subic. On their arrival the *Irene* at once withdrew, and Isla Grande was taken.

On July 22, when Admiral Dewey received certain intelligence of the return of Camara, 4000 troops of the first and second expeditions were landed between Cavite and Manila to commence active operations against the latter city.[1] Here the position was growing more and more serious. The place was closely blockaded by sea and land, and the insurgents had cut off the water supply. Meat was so scarce that the Spaniards had to fall back upon horse-flesh. The total of the Spanish troops, regular and irregular, was about 13,000, whilst the insurgents probably numbered over 15,000 at this time.

On August 7 notice was given by the American commanders, Admiral Dewey and General Merritt, that after forty-eight hours active operations against Manila would begin by sea and land. The Spanish governor, General Jaudenes, replied that, surrounded as he was by the insurgents, he could not remove the non-combatants. On the 9th the American commanders urged him to surrender and not compel them to bombard the town. General Jaudenes asked in reply to be allowed to communicate with Madrid, but this was peremptorily refused. By dint of diplomacy, however, the General was brought into such a frame of mind that it was

[1] General Greene, *Century*, vol. 57. 788.

understood he would surrender to a show of force. Meantime the ships stripped for action, and the American troops made their final dispositions. August 13 was fixed for the attack, which was to be commenced by a bombardment of the Spanish positions by the fleet.[1]

The morning of the 13th was dull and stormy. Heavy thunder-showers swept across the bay, rendering shooting very difficult. Soon after 9 a.m. the ships headed towards the southern extremity of the city in two lines; in the one were the *Monterey*, *Charleston*, *Baltimore*, *Boston* and *Concord*, in the other the *Olympia*, *Raleigh*, *Petrel*, and the captured *Callao* and *Barcelo*. The *Monterey*, however, was not to engage unless four heavy 9-inch guns in the Manila outworks opened fire, as Admiral Dewey feared that her huge shells would miss the Spanish guns, and falling inside the most densely populated part of the city, cause heavy loss of life. The other ships opened a mild fire upon the main Spanish work at Malate, Fort San Antonio de Abad. Their projectiles at first fell short, but the fact was signalled from the American troops on shore and the range was increased. The gunboat *Callao* especially distinguished herself by the rapidity and accuracy of her fire from her 1-pounder Hotchkisses. After only half-an-hour's bombardment, to which the Spaniards made no reply, the American troops swept into Fort San Antonio before the fleet had ceased its fire. A few minutes later, however, the American flag was seen through the rain squalls waving over the fort, and the cruisers and gunboats ceased their bombardment. The

[1] *Times*, October 4, 1898. General Greene, *Century*, 57. 915 ff.

troops pressed steadily forward along the shore, covered by the fleet, and skirmishing with the Spaniards. At this point the latter hoisted the white flag, and General Whittier for the Army and Lieutenant Brumby for the Navy were sent ashore to parley with the Spanish governor. To them he surrendered about 5 p.m. The American loss on land was 6 killed and 39 wounded; in the fleet there was no loss of any kind. Each ship fired about eighty rounds of shell at long range. Thus ended the campaign in the East; for on August 12 the peace protocol had been signed and hostilities suspended. Owing to the cutting of the cable neither combatant was aware of the armistice.[1]

The difficulties which arose in connection with the transport of the American troops across the Pacific are very instructive, as showing the need for forethought, strict discipline, and careful organisation in the transport service. The Navy had no authority on board the transports, and there was great friction between the Army officers and the captains of the vessels chartered, whilst in several cases—probably from inexperience—the ships were much over-crowded. The troops did not understand that on shipboard in a tropical climate sanitary laws must be most strictly enforced, in the interest of the men themselves. In the *Valencia*, which sailed with the third expedition, we are told "it was simply impossible to keep the quarters below decks in a cleanly condition. . . . The bedding soon became unfit for use and had to be thrown overboard. The troops were not clean in their persons, because no wise bathing regulations were adopted, and the regular 'scrub and

[1] Reports, pp. 137-9. *New York Sun.*

wash' clothes was unknown. Lice and other vermin were rampant. The men spat on the deck, threw waste food on deck, and defecated there without regard to the expostulations of the officers of the transport." A short supply of water was carried; hammocks were not provided; 1300 men, as in the *Pennsylvania*, were allotted the space that would barely accommodate 800. That there was not serious trouble with the men and dangerous sickness under these circumstances can only be ascribed to two causes—the splendid patriotism of the soldiers and volunteers, and their extreme healthiness when embarked.

The want of naval control led to an utter disregard of signals by the captains, which might have proved very dangerous had a single Spanish cruiser appeared in the Pacific. It is very strange that such vessels as the METEORO and PATRIOTA, bought in April, were not hastily despatched thither, when their high speed and great coal-supply would have rendered them very dangerous customers. They could probably have made the voyage without coaling, and could have filled up with fuel from colliers at one of the innumerable unfrequented harbours in Malaysia or the Pacific Archipelagoes. Judging from the effect produced by the reports of the presence of Spanish warships in the Nicolas Channel in June,[1] such a diversion would have instantly stopped the transport of American troops to Manila. Some such course as this was Spain's only chance, and would have afforded a good deal of interest and instruction to the naval world.

[1] See page 264.

MANILA

1. American Fleet. (Commodore Dewey.)

Captain	Ship	Date	Tons	Speed	Deck	Guns: 8-inch	6-inch	5-inch Q.F.	6-pndr.	3-pndr.	1-pndr.	Machine	Torpedo Tubes	Men
Commodore G. Dewey Captain C. V. Gridley	*Olympia*	1892	5800	21·6	4·7	4	—	10	14	—	6	4	6	454
Captain N. M. Dyer	*Baltimore*	1888	4600	20	4·0	4	6	—	4	2	6	2	5	402
Commander E. P. Wood	*Petrel*	1888	800	13·7	·3	—	4	—	—	2	3	2	—	129
Captain J. B. Coglan	*Raleigh*	1892	3183	19	2·5	—	1	10	8	—	4	2	6	297
Commander A. Walker	*Concord*	1890	1700	17·3	·3	—	6	—	2	2	3	2	2	187
Captain F. Wildes	*Boston*	1884	3189	15·5	1·5	2	6	—	—	2	2	2	—	274
			19,272	—	—	10	23	20	28	8	24	14	19	1743
Not Engaged														
Captain D. B. Hodgson	*McCulloch*	1897	1280	16	—	—	—	4 4-in.	?	?	?	?	—	130
			20,552	—	—	10	23	24	28	8	24	14	19	1873

2. Spanish Fleet. (Admiral Montojo.)

Captain	Ship	Date	Tons	Speed	Deck	6·2″	5·9″	4·7″	3·4″	2·9″	2·7″	Q.F. 6-pr.	Q.F. 3-pr.	Q.F. 1-pr.	Mach.	Torpedo Tubes	Men¶
Rear-Admiral Montojo Captain L. Cadarso	REINA CRISTINA	1887	3090	16·9	—	6	—	—	—	—	2	3	8	—	2	5	409
Captain A. Algado	CASTILLA	1881	3342	14	—	—	4	2	2	2	—	—	—	4	—	2	401
Captain J. Sidrach	ISLA DE CUBA	1886	1040	15·9	2·5	—	—	6	—	—	—	4	—	2	2	3	187
Captain J. L. Human	ISLA DE LUZON	1886	1040	15·9	2·5	—	—	6	—	—	—	4	—	2	2	3	187
Commdr. S. M. Guerra	MARQUES DEL DUERO	1875	500	10	—	1	—	2	—	—	—	—	—	—	1	—	114
Captain E. Robion	DON ANTONIO DE ULLOA ‡ §	1887	1152	14	—	—	—	4	—	—	—	4	—	1	1	2	190
Captain J. de la Conda	DON JUAN DE AUSTRIA	1887	1152	14	—	—	—	4	—	—	—	4	—	1	1	2	207
	EL CANO OR CORREO † *	1885	525	10	—	—	—	3	—	—	—	—	—	1	3	1	135
Commdr. F. Benovento	GENERAL LEZO † ‡	1885	525	10	—	—	—	3	1	—	—	—	—	—	3	1	135
	VELASCO † ‡ **	1881	1139	14·2	—	—	—	—	—	—	—	—	—	—	—	—	—
			13,505	—	—	7	4	30	3	2	2	19	8	11	15	19	1965

* Mentioned in Dewey's first, but not in his second despatch.
† By Spanish accounts not in battle.
‡ Undergoing repairs.
§ Some guns removed to shore batteries.
** All guns removed.
¶ These are the nominal crews from official Spanish papers. The actual crews are stated by Spanish authorities only to have totalled 1134 men.

3. American Artillery.

	Number	Weight of shot lb.	Total weight of shot lb.	Perforation through wrought iron Inches
8-inch	10	250	2500	19·2
6-inch	23	100	2300	13·7
5-inch	20	50	1000	11·8
6-pounder	28	6	144	7·9
	81	—	5944	—

4. Spanish Artillery.

	Number	Weight of shot lb.	Total weight of shot lb.	Perforation through wrought iron Inches.
6·2-inch H	6 [6]	83	498	9·6
6·2-inch A, M	1 [0]	64	64	3?
5·9-inch K	4 [4]	85	340	14·5
4·7-inch K	2 [2]	43	86	9
4·7-inch H	26 [15]	35	910	6?
3·4-inch K	2 [4]	14	14	2?
3·4-inch H	1 [4]	14	14	2?
2·9-inch K	2 [0]	9	18	2?
2·7-inch H	2 [0]	6	12	2?
6-pounder Q	19 [15]	6	114	7·9
4·7-inch M	2 [0]	32?	64	?
	67 [50]	—	2134	—

A = Armstrong. M = Muzzle-loading. Figures in brackets are those given
H = Hontoria. Q = Quick-fire. by a Spanish officer in *Le Yacht*,
K = Krupp. October 15, 1898.

5. The Two Fleets.

	Ships Engaged	Average age. Years	Men	Guns 6" and over	Guns 3" and over	Guns small	Weight of Metal	Displacement	Torpedo Tubes
American	6	9	1743	33	20	74	5944 lb.	19,272	19
Spanish	10	14	1965 or 1134	11	33	55	2134 lb.	13,505	19

6. Ammunition Expended in the American Squadron.

Ship	8-inch	6-inch	5-inch	6-pounder	3-pounder	1-pounder	Totals
Olympia	36	—	281	1000	—	361	1678
Boston	48	162	—	220	256	400	1086
Baltimore	73	122	—	547	—	692	1434
Raleigh	—	53	341	137	—	100	631
Concord	—	182	—	220	120	60	582
Petrel	—	116	—	—	313	19	448
	157	635	622	2124	689	1632	5859

7. Ammunition remaining after battle.

Ship	8-inch	6-inch	5-inch	6-pounder	3-pounder	1-pounder
Olympia	312	—	318	6080	—	3539
Boston	138	248	—	948	2131	1712
Baltimore	211	454	—	1319	—	3428
Raleigh	—	86	565	3863	—	2267
Concord	—	255	—	718	814	1250
Petrel	—	274	—	—	745	?

8. Details of hits found or recorded.

	8-inch	6-inch	5-inch	6 pndr.	Unspecified. Mostly Small	large	Total	Remarks
CRISTINA	5	0	5	7	?	22	39	About half the hits.
CASTILLA	3	2	12	3	16	4	40	" " "
DON ANTONIO DE ULLOA	4	3	1	10	1	14	33	" " "
DON JUAN DE AUSTRIA	1	1	4	5	2	0	13	Complete record.
LUZON	0	0	0	0	0	3	3	" "
CUBA	0	0	0	4	0	1	5	" "
DUERO	1	1	0	2	0	1	5	Not all.
VELASCO	0	0	0	0	0	1	1	Probably all.
ARGOS	0	0	0	0	0	1	1	" "
GENERAL LEZO	0	0	0	0	0	1	1	" "
	14*	7*	22	31	19	48	141	

* Of the two hits recorded as "either 6" or 8"" one has been counted to each calibre.

9. Percentage of hits.

	8-inch	6-inch	5-inch	6-pounder	Small
Hits found	14	7	22	31	19
Rounds fired	157	635	622	2124	2321
Per cent. of hits to rounds	9	1	3·5	1·5	1
Number of guns in battle	10	23	20	28	46

CHAPTER V

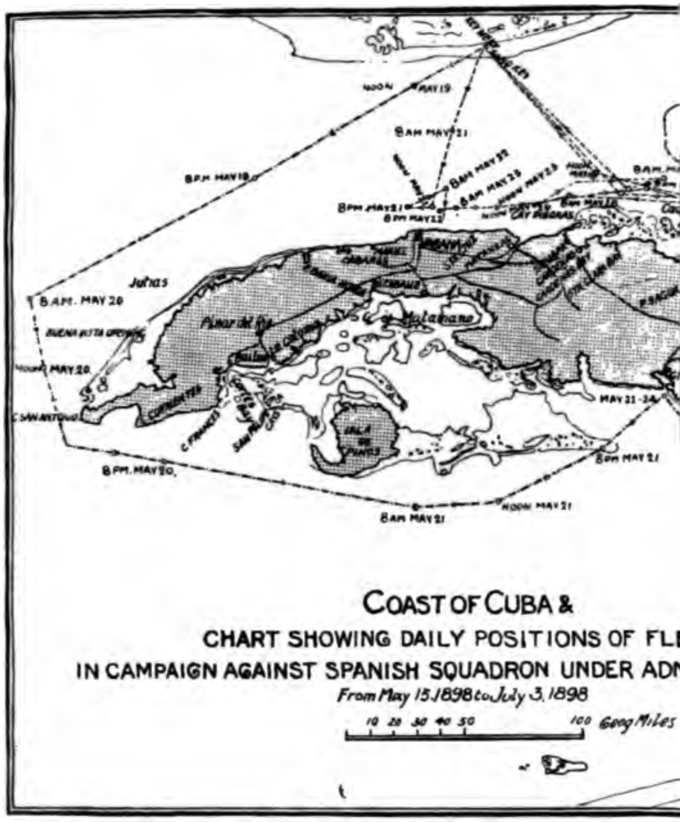
THE CUBAN BLOCKADE

April—May

THE action of the American fleet in the western field of war necessarily depended to a great extent upon the Spanish movements.[1] The whole of May was passed in a strategic game between Admirals Sampson and Cervera, the first striving to head off the Spanish fleet from Havana and Cienfuegos, and to destroy or blockade it; the second attempting to reach Havana. Mistakes were made, as must be expected when men are groping in the fog of war, by the Americans, and surprise can only be felt at the extraordinary inertness of the Spaniards which led them to throw away all their brilliant opportunities. They had chance after chance which they uniformly failed to take.

The disposition of the American fleet at the outset was due, as has been seen, largely to the general uneasiness in the United States as to the defencelessness of the seaboard. Popular alarm compelled the defending of the American harbours with mines, which proved, as

[1] Reports, 163 ff.; Admiral Sampson in *Century*, 57. 886; Captain Chadwick in *Scribner's*, 24. 529; Lieutenant Staunton in *Harper's*, 98. 175; Jacobsen, 1; Goode, 28 ff.; Müller (complete edition), 17—23.



NOON MAY 19
8 AM MAY 21
8 P.M. MAY 19
8 AM MAY 22
8 PM MAY 21
8 PM MAY 22
CAY PIEDRAS
Julias
8 A.M. MAY 20
Pinar del Rio
NOON MAY 20
C SAN ANTONIO
MAY 21-24
ISLA DE PINOS
8 PM MAY 21
8 P.M. MAY 20.
8 AM MAY 21
NOON MAY 21
COAST OF CUBA &
CHART SHOWING DAILY POSITIONS OF FLE
IN CAMPAIGN AGAINST SPANISH SQUADRON UNDER ADM
From May 15.1898 to July 3.1898
10 20 30 40 50 100 Geog Miles

might have been expected, a hindrance and danger to commerce. It was supposed that the four fast Spanish armoured cruisers, supported by armed mail steamers, which had been purchased by Spain from Germany, would bombard the sea-coast cities, especially threatening Philadelphia, Boston, and Newport, all of which were open to attack in mid April, though by May they were probably in a state to offer some resistance. The action of the American fleet meanwhile was scarcely taken into account. It was supposed that the Spaniards would move their torpedo boat and destroyer flotillas to the Cuban coast before the war began. Actually on the Cuban coast, at the end of April, they had four good torpedo gunboats.[1] These, reinforced by the seven destroyers and six respectable torpedo boats which were available, and handled with energy, must have caused the Americans great annoyance—if nothing more. The harbours of the northern coast of Cuba would have proved excellent ports of refuge from which to issue and strike the enemy. But all these interesting anticipations failed to take into account the passive lethargy of the Spaniard. "The Spaniards," said General Garcia, the Cuban leader, to Admiral Sampson, "*never* attack; they *never* attack." Captain Chadwick, who reports the conversation, considers the saying true. The Spaniards will resist, "but they do not seem to have in them the capacity of initiative." At each turn in their naval operations we shall discover the truth of these reflections.

For defensive purposes the eastern seaboard of the

[1] GALICIA, NUEVA ESPAÑA, MARQUES DE MOLINS, VINCENTE YANEZ PINZON.

United States was divided into eight districts, to each of which a few armed steamers, tugs or yachts were appropriated. In this total of vessels the most important were the ships of the Northern Patrol squadron under Commodore Howell, including the cruiser *San Francisco*, and armed mail steamers *Yankee*, *Yosemite*, *Prairie* and *Dixie*. Besides these there was the Mosquito Fleet of about forty armed tugs and ten old monitors. Gradually the patrol ships were taken away from their merely defensive duties and sent south.

The distribution of the American fleet on the outbreak of war and during the early weeks, up to Cervera's sailing, varied from day to day, but was approximately as follows :—

ACTING REAR-ADMIRAL SAMPSON (to blockade Cuba and watch Cervera in the West Indies).

Armoured Cruiser	*New York*	Sea speed	19 knots.[1]	
Battleships	*Indiana*	„	11	„ [2]
„	*Iowa*	„	15½	„
Monitors	*Puritan*	„	10	„
„	*Amphitrite*	„	8	„
„	*Terror*	„	8	„
„	*Miantonomoh*	„	8	„
Cruisers	*Detroit*	„	15	„
„	*Cincinnati*	„	17	„
„	*Marblehead*	„	15	„
„	*Montgomery*	„	15	„
„	*Dolphin*	„	12	„
Gunboats	*Nashville*	„	12	„
„	*Wilmington*	„	12	„
„	*Castine*	„	13	„

[1] Necessarily an approximation ; extreme speed for a short run.

[2] Her bottom was foul, hence her abnormally low speed.

Gunboats . .	*Machias* . .	Sea speed 13 knots.	
„ . .	*Helena* . .	„ 12	„
„ . .	*Newport* . .	„ 10	„
Yacht . .	*Mayflower* .	„ 15	„
Torpedo Boats .	*Dupont* . .	„ 22	„
„ . .	*Porter* . .	„ 22	„
„ . .	*Foote* . . .	„ 20	„
„ . .	*Winslow* . .	„ 20	„
„ . .	*Cushing* . .	„ 20	„
„ . .	*Ericsson* . .	„ 21	„

By the middle of May Admiral Sampson was reinforced by the following ships :—

Armed Liners .	*Harvard* . .	Sea speed 20 knots.	
„ . .	*Yale* . . .	„ 20	„
„ . .	*St. Paul* . .	„ 20	„
„ . .	*St. Louis* .	„ 21	„
Dynamitegunboat	*Vesuvius* . .	„ 17	„
Gunboat . . .	*Vicksburg*		
Torpedo Boat .	*Rodgers*		
Yachts	*Hawk*		
Armed Ships . .	*Scorpion*		
„ . .	*Eagle*		
„ . .	*Vixen*		
„ . .	*Mangrove*		
„ . .	*Windom*		

and many more.

Commodore Schley (Hampton Roads).

Armoured Cruiser	*Brooklyn* . .	Sea speed 19½ knots	Moved to Key West, arriving May 19.
Battleships . .	*Massachusetts*	„ 14 „	
„ . .	*Texas* . .	„ 16 „	
Cruisers . . .	*Minneapolis* .	„ 20 „	Detached to coast of Maine and then to West Indies.
„ . . .	*Columbia* . .	Sea speed 20 knots.	Afterwards detached to coast of Maine.
„ . . .	*New Orleans*	Sea speed 19 knots.	Sent to Key West.

embarrassed at every turn by the want of mobility which marked his mixture of battleships and monitors.

With cruisers he was very poorly supplied. He had at the outset no large and fast scouts, though this want was supplied by the middle of May. His own flagship was indeed the only long-radius cruiser upon which he could reckon, and naturally she could not be detached. He was thus unable to send ships to get touch of Cervera and watch his movements from the start.

On the evening of April 21 Admiral Sampson at Key West received orders from Washington to blockade the western coast of Cuba, from Sta. Clara Bay on the east to Bahia Honda on the west, the blockade of Cienfuegos on the south being left to his discretion. One by one the ships left Key West Bay, and at 9 a.m. of the 22nd the fleet was outside the reefs. Half-an-hour later it headed south towards Havana, capturing on the way two Spanish merchant steamers, the BUENA VENTURA and the PEDRO, the first chased by the *Nashville*, the second by the flagship. At 5 p.m. the fleet was off Havana. Here it dispersed, the various ships proceeding to their several blockading stations, and the *Iowa*, *Indiana*, and *New York* remaining in the offing of the great fortress, whilst the torpedo boats cruised close up to the harbour entrance. All the ships were painted a greenish grey, and fully prepared for battle, with the woodwork cut away and landed. In the *New York* the valuable and finely-finished oak fittings had not been spared, and all the boats except three were left ashore.

Early on the 23rd the Italian cruiser *Giovanni Bausan* was sighted, making for Havana, and caused

some excitement, as she was mistaken for the VIZCAYA, especially when it was seen that the *Wilmington* and the *Porter* were in chase of her. Her nationality, however, was speedily discovered. A schooner was captured that day off the eastern batteries of Havana by the torpedo boat *Porter*, and two small smacks by the *Wilmington* and *Cushing*.

On the 24th there were several more captures, including the merchant steamers, CATALINA and MIGUEL JOVER.

On the 25th the schooner SOL of Sagua was captured, and the little lighthouse tender, *Mangrove*, distinguished herself by taking the liner PANAMA. A touch of burlesque was given to this capture by the fact that the *Mangrove's* crew had no uniforms, and only one revolver between them, whilst their only guns were two 6-pounders. The PANAMA mounted two 14-pounders, of which, however, she made no use. The *Mangrove* was further only good for eight knots against the PANAMA's twelve, so the Spanish liner can hardly have made any serious attempt to get away.

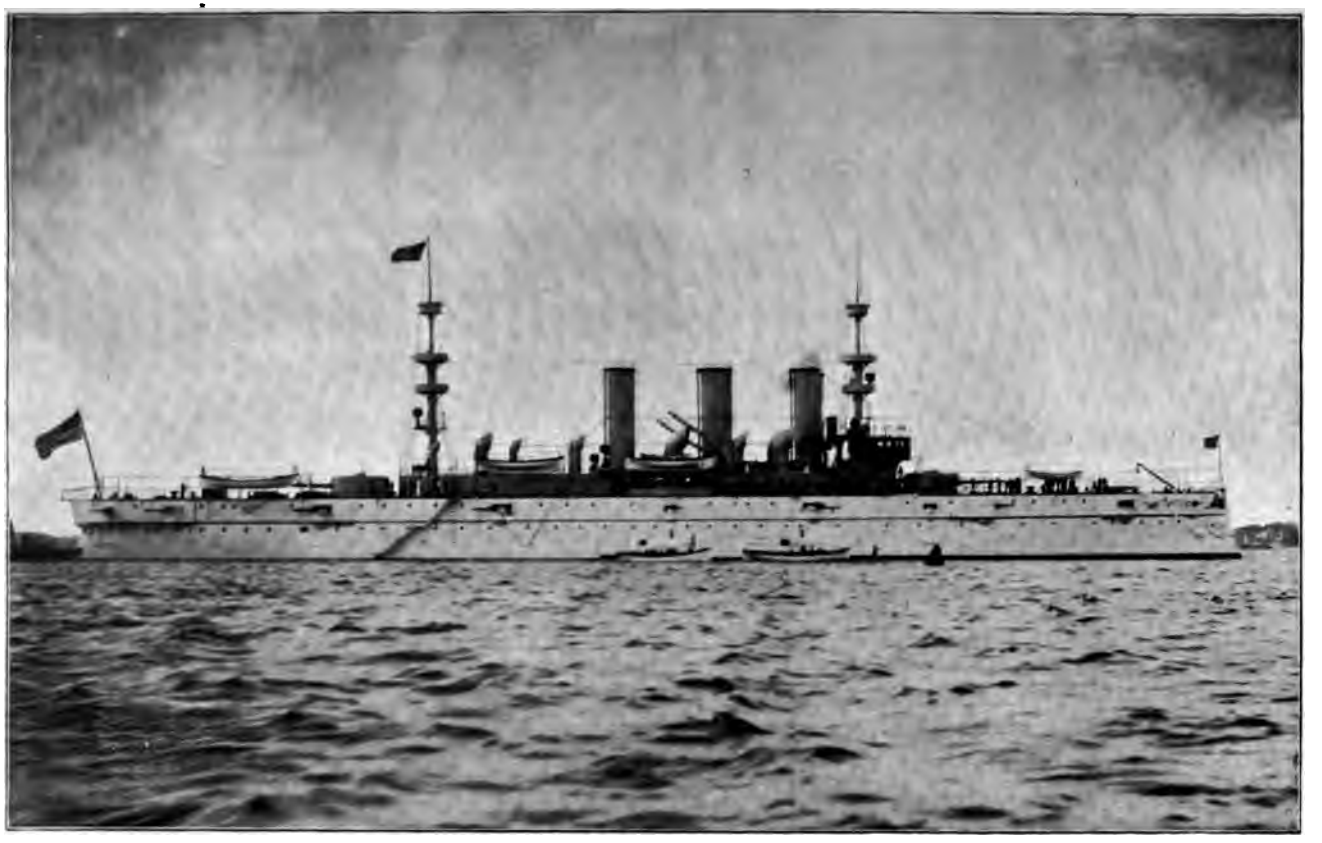
On the 26th the Spanish liner MONTSERRAT ran the blockade into Cienfuegos with a number of soldiers, a cargo of provisions, and a large quantity of gold. She had attempted to get into Havana, but had failed in this. On May 6 she ran out of Cienfuegos, and without incident or adventure got safe back to Coruña.

On the 27th the steamer GUIDO, from Liverpool to Havana, was captured off the latter port by the *Terror*. On the same day occurred the so-called bombardment of Matanzas, in which the *New York*, *Puritan*, and

Cincinnati took part. It was discovered that the Spaniards were constructing fresh earthworks there on Point Rubalcaya. The *New York* ran in to reconnoitre them, and was immediately fired upon. At once the three ships opened on the works, and maintained a steady fire from 12.50 to 1.20 p.m., at ranges varying between 6000 and 3000 yards. The Spaniards replied quite ineffectively, and the Americans claim that their batteries were silenced. The Spaniards, however, only owned to the loss of a mule. In all about 200 rounds were fired by the ships, and twenty-five by the shore batteries. The affair was of no serious importance, as no attempt was made completely to reduce Matanzas. Probably the bombardment was due largely to the wish to give the American seamen target practice under battle conditions, with an enemy firing back—a motive which will explain the many resultless bombardments engaged in by the American fleet. On this day the BOLIVAR, a merchant steamer, was captured by the blockading squadron.

On the 29th the *New York* exchanged shots with a detachment of Spanish cavalry near Mariel, and the steamer ARGONAUTA was captured by the *Nashville* and *Marblehead* off Cienfuegos. The ARGONAUTA had run the Havana blockade with mails and stores. Shots at the same time were exchanged between the *Marblehead* and *Eagle* on the one side and the Spanish torpedo gunboat GALICIA and gunboat VASCO NUÑEZ DE BALBOA in Cienfuegos harbour. The torpedo gunboat is said to have been hit by a 6-pounder from the *Eagle* in one of her boilers.[1]

[1] Reports, 182-6.



To face p. 182.

The U.S. Armoured Cruiser *New York*.

N.B.—Two of the tops on the Mainmast were removed just before the war.

but issued in the loss of the torpedo boat, as the Spanish vessels were far better armed, and made good shooting at her.

On the 11th the *Winslow*, with the armed revenue cutter *Hudson* [two 6-pounders], and the gunboats *Wilmington* and *Machias*, once more entered the bay, the *Hudson* and *Winslow* having swept and sounded one of the channels leading in. They discovered one of the Spanish gunboats lying by a wharf amongst some shipping, and the *Winslow* was directed to examine her, the water being too shallow for the larger vessels. Nearing the quarry, a number of red buoys were noticed ahead in the channel by the *Winslow's* crew, but it was not understood that they marked the range for a masked battery ashore, and no attention was paid to them. The moment the *Winslow* had reached them the Spanish gunboat fired one shot, when a furious fire with smokeless ammunition was opened by six 6-pounders in this battery upon the torpedo boat.[1] The second shell struck her forward, set the paint-room on fire, and exploded in the conning-tower, cutting the steam-pipe to the steering engine, and knocking the wheel from the helmsman's hands without injuring him. The next again pierced the conning tower, and a splinter from it wounded Lieutenant Bernadou in the groin. Yet another shell, exploding in the after conning tower, destroyed the wheel-ropes. The rudder had jammed hard over and could not be moved, so that the boat could be steered only with her engines. At once the torpedo boat's three 1-pounders began to reply, but

[1] The calibre and number of the Spanish guns is doubtful.

the fight was a terribly unequal one, though the *Wilmington's* 4-inch guns at long range were now firing at the concealed battery. The Spaniards' smokeless powder completely concealed the whereabouts of their guns. Flashes were seen from time to time but could not be exactly located.

Lieutenant Bernadou tied up his wound with a towel when, only a moment later, the forward boiler was pierced. The forced draught, however, saved the men in the stokehold from being scalded. A shot struck the head of one of the torpedoes on deck, but missing the primer, did not explode the gun-cotton of the war-head. Next the port engine was disabled. The *Winslow* was now utterly helpless and disabled, but aid was near at hand. In the most gallant style the *Hudson*, Lieutenant Newcomb, came up to her help and flung her a tow-line. This parted, and another had to be sent on board. A group of six men were standing amidships, passing ammunition, or getting up the fresh hawser, when a shell struck the hose reel on deck, glanced, and burst amongst them, killing Ensign G. Bagley and two other men, whilst mortally wounding two more. Four other men were less severely wounded, making a total of ten casualties in a crew of twenty-five. Almost immediately after this the *Hudson* succeeded in getting alongside and picking up the torpedo boat's hawser. The damage to the *Winslow's* steering-gear had now been made good, and she was hauled out of danger. The wounded were transferred to the *Hudson*. The action lasted well over an hour. It is not surprising that the torpedo boat suffered so severely, as she was

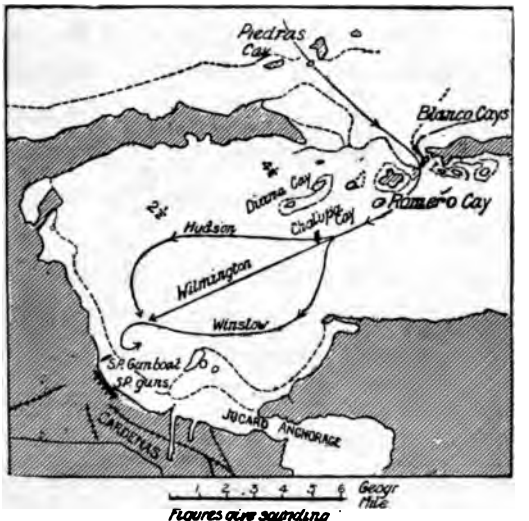
despatched upon work for which she was totally unfitted by construction. It is only fair to the officer who sent her in to say that no trace of the battery could be discovered before the action, and that Lieutenant Bernadou was only ordered to "locate" the enemy's gunboats, not to engage them. The smoke from the American guns made accurate shooting most difficult.

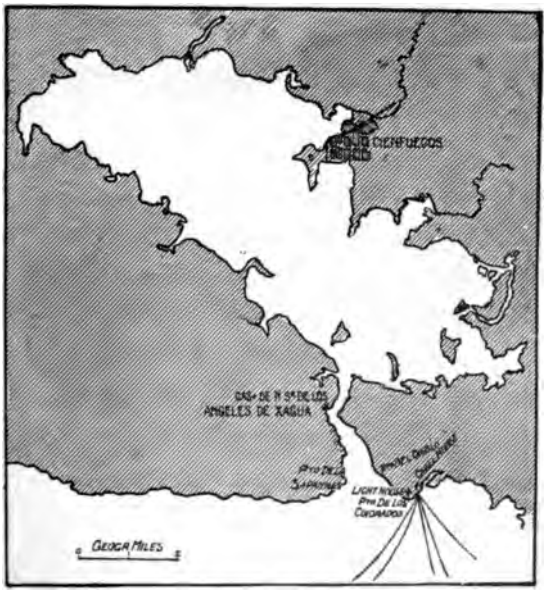
Whilst this fight was going forward the *Machias* shelled a signal station on Diana Cay, and sent a boat's crew ashore to burn it. The Spaniards report the loss of the ANTONIO LOPEZ, an old armed tug, which was probably the gunboat seen by the Americans. She was hit twelve times, and was hopelessly wrecked, whilst of her crew two were killed. The LIGERA was disabled; on shore the American shells set fire to the town of Cardenas, and wounded twelve men.

The injuries to the *Winslow*, though serious, were repaired after some weeks' work at Mobile. In the forward boiler eight rows of water-tubes on each side were wrecked, and the fire-box doors were forced open, fragments of the shell falling out of them. The shell which disabled the port engine lodged in one of the cylinders without exploding. The two thinly-armoured conning towers were completely perforated. The *Winslow* was sufficiently in order to leave for Key West under her own steam on May 12, a fact which says much for the mechanical skill of her crew.

On the 11th a second skirmish took place, but on the southern coast of Cuba, off Cienfuegos. Here the ships engaged were the gunboat *Nashville*, cruiser *Marblehead*, and revenue cutter *Windom*. The Americans were

The Action at Cardenas





The Harbour of Cienfuegos.

To face p. 186.

anxious to cut the three telegraph cables which ran eastward to Santiago, and which kept up communication between Havana and Spain.[1] On the morning of the 11th volunteers were called for to cut the cables, and two steam launches and two sailing launches were sent in from the larger ships, manned by 55 officers and men. The launches carried each one 1-pounder, and a detachment of marine marksmen. As the boats ran in the *Nashville* and *Marblehead* shelled the beach, which is low, and covered with dense scrub and grass. But in spite of this covering fire the Spaniards from the scrub opened with rifles on the boats. Ninety feet from the shore the first cable was grappled and some feet of it cut away. The second was also severed, though the enemy's fire at a range of only 200 yards was growing furious. Finally the third was picked up, but by this time the men in the boats were falling fast. One had been killed, three mortally wounded, and five more less seriously injured. The disabled men showed great heroism, uttering not a groan or complaint. With losses so heavy, considering the number of men engaged, the third cable was left uncut, and the boats retreated after three hours of the hottest work. The cutting of the heavy armoured cables, $1\frac{3}{4}$ inches in diameter, was very difficult in the heavy swell which was running. The water was very clear, and the cables could be seen, else getting hold of them would have proved exceptionally difficult, as the

[1] Five cables touch here, viz. cables from Cienfuegos to Havana (in duplicate, two cables); from Cienfuegos to Santiago (in duplicate, two cables); and from Cienfuegos to Casilda and Manzanillo. The two cables cut were probably one Cienfuegos-Havana and one Cienfuegos-Santiago, if they were not dummies placed to mislead.

uneven coral bottom constantly caught the grapnels. The *Windom* afterwards steamed in and shelled the lighthouse which had been used by the Spaniards as a shelter for their machine-guns. In a few minutes she struck it with a 4-inch shell and brought it down. The order to cease firing was then given.

The attempt to break Havana's telegraph communication with Spain thus miscarried, as three cables remained undamaged.

On May 13 the steamer *Gussie*, convoyed by the armed vessels *Manning* and *Wasp*, landed three Cuban leaders in Cabañas Bay, thirty miles west of Havana. To cover their landing a small detachment of American troops was sent ashore, and these had a sharp skirmish with a Spanish force before they re-embarked.

It will now be necessary to go back some days to the proceedings of Cervera on the one hand and Sampson on the other. Cervera's squadron at St. Vincent in the Cape Verde Islands had been greatly hampered by the loss of its foreign engineers, who withdrew from the Spanish service shortly before the war began. It was also short of stores and ammunition. Its continued delays during the earlier days of the war—from April 22 to 29—may have been due to the wish to wait for reinforcements in the shape of the PELAYO and CARLOS V, which were nearly ready for sea, or may have been the result of the invariable Spanish lack of resources, inertness, and apathy.

During this uneventful stay at St. Vincent arrangements were probably made to coal the Spanish fleet in the West Indies. The British colliers *Twickenham*,

Roath,[1] and *Restormel* seem to have been engaged to proceed to San Juan, and thence, if they did not find the Spanish fleet there, to Martinique, Santiago, or Cienfuegos. On April 29 news arrived that Cervera had at last sailed, but had almost immediately detached the three torpedo boats and the CIUDAD DE CADIZ, which had started with him. These had returned to the Canaries. For a fortnight, so far as the Americans were concerned, the four Spanish armoured cruisers and the three destroyers vanished. They had not been watched in any way, and it was quite uncertain whether they were moving against the *Oregon*, or north to the American coast-line, or due west to the West Indies, San Juan, and Havana. The retention of Schley on the American coast till Cervera could be located now became a matter of necessity, to satisfy public opinion, as the wildest reports were circulated of the presence of Spanish vessels in the North Atlantic. Spanish battleships, cruisers, and torpedo craft were reported off Barbados, on the Nova Scotian coast, near Key West, and off the coast of Maine.

In a telegram of April 29, the Navy Department expressed by cable to Admiral Sampson the opinion that Cervera would make either for San Juan or for the east of Cuba. In case the Spaniards went to San Juan, Sampson was urged to blockade them there. The possibility of a Spanish movement against the United States coast-line was also discussed. This being the

[1] The *Roath* left Cardiff on April 22, arriving at San Juan late on May 12. The *Twickenham* had orders to go to a rendezvous on the coast of Venezuela, but delayed at Martinique. She was captured on June 10 by the *St. Louis* off Jamaica. She sailed from Shields on April 23. The *Restormel* was taken off Santiago.

position on May 4, at 4.55 a.m., Admiral Sampson decided to move eastwards, hoping to meet the enemy in the Windward Passage. He had to face the possibility of Cervera coming round by the Yucatan Channel, and for that reason had to divide his fleet, leaving Commodore Watson off Havana with a strong enough force to withstand Cervera, strengthened as Watson could quickly be from Key West and Hampton Roads.

Commodore Watson.		Admiral Sampson.	
Puritan	Monitor.	*New York*	Armoured Cruiser.
Miantonomoh	,,	*Indiana*	Battleship.
Marblehead	Cruiser.	*Iowa*	,,
Cincinnati	,,	*Amphitrite*	Monitor.
Castine	Gunboat.	*Terror*	,,
Machias	,,	*Detroit*	Cruiser.
Dolphin	,,	*Montgomery*	,,
Dupont	Torpedo boat.	*Porter*	Torpedo boat.
Foote	,,	*Wompatuck*	Tug.
Ericsson	,,	*Niagara*	Collier.
Cushing	,,		
Rodgers	,,		

And numerous small gunboats and armed vessels.

Admiral Sampson's ships were prepared for battle, with chain-cable and sand-bag defence at weak points. His squadron was, however, wretchedly slow: as a combined force it was good for little more than eight knots, and was, so far as its monitors were concerned, badly supplied with coal. To economise fuel the *Iowa* towed the *Amphitrite*, and the *New York* the *Terror*, as well as the *Porter*. "There resulted," says Admiral Sampson, "endless trouble and delay from the breaking of tow-lines." On the 5th the *Indiana* disappeared, owing to an accident to one of her cylinder valve-stems. She completed her repairs and rejoined the squadron on

the 6th. But in the afternoon the crown of one of her boilers came down, and her speed fell to eight knots. The *Terror's* steering-gear failed at the same time, and a very little later the two hawsers by which she was being towed parted. This was the fourth occasion on which such an incident had occurred in the squadron. Off Cape Haytien the monitors *Detroit* and *Montgomery* had to refill their bunkers, after only four days of slow steaming. The afternoon of the 8th and morning of the 9th were spent in this work. Luckily the sea was so smooth that the *Niagara* was able to take both the monitors alongside. The *Porter* at the same time made fast to one of the latter, and got in coal across the monitor's deck.

From the Cape Haytien telegraph station Sampson conferred with the Navy Department. Telegrams from Washington, dated May 6, directed him not to risk so[1] crippling his ships against fortifications, as to prevent them from soon afterwards coping with the Spanish fleet, which was now supposed to consist of the PELAYO, CARLOS V, OQUENDO, VIZCAYA, TERESA, COLON, and four destroyers.

It will be noticed that the Washington authorities represented the Spanish squadron as far stronger than it had been supposed to be. If thus composed, it was on paper much superior to Sampson's heterogeneous medley of ships. He was informed that the *Harvard* had been sent to scout eastwards of Martinique, and the *St. Louis* eastwards of Guadeloupe,

[1] Through some mistake "so" was read by Sampson as "or." The message as he interpreted it ran: "Do not risk or cripple," etc. which quite changed its meaning.—Goode, 65.

whilst the *Yale* was watching the approaches to Puerto Rico. Rumours followed closely on the heels of each other, as there were reports of Spanish colliers at Guadeloupe, and of Cervera's whole squadron at St. Thomas. A conference of captains was called by Admiral Sampson, who finally decided to stand on to Puerto Rico in the hope of discovering Cervera at San Juan, and seizing Culebra Island as a base, if a blockade became necessary. At the same time the Admiral asked that the scouts *Harvard*, *Yale*, and *St. Louis* might be placed under his orders—a request which was promptly granted—and that on the arrival of the Spaniards in the West Indies the *Massachusetts* and *Texas* might be at his disposal. On the 9th he was informed by the Department that on May 7 the Spanish fleet had been seen east of Martinique, but that the PELAYO and CARLOS V were not with it. "You should be quick in your operation at Puerto Rico," the Department told him. "In everything the Department has utmost confidence in your discretion, and . . . does not wish to hamper you."[1]

On the 10th a report came from Cadiz that Cervera's squadron had returned to that place, and the Navy Department, because it could scarcely believe that the Spaniards would send a weak detachment to the West Indies, seems to have credited the story. It was, however, false, and fortunately did not reach Sampson till after the attack on San Juan.

Proceeding towards San Juan,[2] on the 11th, when

[1] Reports, 460.

[2] J. R. Spears, *Scribner's*, xxiv. 145 ff.

fifty miles from his destination, Admiral Sampson temporarily shifted his flag to the *Iowa*. Early on the 12th the lights of the city came into sight, and the American crews were called. The fleet approached warily, expecting at each moment to see Cervera's ships putting to sea. The *Detroit* led 1000 yards in advance of the flagship; then, in line ahead, at intervals of two cables, came the *Iowa*, *Indiana*, *New York*, *Amphitrite* and *Terror*. The *Wompatuck*, 500 yards off on the flagship's starboard bow, towed a boat which was to be anchored as soon as the water shoaled to ten fathoms, as a mark to the fleet. The *Porter* was stationed close under the *Iowa's* lee, with orders to cross the harbour mouth as soon as the battle began, take station close in under the bluffs to the east of the Morro, and there lie in wait for, and torpedo, any Spanish vessel that attempted to leave the harbour. It was supposed that no guns would bear upon her in her position, but here a mistake was made. No sooner had she taken up her station than a furious fire was opened upon her. Last in the order of battle came the *Montgomery*, stationed on the *Terror's* starboard quarter, with orders, like the *Detroit*, to be on the watch for torpedo boats.

At 5 a.m. general quarters were sounded, and a little later each ship hoisted three United States ensigns. At 5.17 Admiral Sampson, standing beside the conning-tower, gave the order for the first shot to be fired by a 6-pounder from the *Iowa*, and an instant later the 12-inch turret guns of the big battleship took up the battle. Simultaneously the *Detroit* opened with her 5-inch quick-firers ahead of the *Iowa*, and

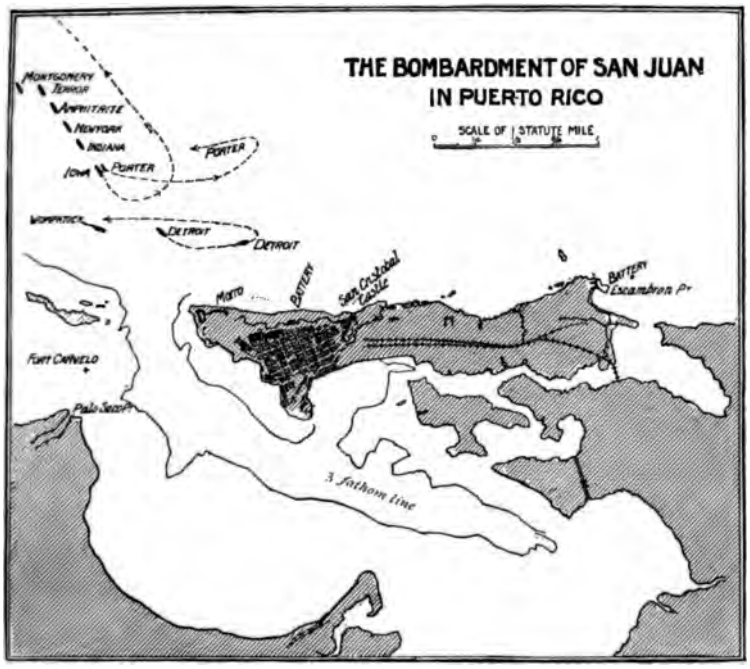
the *Indiana* with all her battery astern. For eight minutes the ships fired without any reply from the Spaniards; then the Morro spoke, and from the Tierra Gate a battery opened on the *Porter*. The torpedo boat withdrew from her station, which was far too hot for an unarmoured vessel of her type.

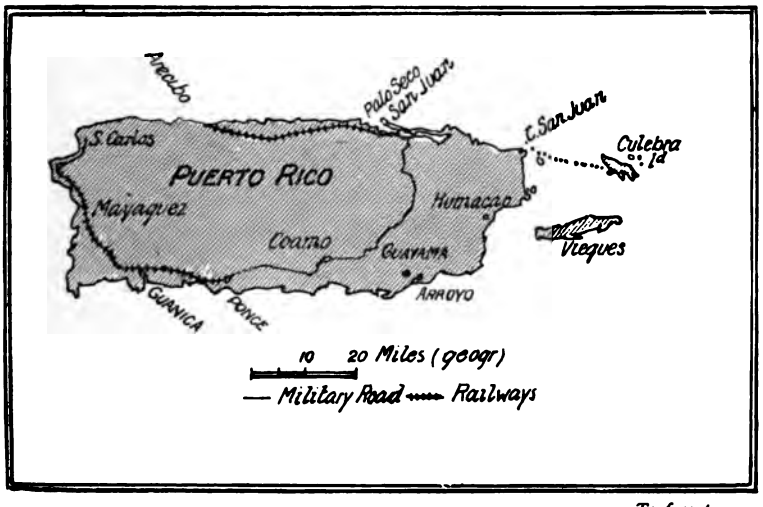
It is not quite certain what guns were mounted in the Spanish defences. Reports before the war speak of seventeen 6-inch breech-loaders and ten 9·4-inch howitzers, a very formidable battery. Probably, however, all these weapons were not in place on May 12, though undoubtedly some heavy guns were in position.[1] The Spaniards used several smooth-bore weapons in addition. Admiral Sampson's ships moved very slowly in line ahead from N.N.E. to S.S.W. at twenty-five revolutions, firing as they passed, and when about 1250 yards from the Morro Point, turned in succession and retraced their course. At 6.10 a.m. the last round was fired by the *Terror*, and the signal was made from the flagship "Use only large guns," as the smoke from the smaller weapons blanketed the fire. On the whole the American shooting was poor. "The aim of the big guns," says Mr. J. R. Spears, a correspondent with the fleet,[2] "was particularly bad, for many shots intended for

[1] Jacobsen, ii. 27, after the bombardment, gives the following guns in place :—

	6-inch B.L.	9·4-inch Howitzers
Morro . . .	5	2
Cristobal Castle .	2	3
To rear of Castle .	3	0
Princesa Battery .	4	2
Escambron Battery .	0	3

[2] *Scribner*, xxiv. 144 ff.





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Puerto Rico.

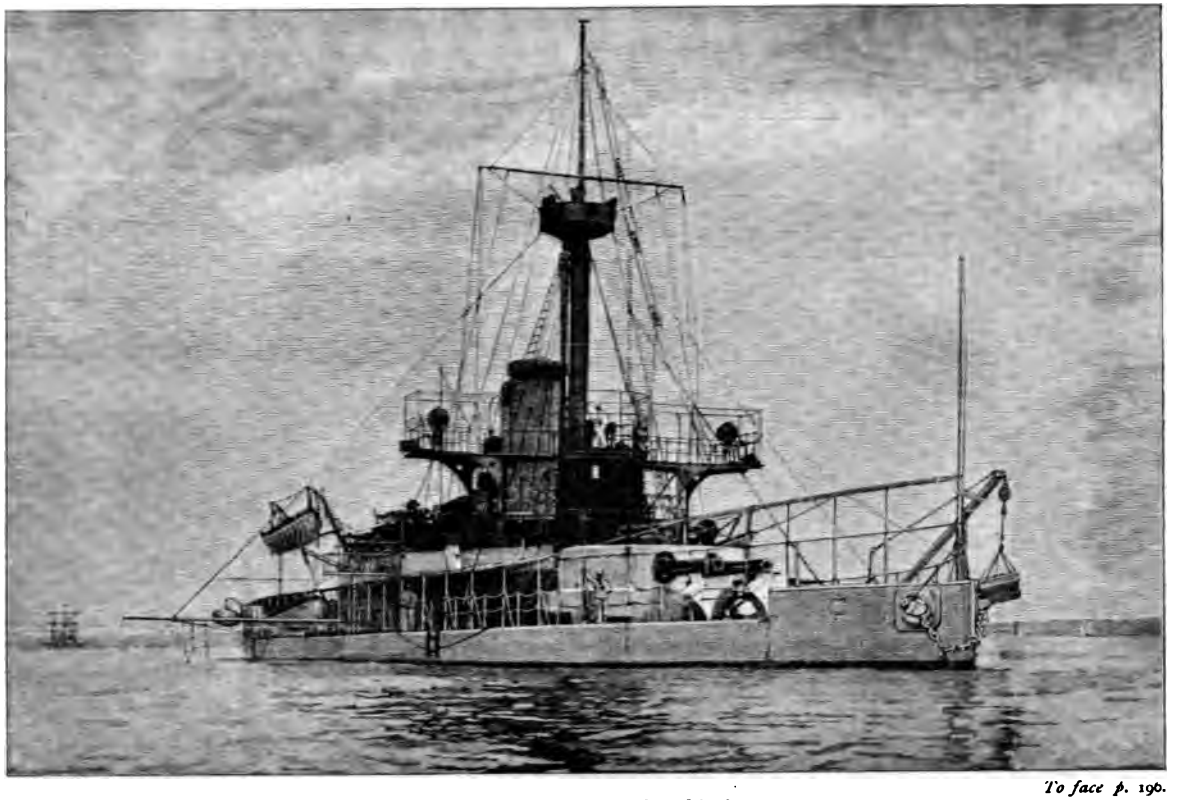
the Morro, built on a hill sixty feet above the sea, really splashed in the water at the foot of the bluff." The range-finders gave the distance correctly, but proper allowance was not made for the height of the fort. There was also a heavy swell, whilst the dense smoke from the powder fired by the ships and forts hung on the water, and rendered rapid fire impossible. "At times it was impossible to see even the outlines of the shore," says Mr. Goode. "Accurate aim was almost out of the question, and the keeping of distances between ships became a matter of great difficulty, hence made collisions hard to avoid." The quick-firers and smaller guns made much better practice than the heavy guns, the *Detroit's* 5-inch weapons effecting many good hits. The Spanish shooting was erratic in the extreme. The *Montgomery* fired with some effect, moral if not material, at the unarmed Fort Canuelo, which stands on a sand-bank to the west of the harbour.

After a respite the fleet turned in once more, and at 6.35 the *Iowa* opened again. This time the heavy guns shot better, and great clouds of dust and smoke went up from the Morro walls, and from the part of the city of San Juan which lies behind it. At 7.12 the *Amphitrite's* after turret was disabled. At 8.15 the *Terror*, as before, fired the last shot and the ships drew off. The *Porter*, *Montgomery*, and *Detroit* excited great and justly-merited enthusiasm by the splendid manner in which, though they were wholly unarmoured, they steamed to and fro, and kept their predetermined stations within easy reach of the Spanish guns. The *Porter* especially for two and a

half hours moved slowly backwards and forwards close to the Spanish works.

The loss of the American fleet was very small. The *New York* was only struck once by a 6-inch shell which cut off the top of the after stanchion of the superstructure deck, and burst near the port waist 8-inch gun, killing one and wounding four of the crew, who had no other protection than was afforded by a shield. The *Iowa* was struck by a shell eight or six inches in calibre on the skid-frames abreast the after port 8-inch turret, and three men were wounded, one severely. The second whaleboat was knocked to splinters and set on fire. Fragments from this shell only just missed Admiral Sampson, Captain Evans, and Lieutenant-Commander Rodgers, who were standing outside the conning-tower. The *Terror's* pneumatic handling gear worked well, but the *Amphitrite's* forward turret broke down through the bursting of the exhaust pipe in the hydraulic system. The heat in her turrets was so suffocating that one gunner's mate died, and it was excessively difficult to work the guns. The *Indiana*, *Detroit*, and *Porter* were not hit.

In San Juan two or three guns were dismounted; several houses were damaged, and eight men were killed and 20 wounded according to Spanish reports. Few of the American shells exploded. Admiral Sampson had no object except to discover Cervera; to look into the harbour he had to pass close to the entrance, and for the protection of his ships whilst doing so, opened fire. He did not attempt to silence or destroy the works, in obedience to the orders of the Navy Department, not to



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The U.S. Monitor *Amphitrite.*

risk crippling his ships;[1] but a good many American officers were of opinion, probably wrongly, that there would have been no difficulty in reducing the town. The affair was really nothing more than a reconnaissance, and therefore it is useless to moralise upon its results or want of results. Yet the retreat of the fleet conveyed to the Spaniards the impression that they had defeated Admiral Sampson and his ships, and they complained at the same time that the town had been bombarded without notice. This, however, was due to accident, not design—to the swell and smoke, which made the American shooting bad.

Admiral Sampson's despatches explain clearly his retreat. "It was soon seen," he says, "that Admiral Cervera's squadron was not in the port. It was clear to my own mind that the squadron would not have had any great difficulty in forcing the surrender of the place; but the fact that we should be held several days in completing arrangements for holding it; that part of our force would have to be left to await the arrival of troops to garrison it; that the movements of the Spanish squadron, our main objective, were still unknown; that the Flying Squadron was still north and not in a position to render any aid; that Havana, Cervera's natural objective, was thus open to entry by such a force as his, whilst we were a thousand miles distant, made an immediate movement towards Havana imperative." The arguments used by the Admiral are convincing, and no

[1] Reports, 366. A further order, however, had given him full liberty of action. But no judicious commander would have taken any risks at this moment.

Spaniards on the Venezuelan coast; and finally, that the Flying Squadron was *en route* for Key West.

Cervera's squadron might be steering for any one of the following points:—

Santiago, from Curaçao . . .	about 600 miles.
Cienfuegos	„ 900 „
Havana, by Bahama Channel . .	„ 1150 „
„ „ Yucatan „ . .	„ 1300 „
San Juan	„ 460 „
N. American coast, *viâ* Mona Passage	„ 1700 „
Tampa and Key West . . .	„ 1450 „

By Sampson's information, 6 p.m. of the 15th was the hour of Cervera's start from Curaçao. It was probable that there would be some days' delay on the Venezuelan coast to obtain coal, so that it was almost impossible for Cervera to move on Havana with success by either route. The Bahama Channel would be held by Sampson's fleet; the Yucatan Channel would be threatened by Schley at Key West. San Juan was ruled out, as Cervera would have steered straight for it from Martinique had it been his destination, instead of going to Curaçao, whilst the possibility of finding Sampson off the port would be a fresh deterrent.[1] Operations against the northern coast-line of the United States were, for the same reason, unlikely to be the plan of action; still less operations against Tampa and the gathering fleet of transports, in the face of Schley's Flying Squadron. Santiago and Cienfuegos alone remained, and of these two all probabilities pointed to the selection of the second. The *Marblehead*, *Eagle*,

[1] Yet Sampson seems himself to have expected the Spaniards even now to steer for either San Juan or Santiago. He had not fully appreciated the deterrent effect of his fleet, in regard to the former place.

and *Nashville*, blockading that port, were therefore in the most imminent danger. Sampson directed that they should be informed of the probability of Cervera's immediate appearance, which was accomplished by means of the *Hornet*. He issued orders to the *Yale* to support the *St. Paul* scouting in the Windward Passage, and to the *Harvard* to cruise in the Mona Passage.

On the 17th Sampson received by the torpedo boat *Dupont* a despatch with fresh information from the Navy Department: "It has just heard that the Spanish fleet have munitions of war essential to the defence of Havana, and that the order of the Spanish fleet is imperative to reach Havana or Cienfuegos, a railroad port connected with Havana, at all hazards; and as Cienfuegos appears to be the only port fulfilling the conditions, Schley with the *Brooklyn*, *Massachusetts*, and *Texas*, to arrive at Key West on the morning of the 18th, will be sent to Cienfuegos as soon as possible." As a matter of fact this information was not correct. Sampson was instructed to send his best battleship to Schley's support, and to place a fast cruiser off Cienfuegos instead of the *Nashville* and *Marblehead*. The *Castine* (15·4 knots) was the only vessel available, but she was not able to leave till the 20th.

Nothing more had been heard of the second Spanish squadron in the West Indies, and neither Sampson nor the Navy Department appear to have attached the slightest importance to the reports of its arrival. The *New York* with the Admiral had already parted company with the slower vessels of the squadron, and was steaming at full speed to Key West, where she arrived on the

afternoon of the 18th. The *Iowa* came in some hours later, the remainder of the squadron on the 19th. There was no further news of the Spanish fleet.

It next remains to follow out in detail the steps taken by the American Navy Department to watch Cervera, and get touch with his squadron, and the movements of the Spanish fleet.

On April 29 definite news of Cervera's departure from the Cape Verdes reached Washington. Orders were at once issued to the *St. Louis* and *Harvard*, both at New York, and capable of steaming twenty to twenty-one knots at sea with ease, to proceed to the West Indies. The *Harvard* was directed to steam at fourteen knots from New York to the westward of Martinique, when she was to patrol the area of water between 14° 25′ and 15° 38′ N. latitude, and 59° 30′ and 59° 40′ W. longitude. The distance which she had to cover from New York to the furthest extremity of her patrol area was about 1700 miles, so that at fourteen knots she would require a little over five days to reach her station. This would bring her there on May 4. Cervera to the same point would have to cover 2000 miles, and thus, even if he proceeded at seventeen knots, could not pass before she had arrived. In case the *Harvard* obtained no information by May 10, she was to go to Martinique for intelligence, and if she heard that the Spaniards were elsewhere, to proceed in search of them. In case she obtained touch of the Spaniards she was to telegraph to Key West and Washington, and then either to follow Cervera, maintaining touch, or to proceed straight to Sampson and inform him. From the time when the Spaniards appeared in

the West Indies she was to be under his orders. In case, however, nothing was heard of Cervera the *Harvard* was to telegraph to Washington, wait twenty-four hours for a reply, and if none were received, to steam to Hampton Roads.

Precisely similar orders were issued to the *St. Louis*, except that she was to patrol an area west of Guadeloupe, to the north of the *Harvard's* area, and bounded by latitude 16° 55′ and 15° 38′ N., and longitude 59° 40′ and 59° 50′ W. If she saw nothing she was to proceed to Guadeloupe. A line of about 150 miles in length would thus be watched, covering the sector through which would lie Cervera's probable approach to either Cuba or Puerto Rico. Yet the line of patrol did not run far enough to the south, since the actual course of the Spaniards to Martinique fell just outside it.

It remained to prolong the line of patrol to the north. The *Yale*, of the same armed liner type as the *Harvard* and *St. Louis*, was ready for work on May 1, and that day received orders to cruise round the island of Puerto Rico until the evening of May 13, when she was to proceed to St. Thomas, or in any other direction where news could probably be obtained of the Spanish squadron. She was to reconnoitre San Juan, if prudent. In other particulars the tenor of her orders was identical with that of those given to the *Harvard* and *St. Louis*. She left New York on May 2, and was on her station on the 6th. On the 8th she captured a Spanish vessel with coal, bound for San Juan; on the 9th she reconnoitred the port, and discovered two gunboats and an armed liner in it. The latter steamed out and fired a few shots at the *Yale*, and

the American cruiser, carrying nothing heavier than the 6-pounder gun, was obliged to retire. On the next day the forts fired at her ineffectually; on the 12th she communicated with the *St. Louis*, and on the 13th proceeded to St. Thomas, and telegraphed that nothing had been heard of the Spanish fleet.

The *St. Louis* discovered nothing, and after touching at Guadeloupe was apparently ordered to join Admiral Sampson. This she did on May 15.

On May 11, at 9.30 a.m., the *Harvard*, Captain C. S. Cotton, arrived at St. Pierre, Martinique, and communicated with Washington.[1] In the evening news reached Captain Cotton that a Spanish destroyer had arrived at Fort de France at 4 p.m., and was to leave at 7 p.m. This was the first indication of Cervera's presence in the West Indies. At the same time Captain Cotton, in accordance with the well-known twenty-four hours' law, was instructed by the French authorities that he could not leave for sea till 7 p.m. on the 12th. He sent an officer to Fort de France, who reported a second destroyer and five large steamers hull down in the offing. In the harbour there was the Spanish hospital ship ALICANTE, with troops and stores. On the 11th the presence of the destroyer, and on the 12th the presence of the five[2] other Spanish ships, was telegraphed to Washington and Key West by Captain Cotton. It has been stated that his despatches were wilfully delayed by the French authori-

[1] Reports, 408.

[2] What the fifth ship was remains uncertain. She did not go to Santiago. Possibly she was a collier; possibly she did not belong to the squadron.

ties; this story he absolutely contradicts in his report. He had little doubt that the Spanish squadron was waiting to catch him, and so, afraid of being forced out by the French authorities owing to Spanish protests—though there was really no ground for this fear, as the French attitude was friendly and correct—he asked for seven days' delay to allow him to repair boilers and engines. This request was granted, and Captain Cotton was informed that he must give twenty-four hours' notice before he put to sea.

On the nights of the 11-12th and 12-13th rocket signals were made by some one on shore, and answered from the sea by coloured lights. They were supposed by Captain Cotton to have been signals exchanged between Cervera and some Spanish sympathiser ashore, but this does not seem to have been the real case, since on the afternoon of the 12th the Spanish squadron had left for Curaçao. The signals, therefore, remain unexplained. On the 14th Captain Cotton telegraphed that the destroyer TERROR remained at Martinique disabled, but that nothing more could be ascertained of the other Spanish ships. He did not know of their departure, but seems to have supposed that they were still blockading him.

On receipt of Captain Cotton's telegram, the Navy Department ordered the Flying Squadron, on May 13, to proceed to Charleston, leaving the *New Orleans* in Hampton Roads. Key West was instructed to have the monitors *Puritan* and *Miantonomoh*, both of which had been lying there for some weeks, ready for service. The *St. Paul* was directed to proceed with all possible despatch to cruise between Hayti and Morant Point in

Jamaica. If she sighted Cervera's fleet she was to telegraph news, and to follow the Spaniards. The *Minneapolis*, with similar orders, was to watch the line of approach along the north of Hayti, cruising between Monte Christi and the Caicos Bank.

On the 14th the American Consul at Willemstad telegraphed the arrival of the Spanish squadron at Curaçao. Fresh orders were at once issued. The Flying Squadron was to proceed from Charleston to Key West with all possible despatch. The *St. Paul*, which had not yet left Hampton Roads, was directed to steam at full speed to Key West, to connect the look-out ships in the Yucatan Channel with the base. The *Cincinnati* and *Vesuvius* were sent to Cape San Antonio, and stationed in the Channel as look-outs; all the blockading ships off Cienfuegos were to be recalled, except the smallest, which could be sacrificed if the Spaniards appeared, whilst if they did not appear, she would serve to maintain a legal blockade; all the blockaders on the north coast of Cuba were warned, but not removed, and the outlying scouts were ordered in to Key West. The *Minneapolis* had sailed for her station, and fresh orders could not be issued to her.

On the 15th there were yet fresh orders, based on information received from London to the effect that coal was being sent from England to the Venezuelan coast. It was now decided to collect in Venezuelan waters a number of fast ships to search these waters thoroughly. Accordingly steps were taken to intercept the *Minneapolis* and send her to the Gulf of Venezuela, where, under the lee of the Paraguana Peninsula, coaling could easily be

accomplished. The *Harvard* and *St. Paul* were also to proceed thither. These orders were, however, revoked by Admiral Sampson.

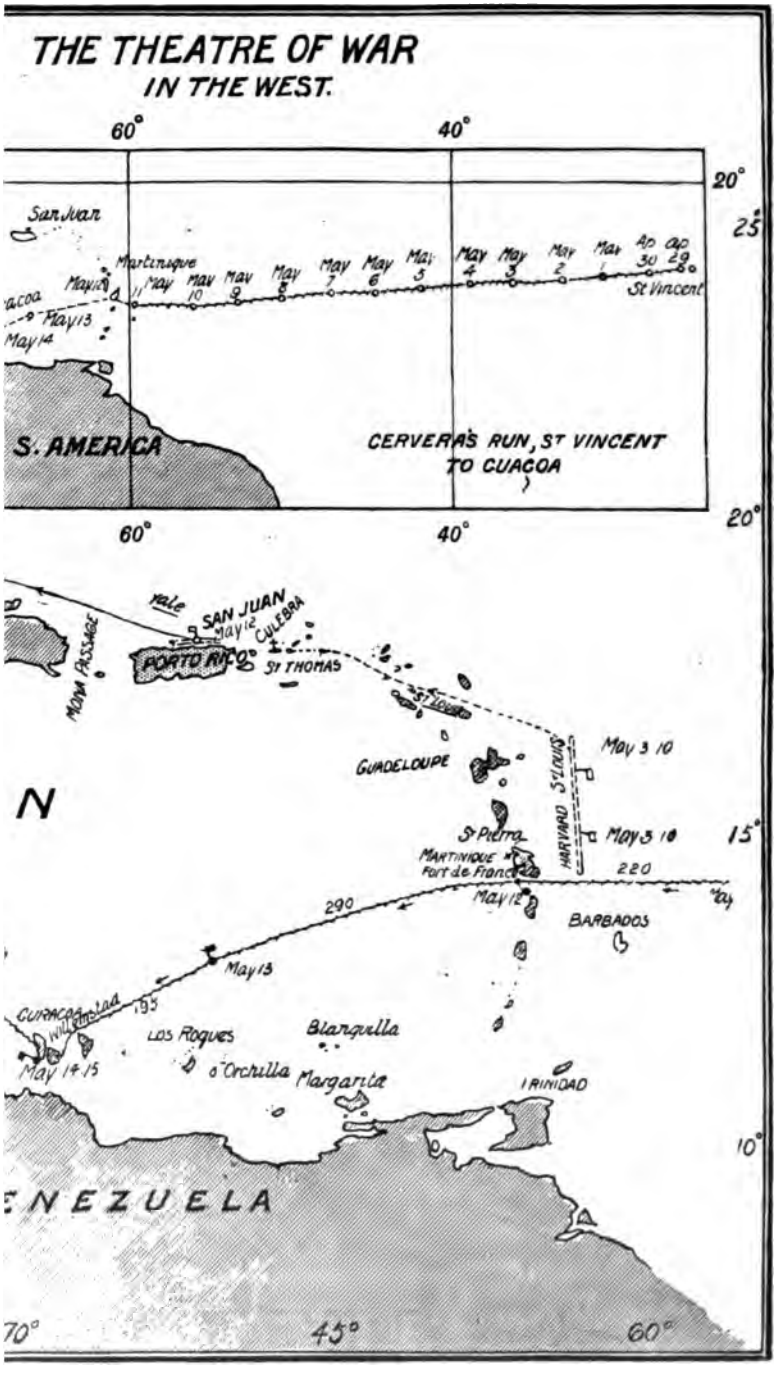
The opinion of the Navy Department was that Cervera, when he had coaled, would strike for Santiago or Cienfuegos, not for Havana, as when once he entered the Gulf of Mexico he would have Schley's squadron, now ordered to proceed to Cienfuegos as soon as it had finished coaling, behind him, and Sampson's squadron, nearing Key West, in front. This opinion was communicated to Admiral Sampson by a letter dated May 16, and was correct as events proved.

Meanwhile Cervera left Porto Grande in the Cape Verdes at midnight of April 28-29, with the TERESA, OQUENDO, VIZCAYA, COLON, FUROR, TERROR, PLUTON, ALICANTE, and possibly another vessel. The only ship's log[1] which remains informs us that between April 16 and 28 the COLON, and therefore presumably the other ships, had been steadily coaling. The average tonnage shipped during a four-hour watch appears to have been twenty-five tons, which is not a good figure for a large modern cruiser with a crew of over 500 men, and illustrates the want of smartness, or perhaps of proper appliances, in the Spanish squadron. On the 29th the squadron stopped and manœuvred, only covering thirty-three miles. The run of the squadron was as follows for each day, up to May 11:—

[1] The COLON'S log, Reports, pp. 429 ff. Spanish sea days are reckoned from 12 (midday) of, say, the 29th to 12 (midday) of the 30th. This day would be the 30th.

	Miles.		Miles.
April 28–9	33	May 5–6	170
,, 29–30	90	,, 6–7	170
April 30–May 1	180	,, 7–8	180
May 1–2	152	,, 8–9	170
,, 2–3	182	,, 9–10	160
,, 3–4	175	,, 10–11	218
,, 4–5	170	,, 11–12	90

The highest speed recorded is ten knots; the average was six or seven. There was great trouble with the destroyers, which had to be towed, with the usual consequence that the tow-ropes were constantly breaking. The TERESA had the PLUTON in charge; the OQUENDO the TERROR, and the COLON the FUROR. The VIZCAYA, probably because of her foulness, was left unhampered. Signal was made to exercise frequently at general quarters, day and night, but there is no record in the log of any kind of target practice, except on the part of the TERROR. The COLON's starboard air-pump gave trouble on the first day out. On the evening of the 10th all the vessels cleared for action, and the speed was increased to ten knots, as the zone of danger was entered. The destroyer FUROR was sent on in advance to Fort de France, Martinique, probably to telegraph and to ascertain whether the fleet would be permitted to coal. During the night of the 11th and early morning of the 12th the squadron was standing off and on, with Martinique in the distance; the TERROR was sent in for repairs, and the ALICANTE left behind. The object of this delay, when every moment was precious, was probably to give time for the arrival of the colliers *Roath*, *Restormel*, and *Twickenham*, and to obtain from Madrid


THE THEATRE OF WAR
IN THE WEST.
60°
40°
20°
25°
San Juan
Martinique
May 11
May 10
May 9
May 8
May 7
May 6
May 5
May 4
May 3
May 2
May 1
Apr 30
Apr 29
St Vincent
May 13
May 14
S. AMERICA
CERVERA'S RUN, ST VINCENT TO CUACOA
60°
40°
20°
SAN JUAN
May 12
CULEBRA
PORTO RICO
St THOMAS
MONA PASSAGE
GUADELOUPE
May 3 10
St Pierre
Martinique
Fort de France
May 3 10
15°
220
290
May 12
BARBADOS
May 13
Curaçao
195
Los Roques
Blanquilla
May 14 15
Orchilla
Margarita
TRINIDAD
10°
NEZUELA
70°
45°
60°

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and Havana exact particulars of Admiral Sampson's whereabouts. On May 10 American newspapers had published the fact that he was off Hayti moving eastwards, which was a clear indication that he was steering for San Juan.

For Cervera to divulge his whereabouts by thus putting in to Martinique was a great mistake. He should certainly have passed the island at night, or have only communicated with his Consul by a destroyer, keeping the rest of his fleet out of sight. Secrecy was all-important in the game which he was playing; and the mystification and uncertainty caused by the low speed at which he had crossed the Atlantic, were dissipated by his "location" at Martinique. A study of the *Alabama's* tactics would have helped him. Captain Semmes managed secretly to coal and refit on the Yucatan coast, and what he did Cervera could have done.[1] Probably, however, the real blame for all these mistakes rests with the Spanish Government, which had failed to make the necessary preparations.

The French authorities appear to have refused to permit the Spaniards to coal, and soon after 8 a.m. of the 12th the squadron resumed its voyage, steering west-south-west for Curaçao. On the 13th the speed was raised from ten to thirteen knots, and a total run of 290 miles was covered. On the 14th the run was 195 miles; at 6.30 a.m. Curaçao came into sight, whereupon the TERESA and VIZCAYA went into the harbour and the COLON, OQUENDO, and the destroyers remained outside.

Curaçao was selected by Cervera as a central position,

[1] Semmes, *My Adventures Afloat*, 538.

near the southern coast of Cuba, but well away from the American scouts. Here, in touch with Madrid by telegraph, he could ascertain where Sampson was. Here, too, he hoped to pick up his colliers. Of these the *Roath* was in San Juan; the *Twickenham*, with 2800 tons of coal, had arrived at Martinique some days after his departure, but was not permitted to coal the TERROR; the *Restormel* was toiling after him, but an unfortunate breakdown in her engines delayed her.

Entering Willemstad harbour, Cervera requested leave to coal and provision his ships, whose fuel was now very low indeed. Immediately on his arrival [14th, 8 a.m.] the American Consul telegraphed the news to Washington. Cervera was not allowed to coal more than two of his ships and the PLUTON, and all that he could procure was 500 tons of very poor stuff. This was shipped in the TERESA and VIZCAYA, and at the same time a quantity of provisions and fresh meat was purchased. Meanwhile the VIZCAYA repaired her engines, the OQUENDO and COLON lay-to outside the harbour, and the destroyer FUROR received thirty-four and a half tons of fuel by boat from the latter. On the 15th Cervera heard by telegraph of the bombardment of San Juan, and at once left, at 5.15 p.m., giving out San Juan as his destination, and steering eastwards, but soon changed his course. There can be no doubt that he had decided to use the chance which Sampson's absence off Puerto Rico gave him, and to make a dash for one of the Cuban ports. It is said by Spanish officers that he had not enough coal to take him the 900 miles to Cienfuegos, and that this circumstance compelled him to steer for

Santiago, which was only 600 miles away. The *Restormel*, whose arrival might have saved everything, did not reach Curaçao till the 20th, five days after the Spaniards' departure.

Cervera's want of coal was a very fortunate accident for the American Government. Had the *Restormel* joined the Spanish squadron the latter could easily have filled its bunkers in one of the unfrequented harbours of the Venezuelan coast. So late as the 16th Sampson, with the ships returning from Puerto Rico, had only got so far as Cape Haytien, 650 miles from Havana. Unless he left the monitors behind him he could not steam more than seven or eight knots. Cervera should have been able to do thirteen, which would have carried him to Cienfuegos in three days. There he could have disembarked his war stores—if he had any on board [1]—for Marshal Blanco's army. He would have had two more days to coal and leave the port, as Schley was not off it until midnight of the 21st-22nd, and with moderate luck he might have got away east to San Juan and re-coaled there, thus indefinitely protracting the game of hide-and-seek and seriously embarrassing the American Navy Department. His squadron was so defective in fighting strength that it had no chance of success in a pitched engagement with the main body of the American fleet. Its only advantage lay in its pace, but of this no use was made. We now know that the speed of one of Cervera's cruisers was very much lower than any one supposed, whilst the other three must have been in some degree hampered by poor coal, bad management of the

[1] As a matter of fact he had not.

boilers and engines, and the ever-growing foulness of the ships' hulls. The hulls of the VIZCAYA and TERESA when at Curaçao were noticed to be covered with marine growths.

Not till the 18th was the news that Santiago was the destination of the squadron communicated by signal from the flagship to the other vessels. The speed maintained was low, the runs being 135, 195, 162 and 145 miles. On the evening of the 18th the squadron prepared for action, but no enemy appeared during the night. When day broke the mountains of Cuba, in sight of which the squadron was doomed to perish, were in full view. At 6 a.m. of the 19th the flagship led the way up the narrow entrance to Santiago, and the squadron was two hours later at anchor in the harbour, having accomplished with success the long and perilous voyage from the Cape Verdes in the face of a greatly superior enemy. It just missed by only one hour the *St. Louis*, which had been cable-cutting off Santiago on the 18th and night of the 18-19th; it was two days ahead of the *St. Paul*.

On the 13th Schley had moved out from Hampton Roads with the *Brooklyn*, *Massachusetts*, *Texas*, armed yacht *Scorpion*, and collier *Sterling*. The latter was left behind at once and could not rejoin the squadron. On the 14th the *Minneapolis*, and on the 15th the *St. Paul*, followed him to sea, to scout independently. On the 17th the *New Orleans* weighed anchor and proceeded south to Key West. Off Charleston Bar on the 15th Schley lay-to, and received the order from Washington to proceed to Key West, where he arrived on the 18th.

The American plan was to cover the western

approach to Havana with his squadron, whilst Sampson took care of the eastern approach. The latter, upon his arrival at Key West on the 18th, gave Schley the following orders, under which he sailed for Cienfuegos by way of the Yucatan Channel on the 19th, at 9 a.m.: "It is unnecessary for me to say that you should establish a blockade at Cienfuegos with the least possible delay, and that it should be maintained as close as possible. Should the Spanish vessels show themselves in that vicinity, and, finding you on the look-out, attempt to come round the island, either east or west, please send me notice by the best vessel you have for that purpose as to their direction, that I may be prepared for them at Havana." In conformity with orders from the Navy Department on the 20th Sampson sent off the *Iowa*, though her coaling had not been completed, torpedo boat *Dupont*, gunboat *Castine*, and collier *Merrimac*, to follow and join Schley.

On this same day he wrote a private letter to Schley,[1] covering a telegram from the Navy Department of May 19, in which it was suggested that Cervera was at Santiago, and that this place should be blockaded. Sampson's letter said that he had duly considered this course and resolved to make no change; that even if the Spaniards had put into Santiago, and he gave reasons for doubting it, they would have to run to Cienfuegos or Havana to land the munitions of war for the troops in the west of Cuba, and might be captured or destroyed by the American squadron off these places; that finally, "if later it should develop that these vessels are at Santiago, we could then

[1] Does not appear in the Reports: published in *New York Sun*, February 21, 1899. Reached Schley May 23.

assemble off that port the ships best suited for the purpose and completely blockade it. Until, then, we receive more positive information we shall continue to hold Havana and Cienfuegos." This letter is of great importance from its influence upon the subsequent action of Schley. It will be observed that it contemplated the blockade of the Spanish fleet as soon as the latter was definitely located. It was possible that the Spaniards had been in Santiago and had again put to sea, in which case to move Schley's fleet prematurely from Cienfuegos would only be to open this port to the wily Cervera. But Schley evidently construed the letter as deciding for a blockade of Cienfuegos under all circumstances.

The following was the "state" of the American fleet in southern waters at this time (only the most important fighting ships can be given):—

[ac. = armoured cruiser. bs. = battleship. m. = monitor. cr. = cruiser. gb. = gunboat. tb. = torpedo boat. co. = collier. † in need of coal. * in need of repairs. a. = armed ship.]

ON WAY TO CIENFUEGOS.	BLOCKADE OF HAVANA.	AT KEY WEST AND TAMPA.
Brooklyn, ac.	*Puritan*, m.	†*Indiana*, bs.
Texas, bs.	*Miantonomoh*, m.	†*New York*, ac.
Massachusetts, bs.	*Dolphin*, gb.	*†*Amphitrite*, m.
Iowa, bs.	*Annapolis*, gb.	*†*Terror*, m.
Castine, gb.	*Newport*, gb.	†*Montgomery*, cr.
Dupont, tb.	*Vicksburg*, gb.	†*Marblehead*, cr.
Scorpion, a.	*Wilmington*, gb.	†*Eagle*, a.
Merrimac, co.	*Hawk*, a.	†*Detroit*, cr.
	Mangrove, a.	*Hornet*, a.
	Tecumseh, a.	*Bancroft*, gb.
	Uncas, a.	*Helena*, gb.
	Mayflower, a.	*Machias*, gb.
	Rodgers, tb.	*Nashville*, gb.
		Osceola, a.
		Suwanee, a.

AT KEY WEST AND TAMPA.

Wasp, a.
Windom, a.
Vixen, a.
Cushing, tb.
Ericsson, tb.
Morrill, tb.
* *Winslow*, tb.
Foote, tb.
† *Porter*, tb.

SCOUTING, ETC.

Cincinnati, cr. } in Yucatan Channel.
Vesuvius, gb. }
Minneapolis, cr.
Yale, a.
Harvard, a.
St. Paul, a.
St. Louis, a. Cable-cutting.

ON PASSAGE.

Oregon, bs., to Key West.
Marietta, gb., to Key West.
New Orleans, cr., to Key West.
Wompatuck, *a*.

The *Puritan* and *Miantonomoh* left Key West for Havana on the 20th. The *St. Paul* and *Yale* had been detached to scout in the Windward Passage on the 18th. Thither on the 19th the *Harvard* from Martinique and the Mona Passage, and the *Minneapolis* from St. Thomas, followed them.

On the 19th reports that Cervera had entered Santiago reached the Navy Department, apparently by secret service from Havana. The presence of the enemy on the Cuban coast made Admiral Sampson, and not unnaturally, anxious for reinforcements. He urgently requested the Navy Department to send him the fine cruiser *New Orleans*, which had as a matter of fact already left Hampton Roads for Key West. "The small auxiliaries," he telegraphed, "can blockade in the absence of [the] enemy; [but] are useless for repelling attacks of armoured cruisers. For [the] difficult task of holding

both sides of Cuba, you should put at my disposal all your fighting force." On the evening of the 20th he complained to the Department of the monitors' inefficiency. They should not be sent from the base, he concluded.

That same night he received these fresh instructions: "The report of the Spanish fleet being at Santiago de Cuba might very well be correct; so the Department strongly advises that you send immediately by the *Iowa* to Schley to proceed off Santiago de Cuba with his whole command, leaving one small vessel off Cienfuegos . . . Auxiliary No. 461 [*St. Paul*?] will proceed at once to Santiago to join Schley, who should keep up communication *viâ* Mole, Hayti, or Cape Haytien, Hayti. If the *Iowa* has gone, send order to Schley by the fastest despatch vessel."[1] Accordingly the *Marblehead*, *Vixen*, and *Eagle* left on the 21st with these orders: "Spanish squadron probably at Santiago de Cuba—four ships and three torpedo boat destroyers. If you are satisfied they are not at Cienfuegos, proceed with all despatch but cautiously to Santiago de Cuba, and if the enemy is there, blockade him in port. You will probably find it necessary to establish communication with some of the inhabitants—fishermen or others—to learn definitely that the ships are in port, it being impossible to see into it from the outside." This order, it will be noticed, was not peremptory; it gave a certain amount of latitude to Commodore Schley.[2] And as some time must necessarily have elapsed before it could reach him, it was quite

[1] Reports, 465.

[2] Especially when taken in connection with Sampson's letter of the 20th. See p. 213.

possible that in the meanwhile the bird might have flown. From Santiago to Cienfuegos is a little over 300 miles—an easy day's steam for fifteen-knot ships. This must be remembered in bare justice to Schley, as it was by no means beyond the reach of probability that the Spaniards had arrived at Santiago, left it, and reached Cienfuegos before midnight of the 21st-22nd, at which time Schley was off the latter port. Indeed, there was an *a priori* probability in favour of such a course, as at Santiago Cervera was not in communication with Havana, but was as much isolated as if he had been at San Juan. The selection by the Spaniards of Santiago can only be defended by their want of coal.

Meanwhile Schley had covered the 500 miles from Key West to Cienfuegos, at the very leisurely rate of about ten knots, with lights out and guns loaded, making a great detour off Cape San Antonio, and expecting each hour to meet Cervera. Several times during the 19th and 20th suspicious ships were sighted, and the decks were cleared for action. On the 21st at midday the course was set direct for Cienfuegos, and at midnight the squadron was off that port. During the night, whilst forty miles from the harbour, Schley thought he heard heavy firing, but no one else in the fleet observed it. At daylight of the 22nd the squadron steamed slowly in, cleared for action.

The harbour of Cienfuegos is of a type common in Cuba. There is a narrow long channel, bordered by high ground, and giving access to an extensive bay. The length of the channel is two miles and the width at the narrowest point about 400 yards. There is

a bend half-way up, and this, coupled with a strong current, renders navigation very difficult. The sheltered sheet of water inside measures about ten miles long by four wide. It is evident that there was abundant space here to contain a large fleet, whilst close reconnaissance would be necessary to determine exactly what ships were inside. The masts of vessels in the harbour could just be seen from the sea. At 8 a.m. Schley's squadron circled in front of the entrance at a distance of 4000 yards to draw the fire of the batteries, if there were any. No guns, however, were fired. At noon the *Dupont* and *Iowa* arrived, and the *Scorpion* was despatched eastwards to obtain further information from the scouts in the Windward Passage. Then the squadron steamed in once more, and circled off the entrance a second time. Schley thought he saw the masts of the Spanish squadron inside, and felt satisfied that he had at last located Cervera. But other officers could only make out one steamer and two schooners inside the bay.[1] Still the general opinion was strongly in favour of the Spaniards' presence inside. At night the big ships cruised three miles off the entrance, whilst the *Dupont* steamed close in and looked into the harbour. She reported several ships inside. Signal-fires were seen upon the hills to the west; they were lighted by the insurgents to show that they wished to communicate, but were not understood by Schley, to whom by some oversight the system used by the Cubans had not been communicated. On this day Schley sent by the *Vesuvius*

[1] How Schley's conduct struck a very enterprising and determined American officer, Captain Evans, can be read between the lines of every page in his contribution to Mr. Goode's book. Goode, 137—142.

a despatch to Sampson, stating that he was uncertain as to the presence of Cervera in the harbour, and complaining of the difficulty of coaling in the heavy swell.[1]

All the 23rd the squadron was off the harbour with engines stopped, where it was joined by the *Castine*, the collier *Merrimac*, and the armed yacht *Hawk*. The *Iowa*, *Dupont*, and *Castine* coaled from the *Merrimac*, the first-named in eight and a half hours, taking on board 255 tons, a fine performance on the open sea. At noon the *Adula*, a British steamer, was permitted to enter the port. She came from Jamaica, and her captain told Schley that cablegrams had been received in Kingston to the effect that Cervera had been in Santiago on the 19th, but had left on the 20th. The *Adula* had been in Santiago on the 18th, and during the night had seen the lights of seven vessels, which were, of course, the Spanish squadron. This confirmed Schley's own conclusion, based on inherent probability, the firing heard, which he took for salutes exchanged between Cervera and the shore, the shipping supposed to have been seen in the harbour, and the large amount of smoke which rose as if from funnels of vessels inside.

The *Hawk* had been despatched from Havana on the 21st, a short time after the *Marblehead*, which she had overtaken on the way. She brought these orders from Sampson :—" It is thought that the enclosed instructions will reach you by 2 a.m. May 23.[2] This will enable you to leave before daylight (regarded very important), so that your direction may not be noticed, and be at Santiago

[1] See plan, p. 186.

[2] She arrived on the 23rd.

a.m. May 24. It is thought that the Spanish squadron would probably be still at Santiago, as they must have some repairs to make and coal to take. The *St. Paul* and *Minneapolis* have been telegraphed to scout off Santiago, and if the Spanish squadron goes westward, one is to keep in touch and one is to go west and attempt to meet you; if the Spanish squadron goes east, one will keep in touch, and one will go into St. Nicolas Mole to telegraph me at Key West. I shall be off Cay Frances, 200 miles east of Havana. If you arrive off Santiago and no scout meets you, send a vessel to call at Nicolas Mole, and get information to be left there by scout as to direction taken by Spanish, in case they may have left Santiago de Cuba. The *Yale* has been ordered to cruise in the Bahama Channel till May 24. It is thought possible that the Spanish, hearing of your departure from Cienfuegos, may attempt to go there. If this word does not reach you before daylight, it is suggested to mask your real direction as much as possible. Follow the Spanish squadron whichever direction they take."

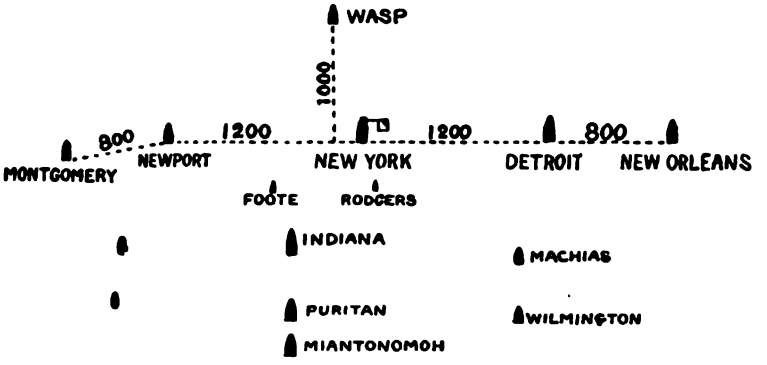
It would seem that these orders left Schley no discretion, unlike those sent by the *Marblehead*, which arrived on the 24th. There can, therefore, be no disputing the fact that he was bound to move to Santiago and blockade that port. He was not in touch with the telegraph, and could not know what information Sampson had to work upon—presumably the reports of the cruiser captains, secret intelligence from Havana, and news from Madrid, where Cervera's arrival at Santiago had been published on the 20th. But instead of acting on the *Hawk's* instructions he followed the earlier orders of the

Marblehead; announced to Sampson that he was by no means satisfied the Spaniards were not at Cienfuegos; recounted the reasons for his belief; and suggested that going to Santiago would be "chasing up a probability," as it was quite likely that the story of Cervera's presence there was only a Spanish ruse. To the *New York Sun* correspondent he said positively, "he was sure Cervera was inside: he had seen the ships himself." And this in spite of the fact that Commander McCalla of the *Marblehead* had during that afternoon communicated with the insurgents ashore, and learnt from them that there were no Spanish ships in the harbour. Finally, at 6 p.m. of the 24th, Schley decided to withdraw and move eastwards, leaving the *Castine* (in trouble with her machinery) to watch Cienfuegos, and the *Dupont* to return to Key West. The squadron now comprised the *Iowa*, *Texas*, *Massachusetts*, *Brooklyn* (flag), *Marblehead*, *Vixen*, *Hawk*, *Eagle*, and *Merrimac*. A speed of nine knots was maintained at first, and no lights were shown. But encountering very heavy weather the ships had to slow down, first for the *Eagle* and then for the *Marblehead*. The *Eagle's* coal-supply was falling dangerously low, and she was therefore detached and ordered to go to Jamaica, obtain fuel, and return to Key West. It was not till the 26th that Santiago was reached. Squalls of rain hid the land from the ships till after noon. In the evening the *Minneapolis*, *Yale*, and *St. Paul* came up, but none of the three had seen anything of the Spaniards.

Meantime Sampson had left Key West in the *New York* during the night of the 20th-21st, and arrived on the blockade next day, after issuing orders to the

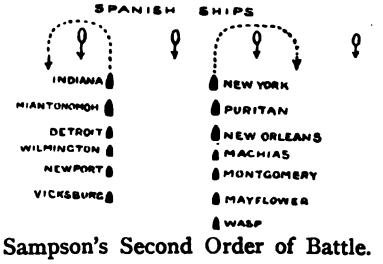
Yale at Cape Haytien to cruise down the Bahama Channel, and then join Schley off Santiago on the 24th. On the 21st the *Puritan* and *Miantonomoh* were ordered to be off Cay Frances, where the flagship, *Indiana*, *Newport*, *Vicksburg*, *Mayflower*, *Machias*, *Rodgers*, *Foote*, and *Montgomery* were to join them, to hold the Bahama Channel. Thither the *New Orleans*, which had now arrived at Key West, wanting coal, was to follow when ready. Sampson's position was somewhat anxious, as he wished to be certain of intercepting the Spaniards, in case they moved towards Havana from the east, whilst at the same time keeping within reach of Key West and his weak blockading force, in case they had slipped past Schley, and were attempting to move up from the west. He had information that on May 21 the Spanish cruisers, and at least one destroyer, were in Santiago harbour. The Navy Department now anticipated an eastward move thence on the part of the Spaniards to San Juan.

On his cruise in the Bahama Channel, Admiral Sampson gave out three orders of battle, which have considerable tactical interest. The first was as follows :— The American ships were to form in one column at intervals of two cables, heading eastward, the enemy being supposed to be heading to the west. The *New York*, *Indiana*, *Puritan*, and *Miantonomoh* were to lead, and behind them were to come the cruisers in order of their strength. After passing the Spanish rear, the four armour-clads were to turn in succession towards the enemy and double on his rear, whilst his van was still engaged by the cruisers. The torpedo boats *Foote* and



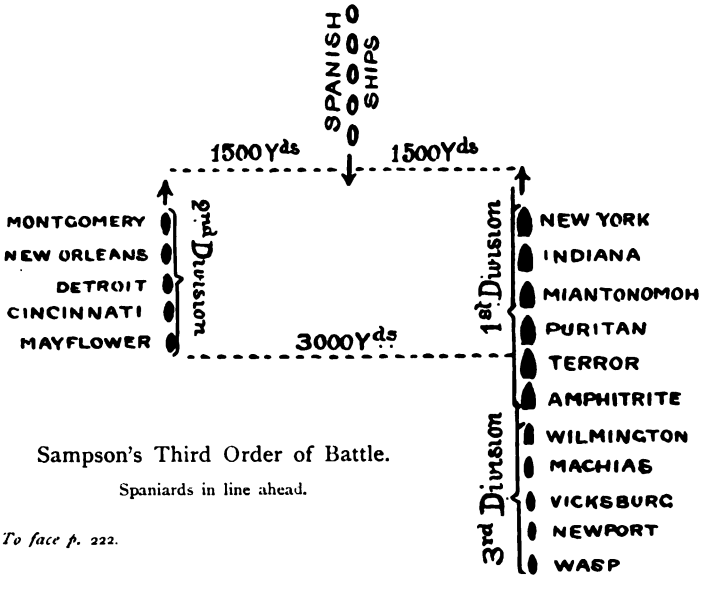
Sampson's Order of Cruising, May 23.

Figures give distance in yards.



Sampson's Second Order of Battle.

Spaniards in line abreast.



Sampson's Third Order of Battle.

Spaniards in line ahead.

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Rodgers were to lie under the lee of the cruisers, and were to take advantage of any opportunity of torpedoing the enemy. Fire was to be concentrated amidships just above the water-line on the VIZCAYA, TERESA, and OQUENDO. In the second order, which was to be employed if the Spaniards were in line abreast, there were to be two columns, as follows:—

PORT.	STARBOARD.
Indiana	*New York*
Miantonomoh	*Puritan*
Detroit	*New Orleans*
Wilmington	*Machias*
Newport	*Montgomery*
Vicksburg	*Mayflower*
	Wasp

which were to pass through the second and third intervals from the left of the Spanish line, and then to turn outwards, doubling on the second and fourth ships in the Spanish line. In the third order of battle there were to be two columns 3000 yards apart:—

PORT.			STARBOARD.
Montgomery	Division II.	Division I.	*New York*
New Orleans[1]			*Indiana*
Detroit			*Miantonomoh*
Cincinnati[1]			*Puritan*
Mayflower			*Terror*
			Amphitrite[1]
		Division III.	*Wilmington*
			Machias
			Vicksburg
			Newport
			Wasp

And the Spaniards, in line ahead, were to be caught between the two. The distinctive feature is, that the

[1] Joined on the 23rd or 24th.

fast ships were separated, that cruisers and gunboats were placed in the line of battle and used to supplement the weakness of the monitors in secondary armament with their numerous small guns. The most powerful ships headed the line. Whether this coupling of weak, unprotected ships, such as the *Wilmington* and *Wasp*, with heavy armour-clads might not have led to a wholly unnecessary sacrifice of life, had the Spanish squadron been encountered, should be considered. It should be remembered, however, that none of the Spanish ships were classed as battleships, and that only one of the four was much superior to the ordinary protected cruiser. The importance of stopping the Spaniards at all costs was impressed upon the American officers.

From the 23rd to the 27th, Sampson's fleet cruised steadily near the junction of the Nicolas, Bahama, and Santarem Channels, whilst the Admiral was in constant communication by despatch vessels with Washington. On the 28th news from Washington arrived that 30,000 troops would be sent to Cuba, and he was requested to be ready to send convoy. As always, the monitors by their low speed, wretched coal-supply, and general unseaworthiness gave trouble. "Movements," Admiral Sampson telegraphed to Washington on the 25th, "are greatly hampered by monitors, constituting the principal force under my command. I cannot despatch armoured vessels until movements of Spanish squadron thoroughly known." Cay Piedras, a small islet in the Nicolas Channel, was used by the American squadron as a secondary base for the purpose of coaling the small craft and giving the monitors shelter.

In the Bahama Channel, on May 26, Sampson learnt from Schley's letters that the Flying Squadron was not at Santiago, as had been intended, on the 23rd. He learnt, too, to his surprise and consternation, that no steps had seemingly been taken by Schley to "locate" the enemy. Indeed, Schley had committed the fault of "making pictures," snatching at any shred of evidence to justify his conduct and want of enterprise. He sent off fresh and urgent orders to his subordinate "to proceed with all possible despatch to Santiago to blockade that port," and directed him not to leave it unless he received "*positive* information" that the Spaniards had flown. These orders were despatched by the *Wasp* on the 27th. On the previous day the scouts *Yale*, *Minneapolis*, and *St. Paul* had been directed by telegrams despatched to Mole St. Nicolas, to inform Schley that the Spanish fleet was in Santiago, in case he was not off that place. In the afternoon of the 27th, however, very alarming news came by Key West from Schley, dated May 24, to the effect that he had ascertained that the Spanish fleet was not in Cienfuegos, but that owing to shortness of coal he could not blockade Santiago. He wanted at least two more colliers, each equipped with hoisting engines, buckets and strong sacks. He would therefore proceed to St. Nicolas Mole and there coal his ships, especially the *Texas*, which carried a very small supply of fuel. Sampson instantly despatched the *New Orleans* with yet more peremptory orders to blockade Santiago at all hazards, and in the last resort to close the harbour by sinking the collier *Sterling* in the entrance. He himself returned to Key West to

coal and get leave to go to Santiago. There he found the *Oregon*, which had reached Key West on the 26th, none the worse for her long voyage, and perfectly ready for sea. She was an invaluable reinforcement, worth the whole squadron of monitors. On the 28th fresh orders were issued to Schley to open communications with the shore at Santiago, and make certain that the Spaniards were inside. That same night, however, a telegram came from the Commodore, which caused consternation at Key West and Washington. It said Schley was coming to Key West to coal, and must have been sent from before Santiago on the 26th.

It will not have escaped the reader that the interchange of messages between Schley and Sampson would have been slow and difficult, but for the facilities afforded by neutral telegraph stations. The two most used were Port Antonio in Jamaica, 110 miles from Santiago, and Mole St. Nicolas in Hayti, 140 miles away. How far the persistent use of these centres of communication was an infraction of neutrality may be debated, although no objection seems to have been made by the authorities in Hayti,[1] and there is nothing in any of the proclamations of neutrality to prevent it. But it is a new condition, and may have to be regulated by new rules. On the other side Cervera had been allowed to use the telegraphs at Martinique and Curaçao, and by this means had been able to communicate with Madrid and Havana.

What had happened before Santiago was as follows.

[1] In Jamaica the colonial authorities forbade the transmission of intelligence from the American ships to Washington, and also vetoed all cipher messages, according to the *New York Sun* of June 18, 1898.

All the 26th the Flying Squadron had lain twenty miles out in the offing, the weather continuing stormy. At this distance nothing could be seen of Cervera's ships. A consultation was held on board the *Brooklyn*, in which Captain Sigsbee told Schley that the *St. Paul* had captured a British collier, the *Restormel*, with coal for Cervera, and that her captain had told him his orders were to go to San Juan, then to Martinique if the Spaniards were not at San Juan, then to Santiago, and finally to Cienfuegos. This information pointed to the presence of the Spaniards in Santiago, without, however, rendering it absolutely certain. It should be said that the *Restormel* had been captured on the 25th, "right in front of the port," and that the Spanish squadron inside, though it had steam up, did not stir to give help. Captain Sigsbee stated in a telegram to Washington—and therefore also probably to Schley—his surprise at not being attacked by the Spanish destroyers if these were really inside Santiago. Schley's difficulties had now been enhanced by the breakdown of the *Merrimac's* engines.

In conversation Captain Wise of the *Yale* gave it as his positive opinion that the Spaniards were inside Santiago. This did not, however, convince Schley, who, to the general amazement of all, that evening signalled to the squadron: "Destination Key West as soon as collier is ready, *viâ* south side Cuba and Yucatan Channel; speed nine knots."[1] The *St. Paul* was directed

[1] When this signal was being made it was taken at first for a joke. "*Viâ* S——" seemed to indicate "*viâ* Santiago," and it was only when "o, u, t, h," etc. followed, that the ships learnt the blockade was to be abandoned.

to remain and watch the port. The *Minneapolis* had only just sufficient coal left to get to Key West, and her machinery was in bad order, whilst the *Yale's* supply was much reduced. At 9.15 p.m. the fleet started, when, fortunately for the United States, the collier *Merrimac* distinguished herself. Her intermediate cylinder valve had broken down, and could not be repaired at once. She was therefore ordered to be taken in tow by the *Yale*. Four times, however, the hawser parted, and only after twenty-four hours of effort was her chain cable got on board the big cruiser. During this interval, early on the 27th, the *Harvard* came in from Mole St. Nicolas with a despatch from Washington, ordering the Flying Squadron to prevent the Spaniards leaving Santiago without a decisive action, and urging Schley to ascertain exactly what ships were in the harbour. For that purpose he was advised to send ashore and communicate with the insurgents. The Navy Department stated that coal was being sent to Mole St. Nicolas to replenish his ships.

Commodore Schley appears to have given not the slightest attention to these orders. The *Harvard's* coal was running short, and he directed her to proceed to Jamaica and take on board sufficient fuel to reach the nearest American port. She left the squadron at noon of the 27th. At 3.40 p.m. Schley started westward once more, the *Yale* towing the *Merrimac*. He was thus leaving Santiago and the Windward Passage in flat defiance of orders received both from Admiral Sampson and the Navy Department, and as there was now little or no doubt that the Spaniards were in

Santiago, was giving Admiral Cervera an excellent opportunity of getting clear away to sea, when all the work of locating him might have to be begun afresh. His defence of his action was that his coal was low, and that the weather rendered coaling at sea impossible; that Sampson was so placed as to be certain of bringing to action the enemy if the latter moved by the north coast of Cuba to Havana, whilst he himself with the Flying Squadron could prevent any attempt to move by the south coast; that the *Merrimac* and *Minneapolis* were in bad order. These excuses cannot justify the abandonment of his position in face of such peremptory and urgent commands as he had received, and betray a want of firmness and resolution such as we do not expect in a great seaman or soldier. The truth was that none of the powerful armoured ships had less than five days' coal, and most of them had very much more, whilst there was a collier with the squadron.[1]

Soon after 7 p.m. the weather improved so that coaling at sea became possible, and the squadron stopped. The *Texas* and *Marblehead* were sent alongside the

[1] The facts are stated on page 3 of Executive Document C, Fifty-fifth Congress, third session:

"During the twenty-four hours in which Commodore Schley signalled that his destination was Key West, and telegraphed the Department that he would be unable to remain at Santiago, there were still on board the *Brooklyn* between ten and twelve days' coal-supply, being 940 tons for full steaming in squadron; between eight and ten days' supply, or 789 tons, on board the *Massachusetts;* between five and six days' supply, or 394 tons, on board the *Texas;* between three and four days' supply, or 110 tons, on board the *Marblehead;* between eight and ten days' supply, or 762 tons, on board the *Iowa*, and 4300 tons on board the collier *Merrimac*, from which during the two following days his vessels were coaled. The Department had suggested the possibility of a near coaling

Merrimac to coal. The first-named was at work all night and until 11.50 a.m. of the 28th, when she had got 267 tons on board. The *Marblehead* finished at 10 a.m. The projecting sponsons of the *Texas* gave great trouble when alongside the collier, and Commodore Schley notes the advantage of a tumble-home, from the freedom from accidents which it ensures when alongside another ship. At noon of the 28th the squadron turned and steamed slowly to Santiago, off which port it arrived in the evening. At 6 p.m. the blockade of Santiago was at last duly formed. The squadron lay eight miles off shore, with the *Marblehead* closer in. The want of small vessels for picket work—he had only the *Vixen*—at once impressed itself upon the Commodore, and he sent by the *St. Paul*, which was now going with the *Yale* to Key West, an appeal to Admiral Sampson for several to be despatched to him. The *Minneapolis* was sent off to the same destination during the 28th.

On the 28th Schley announced both to his squadron and to the Navy Department and Sampson, his intention to remain off Santiago till the failure of his ships' coal compelled his retirement. He would then proceed to the Hayti coast to refill his bunkers. In the meantime Sampson had received permission, on the 29th, to go with two ships to Santiago. He was recommended to seize Guantanamo as a coaling base. With the *New*

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base, but no effort was made to reach it, although Commodore Schley had sent the *Eagle* to Port Antonio for coal. There was coal enough to return to Key West, and therefore to remain at Santiago until further supplies came. He could also have counted on the Department sending him a further coal-supply."

York, *Oregon*, *Mayflower*, and *Porter* he proceeded east at thirteen knots about midday of the 30th. At the same time he learnt that the fast auxiliaries *St. Louis* and *Yankee* were on their way to Santiago.

On the 29th the *Massachusetts* went alongside the *Merrimac*, and during the day took 183 tons of coal on board. The *Vixen* also filled her bunkers. Meanwhile the rest of the squadron circled inshore, and at 7.40 a.m. a large cruiser, which was identified as the COLON, a second of the VIZCAYA class, and two destroyers were seen in the harbour mouth; later in the day the tops of a third cruiser were made out. Thus it was now practically certain that all Cervera's serviceable vessels were in the harbour, for the fourth cruiser, though not as yet seen, was not likely to have been detached. The COLON opened fire at a range of 15,000 yards, and of course hit nothing. A council of war was held on board the flagship, in which Schley expressed his intention, in case the Spaniards came out, of concentrating the fire of all his ships upon the Spanish vessels as one by one they came down the channel. In this way terminated a most instructive series of incidents, showing, in these days of long-range guns which prevent close reconnaissance, the extreme difficulty of determining whether and in what strength the enemy is inside a port. Schley's mistake all through was to reason that the Spaniards would do what was obviously expedient. He knew that if they went to Santiago they would be isolated and must eventually be destroyed, and therefore he could not believe that they would go there.

On the 30th the weather was fine and coaling was

possible. The *Iowa* went alongside the *Merrimac*, and began coaling at 7.45 a.m. By 6 p.m. she had taken on board 357 tons—a very fair average. The *New Orleans* arrived in the afternoon with the collier *Sterling*. In the evening the *Vixen* sighted a supposed torpedo boat close in shore, and shots were fired at it, but it proved to be a train on the railway from Santiago to Juragua. On the 31st the *Brooklyn* and *Marblehead* coaled from the *Merrimac*, and the *Texas* from the *Sterling*. During the morning Schley shifted his flag to the *Massachusetts*, his own ship, the *Brooklyn*, being unavailable, and at 11.10 signalled that the *Massachusetts*, *Iowa*, and *New Orleans* would go in after dinner to 7000 yards, fire on the COLON with the heavier guns, and reconnoitre the works ashore, which the *Yale* had reported to be very strong. At 12.45 p.m. the signal "clear for action" was made; at 1.5 "general quarters," and at ten knots the three moved in. At 2 p.m. the Americans opened, using the heavy guns on the COLON, the lighter ones on the fortifications. The fire was at once returned by the COLON's 6-inch port guns and the forts. After ten minutes' action, during which the *New Orleans*' guns with smokeless powder made very fine shooting, the Americans drew off, but the COLON's 4·7-inch guns and the batteries continued to fire till 3 p.m., the COLON alone expending seventy-six 6-inch and 4·7-inch projectiles. No damage was inflicted upon the American ships—as was only to be expected, considering the long range and the feeble weapons mounted ashore. Many of the American shells fell near the Spanish ships in the harbour and round the COLON, but here also no damage was done. One projectile struck a

Spanish magazine on Ratones Cay, and, fortunately for the Spaniards, failed to explode. The Morro was hit and a portion of a staircase shot away, but the injuries to the works were insignificant, and there was no loss of life.

The necessity of close reconnaissance and the utter futility of firing a few shots at long range to locate and determine the precise strength of works ashore, are shown by the incorrect conclusions which Commodore Schley deduced from his skirmish. "The fortifications," he wrote, "are well provided with long-range guns of large calibre. They used smokeless powder almost exclusively, with the exception of the batteries to the westward of the entrance." In both facts he was mistaken; possibly the masked howitzer battery on Punta Gorda, the smoke of which might not have been seen, led him to suppose that numerous heavy guns were firing at him with smokeless powder.

It was on this day that he received despatches from the Navy Department to the following effect:—"The most absolutely urgent thing now is to know positively whether the Spanish division is in Santiago de Cuba harbour, as, if so, immediate movement against it and the town will be made by the Navy and division of about 10,000 men of the American troops, which are ready to embark. You must surmount difficulty regarding coaling by your ingenuity and perseverance. This is a crucial time, and the Department relies upon you to give information quickly as to the presence of Cervera, to be ready for concentrated action with the army. Two colliers have been ordered to Mole, Hayti. Your vessels

may coal there singly, or in Gonaives, Hayti Channel, or leeward of Cape Cruz, Cuba. . . . It is your duty to ascertain immediately the Spanish fleet, if they be at Santiago, and report. Would be discreditable to the Navy if that fact were not ascertained immediately."

On June 1 the Spaniards constructed a boom across the direct channel up the harbour past Cay Smith, leaving open only the circuitous channel which runs round the island. They also sank two lighters laden with stone lower down the channel to narrow it. At 6 a.m. of this day Sampson arrived and took command.

The town of Santiago, which at this time counted about 30,000 inhabitants, lies at the northern end of the land-locked harbour, one of the finest and safest in the West Indies. The distance from the city to the harbour mouth is just about four miles. The mouth is narrow with high ground on either side: to the east rises Punta Morillo, on which is the Morro Castle, 200 feet above sea level, an old masonry structure; to the west is Socapa Point, of about the same elevation. The cliffs fall precipitously on their seaward face, and just under the Morro are great caverns. Just opposite the Morro the width of the channel is 300 yards, but the rocks of the Diamante Bank, extending 180 yards out from Socapa, reduce the fair-way to 120 yards. To the north-west of the Morro, and just opposite Estrella Cove, a small sheltered inlet with shallow water, the passage further contracts, and is at its narrowest one hundred yards. After this it widens out a little till, opposite Smith Cay, a small rocky island rising to a good height above the water, it divides, one channel making a sharp bend and


PORT OF
SANTIAGO DE CUBA
CITY OF SANTIAGO DE CUBA
ONE SEA MILE
Batteries Used Against Americans
Sounding in fathoms
M - Merrimac Sunk
Jetty
Blanca Bay
Blanca Battery
Las Cruces Pt
Powder Magazine
Cinco Reales
Look out
Colorado Pt Light
Cabanitas Bay
Punta Gorda Battery
La Socapa
Morro Castle Battery
Socapa
"Look out" Mountain
City of Santiago
Morro
VIEW OF THE ENTRANCE

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passing to the south and west of the Cay, whilst the other proceeds by the east and north, leaving two other sheltered inlets, Gaspar and Nispero, on the right. These inlets have deep water. Above Smith Cay the harbour opens out and navigation is easy, leaving on the right Punta Gorda bank, and on the left Colorado shoal. Here there is another turn in the harbour, and the anchorage, to the south of which lies the low islet of Ratones Cay, is reached. The bottom in the anchorage is muddy. The north of the harbour is shallow, and no vessel drawing over fourteen feet can go alongside the two piers by the town, which are built of wood. A little to the south of the town is the Las Cruces pier of iron, in about twenty-eight feet of water. To this runs the narrow-gauge railway from Juragua and Aguadores. There is also a pipe conveying fresh water down from the mountains to the pier. On the opposite side of the harbour a disused railway comes down from the Cobre mines to the water's edge.

The difficulty of entering the harbour, through what *Tom Cringle's Log* describes as a "zigzag chasm in the rock, very narrow, inlaid at the bottom with polished blue steel," is great for a ship of any size, and warping and the help of tugs are generally necessary. The twists and turns, of course, with such a narrow fair-way, render it absolutely impossible for two vessels to be navigated abreast. One ship sunk well in the middle of the channel at its narrowest point, even though not placed athwart the course, would debar entrance. It was this fact which at once made it extremely hard for a squadron

inside to escape, and for a squadron outside to force an entrance.

When the war began Santiago was an open town, surrounded only on the land side by wire entanglements to keep the insurgents at a respectful distance. The only works of defence were the Morro, absolutely worthless from a military point of view; Sta. Catalina battery commanding the narrowest portion of the entrance, but in ruins; and the Blanca battery near the town, containing old smooth-bores, used for saluting. In the town were about 9000 troops and volunteers under Generals Linares and Vara del Rey. The country round had been hopelessly ravaged by the insurgents, so that the place was entirely dependent upon the sea for supplies; it had no communication with the interior, the only railway in that direction stopping short at San Luis, twenty-one miles off, and sending out a branch six miles long to Songo. Mountains on all sides render communications very difficult.

During April two rows of mines, of the electro-contact type, were placed in the channel, the first of seven between Estrella and Socapa Points, the second of six, a little higher up. On Punta Gorda, which rises high above the water, an earthwork was erected looking down the entrance, and in it were mounted two 6-inch howitzers, breech-loading, and two 3·5-inch Krupp guns. In a small work at Estrella Cove were mounted two old muzzle-loading 8·3-inch rifled howitzers, two 3·2-inch short breech-loaders, and two old 4·7-inch rifled bronze muzzle-loaders. During May two 6·3-inch breech-loading Hontoria guns of good and modern pattern, from the

MERCEDES, were mounted in a work on the crest of the Socapa, and during the third week of June three 8·3-inch muzzle-loading howitzers were also placed in position there. During April the Morro received two 6·3-inch muzzle-loaders, during May three more, and during June two 8·3-inch muzzle-loading howitzers. On June 2 a 6·3-inch breech-loader from the MERCEDES was mounted at Punta Gorda, and on the 17th a second. Under the Socapa heights, and overlooking the mine-field, were placed one 6-pounder, four 3-pounders, and one 1-pounder quick-firing gun.

The total artillery strength of the defences at their strongest was then as follows :—

	8·3-inch M.L. Howitzers.	6·3-inch M.L.	6·3-inch B.L.	6-inch B.L. Howitzers.	4·7-inch M.L.	3·5-inch B.L.	3·2-inch B.L.	6-pounder Q.F.	3-pounder Q.F.	1-pounder Q.F.	Total.
1. Morro . . .	2	5	—	—	—	—	—	—	—	—	7
2. Socapa, Upper	3	—	2	—	—	—	—	—	—	—	5
3. Socapa, Lower	—	—	—	—	—	—	—	1	4	1	6
4. Estrella . .	2	—	—	—	2	—	2	—	—	—	6
5. Punta Gorda .	—	—	2	2	—	2	—	—	—	—	6
	7	5	4	2	2	2	2	1	4	1	30
Of these there were in place on June 6	2	5	3	2	2	2	2	1	4	1	24

Of these batteries only the guns in the first two would bear upon a fleet outside in most positions. Not only were the guns few in number and weak in power ; they were also for the most part of antiquated pattern, converted smooth-bores, and, being muzzle-loaders, could only be fired at considerable intervals. Even the MERCEDES' 6·3-inch guns could not be expected at 2000 yards, and under the conditions of actual service, to pierce the thin armour on the American ships. Their shell weighed

112 lbs.; the shell of the 8·3-inch howitzer about 250 lbs.; of the old 6·3-inch muzzle-loaders 80 lbs.

In the harbour were the MERCEDES, which still retained her two 6·3-inch bow guns; the gunboat ALVARADO, little larger than a small torpedo boat, and armed only with one 6-pounder and one 1-pounder; and three or four tugs and steamers.

Two and three-quarter miles east of the Morro, and four miles in a direct line from the heart of the city, were the bay of Aguadores and mouth of the San Juan river, which is hereabouts crossed by the Juragua and Santiago railway on a high bridge. The bay offers a good landing-place for boats. Five and a quarter miles from the Morro is the roadstead of Sardinero, and six miles again from here the bay of Siboney, where is a good but exposed beach for landing; two miles from Siboney is the Juragua beach, and five miles from Siboney, or just over sixteen east from the Morro, is Daiquiri Bay, with a stone jetty and an iron pier used for shipping ore from the mines. Two miles or more west of the Morro is the bay of Cabañas, which will only admit small vessels, but is yet very safe, affording secure landing-places. Further to the west the bay of Guicabon has landing-places which can be used by boats, and beyond that again, about eighteen miles from the Morro, is the small harbour of Aserraderos.

CHAPTER VI

CERVERA AT SANTIAGO

At 5.50 a.m. of May 19, the look-outs in the Morro at the entrance to Santiago harbour signalled the approach of five steamers from the south; a few minutes later the new-comers were seen to be warships, and Spanish warships.[1] They were the Infanta Maria Teresa, Vizcaya, Oquendo, and Cristobal Colon, with the destroyer Pluton. They anchored about 7.30, with the exception of the Pluton, which ran out, and in about an hour returned with the Furor. The morning was a superb one, still, clear, and intensely hot, and the advent of the long-looked-for, eagerly-desired squadron caused transports of enthusiasm amongst the Spanish sympathizers. It was taken to be only the vanguard of the invincible fleet which Spain was to despatch against the Yankees. For the worst of the pessimists had expected eight large cruisers, and at least a dozen torpedo craft. Yet here were only six ships great and small!

Nor were the people of Santiago alone under illusions. Cervera had expected to find at Santiago a

[1] Müller, 27—96. Consul Ramsden. Telegrams interchanged between General Blanco and Cervera, in *New York Journal.*

secure fortified harbour, well-provisioned, and stocked with coal and stores for his ships. He found a harbour defended by only four modern guns, of small calibre, almost destitute of coal, without stores, without provisions, without funds; its weak garrison harassed by the insurgents, with pay ten months in arrear. He discovered that his arrival, with empty bread-rooms and half-empty magazines, far from contributing to the salvation of Cuba, was nothing more nor less than a danger to this unhappy port. It meant 2000 more mouths to feed at a time when, as a Spanish witness in Santiago writes, "everything was wanting: food, prospects, money; our credit and financial resources were exhausted."

General Linares, in command of Santiago, followed up Cervera's telegram announcing his arrival to General Blanco, the Captain-General of Cuba at Havana, by a message which seems even at this early date to forbode disaster. "Cervera's squadron arrived here this morning. . . . The TERROR remained in Martinique repairing the damage sustained on the voyage. The ALICANTE is with the TERROR. Both need coal and provisions. Owing to the increase in consumption caused by the arrival of the squadron the provisions of this place will only hold out to the end of June." Next day he emphasized this discouraging missive with the news that this poor squadron, weak in numbers and wretchedly equipped, was Spain's all; that the PELAYO and CARLOS V were quite unavailable. It was evident to him that the position of the squadron was more than perilous. It could not fight, and the best it could hope for was to

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ADMIRAL CERVERA.

get away. "If it remains here long enough it will be blockaded, and thus completely shut off from communication with the world, and compelled to fall back on the feeble resources of this place. . . . I have furnished to the squadron 2400 tons of coal—600 from the San Luis Railway Company, and 1800[1] tons from the Juragua and Daiquiri mines." Besides this there was some quantity of Cardiff coal at the Navy Depôt.

Every motive dictated the coaling and re-provisioning of the squadron with the most imperious haste. With each hour Cervera's chance of escape lessened. But provisions we have seen were scarce; water could only be obtained by tricklets and with difficulty, at an exorbitant price; coal there was little on the spot—it had to be fetched from a distance, and the appliances for placing it on board were wanting. The stowage (extreme) of the four cruisers would reach 5000 tons, of the two destroyers, perhaps 220 tons. In the harbour were but one tug—the COLON—and only three small steamers, ALCYON, JURAGUA, and ESMERALDA.[2] The COLON was under repair, and could not be ready before the 26th; launches and lighters were few, and for the most part in very bad condition. The ships do not appear to have been supplied with Temperley transporters, or with sacks and baskets for handling coal. In the emergency the poverty-stricken Spaniards could buy or procure only a very few baskets in the town. Labour was scarce, for the troops, in expectation of an almost immediate attack, were busy strengthening the land defences. And thus it came about that though the

[1] Müller, p. 10, says only 600 tons.

[2] Müller, pp. 8, 9.

squadron was coaling, on and off, in a half-hearted, desultory fashion for nearly six weeks, its bunkers were not filled when the final and terrible catastrophe arrived. It was thus locked up in the harbour through the very time when, had there been proper organization and preparation, had there, perhaps, been Anglo-Saxon energy ashore and afloat, the door of escape might have been open.[1] Cervera was doomed to watch, in impotent agony, the jaws of the vice slowly closing on his unhappy fleet.

On the 20th Blanco telegraphed a long string of complaints—but too fully justified—to Madrid:—"The squadron comes without provisions and coal. . . . If it had brought the PELAYO and CARLOS V and a torpedo flotilla it might have effected something of moment, and contributed powerfully to the defence of the island. Reduced as it is [he did not as yet know the whole appalling truth] it will be obliged to avoid battle as far as possible, limiting itself to manœuvres which . . . cannot produce great results. . . . The question of provisions threatens to be very serious, as hardly enough food remains for one month. The efforts which I have been making to get supplies have so far been unsuccessful. . . . I consider it indispensable that the squadron should be reinforced as much as possible, and that the destroyers should be sent here to increase our strength. I am assured on good authority that the enemy plans an invasion with 28,000 men next week." This latter statement was well founded; for though the available

[1] Admiral Sampson calculated that Cervera would need five days to coal. (Goode, 112.)

American force was not so great as Blanco supposed, Washington was at this very time talking of sending 30,000 men to Cuba.

The next two or three days came warning to Cervera of forces moving to crush him. Through the Spanish secret service at Montreal, on May 21, arrived the news that Schley's squadron of "four monitors and a coast defence vessel" (*sic*) had sailed for the south of Cuba; on the 22nd Blanco wired that the *Iowa*, *Brooklyn*, and five other ships were off Cienfuegos, and that a British collier from Curaçao was heading for Santiago; on the 23rd that the *Indiana*, *New York*, *Montgomery*, *Dolphin*, *Wilmington*, and three other American cruisers had left the blockade of Havana, and that the *Cincinnati* and *Vesuvius* were patrolling the Yucatan Passage. Already on the 21st two American scouts had been observed off Santiago—these must have been the *St. Paul* and *Minneapolis;* on the 22nd they were again sighted, far off, going slowly, and hovering round the port; on the 23rd there was an addition to these sentinels in the *Yale*, and later in the day a fourth big steamer (the *Harvard*) joined the watch. The toils were indeed closing rapidly. So great was Cervera's uneasiness that he determined to put to sea, with or without coal, early on the 24th, and to abandon Cuba. The night of the 23rd-24th pilots were directed to go on board, the Ardois lights on all the ships twinkled with signals, and observers ashore noted that steam was being raised. Day came; there were still two scouts waiting and watching outside, but the weather was rainy and the sky overcast, so that they

quickly vanished from the sight of the Morro. The opportunity was favourable for escape, and the PLUTON was sent out to prospect, whilst Cervera held a council of war. As usual the council decided against action. The squadron was to wait till the Americans made a move on Puerto Rico; then to dash out for Curaçao. Opinion was against running the blockade into Cienfuegos. The childishness of the idea that the American expedition, which Blanco and Cervera knew to be preparing, would be directed towards the purely secondary object of capturing San Juan, not to the primary object, the capture and destruction of the Spanish squadron, does not need to be exposed. The American movements plainly indicated an imminent attack on Santiago.

The PLUTON returned in the evening; she had seen four hostile ships, which had chased her but without success, and then disappeared to the west. At 5.30 p.m., however, the ceaseless, vigilant watch had been resumed, and two cruisers showed to the south and west.

Blanco was evidently disappointed to learn on this same day that, after all, the fleet had not gone out. "If it had gone," he wired to General Linares, "to Cienfuegos, it might certainly have entered that port without incident. . . . It is to be hoped that the ingenuity and valour of the Admiral and other chiefs will enable a departure to be effected with success." He reports the *Oregon's* arrival at Key West—a fresh and redoubtable enemy to be reckoned with—and the news that Schley and Sampson are both moving on Santiago. This, we know, was premature. He concludes with "Report to

Cervera that he may take steps to prevent himself from being shut up in the harbour."

Already people in Santiago—as everywhere throughout the world—were beginning to ask why Cervera did not go out, why he waited in the trap inactive. The goings and comings of the American scouts outside the harbour were equally puzzling to the Spaniards. It was not understood that these ships had as yet to watch the whole Windward Passage, and to keep touch with the cable stations at Port Antonio and Mole St. Nicolas.

Next day there was further cause for astonishment. At dawn two steamers were sighted, and it was soon realized that one was chasing the other—which was the collier *Restormel*. But Cervera made no move. The CRISTOBAL COLON went down towards the entrance, and all expected a fight. To the general stupefaction, she merely anchored across the mouth of Caspar Bay, and waited, though the *Restormel* could be seen with volumes of smoke pouring from her funnel, rushing desperately for the harbour. Whilst still some distance away the merchantman was overhauled and captured: a little later she vanished with her captor towards the south. No condemnation for the apathy or positive cowardice which allowed such an incident to take place can be too strong. The COLON had ample coal to run out and save the collier; her mere appearance must have driven off the *St. Paul*. With the *Restormel* a large quantity of excellent coal and some coaling appliances would have been at Cervera's disposal. He was to have yet more opportunities of escape, but of what use is the gods' help to those who will not help themselves? On this day meat in Santiago

rose to 2*s.* 6*d.* a pound. The COLON remained south of Punta Gorda with her battery raking the entrance, whilst the VIZCAYA anchored south of Ratones Cay to support her. The destroyers were placed in Nispero Inlet.

On the 26th the weather was thick and rainy, so that the arrival of Schley's squadron off the port—distant from which it remained twenty miles—was not observed. It was known, however, that Schley had on the 25th been missing from Cienfuegos. During the day three American scouts were seen. On the 27th the fact that the port was at last definitely blockaded was ascertained. Far away eleven ships could be made out, lying motionless on the water. There were the two towering funnels of the *Iowa;* the three of the *Brooklyn;* the two lower funnels of a ship of the *Indiana* class; a one-funnelled battleship, and seven cruisers of all sorts and sizes. The trap had closed. And now came strenuous warning from Blanco that the Americans contemplated "corking up" the passage with hulks, which were to be taken in and sunk in the channel. The imminent departure of an expedition from Key West was also announced.

Cervera's last chance had come. On May 28 but one ship was seen patrolling the coast outside the harbour, and at noon she vanished swiftly to the south. The way was clear for a determined dash; it was broad daylight, and no Schley was in sight. But now the pilots professed that they could not take the squadron out. If Cervera ever thought of vigorous action he may have been deterred by their talk of the heavy swell, and the risk of grounding, though at the shallowest point there were

thirty-three feet, and though the COLON's maximum draught with far more coal than in all probability she now carried stood on her trial at twenty-four and a half feet. But the Nelson spirit had been needed at Copenhagen to rise above the timid advice of the pilots; it was wanting at Santiago. As the evening came on the watchers reappeared though far away; with nightfall, as no lights were shown, they vanished in the darkness, but were still off the port. Early next morning the PLUTON and FUROR went out to reconnoitre. They returned in the course of the morning, and soon after the enemy came within nine miles of the Morro, drawing the COLON's fire. At night they did not withdraw, and the beams of their search-lights played up the entrance and flickered over the hills. On the 30th the Americans were still there; on the 31st the roar of guns told the inhabitants of Santiago that active operations had began. Shells fell right and left in the bay, but this foretaste of what was to come passed off harmlessly. On June 1 in the morning gunshots were heard: they were the salute which marked at once the arrival of Admiral Sampson, and the beginning of a more strenuous investment. The blockading force now consisted of the *New York*, *Oregon*, *Iowa*, *Brooklyn*, *Massachusetts*, *Texas*, *New Orleans*, *Marblehead*, *Harvard*, *Vixen*, *Mayflower*, and *Porter*, with the colliers *Merrimac* and *Sterling*.

As far back as May 27 the idea of blocking the entrance to Santiago harbour had occurred to Admiral Sampson, and instructions had been sent by him to Schley to sink the collier *Sterling* in the narrowest part of the channel when she arrived. On May 29 Sampson

directed Lieutenant Hobson to study the details of such a plan, which were submitted and approved on the 30th. "Surprise under any condition," said Lieutenant Hobson, "would only be partial at best, since a certain amount of light was necessary" for the navigation of the channel. It was decided that the ship to be sunk should be taken in on a flood tide just before the moon set, and that the sinking should be effected by ten mines, each containing 78 lbs. of powder, and placed on the outside of the ship. The mines were to be exploded by electric primers. Lieutenant Hobson wished also to be allowed to place two torpedo war-heads abreast of the two most important bulkheads, but this was not permitted by the Admiral, out of regard for the safety of Lieutenant Hobson and his men.

After the arrival of the *New York* the harbour entrance was carefully reconnoitred by Hobson in her launch. During the afternoon the flagship's starboard watch and detachments from the *Brooklyn* and other ships set to work to strip the collier *Merrimac* for the work. Her great length, 350 feet, and her untrustworthy machinery made her particularly suitable. She had a good deal of coal on board, which could not be quickly disposed of, and which was therefore left in her holds. Batteries were collected from all the ships to work the electric primers. Volunteers were called for, and so many officers and men responded that the utmost difficulty was experienced in making the necessary choice. But owing to the haste and confusion the *Merrimac* was not prepared as Hobson had intended. The port bower anchor, which should have been taken aft and slung over the

starboard side by lashings, so that a man with an axe could cut it loose on a signal, could not be handled; a stream anchor was, however, got aft and lashed to another already slung there, to give holding power. Trouble was experienced in getting the chain cable aft, and in fixing the torpedoes outside the ship; whilst the batteries placed on board were only powerful enough to fire six of the ten. Through various delays the ship was not ready to start on her perilous mission till 4 a.m. of the 2nd. Her crew consisted of Hobson, in command, Assistant-Engineer Crank, Mullen, boatswain of the *New York*, and six petty officers and seamen selected from the ships. The spirit of the fleet was such that after their exchange, these men thanked the Admiral for *allowing* them to go. Just as the *Merrimac* started the flagship signalled the recall.

During the 2nd Hobson, anxious, after his inspection of the entrance, to have good light when going in, solicited permission to take the *Merrimac* in at sunset, but this plan the Admiral considered too dangerous. A second request for two war-heads of torpedoes was also refused. Fresh batteries were, however, sent on board the *Merrimac*, so that the other four mines could be connected up and fired. It was found, unfortunately, that something was wrong with the connection of three mines, so that only seven could be relied upon. A life-boat and catamaran were slung over the side; and Mullen, who was worn out with hard work, was replaced by a petty officer from the *Iowa*.

The final arrangements were as follows. At a signal the forward anchor was to be cut away. Special prepar-

ations were made to bring the ship up quickly without the cables parting. For this purpose eight stops of rope were put on the cable, between fathoms forty and sixty, and attached to a long hawser, the elasticity of which would be brought into play. The stern anchors were to be let go just after the bow anchor; the cable would be checked by tearing down the bulwarks and hatch coamings, finally bringing up against the mainmast. Signals were given by the pull of a cord from the bridge; the man at the forward anchor was to cut it away and fire torpedo No. 1; another man was to fire Nos. 2 and 3; the quartermaster was to put the helm hard a-port and fire No. 4; another man took charge of No. 5; two men, the one in the engine and the other in the boiler room, were to stop the engines, open the sea connections, and fire torpedoes Nos. 6 and 7. The *New York's* steam launch, under Ensign Powell, was to stand in towards the entrance and wait just outside for the *Merrimac's* boat, near the caves below the Morro. At the last moment, most reluctantly, in obedience to orders, Engineer Crank left the ship.

The men stripped to their drawers, put on life-belts and revolvers, and went to their stations. The night was dark, but there was a bright moon, and as the *Merrimac* headed in at nine knots about 3.30 a.m. of the 3rd, the shore works came into view. The ship must have been plainly visible, but no shot was fired till she was within 400 yards of the entrance. She entered the channel under a sputtering fire, and made out a picket-boat lying in shadow, and firing rapidly at very close range at her rudder. As she neared the quick-firing

guns in the lower Socapa battery, these opened upon her with a tremendous crash. Just abreast of the Morro the engines were stopped; an instant later the steering-gear was shot away, when only two ships' lengths from the desired point, by a large projectile which burst in the stern, destroying the connection of one of the torpedoes, and cutting and bruising one of the crew. The bow anchor was promptly dropped; the first torpedo exploded; but Nos. 2, 3, and 4 refused to act. No. 5 went off; Nos. 6 and 7 failed. A hail of projectiles from the Socapa swept the ship at the very closest range. At this instant three of the mines in the channel were exploded. Probably one of the three exploded just under the *Merrimac*, as off Soldados Point she filled rapidly and sank. An instant later the MERCEDES and PLUTON fired four torpedoes at her, which probably missed. Two torpedoes drifted out to sea with the tide and were recovered by the Americans, and one of these was actually found to have its dummy head on. The *Merrimac* sank almost across the channel; the tide, however, moved the hull from the athwart position, so that she finally rested on the bottom, lying across the Nispero inlet, with the channel round the south side of Smith Cay still clear.

As the *Merrimac* went down her gallant men were swept in all directions by the violent suction. They had, all but one, escaped injury under the heavy fire concentrated upon them by the Spanish batteries—which could only, it must be remembered, bring guns of small calibre to bear. It is stated by Lieutenant Hobson that the fire of the MERCEDES across the channel killed 14 and wounded 37 Spaniards in the Morro. There is, however,

no notice of this in Consul Ramsden's diary, or in Lieutenant Müller's account of the blockade. Probably Lieutenant Hobson was misinformed. The only American wounded was merely bruised by a shell. All, however, were much knocked about in the violent swirl of the water, carrying round with it casks and tins and spars. The catamaran floated on the surface, and to it the seven clung, with only their heads above the surface, whilst the Spanish boats sped to the spot, searched for survivors, and found none. With daylight an armed launch came down to reconnoitre; in it was Admiral Cervera himself, and to him Hobson and his companions surrendered. They were treated with the extremest kindness, conveyed to the MERCEDES, clothed and fed. They found that the Spaniards were under the impression that they had sunk the *New York*, the flashes of their own exploding shells on board her being taken for the flashes of her guns, whilst several of the crew professed to have made out two turrets fore and aft with heavy guns. Even when it was known that the *Merrimac* and not the *New York* had been sunk, the Spaniards could not understand why 2000 tons of coal had been left in the collier, and sent to the bottom. With the truest kindness and courtesy, Cervera sent out a flag of truce to Admiral Sampson to inform the Americans that the *Merrimac's* crew was safe.

As for Ensign Powell, with the *New York's* launch, he waited near the harbour mouth till daybreak. He was seen by the Spaniards ashore, and was at first taken for a friend, but afterwards a heavy fire was opened upon his boat. He held his ground bravely, and did not

relinquish his fruitless but gallant watch till the approach of daylight, and the certainty that his little vessel would be clearly visible to the hostile gunners compelled retreat. As he came back to the flagship, his launch was scrutinized by every glass in the fleet. It was seen that it was empty, and a deep hush fell upon the *New York*. In silence absolute and complete Powell made his report—"No one came back, sir."

During the 1st the Spanish ships had shifted their position. The COLON and OQUENDO anchored just above Ratones Cay, the TERESA and VIZCAYA off Punta Gorda.

On the night of the 3rd the alarm of a torpedo boat was given in the American fleet, and the auxiliary cruiser *Yankee*, which had arrived during the day, and the *New Orleans* opened fire. The torpedo boat, however, proved to be only a mass of seaweed.

The scene, looking out to sea, on the 4th is thus painted by Lieutenant Müller, a Spanish officer in Santiago :—

"The evening was most beautiful; the sea was as smooth as a lake; there was hardly any wind, and the sky was perfectly clear. At a distance of about five miles seventeen ships could be seen, among them seven battleships and one torpedo boat. The other nine were merchant ships, the nearest about six miles from the harbour. They formed a large arc, one extremity of which was at Aguadores and the other at Punta Cabrera. The largest and most powerful ships were in the centre . . . All had their engines stopped, and their bows in different directions according to the current. From time to time one

of them would move a short distance forward, and then return again to her place."

Warning that a bombardment was proposed had already been given from Havana, so that this armada rode in the evening sun with the menace of death and destruction to the unhappy town and the Spanish squadron.

On June 5 Admiral Sampson issued orders to prepare for a bombardment of the forts on the 6th. The ships were to steam in in two divisions, the first led by Sampson, circling east when inside 3000 yards range, the second led by Schley circling west. The *Dolphin* on the east and the *Suwanee* and *Vixen* on the west were to search the coast for Spanish positions with their fire. The gunners were instructed not to aim at the Morro, in which Hobson and his fellow-prisoners were confined.

Early on June 6 smoke rose from the funnels of the blockading fleet, denoting immediate action. About 7.40 its ships formed in two squadrons and advanced towards the harbour mouth. On the east were the *New York*, *Iowa*, *Oregon*, *Yankee* (auxiliary cruiser manned by Naval Militia), and *Dolphin;* on the west the *Brooklyn*, *Massachusetts*, *Texas*, *Vixen* and *Suwanee* (armed yachts). They came slowly in, gleaming grey with their war paint; the batteries, which had been reinforced during the night with 120 men, waited with their feeble guns to repulse the attack. There were only three weapons, of 6·3 inches calibre, mounted in the Santiago harbour defences which could be at all trusted, and which could bear on the assailants. Against these were now in line eight 13-inch, six 12-inch, thirty-eight 8-inch, twenty-four 6-inch,

twelve 5-inch, twenty 4-inch, and innumerable smaller guns. Most of the ships advancing were protected on their heavy guns and vitals by armour, which the Spaniards could not hope to penetrate, whilst the batteries were of the rudest and simplest construction. The Spaniards, moreover, had little ammunition; the Americans, with storeships close at hand, an unlimited supply. And the bravery, the devotion, the resolution of the little band of men standing ready to work the guns in the shore works are the more conspicuous and admirable, because many of them had for days been ill fed, and because all knew that surgical stores and the appliances which relieve the misery of the wounded were failing, or had already failed.

To support the forts there were the Spanish ships. The old unarmoured cruiser REINA MERCEDES lay between Smith Cay and Socapa; one destroyer was close to her, and another in Nispero Bay; the TERESA and VIZCAYA were ready to rake the entrance. The COLON and OQUENDO, north of Ratones Cay, formed the second line of defence.

At 8 a.m. the Americans opened, ship after ship firing as the first squadron circled eastwards and the second westwards. "The fire," says Lieutenant Müller, "was so intense, and the shots followed each other in such quick succession, that it resembled a musketry fusillade, if the mighty thunder of the cannon could be compared with the crackle of small arms." The big American shells came through the air with the peculiar sound like the rumbling of a train on a distant railway bridge, and fell steadily in the bay amongst the ships, throwing up sheets of

water and foam. "During the first moments," says Lieutenant Müller, "the fire was so intense that it resembled one prolonged thunder. In fact, I had no idea that any firing could be so terrific as that of these ten ships. Much has been said of the bombardments of Sevastopol and Alexandria, but I do not believe that they could have been as terrible as the bombardment we suffered that sixth day of June—a day which the inhabitants of Santiago will never forget."

The Spanish batteries at first replied bravely, but in the storm of projectiles, and short of ammunition for their short-range guns, soon slackened their fire. The Spanish gunners fell back from their guns to pits in the rear, running out and firing only when the bombardment slackened. "This," says Lieutenant Hobson, who watched the Socapa upper battery in action from his cell in the Morro, "occurred over and over; and then I realized, even more than at the bombardment of San Juan, that ships cannot destroy shore batteries without coming within machine-gun range. It is necessary actually to strike the gun itself in order to put it out of action. I saw some of our shells literally bury guns with dirt and yet do virtually no injury. Our marksmanship was excellent, splendid line shots that tore up the earth and shrubs along the whole front of the battery, but I did not see a single gun disabled, and every time we slackened the Spaniards would come out and fire away." Socapa's guns ceased after expending forty-seven rounds; Punta Gorda, which was out of the action most of the time, discharged but seven; what the Morro fired is unknown. Not a single Spanish gun was hit or disabled, and the

damage done to the works was small, though round the Morro the earth was covered with shell fragments. The houses on Smith Cay were almost all injured, and many of the inhabitants there had narrow escapes. The loss in the forts, however, does not appear to have exceeded 3 killed and 51 wounded, among the latter being Colonel Ordoñez. The Spanish cruisers suffered more severely, the REINA MERCEDES being the apparent target of an indirect, high-angle fire. Several projectiles struck her hull or rigging, and she was twice set on fire.[1] Whilst fighting the flames in her forecastle, Commander Acosta y Eyerman was horribly mutilated by a large shell, which tore off his right hip and right arm. Yet though thus mortally wounded he would not leave his post, but kept to it whilst the fire was being got under, giving orders calmly to the last. Five seamen in the ship were killed and 14 officers and men wounded, 3 dangerously. About the VIZCAYA and the TERESA the American shells fell constantly, but did no damage.

As the day was still, and the continuous concussion of the guns quickly brought down the rain, the smoke hung in dense yellow clouds about the American ships, rendering it difficult for them to hit or to be hit. The shooting on their part was for this reason indifferent. As the morning advanced the *New Orleans*, with new pattern quick-firers and smokeless powder, and the *Marblehead*, joined in the attack, which at times was pressed within 2000 yards of the coast. Admiral Sampson's fleet received only the most insignificant injuries. In the

[1] In all, during the blockade and bombardments she was struck thirty-five times.

Suwanee a man was wounded; the *Massachusetts*' military mast was hit on the starboard futtock bar, probably by a projectile from one of the Spanish howitzers, and some damage was done to the other ships by their own guns.

The moral effect of this tremendous bombardment, in which from 1500[1] to 8000 projectiles are said to have been fired, was excellent upon the Spaniards. Their few feeble and old guns and improvised works had faced a battering such as might have been expected to put them completely out of action. In expending his ammunition Admiral Sampson had had two objects—in the first place to injure the shore works sufficiently to enable his ships to lie close in at night; in the second place, to give his gunners target practice and fire discipline under the enemy's guns. The shortest range indicated during the action was 1900 yards in the case of the *New York*. He was under the impression at the time that he had completely silenced the Spanish guns, whilst the Spaniards were under the impression that they had driven off his fleet and inflicted severe injury upon it. Both were wrong, but the mistake of each was natural and intelligible. On the civilian population of Santiago the effect was the reverse of terrifying. "The more one considers the bombardment matter of Monday," says Mr. Ramsden, the brave and devoted British Consul in the place, "the more ridiculous it appears to have been. It was probably one of the heaviest bombardments

[1] The *Massachusetts* and *New York* alone fired between them twenty-two 13-inch shells, ninety-five 8-inch, thirty-six 6-inch, forty-two 4-inch, 247 6-pounders, and thirty-nine 1-pounders (Reports, 438-40).

known, and done with the most modern artillery, and yet the result has been comparatively small."

After the bombardment Sampson telegraphed that with 10,000 men the city could be taken in forty-eight hours, and urged an immediate movement—he had been informed week after week that the army was only waiting for him—so as to prevent the Spaniards from strengthening the defences by mounting guns from the ships. His plan of attack was to capture the forts at the harbour mouth, and thus give access for his ships to the harbour.

The American fleet now proceeded to seize Guantanamo Bay as a secondary base. It lies thirty-seven miles east of Santiago, and is an even finer harbour than Santiago. It has a wider and easier entrance, and deep water within, in the outer part, though the inner part, the Bay of Joa, is shallower, and will not admit large ships. There are numerous creeks with steep sandy banks, where an expeditionary force could have been landed with great ease. The chief town on the bay is Caimanera, which is connected by road with Santiago.

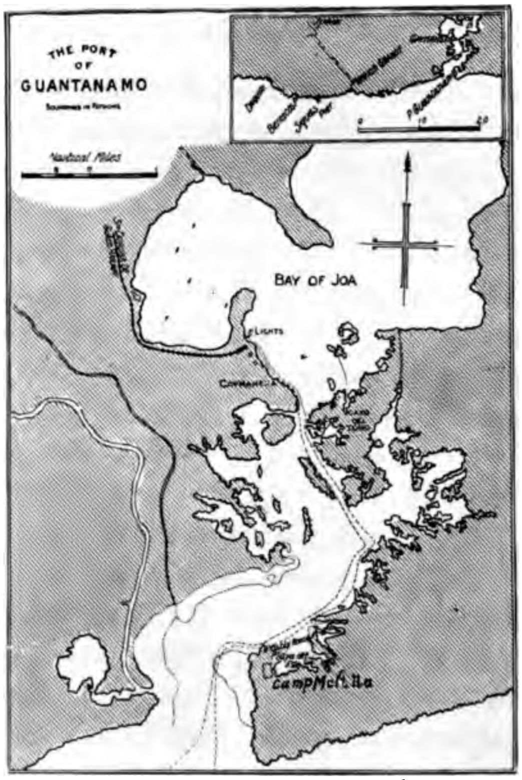
On June 7 the auxiliary cruisers *St. Louis* and *Yankee* and the cruiser *Marblehead* cannonaded Caimanera and cut and buoyed the cable which runs thence to Cape Haytien in Hayti. The gunboat SANDOVAL was driven up the shallows of the Bay of Joa. At the same time the telegraph between Santiago and Guantanamo ceased to work, cut by the *St. Louis*. About 500 Spanish troops were observed in Caimanera, but these could offer no effective resistance. The Americans here, as all through the war, had luck on their side. At the entrance of

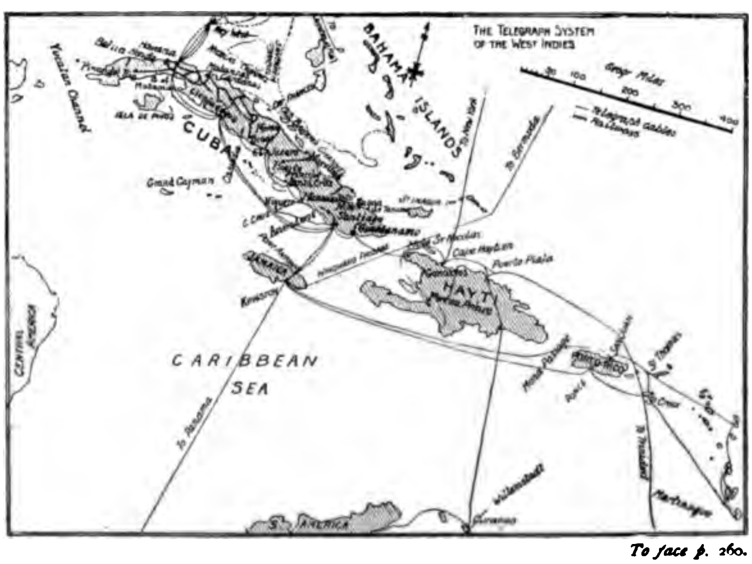
Guantanamo Bay were a large number of mines, each charged with 120 lbs. of gun-cotton. No precautions against these were taken, and the *Texas*' and *Marblehead*'s screws actually struck two and tore them loose from their anchors. The bay was not systematically swept and searched till June 21, when no less than thirty-five mines were recovered. Many showed signs of contact with ships, but the firing plungers and detonators were in such a defective condition that it was plain the mines had been laid down carelessly and without proper supervision.

A Spanish intercepted letter from Guantanamo stated, "The American squadron, in possession of the outer bay, has taken it as if for a harbour of rest. They have anchored as if in one of their own ports since the 7th." From the same source we learn that the only guns mounted there were two small muzzle-loaders of weak pattern.

On June 9 the Spaniards attached planks and spars to the cable which had been stretched across the entrance to Santiago harbour, between Cay Smith and Punta Soldado, leaving clear the passage between the Cay and Socapa. The planks were intended to keep the cable on the surface, and so prevent the passage of floating mines or torpedo craft. The next few days passed without incident, as far as the Spaniards were concerned.

On the 11th Lieutenant Blue was landed from the *Suwanee*, and carefully reconnoitred the harbour from a hill to the north-west of it, to which Cuban insurgents guided him. He made out three at least of Cervera's squadron, and several other vessels in the harbour.


THE PORT OF GUANTANAMO
Nautical Miles
BAY OF JOA
LIGHTS
Camp McCalla


THE TELEGRAPH SYSTEM OF THE WEST INDIES
CUBA
BAHAMA ISLANDS
HAYTI
JAMAICA
CARIBBEAN SEA
CENTRAL AMERICA
S. AMERICA
Grand Cayman
ISLA DE PINOS
Yucatan Channel
Kingston
Santiago
Guantanamo
Cape Haytien
Puerto Plata
Port au Prince
Porto Rico
St Thomas
Ponce
Curacao
Martinique
To Panama
To Bermuda
To New York

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On the 10th the collier *Twickenham*, with 3000 tons of coal for Cervera, was captured by the *St. Louis* off Jamaica.

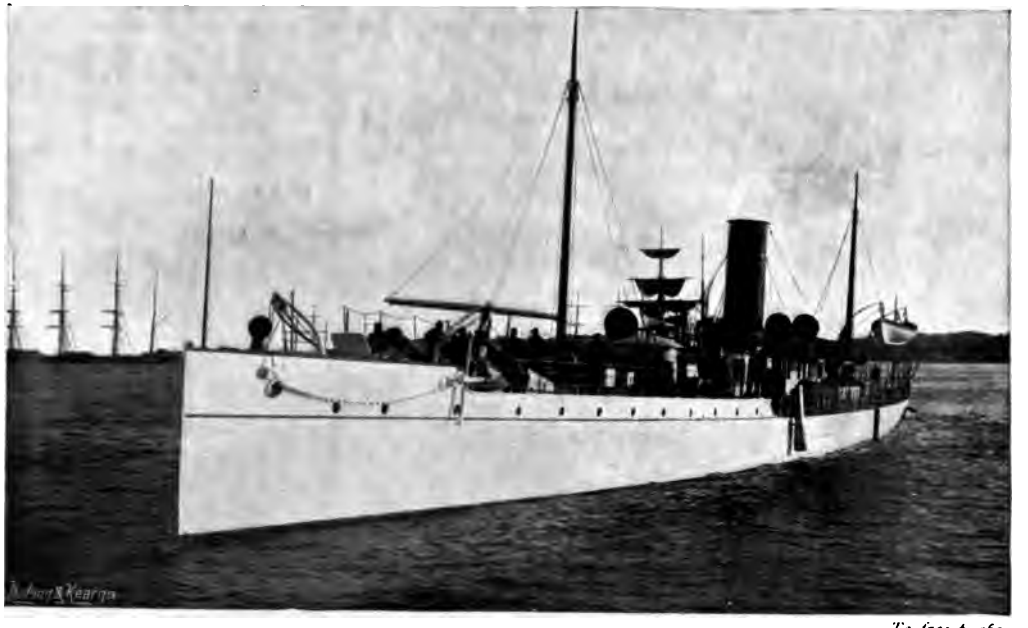
On June 10 a battalion of 646 marines with four guns arrived in the *Panther* from Key West, and landed near Caimanera, where they entrenched themselves. They were attacked by the Spaniards, but, supported by the fire of the American ships in the bay, they maintained their position with the loss of 4 killed and 11 wounded. On the 14th they took the offensive against the Spaniards, having been reinforced by many Cuban insurgents, and carried a Spanish blockhouse with a loss of 2 marines wounded and 6 Cubans killed and wounded; 40 Spanish bodies were found and 17 Spanish soldiers captured. The Americans were supported by the *Dolphin*, which vigorously shelled the Spanish position. On the 15th the *Texas*, *Dolphin*, *Suwanee*, and *Marblehead* bombarded and destroyed a small Spanish fort on the Cay del Tor. The *Texas* left in the evening to return to Santiago, but the *Suwanee* remained and shelled the shore of the bay, as the *Marblehead's* launch had been fired upon by Spanish troops.

Meantime, night after night the American search-lights played steadily up the Santiago harbour entrance, and the Spanish population regaled itself with the hope, destined to be cruelly disappointed, that at last the second division, including the PELAYO, CARLOS V, ALFONSO XIII, and LEPANTO, was approaching, and that when it came Cervera would go out and give battle. In the city famine drew nearer, and horses and dogs died in the streets.

At daybreak on the 14th a new enemy was counted amongst the American ships. This was the "dynamite cruiser" *Vesuvius*, whose long lean hull made her most conspicuous to observers ashore. Late in the night of June 14 the cough of her air guns was heard, followed by the terrific explosion of one of her gun-cotton shells near the PLUTON. The destroyer was lifted almost out of the water, but was in no way injured by the concussion.

Early on the 14th there was a slight bombardment of the forts, lasting a little over a quarter of an hour. The *New Orleans* steamed in and attacked a new earthwork which was being constructed to the east of the Morro, with the object of preventing the mounting of guns there. She was engaged by the Morro and Socapa, and several shells fell near her without, however, doing her any injury; 200 shots are said to have been fired by the ships, whilst the forts fitfully replied. Seven Spaniards were wounded in the Socapa battery; several shells fell near the Spanish cruisers and about the magazine on Ratones Cay. The soldiers were growing weak and sickly; their only food was bread made of rice and rice boiled. Meat was fabulously dear, eggs 5*d.* each, and milk unprocurable. Ammunition for the few guns at the harbour mouth was fast dwindling.

On the 16th the Americans again bombarded, opening at 5.45 a.m., and ceasing fire at 7. Their fire was directed against the Morro and Socapa, and was more accurate than before. A gun at the Socapa was buried by a 12-inch shell from the *Texas*, which blew one man to pieces, killed another, and wounded three. Yet the gun was ready for action a few hours later. The total



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The U.S. Dynamite Cruiser *Vesuvius.*

Spanish loss was 3 killed and 18 wounded. The ships engaged were the *New York*, *Iowa*, *Oregon*, *New Orleans*, *Brooklyn*, *Massachusetts*, *Texas*, and one of the yachts. The heavy smoke now, as always, much hampered the American gunners, the *Massachusetts'* executive officer noting that "the smoke interfered badly with pointing." A 6-inch shell struck her 13-inch turret. On the 17th the *Texas* bombarded the Socapa. Now almost every night the heroes who manned and fought these miserable batteries had to face not only the projectiles of the fleet but the terrible bombs of the *Vesuvius*. The strange and the new it is which has the greatest moral effect in war, and yet the Spaniards bravely faced these gun-cotton shells, which jarred ships even two or three miles away when they exploded, and which ploughed immense pits in the earth where they fell.

On June 17 and 18 there was interchange of fire between the American ships and the works. Consul Ramsden notes that "Gollan, the [British] Consul-General, is going on leave" from Havana, but Ramsden still kept his perilous post, though each hour he saw more clearly what was coming. On the 20th the American fleet was marvellously increased. From the Morro a vast armada of sixty-three ships could be discerned. All knew what this meant. The expected American expeditionary force was at last off the coast. Steps were hastily taken to prepare for a furious attack. A boom was thrown across the passage between Smith Cay and Socapa, and twelve mines were planted there. On land outposts were carried down from El Caney to Daiquiri; reinforcements were ordered up from

Manzanillo; and on the 22nd, 1200 men were disembarked from Cervera's squadron. The pitiful, hopeless plight of the garrison will be understood when it is recalled that only 50,000[1] Mauser cartridges were available, in addition to the 150 rounds carried by each soldier, when it is remembered that the Spaniards were to fight on rice and water, and that men were now dying of hunger in the streets of Santiago. With troops thus starved rapid movements became impossible, and the force lost all its mobility, all the advantage of interior lines.

The American expeditionary corps under General Shafter had been held ready at Tampa, Florida, as soon as it was definitely ascertained that Cervera was in Santiago. Sampson had called for troops to take the forts when the enemy was run to earth, and repeatedly urged that their despatch should be expedited, but the sailing of the transports, which should have taken place on June 9, was delayed, owing to a curious incident. On the evening of June 7, in the Nicolas Channel, the armed yacht *Eagle* sighted a bright light and gave chase, when it disappeared. A little later the light was seen again, but in a different quarter. The *Eagle* again gave chase and made the private signal, but without any response. The hull of a ship was discerned, and the private signal made once more, but without effect. Then suddenly a truck-light showed from the chase, and immediately afterwards three other truck-lights at regular distances astern flashed out, and then vanished. The *Eagle* was able to distinguish four vessels, two large

[1] About sixty rounds per man.

and two small. The storeship *Resolute* saw the same mysterious vessels, which became "a Spanish armoured cruiser of the first-class and two destroyers." On June 9 the *Yankee*, which had gone from Santiago to Mole St. Nicolas with despatches, returned and reported seeing "a battleship and seven other vessels." On the strength of these reports, contrary to Admiral Sampson's advice, the movement of American troops from Tampa was suspended. It was afterwards ascertained that the ships seen by the *Eagle* were the American cruisers and storeships *Armeria*, *Scorpion*, and *Supply*. Possibly also the British second-class cruiser *Talbot*, which was in the neighbourhood, was mistaken for a Spanish armoured first-class cruiser. She is a large and formidable-looking ship. As for the *Yankee's* fleet, it proved to be the *Panther*, an American transport with the marine battalion, and the *Armeria*, *Yosemite*, *Scorpion*, and *Supply*. The *Scorpion* saw the *Yankee* and took her for a torpedo boat, opening upon her, but fortunately at a long range! "This," says Admiral Sampson, "shows how easily the most experienced can be deceived at sea."[1] It also shows that reconnaissance by night is utterly misleading.

The presence of these supposed Spanish ships in the Nicolas Channel made the Navy Department exceedingly anxious that stronger convoy should be given to the fleet of transports, and Sampson was directed to send two armoured vessels, whilst also observing San Juan, in which port were reported to be five small Spanish

[1] Reports, 213, 488-90, 667 ff. The *Eagle* had watched the strange craft for half-an-hour, within a mile's distance!

vessels, with a cruiser. He did not, however, send the two ships, as he felt certain that the alarm was a groundless one. Consequently the original convoying force escorted the transports. It was indeed sufficiently strong for all purposes, including the *Indiana*, battleship, *Detroit* and *Montgomery*, cruisers, *Bancroft*, *Helena*, and *Annapolis*, gunboats, *Ericsson* and *Rodgers*, torpedo boats, and *Wasp*, *Wompatuck*, *Eagle*, *Hornet*, *Osceola*, armed ships. Captain Taylor of the *Indiana* was in charge.

On June 14 thirty-seven transports, with from 15,000 to 16,000 men on board, put to sea from Tampa, and on the evening of the 15th picked up the warships off Rebecca Shoal. The convoy was in very straggling order, retarded by two vessels which were towing lighters. The transports were not under the orders of the American Navy; though there was a naval cadet on board each ship he had no authority, and was there merely for signal purposes. The convoy formed in three columns and proceeded at eight knots. The *Detroit*, *Wasp*, and *Bancroft* were placed in charge of the rear. On the 18th the *Yucatan* and *City of Washington* transports fell behind, and with the *Bancroft* and *Wasp* remained detached from the rest of the convoy, which they did not see again till Santiago was reached. Many vessels ran short of water, and a ship had to be sent into the neutral port of Matthew Town in the Bahamas to procure it.

On the 20th the convoy arrived off Santiago, having been favoured by the most perfect weather. But the expedition was in many ways ill equipped and badly organized. No one knew where such things as the

medical stores were. The artillery was insufficient. Only one lighter, equipped with lifting appliances, was sent with the transports, and there were not enough pontoons or material for constructing landing-stages.

On the 21st Sampson gave out the following general order, to govern the disembarkation :—

"The Army Corps will land to-morrow morning, the entire force landing at Daiquiri. The landing will begin at daylight. Ships stationed to the eastward of Daiquiri will assist in clearing the way for an unopposed landing by flanking out the Spanish forces at that point. Simultaneously with the shelling of the beach and block-house at Daiquiri, the Ensenada los Altares and Aguadores, both to the eastward of Santiago, and the small bay of Cabañas, about two and a half miles to the westward of Santiago, will be shelled by the ships stationed there for that purpose.

"A feint in force of landing at Cabañas will be made, about ten of the transports—the last to disembark their forces at Daiquiri—remaining during the day or a greater part of the day about two miles to the southward of Cabañas, lowering boats and making apparent preparations for disembarking a large body of troops.

"At the same time General Rabi, with 500 Cuban troops, will make a demonstration on the west side of Cabañas. The following vessels are assigned to bombard the four points mentioned above: at Cabañas, the *Scorpion*, *Vixen*, and *Texas;* at Aguadores, the *Eagle* and *Gloucester;* at Ensenada los Altares, the *Hornet*, *Helena*, and *Bancroft;* at Daiquiri, the *Detroit*, *Castine*, *Wasp*, and *New Orleans*—the *Detroit* and *Castine* on the

western flank, and the *Wasp* and *New Orleans* on the eastern flank.

"All the vessels named will be in their positions at daylight. Great care will be taken to avoid the wasteful expenditure of ammunition. The firing at Daiquiri will begin on a signal from the *New Orleans*.

"At Cabañas it is probable that after a few minutes, unless the firing is returned, the occasional dropping of shots from the smaller vessels will be sufficient; but the semblance of covering a landing should be maintained, the ships keeping close in at Aguadores and Ensenada los Altares.

"The same rule should prevail at Daiquiri, the point of actual landing. The vessels will, of course, use their artillery until they have reason to believe that the landing is clear. They will take care to make the firing deliberate and effective.

"The *Texas* and *Brooklyn* will exchange blockading stations, the *Texas* going inside, to be near Cabañas. The *Brooklyn*, *Massachusetts*, *Iowa*, and *Oregon* will keep a vigilant watch on the harbour mouth. The *Indiana* will take the *New Orleans*' position in the blockading line east of Santiago de Cuba and between the flagship *New York* and the shore. This is only a temporary assignment for the *Indiana* to strengthen the blockading line during the landing, and to avoid any possibility of the enemy's breaking through, should he attempt to get out of the port.

"The *Suwanee*, *Osceola*, and *Wompatuck* will be prepared to tow boats. Each will be provided with two five or six-inch lines, one on each quarter, and each long

enough to take in tow a dozen or more boats. These vessels will report at the *New York* at 3 a.m. on June 22, prepared to take in tow the ships' boats which are to assist in the landing of troops and to convey them to Daiquiri.

"The *Texas*, *Brooklyn*, *Massachusetts*, *Iowa*, *Oregon*, *New York*, and *Indiana* will send all their steam cutters and all their pulling boats, with the exception of one retained on board each ship, to assist in the landing. These boats will report at the *New York* at 3 a.m. Each boat, whale-boat, and cutter will have three men, each launch five men, and each steam cutter its full crew and an officer for their own management. In addition to these men each boat will carry five men, including one capable of acting as coxswain, to manage and direct the transports' boats. Each steam launch will be in charge of an officer, who will report to Captain Goodrich.

"Care will be taken in the selection of boat-keepers and coxswains to take no men who are gun pointers, or who occupy positions of special importance at the batteries.

"Unnecessary oars and impedimenta should be removed from the pulling boats for the greater convenience of the transportation of troops; but each boat should retain its anchor and chain.

"Captain C. F. Goodrich, commanding the *St. Louis*, will have, on the part of the Navy, general charge of the landing. The *New Orleans* will send her boats to report to Captain Goodrich upon her arrival at Daiquiri.

"The attention of commanding officers of all vessels engaged in blockading Santiago de Cuba is earnestly

called to the necessity of the utmost vigilance from this time forward both as to maintaining stations and readiness for action, and as to keeping a close watch upon the harbour mouth. If the Spanish Admiral ever intends to attempt to escape, that attempt will be made soon."

As the primary object of the expedition was the capture, not of Santiago, but of the Spanish fleet—as, moreover, Admiral Sampson only required the forts at the harbour entrance to be taken, when his ships could have cleared out the mines and forced their way into the harbour—it is curious that Daiquiri, sixteen miles from the entrance, and not Aguadores or Cabañas, only three miles from the entrance, was selected for the landing. A pier was indeed available at the first place, but it was badly constructed and covered with loose boards, which were never fastened down, and so it was not very serviceable. It was in too shallow and exposed water to be used by the transports, and it stood too high out of the water to be easily reached from boats. Later, Siboney, near Daiquiri, was also used, but here there was no pier at all, and the men had to wade ashore from boats. It is obvious that an early and easy success was anticipated, since the position of a small, ill-supplied expeditionary force on a hostile coast, cut off from its transports and from the fleet, as it might be at any moment by the heavy seas and hurricane weather which are not unknown in late June and which in July become dangerous, must have been most critical. The truth probably was, that from the one extreme of greatly over-rating the Spanish Navy at the beginning of the war, the American authorities had passed to the other extreme of under-rating the

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stubbornness and fighting qualities of the Spanish Army, though the latter would now be acting upon the defensive, when the national want of initiative would be less paralysing. It is possible that there was opposition to a landing nearer the harbour on the part of the army officers, for all that we know of Admiral Sampson leads us to think him a man who weighed every chance and chose the wisest course, and it would certainly appear that an attack on the forts, such as he proposed, would have brought an easy success. Nor does it seem that any proper preparations were made on board the transports to facilitate embarkation. Sampson seems to have had no power over them; Shafter's staff appears to have been apathetic; the General himself was an old man, in feeble health, and lacking activity. The captains of the transports, an eye-witness tells us, were mutinous and insubordinate, and kept much too far out to sea. Colonel Roosevelt on board the *Yucatan* states, "We did the landing as we had done everything else—that is, in a scramble." Finally, the *Alamo* with the engineers and the pontoons was sent off to Aserraderos to build a bridge for the Cubans.

The boat accommodation available for landing troops was sufficient to carry 1800 men each trip. Much time was lost in hunting for one or two transports whose men were to have been landed in advance of the army. At first too it was difficult to get the soldiers from the ships into the boats, as neither the boats' crews nor the troops had any experience of disembarkation. Still between 10 a.m. and 6 p.m. no less than 6000 men were placed ashore, and the number might have been doubled had not

the transports kept from two to five miles out in the offing. At Siboney an average rate of landing of 600 American soldiers per hour was maintained during the 24th-26th, upon an open beach. Large quantities of forage, food, and ammunition were also landed at the same time. On the 26th the disembarkation was completed. In all only two lives were lost, both through the capsizing of a boat.

The value of the liner *St. Louis* for the work of disembarkation proved to be very great. "For four days and nights," says Captain Goodrich's report, "she acted as mother-ship, feeding and berthing nearly 200 extra men and officers; coaling, watering, and repairing steam cutters; furnishing voluntary relief crews of machinists and firemen for the latter for night work . . . and all this without even taxing her facilities. There seemed to be room for everybody and the means to supply every want."

If the Americans made many mistakes, so also did the Spaniards. In the opinion of competent judges, 300 well-posted infantry on the heights above Daiquiri could have inflicted enormous loss on the disembarking Americans—perhaps have prevented the landing. To silence such fire from well-scattered infantry, using smokeless powder under good cover, is difficult for cannon or for small-arms parties afloat in ships and boats. There was a mild shelling of the heights by the American ships *New Orleans*, *Detroit*, *Castine*, *Suwanee*, and *Wasp*, just before and during the landing, but this would not have paralysed the Spaniards, who had faced the fire of over one hundred heavy weapons, in the trenches of the

Socapa and the Morro, without flinching. It was then, perhaps, a fatal error on General Linares' part not to oppose the landing with more vigour and determination.

On the 21st the cable at Guantanamo was connected with Mole St. Nicolas, so that messages could be rapidly sent to Washington.

On the 22nd the MERCEDES moved up the harbour from her berth near the entrance. The forts were bombarded during the day by the *Brooklyn*, *Iowa*, and *Texas*, and replied. At night the *Vesuvius* fired two of her bombs. The *Texas* was hit on her port bow by a 6·3-inch shell, which struck a steel stanchion, broke it, flew across the ship denting the starboard plating, and rebounding burst, killing one man and slightly wounding eight others.

Meantime Blanco, in constant communication with Madrid, had been discussing by telegraph the use which was to be made of Cervera's fleet. As far back as June 3 the Spanish Minister of War, seemingly under the impression that Cervera could get out of Santiago when he chose, had telegraphed to Blanco as follows:—

"The very serious situation in the Philippines compels us to send reinforcements of troops and ships thither at the earliest opportunity. In order to cope with the enemy's squadron at Manila it will be necessary to send there a squadron which is not inferior. There are only two ships of war here, one of which, I think, cannot pass through the Canal. The only thing that we can do is to send such of Cervera's ships as may be able to leave Santiago, but before deciding to that effect the Government desires to know your opinion as to the effect that would be produced amongst the Cubans by the with-

drawal of Cervera. The move would be only temporary, and when once the object was obtained in the Philippines, the squadron would return to Cuba without loss of time, strongly reinforced."

It is needless to discuss this plan, since, as we know, Cervera was closely blockaded in Santiago. It would at least have in the first instance brought about a concentration of the Spanish fleet, which was obviously to be aimed at. But Blanco, though he had repeatedly urged Cervera to leave Santiago, had never meant him to go elsewhere than to Havana, and had not as yet the smallest intention of suffering him to depart from Cuba. He replied:—

"I should be lacking in my duty if I concealed from you the fact that the departure from these waters of Cervera's fleet would produce here such a depressing effect that I doubt whether I should, even by the use of force, be able to cope with the situation. The volunteers are at present irritated at the smallness of Cervera's squadron. They are sustained in their exaltation by the hope at each moment of the arrival of reinforcements. They would rise in a body if they learnt that, far from reinforcements coming, the ships already here were to leave. The shedding of much blood would become inevitable, though whether the Army would consent to fire upon the volunteers I doubt. In that case the loss of the island through the terrible insurrection which would be caused would follow. . . . In my judgment the salvation of Spain and of the dynasty is here in Cuba, and here therefore you ought to send as many ships as you can. If the natives of the Philippines are loyal,

they ought to be able to save the islands. If they are not loyal the Philippines cannot be saved."

Ever since Admiral Cervera's arrival there appears to have been some friction between him and Marshal Blanco as to the relations of the Army and Navy. There was no unity of command, and Cervera was in an independent position, which the Captain-General of Cuba seems to have resented. A divided command is, it need scarcely be said, a serious cause of weakness, and steps ought certainly to be taken in peace to arrange for a thorough concert between the two services. This is actually done in Germany; Spain had shown no such forethought. So now on the 21st Blanco wired to Madrid asking for absolute authority over Cervera. "I have much regretted," he telegraphed, "that the independence enjoyed by Cervera's squadron has prevented me from intervening in its operations, although the consequences of these operations, whatever they may be, will fall upon my head. Since the arrival of Cervera at Santiago, and his prolonged stay there, I have already had to change the plan of campaign. Had he endeavoured to place himself in communication with me, with Linares, or with Admiral Manterola [chief of the Navy Yard at Havana], it is probable that between us all we should have found a more advantageous solution of the problem than that which is forced upon us to-day—an unequal combat within Santiago harbour or a dash through the enemy's lines for either Hayti or Jamaica, where our ships will be once more blockaded. It would, perhaps, be better to move to Cienfuegos or Havana, a course which is even now possible, or to go back to Spain, if there is no chance of

reinforcements coming. It is better to face these risks rather than remain shut up in Cuba, and be compelled to surrender by hunger. The situation is very grave. . . . Permit me, however, to suggest with all respect the advisability of decreeing that with me shall reside all authority to command all our forces on sea and land, operating in these regions."

Madrid agreed, possibly because it suspected Cervera of apathy and inactivity. Thus a General hundreds of miles away was given authority over an Admiral and a squadron. It does not appear that Blanco had any naval knowledge, and poor as Cervera's generalship had been, Blanco's was even worse.

On the 23rd and 24th, the American vessels off Santiago were noted by observers to number eight "battleships," the *Vesuvius*, two torpedo boats, and several armed ships. Each night the *Vesuvius* now threw three bombs into the Morro or Socapa works, but for the most part without inflicting much injury or loss upon the Spaniards. As far back as the 21st Sampson had foreseen that Cervera's attempt to escape would speedily be made, and had enjoined the most strenuous activity upon his blockaders. He was preparing, too, to blockade the south side of Cuba, and so prevent supplies from reaching Cervera *viâ* Manzanillo. On the 24th Blanco wired to Linares demanding Cervera's plans. "Tell him," he continued, "I think he ought to leave as soon as possible for whatever port he may think most advisable, because his position in Santiago is as dangerous as well can be. Last night there were only seven [American] ships there, whilst off Cienfuegos there were but three. Here there

were nine, in spite of which the SANTO DOMINGO and MONTEVIDEO left at 2 a.m. this morning, and ran the blockade with ease." At the same time Madrid wired orders that, "as the blockading squadron off Santiago is reduced to seven battleships, the Government thinks this would be an excellent occasion for our squadron to attempt to make its escape."

All this time, be it noted, critics in England, arguing from a totally different set of conditions, were demonstrating the ease with which Cervera could escape and go whither he wanted; and there was general and not altogether undeserved censure of his want of activity.

On the 25th Cervera gave Blanco his views, and told him what seems to be the absolute truth about his fleet:— "Of 3000 rounds for the Hontoria guns [100 rounds per gun for the thirty guns] only 620 are serviceable, the others being absolutely useless. They were not replaced on our departure from Spain because of the want of supplies. Two of the OQUENDO's 5·5-inch Hontorias are defective, though I had ordered them to be exchanged. Most of the cartridges are useless, as they are without primers. The COLON has not her heavy guns. The VIZCAYA's bottom is foul, and she has lost her speed. The MARIA TERESA has no guns for landing parties; those of the VIZCAYA and OQUENDO are useless. We have very little coal or provisions for the month of July. The blockading squadron is five times our strength. To attempt to leave this port would mean our absolute, immediate destruction. A great number of my men are on land, reinforcing the troops there. On the 23rd I considered it my duty to place before the Government the following information:—

. . . 'As it is absolutely impossible for the squadron to escape under the circumstances, I intend to offer all the resistance in my power, and in the event of necessity to destroy the ships as a last resort.' This is the opinion of myself; it agrees with the opinion of the commanders of my ships. . . . It is not true that the blockading squadron has ever been reduced to but seven ships. Even so, the six best ships represent a force three times my own. The want of long-range guns in the forts at the mouth of the harbour prevents us from keeping the Americans at a good distance; so the result is that they are always close to the mouth of the harbour, and their powerful search-lights make it impossible for me to escape, except by giving them battle and overpowering them. In my judgment an attempt to leave this port will certainly involve the loss of the squadron, and the death of the greater part of the crews of all the ships. It is a course which I should never take myself, but if you order it I will obey. In my judgment the loss of the squadron was settled when I was ordered here; so the present critical situation is no surprise to me. You will decide whether or no we are to go forward to this sacrifice, which I think useless."

It does not fall within our scope to narrate the land-fighting. But on June 24 there was a fierce skirmish at Guasimas, when the Rough Riders encountered the men of General Rubin's column, whilst retiring. The Spanish loss was very small, but the Americans suffered severely. Yet they pushed rapidly forward, nearing Santiago and the ground dominating the harbour. Strangely enough, even now the land forces failed to co-

operate with the American fleet, and no attempt was made to carry the Spanish works commanding the entrance.

On the 26th and 27th more telegrams passed between Cervera and Blanco as to a sortie of the squadron. Blanco wired on the 26th:—"I hope you will consider me your comrade rather than your chief. It seems to me that you somewhat exaggerate the difficulties of leaving Santiago. There is no need to fight. All you are asked to do is to escape from the prison in which the squadron now finds itself. I do not think this impossible if you take advantage of opportune circumstances, such as a dark night or stormy weather. . . . If you should be detected, remember that the aim at night is uncertain, and that, though you may sustain some damage, yet this will be a trivial sacrifice for the safety of the ships. You tell me that the loss of Santiago is certain, in which case you would destroy the ships. Why, that is all the more reason for attempting escape, as it is always preferable for the soldier to succumb in battle, where he has at least some chance of success. For my part I consider it very doubtful indeed whether, granting the strength of the enemy's ships, they could inflict on you much damage if you left port on a dark night, and took advantage of opportunities, such as the departure or temporary reduction of the American fleet. A proof of this is the escape of the MONTEVIDEO and SANTO DOMINGO from this port with nine ships on the blockading station; the escape of the PURISIMA CONCEPCION from Casilda with three, and the arrival of the REINA CRISTINA in Cienfuegos with three ships blockading. If your ships should be captured, by whatever means, in a Cuban port, the

effect on the world would be disastrous, and the war would be held to have been ended in favour of the enemy. To-day all the nations of the earth have their eyes fixed on your squadron. . . . I shall leave absolutely to your discretion the course you must take, even though you sacrifice some of your ships. As a favourable sign, I will tell you that the captain of the German cruiser *Geier* has expressed his opinion that the squadron can effect its departure from Santiago without exposing itself to great risks."

Cervera's reply next day was full of irony :—"I ought to bow to your judgment. . . . I have always believed that there were more competent seamen than myself, and I am very sorry that none of them can come to take over the command of the squadron, making me his subordinate. I consider your telegram an order to leave the port, and in consequence I shall ask General Linares to re-embark the forces which were landed from my ships, in conformity with your orders." This message evidently startled General Blanco, as he replied that he would make determined efforts to get food and reinforcements into Santiago, thus prolonging the defence, and saving the squadron. But if he failed Cervera would have to go. Blanco urged him to hold his squadron in readiness for sea, waiting for a good opportunity, and seizing it. If, however, "affairs become grave, and the fall of Santiago is considered by you to be imminent, your squadron must leave at once as best it can, its destination to be determined by you and the distinguished officers who command the ships."

This was excellent advice for a well-equipped fleet.

But Blanco forgot that, to be ready for a start at any moment, Cervera would have had to withdraw his 1200 seamen and marines ashore, thus seriously weakening the land defences. He also forgot that, as Cervera told him in reply, it took twelve hours to get up steam; consequently the ships would have to be kept waiting with all fires lighted, when the consumption of coal was about fifteen or sixteen tons a day for each large ship—a total of sixty-five to seventy tons a day for the squadron. At this rate the small supply in the bunkers could not have lasted more than three weeks. Yet a reserve had always to be kept for active operations when the squadron left the port. And with the steady daily waste, the physical difficulty of coaling the ships would have re-asserted itself in an aggravated form. It would seem that the squadron could not embark and stow more than seventy tons a day, since it was coaling in a desultory fashion during the whole of its stay, but yet had not full bunkers when it left on July 3.

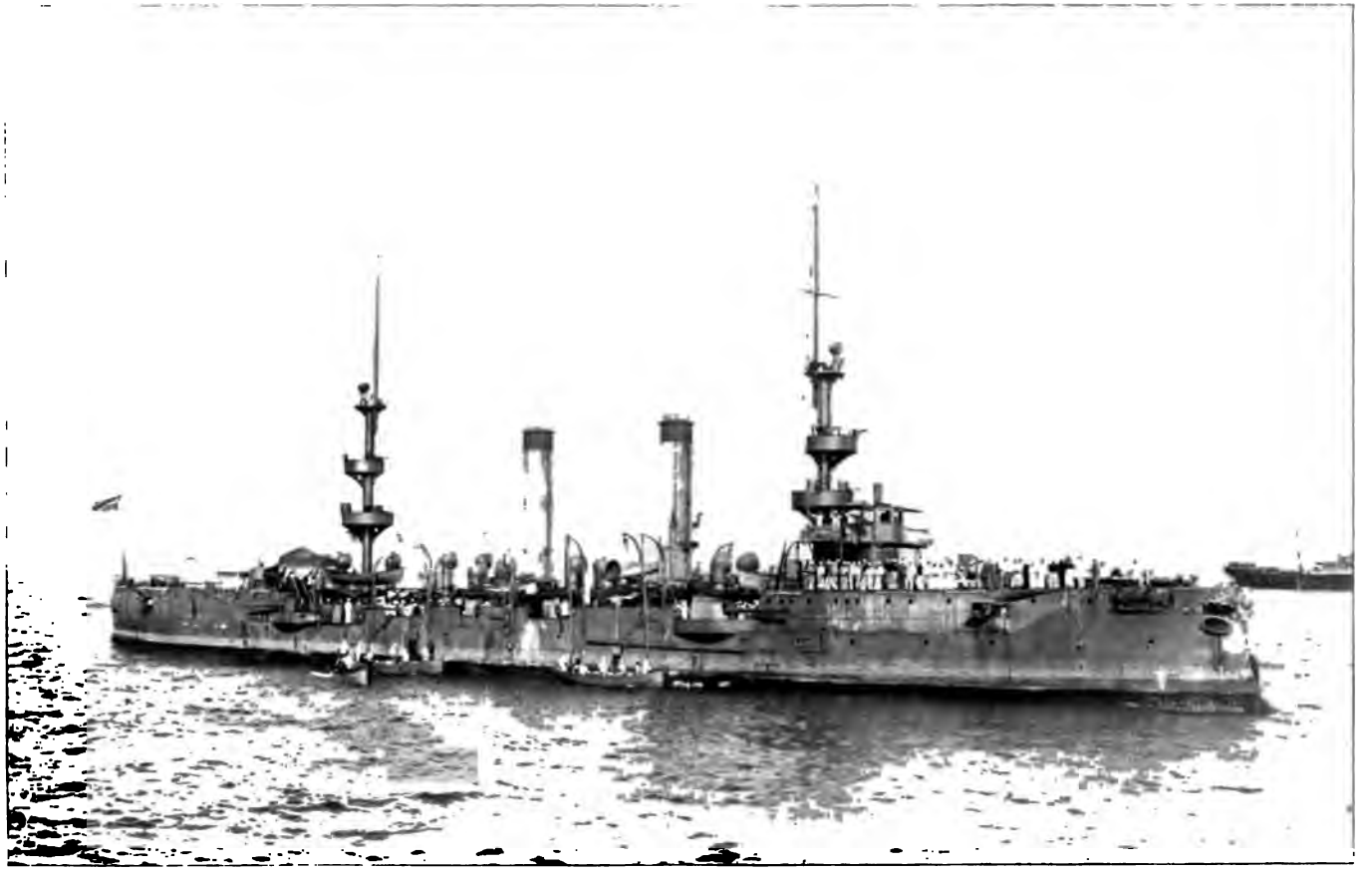
General Blanco, in fact, was issuing orders knowing little of the special circumstances which obtained at Santiago. Because in the British manœuvres well-found and skilfully-handled British warships had run, almost unobserved, out of such harbours as Lough Swilly and Bantry Bay in the face of a blockading fleet, it did not follow that escape would be easy for ill-found, poorly-handled ships from a harbour with an excessively narrow entrance, on which great vigilance could be centred by the blockaders. The American fleet off the port never detached more than one or two of the large armoured ships at the same time. As the number of such ships

was seven—the *New York*, *Brooklyn*, *Indiana*,[1] *Oregon*, *Massachusetts*, *Iowa*, and *Texas*—there were never less than five powerful armour-clads, mostly battleships, off the entrance. Besides the large ships, a host of cruisers, torpedo boats, and armed scouts were present—amongst them the *New Orleans*, *Marblehead*, *Castine*, *Vesuvius*, *Ericsson*, *Porter*, *Gloucester*, *Vixen*, *Suwanee*, and *Yankee*. The torpedo boats were sent to Guantanamo for the day, but were with the fleet at night.

The following were Admiral Sampson's dispositions. On June 1 he divided the fleet into two squadrons: the first under himself, including the *New York*, *Iowa*, *Oregon*, *New Orleans*, *Mayflower*, and *Porter*, watched the eastern side of the entrance; the second under Schley, including the *Brooklyn*, *Massachusetts*, *Texas*, *Marblehead*, and *Vixen*, watched the western side. The ships were disposed in a semi-circle six miles from the Morro, which was the centre, by day, and five or six miles at night. On the 5th steam launches were ordered to act as picket boats close in; on the 7th another picket line of yachts was added; on the 11th the search-light was called into play. From that date on the arrangements were as follows:—

On nights when there was no moon a battleship was stationed from one to two miles off the entrance to the harbour, and was ordered to throw a search-light beam up the channel and keep it there. "This," says the Admiral in his report, "lightened up the entire breadth of the channel for half-a-mile inside of the entrance, so brilliantly that the movement of small boats could be

[1] Joined the squadron after convoying the transports to Cuba.



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The U.S. Cruiser *New Orleans* off Santiago.

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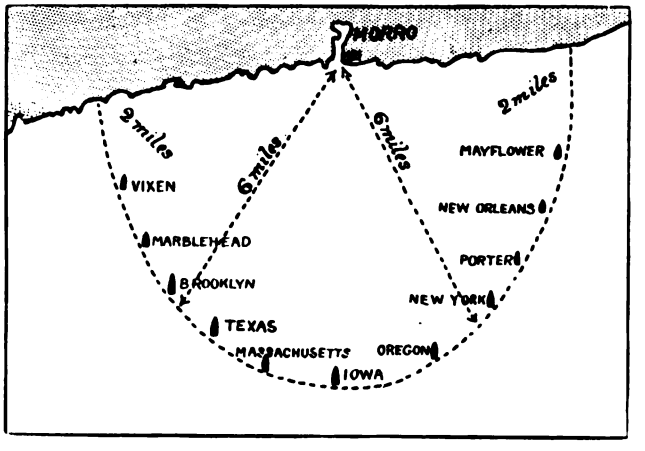
centre, using their search-lights alternately for periods of two hours—*Iowa*, *Oregon*, and *Massachusetts;* west side *Brooklyn* and *Texas*, east side *New York* and *New Orleans*, each of these two last groups sweeping the coast-line with a search-light from time to time. Coaling in fine weather was conducted off the port; in bad weather at Guantanamo, the ships withdrawing for the purpose in rotation.

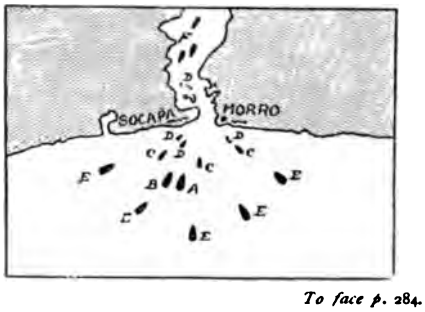
The strain of the blockade upon the officers and men was very great. Captain Evans thus describes the kind of work that was required of him :—[1]

"An experience new to me was having the *Iowa* put on picket duty when we were watching Cervera. All the fellows who have written that kind of book say that battleships must be taken thirty or forty miles from shore at night, anchored first at one point and then at another, so that the enemy cannot locate them. Admiral Sampson signalled me to take the *Iowa* up the harbour mouth. 'How far up must I go?' I signalled back, I confess with considerable anxiety, as besides Cervera's fleet, the forts and batteries, there were doubtless countless torpedoes in there. 'Go in until you can distinguish the movements of a small rowing boat in the harbour,' came back the answer. 'How long must I stay?' I again anxiously signalled. 'All night,' was the answer. I went up that harbour until I could not only plainly follow the movements of any small boat ahead of me with my glass, but could notice the blinking eyes of the Spanish sentries as my search-light struck them. For thirty-nine nights we kept that kind of watch on Cervera."

[1] Interview in *New York Sun*. Feb. 25, 1899.



Blockade of Santiago—Admiral Sampson's order of June 2.



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Final Dispositions for the Blockade.

From Captain Chadwick's Sketch in *Scribner*, vol. xxiv.

A. Battleship with search-light.
B. Supporting battleship, ready to open fire if enemy appeared.
C. Three small Cruisers as pickets.
D. Three steam launches as pickets.
E. Outer line of Blockade.
F. Spanish ships.

The organisation of the fleet demands a few words. The two armoured cruisers, it will be observed, had been chosen as flagships. They were high-freeboard vessels with plenty of accommodation and weatherly. Their great speed was an additional recommendation. Yet it has been noted that, when serious fighting was anticipated, Admiral Sampson transferred his flag to the *Iowa*, his finest battleship. In doing this he was only following the example set by great Admirals, who have almost uniformly preferred to fly their flags in powerful ships of the line.

The American dispositions were directed entirely to prevent egress, but as there were no formidable Spanish vessels in West Indian waters outside Santiago, with the sole exception of the TERROR, the enemy's egress was the only thing which Admiral Sampson had to fear. His work was thus simplified, though had the Spaniards tried vigorous torpedo attacks it might yet have been rendered difficult. For such attacks they had the two destroyers, and presumably the picket or torpedo boats, of which one at least was carried by each of Cervera's four armoured cruisers.[1] Had the smallest success waited upon such attacks the moral effect on the American fleet would have been enormous. Had failure resulted they would yet have caused the Americans great anxiety. "That the strain [of the blockade] was intense," says an American correspondent, "was shown by the way it affected the imaginations of the men of our fleet, cool and calm under stress as they have shown themselves to be. Spanish torpedo boats were supposed to be dis-

[1] The four Spanish cruisers had each two steam launches.

covered by the night look-out, were picked up by the search-lights, clearly seen to be the expected craft, and opened on with fury on many occasions. Not once was such a hostile craft really seen. Aided by the imaginations of men on board our ships, one of our own colliers, one of our own cruisers, a long trade wind swell, a cave in the rocks, and a regularly running railroad train were the real objects seen and fired upon. None of them was hit, although one ship was positive that she had sunk a Spanish torpedo-boat destroyer, which was represented by a railroad train, and another reported that with a 13-inch shell she had destroyed a boat, which it was subsequently proved had been represented by a cave in the rocks." The American torpedo boats were repeatedly fired upon in mistake, and the fact that they suffered no harm is in itself a strong argument for the practicability of torpedo attack by night. All this confirms British experience in the naval manœuvres. But it cannot be said that the success of the American blockade, where there was no torpedo warfare, proves that a blockade could in European waters, against an enemy well supplied with torpedo boats, be maintained with equal strictness.

It should not be forgotten, that in the case of, for example, a blockade of Brest by a British fleet, there would be submarines and torpedo boats inside the harbour. The guns in the batteries would never permit a battleship or cruiser to lie a mile off the mouth of the Goulet and play a search-light up the channel. Torpedo attack—as there are stations all along the coast, and as there are all manner of facilities for moving

the boats by rail—would be even more likely to come from the rear than from the front. To lose sight of such facts is dangerous. Nor should it be forgotten that whereas the Americans could be certain of an immense superiority of force at any moment, the British fleets if faced by a coalition or alliance would almost certainly be inferior, or barely equal to, the blockaded enemy. Viewed impartially, the facts of this war show that England cannot hope to blockade the enemy's ports in a war with a coalition. If the attempt is made to do this the country will court the very gravest disaster.

The sole point in Cervera's favour was the possibility of catching the Americans off their guard with boilers not alight. Had all fires been kept steadily going in all the ships of the blockading squadron, the coal consumption would have been very great, and the trouble of coaling would have been much augmented. Taking the *New York* as an example, at first she kept five out of her six boilers connected for steaming, the sixth being held in reserve with banked fires. Then, when the blockade began, four boilers were kept connected, one banked, and one cold but full of fresh water. Then three boilers were connected and two banked. Last of all, just at the beginning of July, she made it her practice to lie with three boilers connected, one banked, and two cold. Much the same course was followed by the other ships, as the Americans gradually grew more and more confident that the Spaniards would never come out. Thus Cervera had some small prospect of running through the American line, if he started with all his boilers connected, and under steam, and with his

hands: a bold onslaught delivered by the reinforcements, supported by the fire of Cervera's ships, and Shafter might have been driven back for all his men's courage. But at this precise moment the ill-luck which persistently clung to the Spaniards prompted General Blanco, miles away, with no accurate comprehension of what was happening, peremptorily to order Cervera out. If only the Americans had been able, as they had intended, to sever the cables connecting Havana with Santiago, this disaster would never have happened. Doubtless the fall of Santiago would only have been postponed, and not averted, but a serious check to the Americans might have greatly protracted the war, and obtained for Spain far more favourable terms of peace, if not foreign intervention.

On July 1 the bombardment of the town was carried out by the 8-inch guns of the *New York* and *Oregon*, firing slowly, without any very serious result. Late in the day came orders for Cervera from Blanco:—"You must re-embark the men landed," they ran, "and take advantage of the earliest possible opportunity to leave the port with your ships. You may adopt what plan you like, and you are authorized to leave behind any ship which, by reason of its want of speed or for other causes, would have no chance of escape. I should inform you that at Cienfuegos there are only three ships." Cervera replied that General Linares declined to send back to the squadron the landing parties, as they were placed in the firing line, and their withdrawal would leave a gap in the Spanish defences. A second telegram added that General Toral was of opinion that the withdrawal of the seamen would mean the fall of Santiago. Cervera concluded:—

"My opinion is the same, and our departure would in that event look like a flight. My captains also think so."

The answer came on July 2:—"Ship with the greatest despatch all your seamen, and leave at once with the squadron." To this was added, though it is doubtful if it was telegraphed:—"Twelve hours only are necessary for Cervera to get ready." Madrid approved.

The message arrived in the morning. The seamen were again embarked in the course of the day, leaving the battle which still raged along the line of entrenchments. Pilots were sent to each of the ships. Cervera signalled to light fires under all boilers and have steam ready by 2 p.m. During the morning a council of war was held to determine the plan to be adopted, and it was finally decided to choose 9.30 a.m. of Sunday, July 3. Though no accurate reports of what took place at this council have been published, various statements have from time to time been made by Spanish officers as to the arguments which influenced its decision.[1]

First there was the question of disobeying Blanco's order absolutely. A really strong, able, and distinguished officer, a Nelson for example, might have dared this with great results. But Cervera's inaction during the period from May 19 to July 2 had been such that now he had to obey to save his reputation in the eyes of Spaniards. The government had lost confidence in him; the fatal con-

[1] It is said that Captain Moreu of the COLON fought hard for a night sortie at the conference of captains, but that he was over-ruled. Captain Clark of the *Oregon* considers Cervera should have come out by night; Captain Taylor of the *Indiana* thinks that his choice of daylight was correct.

sequence of choosing a man who did not believe in this insane expedition were becoming hour by hour more and more evident. That a similar despair filled his captains is only too manifest. All felt that a fruitless and hopeless sacrifice was being demanded of them, and that the honour of Spain required a holocaust of ships, officers and men. Had they been a little more sanguine—though it must be acknowledged that the prospect before them was such as to dismay the stoutest-hearted—they might have stood a better chance of success. They knew the defects of their ships, the ill-constructed 5·5-inch guns, the want of ammunition, the want of speed, and want of protection, only too well. As for their *personnel*, they were perfectly aware that it was quite unequal in training and quality to that of the Americans. To face the enemy they had but four cruisers, only one of which could be called a vessel fit for the line of battle, and two destroyers. Outside the entrance floated on the water an array of heavily-armoured enemies, with all the moral advantage that superior battery, greater size, and adequate protection give. These must be encountered if they would escape.

The obvious course would have been to have chosen night for the escape. The night of July 2-3 we know from other sources was unusually dark. The moon was obscured. To get out, however, the mines in the channel would have to be removed ; this must necessarily be the work of some hours, and could not be carried on in daylight, as it would have at once been noticed by the Americans, and would have drawn their fire upon the vessel taking up the mines. Secondly, the difficulty of navigating large ships out at night through a narrow

winding channel would have been very great for a Navy which does not possess high traditions of seamanship. Navigation lights must have been placed beforehand at the turns and over the shoals, and these again would have attracted notice. Thirdly, the utmost vigilance was shown by the Americans at night, and the menace of the torpedo boats, lurking after dark, one on either side of the entrance, may well have had a certain moral effect on the Spanish officers. The leading ship in the channel had not room to turn if the boats dashed in at her; she could not go astern without throwing the line behind her into confusion; and yet, bows on to the boats, few of her guns, especially of her small guns, would bear. If sunk in the channel she would certainly bar it. On the other hand, the destroyers might have been sent ahead to drive off the boats, and the Morro and Socapa should certainly have done their best to keep off these small assailants and to harass the two battleships close in, playing the search-lights up the entrance. Still it must be confessed that the peremptory precipitation of Blanco's orders handicapped Cervera greatly. Could he have waited till the night of July 4, he might have completed all his preparations, and, in combination with Toral and Linares, have taken steps to keep the Americans at a distance. It was particularly unfortunate for the Spaniards that the fire of the American fleet on July 2 had put one of the 6·3-inch Hontorias at the harbour mouth out of action, besides killing several men and inflicting much damage on the works. Doubtless the garrison was busy repairing the works and remounting the gun during the night, and

thus, far from attacking the American ships, was only too pleased to be left in peace.

There were some good reasons for selecting Sunday morning. In the first place, the crews of the American ships would be at divisions for inspection, or at service. They would then be less ready than at most other times. Moreover, with day the American vessels moved further out, and apparently banked fires in most of the boilers, whilst the torpedo boats retired. Yet it would seem that, as some American officers have suggested, the second dog watch (6 to 8 p.m.) would have been a wiser choice. For then the blockading fleet would have been caught in the midst of preparations for night, and the advent of darkness must have impeded the pursuit of the Spaniards. By selecting the hour of 9.30 a.m., Cervera gave his enemy the whole day to catch his fleet. As a further reason for choosing daylight, it is reported that the machinery of the COLON required certain repairs which were only effected during the night. The plan finally adopted was for all the ships to go out in line ahead, steer for the west in a body, concentrating their fire on the *Brooklyn*, to hug the coast, and in the last extremity to drive the ships ashore, and thus save as many as possible of the men. No doubt the plan which would have given most chance of one or two ships' escape would have been for the squadron to have scattered in all directions on leaving the harbour. Though the Americans would unquestionably have concentrated on part of the force and destroyed it, some Spanish ships might have got away. The course was not to be set to the eastward, because it was known that at Siboney or Guantanamo were several

American ships, amongst them a battleship and the cruisers *Newark* and *Marblehead*.

As evening came on the Spanish ships hoisted in their boats and shortened in cable. The small gunboat ALVARADO went down at nightfall and removed six of the mines which blocked the channel to the west of Cay Smith. From 10 p.m. to 11.30 p.m. the Ardois lamps blinked with signals for next day's action, and the ships prepared for the terrible ordeal of battle. But the woodwork was not cut away as it should have been, nor was much done in the way of improvising defence. It may be that the hastily embarked men were tired out, and that the captains were anxious not to overtask their crews, that they might be in fit condition for the morrow.

Observers at Santiago saw the flashes of the signals, and remembering the movements of the last few hours, and the talk of the Spanish clubs, felt that the decisive moment was at hand. Many hoped against hope that the PELAYO, CARLOS V, LEPANTO, and ALFONSO XIII were at last outside the port, and that they would co-operate when Cervera made his dash.

July 3 dawned, a superb day. No breath of wind stirred the leaves of the forests which overhung the harbour; the morning was radiantly clear and the atmosphere transparent. The Spanish cruisers lay motionless on the serene water, the fire in the trenches had ceased, and the click of the capstans weighing anchor alone broke the stillness of early day. About 9 the squadron began to move off in a stately, well-formed line towards the harbour mouth. Then came the sharp report of signal guns, and two minutes after a furious cannonade,

prolonged, heavy, shaking the earth, then gradually receding—a cannonade compared with which the terrific bombardment of June 6 was but as child's-play, and which thrilled all in the town who heard it with an agony of apprehension. About 10.40 the Morro signalled cheerfully that the Spanish fleet was fighting in line, that the Americans had not got the range, and that there seemed every chance of Cervera's escape. The news caused general exultation, but it was premature.

CHAPTER VII

THE BATTLE OF SANTIAGO

July 3, 1898

EARLY on Sunday morning, July 3, the *Massachusetts* left her station with the blockading fleet off Santiago, and started for Guantanamo to coal.[1] Thence the *Iowa* had arrived on June 29, and the *Indiana* on July 2. After the vigilance of the night the Americans always somewhat relaxed their watch during the day. The engineers used the respite of daylight for overhauling their machinery and cleaning and sweeping boiler tubes. Some few hours after the *Massachusetts*, the *New York* also left the line, about 8.30 a.m., accompanied by the *Ericsson*, and proceeded slowly down the coast to Siboney, where Admiral Sampson was to land for the purpose of conferring with General Shafter on the best measures to be adopted to take the pressure off the hard-pressed expeditionary force. In thus quitting his command Sampson was obeying direct instructions from Washington. The ships left watching the harbour mouth were thus disposed in a semi-circle from east to west—

[1] Reports, pp. 505—570; *Century*, vol. 58. 50—118; Jacobsen, ii. 1—19; Müller (complete edition), 96—112; Goode, 193—239.

Indiana, *Gloucester* (armed yacht), *Oregon*, *Iowa*, *Texas*, *Brooklyn*, and *Vixen* (armed yacht). They lay motionless, —but not at anchor, for the depth of water was too great —heading towards the land. Once each hour the engines were slowly turned to get into station. Between the blockaders and Daiquiri lay a number of storeships, transports and yachts, whilst the auxiliary cruiser *Harvard* was landing stores at Los Altares, and the cruiser *Newark* and torpedo boat *Dupont* were coaling at Guantanamo.

The capacity of the ships to develop full speed quickly was of great importance when guarding against any attempt of fast cruisers inside the harbour to escape. But during daylight no one in the American fleet seems to have dreamt of Cervera's attempting a sortie. Weeks of security and quiet had produced over-confidence; though this over-confidence had no untoward results it did unquestionably aggravate the difficulty of the work which had to be done by the engineers in the fleet, and so added to the praiseworthiness of their achievements. To moralise on the danger of keeping close up to an alert enemy, with boilers cold and engines uncoupled, is almost superfluous. But the Spaniards were not alert, and experience showed that against them certain precautions could be relaxed without serious risk.

The *Indiana's* bottom was excessively foul, and from this cause her best speed did not exceed ten and a half knots. She had fires under all boilers, but these were very light, and she had little steam available at first.

The *Oregon's* chief engineer, Mr. Milligan, held strong views as to the necessity of keeping fires alight under all boilers, and these views Captain Clark shared.

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Chief Engineer MILLIGAN of the *Oregon.*

It will, however, be observed that this rendered her coal consumption somewhat high, and that between June 1 and July 3 she coaled four times—once on the blockade and three times at Guantanamo. Her engineer staff had had plenty of experience with forced draught on the way round from Puget Sound. The ship's bottom was fairly clean, cleaner far than the *Iowa's* or *Indiana's*. Fresh water was always used in the boilers, though, as the distilling power of the condensers was not sufficient, salt water had to be used by officers and men for bathing and other purposes, whilst the supply of fresh water for cooking and drinking was limited, and the water, moreover, was not sufficiently free from salt to stand the nitrate of silver test. She was, then, in very efficient order, ready to spring like a hound to full speed.

The *Iowa* had been on watch during the night with steam for full speed. In the morning, however, her fires were allowed to die down, and she had only steam for ten knots at 9.30. It is said that some of her boilers were empty, and that these were filled with salt water, but these statements require confirmation.

The *Texas* is expressly stated by her captain to have been ready when Cervera made his rush. She was the fastest battleship on the blockade, and so should have been able to outrun the *Oregon*.

The *Brooklyn* had two of her four sets of engines uncoupled, steam in three double-ended boilers but the fires not fully spread; two double-ended boilers deficient in water, requiring the use of sea-water at the critical moment; and two single-ended boilers full of water but unready for use. The employment of salt water in an

emergency has been sharply criticised ; this was, however, the occasion of a lifetime, when disregard of conventional rules was amply justified. She had steam for twelve knots at any given moment.

The *New York* had plenty of steam in three boilers ; one boiler banked ; one with fires out but water hot ; and one cold. Only two sets of engines out of four, were connected up. She had steam for twelve or thirteen knots. Even in this state her coal consumption was forty-five tons a day, and it was the anxiety to keep down this figure, and so avoid the necessity of detaching more than one ship at a time to re-coal, which led the various captains to lie with fires banked and boilers cold.

All the ships lay generally prepared for action, clear, and stripped of all combustible fittings. Sampson's orders, in the event of an attempted escape, were as follows :— "The ships must close in and engage as soon as possible and endeavour to sink his [the enemy's] vessels or force them to run ashore in the channel. It is not considered that the shore batteries are of sufficient power to do any material injury to battleships."

Very early on the morning of the sortie a gunboat was seen from the *Indiana* in the channel. This was the ALVARADO, removing the mines. On the evening of the 2nd, the officer of the watch on board the *Iowa* had reported suspicious movements inside the harbour to Captain Evans. Six well-defined columns of smoke could be seen rising above the high land. They betrayed the fact that the Spaniards were raising steam, but as they had been seen before on several occasions, they caused no particular suspicion. Nevertheless the signal-

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The U.S. Armoured Cruiser *Brooklyn.*

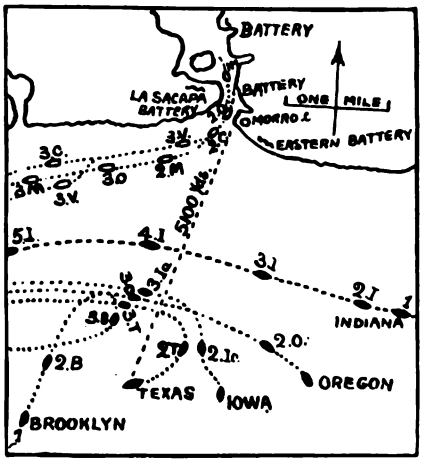
men on duty in the *Iowa* bent on No. 250 to the halyards, and kept it ready. It was to be used next day. According to certain of the newspaper stories, a seaman in the *Iowa* reported, about 9 a.m., smoke moving to the harbour mouth, and at 9.15 a.m. drew several officers' attention to it. It is also said that Schley from the *Brooklyn* had observed this smoke, and suspected Cervera's intentions. If so, however, he made no signal.

The crews in all the ships had mustered in white dress for Sunday divisions, when suddenly and simultaneously observers in three or four vessels saw through the clear and still morning air the bows of a large black ship showing between Socapa Point and Cay Smith. The *Iowa* was the first to fire an alarm gun and to hoist the signal No. 250, "the enemy's ships are escaping;" but she was followed almost instantly by the *Oregon*, which fired a six-pounder, sounded the siren, and hoisted No. 250. The *Texas* and *Brooklyn*, too, had the signal flying. It has been questioned who saw the enemy first, and probably the answer is the *Iowa*. As she lay, looking exactly down the entrance, her men were in the best position to see what was happening. Instantly the crews dashed to their battle stations as the bugles and gongs rang out the signal for general quarters. The speed and precision with which the ships reported ready for action showed the high state of efficiency attained by Admiral Sampson's fleet. Thus the *Iowa* was ready in two minutes. She at once closed in on the harbour mouth with the *Gloucester*, *Indiana*, *Oregon*, *Texas*, and *Brooklyn*, which had emulated her lightning rapidity of preparation. Eager calls to light all fires and press all

boilers went down from the bridges to the engine-rooms. The *Oregon* and *Texas* had immediate recourse to forced draught, when they saw the tactics of the Spaniards. Meanwhile, the appearance of smoke at the mouth of Santiago harbour or the report of the alarm guns led the *New York* and *Ericsson* to turn, at a distance of nine miles from the Morro, and head rapidly back towards Santiago and the battle, with speed rising as boiler after boiler came into play.

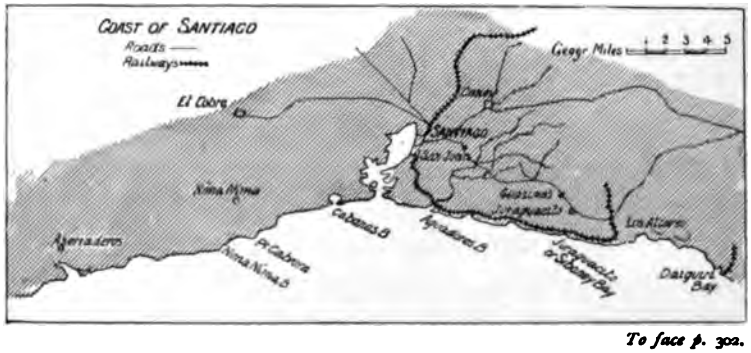
The advance ship of the Spanish line, the MARIA TERESA, with Cervera's flag, passed the Morro at 9.35. To clear the shallows at the entrance, it is necessary to head seawards for about four hundred yards after leaving the entrance, and this meant steering towards the American fleet. Behind at intervals of four to five cables followed the VIZCAYA, CRISTOBAL COLON, and ALMIRANTE OQUENDO. They kept good station and manœuvred with precision. Twelve hundred yards behind the OQUENDO came the PLUTON and FUROR. The Spanish tactics were to concentrate a heavy fire upon the *Brooklyn*, and if possible to put her out of action. She was the fastest vessel in the American fleet, and if she could be disposed of, the Spaniards felt fairly certain of escaping from the battleships. The destroyers were to attack the battleships and endeavour to hold them back whilst the cruisers made off. It must be noted that the determination to "cut and run" cannot but have had a very bad moral effect upon the Spanish crews. The Spaniards were not going to force the fighting, but only to attempt escape.

The speed at which the Spanish cruisers left the harbour does not appear to have exceeded ten knots. By the close



First phase of the Battle according to the New York *Sun*.

Positions of the U.S. Ships when the Spanish fleet came out, and of the Spanish wrecks after the battle.



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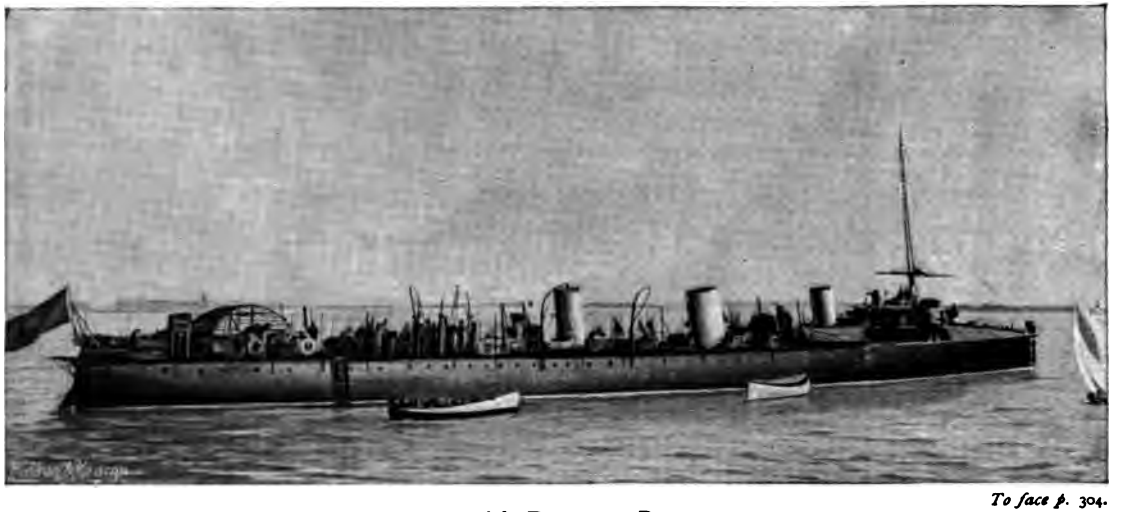
of the battle, about one o'clock, the COLON had worked up to somewhere about fifteen and a half knots. This is determined by the fact that the *New York*, steaming sixteen and a half to seventeen knots, was then fast overhauling her, and by the fact that the *Oregon*, also going sixteen, was gaining on her. As she drew ahead very quickly of the other cruisers, their pace at no time could have exceeded thirteen or fourteen knots. All the cruisers were very foul, though not perhaps fouler than the American ships, which had for the most part been six months or more in warm West Indian waters without docking.

The spectacle as the American fleet closed in was a superb one. The blue-grey American hulls were in rapid motion converging upon the Morro; and as their rams clove the intensely blue sea a white fringe of foam showed on the water-line. In the channel the Spanish red and yellow battle-flags broke the green of the Morro and the hills behind. Both sides felt that the decisive hour had come, and, like the British crews on the morning of Trafalgar, the Americans exulted in the thought that now at last the long tedium of the blockade would be ended. The sea was smooth, but a heavy swell rolled in upon the beach; the heat was fierce and oppressive.

At 9.40 a.m. the *Texas*, *Iowa*, *Indiana*, and *Brooklyn* opened a tremendous fire on the TERESA, before she had turned to the west. The Spanish batteries at once answered, firing furiously at the Americans with the two guns on the Socapa heights which would carry. Cervera only replied with a few shots until his ship had turned westwards, bringing her port broadside to bear.

Before she had seriously engaged the TERESA had already suffered considerable loss of life; water was entering the ship from shot-holes; and, according to her pilot, her woodwork was on fire, and this in spite of the fact that at first many of the American shots fell short. As their ships closed in, and the range was reduced from 6000 or 5000 yards to 3000 and 2500, projectiles began to rain about the flagship. In the stillness of the summer air, a thick haze of smoke quickly settled down upon the water, through which the forms of the big cruisers could be indistinctly seen moving rapidly west. First the TERESA and then the other three cruisers passed between the land and the American blockading line, the ships of which had not as yet been able to work up to any great speed. They fled to the west, and the Americans followed in hot pursuit.

The destroyers emerged last from the harbour. It is said that they delayed to get a higher steam pressure, but if so, they lost the support of the big cruisers and gained little or nothing. The FUROR, in charge of Captain Villaamil, led out, and at first moved towards the east, but seeing the armed yacht *Gloucester* approaching from that quarter, turned and fled westwards, followed very closely by the PLUTON. The smaller guns of the American ships *Indiana*, *Iowa*, *Oregon*, and *Texas* were directed upon them at ranges of 4000 yards or more. The *Gloucester*, however, was their most terrible antagonist. Her captain, Lieutenant-Commander Wainwright, had with admirable judgment slowed as the big cruisers came out, to get a good head of steam. The moment



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The Spanish Destroyer PLUTON.

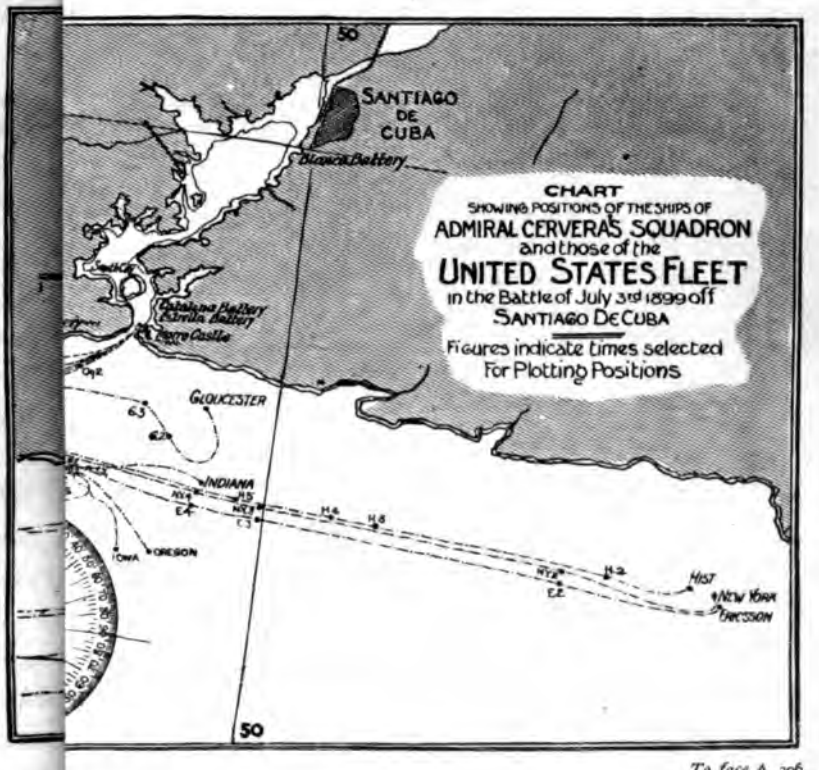
the destroyers showed his vessel flew towards them, at seventeen knots, steering on a convergent course, and opening fire at 2500 yards with her 6-pounder and 3-pounder guns. One 3-pounder and two 6-pounder guns on the starboard broadside were trained on the PLUTON, which boat rapidly gained on the FUROR; two 3-pounders were kept going on the latter. Though the Spanish vessels had a battery of vastly superior power to the *Gloucester's*, in all four 14-pounders, four 6-pounders, and four 1-pounder Maxim guns against the *Gloucester's* four 6-pounders, four 3-pounders, and two mitrailleuses, they never hit their enemy. Many shots struck the water close to the *Gloucester*, or whistled over her men's heads; none hulled her. The steady succession of reports which betrays the use of an automatic gun caught her crew's ears, and they marked a line of foam moving rapidly towards them as the Spaniards found the range, but when only about twenty yards from the vessel the automatic gun's fire ceased, saving the *Gloucester* from terrible loss and damage. Both the destroyers had 14-inch torpedoes in their tubes ready, but neither made any attempt to use them, though against such a vessel as the *Gloucester* they might have been employed with great effect. The crews of the destroyers seem to have lost their presence of mind in the awful hail of projectiles which broke upon them.

The PLUTON, repeatedly hit, was now in difficulties, leaking heavily. She headed for Punta Cabrera, when as she neared the land a 13-inch shell from the *Indiana* struck her amidships, exploding her forward group of boilers, and killing every man in the engine-room or

stokeholds except one engineer and one oiler.[1] "The scalding water," said one of her survivors, "stabbed the men like sword-blades." Almost cut in two, and quite unmanageable, she ran violently upon the rocks, tearing open her bow, rebounded, and slowly sank. Many of her men during the chase had jumped overboard to escape the terrible fire of the Americans, and were for the most part drowned. Others escaped ashore when she went down; twenty-six officers and men were rescued by the *Gloucester*.

The FUROR fared no better. Early in the action the forced-draught mechanism was disabled by a shell and the boilers injured. The *Gloucester* at 600 yards hit her again and again. The boatswain was cut in two, and portions of his body were entangled in the steering gear; the engine-room was struck, the engines injured, and the ammunition in the after shell-room exploded by one of the enemy's projectiles. The FUROR was now circling wildly in the water, firing no longer, with a heavy list, and with steam and smoke pouring from her. She showed the white flag, and boats were sent to rescue the living on board her. The Americans found her in a horrible state—a perfect shambles and burning furiously. "She was on fire below from stem to stern, and on her spar-deck were the horribly mangled bodies of some twenty of the officers and crew," says one of the Americans who boarded her. One of the unwounded Spanish officers on

[1] That she was struck by so heavy a shell is now denied (New York *Sun*, April 25, 1899). The *Yankton*, examining her wreck, found that she had been riddled by 6-pounder shells. On the other hand, Captain Taylor of the *Indiana* states positively that one of this ship's 13 or 8-inch shells struck her (*Century*, 58. 68).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SANTIAGO
DE
CUBA
Blanco Battery
CHART
SHOWING POSITIONS OF THE SHIPS OF
ADMIRAL CERVERA'S SQUADRON
and those of the
UNITED STATES FLEET
in the Battle of July 3rd 1899 off
SANTIAGO DE CUBA
Figures indicate times selected
For Plotting Positions
Estrella Battery
Morro Castle
GLOUCESTER
INDIANA
IOWA
OREGON
HIST
NEW YORK
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jumping overboard from her had his foot cut off by a blow from one of the propellers, which are said to have killed several men. Almost as soon as the survivors had been removed there was a series of explosions, her stern dived, and she went to the bottom. Nineteen officers and men were taken prisoners from her, and a few escaped by shore to Santiago. The loss of life in the destroyers was somewhere about 40 in the PLUTON, and 37 in the FUROR. The *New York* fired her only shots in the action at these boats as she passed them on her way to overtake the fight that was still proceeding between the Spanish cruisers and the main force of the American fleet. The end of the destroyers came about 10.35 or 10.30, nearly five miles from the Morro.

Whilst the fight with the destroyers was in progress, the battleships and cruisers of the American fleet were in full pursuit of Cervera's cruisers, firing steadily at them all the time. At the very beginning of the fight, until it was seen which way the Spaniards were going to turn, there had been a little uncertainty, though the *Iowa*, *Texas*, and *Oregon* had at once headed westwards. The *Brooklyn* at first closed in on the harbour mouth; then circled outwards, all but colliding with the *Texas* as she came round to starboard, and compelling that ship to go hard astern. It was a very critical moment for both ships, and caused Captain Philip far more uneasiness than all Cervera's shells. The *Brooklyn*, the *Oregon* with clouds of smoke pouring from her funnels, and the erstwhile lame duck *Texas* kept pace with the Spanish leaders, though well behind the head of the Spanish line.

The Spanish broadsides rang out with a rapid and

mechanical regularity; they fired faster than the Americans, but always too high. Their great 11-inch shells could be seen sailing over the *Iowa's* deck, sometimes just missing the forward turret; sometimes all but grazing the conning-tower. Through the dense curtain of smoke it was difficult for the Americans to lay their guns, and the utmost caution had to be exercised to avoid firing into friends in the general excitement and confusion of the swift and furious pursuit. Only a minute or two after she rounded Socapa Point the TERESA had been observed to be on fire astern when the smoke about her lifted. In a very few minutes her speed fell, and she dropped towards the rear, about four miles from the Morro. The damage had been done by an 8-inch shell, which struck her stern, presumably as she was rounding the bank off the Socapa, and exploded in the Admiral's cabin. This was roofed and panelled with wood, and blazed up furiously. The same projectile cut the fire-mains, so that though the pumps were set to work no water could be obtained. The precaution to connect and carry hoses from the pumps in the engine-room does not appear to have been taken before the battle in her case. Fires broke out in other directions as the American shells struck her, and the smoke and heat of these drove the men from the after guns.

At first Cervera is said to have thought of closing in on the *Brooklyn*.[1] He turned west, slightly towards her, but in this position, whilst almost end-on to her and at a very

[1] So the earlier accounts of the battle. Later evidence makes it almost certain that he had no wish to close, and only desired to get away.

considerable distance, the TERESA was struck on one of her 5·5-inch gun-shields by an 8-inch shell which exploded, the fragments ranging aft along the upper deck with the most devastating effect, putting two of the 5·5-inch guns out of action and killing or wounding many of the men. Two heavy shells struck her just under the after barbette, and exploded in the after torpedo-room, completely wrecking that part of the ship, and tearing a huge hole in the starboard side. About the same time another shell burst over the engine-room, and was reported at the time to have fractured the main steam-pipe—though this statement has since been proved incorrect. The ammunition hoists to the quick-firers, in the fearful confusion caused by the incessant bursting of the American projectiles in the ship, and the dense, choking smoke which filled her decks below, could not be worked; they had performed badly from the start. The cartridges when they came up did not always fit the guns; more than once seven had to be rejected before one serviceable cartridge could be found. If the defective cartridges were thrown down on the decks it would account for the frequent explosions which were noted in this and the two other Spanish belted cruisers. Electric primers missed fire, as they often will in the din and confusion of the combat, and favourable opportunities were lost. Breech-plugs heated and refused to close; firing-pins blew out and wounded the gunners. And thus it came about, that though the TERESA aimed a hot fire at the *Brooklyn*, the big American cruiser still drew ahead uninjured.

Admiral Cervera stood on the bridge in the storm of shot and shell, and several men were killed or wounded

about him. "It was like hell on the bridge," said one of the Spanish officers after the battle. "Shells were bursting all round us." Captain Concas was wounded; the second in command could not be found. The fire aft was developing so fast that Cervera gave orders for the after magazine to be flooded. But the smoke below was so thick that the valves could not be reached, and nothing could be done. Fire had now broken out also in the forecastle. The upper works were riddled and the crew was demoralised. Fearing a great explosion every moment, Cervera consulted his surviving officers, and these decided that further resistance was hopeless. He headed for the shore to beach the ship, and the TERESA took the ground in Nima-Nima Cove, six and a half miles from the Morro. Orders were given to lower the flag. Of the officers five at least were killed and four were wounded. Efforts were made to get the survivors ashore as quickly as possible, but the first two boats lowered had been damaged and would not float. The *Gloucester* then despatched her boats to the rescue, as did the *Indiana* and *Harvard* later in the day. Admiral Cervera was captured by one of the *Gloucester's* boats.

The OQUENDO was the next ship to go, and was the most terribly punished of Cervera's squadron. She was struck repeatedly before she had cleared the entrance to the harbour, and then had to run the gauntlet of the fire of the entire American fleet. It was the murderous effect of this early fire from the American guns, says Captain Chadwick, which decided the battle.[1] The

[1] Cf. Official Reports, 536: "The fire was deadly in its destructiveness, and although the COLON escaped with small injury, due to her

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The MARIA TERESA—broadside view of wreck after surrender.

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OQUENDO's fore turret was hit on the gun-port by an 8-inch shell, which scored the gun, pierced the 2·75-inch armour of the hood, shattered all the pipes and connections, jammed the turret, and killed every man in it but one. Next day the body of a petty officer was found in the sighting-hood, in the attitude of aiming the gun, whilst a gunner stood with his dead hand on the lever for running out the weapon. The heavy parts of the gun-mount were, however, uninjured, and the gun itself was not damaged. In the after turret the ventilation was so bad that the men could not endure the stifling atmosphere. The officer in command opened the door to the rear, when a shell struck him and killed him. Two fires quickly broke out, one in the after torpedo compartment, where an American projectile struck and detonated a 14-inch torpedo with terrible effect, causing a fearful explosion, which completely wrecked that part of the ship above the protective deck, and severed the fire-mains; the other well forward on the orlop deck, which was got under. An 8-inch shell, followed by several 5-inch, 4-inch, and 6-pounders, put three of the five port 5·5-inch guns out of action, whilst the ammunition hoists refused to work. The two remaining 5·5-inch guns fired furiously, but they were now practically the only serviceable weapons in the ship. The guns of no less than four American ships were directed upon the OQUENDO in reply—of the *Oregon* at a range inside 2000 yards, of the *Texas* at 2500 yards, of the *Iowa* at inside 3000 yards, and of the *Indiana* at 5500

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greater speed, and being in a measure covered by other ships, the VIZCAYA was hopelessly crippled before she had gone a mile from the Morro." So also Müller, 103-4.

yards, whilst the *Brooklyn* at intervals gave her a shot. The *Iowa's* report states:—"The *Iowa* was headed off with port helm for the third ship, and as she approached the helm was put to starboard until our course was approximately that of the Spanish ship. In this position, at a range of 1400 yards, the fire of the entire battery, including rapid-fire guns, was poured into the enemy's ship." Many projectiles from these vessels passed clean through the Spanish cruiser. Captain Lazaga, fearing the explosion of his after magazine, and seeing that his ship had no chance of escape, ordered all her torpedoes except two to be discharged, and headed for the shore, having run about two miles further than the TERESA. She turned towards the coast with clouds of smoke and tongues of flame trailing from her stern. Her flag was lowered by one of her lieutenants, Don Juan Azuar; the second and third in command and three lieutenants had already fallen in the battle.

Both masts fell, whether as the result of damage by the American fire to the stays or structure or from the shock of grounding, is uncertain. Captain Lazaga was reported to have poured oil on the decks, when he saw that the ship was lost, to make them burn more fiercely, and then to have shot himself in the conning-tower. But there seems not the slightest foundation for this story, since officers of the crew state that he was drowned while endeavouring to reach the shore. About one-fourth of the crew were placed *hors de combat.* In the earlier accounts of the battle sensational reports appeared to the effect that the engine-room and stokehold complements perished below, being unable to open the shell gratings, which had

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The OQUENDO—stern view, looking down on wreck.

been jammed. Fortunately there is every reason to suppose such stories to be ill-founded exaggerations. The survivors of the crew were rescued by the *Gloucester* and *Harvard's* boats at no little risk to the Americans.

The third ship to go was the VIZCAYA. She engaged the *Brooklyn* at about 2500 yards, the *Texas* at 6000 yards, the *Iowa* at 8000 yards, and the *Oregon* at about 3000 yards, mainly concentrating her fire upon the *Brooklyn*. Like the TERESA, she was set on fire early in the battle by a shell which burst in the officers' quarters. Her Captain, Eulate, thus describes his plight:—"The firing was terrific; shells were bursting all around us. My ship was set on fire by a shell exploding in my cabin. My engines and pumps were disabled, and I could not fight the flames. My men were being killed and wounded in large numbers. A shell finally exploded in one of my forward compartments, and I was forced to head for the shore." On the main-deck under the rain of projectiles the men could not stand to their guns, and several are said to have been shot by the officers for bolting from the fire of the enemy. In the tops of the military masts there were soon none but killed and wounded, and at the close of the action both masts came down, the mainmast falling over and jamming the after turret.

The scenes below were appalling. The wounded were not, apparently, sent below the armour-deck, but were attended to in the sick-bay, when this caught fire. So many were injured that the surgeons abandoned all efforts to deal with the mass of human suffering, and fled from the blazing charnel-house to the upper deck. An

American projectile struck the forward part of the ship, and, exploding, killed or wounded fifty or sixty men. "I do not believe," says a Spanish officer, "that a man in our ship did a cowardly act, but many of us were perfectly distracted. The flashes of exploding shells, the shriek and roar of the missiles passing over us, and the rattle of the lighter shot on the steel decks made a fearful din. It was impossible to think of or hear anything else. After about fifteen minutes I did not hear a single command given. The officers screamed their orders for a while, but soon they could not make themselves heard, and there were few to obey." Another officer tells us:— "The fire was terrific; shells were continually striking us at all points, and it seemed as if each shell started a new fire wherever it struck. Our men were driven from their guns by the rain of secondary battery projectiles, and by the flame and smoke of burning wood in our ship. In twenty minutes fires had started fore and aft. The decks and the joiner work in the officers' quarters and all along the berth-deck took fire."

What passed in the engine-rooms is thus described by one of the *Iowa's* officers, after interviews with the prisoners:—"Captain Eulate and several officers declared that two boilers exploded, but I am quite sure they were in error. It is likely that steam-pipes may have ruptured, but highly improbable that the boilers actually exploded. One of the engineers said that water came into the engine-rooms and fire-rooms, and that the cranks revolving blinded every one in the engine-room with flying water and oil. The pumps were choked with debris and would no longer free the bilges of water. The Chief

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The VIZCAYA—starboard-quarter view of the wreck.

Engineer was killed by escaping steam, and the greater part of the engineers' force were either drowned or scalded."

The surrender of the TERESA and OQUENDO soon brought that of the VIZCAYA, as the American ships were free to turn most of their fire upon her. It is said that her destruction was virtually completed in six minutes. In one blaze of flame, with her gun-deck burning furiously, all her deck superstructures demolished by the hostile fire, and dense clouds of smoke pouring from her, she turned in-shore about 11.15, at Aserraderos, fifteen miles from Santiago, and struck her flag. The torpedo boat *Ericsson* was close astern of her, and was preparing to torpedo her when this happened. About this time the *Iowa* was ordered by signal from the *New York* to resume her blockading station ; the *Indiana* had been sent back a few minutes before.

There remained now only the CRISTOBAL COLON, whose performance in the action is of the utmost interest, from the light it sheds upon one of the most important problems of naval construction—the distribution of armour. The tests applied to her by the hostile fire and the ranges at which she fought, therefore demand great attention. Leaving the harbour third in the line, she was 2800 yards from the *Iowa*, slightly more from the *Texas* and *Oregon*, and just 3000 from the *Indiana*. The *Texas'* and *Indiana's* reports mention having fired on her at this point. The *Iowa* and *Brooklyn* were busy with the TERESA, OQUENDO, and VIZCAYA. The COLON's officers expressly stated, that whilst coming out and rounding the Diamante Bank they were fired upon by all the American ships. It is fairly

clear then that she had to face the same preliminary ordeal as the other three Spanish cruisers, an ordeal which, if Spanish authorities can be trusted, took much of the fight out of them. That the COLON did not suffer must have been due to either her wide surface of armour or to her freedom from the wood fittings that so hampered the crews of the other Spanish ships, or to both.

When the TERESA turned to run ashore, the COLON was thus placed with regard to the other American ships :—

Oregon, abeam, 1800 yards.
Iowa, on the quarter, 4200 yards.
Indiana, astern, 7000 yards.
Texas, fire blanketed by the OQUENDO, 3900 yards.
Brooklyn, abeam, but nearer to the VIZCAYA than to the COLON, therefore probably firing on the former, 3000 yards nearly.

At this time the *Oregon* is stated by officers on board, though the statement is not in the reports, to have been firing on the VIZCAYA, OQUENDO, and occasionally on the COLON, which was hidden to some extent by the smoke from the two former Spanish ships, and which seemed to be attempting to seek cover behind the VIZCAYA and OQUENDO ; the *Texas* by her reports was firing chiefly at the OQUENDO ; the *Indiana* and *Iowa* at extreme ranges were also firing at the OQUENDO.

The next position marked on the official plan (No. 5) is at 10.30 a.m., or about fifty minutes after the COLON'S battle had begun. She was now drawing fast ahead ; the distances of the American ships within 8000 yards were :—

Oregon, abaft the beam, 3400 yards.
Iowa, on the quarter, 7400 yards.
Texas, on the quarter, 3400 yards.
Brooklyn, on the beam, 3500 yards.

The *Iowa's* fire at this range could effect little, and was mainly directed upon the VIZCAYA, now the only other Spanish vessel afloat; the evidence of the hits and their direction, as well as the express statement of Captain Cook,[1] show that the *Brooklyn* was firing upon the COLON, as well as upon the nearer VIZCAYA; the *Texas*, equidistant from the VIZCAYA and COLON, was probably firing mainly upon the former, since Captain Philip, in his account of the battle, says nothing about firing at the COLON at this point. The *Oregon*, according to the same authority, was firing upon both enemies.

At 11 or 11.5 a.m. the VIZCAYA turned in-shore. The COLON, according to the official plan, was now 11,000 yards from the *Brooklyn*, and 12,000 yards from the *Oregon*, figures which are excessive, as to have reached this position she must for the last thirty-five minutes have steamed at a rate of over twenty knots; and this, we know, was not the case. Such difficulties which arise after even the most careful comparison of evidence show how exceedingly hard it is to obtain certainty, and lead us to suspect that the COLON's position at 10.30 should have been somewhat further from the enemy. In any case the Spanish cruiser was now well outside effective range. Her pace fell about 12, and her pursuers, the *Brooklyn*, *Oregon*, and *Texas* in the order named, with the *New York* now fast coming up astern, gained on her. About 12.50 p.m. the *Oregon* opened fire from her fore turret, and a little later the *Brooklyn* opened with her 8-inch weapons. The shots dropped near the COLON and took all the fight out

[1] *Century*, 98–99.

of her. This splendid ship, intact in every respect, undamaged, well protected by armour, carrying a powerful battery, and with a loss of only one man killed and sixteen wounded, headed precipitately for the shore at Rio Tarquino, and hoisted the white flag at 1.15 p.m. That she should thus have surrendered seems extraordinary, even though she had three enemies of equal or superior tonnage behind her. The Spaniards opened the sea-cocks and sank her, whilst they disabled the guns by throwing the breech-blocks overboard. The average speed of the ship through the fifty-five miles which she travelled from the harbour mouth was 13·9 knots. There were times when her speed rose to seventeen knots, but, owing to the bad physique of her stokers and engineers, this pace could not be maintained. Her men had been sent ashore at Santiago to fight, and had not received proper food, when they returned on board. They were plied with brandy for the fight, and at first did well enough, but, the reaction coming, could not be controlled. It is said that a mutiny took place below the armour-deck, and that the escape-pipe valves were opened by the engine-room force, who had had enough of the fight. What is certain is that the bodies of several men were found with bullet-wounds, in the stokeholds and on deck, and the crew declared that these men had been shot by their own officers for attempting to leave the stokeholds.[1]

The surrender of the COLON was received by the *Brooklyn's* Captain in his launch. A prize crew was hurriedly detached from the *Brooklyn* and *Oregon*, and was sent on board, but she could not be saved. At 7.30

[1] *Century*, 110.

p.m. she slipped off the reef, on which she had run, into deep water and sank.

Recurring to the American ships and their exploits, the *New York* turned back from Siboney about 9.40 a.m., on her way ordering the *Resolute* to call up the *Massachusetts* by telegraph from Guantanamo, and crossed the field of fire of the Santiago batteries, without, however, receiving any damage. She discharged three 4-inch shells at the FUROR, which were the only shots she fired during the day. The TERESA, OQUENDO, and VIZCAYA were finished off before she could arrive. She passed several Spaniards in the water; one of them right in her course shouted "Amerigo! Amerigo! auxilio! auxilio!" His appeal fell upon merciful ears. The ship's course was changed to avoid running him down, and a seaman flung him the chaplain's reading-desk. Life-belts were thrown to the other Spaniards in the water, and most of them were picked up by the small craft, after the first stage of the battle. No cheers burst from the *New York's* men as they passed the burning hulls of their former enemies. Like Captain Miller, himself an American born, at the battle of the Nile, and like Captain Philip, all felt that exultation was impossible whilst brave men were dying.

Joining in the chase of the COLON, she came up directly astern of that vessel, and was at 1.15 going sixteen and a half to seventeen knots, which was about the maximum pace possible with only one set of engines coupled. She did not stop to connect the other set. She was uninjured, and suffered no loss. When her crew saw that the Spaniards were coming out, they were, says an

officer on board, "crazy to get at the 'Dagoes.' One man shouted—'We'll kill every —— one of them! Where's my dirty clothes?' [The crew were in their Sunday best.] And that was the universal cry—for a fight to the death. All hands took off their clean Sunday clothes and put on their dirtiest habiliments." The appearance of the battle as viewed from her upper deck, soon after the Spaniards had come out, is thus strikingly described by Assistant-Engineer Bennett:—"A great cloud of yellowish-white smoke filled the narrow harbour gap that we had watched so long, and rose higher than the Morro and the neighbouring hills. Under it, and partly obscured by it, were the big black hulls of the Spanish ships steaming swiftly, close together, in line ahead, and glowing with the fire of their guns. Our own ships looked far out and beyond the enemy, and were rather widely scattered. Each was in a cloud of its own smoke, literally blazing with gunfire, the *Iowa* especially looking like a volcano in violent outburst. One thing that impressed me particularly was a great splashing in the water near the Spaniards, showing that many of our projectiles were falling short."

After the action, the *New York* was set the delicate task of pushing the COLON up the beach, to preclude her sinking into deep water. This demanded consummate seamanship, and was, it may be, one of the best performances of a wonderful day for the American fleet. The *New York* ran gently in with a rope fender on her bows, placed her ram against the COLON's starboard quarter, and forced the hull of the Spanish cruiser in. Suddenly, however, the COLON rolled over in shallow water on her

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The wreck of the CRISTOBAL COLON at Rio Tarquino.

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port beam, and was left with her starboard guns pointing to the sky.

The *Ericsson* prepared to torpedo the VIZCAYA, after taking the fire of the Santiago batteries without injury, but when the enemy turned in and ran ashore, drew off and headed after the COLON. She was ordered by the flagship to stay behind and pick up several Spaniards in the water. Then she ran in to the rescue of the VIZCAYA's crew. That ship was on fire fore and aft, and the heat was exploding her ammunition and guns. To approach her was excessively dangerous. With splendid courage Lieutenant Usher rescued twenty officers and men from her deck, many of them severely wounded, and then retired, towing the VIZCAYA's cutter loaded with prisoners.

The *Indiana* was ready for action at 9.37, and, being opposite the harbour mouth, fired on each Spanish vessel as it emerged. She reserved her 13-inch weapons till it was certain that the Spaniards were not going to dash through the centre of the American line; in case of an attempt on their part to ram or torpedo him, it was Captain Taylor's intention to steer so as to keep the enemy under his broadside as long as possible, and then turn and meet him bows on. He thought that his ship's powerful battery would crush or sink his enemy before the moment of actual contact. When the Spanish ships turned west, the *Indiana* directed her heavy guns upon the TERESA and OQUENDO, firing her secondary battery at the destroyers. The range varied from 4500 to 2000 yards, by angles from the top. The *Indiana* claims the hit on the belt of the TERESA for one of her 13-inch

shells. At 10.15 she concentrated her fire on the destroyers and helped to knock them to bits. Next she turned her weapons on the VIZCAYA at extreme range. After this she ceased firing and returned to her watch off the harbour, where, about 12.40, she sighted the Austrian cruiser *Kaiserin Maria Theresia*, which was at first taken for a Spanish ship. The *Indiana* was twice hit, but was uninjured and suffered no loss. She fired common shell, except from her 6-pounders, which used armour-piercers. "The good effect of the common shell," says Captain Taylor, "is shown by the fires on the enemy's ships, and the short time taken to disable them, without piercing their armour." The number of rounds fired was 1876—thirteen from the 13-inch, sixty-one from the 8-inch, thirty-three from the 6-inch, 1744 from the 6-pounder, and twenty-five from the small guns.

The *Gloucester* closed in on the destroyers in magnificent style, steaming seventeen knots under forced draught. She poured a terrific fire from her 6-pounders upon these enemies, and herself escaped uninjured, chiefly through "the accuracy and rapidity of her fire."[1] She ran great risk from the fire of her friends. An 8-inch shell from the *Iowa* only just missed her bow; and she cut in across the line of the *Indiana's* fire. This was due to a mistake of Commander Wainwright's, who read the signal of the *Indiana*—"The enemy's torpedo boats are coming out," as "Gunboats close in!" After the destroyers were out of action she lowered her boats to save the lives of their crews, and she also sent boats to the TERESA and OQUENDO. Her men repeatedly

[1] Lieutenant-Commander Wainwright's report.

risked their lives in boarding the cruisers and destroyers whilst their magazines, guns, and boilers were exploding. A boat from the *Gloucester* received the surrender of Admiral Cervera, who had escaped from the TERESA to the shore. He was conducted on board the *Gloucester*, and was there received with the greatest kindness by the American officers, who at this moment did all they could to cheer his spirits, and afterwards fought in the most chivalrous manner for his reputation. Lieutenant-Commander Wainwright draws attention to the fact that not a tube leaked or a brass heated when the yacht's pace was forced, and compliments the engineer staff, as well he may. The *Gloucester* fired 589 6-pounder and 780 3-pounder shells. She was the target of the Socapa batteries during her action with the destroyers, but when it was seen that she was rescuing the wounded, the Spanish guns ashore ceased their fire.

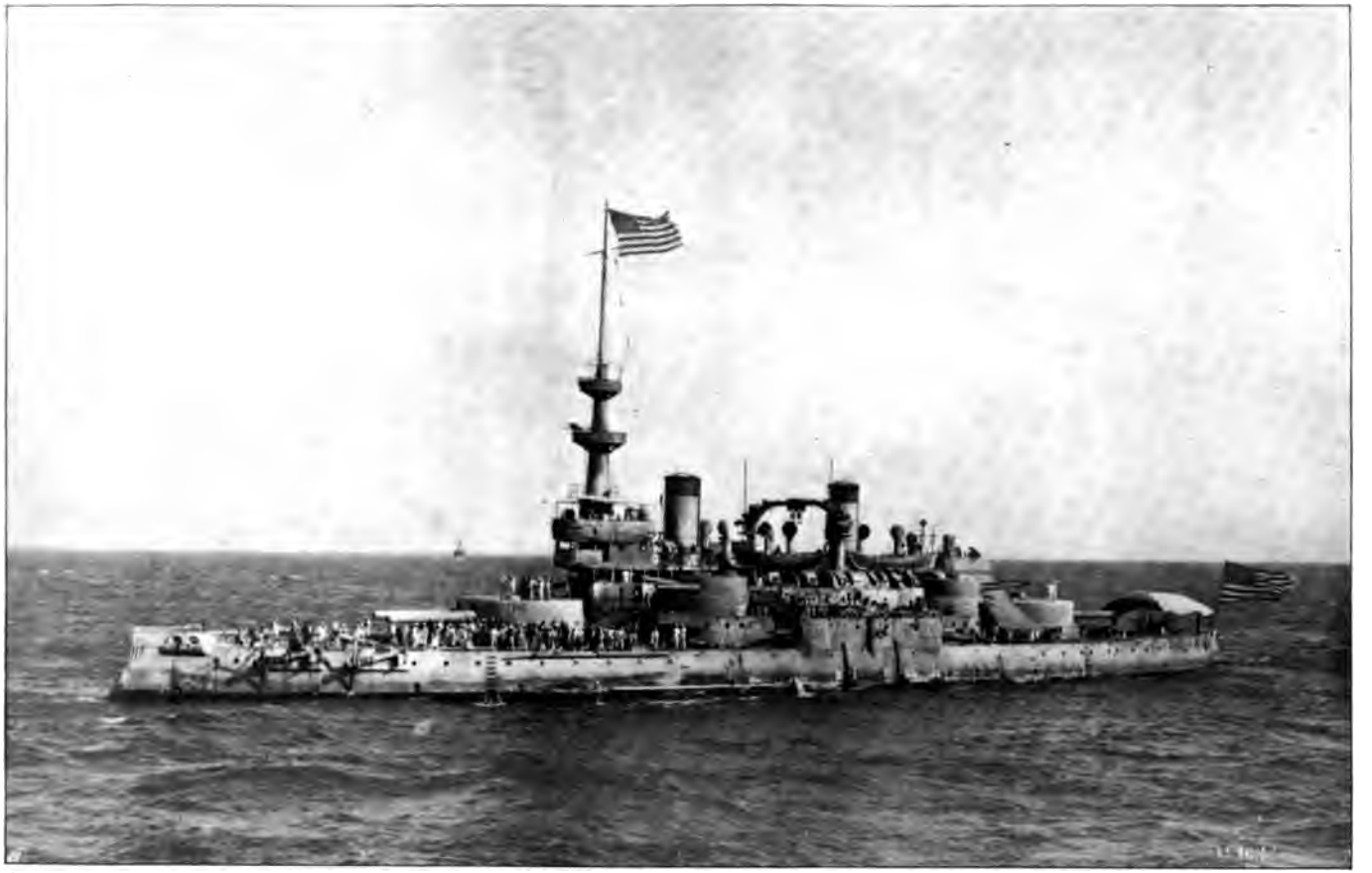
The *Oregon* saw the enemy at 9.30, and became the target of the Spanish fire as she put on forced draught and gave chase. For some time "there was an almost continuous flight of projectiles over this ship, but when our line was fairly engaged, and the *Iowa* had made a swift advance, as if to ram or close, the enemy's fire became defective in train as well as range."[1] She passed all the American ships, except the *Brooklyn*, with flames and dense banks of smoke pouring from her funnels, and a great wave rising over her bows. At first she used only her heavy guns, and kept the crews of the small quick-firers in reserve, under the lee of the turrets, but when the destroyers were seen the smaller weapons as

[1] Captain Clark's report.

well as the 6-inch guns were directed upon them. She raked the TERESA, fired into the OQUENDO and COLON, and repeatedly struck the VIZCAYA. A 13-inch shell from one of her guns was thought to have caused the first fire in the VIZCAYA. She also hit that ship on the port bow, just as the Spaniard was attempting to cross her bows, a movement which is not shown in the official plan. Then raising her speed to sixteen knots with forced draught, she came up on the COLON'S quarter, and fired six 13-inch shells at her, which decided the Spaniards' surrender. The *Oregon* was hit three times but sustained no damage. She fired thirty-four 13-inch shells, 123 8-inch, forty-one 6-inch, 1564 6-pounder, and 141 1-pounder and smaller rounds.

The *Iowa* was probably the first ship to see the Spaniards. Quickly as her men went to general quarters they might have done an even better record, had they not in the first instance supposed the call to be a mere piece of routine practice. None the less they stowed in a safe place the ship's pet dog, cat, and goat. At 9.40 the *Iowa* opened at 5000 yards, closing rapidly in on the Spaniards, on a convergent course, intending to ram either the first or second ship, but as Captain Evans found his speed too slow for this, he altered course to steer parallel with his enemy. The starboard broadside was poured into the TERESA at 2500 yards, into the VIZCAYA at 2100 yards, and into the OQUENDO at 1600,[1]

[1] The Official Report says 1800 yards for the VIZCAYA, and 1400 yards for the OQUENDO. But there is good reason to think that the distance was under-estimated, and Captain Evans in the *Century* (53) puts the distance at 1600 yards for the latter ship.



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The *Oregon* immediately after the battle of July 3.

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when the quick-firers opened. Such a terrific fire was hereabouts poured into the last-named Spanish ship by the *Iowa* and *Indiana* that she seemed almost to stop, and it could be seen that her plight was deplorable. On the destroyers appearing the lighter guns and the 6- and 8-inch pieces were turned upon them at the extreme range of 4500 to 4000 yards, whilst the heavier guns played on the TERESA, VIZCAYA, and OQUENDO. When the first and the last abandoned the fight, attention was concentrated upon the VIZCAYA. The *Iowa* sent her boats to the rescue of the VIZCAYA'S crew, and these brought off Captain Eulate of that ship, 25 officers and 250 men, besides five men who were terribly wounded, and died in the boats. Many of the Spaniards had escaped to a sandbank, but only to be assailed by fresh enemies. On land the Cubans attacked them with a steady fire; in the water, which almost reached to their armpits, the sharks, attracted by the blood of the wounded, dashed at them. But the American boats came as swiftly as possible to their help. Many brave deeds were performed by the American seamen. A boatswain's mate climbed the hissing side of the VIZCAYA to save three men who hung to a rail and would not drop, though the ship's plating was verging upon red heat. He kicked them overboard, and leapt coolly after them, having faced the danger of exploding magazines. Of the rescued thirty-two were wounded. The injured Spanish officers and men showed great courage when they came over the side. Captain Eulate, severely wounded in the head, tendered his sword, which Captain Evans, amidst the cheers of his crew, refused to accept. Lieutenant Luis

Fajardo y Pinzon climbed up the side with slight assistance, stood at attention and saluted, with his left arm hanging only by a muscle. None of the Spanish wounded groaned or murmured. The *Iowa's* main battery fired with great effect inside the range of 2500 yards; the projectiles expended by her were:—

31 12-inch semi-armour-piercing, with full charges.
35 8-inch common shell, with full charges.
251[1] 4-inch common shell.
1056 6-pounder common shell.
100 1-pounder common shell.

The battery behaved well. The injuries to the ship were of trifling importance, though eleven projectiles struck her. A 6-inch shell hit the hull forward, two or three feet above the water-line, but did not explode; it entered slantingly, making a large ragged hole sixteen inches by seven inches, perforated the partition bulkhead between two coffer-dam compartments, but did not pierce the inboard bulkhead of the coffer-dam. The second projectile, a 6- or 4·7-inch one, went through the side and the coffer-dam, five feet above the water-line, and exploded in the ship, the fragments striking the chain locker, and cutting through a sheet chain wound round the 6-pounder ammunition hoist. The explosion tore up the linoleum cemented to the steel deck, and caused a small fire, which was quickly put out. Both projectiles came from the COLON.

These two wounds did not admit the water, as the cellulose swelled and automatically plugged the shot-

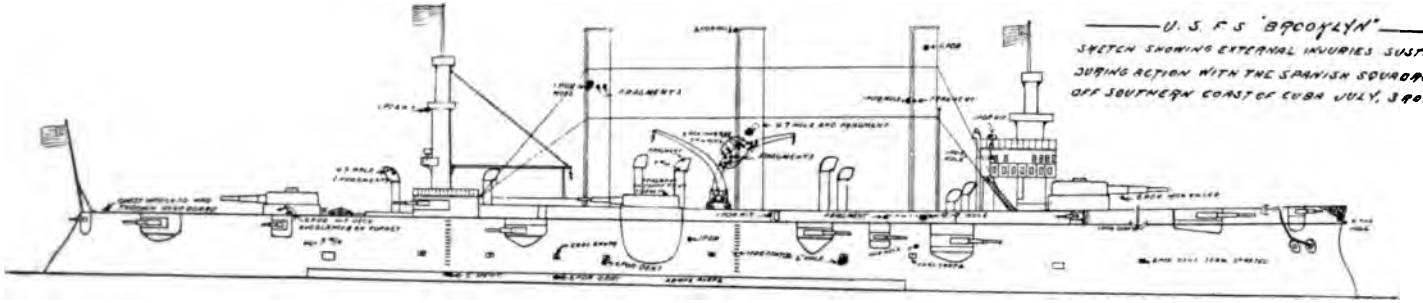
[1] Of these 135 were fired in fifty minutes from a single gun; 440 shots were in the same time got off by two 6-pounders.

holes. On the upper bridge was one hit from a small projectile; in the funnels three; on the side near the after starboard 8-inch turret two, and just forward of the after 12-inch turret one hit. Several shell splinters struck this turret, but of course failed to do more than dent its thick armour. Just abaft the turret was another hit, probably a 6-pounder, right on the water-line. A good many of the gun crews suffered from the blast of the heavy weapons, the men at the 6-pounders being driven once or twice from their guns. "I cannot express my admiration," says Captain Evans, "for my magnificent crew. So long as the enemy showed his flag they fought like American seamen, but when the flag came down they were as gentle and tender as American women."

The *Texas* was three miles S.S.W. of the Morro when the Spanish ships appeared. She put forced draught on all her boilers and went ahead full speed, opening fire at 9.40 on the TERESA. The *Brooklyn's* eastward turn, however, brought some risk of a collision with the *Texas* in the dense clouds of smoke which hid the details of the battle and the movements of the American vessels. The *Texas* was compelled to reverse engines and go astern for a few seconds. When the destroyers came out she turned her secondary battery on them, whilst engaging with her main battery the COLON, OQUENDO, and VIZCAYA. The latter ship was attacked at long range—about 6600 yards. At 11.10 the *Texas* ceased firing and gave chase to the COLON. The *Texas'* only casualty was a man injured by being thrown down a hatchway by the blast of the heavy guns. Her decks were much damaged by the blast of the 12-inch guns, and at the close of the action there

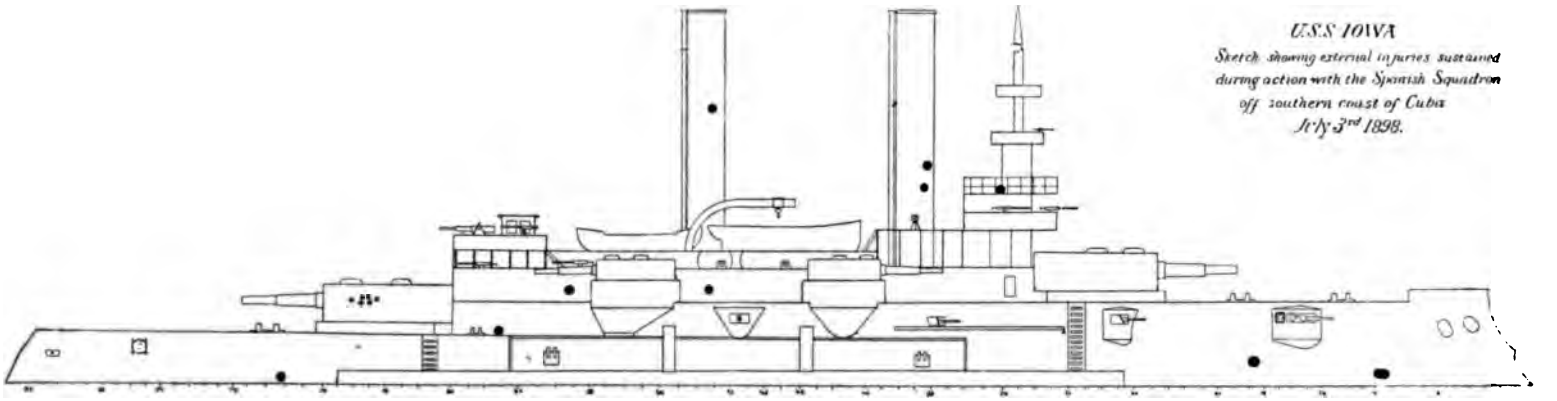
would have been some danger to the ship's structure in firing over them. She was hit several times, a shell from the VIZCAYA bursting in her funnel after perforating the starboard ash-hoist. Fragments of this shell struck the chart-house just after Captain Philip and the bridge contingent had left the upper, or flying bridge, for the lower bridge, where some of the messengers and *aides* could find shelter to the lee of the conning-tower. Had he remained upon the upper bridge he would probably have been killed, with several of the crew. Another shell burst just over the superstructure, and lifted those on the bridge in the air by its concussion. Yet the only injury was to one cadet, who had an ear-drum split. A cutter was blown to splinters, the woodwork of the superstructure torn, and the ship took fire. The fire, however, was quickly put out. The ash-hoisting engine was much injured. A third shot went clean through the unarmoured portion of her bow. Her men cheered when it was seen that the Spanish ship opposed to her was on fire. "Don't cheer, boys," said Captain Philip, "the poor devils are dying." After the destruction of the enemy's fleet he called all hands on deck to give thanks to God. The *Texas* fired eight 12-inch, ninety-seven 6-inch, 400 6-pounder, and 330 small projectiles.

The *Vixen* was four miles south-west of the Morro when the Spaniards appeared. She stood to the south-west to clear the field of fire of the American battleships, and received a broadside from the TERESA. She opened on the VIZCAYA about 11, but quickly ceased her fire on discovering that the latter's flag was down. Her average speed was twelve to thirteen and a half knots.



U. S. F. S. "BROOKLYN"

SKETCH SHOWING EXTERNAL INJURIES SUSTAINED DURING ACTION WITH THE SPANISH SQUADRON OFF SOUTHERN COAST OF CUBA JULY, 3RD 1898.



U.S.S. IOWA

Sketch showing external injuries sustained during action with the Spanish Squadron off southern coast of Cuba July 3rd 1898.

REPRODUCED BY KIND PERMISSION OF THE U.S. BUREAU OF NAVIGATION. (NAVY DEPT.)

To face p. 328.

The *Brooklyn* sighted the enemy as the *Iowa* signalled his exit. Captain Cook at once ordered steam to be raised in all boilers and general quarters to be sounded. The American flagship headed in towards Santiago, and about 9.40 opened fire on the TERESA. At this point, it is alleged by Commodore Schley's advocates, the TERESA attempted to ram or torpedo the *Brooklyn*, and Schley gave orders to the navigating officer, Lieutenant Hodgson, to turn to starboard. A great controversy has arisen with regard to Schley's conduct in the battle, and it will therefore be well to consider the exact circumstances. A turn to starboard would bring the *Brooklyn* bows-on within a few yards of the *Iowa*, *Oregon*, and *Texas*, which were now very close together, in line abreast, heading westwards as they saw that the Spaniards were moving in that direction. The smoke is reported to have been very dense, and any turn *towards* the American ships would be unquestionably dangerous. And so it is not surprising to learn that the following colloquy took place on the *Brooklyn's* bridge :—

Schley. "Put your helm hard-a-port."

Hodgson. "You mean starboard."

Schley. "No, I don't; we're near enough to them [the enemy] already."

Hodgson. "But we'll cut down the *Texas*."

Schley. "Let the *Texas* look out for herself."

The helm was ported: the *Brooklyn* turned to starboard, and in the turn came so close to the *Texas* that that ship had to go astern with both screws to avoid a collision. This movement is shown incorrectly in the official plan of the battle, which minimises

its risks.[1] By this manœuvre Schley increased his distance from the Spanish squadron and enabled the three battleships to close up considerably upon his ship.

Schley's motive, as stated by himself, was to avoid "blanketing" the fire of the battleships, which, he alleges, must have been the result had he turned to port. But if the positions shown in the official plan are correct—and the plan itself is stated to have been prepared in consequence of pressure brought to bear on Schley's behalf, so that it represents the view most favourable to himself—there could have been no such danger of interfering with his own ships' fire. On the whole, it seems probable to the writer that Schley wished to move the *Brooklyn* further out. She was a relatively weak ship but a fast one; if injured early in the action—and she was hit several times—there was a chance of the Spaniards escaping. Schley by the starboard movement concentrated his best fighting ships and took the pressure off the *Brooklyn*. It is a fact that the reports of himself and of the *Brooklyn's* Captain made no allusion whatever to this turn, and this is a little curious. But even if the turn was a grave mistake, some allowance must be made for the strain of battle before Schley is condemned. It is cruelly unjust to impugn his personal courage. The story that the turn was made to avoid the enemy's rams is discredited by Captain Evans' express assertion—"So far as I could see, during the entire action, no Spanish ship gave the slightest indication of using either

[1] Compare the plan published in the *Sun*, which agrees better with the evidence, p. 302.

ram or torpedo."[1] In the *New York* spectators thought the *Brooklyn* had been badly hit and was out of action, but when they saw her renewing the chase they again took heart. The move was really dangerous, for, as the Spaniards were shooting high, to increase the distance from them, which this outward turn did, increased the chance of being hit.

"At the time," says Captain Cook's report, "the firing was very fast and incessant, and our escape with so little injury was miraculous, and can only be attributed to bad marksmanship on the part of the enemy." The TERESA now turned in-shore, and the *Brooklyn* gave her attention to the VIZCAYA, OQUENDO, and COLON, going fourteen knots herself. When the OQUENDO dropped out, she engaged the VIZCAYA at ranges from 2000 to 3000 yards, and finally, at the close of the fight, she fired on the COLON. She thus made a fine record, attacking in turn every one of the enemy's ships. Her casualties were two—the chief-yeoman killed near the fore turret whilst finding the range, by a shell, which took off his head, and one man wounded. The ship was struck twenty times by whole shot, and oftener by fragments of shell and machine-gun projectiles. Her funnels were hit seven times, her flag at the main destroyed, and her signal halliards and flags shot away. There were two 1-pounder hits on her chart-house, one on her mainmast, one on her ventilators, and six on her broadside. A 6-pounder shell struck her bow; another, hitting the deck, glanced up against her after turret; on the broadside were two 6-inch, one 4·7 or 5·5-inch, and three 6-pounder wounds.

[1] *Century*, 55.

One of the 6-inch shells entered the berth-deck amidships, passing through a heavy coal-shoot, tore up the deck, and flung splinters in all directions, but failed to injure any of the eight men who were in the compartment. One 6-inch and one 6-pounder projectile struck her on the water-line, upon the belt, but failed to penetrate. A 4·7 or 5·5-inch shell also struck one of the after ventilators, and fragments dented the top of the after 8-inch turret. The projectiles fired by the *Brooklyn* were 100 rounds of 8-inch, 473 of 5-inch, 1200 of 6-pounder, and 200 of 1-pounder. The 8-inch turrets worked well, but the 5-inch elevating gear performed badly, and at the close of the action several guns were useless. The 6-pounders jammed three times, through shot sticking in the bore. The crew showed the greatest courage, the signalmen especially, standing in the open and calmly doing their duty. Commodore Schley set a fine example, taking his post outside the conning-tower, but close to it, so that his staff could get protection under its lee. The engineers are deservedly commended by Captain Cook for the manner in which they raised the speed from twelve to sixteen knots. At the close of the fight the *Brooklyn* and *Oregon* steamed east to look after a supposed Spanish battleship which proved to be an Austrian.

Amongst the many gallant acts of her crew, these on the part of her marines deserve mention :—

"During the early part of the action a cartridge jammed in the bore of the starboard forward 6-pounder, and in the effort to withdraw it the case became detached from the projectile, leaving the latter fast in the bore,

and impossible to extract from the rear. Corporal Robert Gray of the port gun asked and received permission to attempt to drive the shell out by means of the rammer. To do this it was necessary to go out on the gun, and the undertaking was full of difficulties and danger, the latter due in a great measure to the blast of the turret guns firing overhead. The gun was hot, and it was necessary to cling to the Jacob's ladder with one hand whilst endeavouring with the other to manipulate the long rammer. After a brave effort he was forced to give up and was ordered in. Quarter-Gunner W. H. Smith then came—sent by the executive officer—and promptly placed himself in the dangerous position outside the gun-port, where he worked and failed, as the corporal had done. Neither had been able to get the rammer into the bore, and there seemed nothing left but to dismount the gun. At this juncture Private Macneal, one of the crew, volunteered to go out and make a final effort. The gun was so important, the starboard battery being engaged, that as a forlorn hope he was permitted to make the attempt. He pushed out boldly and set to work. The guns of the forward turret were firing, the blast nearly knocking him overboard, and the enemy's shot were coming with frequency into his immediate neighbourhood. It was at this time that Chief-Yeoman Ellis was killed on the other side of the deck. Macneal never paused in his work. The rammer was finally placed in the bore and the shell ejected. The gun was immediately put in action, and Macneal resumed his duties as coolly as if what he had done were a matter of every-day routine."

Thus, after less than five hours' fighting a modern squadron was completely annihilated with infinitesimal loss and infinitesimal damage to the victors. It is the low cost at which victory was purchased that renders this great battle so honourable to the American Navy. No attempt is made in Admiral Sampson's report to determine the exact figure of the Spanish losses, but in the reports of the various captains we learn that the following vessels received the following number of prisoners:—

Harvard	35[1] officers		637[1] men	from	OQUENDO and TERESA
Resolute	14	„	494	„	COLON
Iowa.	25[2]	„	250[2]	„	VIZCAYA
Indiana, *Gloucester*, *Hist*	12[3]	„	234[3]	„	destroyers OQUENDO TERESA
	86		1615[4]		

Besides these a good many men escaped ashore to Santiago; according to *El Correo*, not less than 120 men. The Spanish survivors numbered, by Spanish estimates, 1835 men out of a total of 2227 present in battle. This gives a total of 392 as killed in action, with probably another 100 or 150 wounded. The final estimate of Spanish killed and wounded would thus amount to 540 or there-

[1] Of this gross total, 38 sick or wounded.

[2] Of this gross total, 32 wounded.

[3] At least 30 wounded.

[4] Of these 692 were sent north in the *St. Louis* and 1008 in the *Harvard*. In the *Solace* were 42 wounded. It will be observed that these figures do not tally with those given in the text, which are, however, taken from the various reports made by Captains. The Spanish journal *El Correo* gives the total of the American prisoners taken in the battle as 1715; various American (official) reports give it as 1720 men and 93 officers and servants. If so the loss was 100 less than the author has calculated.

abouts, being over 24 per cent. of the effective, as against 22·5, the Chinese loss at Yalu, 6 per cent., the Italian loss at Lissa, 16 per cent., the Dutch loss at Camperdown, and 29 per cent., the estimated French loss at the Nile. It is difficult to ascertain with any exactitude the losses of the various ships, but so far as they can be discovered they are as follows:—TERESA, crew 556, killed about 40; VIZCAYA, crew 491, killed about 200;[1] COLON, crew 567, killed 1;[2] OQUENDO, crew 487, killed about 65; PLUTON, crew 80, killed about 43; FUROR, crew 80, killed about 37. These figures do not corroborate the early and exaggerated reports that the TERESA and OQUENDO had each of them half their men killed, and that almost all the men on board the destroyers perished. Admiral Cervera's statement that 600 Spaniards had fallen in the battle is evidently an over-estimate. If the losses are any guide to the determination of the resistance, the VIZCAYA would seem to have made by far the best fight.

It is now easy to explain, what was at first most puzzling, the extraordinary disproportion of the losses and damage. On the authority of Cervera himself, his ships had a quite inadequate supply of ammunition, though his estimates of the number of rounds serviceable, given in his various letters and telegrams, do not agree. His lowest estimate allows only about ten rounds per gun to each 5·5-inch weapon in the three belted cruisers; his most optimistic estimate about twenty rounds. But as only one broadside could be engaged, this would give twenty to forty rounds per gun, a fair supply. There were

[1] Some of the Spanish survivors put the figure at "about 100."

[2] This does not include men shot by their own officers.

six ineffective 5·5-inch guns in the three ships, which we may assume to have been shifted to the starboard, or disengaged broadside, before the squadron came out. What no doubt led to the failure of the 5·5-inch guns to inflict any damage, was the defective construction of the breech mechanism, and the blowing out of the firing-pins. This would have a terribly bad moral effect on the gunners. Moreover, if the ammunition was unsuitable, consisting of armour-piercing projectiles and unfilled shells, as has been reported, we should have a further explanation of the utter incapacity of the Spanish guns to inflict damage. When the wrecks of the Spanish ships were examined, two of the OQUENDO'S 5·5-inch guns were found to have their sights set for 14,000 yards. One of the 6-pounders was found with sights set to 10,000 yards. No gun was noticed with sights set to anything like the correct range.[1]

If it be said that Cervera exaggerated, and that, bad as we now know Spanish management to have been, it is almost incredible that ships should have been sent to certain destruction with their guns virtually useless, there are many circumstances which do seem to point to shortness of ammunition, and to defective artillery—for instance, the failure to molest the *St. Paul* at the end of May, the sluggish movements of the squadron, and the evident disinclination of Cervera to force the fighting before he was ordered out. The withholding of the Spanish official report on the battle from the press, and

[1] Jacobsen, ii. 13; Goode, 229 (chapter contributed by Admiral Sampson), "Many of the Spanish sights were found after the battle to have been adjusted to a ridiculous range."

the rapid silencing of the Spanish fire in the actual engagement, supply further corroboration of Cervera's statements.

Accepting, however, all that Cervera has told us, the fact remains, that the CRISTOBAL COLON was not short of ammunition nor troubled with defective guns, yet she inflicted no damage worth mentioning. The Americans certainly found protection in their singularly accurate fire, and thus a remarkably sagacious saying of Farragut was proved to hold true now as in the days of 1864. Demoralisation quickly sets in amongst gunners who shoot at the enemy without inflicting evident injury upon him, whilst they themselves are suffering loss and witnessing the injuries caused to their own ship by his fire. The destruction of the destroyers early in the fight must have depressed the Spaniards and inspirited the Americans.[1] This is a strong argument against exposing weak vessels to an enemy's fire at the beginning of an action.

This view is confirmed by Admiral Sampson's report. "It is difficult," he says, after dwelling on the slight injury and loss suffered by the Americans, "to explain this immunity from loss of life or injury to ships in a combat with modern vessels of the best type, but Spanish gunnery is poor at best, and the superior weight and accuracy of our fire speedily drove the men from their guns and silenced their fire. This is borne out by the statements of prisoners and observation. The Spanish vessels, as they dashed out of the harbour, were covered with the smoke from their own guns, but this speedily diminished in volume and soon almost disappeared."

[1] Cf. *Ironclads in Action*, ii. 144 (ed. 5).

On examination, an American board of officers found the visible hits by the American projectiles were as follows:—[1]

	12 or 13-inch	8-inch	6 or 5-inch	4-inch	6-pounder	1-pounder	Total
TERESA	2	3	4	1	17	2	29
VIZCAYA	0	4	7	3	13	–	27
OQUENDO	0	3	2	9	43	–	57
COLON	0	0	4	0	3	–	7
	2	10	17	13	76	2	120

As a contrast with these figures it may be stated, that 464 shot and shell wounds were counted in the *Chen Yuen* after the Yalu; yet she fought to the bitter end, and emerged from the action still battle-worthy. It is certainly surprising to see three powerful cruisers of large size put out of action with an average only of thirteen hits apiece from guns of and over 4-inch calibre, especially as in one of the three there were only three hits by really heavy projectiles.

At first sight the American total of hits will appear a very poor one. Figures given by Admiral Sampson show the number of shots fired to have been as follows:—*Oregon*, 1903; *Brooklyn*, 1973; *Indiana*, 1876; *Iowa*, 1473; *Gloucester*, 1369; *Texas*, 835—a total of 9429 shots. Of these 47 were 13-inch shots, 39 12-inch, 319 8-inch, 171 6-inch, 473 5-inch, 251 4-inch, 6553 6-pounders, 780 3-pounders, 466 1-pounders, and 330 37-millimetre. The percentages of hits for the heavier guns were then:—

[1] These figures are counted upon the official diagram (Official Reports, 573), but the Board's report gives the OQUENDO four 8-inch hits. This seems to be a mistake, one hit being reckoned twice. Admiral Plüddemann credits the Americans with forty-five 8-inch hits on the VIZCAYA, and then proceeds to deny them good shooting.

13 and 12-inch	.	2·3 per cent.
8-inch	.	3·1 „
6 and 5-inch	.	2·6 „
4-inch	.	5·1 „
6-pounder	.	1·1 „

The 4-inch has the best record, but of the heavier guns the 8-inch stands out with a slight advantage over the 13, 12, 6, and 5-inch weapons. Its good shooting possibly arose from the fact that, in all the ships which used it, it was mounted very high, and that the men working it were well protected by armour, and exempt from the danger and strain caused by the blast of other guns firing past it. From the size and weight of the 8-inch shells, when hits were made, the results were particularly disastrous to the enemy.

These actual results secured in battle may be compared with those made at target practice in the British fleet. The first return is for the fleet during the year July 1897 to June 1898.

16·25 and 13·5-inch guns	.	178 rounds	21	per cent. hits.
12-inch	.	47 „	27	„ „
9·2-inch	.	207 „	32	„ „
6-inch Q.F.	.	917 „	24	„ „
6-inch Q.F.C.[1]	.	579 „	28	„ „
4·7-inch Q.F.	.	2011 „	36	„ „

The second set refers to the previous year, July 1896 to June 1897.

13·5-inch guns	.	133 rounds	27·1	per cent. hits.
9·2-inch	.	226 „	33·6	„ „
6-inch Q.F.	.	960 „	35	„ „
4·7-inch	.	2078 „	32	„ „

[1] Quick-fire converted pattern—on old carriages. The curious fact that these guns shot better than the newer types needs explanation.

Allowance must, on the one hand, be made for the not very satisfactory system of marking, for the short range, never exceeding 2000 yards, whereas the Americans opened at 6000 yards, and for the fact that the target is stationary. On the other hand, the small size of the target must be taken into account. It will not escape notice that the medium gun in this set of figures makes a better showing than the heavy weapon and than some lighter guns. The immense apparent difference between peace results and battle figures fixes the attention. It is probably the case that the shooting in the American fleet is as good as or better than that in the British fleet. We know that the *Philadelphia*, the crack American ship in 1897, had a percentage at target practice of 92, whilst several of Sampson's ships had records of 70 or 80 per cent., which were in advance of any in our Navy in 1898.[1] If guns which would make one hit in every five rounds in peace practice, only make one in fifty in actual battle, we may ascribe it in part to the disturbing influences of danger and excitement, in part to the longer and constantly changing ranges, in part to the dense smoke produced by eight or ten ships firing smoky powder from their main batteries. This is an accompaniment which is usually wanting at target practice.

As the Spanish ships were making every effort to get away, it was out of the power of the American Captains to move in to closer and more effective ranges. The net result, that the Spanish cruisers were easily and rapidly destroyed, though never within 1500 yards distance from

[1] Recently the *Scylla* has made 80 per cent. of hits at prize-firing.

the American ships, and rarely inside 3000 yards, is sufficient proof of accurate shooting. There is some doubt as to the exact ranges, but no American report places any American ship nearer to a Spanish ship than 1500 yards. From this statement the destroyers must be excepted.

There are further considerations to be taken into account before the figures of the American Board's report can be accepted. In the first place, fires and explosions must have destroyed the traces of many hits. Projectiles which struck the boats, for instance, in the Spanish ships, or burst just above the ships, would leave no trace when the woodwork of the boats had been consumed, yet they would probably cause fearful loss on deck. When the ships were end-on, coming out of the harbour, or running from the Americans, there would probably be a good many hits on the upper deck, the projectiles landing with a high trajectory and ranging downwards, and these, as the woodwork of the decks was consumed, would also leave no trace, though they would spread the most terrific havoc. Shells, again, of small calibre would come in through the gun-ports and openings of the shields, and explode inside the ship without placing their mark upon the structure. All the Spanish officers in the three belted cruisers agree that the hail of American projectiles was terrible, and drove the men from the guns.

But it would need some strength of imagination to call—in the case of the VIZCAYA—twenty-seven projectiles "a rain of shot and shell against which it was physically impossible to stand." For these reasons it seems certain that a good many hits above the water-line escaped the

Board's notice. On and below the water-line there were also, doubtless, some unexamined hits; the OQUENDO in particular had a very considerable portion of her side submerged, whilst of the COLON'S port broadside one-third was under water. Under these circumstances it does not seem an over-estimate if the number of hits is doubled. In that case the total for 6-pounders and upwards will be 230 or 240 on the four cruisers. The hits on the two destroyers could not be examined, but ought certainly to be added in if we are to have a just approximation to an estimate of the accuracy of the American fire. These vessels were under fire forty minutes, at ranges of from 4000 yards, in the case of the American battleships, to 1500 and 500 yards in the case of the *Gloucester*. One 12- or 13-inch projectile is believed to have struck them, and we should scarcely over-estimate the hits on the two if we put them down at forty or fifty, which gives 270 to 290 hits for the American fleet. Even so this figure is very much below the Japanese at the Yalu.

In artillery strength the American ships engaged—omitting the *New York*, which was always in reserve, and which therefore ought perhaps to be counted—had a great advantage. To the six big guns of the Spanish cruisers they could oppose fourteen; there was no gun in the Spanish fleet to meet their thirty-two 8-inch pieces; against the forty-six Spanish quick-firers, of 6-, 5·5- and 4·7-inch calibre, they had, however, only eighteen 5- and 4-inch quick-firers, and fourteen 6-inch slow-firers. Here, then, they were weakest, and had the Spanish quick-firers been in good order, properly served and aimed,

1. Batt

COMMANDER.	Belt-Armour.			Armour on		Shields on Heavy Guns.	Armour Deck.
	hick.	Long.	Wide.	Side.	Heavy Guns.		
Vice-Admiral Cervera Captain Concas Captain Eulate Captain Lazaga	to 10 9-inch.	216 feet.	5½ feet.	none.	10 and 14-inch.	3 to 4-inch.	3 to 2-inch.
Commodore de Paredes Captain Moreu	2-inch.	328 feet.	8½ feet.	6-inch.	6-inch.	5-inch.	1½-inch.
Lieutenant Vasquez Captain Villaamil Lieutenant Carlier	one.	none.	none.	none.	none.	none.	none.

1. Batt

	Belt-Armour.			Armour on		Turrets of Heavy Guns.	Armour Deck.
	hick.	Long.	Wide.	Side.	Heavy Guns.		
Captain H. C. Taylor Captain C. E. Clark Captain R. D. Evans Captain J. W. Philip Commodore W. S. Schley Captain F. A. Cook Lieutenant-Commander R Lieutenant A. Sharp	to nch. 10-inch. 9-inch. nch. ne.	200 feet. 250 feet. 116 feet. 170 feet. none.	7½ feet. 7½ feet. 6½ feet. 8 feet. none.	5-inch. 5-inch. none. none. none.	15-inch. 15-inch. 12-inch. 5½-inch. none.	17-inch. 15-inch. 12-inch. 8 to 4-inch. none.	3-inch. 3-inch. 3-inch. 3 to 6-inch. none.

In R

Rear-Admiral W. T. Sam	inch.	none.	none.	none.	10-inch.	7 and 4-inch.	2·5 to 6-inch.
Captain F. E. Chadwick Lieutenant N. Usher	one.	none.	none.	none.	none.	none.	none.

[1] Rate of fi

4 are stated to have been killed or wounded in the land and ting before the battle, leaving 2227 engaged in the battle. break of war the peace complements were strongly reinforced. figures are from the Surgeon-General's Report, pp. 187-8.

had the gunners been protected against the 6-pounder shells which were rained upon the upper works of the Spanish ships by the Americans, the result might have been very different. In the smaller calibres the Americans had eighty-eight 6-pounders, four 3-pounders, thirty-two 1-pounders, and eighteen Gatlings to the Spanish four 14-pounders, thirty-eight 6-pounders, forty-four 1-pounders, and thirty-two machine guns. The great superiority in light guns, which can be fired rapidly and accurately, stood the Americans in good stead, and in some degree made up for their weakness in large quick-firers. In 6-pounders the Americans had two guns to the Spaniards' one. Calculation shows that the weight of metal fired on the broadside by the heavier guns would be, in the American ships 10,003 lbs. in sixty-two projectiles; in the Spanish squadron 7590 lbs. in eighty-seven projectiles.[1]

The initial advantage in weight and number of guns which the Americans possessed was increased by the great attention which had been given to target practice during peace and in the earlier weeks of war. "The completeness of our naval victories during the war," states the official Report of the Bureau of Navigation, "and the almost absolute immunity from injury which our ships and crews enjoyed, naturally led to a general conclusion that our gunnery had much to do with the matter. As a matter of fact, all reports bear out this conclusion. The percentage of hits, smaller it is true than that which has been obtained at target practice, is modified by three conditions. In the first place, the

[1] See Tables.

demolition of the enemy's ships has usually been so complete that it is certain that the marks of many hits were obliterated by subsequent fires and explosions; in the second place, the ranges at which the combats have taken place have usually been so much greater than those which have been used in target practice, that this difference would account for a reduction of from thirty to sixty per cent. in the percentage of hits; and finally, the rate of fire was much higher in the battles than at target practice. In this connection it is proper to note that it had been the endeavour of the Bureau [of Navigation] during the year preceding the war to increase the rate of fire at target practice. When all is considered, it will be found that the 'hits per gun per minute' have been remarkably high. In fact, it appears that the experience of each combat was that our marksmanship was so far superior that, at a range at which Spanish guns and gunners were ineffective, our guns and gunners were so effective that before the range was or could be reduced the Spanish ships were either seriously crippled or their crews demoralised." Extreme accuracy of fire in action can only be obtained by unlimited expenditure of ammunition during training, and, ammunition being very expensive, and target practice making no show in paper returns, the tendency will always be to economise in this direction, when a Navy is controlled by economists or men of routine.

In the American Navy practice at sea is carried out six times a year, twice at least under battle conditions, and once at night using search-lights. Besides

these there is one "record practice," corresponding with the British prize-firing. Two prizes—one of £2, the other of £1—may be awarded by the commanding officer for every twenty-five men who take part in the quarterly target practice, but no sailor can receive more than one prize in any one year. During the period immediately preceding hostilities, the allowance of ammunition was greatly increased, and the number of target practices augmented threefold, at the instance of Mr. T. Roosevelt (now Colonel), then Under-Secretary for the Navy. Moreover, the frequent bombardments in which Admiral Sampson's ships engaged gave the American gunners valuable experience, whilst providing the press of the United States with sensational copy, and satisfying the desire that "something should be done." The seamen-gunners grew accustomed to steady shooting when they were being fired at. It cannot be doubted that this thoroughly practical training under battle conditions contributed greatly to the splendid success at Santiago. Further, during the blockade of Santiago the gunners had been daily practised in judging the distance to the Morro, and their guesses had been corrected by sextants and range-finders.[1] So at the very outset, when the shooting was of the most importance, the American guns probably had the range with almost ideal correctness.

In the Spanish Navy target practice is known to have been infrequent. Spanish officers held that it was simply "throwing money into the sea." A country so poor as Spain could ill afford the annual drain which it

[1] *Century*, 66.

involves, and thus the fleet, though formidable enough on paper, was without practical military efficiency. It was supposed that in the hour of battle the gunners would miraculously acquire that skill which only training can give, and which should be a matter of habit. We are told by the Spanish *Revista General de Marina* for August 1898, that there had only been one target practice in the Spanish Navy during 1897, and none in 1898. Even then a very small amount of ammunition was expended. The COLON's log, it is noted by Captain Chadwick, contained no mention of target practice for the year June 14, 1897, to July 3, 1898.

In defensive qualities the American ships had a very striking advantage. The *Indiana*, *Oregon*, and *Iowa* were stoutly-armoured battleships, with all their heavy guns behind thick plating, well protected on the water-line, and generally impenetrable to the Spanish heavy guns. The Hontoria 11-inch weapon, of excellent pattern, is calculated to perforate at the muzzle, striking perpendicularly, twenty-nine inches of iron ; but here it was faced by eighteen or fifteen inches of Harveyed steel, at ranges varying between 2000 and 6000 yards, and at all manner of angles. The smaller Spanish guns could not be expected to pierce the five inches of steel on the sides of the American battleships, nor did they do so. The *Texas* and *Brooklyn* had no side protection beyond belts on the water-line, and armour in front of and below their heavy guns. From the defensive point of view they were the weakest ships in Admiral Sampson's fleet, superior to three of the Spanish cruisers which they had to face, but vastly

inferior to the CRISTOBAL COLON. All the American ships had thickly-armoured conning-towers, but these, except in the case of the *Iowa*, do not appear to have been used by the captains, who generally, however, stood by them, whilst their staffs kept to the lee side of the towers, and were thus well protected. A large group of men near the tower, if visible to the enemy, would unquestionably draw his fire and so endanger the lives of all. Captain Evans has very wisely urged that in battle the conning-tower should always be used, if only for the sake of quick communication with every part of the ship.[1]

The Spanish cruisers were of two distinct and widely different types — the TERESA, VIZCAYA, and OQUENDO being little better than protected cruisers for fighting purposes. Beyond their narrow belts on the water-line, and the barbettes and shields protecting their heavy guns, they had no armour defence on that portion of their hulls which was exposed to the enemy's fire. Their quick-firing guns were protected only by shields of a weak pattern. Consequently the men working and fighting the ship were practically in the open, and had none of the moral confidence which armour must give when it is interposed between the gunner and the enemy. "Everything," says one of the *Iowa's* officers, "would tend to emphasise the superiority of armoured ships over unarmoured ones. Such a riddling as some of the Spanish ships received could not have been inflicted on any of our ships that were engaged." The COLON, however, was of totally different type, with widely distributed 6-inch steel armour, protecting not only her

[1] Goode, 234-5.

water-line but also her guns and the whole hull of the vessel amidships. It is a very significant fact, that her guns made far the largest number of hits of the four Spanish ships. As for the destroyers, they were of course vulnerable to the smallest projectile, having no protection of any kind other than that afforded by their bunkers. Nor does protection seem to have been improvised in the Spanish ships in the way that it was improvised in Admiral Sampson's squadron, where cables were wound round ammunition hoists, and sand-bags used to defend weak points.[1]

In speed the Spanish squadron as a whole had a marked advantage on paper. The slowest ship was good on trial for about twenty knots, whereas the slowest American ship, the *Indiana*, could steam only fifteen and a half knots on paper.[2] The fastest American ship, the *Brooklyn*, had a trial speed of 21·9 knots, and she was the only vessel in the American squadron, except the *New York*, which could be expected to overhaul the Spanish cruisers. It has been argued that the actual facts of the battle prove speed valueless, but this conclusion will hardly hold water. Had the Spanish ships been able to come as near their nominal speeds as did the American vessels, two if not three of the cruisers might have escaped. With hulls foul, lacking good engineers, unable to keep their delicate machinery in good order, and supplied with wretched coal, the Spaniards, as has already been shown, failed to attain on

[1] In the VIZCAYA grate-bars were used to protect the torpedo tubes.

[2] Actually she was so foul that she was good for no more than eleven knots. The VIZCAYA (see p. 277) was in nearly as bad a plight.

the field of action the pace which their ships had once possessed. The American engine-room staffs, on the other hand, were singularly efficient, and obtained speeds which surpassed expectations. Thus the *Oregon*, which had done 16·7 knots on trial, running light and with clean hull, now at times obtained sixteen knots, running with her full war load and with foul hull. Her average from the time when she was fully in chase was 12·9 knots; the *Brooklyn's* 13·2, and the *New York's* fourteen or more. If speed was the unimportant item which it is represented to be, the pace of the new American battleships would not have been raised from sixteen knots, the original requirement, to eighteen and a half. What the events of Santiago prove to be valueless is a paper speed which cannot be attained on service, at the moment when it is most required. Undoubtedly most Navies—and the British amongst them—contain in their ranks cruisers of high nominal speed, which would without much difficulty be overtaken by battleships, in theory a couple of knots slower. The military value of such cruisers is more than doubtful.

In torpedo tubes the two squadrons were approximately equal, the Spaniards having thirty-three and the Americans thirty-one. As at the Yalu, these sixty-four tubes were absolutely useless, neither side making the faintest attempt to employ them. To the Spaniards, indeed, the above-water dischargers were the cause of heavy loss and damage, as one if not two torpedoes were exploded in the tubes. It may seem extraordinary that the Spaniards, as the weaker party, with less to lose—their ships being smaller—and being slightly superior to

the Americans in torpedo tubes, though so much weaker in guns, did not attempt to force a torpedo action, where chance rather than skill decides the issue. The conditions were eminently favourable for some such concerted long-range torpedo firing, as has been suggested by Admiral Makarov,[1] but this would have meant closing in on the Americans at the outset to something like 800 or 900 yards, since the Spanish torpedoes are not likely to have had the adjustments required for a range of 1200 or 1400 yards. A rapid approach bows-on would not, in all probability, have cost Cervera much in loss of life or damage to his ships, for when the range is altering quickly correct shooting becomes extremely difficult, and the American marksmen would scarcely have stopped him. Yet it would seem that the Spanish vessels left most of their torpedo war-heads at Santiago; and it was evident from an examination of the torpedoes on board them after the battle, that the compressed-air flasks had not been charged ready for use.[2]

The experience of Santiago, following so closely upon that of the Yalu, has led to some disparagement of the value of the torpedo. The evidence is not, however, sufficiently strong to condemn its use on board the battleship; the growing perfection and increasing range of the torpedo being elements in the problem which cannot be overlooked. Because the Spaniards neglected to use this weapon, it does not follow that it is valueless.

Cervera cannot be acquitted of a want of judgment in choosing to fight a gun action, in which the odds against

[1] *Notes on Naval Progress*, II. xvii. p. 106.

[2] Jacobsen, ii. 9.

him were, roughly, four to three, rather than a torpedo action, in which the odds would have been eleven to ten on his side. Moreover, the closing-in of the big cruisers to fight a torpedo action would have favoured the tactics of the two destroyers. With supreme ineptitude these little vessels were flung upon intact, well-prepared battleships in broad daylight, and their crews sacrificed to no purpose. They were put to a use for which they were never intended, and in consequence failed most signally. The moral in their case is surely, not that destroyers are useless craft, but that there are strict limitations to their sphere of action which the wise tactician will never disregard. The reluctance of the Americans to use the torpedo when they were fighting a winning battle with the gun was well-founded. Precisely the same reasons which should have led Cervera to court a torpedo action, justified the American Captains in avoiding one.

The battle was a running one, both sides steering generally parallel courses, but at the outset these courses converged somewhat. This was only what might be expected when a blockading force had to stop a squadron of blockaded ships attempting escape. On the part of the Americans it was an Engineers' and Captains', rather than an Admiral's battle, though this does not deprive Admiral Sampson of the credit which he deserves, not only for the excellent dispositions adopted in the blockading fleet, but also for the very high state of efficiency to which that fleet had been brought. Amongst the American Captains there was not the slightest hesitation. All did their duty or something more. They rushed impetuously upon the enemy with an *élan* which

was in itself an earnest of victory, and which cannot but have inspired the men they led. That their enemy offered a contemptible resistance was not their fault. They would probably have given a fine account of a far stronger foe. They fought the battle with judgment and coolness as well as valour, and so far as we can see from the published accounts made not a single mistake. Admiral Sampson suggests that had the Spanish ships dispersed on leaving the harbour there must have been some embarrassment in his fleet, but that with all steering the same course there was none. What resulted was the concentration of the fire of the greater part of the American fleet upon the Spanish vessels in succession as they fell to the rear.

The ease with which the Spanish cruisers were destroyed points most emphatically to the danger of a ship engaging vessels of a quite superior class. We know what happened when a fifty-gun vessel faced a seventy-four; and the relation of a VIZCAYA to an *Iowa* was much the same. There are times, of course, when cruisers must be placed in the line of battle for want of battleships, but if these cruisers are opposed to battleships, the course must be a very risky one. As Admiral Makarov has pointed out, a cruiser in formation with battleships is robbed of her one tactical advantage in possessing a high speed, and becomes weaker than her displacement would lead us to rate her. The formation adopted at the Yalu by the Japanese, where the van squadron, composed of the four fastest cruisers, acted independently, seems preferable. At the same time, there are occasions on which a cruiser might attack an isolated battleship—

The MARIA TERESA.
Showing hole in 5·5-inch gun-shield, inner view.

The MARIA TERESA.
Port side quarter-deck, showing after turret and gun.

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(*To face p.* 352.

The ISLA DE LUZON,
After the Battle of Manila.

especially if the latter were of low freeboard—with every chance of success, for instance in a heavy sea. It is extraordinary, in face of the facts of Santiago and the Yalu, to find the opinion advanced that cruisers can engage battleships in the line of battle with impunity. The author wrote in 1895:—"The belted cruisers of the *Aurora* class [which the VIZCAYA class resemble very closely] . . . could not face battleships of their own date [much less battleships of five or six years' later design]. Their armament is unprotected, their gunners exposed to every shell, and in a hot or close action their batteries could not be fought."[1] Events have on the whole justified this conclusion. The *Brooklyn*, it should be remembered, had every heavy gun behind armour—the 8-inch guns behind plating eight to five and a half inches thick, the 5-inch guns in 4-inch casemates. She resembles our *Powerful* type, which the author stated was fit to fight in line, though only at some risk to herself.[2] That she did incur great risks is evident from the published statements of the Captains of the *Oregon* and *Texas*, from the fact that having closed in at the very outset of the action she hastily circled outwards, and from the determined and successful efforts which were made by these ships' engine-room staffs to give her support, though she had to deal at the close of the fight with but one adversary, of 2000 tons smaller displacement and weaker battery. That adversary, however, was the COLON, and a glance at her design will show that she falls into the author's class of "armoured cruiser, with water-line protection as well as armour on her guns, fit

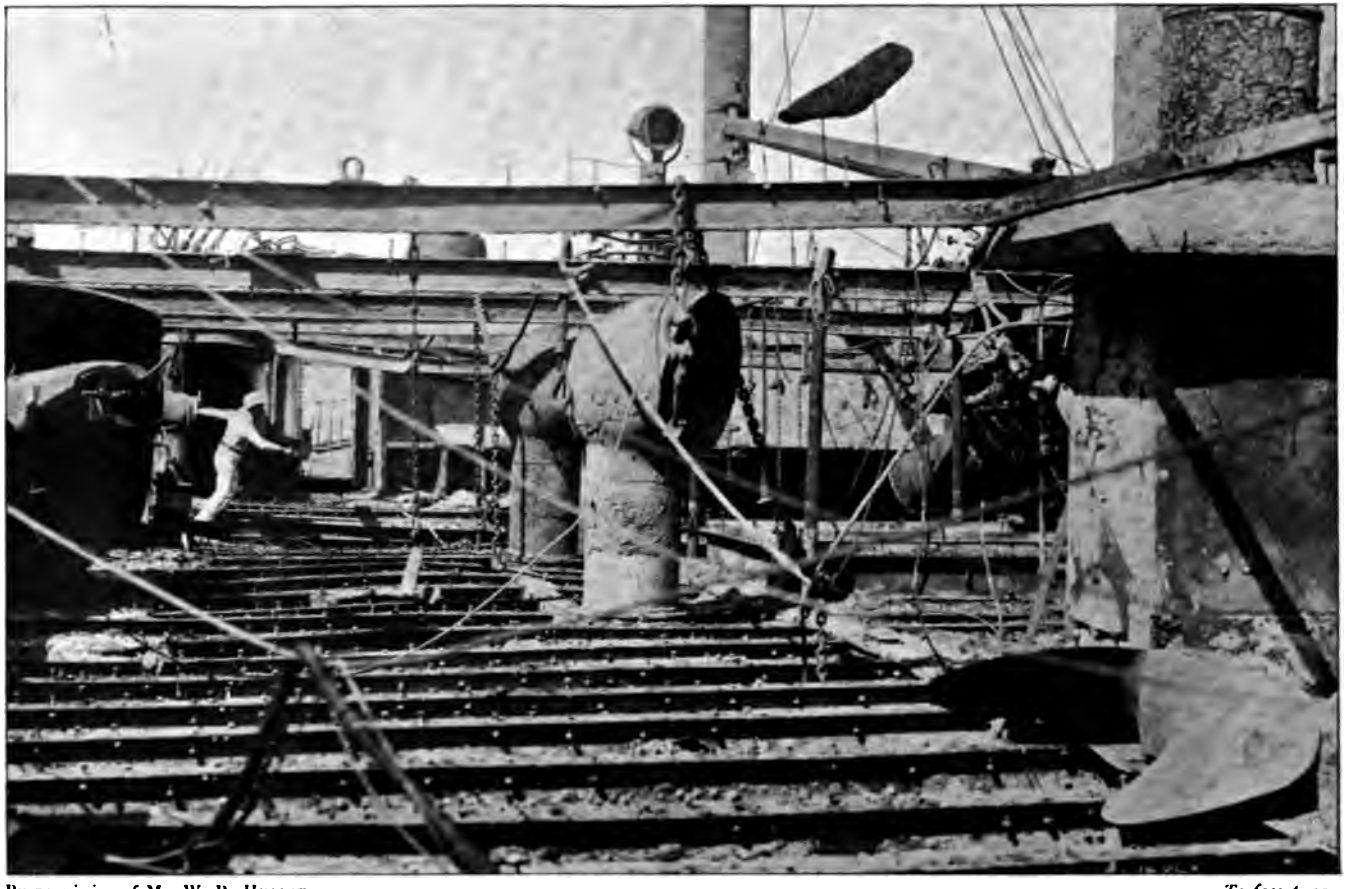
[1] *Ironclads in Action*, ed. 1, ii. p. 143. [2] *loc. cit.*

for the line." It is a pertinent question for Englishmen to ask of their Admiralty, why no such armoured cruisers are to-day found in the British Navy. That fourteen are constructing is no answer; the duty of an Admiralty is, if not to anticipate the line of naval progress, to adopt promptly a good type of ship, even though its design be copied from that of foreign Powers. In this class of ship England is now much behind France, and as much behind Italy.

The ram was not actually employed by either side, though several of the American Captains meditated its use. This again accords with anticipations. The difficulties of actually striking an enemy, under way, with fair sea-room, are so great that the ram may be ruled out of court for use except in very exceptional circumstances. It is superseded at moderate ranges by the torpedo.

The lesson which is most clearly taught by the action is the absolute certainty of fire where there is much wood or many combustible fittings on board the ship. In the TERESA, OQUENDO, and VIZCAYA fires broke out the minute the American shells began to hit.[1] The action of shells upon woodwork is by the explosion to tear the wood to splinters, which are set on fire by the flash, and which thus start the blaze. The caulking of the decks is usually very combustible, and not being affected by water, feeds the flames. No matter how thoroughly the fittings and decks are drenched the fires occur, as the

[1] It has been stated that the fires were purposely caused by the crews, to destroy the ships when the fight became hopeless. This, however, does not seem to be supported by facts, and it directly conflicts with the Spanish reports in Official [American] Reports, 461.



By permission of Mr. W. R. Hearst.

To face p. 354.

The Maria Teresa, starboard side, interior view, showing deck burnt off the beams.

experience of the Yalu showed clearly. The Spanish ships are reported to have had good organisation for fighting the flames, but the fire mains were badly placed, above the armour-deck—as in most old ships—and were shattered by the American shells. Hence it was difficult to obtain water. In all the American ships hoses were attached to pumps in the engine-room and led up through the various hatches in the armour-deck ready for use. Thus the American ships could not be crippled by the cutting of the mains. It is not certain how far the Spanish cruisers were properly prepared for battle; it is certain that they had not torn down all wooden bulkheads and fittings. This had been done in the American ships. Structurally the three Spanish cruisers mentioned above were built to burn, as their decks were of wood, and were not uniformly laid upon steel plating, but in places directly upon the beams. Photographs show that these decks were totally consumed by the fires. For this very grave technical defect the constructor must be held responsible. He is always prone to overlook the fact that his creation must meet the conditions and demands of war. From the earliest days of naval war fire has been the ships' greatest enemy, and Lissa, the action of Angamos, and above all the Yalu, showed that under modern conditions the danger still existed. The Spanish cruisers were designed before the Yalu, but this is no excuse. In the COLON, which had very little wood on board, there were no fires. The trouble is that the employment of wood, or some substitute, is necessary during peace time at least, to make the ship comfortable and healthy. We can call upon officers and men to face

great privations in war; to expect them to suffer extreme discomfort through the long years of peace is asking more than human nature will stand. Still the fact remains, that four years ago wood fittings were abolished in French and German designs, and even wooden decks in some cases abandoned. There was no corresponding movement in England, and many of our recent cruisers and battleships, especially the *Minerva*, *Edgar*, and *Majestic* classes, are crammed with wooden fittings, which could not easily be removed, and which would handicap them seriously in action with an unencumbered enemy. The advent of fire-proof wood may solve the difficulty.

The extinction of fires under fire in an armoured ship, though a difficult is not a hopeless task, as the story of the *Chen Yuen* at the Yalu shows. The Japanese fire upon her was precise and more accurate than the fire concentrated by the Americans upon any one of the Spanish cruisers. Yet she kept her place and fought her battle out, though on eight separate occasions flames broke out on board her. The effects of fire in the warship are moral as well as material. There is the paralysing fear of magazine explosions amongst the crew if the flames get any hold. There is the smoke to interfere with the aiming of the guns, the ammunition supply, and the working of engines and boilers. There is the distressing heat. An American officer who witnessed the battle states:—"Fire and smoke always have the worst possible effect on the crew, and owing to the great number of hatches and compartments in the ship, fires are the harder to discover and fight. It was found simply impossible [compare this with *Chen Yuen's* case, the Spanish

cruisers being virtually unarmoured] to keep fighting both the fire and the ship, the gun-fire slackening up immediately the alarm was given. So clear did this become, that whenever the flame and smoke could be seen from our fleet, it was felt that all was up with that ship, and the tendency was to direct our fire on some other ship. . . . It is a fallacy to think that fire-drill is all a matter of form on board a steel ship. So quickly and rapidly does the fire spread, that it seems even the steel itself must be burning. The importance of keeping watch for fire in every compartment was shown." The view of this officer exactly coincides with the opinion of the distinguished American Chief-Constructor Hichborn.

It should be noted that small fires occurred in at least three of the American ships—the *Iowa*, *Texas*, and *Brooklyn*. But in no case were they at all serious.

Not less important, though well understood before this battle, is the lesson that the quality of the men behind the guns is of more decisive influence than the quality even of the ships and guns. There is abundant evidence to show that the Spanish crews were very quickly demoralised. They were of indifferent material, indifferently trained, many being raw conscripts. Spain's legendary *personnel* of 15,000 officers and seamen—Durassier's figures—must have been a mere paper total. It is said that 600 men were impressed just before the squadron sailed to fill up the gaps, and the *Revista General de Marina* expressly states that "we [the Spaniards] have the greatest difficulty in finding engineers, and we have hardly any stokers at all." This would explain very much, as the failure to work up to a high

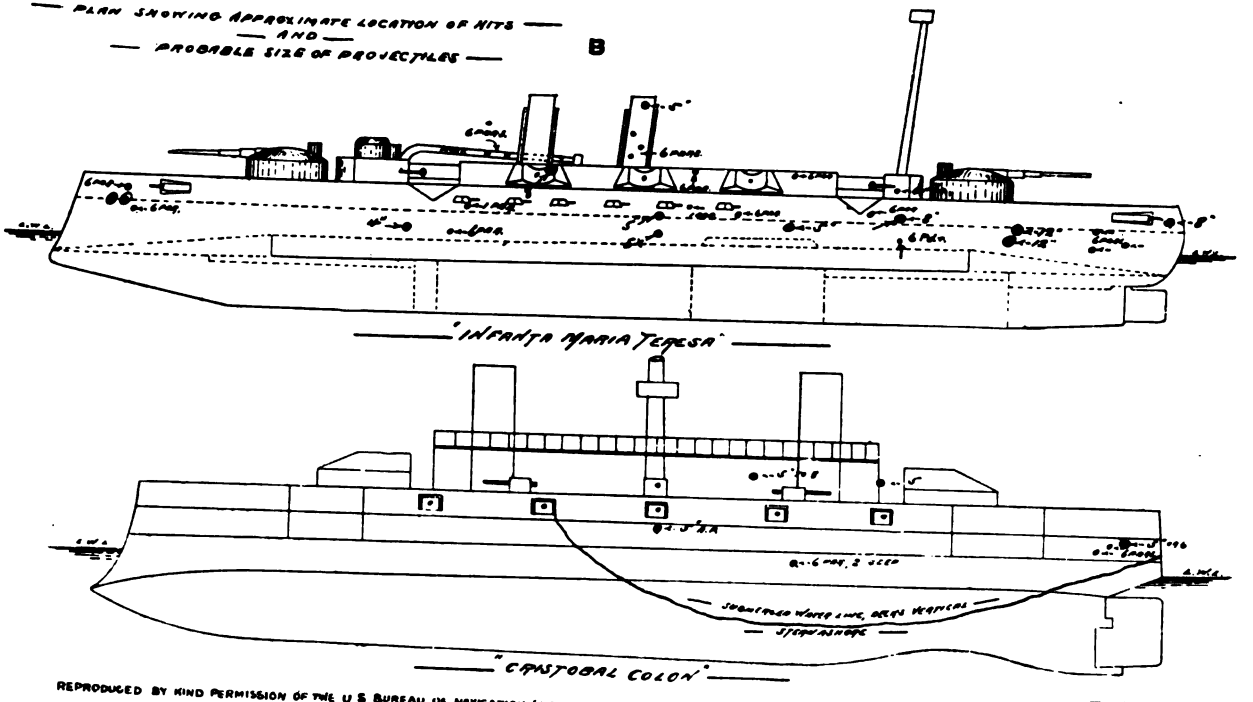
speed or to hit the enemy argues gross incapacity and want of training in the *personnel*.

A good deal of the American efficiency was undoubtedly due to the fact that their ships had been for weeks engaged in the difficult and ticklish work of blockading. They had gained in *morale* by steadily and continuously keeping the sea, and gained in efficiency by learning to hold big unhandy battleships close in to the harbour entrance at night. Long-continued blockade may strain the *personnel* to a dangerous degree; a short blockade, however, gives just the kind of practice which makes a fleet truly formidable.

After the battle the hulls of the Spanish ships were examined by an American commission. The fires and magazine explosions, which had done great damage in the three belted cruisers, must, however, have prevented the experts from determining in many instances the exact effects of the American shell fire.

The number and nature of the hits in the ships have already been given. It may here be added, that thirty-two shots had passed through the berth-decks of the three belted cruisers, forty-five through the gun-decks, nine through the superstructures, ten through the funnels, two through the ventilators, and two through the foremasts. In two or three of the ships a good part of the water-line was under water, and thus could not be examined for hits between wind and water.[1] There is also a certain margin of uncertainty as to the calibre of

[1] The details which follow are drawn from (1) non-official photographs; (2) non-official descriptions of the *Sun's* correspondents; (3) non-official comments of Rear-Admiral Plüddemann, I.G.N.; (4)



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To face p. 358.

shot wounds to be taken into account, the 8-, 6-, 5-, and 4-inch shots shading off into each other.

The TERESA had one of her military masts left standing, the mainmast having survived alike battle, shock of grounding, and fire. The planking of her gun-deck was burnt clean away, and the paint in the heat had crumbled to a white ash, or peeled off. Her second[1] 5·5-inch shield was perforated by an 8-inch shell which exploded in the rear of it, killing or mutilating every one near it. A second 8-inch shell which entered aft, ranging aft and upwards—perhaps when the ship was heeling during one of her sharp turns—exploded with as terrible effect in the after part of the ship. The Americans evidently aimed for the ship's centre—to set the woodwork of the cabins and berth-deck on fire—and thus no less than fourteen hits were found in this region. One 5-inch, one 4-inch, and one 1-pounder are close to the water-line, just above the belt. The Spanish pilot has stated that much water came on board her; whether through these or yet lower wounds, which were out of sight, is uncertain. Higher up, along the berth-deck amidships, are two more 5-inch hits, and the 8-inch already referred to; above this again two 1-pounder and five 6-pounder hits, amongst the 5·5-inch guns, and the 8-inch shot on the gun-shield. Two 6-pounders and one 5-inch shell struck the after funnel; two 6-pounders high up on the foremast; on the bows are two 6-pounder wounds; whilst the stern was severely

official diagrams and sketches of Carpenter Warford, U.S.N.; (5) Official Reports, pp. 571 ff., where are numerous official photographs; (6) Commander Jacobsen (who examined the wrecks), ii. 1–19.

[1] Counting from the bow to the stern (port broadside).

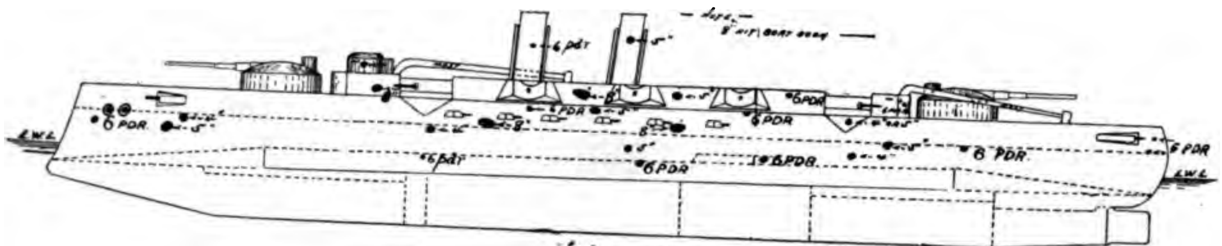
hit. Two 12-inch, one 8-inch, and four 6-pounder shells struck abaft of or under the after turret gun. The 8-inch shot passed clean through the ship without exploding; the 12-inch shells exploded in the stern torpedo-room wrecking it completely.[1] Fragments tore a hole four feet square in the starboard side of the ship. The after part of the ship was entirely wrecked and burnt out, and of the woodwork throughout not a trace was left. Where shots struck bunkers full of coal it was noticed that the coal had stopped the projectiles.

Like the TERESA, the VIZCAYA had all her deck planking burnt off and the wood in the ship consumed. The superstructure and bridges were fearfully wrecked. On either bow is an immense gap, caused probably by the explosion of a loaded torpedo or war-head through the heat of the fires in the ship; though it should be noted, that there was evidence of the torpedoes and tubes having been struck by projectiles, and many charred bodies were found in the forward broadside torpedo-room. On the port bow the plating was folded back, showing the framing; on the starboard bow was a hole through which a carriage could have been driven. The protective deck, however, limited the force of the explosion, and saved the hull below the water-line from injury. Both magazines had exploded, forcing up the deck-beams and the protective deck, tearing down bulkheads, and doing great injury to the structure of the ship. The mainmast fell to port over the after turret, which it jammed. The concentration of hits amidships is somewhat remarkable. Between the two turrets are no less than eighteen hits on the hull. A

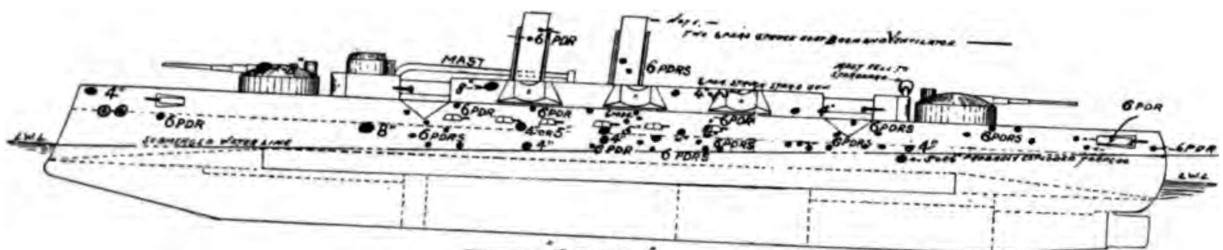
[1] Commander Jacobsen thinks these shells did not explode.

PLAN SHOWING APPROXIMATE LOCATION OF HITS
— AND —
PROBABLE SIZE OF PROJECTILES.

B



"VIZCAYA."



"OQUENDO"

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To face p. 360.

6-pounder struck the conning-tower, and just below the tower an 8-inch projectile, ranging from aft forward, struck and exploded. Fragments of the shell dented the shield of the fore barbette; had it been open to the rear the gun-crew would probably have been killed. Under the first 5·5-inch gun is a 4-inch shot wound; under the second an 8-inch and a 6-pounder; the 8-inch shell ranged forward, glanced against the armour of the fore barbette, which it did not seriously dent, and exploded on the starboard side of the ship; between the second and third 5·5-inch guns is another 8-inch shell, which ranged across the deck, probably causing heavy loss of life; below this is a 5-inch hit; then between the third and fourth guns is a 5-inch wound with an 8-inch hit below; abaft the fourth gun is a 6-pounder hit; on the fifth gun sponson a 5-inch hit, and abaft it a 6-pounder wound. On the water-line amidships are three 6-pounder holes. A 5-inch, a 4-inch, and a 6-pounder hit are under the after 5·5-inch sponson or the after turret. The bows show three hits, 6-pounder, 4- and 5-inch; the stern two, both 6-pounders; on the funnels are two 6-pounder and one 5-inch hit, whilst an 8-inch shell struck the boat-boom and burst over the deck, probably causing great loss of life. The remains of many bodies were seen in the ship by Commander Jacobsen.

As for the OQUENDO, she was completely riddled amidships, having received the fire of all the American ships at relatively close range. Yet as a very considerable part of her water-line and side—especially aft, where most of the Spanish ships were heavily punished — was under water, the hits examined were probably very

far short of the actual total. The woodwork was burnt out and the interior a mass of metal debris. A torpedo exploded just under the after barbette, bulging or rending the side plating of the ship, but leaving the protective deck intact. It is probable that this torpedo was detonated by an American shell, as a 5-inch or 6-inch wound was found close to the location of the tube. The upper works were torn to pieces, and the bridges destroyed. The fore turret shield was pierced by an 8-inch shell which exploded; but for the thin shield the projectile would probably have hurt no one, whereas it killed the whole gun-crew. The explosion of the fore magazine wrecked the ship forward, and caused the forward turret to sink perceptibly. Two 8-inch projectiles amidships passed clean through the vessel. Forward on the bows were two hits, one 4-inch and one 6-pounder; except for these and the 8-inch hit on the fore turret all the hits were abaft that turret in a close pattern amidships and thinning out a little astern. Four 6-pounder hits were divided between the funnels, and there were two on the boat-booms. The foremast fell nearly fore and aft; the mainmast to starboard.

On the COLON'S side were traces of a 5-inch shot, which struck just under one of her 6-inch gun-ports, on the 6-inch mail of the citadel, and a 6-pounder scar on the water-line; two 6-pounders and one 5-inch shell had struck the stern and wrecked the ward-room. A 5-inch and 4-inch shot struck just above the deck, upon the superstructure. The Spaniards reported that she had also been hit in the bow by a 5- or 6-inch shell. Fragments of large shells were found sticking in her armour.

Almost certainly there were other wounds on the submerged portion of the side, yet not such as to disable or hamper the ship.

The recommendations of the American Board are these:—

"1. As little woodwork as possible should be used in the construction of warships, and none at all if it can be done away with.

"2. Torpedoes should not be carried in battleships or cruisers above the water-line.

"3. Too much stress cannot be laid on the importance of rapid-fire batteries in battleships. The Spaniards were driven from their guns, and their ships riddled, by the American rapid fire.

"4. All water and steam piping should be below the protective deck, or below the water-line, and fitted with risers at such points as may be considered necessary."

In general agreement with this are the conclusions of the Spanish *Revista General de Marina*:—

"The lessons drawn from this defeat are very obvious. In the first place, warships should be entirely protected with armour over all the parts necessary for flotation, for the defence of the engines and the protection of the artillery. In the second place, warships very speedily become obsolete and defective, if not useless, with the changes that progress demands. In the third place, all wood and all combustibles should be removed from all ships. In the fourth place, warships should carry their torpedoes below the water-line. In the fifth place, in order to have a serviceable fleet, it is indispensable to have a trained *personnel*, navigating constantly and

practising constant evolutions. If this is not done there can be neither engineers, stokers, nor gunners. And, lastly, torpedo-boat destroyers do not serve any other purpose than that which the name indicates."

The first and second American recommendations have already been considered and commented upon. As the opinion of practical officers who have war experience they are of the utmost importance, and no time should be lost by any Navy in giving them effect. The unarmoured ship with much wood on board is, so far as we can see, a ship doomed before the action begins. The armoured ship with much wood will be much hampered. Admiral Sampson's opinion is just as strong as that of his Board. "If the war teaches a lesson more important than any other, it is to dispense with all wood in the future construction of our ships. Not a particle of it should be permitted where it is possible to avoid its use."[1]

The stress laid upon quick-firing guns is not surprising. Since their first introduction their value has been manifest, and the battle of the Yalu emphasised in the most striking manner their tactical efficiency. Rapidity of fire is an object for which great sacrifices may wisely be made, and it is one of the characteristics of the quick-firing gun, that it can be worked throughout by manual power. Of late years, in the 6-inch, 8-inch, and 9·4-inch quick-firers, weapons of tremendous power have been placed in the gunners' hands, and there are now in existence battleships of large displacement in which the battery is entirely of this nature. Such vessels are the Chilian *O'Higgins* and the German *Kaiser Friedrich III.*

[1] Goode, 228.

class. They exhibit indeed a tendency to return to the old type of ironclad in their numerous guns of a moderate size, and they may well be contrasted with such designs as the *Thunderer* or *Puritan.* In France, Russia, England, and the United States, however, there has as yet been no sign that the heavy gun is likely to be abandoned.

On the strength of the comparative failure of the big guns to hit the target in the battle, and of the above report, it may seem that the abandonment of the heavy gun is in sight, the quick-firing secondary battery being at the same time increased in power. Some countenance to such a theory is certainly afforded by Italy, who since the battle has produced a battleship design in which but two 12-inch guns are carried to ten 8-inch quick-firers. But in the first place, it must be remembered that the American recommendation is addressed to the American Navy Department, which mounted but few quick-firers in its battleships prior to the *Kearsarge* class. It is also a little doubtful whether American officers as a whole are opposed to the heavy gun, or whether the above recommendation was intended to be hostile to the heavy gun. Opinions favourable to it can be cited. Thus Captain Philip of the *Texas* says:—"The big ship with big guns, and the men who know how to fight it, is the one that can do the business." Lieutenant Heilner of the same ship says:—"As to armament, the 13-inch rifle has proved to be the most desirable because the most destructive weapon, and next to it, I think, comes the rapid-fire 6-pounder. There can be no doubt that a 13-inch gun is preferable to a 12-inch,

when it is remembered that a 13-inch fires with equal velocity and penetrating power a projectile weighing 1100 pounds, while the 12-inch shell weighs only 850 pounds. So far as the results of naval fighting have come to hand, it seems to me that the middle-calibre guns, such as the 8-inch and 10-inch, might well be dispensed with." Admiral Sampson states:—"The big guns will always be needed. There is work which they can do, and which is out of the question for the smaller calibre. It happened at Santiago that the 8-inch guns and the rapid-fire guns did great execution, but this was because they could strike the Spaniards below the belt as it were. That is, the lightly armoured portions of the Spanish ships were exposed to their fire. When it comes to piercing heavy armour the high-calibre guns must be brought into action." Captain Evans holds that the *Iowa* would have been a better ship with 13-inch than with 12-inch guns. He adds, "We must have the heavy guns, and the heavier the better within certain limits, to breach and rack to pieces the armour."[1]

Admiral Schley is reported as saying the merits of the 13-inch and 8-inch guns are equal, and that the 8-inch weapon will shoot through anything if it is placed near enough to its target. This is rather a confirmation of Admiral Sampson's opinion than an invalidation of it. Lieutenant Hodgson of the *Brooklyn* considers that it is susceptible of argument whether a battery of 6-inch quick-firers would not have been more efficient than the mixed 8-inch and 5-inch quick-firing battery which she at present carries, but holds that the 8-inch gun did its

[1] Goode, 238.

full share in the battle, and that it is a formidable weapon. The fight, he says, was won by the 8-inch and lower calibres. Lieutenant Wells, Schley's secretary, writes :— "The thirty-two 8-inch guns proved their excellence over other guns by the terrible execution which they wrought." Finally, the Spanish officers and the Spanish writers in the *Revista General de Marina* assert that their defeat was due to the American heavy guns, and particularly to the 8-inch weapons.

Summing up on the question, the verdict seems to be :—

1. The heavy gun is essential where armour is to be attacked, but only makes hits with great difficulty, due in part to the ponderous nature of the gun and its mount, in part to the small field of view afforded by the sighting hoods, in part to the relatively slow rate of fire.

2. The 8-inch gun rendered the very greatest services, and proved invaluable.

3. Both guns require to be supported by a powerful quick-fire armament in the smaller calibres.

The soundness of the first conclusion is apparent when we consider that neither at the Yalu nor at Santiago did battleship meet battleship. In the one case antiquated battleships were beaten by modern cruisers, in the other modern cruisers by still more modern battleships and cruisers. From the relative absence of water-line hits at Santiago, it does not appear that well-constructed battleships will be put out of action without their citadels or turrets being pierced.

As to the second conclusion, it is in general accordance with anticipations. The author wrote in 1896 :—

"The 8-inch guns would be very effective against thin armour, and their great height of command would enable them to fire with the best effect." The advisability of the 8-inch calibre, intermediate between the 12- or 13-inch and the 6- or 5-inch, must be settled by practical men after full consideration of the disadvantage of complication in the battery. The matter might be solved by substituting the 8-inch quick-firers alike for the old type 8-inch gun and the 6- or 5-inch quick-firers.

In the smaller calibres opinion is decisive in favour of the 6-pounder as against the 3-pounder, 1-pounder, and small rifle-calibre gun. There were no 12-pounders mounted in the American fleet, but we may suspect that had there been, the verdict would have been as strongly in favour of this calibre, which has all the 6-pounders' rapidity of fire, and at least treble its power of inflicting damage. The 1-pounders, so far as could be ascertained, scored only three or four hits. Their very limited range renders them almost useless against big ships, but when settling the problem of the battleship's battery, it should not be forgotten that they may be most valuable against torpedo boats. The rifle-calibre gun appears all but useless against big ships, but effective against torpedo boats. Spanish officers in the destroyers stated that the effect of the *Gloucester's* automatic Colt 6-millimetre guns was "deadly," the projectiles sweeping away the men on deck and passing clean through the vessels' hulls.

The fourth American recommendation is only common sense applied to warship construction. Yet how many of the older ships of war have their fire-mains below the

protective deck? And when they have, fresh difficulties arise.

With regard to the Spanish conclusions, in so far as these do not merely repeat the American findings, by far the most interesting is the first. The recognition that the battery should be thoroughly protected, as also the water-line, is very significant, and coincides with the general tendency observable in modern Navies, to abandon the protected cruiser and substitute for it the side-armoured cruiser. In the two French programmes of 1897-8 armoured cruisers only have been included,[1] as also in the last two British programmes and in the recent German programmes. Only where very exceptional speed is required—twenty-three to twenty-five knots—is armour now discarded. "The necessity for more and better protection for the gun's crews," says Lieutenant Wells of the *Brooklyn*, "is one of the lessons of the fight. With the men disabled and driven from their stations the ship is of little value as a fighting machine. The armour of the COLON kept out 5-inch shells at a range of about 3000 yards. [It really kept out much heavier shells.] This would be a great superiority in most cases." "The COLON," said a Spanish officer, "managed to withstand the fire of your guns better than our other cruisers, because her 5-inch armour kept out your secondary battery and other small projectiles. It was these that did us so much damage, setting us on fire at every explosion." The armour must be sufficient to

[1] In the 1899 programme are two scouts of exceptional speed. To get portentous speed, of course armour must, and may legitimately, be sacrificed in certain ships.

exclude 8- and 6-inch projectiles at good range; that is to say, it must not be thinner than 4-inch, whilst 6-inch would seem a good medium thickness. Armour two or two and a half inches thick serves only to burst shells.

The instances of the *Texas*, which carried no armour except on her two heavy guns and on the water-line, and escaped unscathed, and of the *Gloucester*, prove nothing. The erratic nature of the Spanish gunnery must be remembered. But when four ships are subjected to much the same fire, and one escapes virtually uninjured—as did the COLON—we certainly have matter for reflection. At the same time, the COLON was to some extent screened by the other Spanish ships in the earlier phases of the action, and was also protected by the dense clouds of smoke which hampered the American fire. Still, as a type she appears to have proved very successful, and her Spanish Captain's opinion of her fighting qualities is all that could be desired. Towards general protection by armour of moderate thickness seems to be the trend of naval progress. The COLON exhibits a remarkable equipoise between attack and defence. On the water-line the hits were few, but there *were* hits. What might not have happened to the *Brooklyn*, whose belt kept out a 6-inch shell, had that shell entered the ship and exploded, as it would have done, just over the engine-room? That armour 4·8 inches thick excluded this projectile shows the value in action of moderate plating.

Captain Evans is emphatic against the light-ended battleship, after his war experience. "Armour," he says, "must be carried the whole length, and go far enough up the side to give good protection to the secondary

batteries."[1] Captain Taylor, on the other hand, thinks that too much attention has been given to the defence of the water-line.

The second conclusion of the *Revista General* is inspired by the fact that the American ships were newer than the Spanish, whence their superiority in many particulars—especially in robustness of machinery, and the smaller amount of wood used on board. This conclusion seems to hold generally good, and will suggest some unpleasant reflection as to the value of the old armour-clads which still in such numbers figure on our effective lists. What service vessels, designed thirty years ago, with old engines, worn-out boilers, short-range muzzle-loading armament, and with a great deal of wood on board, could render is not altogether obvious. It would seem that they could have little prospect of victory against even small unarmoured cruisers of modern construction, and that they should be struck off the effective list, and relegated to harbour defence.

To turn now to certain matters of detail. That little use was made of the conning-tower in any American ship but the *Iowa* is scarcely surprising, as Captains would naturally prefer the clearer field of view and the free space of the deck or bridge when there was no urgent need of protection. The moral effect of such conduct upon the *personnel* must be very great. The first instinctive feeling of all men when they enter battle must be a certain nervous apprehension—though the fact may not appear in reports and bulletins. Sherman disbelieved the people who affected not to have known fear. The

[1] Goode, 238.

normal man, however, quickly recovers his self-possession when dominated by a strong will or superior intelligence. The sight of his Captain standing calmly on the bridge, facing the enemy's fire, will exert such an influence upon him. At the same time, where the *personnel* is of high quality and the *morale* good, the Captain may owe it as a duty to his country to seek the shelter of the tower. This is particularly the case where the action is so close that successful fire upon particular portions of the enemy's ship or ships becomes possible on either side. Under these circumstances, however, it will probably be necessary to withdraw the men from exposed stations on deck, when the influence of his example will not be required. No heavy hits are recorded in the Santiago battle on any of the conning-towers. Still, to abolish them would be inexpedient. Indeed Captain Evans urges that a second tower should always be fitted, giving a good view of the stern. The value of this, in the case of a cruiser, is evident.

Whether the military masts of the Spanish cruisers were shot away or fell from the shock of taking the ground is uncertain. They appear with the fighting tops to have proved of little value. The use of the range-finders in the tops of the American ships was apparently discontinued from the difficulty of sending down the range, and the liability of these delicate instruments to go wrong in the shock and stress of battle. Internal communication proved difficult, as we should expect, and though the loud-speaking telephone behaved fairly well, there is still much room for improvement in this direction. Voice tubes were comparatively

useless. Messengers were generally employed, but mistakes were made by them; for instance, an order given in the *Indiana* to fire at the destroyers, though intended only for the secondary battery, was carried to the fore turret. The 13-inch guns thus lost a good chance of firing on the COLON.

The machinery of the big gun turrets in the American ships worked uniformly well. No breakdowns of any kind are reported, whether in hydraulic, steam or electric training, turning and loading gear.

All the officers agree upon the immense importance of smokeless powder. Admiral Sampson is for it, not only because it does not give a dense curtain of smoke, but also because it increases the velocity and the range. Captain Evans is for it because the smoke always slowed the American fire, and rendered manœuvring in close formation very dangerous. He prefers to see the target, even if his own ship is thereby exposed to view—in short, he holds the sound maxim that offence is more important than defence.

After the battle ungenerous and ignorant attempts were made to rob Admiral Sampson of the credit which he deserved. By certain Americans, who are apparently unaware that Admiral Sampson's name as a great artillerist has been for years familiar to all naval students, it was assumed that his promotion to the chief command over the heads of Captains Schley and Watson was a piece of favouritism. Admiral Sampson's success is the best answer to this charge. He has been blamed for his absence at the moment when Cervera put to sea, though it is now known that he had been expressly

ordered by the Navy Department to go to Siboney, and though it was obviously impossible for him to foresee the enemy's movements with absolute exactitude. Admiral Sampson from first to last did his work in a manner that commands British admiration, displaying coolness and judgment both in council and in action, and adopting dispositions which were excellent for the object in view. Blame for the mistakes at the outset—in not closely watching Cervera's fleet—cannot be laid at his door.

The greatest honour in the battle unquestionably rested with the engineers. Given sufficient pace to keep up with the Spanish cruisers, however well handled and well armed the latter had been, they must have been shot to pieces after a longer or a shorter fight by the heavily-gunned American battleships and cruisers. The American engineers had every disadvantage except that of wanting professional capacity and skilful *personnel*. They were taken by surprise, and from the exigencies of blockading work could not be expected to have everything in perfect order. Yet the performances of the *Brooklyn*, *Oregon*, *Texas*, and *New York's* staff showed that the men below the armour-deck could rise to a great emergency. They won the battle by placing the ships they worked in a position to bring their guns to bear. If they have not received their due meed of honour, it is because of the traditional jealousy which the executive and military officer cherishes towards the man who runs the ship, be he master or engineer. We may confidently assert that one of the immediate consequences of this action will be to draw attention to the anomalous

position of the engineer, who in most Navies has not even authority in his own department, though he is, of course, held responsible if the slightest thing goes wrong.

The suffering and hardships faced by the engineers during this campaign were in some ships very great. The temperature in the *Oregon's* engine-rooms is said at times to have neared 200° ; it was much the same in the *Texas*. The monitors' staffs of engineers and stokers were the worst used ; the low speed of these ships was due at least as much to the exhaustion of their staffs as to weak engines and hulls built for low speed. In the Puerto Rico campaign the *Amphitrite* had on one occasion to be towed, because her engineer force was exhausted. Forced draught was rarely used, the *Oregon* being the most conspicuous exception ; but assisted draught was employed not unfrequently. In the large cruisers such as the *Brooklyn* and *New York*, the battle-hatches and air locks were not closed for action, and the ventilators were kept up. Consequently their staffs did not suffer any discomfort in action. During normal cruising, temperatures were relatively low below their armour-decks. It is this superiority in comfort and habitability which endows the large, high-freeboard ship with such conspicuous advantage.

In its influence upon the campaign, this sea-fight was the decisive battle. On the morning of July 3 the position of Shafter's Army was most critical ; in the evening the moral effect of such a brilliant success re-acted most favourably upon the shaken American troops. This was the culminating blow to the weak, ill-fed Spanish Army. At first, as we have seen, Santiago

had received favourable reports from the Morro, and these were instantly telegraphed to Havana, whence orders were sent to Cienfuegos to prepare for Cervera's arrival. Then at 12.30 General Toral telegraphed the destruction of the destroyers:—"Cervera's squadron departed in perfect formation, firing like the devil on the enemy's ships. . . . After an hour of fierce fighting our squadron disappeared from view, going to the west. . . . The enemy's squadron was thrown into confusion and was not able to approach our ships, though it was much superior, and it was only after our vessels had run the blockade that the enemy followed in pursuit. I regret to have to report the loss of the two destroyers. One of them ran on the rocks near Punta Cabrera, and the other received such injuries, including the loss of its rudder, that it in vain endeavoured to return to port. Attacked by one of the enemy's ships, it engaged for some time, and then was obliged to ship its crew in two boats, one of which was captured and the other reached the shore. A short time after the destroyer blew up." After passing Punta Cabrera the battle was invisible to spectators in the Morro, and thus the belief that Cervera's squadron had escaped was by no means unreasonable. At 6.30 p.m., however, came from the pilot of the TERESA[1] news that five survivors from the TERESA and OQUENDO were in his house. This was the first intimation of the destruction of these ships. The men reported that the VIZCAYA and COLON were still steaming west, when last seen, with the enemy in hot pursuit.

[1] He had been put into a boat just as the ship turned after passing the Diamante shoal.

General Shafter had, early on July 3, called for reinforcements, and telegraphed that Santiago was too strong to be stormed. His expedition had done its work—it had driven Cervera out; but for it now to retreat was a military and political impossibility. It had to go forward to the capture of the town, as a withdrawal in the face of the Spaniards would have been dangerous, and would have led to furious outcries in the United States. But with the news of Cervera's destruction, Shafter, acting on advice from Washington, at once tried "bluff" upon the Spaniards. He informed General Toral of the defeat of the Spanish squadron, and demanded the surrender of the town, under threat of a bombardment. The news of the sea-fight spread joy through the American trenches, where the men turned out dripping wet, but cheering uproariously. General Toral telegraphed the painful intelligence to Havana, where it must have arrived just about the same time as a message from Madrid, expressing great satisfaction at the sortie of the fleet.

On July 4, as the channel giving access to the harbour was open to the enemy, and attempts on the part of Sampson's fleet to force its way in were to be apprehended —Sampson had already been urged by Shafter to make such an attempt, and had declined so long as the forts commanding the harbour mouth were in possession of the Spaniards—General Toral decided to sink the REINA MERCEDES at the entrance. She was hurriedly stripped and taken down to the entrance about 8 p.m. At 11.30 she moved out from behind the Socapa to the narrowest point of the channel, but was immediately

seen in the beams of the search-lights, and a sharp fire was opened upon her. In spite of this she was sunk in the pre-determined position, though, as her cable was shot away, she did not lie properly across the channel, and thus failed entirely to close it. Her crew suffered no loss, but the ship was a good deal injured by the American fire.

A suspension of hostilities from the 3rd to the 5th had been agreed to by the American and Spanish commanders, to allow the non-combatants in Santiago time to withdraw before the bombardment. On the 5th Cervera reported to Blanco, by telegraph from Playa del Este, the destruction of his whole force in combat against "forces more than three times my own." Blanco replied, "I admire the bearing of the chief officers and crew. Perhaps if you had selected some other hour to leave port, the result would have been different. Sampson says in his telegram that he has not suffered a loss of more than three killed and one wounded. Is that possible?" It should be said that the Spanish prisoners when taken on board the American ships were stupefied to discover little or no trace of injury, and not a sign of killed or wounded men.

The armistice was further prolonged till the 10th, when the *Brooklyn*, *Texas*, and *Indiana* bombarded the forts and town, and the American Army also opened fire on the Spanish lines. On the 11th the *Brooklyn*, *New York*, and *Indiana* used their 8-inch guns from Aguadores, firing very slowly on the city at a great angle, whilst the practice made was reported by signal from the American lines. Fifty-nine houses were damaged, one or two being

completely wrecked, but many of the projectiles did not explode, and as the population in the city had sought safety, there was no loss of life. The moral effect of this fire, however, from guns which it was impossible to see and to which it was impossible to reply, was very great. It directly contributed to the fall of the town. In the afternoon a flag of truce was sent in, and the surrender of the place again demanded by Shafter. On the 13th Toral agreed to the American proposals, and handed over Eastern Cuba to the enemy.

It has been said that at an early period—immediately after the destruction of Cervera's squadron—Sampson should have forced his way into the harbour. We now know that the passage was open all the 3rd and during daylight of the 4th, and that the guns mounted in the Spanish works were not of a nature to inflict serious damage on well-protected battleships. Still, to expect Sampson to have acted as if he had been possessed of this knowledge is absurd. For political reasons it was important to keep intact the best American ships, and he had express orders not to risk his armour-clads—the only vessels which were suitable for such a dash. There was no reason for demanding that he should repeat Farragut's achievements. After July 3 the position of Shafter's Army ceased to be really dangerous, and patience without risk or injury to the ships secured that which a premature dash at the harbour might only have accomplished with heavy loss and serious damage to the cruisers of the fleet. Indeed it will appear that at this point Admiral Sampson showed pre-eminently the quality of good judgment.

The Spanish prisoners taken by the Americans

were sent north after the battle. An unfortunate incident occurred on board the *Harvard* on July 5, when some of the VIZCAYA'S men rose on the American sentries, and were fired upon, with the result that seven Spaniards were killed and more wounded. But from first to last the treatment of the prisoners was exceptionally kindly and generous, and the best of feeling prevailed between them and their captors. It is, indeed, not certain that the affair on board the *Harvard* was not caused by a mistake on one side or the other.

CHAPTER VIII

CABLE-CUTTING, AND MINOR INCIDENTS OF THE WAR IN THE WEST

April—August

WE have already noticed the general prevalence of rumours respecting the presence of Spanish ships in the North Atlantic and on the American coast. Though these were mere newspaper stories, they undoubtedly added to the uneasiness of the American coast population. The first such report came from Queenstown on April 27, when the *Majestic's* passengers told of "a battleship and three torpedo boats" 1700 miles west of Queenstown. The battleship was identified with the PELAYO, and was supposed to be *en route* for the northern coast. Next the Belgian liner *Pennland* reported seeing the Spanish cruiser CARLOS V on the track of the *Paris* on April 24. Needless to say, neither the PELAYO nor CARLOS V were at sea at this date. Next a Canadian fishery cruiser saw "a Spanish warship" off Machias, Maine. This was probably the Austrian training-ship *Donau*. The cruiser *Minneapolis* was sent scouting up the Maine coast but found no enemy. The sound of her

guns at target practice, however, caused some alarm amongst the nervous ashore.

Meantime New York, San Francisco, Key West, and most of the other important harbours, whether on the east or west coast, were protected with mines, which embarrassed navigation, and were by no means a certain defence against the enemy. Again and again vessels steamed into New York over the mine-field, tearing loose the torpedoes by their wash.[1] There were also stories of persistent destruction and cutting loose of mines by Spanish emissaries.

On May 5 a fleet of five Spanish ships was reported off Barbados. A week later circumstantial stories of a Spanish fleet off New York reached Washington. The British tramp *Menantic* told the following tale:—"At about 12.30 o'clock Wednesday morning [May 11], the moon being up, we sighted about one quarter mile off our port quarter a low-lying dark grey one-funnel boat that looked like a torpedo boat. This was twenty-seven miles east of Nantucket. The boat ran up near us . . . suddenly sheered off and disappeared in the darkness. . . . About ten minutes after the boat disappeared a rocket was sent off from the quarter towards which she had gone." Then flash-light signals were seen to be interchanged between this vessel and another. At 5.30 a.m. yet another two-funnelled boat was made out. This larger boat was also sighted by another ship, and her presence being reported to Washington, led to the closing of New York harbour on the night of the 12th. On the 14th "three Spanish warships were sighted off the

[1] Cf. the failure of the submarine mines at Guantanamo.

coast of Brazil," cruising near Cape Agostinho. On the 15th heavy gun-firing off Cape Cod caused great alarm, though wise men guessed that it was only the gun-practice of one of the American cruisers off the coast. The American authorities about this date were "pestered with pleadings to detail warships for the defence of ports that might hardly be worth the while for Spanish ships to attack." On the 19th a veritable phantom fleet was seen off Nova Scotia. It consisted of nine ships, steaming rapidly, but from this vague description it might perfectly well have been the British North American squadron. The British steamer *Mohican*, arriving from Hull on the 20th, reported being fired on by a squadron of six ships, "presumably Spanish," on May 8 off the Scillies. On the 18th another British ship reported a Spanish cruiser off Cape Henlopen. And from Louisburg, Nova Scotia, came a still more entertaining yarn of seven warships, "presumably Spanish" as usual, steaming west. The pilots who saw them were certain that they were warships and not "coal barges," which it would seem are often mistaken for cruisers and battleships by the good people of Louisburg! The tale was confirmed, but it now appears that these vessels were French or British. All through these days the Navy Department was uncertain as to the exact position of Cervera, and even when he had been definitely located at Santiago, there was no rest from continued false alarms. In war time such stories are a common feature, as can be discovered from a study of the British press during the Napoleonic struggle.

On the 14th the Spanish warships CONDE DE VENADITO

and NUEVA ESPAÑA[1] made a mild attack upon the American blockading squadron to the east of Havana. They were fired upon an hour after leaving Havana by the American gunboats *Vicksburg* and *Annapolis*, and the auxiliary warships *Mayflower*, *Wasp*, *Tecumseh*, and *Osceola*. The latter approached them within 6000 yards, and were fired upon by the Santa Clara battery but without effect. It is noted by a German officer, who saw the Spanish vessels go out and come back, that none of their woodwork had been removed for the action. Darkness finally parted the combatants, without loss of life on either side. This was the only instance of any initiative on the part of the Spaniards during the war against vessels which they knew to be well armed. At San Juan they only ventured out against the American scouts, which were supposed to carry a light battery.

On May 13 the *St. Louis* dragged for the San Juan-St. Thomas cable, some miles east of San Juan, picked it up and cut it. On the 15th she came up with Sampson's fleet on the coast of Hayti, and was ordered with the *Wompatuck* to go to Santiago and cut the cables there, and then to sever the two cables running from Jamaica to Puerto Rico. On the night of the 16-17th the two arrived off Santiago. They stood close in under the Morro, and the *Wompatuck* dragged for the cables. One was quickly found, but the winch raising it made so much noise that two Spanish vessels came out of the harbour. They were mistaken for torpedo boats, and

[1] The first carried four and the second two 4·7-inch Hontoria slow-firers; each had also four 6-pounders. The Hontoria guns could only fire once every five minutes, being in bad order.

Captain Goodrich of the *St. Louis* at once took his valuable charge out of range, whilst the *Wompatuck* dropped the cable. Next day about 10 a.m. the cable-cutting operations were resumed by a party from the *St. Louis*, who were sent on board the *Wompatuck*. The Spaniards fired from their old pattern rifled guns, the projectiles of which fell short, and with two howitzers, which made the cable-cutting unpleasantly warm work. The American 6- and 3-pounder guns replied without the slightest effect.[1] One cable was at last got upon the deck of the *St. Louis* and 100 fathoms cut away, but not before the Spaniards had obtained the range of the ships. The mortars ashore were now firing with some effect, and the cable-cutters withdrew. The severed cable was one of the two to Jamaica, or, perhaps, was only a dummy.

From Santiago the two ships proceeded to Guantanamo to cut the cable which runs thence to Hayti. The *Wompatuck* entered the bay, and under a heavy fire picked up the cable. She was hoisting it on deck when the little Spanish gunboat SANDOVAL appeared and opened fire, supporting the troops ashore. Captain Goodrich therefore signalled to the *Wompatuck* to withdraw, as the fire of the enemy was too hot for her to face,[2] and though she steamed away dragging at the cable, the grapnel seems to have slipped off without parting the cable. On the 20th she proceeded to Mole St. Nicolas, and there, just outside the marine league, grappled and cut the cable which runs thence to Guantanamo. On May 22 she was off Ponce, Puerto Rico, grappling for the cable which leads from there to Jamaica. The bottom

[1] Neither ships carried heavier weapons. [2] Reports, 211.

hereabouts is very irregular and rocky, and after bending her two last grapnels she abandoned the enterprise.

On June 7 a fresh attempt was made to interrupt the Hayti cable at Guantanamo,[1] this time by the *St. Louis*, *Marblehead*, and auxiliary cruiser *Yankee*. The two latter vessels bombarded a small blockhouse near Caimanera, inside Guantanamo Bay, whilst the *St. Louis* grappled the cable, discovered it, severed it and buoyed it. On June 11 the *Adria* cut the loop of the Santiago-Guantanamo cable about two miles south of the Santiago Morro. Grappling was then carried on to get hold of the two Jamaica-Santiago lines, the last remaining means of communication with the outside world. But after a whole month's work the *Adria*, though equipped with special appliances, did not succeed in severing a single live cable. Several dummy cables had been laid by the Spanish authorities[2] near the coast, and these caused a good deal of trouble. On June 21, at last, the *St. Louis* grappled one of the Jamaica-Santiago lines and cut it. Probably it was the same cable which she had already severed on May 18, as communications between Santiago and Madrid were still uninterrupted. On July 10 the *Wompatuck* dragged for the Santa Cruz-Manzanillo cable, and after three drives got hold of it and heaved it on board, when it was severed, and the seaward end towed out to sea, after 200 feet had been cut off it. The bottom was muddy and the work easy. On the

[1] The injury inflicted on the cable on May 20 appears to have been repaired.

[2] So Admiral Sampson (Reports, 213). Such foresight, however, is so unlike Spain that it would seem these were more probably abandoned or worn-out cables, which had been left at the bottom when replaced.

17th the *Wilmington* grappled and cut the Santa Cruz-Jucaro cable off Santa Cruz.

Several points in this warfare against cables are of interest. In the first place, the American naval authorities asserted the right to cut any cable which led from a neutral point to Spanish territory, outside the marine league from the neutral point. This is seen in the case of the cutting of the Mole St. Nicolas cable. In the second place, they warned the neutral owners of the cables that any attempt to repair such breaks would be regarded as a hostile act,[1] and they brought pressure upon the companies to cut San Juan and Ponce, Puerto Rico, out of the circuit, by the threat of injuring the cables. In acting thus they were probably well within their rights, but the circumstances are novel and interesting.

The usual procedure when the cable had been picked up was to cut a length of 200 to 400 feet from it, and then to drag the seaward end out to sea. This, of course, rendered repairs very difficult. The recommendation of Admiral Makarov to cut off some miles was, perhaps, found impracticable or unnecessary.

Because the Americans found it so very difficult to get hold of the cables round the Spanish islands, it has been assumed that it would be equally difficult to cut the cables which connect Great Britain with her dependencies and with the outside world. But before such a conclusion is arrived at the peculiarities of West Indian waters must be considered. "Apart from the climate," says the *Life of Sir Charles Bright*,[2] when speaking of the grappling for the Puerto Rico-Jamaica cable, "fishing

[1] Reports, 212. [2] ii. 294-5.

for a cable in the soft ooze forming the so-called 'telegraphic plateau' at the bottom of the North Atlantic was mere child's play to the work entailed in recovering this line between the west end of Hayti and Holland Bay, Jamaica, where the bottom is mostly volcanic, and probably one of the roughest in the world. . . . Mr. Edward Bright does not hesitate to say—after nearly two and a half years of continuous cable work in the West Indies—that many parts of the sea bottom in these regions are, as sea precipices, worse in their constant variations in height than any part of the Swiss or Dauphiné mountains. . . . The difficulty of getting hold of a broken cable in such irregular ground consists in finding a smooth patch either of ooze or gravel to plough through." The depths are often enormous, some of the West Indian cables lying in 5000 feet of water. When dragging for a single cable in the West Indies, Sir C. Bright with the best appliances broke or bent forty grapnels and lost several grapnel ropes.[1] The circumstances in West Indian waters are therefore very exceptional, and no conclusion affecting our Atlantic cables can be drawn from what happened in this war. If Admiral Makarov can be believed, any warship can pick up cables on a smooth bottom in depths up to 1200 feet.[2] The waters surrounding the British Isles do not exceed 660 feet in depth, and steps ought certainly to be taken to give some modest protection to the shore-ends of cables, which otherwise are at the mercy of the smallest torpedo boat. Even in 1500 fathoms,

[1] *Life of Sir C. Bright*, ii. 284.

[2] *Notes on Naval Progress*, Washington, II. xvii. 131.

says the authority already quoted, grappling a cable with special appliances in fine weather is fairly easy.[1]

On May 28 the American cruiser *Columbia*, whilst scouting off New York, was unfortunate enough to collide with the British steamer *Foscolia*, which was sunk. The injuries received by the *Columbia* were such as to detain her some days in dock. The *Foscolia's* crew escaped in their boats.

On the 31st two "Spanish auxiliary cruisers" were seen off Key West, to one of which the *Detroit* gave unsuccessful chase. On June 4 four of these imaginary warships were reported off Navassa, a small island lying between Jamaica and Hayti. On June 7 three more were sighted in the Nicolas Channel, and three days later ten "mysterious Spanish cruisers" appeared to some imaginative observer off Cape Henry.

On June 1 the *Suwanee* (armed yacht, two 4-inch and four 6-pounder guns) made an attempt to destroy two Spanish gunboats supposed to be lurking off Cape Frances, and in navigating one of the channels amidst the numerous cays, struck a reef. She got off, however, without injury, assisted by one of the newspaper despatch boats.

On June 7 the *Marblehead* and *Yankee* had a brush with the little Spanish gunboat SANDOVAL (one 6-pounder, one 1-pounder), and drove her into the shallows of the Bay of Joa, above Guantanamo harbour, whither, by reason of their heavy draught, they could not follow her.

[1] *Notes on Naval Progress*, Washington, II. xvii. 137.

On June 12 the auxiliary *Yankee* was sent to Cienfuegos to watch for the Spanish steamer PURISIMA CONCEPCION, which was expected to run the blockade. Next day a few miles to the east of that port she encountered the Spanish torpedo gunboat GALICIA. The latter must have taken the *Yankee* for a merchant steamer. She approached with her awnings up, and quite unprepared for battle. Thereupon the *Yankee* gave chase, and when within 2000 yards hoisted her colours and opened with her port 5-inch guns. The GALICIA returned the fire, but as there was no wind, the dense smoke of the American weapons made accurate shooting impossible, and the Spanish vessel was able to reach the harbour mouth. A second gunboat, the VASCO NUÑEZ DE BALBOA (two 6-pounders and two 1-pounders), came out to the GALICIA's help, and the batteries also opened fire at 4000 yards range. Finally both vessels retired to the shelter of the harbour. The *Yankee* had one man wounded by a shell splinter which came in through one of the gun-ports; the VASCO NUÑEZ had a shot through her bows, and is said to have lost three men killed and ten wounded.[1]

On the 20th the *Yankee* saw a Spanish vessel, answering to the description of the PURISIMA CONCEPCION, near Casilda, but inside the line of reefs, where the *Yankee's* draught and unhandiness would not permit her to venture. The *Yankee* opened fire, whereupon the Spaniard stood to the east, sheltered by the reefs, and escaped. On the 25th the *Yankee* destroyed a number

[1] Reports, 214-15. Commander J[acobsen], *Sketches from the Spanish-American War*, i. 31. New York *Sun*.

of Spanish fishing-boats, under the lee of Cape Frances, Isle of Pines.[1]

On June 22, whilst cruising off San Juan, Puerto Rico, the American auxiliary cruiser *St. Paul* was attacked by the small Spanish unprotected sloop ISABEL II and the destroyer TERROR. The ISABEL came out about 1 p.m. The TERROR followed her, steaming along the shore so as to keep under the shelter of the batteries, then suddenly circled and ran towards the *St. Paul* at her best speed, firing her 6-pounders meantime.[2] The *St. Paul* lay-to, bringing her enemy on the beam, opened at 5400 yards with her starboard battery, and as the destroyer approached firing rapidly with her 6-pounders to inspirit the Spanish seamen, was so fortunate as to disable her steering-gear. The destroyer turned, her rudder having jammed, and was struck by a 5-inch shell on the starboard side amidships, one foot above the water-line. The projectile passed through the engine-room, wrecking the intermediate cylinder of the starboard engine, and killing two officers and three men, whilst wounding seven men. An assistant-engineer was struck by flying fragments of the machinery and had his legs cut off. He died shortly after the action. The projectile passed out of the vessel on the port side one foot below the water-line, and she at once began to fill and listed heavily. She turned and ran for the port with her uninjured engine, at sixteen knots, but had to be

[1] Reports, 217-18.

[2] Jacobsen, ii. 26; Reports, 221-4. Her 14-pounder quick-firers had been removed to the TERESA on the voyage, and had not been replaced. The *St. Paul* carried at this time six 5-inch quick-firers, six 6-pounders, and six 3-pounder guns.

beached on Puntilla shoal, as she was fast sinking. Her repairs took a month to complete. The ISABEL II, which at no time came close enough to the *St. Paul* to use her guns, fell back when it was discovered that the American cruiser carried heavy weapons, and not merely 6-pounders. It is possible that the TERROR's only object was to decoy the *St. Paul* within range of the Spanish batteries. On the 25th the *St. Paul* was relieved off San Juan by the *Yosemite*, and was ordered to New York to coal and refit.

On June 29 the *Eagle* was landing some Cuban insurgent officers near Cienfuegos, when she was suddenly attacked by a Spanish battery of horse artillery. After a short skirmish she drove it off, with the assistance of the armed yacht *Yankton*.

On June 30 the *Hornet*, *Hist*, and *Wompatuck*, armed yachts or tugs, executed a reconnaissance of the cays and shallows between Santa Cruz and Manzanillo. In these waters a considerable coasting trade was carried on by the Spaniards, and at this particular time great efforts were being made to get provisions into Santiago by what might well be called the back-door.[1] As far back as June 15 the American Consul at Kingston had drawn the attention of Washington to this trade, and warned the American Government that eight vessels were preparing to carry food to Cuba by this route; on the 19th Sampson had promised that, as soon as light-draught vessels arrived, he would watch this stretch of coast. On June 28 the President had issued a proclamation extending the Cuban blockade to the south coast and to

[1] Reports, 495.

Puerto Rico. The movement of the *Hornet*, *Hist*, and *Wompatuck* had as its object the close blockade of Manzanillo. A Spanish gunboat[1] was sighted in the shallows of Niguero Bay, and engaged by the *Hornet* and *Hist;* the *Wompatuck* drew too much water to get at her. At 1500 yards the gunboat returned the fire from a 3-pounder forward and a 1-pounder astern. At the same time a vigorous rifle fire was opened by Spanish troops ashore. This was speedily silenced by a few shots from the American vessels' Maxims and 3- and 6-pounders. After three shots from her 3-pounder the *Hist* hit the gunboat's stern and put her machine gun out of action. The Spaniard then endeavoured to escape behind one of the small cays, but was struck amidships by a 3-pounder shell, and blew up.[2]

The *Hornet*, *Hist*, and *Wompatuck* then proceeded to Manzanillo, but on reaching the place were very warmly received. Nine armed vessels, amongst them an old cruiser and a sailing vessel, with four small gunboats,[3] were found in the harbour. The gun- and torpedo-boats were under steam, the others moored with their batteries commanding the harbour entrance. There also seemed to be several 6-inch smooth-bores mounted in four steamers, and one or two 3-inch and 4-inch quick-firers and a large smooth-bore mounted ashore in batteries on

[1] Probably she was one of the ESTRELLA class, launched in 1897, 40 tons; one 1·5-inch Nordenfeldt and one Maxim 1-pounder.

[2] Reports, 227-30.

[3] These were the ESTRELLA, see above; GUARDIAN, launched 1895, 65 tons, one 3-pounder, three machine guns; GUANTANAMO, launched 1895, 135 tons, one 14-pounder, one 6-pounder, and two small guns; and DELGADO PAREJO, launched 1895, 85 tons, two machine guns.

Caimanera Point, on the water front of the town, and in a fort which could be plainly seen. At 3.20 p.m. the Americans opened a fire, which was instantly returned. The Spaniards had the range of the American vessels, and struck them again and again. The *Hist* was hit eleven times, one shell passing right through the engine-room hatch, and a second exploding inside the hatch, close to the main steam-pipe. The *Hornet* had her main steam-pipe cut by a shell, and three men scalded by the hot steam which filled the vessel. A shell struck an ammunition box under one of the gun-captains, but did not injure him. She was several times hit near the water-line, but claims to have put out of action a Spanish gunboat with a 3-pounder shot, and with a 6-pounder shell to have sunk a small sloop full of soldiers, who were firing at her. Finally she was towed out of action by the *Wompatuck* about 4.30 p.m. The *Hist* continued in action at a range of about 2000 yards till 5 p.m., and then retired. These three lightly-armed[1] vessels were, of course, quite unfit for the work of silencing the Spanish fire and destroying the craft in the harbour; that they escaped without the loss of a single man—other than those scalded—is simply extraordinary. The *Wompatuck* was hit three times.

On July 1 the *Scorpion*[2] and *Osceola* executed another reconnaissance of Manzanillo, but, hampered by shallow water, could not get close enough to destroy the Spanish

[1] They carried nothing heavier than the 6-pounder.

[2] The *Scorpion* was armed with four 5-inch quick-firers and six 6-pounders; the *Osceola* with two 6-pounders, one 3-pounder, and one machine gun.

vessels and silence the batteries. They engaged at 2000 to 1500 yards range, and after about twenty minutes' firing withdrew. The *Scorpion* was hit twelve times, but no one was hurt; the *Osceola* escaped without a hit. The port was now closely blockaded, several small craft laden with provisions being captured, and the unfortunate civilians in the town were reduced to deplorable straits[1] for want of food, all the provisions having been appropriated for the Spanish garrison.

Not till July 18 could a sufficient force be concentrated to destroy the shipping at Manzanillo. Early in the morning of that day the *Wilmington* and *Helena*,[2] gunboats, and *Scorpion*, *Hist*, *Hornet*, *Wompatuck*, and *Osceola*, armed yachts or tugs, approached the harbour, the first two by the northern channel, the *Scorpion* and *Osceola* by the centre channel, and the others by the southern passage. They arrived simultaneously off the town at 7.50 a.m., and found the Spanish vessels thus disposed.[3] At the north end of the harbour were three transports moored to a wharf, followed by a gunboat; then a pontoon; then two gunboats close together and close to the wharf, and just inside Caimanera Point another gunboat. The Americans, from positions which they knew to be outside the effective range of the Spanish works on shore, opened on the Spanish vessels, and then gradually closed in, but made no attempt to silence the batteries. After two and a half hours'

[1] Reports, 254.

[2] 1392 tons; each eight 4-inch quick-firers, six 6-pounders, two 1-pounders, two machine guns. 2·2-inch armour on 4-inch guns.

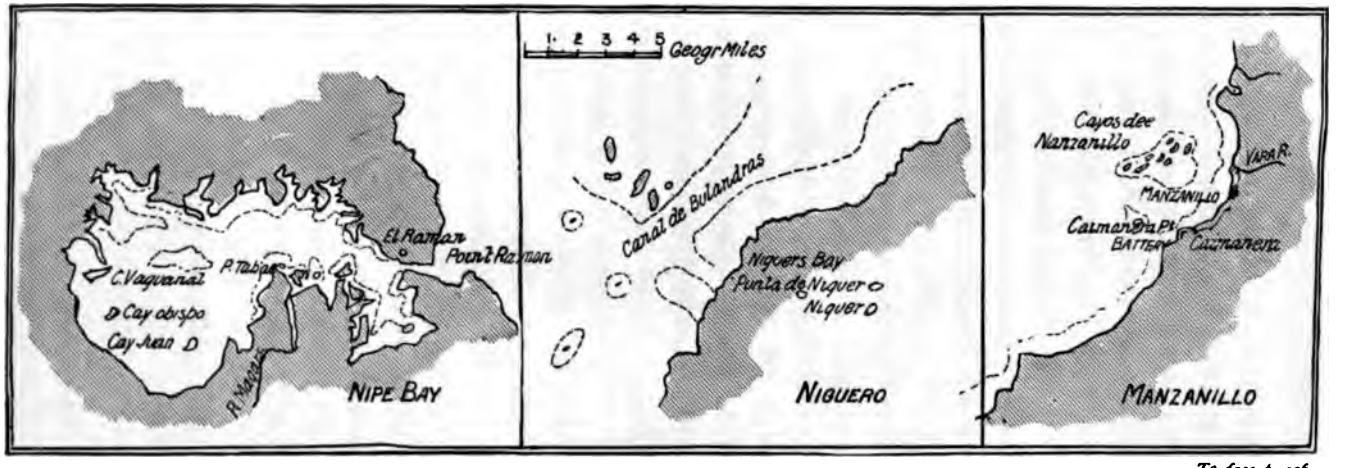
[3] Reports, 261-6.

deliberate firing the three transports or blockade-runners GLORIA, JOSÉ GARCIA, and PURISIMA CONCEPCION were burnt and destroyed; the pontoon blew up; three gunboats were sunk and three others driven ashore.[1] The Americans suffered no loss; the loss of the Spaniards is unknown, but was probably considerable. The commanding officer of the *Scorpion*, Commander Marix, draws attention to the fine shooting of the American gunners in this action. "In my opinion," he says, "the successful result of this engagement is due, to a large extent, to the system of 'gun-captains' lately established in the Navy. The four on board this ship did splended firing with decisive result. No doubt the want of a similar system in the Spanish Navy accounts for the few casualties we have had during the present war." Here, as elsewhere, an accurate and rapid fire seems to have proved the best protection to the American ships.

On August 12 a strong force under the command of Captain C. F. Goodrich arrived at Manzanillo to capture the place. The vessels under his orders were the protected cruiser *Newark*,[2] the armed ships *Suwanee*, *Hist*, and *Osceola*, the gunboat *Alvarado*, surrendered by the Spaniards when Santiago fell, and the transport *Resolute*, with a marine battalion on board. The Spanish commander of the town was summoned to surrender, but declined to obey. At 3.40 p.m. the ships

[1] In addition to those mentioned on p. 393, the gunboats CENTINELLA and CUBA ESPAÑOLA were destroyed. The first was of 30 tons; the second of 225 tons.

[2] 4083 tons; twelve 6-inch quick-firers, four 6-pounders, four 3-pounders, five 1-pounders, and four machine guns.



To face p. 396.

Nipe, Niguero, and Manzanillo.

opened on the forts, the *Newark* at 5000 to 6000 yards, and the other vessels, which drew less water, at 1000 to 1500 yards. At 4.15 the *Alvarado* was sent in with a flag of truce to communicate with the Spaniards, but as the flag was not observed, and as the batteries continued their fire, the Americans resumed the engagement. The Cuban insurgents also appeared to the north of the town and attacked the garrison. Fire from the *Newark* continued intermittently during the night; with daylight preparations were made to resume the bombardment, when flags of truce were seen flying ashore. A boat came off, and reported that the United States had signed the peace protocol, and that an armistice had been proclaimed. The Americans had no casualties.[1]

On June 30 the Compañia Transatlantica steamer ANTONIO LOPEZ, of 3460 tons and fourteen knots, attempted to run into San Juan harbour, but was seen, chased, and driven ashore off Punta Salinas by the auxiliary cruiser *Yosemite*, then blockading San Juan. Part of her cargo of provisions and arms was saved. The Spanish cruiser ISABEL II and gunboat GENERAL CONCHA came out to drive the *Yosemite* off, mistaking her for a weakly-armed vessel, but getting a taste of her heavy battery, precipitately retired to the shelter of the harbour.

On July 2 the *Helena* had a sharp engagement with a Spanish battery at Tunas, whilst covering the transport *Florida*, which had been attempting to land a force of Cubans and Americans near the town. The landing party had been repulsed with considerable loss.

[1] Reports, 301—310.

On the 3rd the *Helena* had another brush with this battery, but without any decisive result.[1] On the 15th the *Annapolis* engaged a battery at Baracoa, whilst on the look-out for a schooner which had been carrying provisions from Hayti. The dense smoke from the guns, and the heavy sea prevented any decisive result. The *Annapolis* was struck at least twice, but no one was hurt.[2]

On July 21, in obedience to orders, the American vessels *Annapolis*,[3] *Topeka*, *Wasp*, and *Leyden*—the last three having been for some days engaged in blockading the entrance—took possession of Nipe Bay. This bay, like the harbours at Cienfuegos and Santiago, has a very narrow entrance, from 400 to 1200 yards wide, with deep water. Inside the bay opens out to a width of from three to seven miles, and affords a perfectly secure anchorage for the largest ships. The entrance had been defended by thirty mines, placed zigzag in the channel, and also by a small battery on Ramon Point. The *Wasp* and *Leyden* led into the bay, and by good luck passed over the mines without injury; it was found that the guns had been removed from the battery on Ramon Point. On entering the bay, these vessels sighted the Spanish gunboat JORGE JUAN,[4] at anchor four and a half miles from the entrance, trusting apparently to the security given by the mines. They signalled her

[1] Reports, 240-1. [2] *Ibid.*, 243.

[3] *Annapolis*, six 4-inch quick-firers, four 6-pounders, two 1-pounders, one Gatling; *Topeka*, six 4·7-inch quick-firers; *Wasp* and *Leyden*, 6-pounders, 3-pounders and machine guns.

[4] 935 tons, launched 1876; three 6·2-inch muzzle-loaders; two 2·9-inch Krupps; two machine guns. Crew 146.

presence to the *Topeka* and *Annapolis* behind, and these two ships at once entered the bay in their wake. At 12.45 p.m. the JORGE JUAN opened on the *Wasp* and *Leyden*. Her fire was at once returned. Then the *Annapolis* came up and attacked her vigorously at a range of about 2000 yards. The dense smoke hid her, but at 1.15 the *Leyden* signalled that she was sinking. At 1.45 she went down bows first, whether through the injuries she had received from the American guns, or through the opening of her sea-cocks by her men is uncertain. The crew escaped in boats ashore. Another gunboat of small size had been taken by the Spaniards up the river Mayari and there scuttled. Whilst the *Annapolis* was thus engaged the *Topeka* shelled a Spanish work on Point Tobacco.[1]

In his report on the action the executive officer of the *Annapolis* dwells upon the danger and inconvenience caused on board warships by such articles as ditty-boxes, mess-tables, and benches, which, being of wood, splinter and cause risk of fire, thus distracting attention from the guns.[2]

There were no casualties in the American ships. The JORGE JUAN appears only to have fired four or five shots.

On July 26 Gibara, a small port on the north coast of Cuba, connected by railway with Holguin, was occupied without resistance by the *Nashville* and the Cuban insurgents. The inhabitants had been reduced by the blockade to great straits for food and clothing.

On August 2, in Cortes Bay on the south coast of

[1] Reports, 266—275. [2] *Ibid.*, 271.

Cuba, a boat from the *Bancroft*, whilst attempting to carry off a Spanish schooner aground at the little town of Bailen, was fired upon. One American seaman was killed. The schooner could not be got off, and was rendered unserviceable, in consequence, by the fire of the boat's 1-pounder gun.

On the 14th the American revenue steamer *Mangrove* had a slight brush with a small Spanish gunboat, probably one of the NUEVA ESPAÑA class (570 tons, two 4·7-inch, four 6-pounders, and one machine gun), which was found anchored at Caibarien. After some shots had been exchanged the Spaniard hoisted a flag of truce, and informed the Americans that peace had been proclaimed.

It now remains to consider in detail (1) the attempts which were made to run the blockade of the Cuban coast; (2) the general management of the blockade by the Americans, and the steps which were taken to defeat it by the Spaniards; and (3) the strategical effects of the blockade.

The blockade was proclaimed on April 21, when these instructions were issued by Admiral Sampson:—

"You will immediately institute a blockade of the north coast of Cuba, extending from Cardenas on the east to Bahia Honda on the west; also, if in your opinion your force warrants, the port of Cienfuegos on the south side of the island. It is considered doubtful if the present force at your command would warrant a more extensive blockade. . . . It is believed that this blockade will cut off Havana almost entirely from receiving supplies from

the outside."[1] The blockade of the north coast was formed on the 22nd, of Cienfuegos on the 27th. But in its anticipations that thus all supplies would be cut off from Havana, the Navy Department was much too sanguine. Santa Clara Bay, Sagua, and Caibarien, all of which places were in railway communication with Havana, remained open, so that supplies could be and were introduced. Nor does any proclamation closing these ports appear to have been issued, yet they were actually—and not altogether legally—blockaded during the month of July by Commodore Howell. "The section from Piedras Cay to Nuevitas," he writes on July 17, "is much more difficult to handle [than the Havana section], and at present is the principal source of supplies. . . . Cargo landed anywhere inside these keys can be easily transhipped by boat and rail to Havana, and my reports show that much of this traffic has been going on. I have as yet been able to do nothing to stop it from lack of ships, but I will give my attention to the matter as soon as possible. . . . The matter is of prime importance if the supply of provisions to Havana is to be stopped. Nuevitas should be blockaded for the same reason."[2] The authority under which Commodore Howell acted was apparently a telegram from Admiral Sampson, bearing date July 10, and instructing him to watch Nipe and Nuevitas, and "make other disposition of the force under your command that will blockade the north coast of Cuba, as far as it is possible to do so."[3] But there

[1] Reports, 175. [2] *Ibid.*, 256.

[3] *Ib.*, 297. Cf. Hall, *International Law*, 703. The establishment of a blockade is so high an exercise of sovereign power that it can only be

was no notification to foreign Powers, such as usage demands, nor, since these places were not included in the President's original proclamation, or in the later proclamation of June 28, was their blockade notorious. Knowledge of the fact could not be presumed in neutral ships attempting to enter or leave. The Navy Department itself wanted to know on August 8 by what authority Commodore Howell was blockading Sagua, and informed him that he could not capture vessels going there. So at any time food for Havana could have been landed at this place. As the Commodore himself wrote, "a blockade of Havana is of very little practical use as long as these ports are left open." It is quite inexplicable that the Spaniards made such small use of such an open port. Provisions were not proclaimed to be contraband, and could have been imported with impunity, though probably, had a big traffic sprung up, the United States could have stopped it by proclaiming a regular blockade.

The blockade of the whole south coast of Cuba from Cape Frances to Cape Cruz, and of San Juan in Puerto Rico, was proclaimed by the President on June 28; but, curiously enough, the blockade of Santiago and of the stretch of coast from Cape Maysi to Cape Cruz never appears to have been proclaimed, though on May 21 Schley was directed to "blockade the enemy in port."[1] It may even be questioned how far the *St. Paul* was,

effected under the express or implied orders of the Government. Subordinate officers cannot create or vary a blockade at will. There are precedents on the other side.

[1] Reports, 466.

by the strict letter of the law, justified in seizing the *Restormel*, bound for Santiago with coal, on May 25; and it is interesting to observe that the vessel was ultimately released, though her cargo was pre-empted by her captors. The capture of the British collier *Twickenham* off Jamaica, on a voyage from one neutral port to another,[1] was another arbitrary act. Her fate is not stated in the official reports, but she was doubtless released by the American Prize Courts, which displayed commendable fairness and impartiality.

When the blockade of Santiago demanded the presence of a large force of ships in the east of Cuba, the difficulty of blockading the western and central portions of the island became very great. The number of vessels available was quite inadequate, and proper reliefs could not be regularly sent to the vessels on the various stations, with the consequence that from time to time some point had to be left unblockaded whilst the ship which should have been watching it was getting a fresh supply of food and water. "I have been told," says the commander of the German warship *Geier*, which visited many of the blockaded ports, "that the American ships would often leave the harbour [of Cienfuegos] without any guard, and then suddenly re-appear at the end of a few days." Strictly speaking, such action suspended the blockade, gave neutrals the right to enter, and involved a fresh proclamation and notice to all concerned.[2] But the cobwebs of theory are not infrequently

[1] Ultimately her coal was intended for the Spanish fleet.

[2] Cf. Hall, *International Law*, 705.

in war brushed aside by the besom of common sense, and no one protested against the American methods. Certainly England has much to gain by seeing that the principles and law of blockade are as elastic as possible; as certainly she would have been the last to protest in this instance.

In a general report drawn up on July 17, Commodore Howell gives the following force of ships as necessary for the blockade of the northern coast.

Baracoa	1
Porto Tanamo to Punta Gorda	1
Gibara	1
Porto Padre	1
Nuevitas	1
Boca de Caravela	1
Sta. Maria Cay to Fragoso Cay	1
Fragoso Cay to Dromedary Cay	1
Dromedary Cay to Bahia de Cadiz Cay	1
Bahia de Cadiz Cay to Piedras Cay	1
Matanzas	2
Havana	10
Mariel	1
Bahia Honda	1
Pass of Jutias to Pass of Buena Vista	1
Pass of Buena Vista to Cape St. Antonio	1
	26

As it was found best to send the ships from time to time to Key West to obtain coal and fresh water, instead of coaling them on their stations, a force of from 33 to 50[1] per cent. more ships than those actually at work blockading was required, to supply reliefs in turn. This made a total of forty ships, which was never

[1] He says "one-third more," but his figures show one-half more. Reports, 257.

reached. In addition, for work behind the cays and amongst the shallows of the Nicolas and Bahama Channels, the Commodore asked for twelve light-draught vessels, eight of which should be always on their station. At Havana four light-draught vessels, two heavy ships, and four fast vessels were needed. The heavy ships served as a rallying-point in the event of serious attack; the light-draught vessels were to prevent all attempts to creep along the shore-line, and the fast ships could at any time take up the pursuit. On July 27, however, the actual blockaders consisted only of two revenue cutters, two tugs, a yacht, two gunboats, and the second-class cruiser *San Francisco*,[1] a total of only eight vessels, all but one small. As inside the harbour there were four Spanish warships, the American position was not altogether secure. The arc which the blockaders covered extended for ten miles on each side, east and west from the Morro, and six miles north from it. Nearer the batteries made it dangerous to approach.[2] Bahia Honda and Mariel were not each watched continuously by one ship; between them there was only one for half the time. At Matanzas and Piedras Cay on this date were only four ships, one a collier and three revenue cutters or armed tugs of low speed and no fighting capacity. On August 3 the Commodore's whole command only mustered seventeen ships to watch 400 miles of coast, and he reported that most of them were

[1] The four monitors were kept at Key West, their unseaworthiness, discomfort, and low coal-supply rendering their presence on the blockade line inexpedient.

[2] On August 12 the batteries suddenly fired at the *San Francisco* and hit her, inflicting some slight damage.

of low speed, weak gun-power, and at the mercy of any hurricane. Of these seventeen, moreover, two were in want of repairs to their machinery, and one was in need of coal and water, reducing the effective total to fourteen. It is perfectly evident that such a force could not have been trusted to intercept fast blockade-runners. In addition to these ships were three torpedo boats inside the cays.

The blockade ended on August 14, before it had been really tested by the strain of hurricanes and by the lapse of time, wearing out boilers and machinery, and fouling the hulls of the promiscuous collection of tugs, yachts, ferry-boats, and armed steamers.

On the south coast the important points to be watched were Cienfuegos, blockaded from the outset, and Manzanillo, blockaded from June 28. On April 27 Sampson telegraphed to the Navy Department that he could not maintain the blockade of Cienfuegos unless colliers were sent there. The coaling difficulty was so serious that it was ultimately determined to seize a secondary base on the Isle of Pines, where to water the American ships and fill their bunkers. The war, however, ended before this could be accomplished. Until the Santiago campaign the *Marblehead*, *Nashville*, and one or two armed yachts or cutters constituted the blockading force here; then, the *Marblehead* having been withdrawn with Schley's squadron, the *Castine* was sent to carry on duty, and she again was succeeded in June by the *Yankee*, the *Yosemite* being despatched to cruise between Jamaica and Cuba, to break up the trade which had developed during the war. The *Yankee* was ultimately relieved

by the *Dixie*. Towards the middle and end of July a considerable force of ships was concentrated along this coast, and the blockade became very strict. Among the vessels employed at various times were the *Detroit*, *Bancroft*, *Nashville*, *Helena*, *Wilmington*, *Hornet*, *Hist*, *Wompatuck*, *Osceola*, *Yankton*, *Scorpion*, *Peoria*, *Maple*, *Suwanee*, *Eagle*, and *Niagara*. A powerful vessel had always to be kept off Cienfuegos, because of the presence of the Spanish torpedo gunboat GALICIA in the port. During July and August effective steps were taken to stop all boat traffic behind the cays, in the gulfs of Guacanayabo and Matamano. The last was of considerable importance, as a great quantity of cattle are believed to have been sent across it to Batabano from the Isle of Pines for the use of the Spanish troops in western Cuba.

In Puerto Rico the port of San Juan was blockaded during May and June, generally by only a single American ship. The difficulties to be faced by the blockader were considerable, the worst being the roughness of the sea, which made the boarding of vessels approaching the harbour an arduous task, and exposed the ship engaged in it to the risk of attack by the Spanish men-of-war inside the harbour. According to Captain Sigsbee,[1] a "considerable force of vessels" was needed there to maintain a really effective blockade.

The peculiar conditions which existed in Cuba rendered the blockade extraordinarily effective as a means of putting more pressure upon Spain and the Spanish forces in the island. In the course of the protracted civil war which had raged for three years before the United States

[1] Reports, 225.

espoused the cause of the Cubans, the greater part of the island had been ravaged. Plantations and growing crops were ruthlessly destroyed by one side or the other. Exercise of the most ordinary foresight would have led Spain, as war with a great naval Power drew nearer and nearer, to take steps to victual Cuba, especially the outlying towns in the east of the island. As far back as January 1898, Cervera's letters prove that a struggle was known to be imminent. There was ample time, then, to take precautions. But with the usual apathy of the Spaniard, little or nothing was attempted. When war came the bands of insurgents scattered up and down the island prevented the cultivation of the soil, and the American cruisers interdicted the arrival of supplies by sea. Food in consequence grew very scarce, and the population suffered severely.

The presence of the insurgents, the incompleteness of the railway system, and the mountainous nature of so much of the island, rendered communication by land practically impossible. From Pinar del Rio in the west, to Caibarien, Trinidad, and Tunas in the east, ran railways centring at Havana. But even these lines were constantly interrupted by the insurgents, who destroyed bridges and rails with dynamite, causing from time to time severe accidents and heavy loss of life. East of Caibarien and Tunas the greater part of the island was in the hands of the insurgents, the Spaniards being found at only a few scattered points, and nowhere exercising any authority beyond the range of their guns. They had garrisons along the Moron-Jucaro trocha—the line of works which stretched across the island, penning up

the insurgents as it was fondly hoped in the eastern half—at Nuevitas, Gibara, Holguin, Nipe, Baracoa, Guantanamo, Sta. Catalina, Santiago, Niguero Bay, Manzanillo, and Sta. Cruz. As there was no safe means of communication on land between these various points, these garrisons were almost as much isolated by the blockade as if they had been dwelling on so many islands. It took Colonel Escario from June 22 to July 3 to move 3750 men from Manzanillo to Santiago, a distance of 100 miles, and on the journey he lost 100 men in casualties, fighting with the Cubans. The troops from Holguin, Guantanamo, and Baracoa were unable, because of the bad roads and the want of provisions, to come to the help of Santiago. Hence the Spanish forces were liable to be destroyed in detail, and, had the war continued, the plan of successively attacking the positions in the east of the island might and would have been carried out by the American authorities in concert with the insurgents. As each Spanish garrison had a very inadequate supply of provisions for its own mouths, it followed that the despatch of reinforcements to any point merely reduced the length of time that this point could hold out, for these scattered forces had no properly organised trains to carry supplies. Escario's arrival at Santiago added so many thousand extra mouths to the total which had to be fed.

Lieutenant Müller's work on the Santiago campaign illustrates this fact clearly. "Everything was lacking," he says in a passage which we have already quoted. "And this was the case not only at the capital [of Santiago province], but extended to the whole division.

What happened at Santiago also happened at Manzanillo, Holguin, Puerto Principe, Ciego de Avila, Moron, Spiritu, and other places of the island. The cities had to supply the population of the surrounding country, and the latter had no provisions and no stores to furnish in return. . . . Had it not been for the arrival of the German steamer *Polaria*, which fortunately left at Santiago 1700 sacks of rice intended for Havana, there would have been an absolute lack of provisions, as neither the merchants nor any one else attempted to import them. . . . If there had been flour and bacon, the soldiers would not have been weakened by sickness. . . . Every one knew that if the blockade should continue the ruin of the city was imminent."

In the earlier weeks of the blockade Havana and western Cuba did not suffer much. Commander Jacobsen notices in May that at the former place the price of food was higher than in ordinary times, but still not extravagant. Meat was 1*s.* 6*d.* a pound ; eggs were very difficult to procure ; and the poorer class, especially the miserable *reconcentrados*, were undoubtedly feeling the pinch. Many houses were empty, and business was at a complete standstill.[1] At Cienfuegos in early June meat was only 9½*d.* a pound, and there was no apparent lack of provisions. The Spanish Government had requisitioned all that it could get, and fixed selling prices. Towards the end of June, at Havana free kitchens for the poor were opened, and " zones of cultivation," where fruit and vegetables could be raised in large quantities, had been taken in hand by the Government. Pine-apples

[1] Jacobsen, 31.

could be bought in any quantity for a low figure, whilst the health of the town was generally good. In July, however, famine made its appearance. Crowds of poor people came off to the German cruiser *Geier* in the hope of getting something to eat. "Everything floating in the water was examined by these miserable people. Nothing escaped their eyes. Parings of fruit and other refuse were caught up and sucked out. The suffering was terrible, and we were powerless before it."[1] Ashore the free kitchens were open, but though they fed about 1000 people a day, the help which they gave did not suffice. The crew of a brig captured by the *Vicksburg*, running out of Havana on June 24,[2] asserted that the mass of the people had nothing to eat but potatoes and rice, and that the price of meat had reached 4*s.* a pound, when a Government decree compelled a reduction to 2*s.* 2*d.* a pound. Even potatoes were 10*d.* a pound. Nine-tenths of the *reconcentrados* in Havana were estimated to have died of starvation. The captain confirmed Commander Jacobsen's statement as to the plenty and cheapness of pine-apples, which he said were selling for ½*d.* each. *La Lucha*—a Havana journal—of June 23 quotes the following wholesale prices for meat at the slaughter-house: beef, 2*s.* 3*d.* per kilo (about two pounds); mutton, 3*s.* 8*d.*; and pork, 4*s.* 2*d.* These figures were treble the ordinary prices or more. Attempts were made to employ the poor upon the fortifications, and so to provide them with work and food. The *Times'* correspondent, though he notes the fact that at the end of the war there were enough provisions in Havana to

[1] Jacobsen, 34. [2] New York *Sun*, June 26.

supply the troops for some months, states that during the blockade the mortality amongst the poor whites reached a rate of 45 per cent. per annum, owing to the unsuitable food.

The official papers published by the American Navy Department and the reports of General Shafter show that on the east of the island the blockade pressed much more heavily. The Spanish commanding officer at Caimanera states, for instance, on June 10, that his force is on half-rations, and even so has only supplies sufficient to last till the end of the month.[1] The surrender by Generals Linares and Toral of not only all the Spanish troops in Santiago, but also those at San Luis, Sta. Catalina, Guantanamo, Baracoa, Sagua de Tanamo, and other small places in the province of Santiago, was unquestionably due to the want of supplies, which again was due to the blockade. The chief of the Spanish staff confessed that the Guantanamo troops had received no rations at all after July 1, but had lived on green corn and horse-flesh.[2] "The garrisons," he wrote, "would have been cut off without the possibility of retreat, and would therefore have been left to the mercy of the enemy, as the nearest place on which they could have fallen back was at least a seven days' march distant. This is why these garrisons were included, whilst that of Guantanamo was included on account of the absolute want of provisions." "The Spanish troops at San Luis," writes General Shafter,[3] "were on the verge of starvation, and I have to send them rations." At

[1] Reports, 451. [2] Jacobsen, i. 15.
[3] July 24. *Times*, July 25.

Gibara, rice, peas, and beans were the only food that could be given the Spanish sick and wounded; provisions are stated by the commanding officer of the *Nashville*[1] to be urgently needed, especially for the people of the town. At Batabano, a town in railway communication with Havana, about this date beef was 2*s.* 1*d.* a pound; "provisions," according to a prisoner, "are very scarce; flour is very hard to get, and poor people die in the street for want of food and medicine."[2] A similar state of things prevailed along the coast, opposite to the Isle of Pines. Further east there was much suffering and distress for want of food, whilst towards the interior the destitution and hunger were, in the words of an American naval officer, pitiful.[3] Meat and flour were from time to time distributed in small quantities to the women and children by the American gunboats patrolling the coast.

There can, then, be not the slightest doubt that the blockade was an agency of the first importance in the reduction of Cuba, and this in spite of the small number of vessels employed by the Americans, and the frequent withdrawals of their ships to coal and refit. But we may well ask how it was that determined attempts to run the blockade and carry in provisions were not made. For such the experience of the American Civil War might have prepared us.

The island of Cuba has neutral territory from which blockade-runners could easily start, near on all sides. Off its northern coast lies the Great Bahama Bank—a stretch of reef-studded shallows—which can only be crossed without danger by those thoroughly familiar

[1] July 27. Reports, 281, 313. [2] *Ibid.*, 285. [3] *Ibid.*, 300.

with its coral ledges and innumerable cays. Small craft, with skilled navigators, can run over it from Nassau in the Bahamas, to within a few miles of the Cuban cays, absolutely secure from interference. No warship strange to the locality would dare to risk herself in these treacherous waters. Here then was a simple and easy route for blockade-runners, involving the crossing of only ten to twenty miles of open water. From Great Inagua in the Bahamas—a neutral group—is again only sixty miles to Baracoa; from the nearest point of Hayti about 100 miles. Jamaica was well placed for vessels approaching the south coast of Cuba; from Santiago it was only 170 miles to Morant Point, from Manzanillo 190, and from Cienfuegos 350. From the Mexican port of Vera Cruz to Havana was 800 miles, and to Cienfuegos 950. We should therefore have expected much use of these neutral bases to have been made by the Spanish Government. Whether at the north or south the Cuban coastline is usually difficult of approach, except to those with intimate knowledge, which should have given the Spaniards a further advantage. Their pilots knew or could easily learn the channels between the intricate cays, of which the best charts often gave no information.

Spanish apathy, however, flung these exceptional advantages away. That foreigners did not to a greater degree engage in the blockade-running trade, may, perhaps, be explained by the fact that there was no great amount of money in Cuba—the Spanish Generals and troops being generally in heavy arrears with all payments—and that there was no such valuable cargo as the cotton in the days of 1861-5 to freight the vessel on her return

run. The inducement to face risk was thus wanting. Sumptuary edicts in the Confederacy in 1864 did much to stifle the active trade that sprang up during the war; such edicts were to be looked for, and were indeed actually enforced in Cuba by the Spanish authorities from the beginning of the blockade. The price at which food stuffs were to be sold was fixed, and though it was stated that blockade-runners would be exempted from such enactments, it is not clear how the merchant could pay a high price for the runner's goods, when he had himself to sell them at a relatively low figure, arbitrarily fixed.

A few ships in the employment of the Spanish Government did, however, succeed in running the blockade. On April 26, a few days before the blockaders arrived off Cienfuegos, the MONTSERRAT, a 14-knot Spanish mail steamer, got in with war material. She afterwards escaped, probably when the blockaders had withdrawn to coal, and reached Spain in safety. All through the war there were two large vessels lying inactive in this port, and no attempt was made to utilise them. On June 17 the ADULA with provisions slipped into Cienfuegos, probably from Jamaica. It would seem that she had been secretly chartered by the Spanish Government. On the 22nd the Compañia Transatlantica steamer REINA MARIA CRISTINA, of 4300 tons and sixteen knots, reached the same destination, with arms, ammunition, and provisions. She was seen and chased ineffectually by the blockaders. About this date or a little earlier, according to the Havana press, two other large steamers ran the blockade with provisions. These were probably the SANTO DOMINGO

and MONTEVIDEO, both 14-knot Compaña Transatlantica boats, which were at Havana on the 22nd. At midnight of June 24-25 they put to sea and eluded the blockaders. Nothing whatever was seen of them by the Americans, and it was only the talk of the crew of a captured brig which revealed the news some days later. The MONTEVIDEO and SANTO DOMINGO proceeded to Vera Cruz, shipped a large cargo of provisions, and again attempted to run the blockade.

But now began a series of disasters for the Spaniards. On the night of July 4-5 the 16-knot, 4380 ton mail steamer, ALFONSO XIII, attempted to run into Havana. She had previously appeared off Cienfuegos on July 2, when she was seen and chased by the *Yankton* and *Detroit;* she was hovering near the Isle of Pines on the 3rd, where she was discovered and chased for sixty miles by the little gunboat *Eagle*.[1] Near midnight of the 4th-5th the 14-knot American gunboat *Hawk*,[2] being then about seven miles from the Morro, suddenly discovered a large steamer astern heading at full speed for Havana. At that moment the Spaniards must have made out the American, for the ALFONSO XIII, which was the steamer in question, turned and steamed full speed westwards along the coast, keeping her distance from the *Hawk*, which now gave chase and opened upon her with a 6-pounder. At 1.30 a.m., however, the stranger ran hard aground while attempting to enter the port of Mariel. The *Hawk* lowered and despatched a boat to examine her, but the Spaniards promptly fired and drove

[1] Reports, 236. Four 6-pounders, two 1-pounders; 490 tons.
[2] 545 tons; two 6-pounders, and two 1-pounders.

it off. Wishing, if possible, to make a prize of the ALFONSO, the *Hawk* refrained from firing upon her until daylight, when it was seen that by no possibility could she be saved. The *Hawk* thereupon brought up the *Castine* from Havana, and together the two vessels shelled the blockade-runner until her hull took fire. Part of the cargo had, however, been saved during the night by the Spaniards.

On the morning of July 12 the armed yacht *Eagle*, of fifteen knots, discovered the Spanish steamer SANTO DOMINGO in the bight to the west of the Isle of Pines, and at once gave chase.[1] The Spanish vessel was probably bound for the sheltered water behind San Felipe Cays, but in her haste to escape went hard aground off Piedras Point. A small coasting steamer ran up to her at once, and took off her crew and as much of her cargo as could be very hastily transferred, whilst the *Eagle* was slowly approaching, with her boats out, sounding. Finally the *Eagle* anchored about 2000 yards away from the stranded ship, and opened fire from her 6-pounders, when the coasting steamer speedily retreated behind the cays. One hundred and four shells were fired at the SANTO DOMINGO's hull, and then, as she appeared to be abandoned, a boat was sent to her. She was found to be armed with two 4·7-inch guns, which, but for the gross cowardice of her crew, might well have driven off the *Eagle*, a vessel armed with 6-pounders alone. In her hold were two 12-inch breech-loaders. She was packed with clothing and food, and had live stock on board. The effect of the 6-pounder shells upon her hull, states the officer who

[1] Reports, 247.

examined her, was remarkable. She had one shell through her port side, between wind and water, which burst in her shaft-alley; through the hole she made water fast. Another shell had struck and wrecked the steering engine. In all, twelve to fifteen hits were counted, which proves good shooting on the part of the Americans. As the vessel could not be got off the reef on which she lay, she was fired and abandoned, her 4·7-inch guns having first been disabled by hacking away the screw threads of the breeches. The SANTO DOMINGO had attempted to run the Havana blockade on July 8, but had been seen and chased away by the *San Francisco*, *Castine*, and *Bancroft*.

The MONTEVIDEO made one or two attempts to run the blockade, but finally retired to Vera Cruz and disembarked her cargo.

On July 28, about 11.30 p.m., the *Mangrove*, blockading Matanzas, sighted a steamer heading for that port, and gave chase. After two hours, however, the stranger drew away and disappeared.[1] It is uncertain what she was—perhaps the MONTEVIDEO. Two vessels seem to have got into Matanzas before this, and they were now attempting to leave. Whether in the end they did get out is uncertain.

In all, the number of vessels captured or destroyed during the West Indian blockade was as follows, excluding warships: steamers, 30; sailing vessels, 5; small sailing craft, 58; lighters and boats, 89. Of these many were released, during or after the war, by the Prize Courts.

[1] Reports, 294.

Early in July it was reported that a Spanish privateer was watching in the North Pacific for American ships from the Alaskan ports with treasure. It does not appear that there was any real foundation for the story, but three British warships proceeded north from Esquimault to assure respect for the British flag.

CHAPTER IX

THE PUERTO RICO CAMPAIGN, AND SOME DEDUCTIONS FROM THE WAR

THE surrender of Santiago accomplished, preparations for an expedition to Puerto Rico were at once made, whilst the fleet, having to fear no further trouble from the Spanish Navy in the West Indies, left one ship to watch the captured city, and withdrew to Guantanamo Bay.[1] There it was organised in two squadrons. The first, under the command of Commodore Watson, consisting of the *Oregon*, *Iowa*, *Newark*, *Yankee*, *Dixie*, *Yosemite*, *Badger*, and several colliers, was to proceed to Europe and pass through the Suez Canal to Dewey's help. The second, under Admiral Sampson's orders, consisting of the *New York*, *Brooklyn*, *Massachusetts*, *Indiana*, and *New Orleans*, was to accompany the first and make demonstrations against the Spanish coast. But these plans were interrupted by General Miles' request for strong naval convoy to accompany his expedition. Admiral Sampson had assigned to this duty the *Cincinnati*, *New Orleans*, three monitors, *Gloucester*, *Annapolis*, *Wasp*, and *Leyden*, whilst the *Yale* and *Columbia*, which

[1] Reports, 635; Goode, 265; Jacobsen, 2. 19; *Scribner's Magazine*, 24. 515.

were carrying troops, were also heavily armed. The Spaniards had nothing beyond the ISABEL II, TERROR, a torpedo boat, and a gunboat at Puerto Rico, and these were closely blockaded by the *New Orleans*. Though the monitors had not as yet arrived, the voyage could have been made in perfect safety under the escort of the gunboats. But none the less, frankly acceding to General Miles' wishes, Admiral Sampson attached to the convoy the *Massachusetts*, Captain Higginson, and the auxiliary cruiser *Dixie*, Commander Davis.

On July 21 the *Massachusetts*, *Dixie*, and *Gloucester* left Guantanamo with ten or twelve transports in which were General Miles and 3415 troops. Other expeditions left Tampa and Newport News for the same destination, it being the intention of the American War Department to employ a force of 25,000 to 30,000 men. The place of landing originally selected had been Cape San Juan, at the north-east corner of the island. But as this destination had appeared in the American press, and as the Spaniards were believed to be collecting troops there, General Miles, whilst *en route*, decided to go to Guanica instead, a port on the south-west coast, in spite of the fact that no warship, except the *Gloucester*, could get into the harbour and cover the landing.

As it turned out, the Puerto Rico campaign was a promenade for the Army, and gave little or no work to the Navy, except one or two insignificant skirmishes. Arriving off Guanica on July 25, early in the morning, the *Gloucester* asked permission to move into the harbour. Permission was conceded, and steaming in she fired several shots at the Spanish flag hoisted on a blockhouse, and at

a small Spanish force which was seen retiring. She then landed a detachment of blue-jackets to protect from destruction a number of sugar-lighters, which it was desired to seize and use for the landing of the Army. There was a sharp exchange of fire between this party and a Spanish force of about 30 soldiers, but aided by the *Gloucester's* 3- and 6-pounders, the enemy was driven back without casualty to the Americans. The troops forthwith began to land, and found the lighters most useful.

On July 27 the *Dixie*, *Annapolis*, and *Wasp* appeared off Ponce and obtained the surrender of the town. No resistance was offered. Sixty-seven lighters and several small Spanish sailing vessels were captured, and employed in landing the American troops.

The American ships seem to have used the neutral island of St. Thomas as their coaling station. A depôt of coal was maintained there, and the cruisers *Columbia* and *New Orleans*, and monitor *Terror* obtained fuel there, in spite of the Danish Governor's protests against this virtual establishment of a coaling station in his territory. To get over the difficulty Captain Higginson suggested the seizure of the small island of Culebra to the east of Puerto Rico for the Navy's use. Ponce was too exposed and Guanica too shallow to be of much service to the fleet. On August 1 the *Gloucester* received the surrender of Arroyo; on the 2nd the *Cincinnati* and *St. Louis*, covering the advance of General Miles' army upon Guayama, shelled the hills between that place and Arroyo.

Meantime the *Amphitrite*, *Puritan*, *Montgomery*,

To face p. 422.

The *Gloucester* bombarding Guanica, Porto Rico.

and *Leyden* had proceeded from the Havana blockade, coaling on their way at Cape Haytien, to Cape San Juan, where, according to orders, they were to await General Miles. But his plans having been changed, as has been already seen, they found no ships there—not even the colliers which had been promised. On August 6 a detachment from the *Amphitrite* seized the San Juan lighthouse and fortified it. A naval cadet was accidentally wounded during this operation, and died afterwards of the results. This was the only casualty. On the night of August 8 a small Spanish force attacked, but after sharp firing, in which the *Amphitrite* and *Cincinnati* gave support to the garrison, was repulsed, with some loss to the Spaniards and with not a single casualty in the American force. The firing of the ships was wild, and a 6-pounder shell from one of them struck the lighthouse, almost within touch of six men, yet hurt no one. In view of the fact that 7000 Spanish troops were in the island, most of them within striking distance of Cape San Juan, the seizure of the lighthouse was an act of great daring. The American force was withdrawn on the 9th.

Preparations were now made for the attack on the fortress of San Juan, already once bombarded by Admiral Sampson. General Miles' troops were advancing upon it by land, and from the sea it was menaced by the *Amphitrite*, *Montgomery*, *Cincinnati*, and *Prairie*. The *New Orleans*, after withdrawing on August 5 to coal at St. Thomas, returned to the blockade on the 7th. In conformity with a plan submitted by Commander Davis of the *Dixie*, Admiral Sampson had instructed

Captain Rodgers of the *Puritan* to place the monitors, *New Orleans*, and other large vessels to the north-east of the place, at a distance of three miles, and bombard the city—after giving due notice. No ammunition was to be wasted upon the batteries, the futility of endeavouring to silence which had been on many occasions ascertained. Commander Davis further suggested that light-draught vessels with 5-inch guns, at the eastern extremity of the island on which San Juan stands, could sweep the San Antonio bridge, communicating with the main island of Puerto Rico, whilst a detachment of marines, landing a mile to the west of the harbour with field-guns, could attack the town and arsenal on its inner side, from the western beach of the harbour. Preparations were being made for the attack, when on August 12 the signing of the peace protocol put an end to the war.

By deciding to shell the city rather than the works, the American authorities showed that they had no intention of making "rosewater war." But whether such a bombardment alone would have succeeded in reducing the town is somewhat doubtful. All we can say is, that hitherto bombardments have rarely compelled surrender. Throughout the Franco-Prussian war, where the *morale* of the defenders was good, they proved little more than a bugbear. At Santiago it was quite as much the utter hopelessness of resistance as the effect of the ships' shells, great though this was, that brought about the surrender. And here it seems the Navy was to anticipate the Army in attacking, and was to snatch the glory by a *coup de main*.

The position of the Spaniards in San Juan must have

become hopeless so soon as the Army closed in upon the town. There was no great supply of food in the city, so that a long siege could not have been endured. The population was generally disaffected. Indeed whenever American troops invaded a Spanish colony—in Cuba, in the Philippines, in Puerto Rico—they were received with open arms. On the part of the Americans the campaign was well managed and skilfully conducted. There was none of the unnecessary waste of life and none of the unnecessary suffering which had marked the Santiago campaign. The Army and Navy co-operated heartily and intelligently; the force employed was ample; and the resistance was nowhere very serious. Here as elsewhere the Spanish leaders would seem to have lacked energy and *morale*.

The technical deductions from the various engagements and incidents have been already dealt with. It now remains to consider certain general lessons which cannot well be treated under any particular head.

The conduct of the naval war both in the United States and in Spain has been much criticised in England. The history of this struggle is peculiarly instructive as showing the result of the control of Navies by Boards. In the United States the Strategy Board, or "Naval War Board," consisting of Rear-Admiral Sicard, Captain Barker, Captain Crowninshield, and Assistant-Secretary Roosevelt, virtually directed the movements of the American fleet. All the officers were professionally distinguished; Secretary Roosevelt was famous as a naval historian

and writer, besides being a very capable man of business. He retired on May 7, and Captain Barker on May 20; whilst on May 9 the great naval historian, Captain Mahan, joined the Board. The *personnel* was thus in many ways ideal, composed of practical officers, with a leaven of accomplished theorists; yet the Board's timidity and excessive caution have been the subject of unfavourable comment in Europe. Whether this timidity and caution were quite so great or quite so unreasonable as European critics have assumed, has been elsewhere discussed. The fact remains that the charge has been made.

And now, turning to the Spanish management, we find a Board of eminent Admirals guilty of apparently just the opposite excess. The flag-officers who voted for the despatch of Cervera to the West Indies, with a fleet such as his was, displayed the maddest rashness, and the result was the prompt destruction of the unhappy force. The truth is that all sense of personal responsibility is lost in a Board, and timidity almost invariably prevails. It was timidity—fear of popular indignation—which led the Spanish Admirals to send Cervera to defeat. It was timidity—fear of popular indignation—which led the American officers to keep three of their best ships on the northern coast.

Nowhere is the control of a nation's forces by a single man, nowhere is unity of direction more necessary than in a democracy, a form of government which is peculiarly apt to be swayed by irrational impulses. This is especially the case where such a government is engaged in conflict with an absolute Power, whose whole

organisation is directed and elaborated for the single purpose of securing victory in war. Boards like councils of war do not take risks. Yet, as Nelson and Napoleon —as every great leader in war has told us, nothing great can be achieved without risk.

This is no place to study the working of the English Board. Sufficient to say that our present Board differs in essentials from the Board under which we won our greatest victories, though that could be proved to have been very far from perfect, to have often mismanaged our forces, and to have shown prodigality and favouritism. But it is most earnestly to be hoped that England will grasp this lesson of the war and remodel her organisation, whilst there is yet time. It is too late to do so when the day of battle comes.

This is all the more important as the Board tends to conduct all affairs itself, and to make of its Admirals and Commanders-in-chief mere puppets, of which the strings are pulled from Whitehall. A twentieth-century Nelson might find himself so harassed with orders and counter-orders, that all his combinations would be spoilt, and no scope given for his originality. The telegraph is an enemy as well as a friend. If in this war it was not quite the case that, as Admiral Colomb has said, "everything was done from Washington," yet very much was done from Washington. Orders to the scouts, for instance, were sent by the Navy Department, as well as by Admiral Sampson, the Commander-in-chief. Sometimes he gave different orders, not knowing of the other set of instructions, and the result, as we should expect, was confusion. The American system of intelligence was

excellent, but the American organisation of command was faulty and might have resulted in much mischief had the Navy been opposed by a stronger foe.

Two American officers, Ensigns Ward and Buck, volunteered for secret service and proceeded to Europe; Ward even went to Cadiz and stayed some days there, ascertaining all the facts about Camara's squadron and the general state of preparedness of the ships which had not sailed with Cervera. He took very great risks, for had he been detected he would certainly have been shot or hanged. Subsequently he went to Puerto Rico and made a careful inspection of the island, obtaining knowledge of the greatest value to General Miles. He was on one occasion arrested, but his imperturbable coolness pulled him through.

Everything that was being done, both in New York and Madrid, leaked out; and upon this fact has been based the theory that in future wars there will be no secrecy. But want of secrecy was one of the characteristics of our own system of waging war both in the Crimea and in the days of the struggles with France. It drew forth bitter complaint from Lord Dundonald. Since then wars have been waged, by Germany especially, without such betrayals of confidence. A Power which knows how to control the press, and whose ministers can hold their tongues, need not reveal anything. Even in peace time we find it difficult enough to ascertain what is happening in the Russian dockyards. A free press is, of course, a great enemy to its own country in war. It may be found necessary in a serious struggle to impose the muzzle upon it. To such a measure, if it be

a question of life or death, a democracy can be brought to consent. The betrayal of military secrets really means the sacrifice of heroic lives to sell a newspaper and put profit in the proprietor's pocket. We are inclined to believe, with considerable experience of the press, that patriotic proprietors would welcome the muzzle, whilst the unpatriotic proprietor deserves no consideration. Such things, however, need to be thought out beforehand by the military and naval authorities.

Naval correspondents in newspaper despatch boats pursued the American fleets, and were regarded by the naval officers as a great nuisance. On several occasions they led vessels of the blockading squadrons a troublesome chase. "They (the despatch boats) were unceasing sources of anxiety to the ship-commanders," says Mr. Goode, a correspondent on board the *New York*. They rode with lights showing where the fleet was cruising with lights out. When compelled to hide their lights they were a fresh source of trouble, owing to the constant danger of their being run down or running other warships down. As many of them sailed under a neutral flag it was not altogether easy to manage them. But as the war went on regulations were imposed by the American authorities. At times the despatch boats were of real service; they fetched and carried for the flag-officers; towed prizes into Key West; and once at least helped to haul a warship off the rocks.

A censorship on news, of a primitive kind, was established at Key West, at Washington, and at the cable offices in New York. But to evade this was the

simplest thing possible so long as no muzzle was placed upon the press. The intelligence had only to be sent by letter to Canada and thence telegraphed. It is true that correspondents of foreign newspapers, which received intelligence in this fashion, were threatened with penalties, but it does not appear that these penalties were ever enforced.

On the question of batteries versus ships, Admiral Colomb has noted that two conditions with respect to sea-coast fortifications require to be kept in view. The armament must be modern, and the gunners on shore must be at least as well-trained as those in the ship. There is a tendency to think that batteries do not become obsolete, and that any gunners will do for coast work, which in the opinion of the Admiral is wrong. The 64-pounder muzzle-loaders at Cavite were certainly useless for all practical purposes. But the Manila heavy guns, which might have done a good deal of damage to Admiral Dewey's fleet, were kept out of action rather by the bugbear of bombardment—for Dewey threatened to shell the city if they fired on him—and by the impossibility of removing the non-combatants, as the defenders were harassed in the rear by the Filipinos, than by the fact that they were of somewhat antiquated pattern. At Santiago old mortars on occasions made things very unpleasant for the American ships, and two or three Hontoria guns of by no means recent pattern in conjunction with mines kept the harbour closed to Admiral Sampson. It would seem that quick-firers using smokeless powder are far the most trustworthy weapons for coast defence, and that, properly mounted

behind earthworks, such guns cannot be silenced by ships. Mr. Goode, in his excellent work on the war, well describes the change in opinion brought about in the American Navy by actual experience in engaging batteries. At first officers argued that they could be attacked with success.[1]

"But all the same every man who aimed a gun against the fortifications of Matanzas knew that he had encountered difficulties in sighting that were entirely unexpected. All previous practice had taken place against objects on the water. When it became necessary to plant a shot on what to the naked eye was only a light blur on a long stretch of land, and when it was necessary not only to hit this blur, but also, in order to have any effect, actually to hit one of the enemy's guns, which were only black spots visible through glasses, then the gun-captains realised what a bombardment of fortifications signified. They found, also, that they could not tell where their shells were falling. . . . After more experience there were few officers in the United States Navy who did not realise that the impressions of Matanzas formed one of the best-based lessons of the war; that delicately constructed high-power guns are no more able to hit a needle in a haystack than were old smooth-bores in 1862; and that, except for moral effect or for some purpose other than the dismounting of guns, a naval force of the best calibre is next to useless when opposed to mo[redacted] fortifications."

Many incide[redacted]s illustrated the need for some controlling authority, directing both Army and Navy, or, if this

[1] Goode, p. 48.

is declared by conservative routine to be unattainable, for close concert and regulations governing the relations of the two forces. An incident which illustrated the friction that prevailed between the American Army and Navy was the seizure of the Spanish gunboat ALVARADO by an Army detchment in Santiago harbour. Sampson despatched a prize crew, to whom the soldiers surrendered the ship, but barely had this been accomplished, and barely had the vessel started to leave the harbour, when a tug, at General Shafter's orders, gave chase to recapture her for the Army. The merchantmen captured at Santiago had prize parties from both Army and Navy on board for three days.

Alone amongst the great Powers, Germany, who prepares for war scientifically and systematically, and is rarely or never faced by a problem which she has not thought out, has taken steps to avoid such ridiculous and unpleasant occurrences. Though there are officers in our Army well qualified by their knowledge of military and naval affairs to prepare a scheme for our forces which would have the same result, the writer cannot ascertain that any such scheme has been drawn up. Yet it is certain that any great war in which England engages will be, and must be, amphibious.

Nothing is more striking to a student of the naval wars which England waged at the close of the last and the beginning of the present century than the often indifferent material of her warship crews. Success appears to have been due to the excellence of the officers and persistent target practice. In the American Navy, though there may not have been many foreigners

technically, there were certainly men of many nationalities who had only recently been naturalised. A scrutiny of the list of names of the crew of the *Maine* will prove the truth of this. Swedish, German, French, and Greek names alternate with the more familiar Irish and English. Of the officers, however, the bulk seem by their names to have been of British descent. As Commander Jacobsen has said, they knew how to handle their men and how to maintain that amount of discipline which their experience showed to be necessary. They were scientific and intelligent, and the men under their orders were good gunners, accustomed to the sea, practised, and intelligent also. The American Navy had not forgotten that manœuvres are the best peace preparation for war, and that to hit the enemy with your projectiles is the *ultima ratio* of naval tactics.

The great strength of the American Navy lies in its freedom from conservatism. Though its officers are old, they seem to retain the belief of youth, that what is, is not the very best conceivable. As a force it is never ashamed to borrow its neighbours' ideas when they are good, or to discard its own experiments when bad. It broke away from routine when the appointment of a commander-in-chief was in question. It broke away from routine after the war, by amalgamating the engineer and executive. Possibly it will go yet further. The abolition of the marines, as a sea-service force, has been mooted, and though this branch of the service has subsequently been strengthened, those who desire simplicity in the naval organisation are not likely to relax their efforts to make of the marines an expeditionary force, at the

disposal of the Navy and accompanying the Navy, rather than an integral part of the warship's crew. There was a tendency to use bodies of marines 400 or 500 strong, carried with the fleet in a transport, for the seizure and occupation of secondary bases. Perhaps in our Navy the fact that the marine is cheaper than the blue-jacket will delay the working toward this result. Yet integral parts of ships' crews cannot in war be risked ashore. The classical example is the censure of the Admiralty upon Nelson for landing 1000 of his best seamen at Naples, to operate against Capua.[1] The real value of the marines should lie in the fact that they can be made to constitute an expeditionary corps of the highest quality under naval control. Splitting them up into small detachments on shipboard cannot contribute to their efficiency as such, and should be avoided, except so far as it may be necessary to bring the seaman and marine into close touch and to give the marine sea-legs. It seems almost hopeless to pour money into the bottomless sink of the War Office. But money spent on increasing our marine force and raising its numbers and efficiency would not be wasted. Whatever the demerits of our Admiralty, it does give us results. Only the Army is jealous of the marines, and the nation does not know how good the latter are. The marines are a peculiarly British force with magnificent traditions. Thanks to the fact that our Navy of to-day is manned by seamen of education and character, they are no longer needed on shipboard to guard the guardians of our shores. It is believed that they would welcome the

[1] Nicolas, *Nelson Despatches*, iii. 409.

great *rôle* which it is here proposed to assign to them.

Engineering experience during the war proves that delicate machinery, even in skilled hands, will not stand prolonged strain. The American torpedo boats, which, from want of accommodation and lack of engineers, carried no officer of this branch, were continually under repairs, and at the close of the war were in a "horrible condition," to quote Commodore Melville's report.[1] Boilers were burnt, cylinder covers broken, and pistons and valves stuck. Electrical machinery was found in the ships to give a good deal of trouble, possibly because its introduction was so recent that the proper methods of handling it were not generally known in the American Navy. Yet, as electric gear is to be fitted to the new ships, it is clear that the disadvantages are considered by the chiefs of the Navy only temporary. On sea as on land its applications are innumerable.

The supply of fresh water for the boilers was a matter which attracted a considerable amount of attention. In the tropical climate of Cuba the high temperature of the sea water used for condensing reduced the output of fresh water, and led to the use in several cases of salt water in the boilers, with disastrous results. Distilling ships later accompanied the fleet and proved of great service. Two will henceforward remain in commission, even in time of peace, making voyages with the various squadrons. "In future," says the report of the Chief of the Bureau of Equipment, "fresh water for boilers must be rated among the necessities of the fleet. It

[1] Report of Chief of Bureau of Steam Engineering (1898), 7.

must be abundantly supplied at all coaling stations, and transported to the fleet when supplied with coal elsewhere."[1]

As with distilling ships, so with repair ships and colliers. Both were found to be necessary adjuncts of a modern fleet. The following colliers were purchased at once, on the outbreak of war:—*Merrimac*, capacity 5000 tons; *Saturn*, 3000 tons; *Sterling*, 2600 tons; *Niagara*, 1800 tons; *Lebanon*, 1600 tons. Later additional vessels were bought, and finally the Navy possessed "an efficient armed collier fleet, with a carrying capacity of 50,000 tons, for use in the Atlantic." Many of the colliers, however, being hastily improvised, were not properly fitted for quick coaling of ships at sea. Colliers specially constructed for coaling warships would be of great service to our Navy, and it is to be regretted that we own none such. A high speed is not required; robust boilers and engines capable of developing twelve or thirteen knots would seem from American experience to be all that is needed. Were every important British naval station equipped with a distilling ship, a repair ship, and a couple of colliers, well found in the matter of winches, derricks, and equipment, the striking power of our Navy in the first days of war would be much increased.

The report of the American Bureau of Equipment draws attention to the exorbitant prices demanded for their ships by the owners of steam colliers. It also notes that no complaints of the coal-supply were received from the various commanders during the months of war.

[1] Report of Bureau, 11.

It took weeks and months to fit up the repair and distilling ships in the United States. The war was almost over when they were ready for work. The repair ship *Vulcan*, for instance, only sailed for Cuba on June 22, and reported off Santiago on July 1, when she was ordered to Guantanamo. There she remained making repairs. She was fully equipped with lathes, jacks, and machinery, and was fitted with small foundries for brass and iron castings, the capacity of her iron-melting cupola amounting to one and a half or two tons of iron at one heat, whilst her brass foundry was capable of turning out 6-pounder gun-mount brackets and small castings generally. She carried an enormous stock of spare parts and appliances. The kind of work which she accomplished is thus described:[1]—

"Thorough overhauling and repairs were made for the different vessels of their main engines, reversing engines, capstan engines, winch engines, crane engines, blower engines, steering engines, dynamo engines, dynamos and electric motors, ice machines, steam pumps of various types, main and auxiliary steam boilers, and extensive repairs made to boilers, engines, and pumps of steam launches. Manufacturing orders were executed for many spare parts, such as air-pump valve seats, ash-hoist castings, plug cocks, wrist pins of small engines, special studs and screws, etc."

In the space of forty-one days at Guantanamo the *Vulcan* filled 528 orders for repairs and 256 requisitions for supplies. She fitted out the squadron intended for service against the coast of Spain. Her mechanics jacked-up

[1] G. C. Sims and W. S. Aldrich in *Engineering Magazine*, June 1899.

the furnace crowns of many of the boilers of the blockading fleet, when these bagged through the use of salt water. She carried a distilling outfit with a capacity of 10,000 gallons daily, which was able to supply not only her own crew and boilers, but also the marines ashore at Camp McCalla. The total strength of her special force of mechanics was 109, whilst her crew numbered 109. Her mechanics normally worked in two shifts of eight hours each, but when the repairs to be made were very heavy they were divided into three shifts, and work went forward continuously night and day, all seven days of the week.

With regard to the question of the torpedo boat against the large ship, the war has made no contribution to our knowledge. The French advocates of the small craft have never suggested that two or three isolated boats could attack a squadron of battleships in broad daylight with the faintest hope of success. They have always pictured swarms of boats falling upon isolated ships by night, and they have urged that during daylight no torpedo-boat attacks should be made until the battleship's auxiliary battery has been put out of action. The rush of the FUROR and PLUTON at Santiago was as useless as would be a charge executed by a troop of cavalry upon a regiment of perfectly intact infantry and a couple of batteries of artillery. Spain's flotilla of seven destroyers and five good torpedo boats was too small to test the torpedo-boat question. Such a flotilla is quite insignificant beside England's 110 destroyers, or France's 300-odd destroyers and torpedo boats.

The great uncertainty and risk of mistake, which are

such serious arguments against torpedo-boat warfare, are well illustrated by an incident which Lieutenant Fremont of the *Porter* records.[1] About 2 a.m. one morning a steamer was reported running the blockade into Havana. The *Porter* gave chase, closed her fast, got within easy torpedo distance, and then made the night signal. It was not answered. A second time it was repeated and a gun fired, followed by a second. The stranger replied with the wrong signal. The *Porter* went full speed,—the stranger opened fire, and only in the very nick of time was the supposed blockade-runner made out to be an American ship. Torpedo boats, it should be said, were always fired upon first, and inquiries were only made subsequently. Nothing could have saved the big ship in this instance, and the torpedo boat could not have been much injured.

The torpedo boat from its intense heat in a tropical climate, fragility, and quick motion proved very distressing to its crew. No attempt was made by the Americans to use their boats against the Spanish ships in the harbours of Havana, Cienfuegos, and Santiago. Possibly this was due to the fact that the entrances of all these harbours being exceedingly narrow, it was comparatively easy for the Spaniards to close them effectively with mines and booms.

The effect of the war upon the commerce and shipping of the belligerents at the outset was considerable. Spanish trade with the Philippines and the West Indies ceased, and only a few large steamers attempted the work of blockade-running. Spanish shipping was, however,

[1] *Harper*, vol. 97. 832.

employed on the coasting trade of Spain and in the Mediterranean. American shipping at the end of April was hampered by high insurance rates, British companies raising their charge for insurance on American bottoms as much as fifty per cent. Owing to the uncertainty as to what would happen, and the reports that Spanish privateers had appeared in the Channel—reports which had no real foundation—heavy premiums were demanded for long voyages, and for the Transatlantic voyage in some cases as much as five per cent. was charged. Insurance on sailing vessels between San Francisco and New York went up from one-half per cent. before the war to twelve and a half per cent.[1] Sailing vessels were laid up, and even the coasting traffic almost ceased. But as the war went on shipowners recovered from their fright and sailing vessels again took the sea.

The total shipping of the two Powers was in 1897 :—

	Sailing Vessels.		Steamers.	
	No.	Tons.	No.	Tons.
United States :				
Atlantic . .	11,937	1,329,000	3173	1,011,000
Pacific . .	973	240,000	603	195,000
Spain . .	303	81,000	420	506,000

The great demand for auxiliary cruisers and transports kept the steamers of the American merchant service very busy during the later months of the war. The few ships of the American lines running to Europe were transferred to a foreign flag—the Belgian—where they were not taken away from their work and employed as scouts and cruisers. When the inactivity and apathy of Spanish methods were realised in the United States

[1] New York *Sun*, April 28, 1898.

the insurance rates fell. A significant fact is noted in the report of the Bureau of Equipment, that when war came, only one of the firms which had tendered for the supply and transport of coal was ready to face the war risks.[1]

Though both Spain and the United States announced their intention of observing the rule that "free ships make free goods," a striking feature of the war was the heavy rise which accompanied it in the price of wheat throughout the world, leading to acute distress and riots in Italy, and some uneasiness in England. The price of wheat in England was 35*s.* 2*d.* per quarter of 480 lbs. on April 9; it reached 42*s.* 4*d.* in the week ending May 7, and on May 12 touched 56*s.* Thereafter it fell steadily.[2] How far this rise was due to the fear that American corn in transit on the Atlantic might be seized by Spain, how far it was due to a special and abnormal demand for wheat in France, and to an attempt to corner wheat, is uncertain. But it seems that part at any rate of the rise must be ascribed to the nervousness felt in the commercial world at the beginning of the war.

[1] Report, p. 10.

[2] Between April 5 and May 10 the quartern loaf (4 lbs.) rose on the average one penny. *Times*, May 18, 1898.

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