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ROOKS, A.H.

NAVAL OPERATIONS OF THE CIVIL WAR

STAFF PRESENTATION

Naval War College
Newport, R.I.
29 January, 1940

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Not to pass out of the custody of Officers of the U.S. Naval or Military Service.

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7. Character of Theatre of Operations. Long coast line, with a chain of lagoons and coastal islands, and capillary rivers penetrating to interior. Many bases both for blockade-runners and for blockading forces. Unusual amount of naval activity against opposing troops facilitated by rivers. Atlantic coast; Gulf coast; Mississippi River and its tributaries.

8. Command Arrangements. Command of joint expeditions by method of mutual cooperation. Early joint command arrangements on Mississippi not satisfactory, but became so when naval command of the Flotilla was instituted.

9. Loss of Norfolk Navy Yard. Proper steps not taken to protect valuable Union property. Loss of eleven vessels, including MERRIMAC, and over 2000 powerful guns.

10. Establishment of the Blockade. Blockade enormous problem, but ships hastily procured and stationed, and the blockade rapidly made effective. Fear adds to effectiveness. Potomac

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15. The MERRIMAC and MONITOR. Conversion of MERRIMAC to an ironclad. Race between MONITOR and MERRIMAC for completion. MERRIMAC attacks Federal force at Hampton Roads on March 8, 1862, sinking CUMBERLAND and destroying CONGRESS. Sacrifice of CUMBERLAND not in vain. Alarm of the Federals. The MONITOR and

NAVAL OPERATIONS OF THE CIVIL WAR

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by

Commander A.H. Rooks, U.S.N.

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OUTLINE OF THE PRESENTATION

NAVAL OPERATIONS OF THE CIVIL WAR

Given by Commander A. H. Rooks, U.S. Navy

Naval War College, Newport, R.I.

January 29, 1940

1. Importance of a Study of the Civil War. Most of the strategical ideas still sound. The tactics and leadership of great interest.

2. Federal Naval Forces. Very weak and inadequate at beginning; Home Squadron only seven steam vessels. U.S. far behind European navies; U.S. naval strategy dominated by ideas of passive coast defense and commerce raiding. Immediate great expansion of material and personnel. Value of Welles, Fox, Isherwood.

3. Confederate Naval Forces. Initially no armed vessels. Privateers authorized. Thirty-five vessels built in South during war. Many others converted, or bought abroad. Commerce-raiders and blockade-runners. Sufficient officers but no trained seamen.

4. Logistic Support. South dependent on sale of cotton and importation of many essential materials. Few iron works.

North strong in industry, commerce, and finance, and all essential resources.

5. Objectives and Strategy of Union. Five objectives of operations in sea areas under command effectively carried out by Federal Navy. Prevented foreign intervention. Blockade.

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6. Objectives and Strategy of the Confederates. The four objectives of operations in sea areas not under command. Secretary Mallory understood and planned to carry out all four, i.e., commerce destruction; breaking blockade; raids on Northern coast, and Confederate control of Chesapeake. Industrial resources not adequate to carry out this program.

7. Character of Theatre of Operations. Long coast line, with a chain of lagoons and coastal islands, and capillary rivers penetrating to interior. Many bases both for blockade-runners and for blockading forces. Unusual amount of naval activity against opposing troops facilitated by rivers. Atlantic coast; Gulf coast; Mississippi River and its tributaries.

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MERRIMAC. The MERRIMAC contained. North constructs improved monitor types, single and double turreted. NEW IRONSIDES.

16. On the Mississippi. Capture of Island No. 10 April 7, 1862. Capture of New Orleans by Farragut April 25, 1862. The plan of attack. Bombardment and passage of Forts Jackson and St. Philip. First Federal victory on land or sea of cardinal importance. Abortive attempt to open the river at Vicksburg.

17. The Peninsular Campaign. Goldsborough supports McClellan. Gunboats attempting to reach Richmond stopped at Drewry's Bluff. Gunboats render invaluable services at Malvern Hill and Pittsburg Landing.

18. DuPont Attacks Charleston. Attacks of C.S.S. CHICORA and PALMETTO STATE. DuPont ordered to make naval attack on Charleston. Defenses very powerful. Failure of naval attack on April 7, 1863. Later joint operations under Dahlgren fail to capture city, which finally falls in 1865.

19. Capture of Vicksburg. Importance of naval assistance under Admiral D.D. Porter. Operations at Hayne's Bluff, on the Yazoo, against Arkansas Point, on the Red River, and in the bayous of the upper Yazoo. The Flotilla runs the Vicksburg batteries and assists in the attack from the south. Surrender of city on July 4, 1863.

20. Repulse on the Red River. Failure of Red River campaign. Dangerous position of Porter's flotilla. Saved by the dam at Alexandria. Comment on river operations.

21. Attacks on Blockade. Technique of blockade-running. Texans temporarily break blockade at Galveston and Sabine Pass in January, 1863. DAVID torpedoes NEW IRONSIDES in October, 1863. HUNLEY sinks HOUSATONIC February, 1864. New Confederate ironclad ALBEMARLE threatens blockade in Spring of 1864, but is destroyed by Cushing.

22. The Capture of Mobile. Mobile important as manufacturing center. Characteristics of C.S.S. TENNESSEE. The defenses of Mobile. Farragut attacks on August 5, 1864. Plan of attack. Loss of TECUMSEH. Farragut leads over the mine field. Defeat of TENNESSEE. Surrender of forts.

23. The Capture of Fort Fisher. Joint expedition under Porter and Butler fails on December 25, 1864, as Butler withdraws. General Terry appointed to command troops. Strength of the works. The assault of the naval landing force and the army, and the naval bombardment against stubborn resistance. Surrender on January 15, 1865. Cessation of blockade running.

24. The Cruiser Raids. Confederate commerce-raiding seriously cripples North's shipping industry but fails of objectives and has negligible effect on outcome of war. Welles safeguards efficiency of blockade. The SUMPTER, FLORIDA, GEORGIA, TALLAHASEE, and SHENANDOAH. Captain Semmes of the ALABAMA. KEARSARGE under Captain Winslow sinks ALABAMA off Cherbourg, France, June 19, 1864. Importance of correct conception of objective.

25. Conclusion. Navy successfully imposes strangling blockade; captures necessary bases; escorts, supports, and covers Army expeditions; protects own commerce; denies use of sea to Southern commerce; and prevents foreign intervention. End of Confederate Navy.

G. H. Bowdey,
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NAVAL OPERATIONS OF THE CIVIL WAR

Last week both the President of this College and the lecturer, Colonel Wright, pointed out the great value to us of a study of our Civil War. Although by modern standards the weapons of that day were primitive, most of the naval strategic ideas of the Civil War are still sound and such as we would employ today under similar circumstances, and its tactics, its leadership and its methods of command are of much more than historical interest. Colonel Wright in his presentation very ably covered the political, economic, and military situation, so that we may proceed directly to the naval operations.

FEDERAL NAVAL FORCES.

At the opening of the Civil War the United States Navy, although stronger than at any previous period, was in reality a very weak and inadequate force. There were in commission a total of only twenty-four steam vessels, most of which were on foreign station. The Home Squadron comprised only one first-class screw sloop of the HARTFORD class, two second-class screw sloops, and four smaller steamers, a total of seven steam vessels. Out of commission and without crews were five steam frigates and five smaller steamers, a total of ten. One of the best of the steam frigates, the MERRIMAC, was lost along with ten other ships when the Norfolk Navy Yard was evacuated.

In addition to the steamers there were about thirty sailing vessels of various sizes. These were of relatively little fighting value and those which were in commission were all used to show the flag on foreign stations. An indication of their value is contained in the remark of Silas Stringham when he had been placed on blockade duty in the Atlantic. "I will trade you," he wrote the Department, "my two sailing frigates and a sloop for one of the new steamers now building--that is, my one hundred and thirty guns for six, a thousand men for a hundred."

In comparison with foreign powers, the United States was lagging far behind in naval strength. This was an era of transition. Steam was replacing sails, and the screw propeller was replacing the early side wheels. Important developments in

ordnance were taking place, including explosive shells, rifled cannon, heavier projectiles, and longer ranges. The efforts of Dahlgren had resulted in equipping all ships with smooth-bore shell guns and boat howitzers equal to any afloat, and the rifled gun in an experimental state had appeared on a few vessels. The six steam frigates of the MERRIMAC class carried a very powerful battery, and were regarded the world over as model men-of-war of the wooden era. The United States, however, had none of the seagoing ironclads which were beginning to make up the battle squadrons of foreign fleets. The weight of naval opinion favored the smaller wooden steamers, the frigates and sloops which were the heavy and light cruisers of that period. The eyes of the country were turned toward the West, and America did not think of herself as a seapower, although she had a flourishing commerce. Naval strategy was still dominated by the two ideas of the War of 1812, that is, passive coast and harbor defense, and aggressive action only in the form of cruiser warfare against the seaborne commerce of the enemy. It is astonishing that such ideas should have still prevailed, for the War of 1812 had given a convincing demonstration that they are the methods of the hopelessly weak, and that they result in destruction of foreign commerce, disruption of internal economy, and armed invasion from the sea. But no Mahan had yet arisen to point this out to his countrymen and to champion the idea of the command of the sea based on a concentrated battle fleet of

capital ships.

At the outbreak of war, the Union Government immediately set about expanding the Navy. All but three of the vessels on foreign stations were recalled. All vessels out of commission were made ready. Scores of ships were purchased from the merchant marine and hastily equipped for war service. A large shipbuilding program was undertaken, the vessels laid down consisting of steam sloops, screw gunboats, double-ender paddle-wheel steamers for use on the rivers, and ironclads. In addition, there was gathered for the operations on the Mississippi a flotilla of river steamers, ironclads, tinclads, rams, and mortar boats.

Eventually the Navy was expanded sufficiently to meet the demands of the war. In December, 1864, the Navy List included nearly 700 vessels, aggregating half a million tons, mounting nearly 5,000 guns, and manned by 50,000 officers and men. But this expansion was achieved at a tremendous cost in time and money. The hastily built ships in many cases developed serious defects and frequently broke down in emergencies. The merchant vessels never became efficient men of war.

Added to this there was a chronic shortage of trained personnel. Before the war there were 78 captains, 114 commanders, 321 lieutenants, with proportional junior ranks and staff, and 5,000 men. About one-fifth of the commissioned personnel "went South", but almost the entire enlisted force remained loyal. The

defection of so many experienced officers magnified the difficulty always incident to the expansion of a navy at the outbreak of war. Officers and men were taken in from the merchant marine, where, fortunately, there were many available, and they generally proved satisfactory. Midshipmen then at the Academy became lieutenants before they reached 19 years of age. The morale of the Navy was good, but there were some superannuated and inefficient officers, who had to be weeded out. One captain afloat and the Commandants at Norfolk and Pensacola were nearly seventy years of age.

It is not surprising under the circumstances that there was some record of waste, confusion, mismanagement, and even of corruption. Unquestionably, it was only the naval weakness of the Confederacy which saved the Federal Navy from many serious defeats.

The North was fortunate in its new and efficient Secretary of the Navy, Gideon Welles, who, although he had no experience in naval affairs, took vigorous hold of the situation. Paullin says that with Welles rested the final decision respecting all shipbuilding programs, the principal plans of naval operations, and the general lines of naval policy. He was held responsible for the blunders and failures of the Department and the Navy. He was ably assisted by Mr. Gustavus Fox. This gentleman had served in the Navy for eighteen years and had then engaged very successfully in civilian pursuits. Fox was the professional adviser, and Welles had the good judgment to give him great

latitude in planning operations and in choosing men to carry them out.

Mr. Fletcher Pratt in "The Navy: A History", says "The name of the man who really won the naval war for the Union appears rarely in the history books." It was Benjamin Franklin Isherwood, engineer-in-chief of the Navy, undoubtedly the greatest man of his profession of that period. It was to the last degree fortunate for the Union that a man of such caliber should have been in the position Isherwood held when the war broke out. It was his engineering genius that made possible the building program carried out by the North, and that produced ships with engineering plants which functioned so well. On the other hand, the relative level of Southern steam engineering experience was not high, and the great weakness of the Southern ironclads was in their propelling machinery.

CONFEDERATE NAVAL FORCES.

At the beginning of the war the South had no armed vessels of any description. Having a very small merchant marine from which to draw vessels, she was forced to seize what craft were within her reach and to purchase from abroad any that could run the blockade. To offset this situation President Davis of the Confederacy early in April issued a proclamation offering letters of marque to anyone who desired to engage in privateering. Some vessels were fitted out as privateers but their results were so

meager that most of them eventually abandoned it and took up the more lucrative occupation of blockade-running.

Some thirty-five vessels were built in Southern yards during the war, the largest being of the TENNESSEE type, about 200 feet in length, with iron armor over wooden hulls. The number of vessels in the Confederate States Navy, built, bought, seized, or captured, reached a total of 215. With a few exceptions these were converted ferry boats, tugs, coastwise and river steamers, and revenue vessels. Some of the exceptions were the converted MERRIMAC, the TENNESSEE which took such an active and aggressive part in the defense of Mobile Bay, the LOUISIANA of the River Defense Flotilla, similar in type to the Union ironclad BENTON, and the cruisers SUMPTER, FLORIDA, ALABAMA, RAPPAHANNOCK, GEORGIA, and SHENANDOAH. In all over fifty vessels were commissioned as commerce raiders. One submarine was given a letter of marque and another, the HUNLEY, sank with the HOUSATONIC when she torpedoed that vessel off Charleston in 1864.

In addition to the vessels actually commissioned in the South, there were many blockade-runners, some owned by the Confederacy and some owned abroad. About 1500 of these runners were captured or destroyed during the war.

In the South the morale was high and there were sufficient trained officers for the very limited number of Southern ships, but there were practically no trained seamen. The Confederate

Navy List of 1863-64 showed four admirals, ten captains, thirty-one commanders, 753 junior and staff officers, and 5,000 enlisted men, the total being about one-tenth of the strength of the Federal personnel.

LOGISTIC SUPPORT.

The sale of the South's chief product, cotton, was vital to the finances of the Confederacy. After the closing of the Northern markets, the maintenance of communications with Europe became essential. Moreover, the lack of manufacturing facilities in the South made her largely dependent upon the European markets for ships, engines, iron, shell, powder, cannon, rifles, pistols, cloth, shoes, leather goods, nitrates, blankets, etc. The lack of nitrates caused the shut-down of the powder factory at Petersburg on one occasion.

As the Confederate Army had first call upon the clothing, shoes, and blanket factories and had absorbed all the available stock at the outbreak of war, the Navy was particularly dependent upon English and French markets. The Confederates established a naval representative in England, Captain J.D. Bullock, through whom all purchases for the Navy were made.

The South had ~~no navy yards, and~~ only a few small shipyards. She captured the Pensacola and Norfolk Navy Yards almost at the outset of the war, but lost them before they had been of much use. In the capture of the Norfolk Yard she obtained nearly 2,000 guns,

including many large ones of modern type, which were subsequently used as the principal source of heavy fortifications throughout the Confederacy. For ordnance manufacture she depended principally on the Tredegar Iron Works at Richmond, from which, as well as from the iron mills at Atlanta, were obtained most of the plating for the vessels built or converted in the Confederacy.

For the normal daily requirements of the population and for a large part of her war munitions, she was dependent on imports from abroad brought in by blockade-runners or arriving via Mexico, and thence across the Mississippi. This latter channel became undependable when the river came under Federal control. The South was able to support herself in food until the latter part of the war. At that time the desertion of slaves from the plantations, and the absence of a large number of able-bodied men in the Army, reduced the area under cultivation and the food supply became deficient.

The North had no comparable logistic difficulties. She was self-sustaining in food; her industries were strong and met most of the wartime needs; her ports were open to foreign trade. She was rich in mines, iron works, factories, shipyards, railroads, and merchant marine, and had abundant liquid capital.

OBJECTIVES AND STRATEGY OF THE UNION.

A few moments ago we noted that the U.S. Navy of that period did not conceive of naval operations against the stronger European

navies in terms of fleet battles, or of command of the sea, but relied upon passive coast and harbor defense, and upon cruiser warfare. However, the naval weakness of the Confederacy automatically presented the North with the command of the sea, without the necessity of fighting for it, and she was quick to take advantage of the situation. You will recall that naval operations in sea areas under command usually have five broad objectives, which, stated in the form of tasks, are:

(1) To prevent attack on our own coasts, either in the form of invasions or of raids.

(2) To deny to the enemy the use of the seas for foreign trade.

(3) To ensure to our own vessels and foreign commerce the unimpeded use of the sea.

(4) To transport and cover overseas expeditionary forces.

(5) To support military operations in enemy territory.

The Federal Navy effectively carried out all of these tasks, some of them in a very striking manner, and in addition, by its prompt expansion, and by its aggressiveness and success, probably prevented foreign intervention in the war. To quote Captain Knox, in his History of the United States Navy:

"The genius of the Federal Navy lay in its effective employment of the command of the sea, together with the control of thousands of miles of ocean inlets and rivers. This was manifested in a variety of ways, including world-wide commerce protection,

extensive blockading operations, numerous attacks on fortified coastal and river ports, close cooperation with the Army in military movements and combats, safeguarding long Army lines of communication, and preventing foreign intervention in the War."

The danger of foreign intervention was certainly a real one, and the services of the Navy in this respect were by no means the least of its achievements. The blockade, which seriously affected several of the European countries, notably England, brought on many grave disputes which might have ended in hostilities. England was not neutral in sympathy. The Prime Minister openly stated that the belligerency of the Confederacy had been recognized so that the United States might be disrupted and thus made a less dangerous commerical rival. The interruption of trade with the South meant great loss to the British merchant marine and disaster to her huge cotton-spinning business. Apparently she would have been glad to come to the support of the South on many occasions but for the power of the Federal Navy. There was, moreover, the matter of the French aggression in Mexico, with Napoleon's ambitions toward some form of control over Texas.

Mr. Lincoln from the very first considered the establishment of a blockade, but there were many objections to this step. Such a declaration might and did result in the recognition of the belligerent rights of the South by foreign powers and tended to antagonize such nations. Furthermore, the Navy was at first in no position to make a blockade effective.

However, when on April 17, 1861, President Davis invited Southern citizens to fit out privateers, thereby extending the conflict to the sea, Mr. Lincoln's hand was forced. In two proclamations, on the 19th and 27th of April, he declared a blockade on the entire Southern coast. This proclamation, because of the political reasons given above, was very much qualified. Ships could only be seized when "approaching or attempting to leave any of the said ports; -- the ship must approach with a view to violate the blockade; -- the ship could be captured only when on its second attempt to enter the same port."

You will remember that Colonel Wright pointed out the general plan for the combined operations of the Federal forces as set forth in General Scott's letter of May 3rd, 1861, which was in effect a joint plan of operations. That part of it which applied to the Navy was as follows:

"2. We rely greatly on the sure operation of a complete blockade of the Atlantic and Gulf ports soon to commence. In connection with the blockade we propose a powerful movement down the Mississippi to the ocean with a cordon of posts at the proper points and the capture of Forts Jackson and St. Philip, the object being to clear out and keep open this great line of communication in connection with the strict blockade of the seaboard, so as to envelop the insurgent States and bring them to terms with less bloodshed than any other plan."

In June, 1861, the Secretary of the Navy appointed the very important Commission of Conference, headed by Captain S.F. DuPont, to determine the military and naval operations on the Atlantic and Gulf coasts, collect hydrographic, geographic, and topographical information, and to devise methods for rendering the blockade effective. It was especially to obtain such information as would be of value in capturing a naval base on the Atlantic coast of the Confederacy. The Commission was composed of two naval officers, one Army engineer, and the Superintendent of the U.S. Coast Survey. It was one of the first, if not the first, of our Joint Boards. The reports of this Commission were discussed by the Cabinet and by General Scott of the Army, and proved to be valuable bases for planning naval operations. I shall refer to these reports in more detail after examining the character of the theatre of operations.

The Government finally determined upon two major naval objectives: first, to isolate the Confederate States west of the Mississippi by joint Army and Navy operations working up from the Gulf and effecting junction with similar undertakings working downstream from the north; and second, to close every inlet by which the products of the South could find their way into the markets of the world; thus to shut out not only war materials but also materials essential to the life of the people.

The tasks eventually assigned the Navy were:

(1) To blockade the coast from Norfolk to the Rio Grande.

(2) To assist in the capture of important ports on the coast.

(3) To secure and exercise control of the principal bays and sounds.

(4) To assist in opening the Mississippi and other rivers.

(5) To support the operations of the Army in certain parts of Confederate territory.

(6) To protect Northern seaborne commerce by destroying or containing Confederate raiders.

OBJECTIVES AND STRATEGY OF THE CONFEDERACY.

The naval operations of the South fell of necessity into the general category of what we call "Operations in Sea Areas not under Command", although certain bays and sounds, and certain rivers, were for a part of the time under Southern control. You will remember that operations of this nature are classified under four headings or general objectives: (1) defense of lines of naval communications; (2) raids; (3) amphibious expeditions; and (4) trade warfare.

Unquestionably, the Secretary of the Confederate Navy, Stephen R. Mallory of Florida, a former Chairman of the United States Senate Naval Affairs Committee, well understood the nature of the possible objectives open to the South. First, he proposed an aggressive commerce-raiding campaign on the high seas with "vessels built exclusively for speed" and "with a battery of

one or two accurate guns of long range," equipped to remain at sea for long periods and "able to engage or avoid an enemy at will." It was his thought that such raids would hamper the North's ability to carry on the war by creating havoc in her commerce, and would, moreover, divert sufficient Union vessels from the blockade to render it ineffectual.

Mallory's next plan was, by means of a few powerful ironclads, to break up the blockade and to carry the war to the Northern seaboard; in other words, to defend his lines of naval communications and to raid the enemy coasts. He believed that one armored vessel in 1861 "could traverse the entire coast of the United States, prevent all blockades, and encounter with a fair prospect of success....the....entire (Union) Navy."

Under the head of amphibious expeditions he envisaged Confederate naval control of the Chesapeake, thereby opening Richmond to the sea, seriously hampering Union military operations in Northern Virginia, perhaps winning Maryland to the Confederacy, and even menacing the Federal capital.

As we have previously noted, however, the industrial resources of the South were quite inadequate to carry out this naval program. By virtue of great ingenuity and effort, several primitive armored vessels were constructed, as we shall see later, but although they threatened the blockade, they failed to break it. Later in the war the North by diplomatic action defeated the efforts of the South to obtain two formidable ironclad rams from England.

THE CHARACTER OF THE THEATRE OF NAVAL OPERATIONS

Fletcher Pratt points out that the Civil War blackade, which is generally regarded as the most effective single strategical measure undertaken by the Federal Government, was the product of abnormal conditions in physical geography and in technical science. By the latter he meant the great change which was taking place in the character of naval operations due to the shift from sails to steam, coupled with the South's relative lack of engineering experience. With regard to the physical geography, he points out that the chain of lagoons and coastal islands running right around the Confederacy, and the capillary rivers penetrating to every point of its structure, not only gave the Federal Navy bases for a blockade of strangulation tightness, but also permitted it seriously to interfere with Southern troop movements. It is estimated that a good third of the Confederate reserves were sidetracked from their normal business of opposing Union troops into the unprofitable activity of beating off Union ships.

ATLANTIC COAST.

At the northern end of the theater lies Chesapeake Bay and Hampton Roads into which empty, among others, the Potomac, the York, the James and the Elizabeth rivers. From a little south of the Chesapeake Capes to Wilmington there is a double coast, the outer one consisting of a long narrow belt of sand jutting

out in three headlands, Cape Hatteras, Cape Lookout, and Cape Fear, and enclosing two extensive sheets of water, Pamlico and Albermarle Sound, upon whose tributory waters lie a number of important towns, This sand belt is broken at intervals by shallow inlets. Below Wilmington the coast sweeps in with a long curve at the end of which lies Georgetown, S.C. in a deep recess. From here the coast begins to assume the insular character so well defined below Charleston, S.C. From Charleston to Fernandina at the northern edge of Florida, there is a series of low swampy islands, separated by narrow rivers and arms of the sea, making an intricate network of water courses. At intervals the groups of islands are broken by large estuaries at the mouths of rivers. There are five of these between Charleston and Savannah, Stono Inlet, North Edisto, St. Helena, Port Royal, and Tybee Roads. Below Tybee Roads the same formation continues with six important sounds - Wassash, Ossabaw, St. Catherine, Sapelo, Doboy, and Altamaha. Brunswick, Ga., is the only important town in this region, with an entrance at St. Simon's Sound. From St. Simons the islands and sounds continue including St. Andrews, Cumberland Sound at Fernandina, St. John's and St. Augustine. Below this point the coast of Florida consists of narrow reaches of sand enclosing long lagoons, broken only by small and infrequent passes.

Waterways from the interior to the coast were no less important as a means of collecting exports and distributing im-

ports than were the railroads. The meager railroad facilities of the Civil War period forced the use of waterways for this purpose that would not be considered today. Some of the more important outlets have been mentioned but there were numerous others which served as ports for the blockade-runners. In addition to being coastal terminals of inland waterways, Newbern and Wilmington, N.C., Charleston, S.C., Savannah and Brunswick, Ga., and Fernandina, Fla., were also rail terminals.

GULF COAST.

The Gulf coastline from the southern tip of Florida to the Rio Grande is about sixteen hundred miles long. It is everywhere low and sandy, or marshy with an occasional bluff of moderate height. A large proportion of the coast line is skirted by low sandy islands sometimes joined by narrow necks to the mainland. These form inland sounds of considerable extent which are generally inaccessible to all but very light draft vessels. They as well as numerous bays and the mouths of many small rivers can be entered by light vessels acquainted with the ground. During the war small steamers and schooners frequently escaped from them carrying valuable cargoes of cotton, probably others entered with much needed supplies for the Confederacy. There is but little rise and fall of the tide in the Gulf, from one to two feet, but the height of the water is much affected by the wind.

The principal ports on the Gulf at the time of the Civil

War were New Orleans, Mobile, Galveston, Tallahassee, and Apalachicola. Pensacola Bay was the best harbor but at the time was not of much commercial value due to its lack of communication with the interior, its railroad connection having been destroyed.

MISSISSIPPI RIVER.

That portion of the Mississippi River in which we are interested in this discussion is from Cairo south. Cairo is situated at the junction of the Mississippi and Ohio Rivers and became the base and arsenal of the Federal flotilla operating in the Mississippi. From Cairo the Mississippi flows in a generally southerly direction but its course is so tortuous that by river it is a distance of about 1100 miles while by air it is only 450 miles to its mouth.

The river and its tributaries are subject to great variations in height dependent upon the rains and melting snows in their basins. The greatest average height is attained in the late winter and early spring months, with another rise in early summer. The lowest water occurs in August, September, and October, followed by a rise from the autumn rains. These rises and falls were factors in the operations of both the Army and Navy.

At a few points on the banks high land is encountered. On the right, or western bank there is only one, at Helena, Ark., between three and four hundred miles below Cairo. On the left bank such points are more numerous. The first is found at Colum-

bus, 21 miles below Cairo, then follow in order, the bluffs at Hickman, Ky., New Madrid, the four Chickasaw Bluffs in Tennessee, on the southernmost of which is Memphis; and finally a rapid succession of bluffs at intervals, extending from Vicksburg to Baton Rouge, of these latter named those at Vicksburg, Grand Gulf, and Port Hudson were the most important during the war. These positions afforded excellent sites for fortifications for control of the Mississippi and were seized and fortified by the Confederates.

COMMAND ARRANGEMENTS.

The matter of command of joint expeditions has been a controversial subject from time immemorial. In the Civil War the question of command does not seem to have caused as much difficulty in the operations along the coasts as did the matter of cooperation, because the orders issued on this subject were clear. I quote from a letter dated October 12, 1861, from the Secretary of the Navy to Flag Officer Dupont:

"By a recent order of the President, a copy of which has been forwarded to you, flag officers rank as major generals; but no officer of the Army or Navy whatever may be his rank, can assume any direct command, independent of consent, over an officer of the other service, excepting only when land forces are expressly embarked in vessels of war to do the duty of marines.

"The President expects and requires, however, the most cordial and effectual cooperation between the officers of the two services in taking possession of and holding the posts and positions on our Southern coast, which are designated in these instructions, and will hold any commander of either branch to a strict responsibility for any failure to procure harmony and secure the objects proposed."

Instructions of a similar tenor were addressed to Brigadier General W.T. Sherman by General Scott on October, 14, 1861.

The command situation on the Mississippi during the early operations when the flotilla was under the War Department was not satisfactory. It was evident that few soldiers of that period understood the true functions of the flotilla nor its high military value, and either overlooked its utility or dissipated its strength by the detachment of individual vessels for minor duties. When, after more than a year under the Army, the gunboats were transferred entirely to the control of the Navy Department, largely, it is said, on the recommendation of General Grant, and acted under a single naval commander according to the needs of the Commanding General, they proved to be most effective instruments for the military operations.

NAVAL OPERATIONS.

The number of engagements which occurred during the four years of the war was so great as to preclude a detailed study of them in this narrative. Therefore only the more important ex-

peditions and engagements will be touched on.

LOSS OF THE NORFOLK NAVY YARD.

Immediately after the fall of Fort Sumpter the Union Navy suffered the greatest naval disaster of the war, and that without the firing of a shot. This was the loss of the Norfolk Navy Yard. Proper steps had not been taken to protect the valuable Union property, and when threatened, the hasty and panic-striken efforts to destroy the ships, munitions, ordnance and facilities of the yard were ineffectual. The vessels were scuttled and set on fire, but they burned only to the water, and the depth was so shallow that it was fairly simple to raise them afterward. When the Northern forces had withdrawn, the local people rushed in, extinguished the fuses attached to mines, and saved many of the buildings which were just starting to burn. This regrettable and unnecessary affair entailed the loss of eleven ships, including the famous old United States Decatur's ship. Four of the vessels, including the steam frigate MERRIMAC were nearly ready for sea. But the great blow was the capture of over 2,000 powerful guns, already referred to.

Previously the Navy Yards at Pensacola and Charleston had been lost, at the time of the secession of their States.

ESTABLISHMENT OF THE BLOCKADE.

On May 1, 1861, the Coast Blockading Squadron was ordered

established under Flag Officer Silas H. Stringham. It is amusing to note a letter from Stringham to the Secretary of the Navy, written before he sailed on this duty, requesting an additional surgeon because the fleet surgeon had been sick at sea for the past ten years.

The problem of effectively blockading a coastline 3,000 miles long was enormous, particularly since the Navy had in the beginning but seven steamers in commission in home waters, and two of them were needed at Pensacola. Both the British and Southern newspapers were contemptuous of the idea of blockading with such a flotilla. However, ships were purchased and commissioned with the greatest speed. The squadron already at Hampton Roads blocked access to Richmond and Norfolk. The arrival of the NIAGARA under Captain McKean off Charleston early in May inaugurated the blockade of that port. Several months elapsed, however, before even one vessel could be stationed permanently off the other important points. Nevertheless it is said that mere fear of the blockade proved sufficient to virtually stop overseas commerce with the entire South almost immediately after the President's proclamation.

In May, 1861, Commander Ward organized a small flotilla to maintain control of the highly important Potomac River. This flotilla was active and efficient, but the operations of the Confederate Army, supported by the establishment of heavy

batteries with guns captured at Norfolk, practically closed the river by the middle of October, and it was not until the following spring, when the movements of the Army of the Potomac against Richmond compelled the Confederates to abandon their posts in the Potomac, that the river again came under Union control.

In July, August, and September 1861, Captain DuPont's Commission of Conference submitted three reports to the Secretary of the Navy containing the following recommendations for making the coast blockade effective:

(a) That an advance base be established on the southern part of the Atlantic Coast to be used by vessels engaged in blockade duties in that more remote section in order that they might be absent from their blockade station a shorter time when driven off by weather, or required to leave to refuel or obtain other supplies. Capture of a suitable position was, of course, necessary. Fernandina ~~off~~ at the Northern boundary of Florida was recommended as satisfactory.

(b) That the blockading vessels be divided into two commands, one to cover the coast from Cape Henry to Cape Romain, the other, from Cape Romain to St. Augustine.

(c) That the important Albemarle and Pamlico Sounds be closed by obstructing all the inlets with sunken vessels loaded with stone, the so-called "stone blockade".

(d) That joint expeditions seize, and occupy with Army troops, Bulls Bay, St. Helena and Port Royal Sounds in South Carolina, and all of the sounds from the entrance to Savannah, Georiga to Fernandina in Florida. The objective of this was the establishment of bases for small light draft vessels for work in the shallow waters of these sounds in order to more effectively close the numerous coastal entrances to the Confederacy, and to eliminate the necessity for offshore patrol.

(e) That the coast south of Fernandina be patrolled ~~by one or two vessels~~.

This plan applied only to the Atlantic coast. There does not appear to have been as definite a plan for the Gulf coast. However, it was a part of the general strategy to blockade the coast as far as the Rio Grande, and this blockade was undertaken. The plan for control of the Mississippi by simultaneous movements from the north and south has already been referred to. By October, the Gulf Blockading Squadron, charged with operations on the Gulf as well as opening up the western rivers from the south, had reached a strength of twenty vessels. Large forces were placed off New Orleans and lesser ones off Galveston.

Throughout the summer of 1861 about fifteen privateers operated against Union commerce, but their results were not striking. Many of them were captured or wrecked. The crew of one, the SAVANNAH, were tried in New York as pirates, and

threatened with hanging, but the idea was promptly dropped when President Davis threatened retaliation against Union officers captured at Bull Run.

In August it was decided to try out the "stone blockade" at Hatteras Inlet. This task necessitated joint operations to reduce the two forts, Clark and Hatteras, protecting the entrance. on August 27th a joint expedition consisting of a strong squadron under Flag Officer Stringham and two regiments under Major General Butler appeared off the entrance. The naval squadron bombarded and forced the surrender of the forts without the necessity for assault by the troops. Stringham had never been optimistic about the success of the "stone blockade" and, after the capture of the forts, persuaded General Butler to hold them with garrisons. This not only insured denial of the passage to the Confederate privateers, commerce raiders, and blockade-runners, but provided a base and entrance to the Sounds. It became a coal and supply depot, and the center of further operations. Incidently, this expedition sank many stone-laden vessels in the numerous inlets of this area, and although the operation was successfully accomplished, the vessels did not remain in position and the effort was fruitless. This minor naval victory, and the greater ones which followed it at Port Royal, Roanoke Island, Forts Henry and Donelson, and Hampton Roads, did a great service in elevating the morale of the Northerners

who, ever since the disaster at Bull Run in July, had been in the depths of anxiety and gloom.

It may be interesting to note that the Confederate naval forces were usually grouped locally under geographical names. The Naval Defenses of Virginia and North Carolina were under Flag Officer Lynch. The James River Squadron, when formed, was under Flag Officer Buchanan, formerly of the MERRIMAC, and of Flag Officer Tattnall, the author of "blood is thicker than water," a peppery old character who having been placed, as he thought, subordinate to General Johnston, requested relief from his command, saying: "Some younger man, whose backbone is more supple than fifty years of naval pride has made mine, can be found, I hope, for the sake of harmony, to take my place and carry out the views of the Department". He later commanded the defenses of South Carolina and Georgia. At Cape Fear was Flag Officer Pinckney, while at Charleston was Flag Officer Ingraham, and later Tucker.

On October 12th, The Confederates achieved a minor naval victory when the squadron under Commodore G.N. Hollins, C.S.N., operating from New Orleans, surprised a Federal squadron anchored at the head of the Mississippi Passes. New Orleans was being used extensively for Southern shipping and Flag Officer McKean had sent the steam sloop RICHMOND, two sailing sloops and a small side-wheeler to the head of the passes. At New Orleans

the Confederates had housed over an old Boston tugboat with heavy timbers and railroad iron and fitted her with an underwater ram of coast iron, naming her the MANASSAS. The Union forces knew of the MANASSAS but took no precautions. In a surprise night attack the MANASSAS succeeded in ramming the RICHMOND, making a small hole below the water line. The blow, however, damaged the ram's prow and engines, and she steamed slowly back toward the city. Fire rafts were now released, which drifted harmlessly ashore, but they were sufficient to stampede the Union vessels. In the hurry of retreat, the RICHMOND and VINCENNES grounded on the bar and the latter was for a time actually abandoned. Fortunately a train set to her magazines failed to burn. She was remanned, and the two vessels withdrew the next day, after repulsing the attack of a flotilla of five gunboats.

THE CAPTURE OF PORT ROYAL.

The plan of Captain DuPont's Commission of Conference was approved by the Government and on October 12, 1861, the forces on the Atlantic were divided into the North Atlantic Blockading Squadron under Flag Officer Goldsborough, from Cape Henry to Cape Romain, and the South Atlantic Blockading Squadron under Flag Officer DuPont, from Cape Romain to St. Augustine.

A joint expedition under DuPont and General W.T. Sherman was directed to seize two coastal bases, the selection to be

made from those named by DuPont's Commission. Port Royal was selected as the point of attack because of its domination of the entrance to a labyrinth of canals and rivers about equidistant from Charleston and Savannah and because it was the source of great quantities of rice and of sea island cotton which brought ten times the price of ordinary cotton. The bay of Port Royal and the Islands of St. Helena, loosely defended, offered an excellent operating base.

The fleet under DuPont consisted of a steam frigate, a large paddle-wheeler, three sailing frigates, five sloops, 25 colliers, and 32 transports with 15,000 men embarked, the transports towing surf boats to permit the landing of 4,500 men each trip. A heavy gale struck the expedition just south of Hatteras. The naval vessels had little difficulty, but the transports, not built for heavy weather, were in many cases considerably damaged. Four had to seek shelter, several saved themselves by jettisoning their cargoes, two were sunk on the ~~enemy~~ Southern coast and their crews made prisoners, and two others sank at sea.

During this expedition the two commanders coordinated their efforts by the method called mutual cooperation, in our book "Joint Action of the Army and Navy". A paragraph from General Scott's letter to General Sherman is worthy of note:

"Cordiality and deference on the part of our land forces toward those of our Navy, in the joint service in question, need

scarcely be enjoined. To this end free and frequent conferences between the joint commanders are recommended...."

Because the gale had destroyed most of the special equipment for the Army's quick landing, DuPont resolved to attack with the fleet alone, wooden ships against heavy land fortifications in narrow waters. On November 7th, after a heavy bombardment, Forts Walker and Beauregard surrendered. From this position naval and military detachments spread along the coast and effected lodgements in many places. Among these was Tybee Island, off the entrance to the Savannah River, the occupation of which made the blockade of that important port much more effective. DuPont had won a major victory for which he subsequently received the Thanks of Congress. Concerning this action, Knox says:

"The fruits of this victory were quite amazing. General Robert E. Lee had come down from Richmond to plan for the defense of the southern Atlantic seaboard and arrived at Port Royal harbor during the engagement. Afterwards he concluded to withdraw lines of defense inland out of reach of the Navy except at Charleston and Savannah, and the whole nearby coastal strip of numerous estuaries and islands was, therefore, soon deserted by troops and even by the white inhabitants except at those points."

In the area between Tybee Island and Fernandina, Florida, control was established by DuPont within four months by the

occupation of additional minor positions by joint expeditions, and by the operation of small vessels in the sounds and inland waterways. The region was of special importance because of its proximity to Bermuda and Nassau, from which blockade runners principally operated.

THE TRENT AFFAIR.

Previous to this, in June, the first of the commerce-raiders, the SUMPTER, Captain Raphael Semmes, slipped by the U.S.S. BROOKLYN off new Orleans and began a raid which netted her nineteen prizes, but which ended in Gibraltar early in 1862 when Semmes was forced to sell her because of being blockaded by Union ships and because of his inability to obtain coal and to effect repairs there. Her presence on the high seas caused the withdrawal of six badly needed steamers from the blockade. It was while searching for the SUMPTER that Captain Wilkes of the SAN JACINTO seized Commissioners Mason and Slidell, in the famous TRENT Affair. The action of Captain Wilkes was wildly acclained in the North, but was contrary to International Law, and England made preparations for war, actually embarking a large body of troops for service in Canada. It was only through the tact of the American Minister, Mr. Adams, and similar tact on the part of Lord Lyons at Washington, that hostilities were averted.

CAPTURE OF FORTS HENRY AND DONELSON.

The month of February, 1862, was marked by the notable victories at Forts Henry and Donelson, and the capture of Roanoke Island. In May, 1861, Commander John Rodgers had begun the preparation of a river naval force under the direction of the War Department. This is the command arrangement about which much adverse comment has been made, and to which I referred a few minutes ago. In September, Rodgers was succeeded by Commander A.H. Foote, at which time three wooden gunboats had been purchased and commissioned, and nine ironclad gunboats and thirty-eight mortar boats were under construction. This force was active in support of General Grant's operations, reconnoitering, transporting, and supporting the troops, and participating in numerous minor engagements on the Mississippi, Cumberland, and Tennessee Rivers. On November 7th the gunboats materially assisted in Grant's success in the sharp action at Belmont, on the Mississippi, and, it is said, made Grant decidedly naval-minded thus early in his brilliant career. In Captain Knox's opinion, few generals have equalled Grant in his ability to use naval power in conjunction with military operations.

At the capture of Fort Henry on February 6th, the gunboats played the leading role, the actual surrender of the fort being made by General Tilghman to Foote on board his flagship. From the beginning Grant and Foote had counted mainly on the gunboats

to reduce Fort Henry, the troops being intended as an auxiliary to prevent the escape of the garrison to Fort Donelson. Foote's flotilla included three of the gunboats designed by James B. Eads of St. Louis, which differed from any other types then in existence. Their dimensions were: length 175 feet, beam 50 feet, draft 6 feet, tonnage 512, speed 9. The hull was flat bottomed, and carried a casemate eight feet high having inclined sides and pierced for thirteen guns. The casemate was armored on the forward face and abreast the engines. The ship was propelled by paddle wheels housed within the casemate. The seven ships of this class, together with the BENTON and ESSEX, may be called the battle line of the Western Flotilla. The BENTON and ESSEX were of the same general type but larger. The BENTON was a converted snag-boat, mounting 16 guns, but could make only five knots. The remainder of the gunboats of this flotilla consisted of a heterogenous collection of river gunboats converted for the purpose by tearing off the upper works and upper works and installing a wooden rampart to protect the guns and machinery. They carried a battery of from 2 to 7 guns.

Ten days after Fort Henry, Fort Donelson surrendered at the conclusion of a stubborn fight in which the gunboats had a substantial share. Colonel Wright has already emphasized the strategic importance of these brilliant victories at Forts Henry and Donelson.

THE CAPTURE OF ROANOKE ISLAND.

The next important operation, the capture of Roanoke Island, took place on February 8th, two days after the fall of Fort Henry. The object was to gain control of Albemarle Sound and its tributaries. The joint expedition was under Flag Officer L.M. Goldsborough and General Burnside, the latter with 12,000 troops. Owing to the shallow depths, the naval fighting squadrons under the direct command of Commander Rowan consisted of twenty small, light vessels converted into men-of-war from ferry-boats, tugs, river steamers, etc. A spirited and courageous resistance was made by the Confederate batteries on Roanoke Island and by a flotilla of seven gunboats under Flag Officer Lynch, but they were eventually destroyed or captured. As a result of the wholehearted cooperation of the two services on this expedition, control was rapidly extended over the whole of the Sound, and its key points captured. Throughout these operations Commander Rowan is credited with having distinguished himself by bold and enterprising leadership.

THE MERRIMAC AND MONITOR.

The South now prepared to make its strongest and most spectacular effort to neutralize the sea supremacy of the Federals. Following a plan suggested by Lieutenant S.M. Brooke, a former Union officer, the partially burned MERRIMAC was raised and converted into an ironclad. The idea of the ironclad was not new.

Both the British and the French had successfully used armored vessels against fortifications in the Crimean War in 1854. With this experience, both countries began to build successful sea-going ironclads, and by 1861 that type had taken its place as the capital ship in Europe. But there was none in the United States fleet.

Work on the MERRIMAC was begun two months after the opening of war. News of this alarmed the North, and three or four months later the Navy Department signed contracts for three ironclads. The smallest of these - the MONITOR - was to be completed in one hundred days. As each side was well informed of the progress of the other, there ensued a shipbuilding race of grave importance. The North had the advantage of superior facilities; the South had a long start and an intensity of feeling stimulated by the constant pressure of her opponent.

The MONITOR, designed by Ericsson, was built at Green Point, Long Island, and left New York for the Capes in tow of tugs on March 6th, 1862 under command of Lieutenant J.L. Worden. The voyage south was a most dangerous one, with many material casualties. In a storm the tugs made for the shore, but by great courage and perseverance the MONITOR reached the Capes and headed for Hampton Roads, hearing in the distance the roar of guns, and seeing the red glare of the burning CONGRESS. The crew of the MINNESOTA worked with the tired men of the sea-battered MONITOR

nearly all night to put the ship in condition for the coming crisis.

The MERRIMAC, rechristened VIRGINA, had been placed under the command of Flag Officer Buchanan, with Lieutenant Catesby R. Jones as Executive. Her superstructure was covered with rolled iron bars and she was fitted with a ram. The gun crews were selected from artillerymen at Richmond.

At noon on March 8th, Buchanan took the MERRIMAC out against the Union forces. At anchor in Hampton Roads were the steam frigates MINNESOTA and ROANOKE, the sailing frigate ST. LAWRENCE, and a number of gunboats and sailing craft. Off Newport News were the sailing frigate CONGRESS, and the sailing sloop CUMBERLAND. It is said that Buchanan's brother was a lieutenant on the CONGRESS and that he therefore hoped for her surrender. For his first victim Buchanan chose the CUMBERLAND.

The dramatic battle between the CUMBERLAND and the MERRIMAC has been overshadowed in the popular imagination by the one which followed it the next morning, but it ranks among the most gallantly fought actions ever recorded in naval history. At the time of the sinking of the GRAF SPEE there was considerable comment in the press as to American naval tradition in a one-sided engagement. The CUMBERLAND gave an answer on this occasion. She was hopelessly outclassed in material qualities. Her destruction was certain. According to the standards of those days, there could have been

no dishonor in an early surrender. But she was strong in the exceptional qualities of her crew, men of splendid training and discipline, whose indomitable spirit had been stimulated by fine leadership. The tertimony of survivors is that there was no thought of anything but the chance to injure the opponent. The first shot from the MERRIMAC struck down nine Marines, the second disabled a gun and its entire crew. Great wooden splinters caused more damage than hostile metal. The CUMBERLAND was rammed once, but continued to fight, so the MERRIMAC rammed her again. At one time, seeing the havoc on board, Buchanan ceased fire and demanded her surrender, to which Lieutenant G. U. Morris, her acting commander, replied: "Never. We will sink with our colors flying."

After sinking the CUMBERLAND, the MERRIMAC attacked the weaker CONGRESS which, after great damage, and when she no longer had a gun which would bear, surrendered. She blew up about midnight, her total casualties amounting to approximately 120.

The MERRIMAC then attempted to attack the MINNESOTA, which had run aground in coming to the aid of the CUMBERLAND, but because of the depth the MERRIMAC could not get close enough. At about six-thirty p.m., because of the falling tide, she withdrew to Sewell's Point and anchored for the night. But she was by no means the same ship which had steamed out at noon. To outward appearances the sacrifice of the CUMBERLAND had been a

useless one. Actually, however, she had inflicted damage on the MERRIMAC which probably saved the MONITOR from serious injury or defeat the next morning. The sinking CUMBERLAND had shot off the muzzles of two of ~~her ten~~ the MERRIMAC'S large guns; had filled the smoke-stack with so many shot holes that her speed was reduced, and that her casemate was so thick with smoke as to interfere with the working of the guns; her armor was loosened at a number of points; she was leaking badly; and most important of all, her ram had been wrenched off in the CUMBERLAND's side.

When the MERRIMAC retired at dusk, she had lost two men killed and nineteen wounded, including Buchanan, who had been struck by a rifle shot from ashore after the surrender of the CONGRESS. The command was turned over to Lieutenant Jones.

This first day's victory of the MERRIMAC caused the greatest alarm throughout the North, which envisaged the loss of control of the Chesapeake, the capture of Washington, the raising of the blockade, and possibly the defeat of the whole war effort. These alarms were, of course, exaggerated, since the MERRIMAC was not so formidable as she appeared to be, but in the little fleet at Hampton Roads deep gloom prevailed that night.

At eight o'clock the next morning, when the MERRIMAC steamed down to attack the stranded MINNESOTA, the MONITOR moved out to meet her and there began one of the strangest encounters on record, the first fight between ironclads. For four hours the

vessels fought, part of the time touching each other, without inflicting serious damage and with only a single cacualty. Once the MERRIMAC succeeded in ramming the MONITOR, but, because of the loss of her ram the previous day, the blow was ineffectual. Twice Jones thought he had silenced the MONITOR's fire. The first time she had simply hauled off into shoal water to hoist a fresh supply of shot into the turret. Later a shell broke one of the iron legs forming the MONITOR's pilothouse, throwing splinters into the eyes of Lieutenant Worden. Temporarily blinded, he ordered the pilot to sheer off. As to whether or not the MONITOR returned to the fray before the MERRIMAC made for Norfolk, the sources of information are hopelessly in conflict. But the leaks incurred in the previous day's action were increasing, and her pilots insisted that if she did not return at once she could not cross the bar until the next day. Jones, with the advice of his lieutenants, gave the order to return.

The battle between the MONITOR and the MERRIMAC did not end the alarm of the North. The President ordered that the MONITOR "be not too much exposed", and that she should in no event attempt to proceed to Norfolk unattended. As a successful sortie by the MERRIMAC might play havoc with the movement of McClellan's forces to the Peninsula, neutralizing the Confederate ironclad became the object of greatest importance. However, the extreme caution shown by the Union forces on the occasion when the MERRIMAC again

offered battle suggests that the Navy was influenced by the theory that containment of the enemy was equivalent to victory. In any case, the Merrimac did not break the blockade, and she was destroyed by the Confederates when they were forced to evacuate Norfolk.

The Federal Navy immediately began the construction of improved ironclads which were not only useful at home, but which also had the wholesome effect of discouraging European intervention in the American struggle. In all, the United States contracted for 21 single and double turreted monitors. They were about 200 feet long, beam 45, draft 11, and displaced 844 tons. The hulls were of iron, and the turrets were 11 inches thick. They were armed with one 15 and one 11-inch gun, which could fire at about seven minute intervals. Under service conditions they could make about four knots. They were generally unseaworthy and almost uninhabitable in hot weather, but proved effective for the inshore and harbor work of the war.

The NEW IRONSIDES was one of the most powerful vessels of the time, an ironclad screw steamer of 3,500 tons, 8 knots, carrying two 150-pound and two 60-pound rifles and fourteen 11-inch smooth bores. She saw much active service.

ON THE MISSISSIPPI.

In the West the Federal campaign to obtain control of the Mississippi was marked by two important events in April. One was the capture on April 7th, 1862, of Island No. 10 in the Mississippi at the northern boundary of Tennessee. The surrender was made to Flag Officer Foote, the commander of the large flotilla of gunboats, and was the result of extensive joint operations with the Army troops under General Pope.

The second event was the capture of New Orleans by the squadron under Farragut. This operation was a part of the general strategic plan to seize control of the Mississippi by simultaneous pressure from the north and south. The Army participated on the understanding that the attack would be made by the Navy and that the troops under General Butler would be used merely to occupy and hold the approaches to the city should the naval attack be successful. The plan was to have a mortar flotilla bombard the forts below the town, then for the wooden ships to run past the forts and force the surrender of the city, which was then to be occupied by 10,000 troops. The success of such a bold operation depended largely upon the selection of a fearless and well balanced commander, and the whole Navy list was scanned for the one best fitted. Farragut was selected at the suggestion of his foster-brother, D.D. Porter, and after an interview with Assistant Secretary Fox and Montogomery Blair, the Postmaster General, who

had the reputation of being a gifted cross-examiner. The choice was indeed fortunate, for Farragut proved himself the outstanding naval leader of her generation.

Taking over the command of the Western Gulf Blockading Squadron on February 21st, Farragut spent about two months in careful preparation. He assembled a strong force at the Head of the Passes, including the screw sloops Hartford, Pensacola, Brooklyn, and Richmond, the side-wheeler MISSISSIPPI, three corvettes, fifteen gunboats, and twenty mortar boats, the latter under the command of D.D. Porter. Opposing them were the two strongly armed forts Jackson and St. Philip, on opposite sides of the river scarcely a half mile apart, with obstructions blocking the channel. Above the forts lay a Confederate naval force of twelve vessels under Flag Officer J.K. Mitchell, including the ram MANASSAS and the heavily armed ironclad LOUISIANA, the engines of which, however, had not been completed.

On April 16th, 1862, the Federal squadron moved up-river and anchored just below the forts. The mortar boats were in advance and toward the right bank. On the 18th at ten a.m. the mortar boats commenced a bombardment of Fort Jackson which was continued daily through the 23rd. The bombardment was effective, considerable damage being done to Fort Jackson. The forts replied, making a few hits. Every night fire rafts were sent down the river, but the ship's boats towed them clear. At two o'clock on the morning

of the 24th, the squadron got underway for the passage of the forts. The ITASCA had opened the obstructions in the river by ramming. The squadron was in two divisions in single column. It was planned for the leading division to fire at the fort on the right, St. Philip, and the second division at Fort Jackson on the left, but it was not possible to follow this exactly as there was some minor confusion in the formation caused by the difficulty in passing the obstruction. During the passage the mortar boats kept up a bombardment from below the obstruction. Before daylight all of the squadron except three of the smaller gunboats had passed the forts and the operation was a brilliant success. The MANASSAS as well as the Confederate gunboats above the forts got into the action but were unequal to their task and were destroyed. The LOUISIANA and several smaller ships gained the shelter of the forts.

The squadron anchored for the day about five miles above the forts. Leaving two gunboats here to protect the landing of troops through Quarantine Bayou, Farragut proceeded next morning to the city where he ~~anchored at noon and~~ received the surrender from the mayor. All Confederate troops had been withdrawn. The Federals found the city in great confusion. Along the levees, coal, cotton and shipping, including the unfinished ironclad MISSISSIPPI, were ablaze, menacing the safety of the squadron itself.

Porter remained in command below the forts, continued his bombardment, and on the 28th received their surrender. On May 1st, General Butler arrived and the city and its defenses were turned over to him.

The capture of New Orleans was the first Federal victory on land or sea of cardinal importance. It affected the morale and military plans of both sides, and had a powerful effect on the attitude of foreign nations. The principal seaport of the South had been lost, and the ultimate severance of the Confederacy was indicated. Baton Rouge and Natchez soon surrendered to Farragut's forces, leaving Vicksburg and Port Hudson the only Confederate strongholds on the river.

By the summer of 1862 the South retained only five ports of importance, Mobile and Galveston on the Gulf, and Wilmington, Charleston, and Savannah, on the Atlantic. It was decided that the main effort of the Gulf Squadron would be on the Mississippi, that DuPont should attack Charleston, and that the blockade of the other ports was to be maintained.

In June, 1862, Farragut, contrary to his own recommendations, received mandatory orders to open the river. He assembled his squadron below Vicksburg and before dawn on the 28th ran by the batteries at that place and joined the gunboat squadron of Flag Officer Davis, who had succeeded Foote. The Federals were thus in control of the entire river, but the control could be temporary

only. In the absence of military support, the Department had asked him to accomplish the impossible. Without troops to hold the commanding points along the river he could not maintain the necessary transport service. The defenses at Vicksburg were too strong for the naval forces unaided; the Confederates were establishing batteries atmany of the high points of the river banks; the river was falling, and the new and powerful ironclad ram ARKANSAS had arrived under the batteries at Vicksburg to threaten Farragut's wooden walls. He therefore determined on a withdrawal, which he successfully accomplished on the 28th of July. The important section of the Mississippi covering the rail and water communications through northern Louisiana to Texas therefore remained in Confederate hands, and it was not until the fall of Vicksburg a year later, on July 4, 1863, that the river came under complete Federal control.

THE PENINSULAR CAMPAIGN.

In May, 1862, Goldsborough was instructed to support McClellan's operations in the Peninsular Campaign. It was McClellan's plan, you will remember, to move his army to Fortress Monroe by water, and then to advance up the Peninsula between the York and James Rivers, with the Navy supporting him on either flank. It was expected that as a result of these movements the decisive battle of the war would be fought near Richmond. Naval operations were restricted for a time by Confederate batteries

at Yorktown and Gloucester Point, and by the MERRIMAC at Norfolk. After these points had been evacuated by the Confederates, and the MERRIMAC destroyed, the Navy engaged in extensive and arduous operations on the James and York Rivers, escorting transports, protecting the lines of supply, defending the flanks of the army, supporting its advances, and engaging numerous shore batteries. At one time Commander John Rodgers, in a little squadron which included the MONITOR, was ordered to "push on to Richmond, if possible .... and shell the place into surrender". This was seriously underestimating the Confederate strength, but entirely unsupported, he got as far as Drewry's Bluff, eight miles below the city. The ships could not proceed further because their guns could not elevate sufficiently to reach the opposing guns on the Bluff. Rodgers' squadron later materially assisted in preventing disaster to McClellan's forces by covering their retreat, and by protecting their flanks at Malvern Hill and at the new base at Harrison's Landing. Toward the end of the campaign the largely augmented force of gunboats, organized into the James River Flotilla under Captain Charles Wilkes, was very active in safeguarding the army's lines of supply, which it successfully accomplished until McClellan withdrew from the Peninsula.

DUPONT ATTACKS CHARLESTON.

The South Atlantic Blockading Squadron under DuPont was continuing the blockade of Savannah and Charleston. The old wooden vessels had been reinforced by seven new monitors and by the NEW IRONSIDES and the KEOKUK, the latter a turreted vessel of higher freeboard than the monitors. The Confederates had built the rams CHICORA and PALMETTO STATE, which, in January, 1863, made a surprise sortie from Charleston, capturing a Union blockading ship and badly damaging another before retiring. The Confederates, backed by the foreign consuls at Charleston and the captain of a British man-of-war claimed that the blockade had been raised, a claim not supported by fact, since the blockading vessels were on station the next morning. That the blockade was effective was shown by the fact that the Confederate steamer NASHVILLE lay for eight months loaded with cotton awaiting a chance to run the gauntlet. She finally gave it up and was converted into a privateer, but never escaped.

At the insistence of the Department, and against his own better judgment, DuPont on April 7th made a naval attack without Army support against the forts defending Charleston, in the attempt to compel the surrender of the city. In Captain Knox's opinion, the attacks on Charleston in 1863 had no important military objective commensurate with the cost, but were undertaken because of the great moral effect which it was thought would

result from the fall of the city. It is true that this was a particularly discouraging period from a military point of view, and the Country did need a victory. However, the moral costs of failure seem to have been disregarded, and certainly there was no adequate apportionment of fighting strength.

The defenses of Charleston were exceedingly powerful, consisting of Forts Pinckney, Riply, Moultrie, Beauregard, Sumpter, and Johnson, with thirteen supporting batteries, all mounting the heaviest and most destructive guns then known. There were, moreover, formidable obstructions in the main ship channel which contributed greatly to the difficulties of the ships.

After a very hot fight, the Federals withdrew without having inflicted any serious damage on the forts. The ships had been struck 430 times, the Keokuk was sinking, and five monitors were more or less damaged. During the night DuPont decided not to repeat the attack. "We have met a sad repulse", he said, "I shall not turn it into a disaster." Admiral DuPont was much criticised for this failure and asked to be relieved, but present-day historians do not support the criticisms.

Later, formidable joint operations were conducted against Charleston, the naval commander being Rear Admiral Dahlgren, and after extensive efforts several of the forts were reduced. Entrance to the harbor was never gained, but the port was closed to blockade runners. It was not until 1865 that General Sherman,

assisted by feints from seaward, outflanked the city and forced its evacuation. In all, the naval operations here cost the Federals twenty-two vessels.

THE CAPTURE OF VICKSBURG.

You will remember that Colonel Wright last week described the military operations of Grant's Vicksburg Campaign, the objective of which was to complete the control of the Mississippi. Concerning this operation, Captain Knox says: "The amazing campaign against Vicksburg represents a classic example of military-naval strategy and cooperation. The employment of both land and water forces was essential to victory and close coordination of their joint efforts was equally so." Grant said of the Navy, "Without its assistance the campaign could not have been successfully made with twice the number of men engaged. It could not have been made at all in the way it was with any number of men without such assistance."

Naval operations in this campaign were exceedingly complicated, and it does not seem profitable to attempt to follow them in detail. The Flotilla under Admiral D.D. Porter, who had succeeded C.H. Davis, engaged shore batteries on numerous occasions. As a preliminary to Sherman's attack on Hayne's Bluff, north of Vicksburg, the gunboats seized control of the lower Yazoo, and bombarded the batteries. But Sherman's attack was repulsed and the enterprise was abandoned. In what Grant called General

McClernand's "wild goose chase" against Arkansas Point, fifty miles up the Arkansas River, the gunboats dismounted the battery and forced the surrender of 5,000 troops. Several gunboats were defeated in an attempt to seize control of the Red River, and in consequence Farragut ran past the dangerous batteries at Port Hudson and came up the river with several ships to blockade the mouth of the Red River. Two expeditions of gunboats supported by troops attempted to find water routes from the Mississippi into the upper Yazoo with the object of turning the Vicksburg position from the north, but after incredible difficulties, both failed. Finally, when the falling river dried the lowlands sufficiently, Grant began to march south on the west bank, with the idea of crossing the river and approaching Vicksburg from the south. Accordingly, Porter sent the Flotilla past the Vicksburg batteries on April 16th. After the gunboats had attacked the batteries at Grand Gulf, south of Vicksburg, and found them too strong, they supported a crossing of the Army further south at Bruinsburg. During the investment of Vicksburg, the Flotilla supported the flanks of the Army, kept open the Army's lines of communications to the north, bombarded the defenses of Vicksburg, and even supplied a battery to each of the three Army corps to remedy a deficiency in heavy guns.

Vicksburg surrendered on July 4, 1863, followed immediately by the surrender of Port Hudson which had been under siege by

General Banks. With the surrender of these two positions, control of the Mississippi passed into the hands of the Federal troops, and the future work of the Flotilla was one of maintaining control in cooperation with the Army.

REPULSE ON THE RED RIVER.

In the spring of 1864 the gunboats under Porter participated in the unsuccessful Red River campaign, the object of which was to extend control over Texas. After the defeat and retreat of the Army, the gunboats were left entirely unsupported and open to attack by the Confederate Army in a very crooked, narrow, and shallow river, full of snags and liberally sprinkled with mines, or as they were then called, torpedoes. For more than two weeks they were frequently attacked by Confederate detachments of infantry and artillery along the banks. Throughout this time the river was falling, and they finally succeeded in reaching the Mississippi only through the ingenuity of Colonel Bailey of the Wisconsin Volunteers, who raised the water level by a dam having a central opening through which the water swept in a torrent, but which was sufficiently deep to permit the gunboats to pass. For this conception he subsequently received the thanks of Congress.

In reviewing these operations on the Mississippi, it is noted that:

(a) The Flotilla usually engaged the land batteries with success;

(b) The Confederate naval forces opposing them were never superior or equal in strength to the Federal naval forces;

(c) The Flotilla kept open the river in rear of the Army thus safeguarding their lines of communications;

(d) The Army assured a secure base for the operations of the Flotilla;

(e) The mutual understanding of the proper spheres of activity and the capabilities of the Army and Naval forces by Grant, Porter, ~~and~~ Foote and Davis placed the naval forces as effectually under Grant's control as though they had been directly under his command.

ATTACKS ON THE BLOCKADE.

The blockade was proving so powerful in hampering the Confederates that they did everything within their power to break it or to nullify it by blockade-running. Some of the profits made by blockade-runners were fabulous. The technique of running became highly developed. A special type of ship was constructed for the run from Nassau, Bermuda, or Havanna to the Confederate coast, low, long paddlewheel steamers of from 400 to 600 tons and about fourteen knots speed, painted a dull gray, burning smokeless anthracite coal, and having telescopic funnels which could be lowered to the rail.

In January, 1863, the Texans administered sharp defeats to the weak blockading forces at Galveston and Sabine Pass, and broke

the blockade temporarily. On the Atlantic Coast, in addition to the efforts already described, the Confederates in October, 1863, torpedoed the NEW IRONSIDES off Charleston by the torpedo-boat DAVID. In February, 1864, the submarine HUNLEY sank the HOUSATONIC These attacks were interesting as pioneer successes in a new form of naval warfare, and as showing the daring and ingenuity of the Southern naval officers, but in themselves were strategically unimportant. A more serious threat was made in the spring of 1864 in the North Carolina Sounds by the new ironclad ram ALBEMARLE, which in several engagements inflicted damage on the Union squadrons. In October, 1864, however, she was torpedoed by Lieutenant William B. Cushing in one of the most daring exploits of the war.

THE CAPTURE OF MOBILE.

Farragut had early recommended that operations be conducted against Mobile, but the Department kept him employed on the Mississippi until the surrender of Port Hudson in July, 1863. He then returned to New York for a much needed rest.

Although its early importance as a blockade running port had waned because of the strength of the Federal squadrons off the coast. Mobile was of great value to the Confederates as a manufacturing center. In addition, they had been constructing there several ironclad rams which threatened the blockade. The TENNESSEE, completed in March, 1864, was the most powerful vessel ever to fly the Confederate flag. She carried a battery of six long-

range rifles and her casemate was protected by six inches of armor on its face and five inches elsewhere. Her principal weaknesses were a maximum speed of only six knots, poorly designed gunport shutters, and exposed anchor chains, all of which hampered her in the coming battle. In January, 1864, Farragut returned to the Gulf with orders to capture Mobile before the TENNESSEE could be completed. It was not, however, until the end of July that the necessary troops arrived, and that a sufficient squadron could be assembled.

Mobile is thirty miles from the Gulf. The entrance was defended by Fort Morgan on Mobile Point and Fort Gaines on Dauphin Island. For most of its three miles, the entrance was very shallow and was obstructed by a line of piling, so that Fort Gaines was out of range of the fleet. The deep but very narrow navigational channel passed close to Fort Morgan, which was of very strong masonry construction, with 23 heavy and 46 light guns. The passage was blocked by about 180 mines in several lines, except for a passage near the fort which had been left for the TENNESSEE. The defenses were much stronger than those encountered at New Orleans.

Farragut began the attack early in the morning of August 5th, 1864. The plan was to run past Fort Morgan, using the narrow channel between it and the line of mines, to defeat the Confederate naval forces inside the bay, which, in addition to the TENNESSEE,

included three armored gunboats, and then to capture the two forts by joint attacks with the Army. For the run past the forts, four new monitors were to constitute the starboard and leading column, while the wooden ships, lashed in pairs consisting of a screw sloop and a smaller ship on the off side, constituted the port column. It was expected that the sloops with their great volume of broadside fire would when they came abreast the forts drive the gunners to cover. Farragut further wished for a westerly wind to blow the smoke from the ships on to the fort, and a flood tide to carry any damaged ships past the defenses. Both conditions were present on the day of the battle.

The battle opened at five minutes before seven when Captain Craven in the TECUMSEH fired both turret guns, and the action quickly became hot, with clouds of smoke over the scene. The Confederate squadron under Admiral Franklin Buchanan took station immediately in rear of the end of the torpedo field, partially blocking the channel. The TECUMSEH found the channel between the fort and the buoy marking the limits of the mines so narrow that she crowded over to port into the waters nearly ahead of the BROOKLYN, which was leading the left-hand column of wooden ships. At the same time the BROOKLYN thought she saw torpedoes ahead. She accordingly stopped and backed, and turned across the channel so as to block the passage of the whole line, which consequently crowded up in great confusion. At this ciritcal moment the

TECUMSEH, passing the buoy marking the limit of the mine field to starboard instead of to port, struck a torpedo and sank immediately. Captain Craven, meeting his pilot at a narrow escape exit, drew back with the remark, "After you, Pilot", and was carried down with 112 of his crew.

Farragut now demonstrated the qualities which made him great. Indecision or retreat would have led to disaster. The way forward was blocked by the BROOKLYN, which he could not pass on the safe starboard side because of the two rear vessels of the monitor column. He instantly chose, therefore, to lead the way to port over the mine field, believing that, although he might lose his ship, a way would be cleared for sufficient vessels to get through to ensure the victory. Passing the BROOKLYN, he heard warning shouts, to which he responded with his famous "Damn the torpedoes!" As the HARTFORD passed over the line of mines, they could be heard knocking on the bottom, their primers snapping, but fortunately they had become defective at this point from long immersion. Order was now restored, and the ships followed the HARTFORD over the mines without damage. The TENNESSEE attempted to ram the HARTFORD but failed due to insufficient speed. She then turned to engage the entire column of wooden ships in succession as they passed, but she succeeded in materially injuring only one ship. The fleet completed the passage of the fort and anchored in Mobile Bay out of range of its guns.

The TENNESSEE, with her light draft and powerful long-range guns could have bombarded the Federal ships from shallow water where many of them could not follow her. Or she could have gone outside to attack the transports. But through what is generally regarded as a mistake in judgment, Buchanan unexpectedly stood down to the anchorage and attacked the fleet. Buchanan was probably impelled to this bold course by the previous comments of certain of the Southern newspapers, which had criticised him for rather caustically not going out and destroying the Federal ships outside the bay. After a very hot mêlée lasting for over an hour, in which the whole Union squadron participated, the TENNESSEE was reduced to impotence and surrendered, Buchanan being badly wounded.

Fort Gaines surrendered the next day but Fort Morgan held out for seventeen days. Mobile was now completely closed as a port for blockade runners but the Army could not spare the additional troops required for the reduction of the city until the following spring.

THE CAPTURE OF FORT FISHER.

In December, 1864, a joint expedition sailed for the capture of Wilmington, North Carolina. This place had long been the only seaport where blockade-running could be successfully conducted, and was considered essential for the supply to Lee's army of meat, lead, saltpeter, shoes and blankets. The expedition consisted of over 50 vessels under Admiral Porter and 6,500 men under Generals

Butler and Weitzel. After a heavy bombardment of Fort Fisher, guarding the entrance to the Cape Fear River, General Butler re-embarked his troops without assaulting the works and sailed for home, claiming that insufficient damage had been done by the Navy. Grant had not intended that General Butler should have any active part in the affair, and it was particularly unfortunate that he did, as previous difficulties between him and Porter resulted in a lack of cooperation which made the undertaking a failure. Grant then ordered General Terry to command the same forces in a second attempt, ordering him not to abandon the siege until the fort was taken.

Fort Fisher had two sides, one more than three-quarters of a mile long facing the sea, and the other, the northern one, extending inshore at right angles for nearly a quarter mile across the neck of land to the river. The plan was for the Army, after a general bombardment by the fleet, to assault the northern face, while a naval landing force of 1600 bluejackets and 400 Marines attacked the sea face. The landing force had not been assembled or drilled together before the assault; furthermore, they were not properly armed. After a gallant charge, they were repulsed with heavy losses. However, the soldiers, aided by the naval diversion, carried the other face, and supported by heavy fire from the ironclads, finally forced the surrender of the defenders at ten p.m. on January 15, 1865, after the most stubborn resistance. Colonel Lamb, commander of the fort, afterward said:

"That magnificent charge of the American Navy upon the center of our works enabled the Army to effect a lodgement on our left with comparatively small loss."

The fall of Fort Fisher was followed by the capture of Wilmington and the virtually complete cessation of blockade-running into the Confederacy.

THE CRUISER RAIDS.

Early in this presentation it was pointed out that the South, following the strategical ideas prevalent in the U.S. Navy at that time, placed great faith in the efficacy of cruiser raids against seaborne trade. It was expected that such raids would accomplish two important objectives; first, that they would seriously hamper the North's ability to carry on the war by direct pressure on her commerce and finances; and, second, that they would render the blockade ineffectual by diverting from it large numbers of Union vessels. Neither of these objectives was realized.

It is true that the raids seriously crippled the great shipping industry of the United States. In 1861 our merchant fleet ranked second only to Great Britain in world commerce and ninety percent of it was owned and operated by the North. The cruisers captured or destroyed about 260 merchant vessels aggregating in the neighborhood of 100,000 tons, a direct monetary loss in ships

and cargoes of about $20,000,000. This in itself was serious but not vital; it represented less than one percent of the aggregate commerce during the war. But there were important indirect losses. Over 800,000 tons of American shipping was transferred to neutral flags; the carrying trade was largely diverted to foreign bottoms; and the war insurance premiums reached exorbitant figures. An indirect loss, mentioned by the United States in its case against Great Britain, was the expenditure for the naval pursuit of the cruisers. Some fifty Union vessels were, at one time or another, engaged in the search. The cruisers were, directly and indirectly, responsible for the loss or sale of nearly a million tons of American shipping. In 1860 two-thirds of the commerce of New York was carried in American ships; in 1863, three-quarters was carried in foreign bottoms. The Southern cruisers dealt American shipping a primary blow from which it has never recovered, although there have been, of course, many other factors in the intervening years which have hindered its expansion.

In spite of this, the effect of the cruisers on the final outcome of the war was negligible. Although the shipping business of the North was seriously injured, its commerce was not materially affected. While the Confederacy was ruined by the blockade, Northern commerce flourished in spite of the cruisers.

The accomplishments of the raiders naturally resulted in clamorous demands for protection, but Secretary Welles stubbornly

resisted to the best of his ability, yielding only enough to quiet the most intemperate denunciations. He quite rightly placed the efficiency of the blockade first. In his report for 1864, he stated:

> "It has been the policy of this Department, rigidly adhered to under all circumstances and from which it has not allowed itself to be diverted, never to permit the efficiency of the blockade to be impaired."

There would be little profit in attempting to follow the operations of the cruisers in any detail. British connivance was a material factor, and was later the basis of the Alabama Claims which were settled in our favor for $15,000,000.

Among the best known of the raiders were the SUMPTER, FLORIDA, GEORGIA, TALLAHASSEE, SHENANDOAH, and ALABAMA.

The most spectacular and successful was the ALABAMA under the command of the celebrated Raphael Semmes. Her great success was largely due to the fact that she operated, in the main, against sailing vessels. Semmes was a very skillful cruiser captain. He carefully calculated the time required for news of his operations to reach the Federal Government, and then shifted his hunting grounds. Furthermore, his ship could keep the seas for long periods because most of the passages were made under sail.

The story of the destruction of the ALABAMA by the KEARSARGE, Captain Winslow,
off Cherbourg, France, on June 19th, 1864, is well known. In

deliberately going out to fight when he was not forced to. Semmes is generally credited with two errors in judgment; first, he underestimated the strength of his opponent; and second, he disregarded his military objective, which was the destruction of Northern shipping. Even a victory over one of the numerous Northern cruisers would probably have jeopardized that purpose. It is certainly one of the important functions of our study of naval history to detect such errors in objectives, and of our study of the pamphlet, "Sound Military Decision", to prevent them.

CONCLUSION.

Although at the beginning of the war the Navy was weak and its initial efforts were necessarily small, it built itself into one of the most formidable fleets in the world of that time. It gave an outstanding example of the use of command of the sea. It was eminently successful in maintaining a blockade which slowly but surely strangled its opponents. It captured essential operating bases on the Southern Coast, cooperated with the military forces by escorting them, by covering and supporting their operations, and by maintaining their lines of communications. It protected its own commerce and denied the use of the sea to Southern commerce. And by its strength and energy it materially contributed to the prevention of foreign interference.

Admiral Porter relates that the night following Grant's capture of Petersburg, on April 2nd, 1865, Abraham Lincoln spent

on Porter's flagship the MALVERN, in the James River. Lying up the James was a Confederate squadron of three ironclads and five wooden vessels under "ALABAMA" Semmes, now an admiral. This force, together with the shore batteries and the obstructions sunk in the river, was a bar to a naval advance on Richmond. At the same time the Federal squadron was containing the Confederate squadron, and preventing ~~them~~ it from interfering with the troop movements. On every hand was heard the sound of artillery and musketry, showing that the Federals were closing in on the Confederate positions. Some time after midnight on this historic night the President and the Admiral, from the decks of the MALVERN, heard a series of heavy explosions up-river. It was Semmes destroying his own ships on orders from his Navy Department because of the evacuation of Richmond. Thus perished the last of the Confederate fleet, and the Navy's work was done.

NAVAL OPERATIONS OF THE CIVIL WAR

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NAVAL OPERATIONS OF THE CIVIL WAR

TITLE OF THE PRESENTATION

Given by Comdr. A.H. Rooks, USN

Date January 29, 1940

LEFT SCREEN (FACING STAGE)			RIGHT SCREEN (FACING STAGE)		
Box No.	File No.	TITLE OF SLIDE	Box No.	File No.	TITLE OF SLIDE
1	B29-1348	U.S.S. HARTFORD	2	B29-1150	U.S.S. MINNESOTA
3	B30-1142	LA OLOIRE		"	"
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4	B29-1323	Gideon Welles	5	B30-699	G.V. Fox
6	B40-432	Isherwood			BLANK
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7	B29-1327	C.S.S. TENNESSEE	8	B30-1302	C.S.S. FLORIDA
	"	"	9	B29-1423	C.S.S. ALABAMA
10	B29-1424	C.S.S. GEORGIA	11	B29-1410	C.S.S. SHENANDOAH
12	B29-1168	Hunley			BLANK
		BLANK			BLANK
13	B30-821	Theatre of Naval Operations			BLANK
	"	REPEAT	14	B29-1199	DuPont
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		"	15	B29-1308	Mallory
		"			BLANK
		"	16	B30-947	Yorktown Peninsula
		"	17	B29-1182	North Carolina Coast and Sounds of
		"	18	B30-425	Coast of South Carolina
		"	19	B30-426	Coast of South Carolina and Georgia
		"	20	B30-572	Coast of Florida, Alabama and Mississippi

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Box No.	File No.	TITLE OF SLIDE	Box No.	File No.	TITLE OF SLIDE
"	B30-521	Repeat	21	B30-939	Strategic map of the Confederacy.
	"	"	20	B30-572	REPEAT
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22	B29-1154	Burning of Norfolk Navy Yard.			BLANK
		BLANK			BLANK
23	B29-1172	Stringham			BLANK
		BLANK			BLANK
13	B30-521	REPEAT	24	B30-569	The Blockaded Coast.
		BLANK			BLANK
13	B30-521	REPEAT	17	B29-1162	REPEAT
25	B29-1179	Forts Hatteras and Clark.	26	B29-1160	Landing of Troops at Hatteras.
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27	B40-437	Buchanan and Tattnall			BLANK
28	B29-1320	Passes of the Mississippi	29	B29-1156	C.S.S. MANASSAS
13	B30-521	REPEAT	24	B30-569	REPEAT
		"	30	B40-428	Bombardment of Port Royal.
		"			BLANK
31	B29-1170	Wilkes	32	B29-1169	San Jacinto and Trent
		BLANK			BLANK
33	B29-1240	Rodgers	34	B29-1256	Foote
13	B30-521	REPEAT	35	B29-1272	Building the Eads Gunboats.

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Box No.	File No.	TITLE OF SLIDE	Box No.	File No.	TITLE OF SLIDE
36	B20-1207	U.S.S. DE KALB			BLANK
37	B30-997	U.S.S. BENTON	38	B29-1204	U.S.S. TYLER
39	B29-1208	Bursting gun at Port Henry	40	B20-1206	Gunboats at Fort Donelson.
13	B30-821	REPEAT	41	B29-1109	Roanoke Island
42	B20-1173	Goldsborough	43	B29-1188	Rowan
		BLANK			BLANK
44	B20-1190	MERRIMAC			BLANK
45	B29-1158	MONITOR	46	B20-1157	Ericsson
47	B20-1192	Buchanan	48	B20-1195	Worden
		BLANK			BLANK
49	B20-1193	MERRIMAC and CUMBERLAND	50	B29-1149	MERRIMAC and CONGRESS
		BLANK			BLANK
51	B20-1194	Jones	52	B40-438	MONITOR's Crew
53	B29-1196	MONITOR and MERRIMAC			BLANK
		BLANK			BLANK
54	B20-1208	Weehawken	55	B40-439	Onondago
56	B29-1160	NEW IRONSIDES			BLANK
		BLANK			BLANK
13	B30-821	REPEAT	57	B20-1204	CARONDELET at Island No. 10.
58	B20-1325	Farragut	59	B34-24	Porter
60	B20-1344	Battle of New Orleans			BLANK
	"	"	61	B29-1315	Mortar boats

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Given by Comdr. A.H. Rooks, USN

Date January 20, 1940.

LEFT SCREEN (FACING STAGE)			RIGHT SCREEN (FACING STAGE)		
Box No.	File No.	TITLE OF SLIDE	Box No.	File No.	TITLE OF SLIDE
60	B20-1344	REPEAT	62	B37-478	Mortar schooners
		"	63	B20-1313	Passing the Forts
		BLANK			BLANK
64	B36-1009	Butler			BLANK
		BLANK			BLANK
13	B30-821	REPEAT			BLANK
		"	65	B29-1254	Davis
16	B36-947	REPEAT			BLANK
		"	66	B40-429	Gunboats at Malvern Hill
13	B30-821	REPEAT	67	B29-1200	Surrender of Mercedota to Palmetto State
		"	68	B29-1205	Bombardment of Fort Sumpter
		"	69	B29-1175	Dahlgren
		BLANK			BLANK
70	B36-933	Vicksburg Campaign	71	B29-1200	Gunboats in the Vicksburg Campaign.
		"	72	B29-1237	Running Batteries at Vicksburg
		"	73	B29-1236	Battle of Grand Gulf.
		BLANK			BLANK
74	B40-430	OSAGE on Red River	75	B40-431	Passage over Falls at Alexandria.
		BLANK			BLANK
76	B29-1210	Blockade Runner	77	B29-1167	Chase of a Blockade Runner.
		BLANK			BLANK

NAVAL OPERATIONS OF THE CIVIL WAR
TITLE OF THE PRESENTATION

Given by Comdr. A.H. Rooks, USN

Date January 29, 1940

LEFT SCREEN (FACING STAGE)			RIGHT SCREEN (FACING STAGE)		
Box No.	File No.	Title of Slide	Box No.	File No.	Title of Slide
70	B29-1207	Confederate Torpedo Boat	70	B29-1209	Sinking of the HOUSATONIC
80	B30-1218	Blowing up the ALBEMARLE	81	B40-435	ALBEMARLE
82	B 29-1178	Cushing			BLANK
		BLANK			BLANK
13	B30-321	REPEAT	7	B29-1207	REPEAT
		"	83	B29-1321	Mobile Bay
84	B29-1317	Destruction of TECUMSEH	85	B40-433	Captain Craven
		BLANK			BLANK
86	B29-1318	Surrender of Tennessee			BLANK
87	B40-440	Fort Morgan			BLANK
		BLANK			BLANK
13	B30-321	REPEAT	88	B36-1013	Fort Fisher
64	B30-1000	REPEAT	89	B36-1010	General Terry
90	B29-1216	Fort Fisher			BLANK
91	B36-1011	Assault of naval column on Fort Fisher	92	B29-1215	Bombardment of Fort Fisher
93	B40-434	Silenced guns at Fort Fisher			BLANK
		BLANK			BLANK
0	B29-1423	REPEAT	94	B29-1306	Semmes
95	B29-1304	KEARSARGE	96	B29-1309	Winslow
		BLANK			BLANK