THE BLOCKADE AND THE CRUISERS.

CHAPTER I.

THE PREPARATIONS.

THE Naval War of 1861 was marked by two principal features. The first is that while one side had a small force of naval vessels, which were generally good of their kind, the other entered the contest with absolutely nothing that could be called a man-of-war. The second is that though certain developments in the character and construction of ships and of weapons had been foreshadowed before the war, and had even been partially realized, it was while the struggle was actually in progress that changes took place in these respects which amounted to a revolution in naval warfare. At the beginning the fact that sailing vessels were soon to be laid aside was still far from general recognition, especially among officers of conservative tendencies; the three great weapons of to-day, the rifled gun, the ram, and the torpedo, were almost unknown in the service; and iron armor was still an experiment. The modifications of the past fifteen years had accustomed men's minds to the idea that considerable changes would gradually take place; but none foresaw or were prepared for the tremendous development that was wrought in four years of actual fighting.

Modern naval warfare was therefore almost a new art to the officers that were called in 1861 into active service. The long period of profound peace that followed the wars of Napoleon had been broken only by the war with Mexico in 1846, the Crimean War in 1854, and the Franco-Austrian War in 1859. None of these was marked by naval operations on any important scale, and such operations as there were indicated but faintly the coming development. In the contest with Mexico, steamers were used in war for the first time; but the enemy was so destitute of naval resources that their overwhelming importance was not fully recognized. The operations of the navy were confined to the attack of imperfectly-fortified points on the seaboard, and to blockading a country that had no commercial importance. The Crimean War advanced a step farther. The destruction of the Turkish fleet at Sinope, in 1853, showed the effectiveness of horizontal shell-firing, as invented by Paixhans, while the success of the French ironclads at Kinburn led the way to the practice of casing ships-of-war in armor. In 1858 experiments were made at Portsmouth with the Erebus and Meteor, two lightly-armored floating batteries; and these were followed, in France and in England, by the Gloire and the Warrior, veritable ironclad cruisers. But the new system was still in its experimental stage; and it was left to the war of 1861 to show clearly its practical value.

The application of armor to the sides of vessels was accompanied, or rather induced, by improvements in ordnance, especially by the introduction of rifled guns in Europe and of the heavy cast-iron smooth-bores of Dahlgren in America. Both these improvements, however, were of recent date. The first successful employment of rifled cannon in actual war was made by the French in the Italian campaign of

1859; while the heavy Dahlgren guns had hardly been ten years in use, and were still undergoing development.

In regard to the ram, though seemingly a paradox, it may be said that its employment in naval warfare was so ancient that in 1861 it was really a new weapon. Its revival was a direct consequence of the application of steam to the propulsion of vessels. The Greeks and Romans had used it in their galley-fights with destructive effect; and it was only displaced by heavy guns when oars were displaced by sails, when ships no longer fought end-on, but broadside to broadside, and when the close-hauled line ahead took the place of the direct attack in line abreast, of the old galley tactics. The introduction of steam, by giving ships-of-war a motive power under their own control, independent of the action of the wind—an advantage similar to that which the triremes possessed in their banks of oars—revived the trireme's mode of attack, and made the ram once more an effective weapon. But in 1861 this phase of naval development had not been recognized, and the sinking of the Cumberland, in March of the next year, first revealed the addition that steam had made to the number and variety of implements of destruction.

Torpedoes, though of more recent introduction than rams, were not wholly new weapons. The idea of the torpedo, first discovered by Bushnell, and developed by Fulton, was rejected by the English Government in 1805, because it was recognized as giving an advantage to a weak navy over a powerful one, and its adoption could only impair the maritime supremacy of Great Britain. On account of this advantage which the torpedo gave to the weaker side, it was brought into use by the Russians in the Crimea, and, though none of the allied vessels were destroyed by its agency, it none the less contributed appreciably to the protection of Russian harbors. But its great importance was not estab-

lished until the Civil War, and then only in the second year. The Confederates took it up for the same reason that the Russians had adopted it in 1854, and the English had rejected it in 1805. Driven by the poverty of their naval resources to the use of every device that ingenuity could suggest, in the fall of 1862 they established a bureau at Richmond to elaborate and systematize torpedo warfare; and the destruction of the Housatonic, the Tecumseh, the Patapsco, and many smaller vessels, showed the tremendous power of the newly adopted weapon.

From the fact that the navy at this period was concerned with an essentially living and growing science, it was important that its officers, above all in the senior grades, should be men of progressive minds and of energetic and rapid action. Especially was this the case when the navy found itself upon the threshold of a great war, in which every variety of naval operation was to be attempted, and every contrivance of mechanical art was to be employed. No doubt a war always brings new men to the front, irrespective of rank or age. But the main object of a navy's existence in time of peace is to be in a condition of instant readiness for war, and this object can only be attained by having the ablest and most energetic men in the foremost places. Unless such a provision is made, and made before war begins, the possibilities of naval development will be neglected; the vigor and audacity that should mark the earlier operations of a war will be wanting; and the opportunity of striking sharp and sudden blows at the outset will be lost.

Unfortunately, in 1861, the arrangement of the navy list failed to meet this essential condition of readiness for active operations. Long years of peace, the unbroken course of seniority promotion, and the absence of any provision for retirement, had filled the highest grade with gallant veter-

ans, most of whom had reached an age that unfitted them for active service afloat. At the head of the list were the seventy-eight captains. A few of them were men of commanding talents, and these few left their mark upon the records of the war. Of the rest, some had obtained distinction in an earlier period of their career. But it is only in exceptional men that the physical and mental vigor is to be found that resists the enfeebling influences of advancing years; and it would be unjust to expect the active operations of war to be successfully carried on by a body of commanding officers most of whom had passed their sixtieth year.

This was, however, only one of the difficulties of the situation. The excessive accumulation of older officers at the head of the list was felt as a heavy drag all the way down to the foot. Promotion was blocked, as there was no provision for retirement; and the commanders and lieutenants, many of whom were conspicuous for ability and energy, were stagnating in subordinate positions. The commanders at the head of the list were between fifty-eight and sixty years of age—a time of life at which few men are useful for active service. The upper lieutenants were forty-eight or fifty—some indeed were past fifty—and very few were in command of vessels, as there were two hundred officers above them. The first-lieutenant of the Hartford, at that time the flagship of the East India squadron, had been thirty-four years in the service. He and his contemporaries, who had entered the navy at sixteen or thereabout, had not yet risen to the responsibilities of command. This enforced continuance in subordinate stations could not fail to tell upon even the best men. The tendency of such a system is to make mere routine men, and to substitute apathy and indolence for zeal and energy. If a man that has had proper

training is not fit for command at thirty-six, it is not likely that he will ever be fit for it. If he has reached the point of fitness, every year of postponement, unless he is a very extraordinary man, is a year of deterioration.

The efficiency of the service was further weakened by the vicious system of promotion by seniority, to which the navy has always clung tenaciously, in the face of reason and precedent, of the analogies of civil preferment, and the example of other military and naval establishments. The defects of this system may be briefly indicated. Every man who lives long enough, unless gross incompetency can be proved against him, goes to the head of the list, while those who have entered the service later, however much they may excel in ability or zeal, remain below to wait their turn. It is purely a question of survival. An officer comes to look upon promotion as his right, apart from any considerations of merit or distinction. Public opinion in the service has no leaders, for the leading minds are not destined, as they would be in every other profession, to gravitate to the leading positions. They simply take their turn. The natural conservatism of a military body is exaggerated, and judgment becomes warped by tradition. As promotion is sure, there is no inducement to effort. No one will readily assume responsibility, for he only runs a risk without any prospect of reward. It is not so much the presence of poor material that injures a service, as its elevation by an iron rule of promotion, and the enforced subordination of more capable men. As the Secretary of the Navy in 1855 tersely put it, "It is neither more nor less than elevating the incompetent, and then ordering the unpromoted competent to do their work."

It became evident, shortly after the war began, that steps must be taken to remedy the existing state of things; but

nothing could be done at once, and it was only in December, 1861, that a law was passed retiring all officers at the age of sixty-two, or after forty-five years of service. By the same law, any captain or commander might be selected for the command of a squadron, with the rank of flag-officer, which should give him authority over his seniors in the squadron. Another act, passed in the following summer, created the grades of rear-admiral and commodore, recast the whole corps of officers, and established promotion by selection temporarily in the highest grade. These measures, though late in coming, had the desired effect. The veterans were gradually replaced by younger men; the commanders and lieutenants were raised to the places they were qualified to fill; and new life was infused into the service.

But the spirit of routine had for thirty years pervaded the naval establishment, and the change could not be effected in a day. The whole tendency of the navy had been to preserve traditions, and to repress individuality in the junior officers. Men thought alike, talked alike, and acted alike. The officers in active service, grown old in the lower grades, and but little encouraged to exercise their powers of volition, had come to regard themselves as parts of a machine, and to wait for the orders of their superior. As a general thing, the assumption of responsibility was neither desired nor permitted; and the subordinate who presumed, even in an emergency, to act upon his own judgment, was apt to bring down upon himself official censure. It is related of one of the captains at the battle of New Orleans, a man of unquestioned courage, that when he fell in with the Manassas, he hailed ship after ship to obtain an order from the admiral to run her down. Nor was this an extreme case. As it happened, the character of the war was such as to call especially for self-reliance, resolute action, readiness of resource, and

the exercise of individual judgment. But confirmed habits are not easily shaken off; and the operations of the first two years show from time to time the persistence of old traditions. Nothing short of a complete upheaval of the service brought about the needful change; commanders became admirals by a single step; and junior officers became first-lieutenants of the ships in which they were serving as midshipmen. Finally, when the great leaders came into positions of active command, their encouragement and approval of individual enterprise gave to their juniors the opportunities of which the latter were only too eager to avail themselves.

It was another unfortunate feature of the situation, that while there was a superabundance of old officers, there was a deficiency in the junior grades. Below the lieutenants there were less than a hundred masters and midshipmen. These, together with a dozen of the younger lieutenants, were graduates of the Naval Academy; and their service during the war showed the value of their thorough training. To fill the gap at the foot of the list the three upper classes of acting midshipmen were ordered from the Academy into active service. Most of these were mere boys. They found themselves, with only the experience of two or three years at the Naval School, suddenly placed in positions of difficulty and responsibility. Many of them were lieutenants at nineteen; but no better work was done in the naval war than that which was placed in the hands of these lads from the Academy.

The deficiency of officers was increased by the resignation or dismissal of those who took side with the South. There were 322 of these of all grades and corps, and among them were several of marked ability. But even without the losses occasioned by retirement and by resignation, the number of

officers would have been wholly insufficient to meet the demands of the war. Volunteers were called for, and great numbers entered the service. There were appointed altogether about 7,500. The regular officers formed only one-seventh of the whole service; but in general they filled the most important positions. The additions to the line of the navy were composed of a great variety of material. Some were merchant captains and mates of experience; others had never been at sea. Those employed on the Mississippi were chiefly steamboat men and pilots. Many of them were capable and gallant men, who, though unused to the handling of guns and the discipline of a military service, conducted themselves honorably and acquitted themselves with credit. As a class, the volunteers were an indispensable addition to the naval force, and rendered valuable service. Without the least reflection upon their good qualities, it may be said that their efficiency would have been increased by a previous military training. But no attempt had ever been made to form a reserve for the navy; and the administration was fortunate when it secured any nautical experience, although military training might be wholly wanting.

Great as was the want of officers, the want of trained seamen was equally great. The complement of the navy had been fixed at 7,600. Of these there were on March 10, 1861, only 207 in all the ports and receiving-ships on the Atlantic coast. It was a striking illustration of the improvidence of naval legislation and administration, that in a country of thirty millions of people only a couple of hundred were at the disposal of the Navy Department. Seamen could not be had either to man the ships that might be commissioned, or to protect the exposed stations at Annapolis and Norfolk. Prompt measures were taken during the first year to in-

crease the force; and later, a great expansion took place. In July, 1863, there were 34,000 men in the service. But at all times there was a difficulty in obtaining trained seamen. Large bounties were offered by State and local authorities for enlistment in the army, and transfers between the two services were not authorized by law. When the draft was established, mariners were subjected to it like other citizens, without any regard to the service which they would prefer, or for which they might be specially fitted. In assigning the quotas to each locality, no allowance was made to maritime communities for the seamen they had furnished; so that they were forced, in self-defence, to send their seafaring population into the army. In 1864, a law was passed correcting these evils; but meantime the navy suffered, and vessels were occasionally unable to go to sea for want of men. As the necessities of the service grew more pressing, the number of men in the navy increased. To obtain them, it was necessary to hold out extraordinary inducements; and in the last months, bounties as high as one thousand dollars were offered and paid for a single seaman. When the war ended, there were 51,500 men in the service.

Nothing shows more forcibly the dependence of the navy upon the merchant marine for recruiting its ranks in time of war than the enormous additions both of officers and seamen that took place between 1861 and 1865. It is from the merchant marine that such reinforcements must always be chiefly drawn. To fill the cadres of the army a well-trained and organized militia stands always ready, at least in many of the States; but no steps have ever been taken toward establishing a sea-militia, even since its importance has been demonstrated by the war. A trained reserve force is a greater necessity for the navy than for the army, not because the one service is more important than the other, but be-

cause its ranks are less easily recruited. It may be said that drill will make any man a soldier, while a special training is required to make an efficient man-of-war's man. The army is purely a military profession; the navy combines two professions—each an occupation by itself—the military and the nautical. Hence the greater necessity for the navy of a large body of trained officers; and hence, also, the greater importance of a partially-trained naval reserve.

In matériel, the navy was by no means in a backward condition. The wise policy, begun before the establishment of the Navy Department, of building vessels which should be the best possible specimens of their class, had been steadily adhered to; and in war-ship construction the United States still held, and continued to hold until 1867, a place very near the highest. When the importance of steam as a motive power had become established, the early side-wheelers were built,—first the Mississippi and Missouri, and later the Powhatan, Susquehanna, and Saranac. The Powhatan and Susquehanna, at the time they were launched, in 1850, were the most efficient naval vessels afloat. Next came the six screw-frigates, which were built in 1855, and were regarded all the world over as the model men-of-war of the period. Of these the largest was the Niagara. The other five, the Roanoke, Colorado, Merrimac, Minnesota, and Wabash, were vessels of a little over three thousand tons, and they carried, for their day, a powerful battery. Again, in 1858, twelve screw-sloops of two classes were built, most of which were admirable vessels, though they were wanting, with a few exceptions, in the important quality of speed. The first class, vessels of about two thousand tons, included the Lancaster, Hartford, Richmond, Brooklyn, and Pensacola. The second class, of which the Pawnee and Iroquois were the largest, were also serviceable vessels. Finally, in February,

1861, Congress had made appropriation for seven new screw-sloops, which were intended to be as efficient as their predecessors.

But these measures, well-judged though they were, were only a first step in the general conversion of the naval force from sailing vessels into steamers. Of the ninety names borne on the Navy Register in 1861, fifty were those of vessels of the older type—ships-of-the-line, frigates, sloops, and brigs. Several of the liners were still on the stocks, never having been completed. The others were notable ships in their day, but their day was past and gone forever. The list of frigates was headed by the Constitution and the United States, built originally in the last century, and rendered famous by the victories of 1812. Others had been built within a more recent period, but the type had not been materially altered. The frigates were useful as receiving and practice-ships; but as far as war-service was concerned, they had only a historic value. But little more could be said of the sloops and brigs; and the remainder of the sailing fleet were store-ships.

Though swelling the total of ships-of-war to a considerable figure, the sailing vessels added little or nothing to the efficiency of the force. This fact explains, in some degree, the inadequacy of the navy at the beginning of the war. A change had taken place about fifteen years before in the motive power of ships, so radical that all the constructions of an earlier date were completely superseded. In 1840 the navy was stronger for its day than in 1860; because in 1840 all its ships were ships of the period, while in 1860 only half the fleet could be so regarded. The distance in time that separated the second Macedonian from the Powhatan was not much greater than that between the Powhatan and the Hartford; yet in the first case the change was a revolu-

tion, while in the second it was only a development. A captain that fought the Invincible Armada would have been more at home in the typical war-ship of 1840, than the average captain of 1840 could have been at that time in the advanced types of the Civil War. As a matter of fact, it was no uncommon thing in 1861 to find officers in command of steamers who had never served in steamers before, and who were far more anxious about their boilers than about their enemy. As naval science had advanced more in the last twenty-five years than in the two hundred years preceding, more than half the vessels on the navy list had become suddenly useless, and the effective force was narrowed down to the forty that had steam as a motive power.

Another fact which helped to account for the want of preparation in 1861 was the supineness of the Navy Department during the last months of Buchanan's administration. Few wars come on without some note of warning; and this was no exception. The effective force, small as it was, might easily have been so disposed as to be ready for an emergency, without even exciting comment. The failure to take the necessary measures need not, however, be imputed to a treacherous sympathy with the insurgents. It was only a part of the general policy of inaction, deliberately adopted by the Government during the winter of 1860–'61, which forbade any measures pointing even remotely to coercion. The most ordinary preparations were neglected; and if the crippling of the fleet had been intentional, it could not have been more effectual.

Of the forty steamers included in the general list, five were unserviceable, two of them being still on the stocks, and the others useless except as receiving-ships. Two more were mere tugs, and, together with the Michigan, stationed on the lakes, may be thrown out of the calculation.

Eight others, including the five frigates, were laid up in ordinary. There remained twenty-four steamers, whose disposition on the 4th of March was as follows:

Class.	Name.	Station.
One screw-frigate.....	Niagara.....	Returning from Japan.
Five screw-sloops (1st class).	San Jacinto ..	Coast of Africa.
	Lancaster	Pacific.
	Brooklyn.....	Home Squadron (Pensacola).
	Hartford.....	East Indies.
	Richmond ...	Mediterranean.
Three side-wheel steamers ..	Susquehanna .	Mediterranean.
	Powhatan....	Home Squadron (returning from Vera Cruz).
	Saranac.....	Pacific.
Eight screw-sloops (2d class).	Mohican	Coast of Africa.
	Narragansett .	Pacific.
	Iroquois	Mediterranean.
	Pawnee	Washington.
	Wyoming	Pacific.
	Dacotah.....	East Indies.
	Pocahontas...	Home Squadron (returning from Vera Cruz).
	Seminole.....	Coast of Brazil.
Five screw steamers (3d class)	Wyandotte...	Home Squadron (Pensacola).
	Mohawk	New York.
	Crusader.....	New York.
	Sumter	Coast of Africa.
	Mystic.....	Coast of Africa.
Two side-wheel steamers	Pulaski	Brazil.
	Saginaw	East Indies.

It will be observed that of the twelve vessels composing the Home Squadron, seven were steamers; and of these only three, the Pawnee, Mohawk, and Crusader, were in northern ports and at the immediate disposal of the new administration. The best part of the fleet was scattered all over the world.

In the matter of ordnance, as in ships, the navy had been making active progress. In the old sailing vessels, the

32-pounder, which was simply a development of the 18s and 24s of 1812, and the VIII-inch shell-gun were still the usual guns. Since 1850, the powerful Dahlgren smooth-bore shell-guns had been introduced, and the new steam-frigates and sloops were armed with them. The IX-inch guns of this description were mounted in broadside, and the XI-inch (with a few X-inch) on pivots. The powers of the XI-inch had not been fully tested, and the prescribed service-charge was smaller than it was afterward found that the gun would bear. The latest development of the smooth-bore gun was the XV-inch, one of which was generally mounted in each monitor turret. Rifled guns were gradually introduced during the war. These were chiefly Parrott guns, 20-, 30-, and 100-pounders. They were cast-iron guns, strengthened by a wrought-iron band around the breech. Later, 60-pounders and 150-pounders were manufactured. The Parrott gun of the smaller calibres was serviceable, but as a heavy gun it was dangerous, and occasionally burst. Besides the Parrott guns, a few light cast-iron Dahlgren rifles were made; and in the Western flotilla, when it was transferred to the navy, there were several army rifled 42-pounders, which were so dangerous as to be nearly useless.

The demands of the new service were many and various. There was the river service, where the navy acted largely in co-operation with the army, in the reduction of fortified points, and in opening and keeping open the lines of communication. For this the essential qualification was light draft. It needed small handy vessels, capable of approaching the shore, and of passing through shallow and difficult channels. Quite distinct from it was the ocean service, which meant the pursuit and capture of Confederate cruisers, and of vessels engaged in illegal trade. The prime necessity here was speed. Lastly, there was the coast service,

comprising the maintenance of the blockade, and detached operations against fortifications protected by powerful batteries. The blockade required vessels that combined both speed and light draft, together with seaworthiness, and a certain degree of force to resist the sudden attacks which were made from time to time, in the hope of raising the blockade, or what was perhaps of equal importance, of inducing a belief abroad that such a result had been accomplished. The attack of fortified harbors, on the other hand, though from the nature of things carried on in connection with the blockade, called for an entirely different type of vessel. Here, force pure and simple, was needed; force offensive and defensive, heavy guns and heavy armor.

For all these kinds of service, vessels were required, and vessels in great numbers. A small force could accomplish nothing. The operations on the Mississippi and its tributaries alone, operations which were second to none in extent and efficiency, and carried on wholly in the enemy's country, required a large fleet. For the ocean service, the vessels, to accomplish their object, must be numerous; while a very few served every purpose of the enemy. It was easy for the half-dozen commerce-destroyers to catch merchantmen, with which every sea was filled, while it was a very difficult matter to catch the half-dozen commerce-destroyers. Similarly, the blockade service required vessels at every port and inlet; otherwise it was not even legal, to say nothing of its being ineffective.

In meeting the wants of the navy, the new administration proceeded with energy. All the ships on foreign stations, except three, were recalled. Measures were taken at once to increase the force by fitting out all the serviceable vessels that were laid up, by building in navy yards, and in private yards on contract, and by purchase in the open market. The

difficulties were great, for the force required was enormous; and there were neither officers, men, ships, nor guns available, nor authority to procure them. Ship-owners had failed to see that steamers were to supplant sailing-vessels for commercial purposes, and though the merchant marine was still considerable, it had not been modernized. Nor had any systematic plan been adopted, by which a Government inspection might secure the construction of merchant vessels, imperfectly perhaps, yet in some degree adapted for conversion into men of war. Indeed, in the absence of a demand, ship-builders were not prepared to supply steamers of any kind to a considerable extent. The number of machine-shops was small—from twenty to thirty at the most—and their plant only equal to the ordinary work of the construction and repair of machinery. There were not more than eight of these of any considerable size; and, in the sudden demand for locomotives and transports for the army and for marine engines for the navy, they were strained to the utmost.

Five distinct measures were immediately adopted for the increase of the naval force. The first was to buy everything afloat that could be made of service. Purchases were made directly by the Department, or by officers acting under its direction. By the 1st of July, twelve steamers had been bought, and nine were employed under charter. Subsequently it appeared that the business of purchasing, being a purely mercantile matter, might be suitably placed in the hands of a business man, who should act as the responsible agent of the Department in conducting the transactions. This plan was adopted in July. Each purchase was inspected by a board of officers, and in this way the Department was enabled to secure, as far as any such were to be found, suitable vessels at a suitable price. The board of inspection could not exact a very high degree of excellence or

fitness, because everything afloat that could in any way be made to answer a purpose was pressed into the service. The vessels were of all sizes and descriptions, from screw-steamers and side-wheelers of two thousand tons to ferry-boats and tugs. Some of the larger steamers were fast vessels and made efficient cruisers. The Connecticut, the Cuyler, the De Soto, and the Santiago de Cuba paid for their cost several times over in the prizes they captured. The majority of the purchased steamers were between one hundred and eight hundred tons. Some of the least promising of these improvised men-of-war did good service against blockade-runners. The steamer Circassian, one of the most valuable prizes made during the war, was captured outside of Havana by a Fulton ferry-boat. Even for fighting purposes, however, the ferry-boats, with their heavy guns, were by no means to be despised. There were purchased altogether up to December, 1861, 79 steamers and 58 sailing vessels, 137 in all. The number of vessels bought during the whole war amounted to 418, of which 313 were steamers. After the war was over, they were rapidly sold, at less than half their cost.

The second measure adopted by the administration was the construction of sloops-of-war. Seven of these had been authorized by Congress in February, but the Department resolved to build eight, assigning two to each navy yard. Four of these vessels, the Oneida, Kearsarge, Wachusett, and Tuscarora, were reproductions of three of the sloops of 1858, which made the work of construction quicker and easier, the designs being already prepared. In the latter part of 1861, six additional sloops were built, of the same general class, but larger. All these fourteen sloops, like their models of two years before, were excellent vessels, and several of them are still in the service as second-rates and third-rates.

The third measure adopted by the Department, on its own responsibility, without waiting for the action of Congress, was to contract with private parties for the construction of small, heavily armed screw-gunboats. Twenty-three of these were built, of which the Unadilla and Pinola may be regarded as types. They were of five hundred and seven tons each, and mounted from four to seven guns. Some of them, within four months from the date of contract, were afloat, armed, and manned, and took part in the battle of Port Royal. From their rapid construction, they were commonly known as the "ninety-day gunboats." Nine of them were in Farragut's fleet at the passage of the forts below New Orleans. They were an important addition to the navy, and were actively employed both in fighting and blockading during the whole war.

For service in the rivers and in narrow sounds and channels, still another class of vessels was needed. To meet this want, a fourth measure was adopted, by building twelve paddle-wheel steamers, three or four hundred tons larger than the gunboats, but still small vessels, and of very light draft. To avoid the necessity of turning, they were provided with a double bow, and a rudder at each end. These were the famous "double-enders." The first twelve were the so-called Octorara class. Twenty-seven larger vessels of the same type were afterwards built, composing the Sassacus class. The Wateree, a vessel of the same size and general design, was built of iron. Finally the Mohongo class, also of iron, consisted of seven double-enders of still larger size, and carrying a heavier armament. The Ashuelot[1] and Monocacy still represent this class in the service.

The fifth and last measure for the increase of the naval

[1] News of the loss of the Ashuelot is received as this volume is going to press.

force was the construction of ironclads. Congress had passed, at the extra session in August, an appropriation of a million and a half dollars for armored vessels, to be built upon plans approved by a board of officers. The board was composed of three of the ablest captains in the service, Smith, Paulding, and Davis. Out of a large number of plans proposed, three were selected by the board and ordered by the Department. Upon these plans were built the New Ironsides, the Galena, and the Monitor.

Most of the measures, as outlined above, refer to the first year of the war; but these five types of vessels, converted merchantmen, sloops, gunboats, double-enders, and ironclads, represent the additions to the sea-going navy during the four years. There was also an immense river fleet, composed of river-steamboats, rams, ironclads, "tinclads," and mortar-boats, a collection of nondescripts, which under the leadership of able commanders, made the naval operations on the Mississippi as brilliant and successful as any in the war.

In the construction of the new ships-of-war, no attempt was made to reproduce the fine screw-frigates of 1855, as they failed to show their usefulness, except perhaps at Port Royal and at Fort Fisher. The Colorado could not be got over the bar, when Farragut went up to New Orleans, and the Roanoke and Minnesota were helpless at Hampton Roads. In the latter half of the war, however, the Department undertook the construction of a class of vessels of considerable size, but very different in character. These were large, wooden steamers, with fine lines, excessively long and sharp and narrow, of light draft for their size, in which every quality was sacrificed to speed. In some of these the length was as great as eight times the beam. They were to be sea-going cruisers. Their main purpose was to capture the commerce-destroyers; and perhaps, in case of foreign complica-

tions, to do a little commerce-destroying themselves. Their armament was heavy; but armament was not their principal feature. Above all things, they were to be fast; and in those that were built, the desired result was generally secured. One of them, the Wampanoag or Florida, succeeded in attaining for a short time the extraordinary speed of seventeen and three-fourths knots an hour.

The plan which comprehended the construction of these vessels was a scheme of somewhat large dimensions, and was never completed. Of the three principal types, named respectively after the Ammonoosuc, the Java, and the Contoocook, twenty-five vessels were projected, and most of them were begun; but few of them were launched, and these only after the close of the war. Under the pressure of urgent necessity, they were built of unseasoned white-oak timber, instead of the live-oak which had been hitherto used for ships-of-war; and such of them as were finished were no sooner in the water than they began to decay. Six years after the war was ended, the chief constructor, writing of these vessels, reported that some of them, costing over a million of dollars, had made only one cruise, and then had been found too rotten to be repaired. They served the purpose, however of contributing, with other circumstances, to modify the menacing attitude of foreign powers; and their serious imperfections were the necessary result of the situation. The Administration was bound to do its utmost to provide for every contingency; and the failure of preparation during peace, when plans could be matured, and materials accumulated at leisure, compelled, when the time of action came, a hurried and lavish expenditure.

Great as was the task before the United States Government in preparing for a naval war, it was as nothing to that

of the enemy. The latter had at his disposal a small number of trained officers imbued with the same ideas, and brought up in the same school, as their opponents. Some of these, like Buchanan, Semmes, Brown, Maffitt, and Brooke, were men of extraordinary professional qualities; but except in its officers, the Confederate Government had nothing in the shape of a navy. It had not a single ship-of-war. It had no abundant fleet of merchant-vessels in its ports from which to draw reserves. It had no seamen, for its people were not given to seafaring pursuits. Its only ship-yards were Norfolk and Pensacola. Norfolk, with its immense supplies of ordnance and equipments, was indeed invaluable; but though the three hundred new Dahlgren guns captured in the yard were a permanent acquisition, the yard itself was lost when the war was one-fourth over. The South was without any large force of skilled mechanics; and such as it had were early summoned to the army. There were only three rolling-mills in the country, two of which were in Tennessee; and the third, at Atlanta, was unfitted for heavy work. There were hardly any machine-shops that were prepared to supply the best kind of workmanship; and in the beginning the only foundry capable of casting heavy guns was the Tredegar Iron Works, which under the direction of Commander Brooke, was employed to its fullest capacity. Worst of all, there were no raw materials, except the timber that was standing in the forests. The cost of iron was enormous, and toward the end of the war it was hardly to be had at any price. Under these circumstances, no general plan of naval policy on a large scale could be carried out; and the conflict on the Southern side became a species of partisan, desultory warfare.

A Navy Department had been established by an act of the Provisional Congress on February 21. Mallory, who

had been Chairman of the Committee on Naval Affairs in the United States Senate, was appointed Secretary of the Navy. In matters relating to ordnance and armor, the leading spirit at the Department was Commander Brooke, who was afterward Chief of Bureau. As early as the 15th of March an appropriation of one million dollars was made for the construction or purchase of ten steam-gunboats. The Administration made tremendous efforts to create a navy; but in spite of the greatest perseverance and ingenuity, it found itself checked and hampered at every turn. By dint of using everything it could lay hands on, it got together in the beginning a small and scattered fleet, which had hardly the semblance of a naval force. Six of the revenue-cutters came early into its possession. The steam-battery Fulton was seized at Pensacola, and $25,000 were appropriated to complete and equip her. The Merrimac was presently raised at Norfolk, and found to have no serious injury. Encouragement was given to private enterprise, by Davis's immediate adoption of the plan of issuing letters-of-marque. It was recognized that one of the most vulnerable points on the Union side lay in its commerce; and it was against commerce alone that the insurgent navy throughout the war was able to sustain the offensive. The Federal Government could not retaliate, because there was no commerce to retaliate upon. The carrying trade of the South was in foreign hands; and the only way to assail it was by establishing a blockade, which affixed to it an illegal character. Powerless to raise the blockade of their own coast, and much less to establish one at the North, the Confederates confined their aggressions chiefly to merchant vessels; and having, by the address of their agents, and the negligence of the English authorities, secured a few cruisers well adapted for the purpose, they inflicted injur-

ies on the American merchant marine from which it never recovered.

But this was warfare for which only a few vessels were needed. For strictly naval warfare, where ships-of-war measured themselves against each other, the South was never able to accumulate a sufficient force. Old vessels were altered, new vessels were built at different points, and some of them were for a time successful, or at least did not yield without a hard struggle; but there was no possibility, except perhaps for a time on the Mississippi, of sustained or concerted action. The naval force that opposed Goldsborough in the Sounds was pitifully weak, as was that which Dupont found at Port Royal. Little more could be said of the squadron at New Orleans, though the ironclad Mississippi, if accident and mismanagement had not delayed her commission, might have given Farragut's fleet some annoyance. At Mobile the Tennessee, under the gallant Buchanan, fought almost single-handed the whole fleet, only to be captured after a heroic defence. At Savannah, the Atlanta was captured almost as soon as she appeared. Charleston was never able to make more than a raid or two on the blockading force. The Albemarle maintained herself for six months in the waters of North Carolina, but she was blockaded in the Roanoke River, and was finally destroyed by the daring of Cushing. Finally the Merrimac, which was lost through our own shortcomings, had a brilliant but brief career in Hampton Roads.

These isolated attempts comprised, together with the exploits of the cruisers, the sum of the naval operations on the Southern side. Viewed in the light of the difficulties to be met by the Confederate navy, they were little less than phenomenal. But as forming a standard of comparison for future wars, or for the strength of future enemies, they are hardly

to be considered. To-day we are worse off, for the period in which we live, than we were in 1861, when the feebleness of our enemy gave us eight months for preparation; and if it should ever be our misfortune to be involved in another war, we shall probably have a far more formidable antagonist to encounter, and one prepared to carry on hostilities from the very outset.

CHAPTER II.

THE BLOCKADE.

THE first measure of naval warfare undertaken by the Administration, and the one which it carried out for four years with the most sustained effort, was one that seemed at the outset in the highest degree impracticable. A navy of thirty-five available modern vessels, while it might be expected to produce substantial results by concentrated attacks at isolated points on the seaboard, or in engagements with the enemy's ships-of-war, counted for almost nothing as an effectual barrier to commerce along 3,000 miles of coast. To undertake such a task, and to proclaim the undertaking to the world, in all its magnitude, at a time when the Navy Department had only three steam-vessels at its immediate disposal in home ports, was an enterprise of the greatest boldness and hardihood. For the days of paper blockades were over; and, though the United States were not a party to the Declaration of Paris, its rule in regard to blockade was only the formal expression of a law universally recognized. "Blockades, to be binding, must be effective—that is to say, maintained by a force sufficient really to prevent access to the coast of the enemy;" or, according to the general interpretation given to the treaty, sufficient to create an evident danger in entering or leaving the port. In this sense, the Government understood its responsibilities and prepared to meet them.

It was natural, in view of the inadequacy of the force, that foreign governments should look at the measure with suspicion, and should watch its execution with careful scrutiny. Commercial communities abroad doubted the seriousness of the undertaking, because, in their ignorance of the energy and the resources of the Government, they doubted its feasibility. An effective blockade on such a scale was a thing unprecedented, even in the operations of the foremost naval powers of the world. It seemed to be an attempt to revive the cabinet blockades of half a century before, when England and France laid an embargo upon each other's coasts, and captured all vessels at sea whose destination was within the proscribed limits; and when Spain interdicted commerce with the northern colonies in South America, and as a matter of form, kept a brig cruising in the Caribbean Sea.

No time was lost in announcing the intentions of the Government. On the 19th of April, six days after the fall of Sumter, the President issued a proclamation declaring the blockade of the Southern States from South Carolina to Texas. On the 27th the blockade was extended to Virginia and North Carolina. The terms of the proclamation were as follows:

"Now therefore I, Abraham Lincoln, President of the United States . . . have further deemed it advisable to set on foot a blockade of the ports within the States aforesaid, in pursuance of the laws of the United States and of the Law of Nations in such case provided. For this purpose a competent force will be posted so as to prevent entrance and exit of vessels from the ports aforesaid. If, therefore, with a view to violate such blockade, a vessel shall approach or shall attempt to leave any of the said ports, she will be duly warned by the commander of one of the blockading vessels, who will endorse on her register the fact and date of such warning, and if the same vessel shall again attempt to enter or leave the blockaded port, she will be captured, and sent to the nearest convenient port for such proceedings against her, and her cargo as prize, as may be deemed advisable."

Upon the issue of the proclamation, the Government immediately found itself confronted with the question whether the movement at the South should be regarded as rebellion or as war. From the legal point of view the acts of the insurgents could be looked upon in no other light than as armed insurrection, "levying war against the United States," and under the constitutional definition, the actors were guilty of treason. But the extent of the movement, its well-defined area, and, above all, its complete governmental organization, made it impossible to put the legal theory into practice; and almost from the beginning hostilities were carried on precisely as in a regular war. The Government, however, in its dealings with foreign powers always asserted stoutly that the movement was purely an insurrection, and that those in arms against it were rebels, and not belligerents.

This position, though it involved occasional inconsistencies, was maintained with considerable success, except in relation to the status of prisoners, and in those cases where the operations of the war affected foreign interests. The question first arose in reference to the blockade. Blockade, in the ordinary sense, is purely an act of war. It means the closing of an enemy's ports, and the capture of all vessels, neutral or hostile, attempting to enter with knowledge of the blockade. It enables a belligerent to seize vessels on the high seas bound for a blockaded port. It stands on the same footing as the right of search, which is exclusively a war right; and like the right of search, it is a benefit to the belligerent, and a hardship to the neutral.

Even after the President's proclamation, which was to all intents a belligerent declaration, and after the blockade had been set on foot, the Government still held to its theory that the parties to the contest were not belligerents, and that

rebellion was not in any sense war. In his report of July 4, 1861, at the special session of Congress, the Secretary of the Navy referred to the blockade in these terms:

"In carrying into effect these principles, and in suppressing the attempts to evade and resist them, and in order to maintain the Constitution and execute the laws, it became necessary to interdict commerce at those ports where duties could not be collected, the laws maintained and executed, and where the officers of the Government were not tolerated or permitted to exercise their functions. In performing this *domestic municipal duty*,[1] the property and interests of foreigners became to some extent involved in our home questions, and with a view to extending to them every comity that the circumstances would justify, the rules of blockade were adopted, and, as far as practicable, made applicable to the cases that occurred under this embargo or non-intercourse of the insurgent States. The commanders of the squadron were directed to permit the vessels of foreigners to depart within fifteen days, as in cases of actual effective blockade, and then vessels were not to be seized unless they attempted, after having been once warned off, to enter an interdicted port in disregard of such warning."

In referring to the blockade in these words, the Navy Department clearly had in mind a measure of internal administration; and this domestic application of a belligerent right was excused on the ground of a desire to extend every possible comity to foreigners. But in putting forward this plea, the Secretary failed to see that the application of the rules of blockade to a domestic embargo, so far from extending comity to foreigners, abridged their rights, and imposed on them liabilities and penalties which no domestic embargo of itself could produce. It was not the foreign trader, but the belligerent cruiser that gained by the adoption of the rules of blockade. A government has the right to close its own ports, and to impose heavy penalties upon all who attempt

[1] The italics are not in the original.

to enter; but it cannot by virtue of any such measure search and seize foreign vessels on the high seas, even though bound for the embargoed port. To do this it must establish a blockade. In other words, it must wage war, and the two parties in the contest must become belligerents.

Although it may have been the intention of the Executive in July to regard the blockade as a domestic embargo, it soon gave up the idea in practice. Neutral vessels were searched and captured at sea. Prizes were sent in for adjudication, and condemned for breach of blockade and for carrying contraband, "in pursuance of the laws of the United States and the Law of Nations in such case provided," and not in pursuance of any law imposing civil forfeitures or penalties for violation of a domestic embargo. The forms of examination and procedure were those of belligerent prize-courts; and the decisions expressly recognized a state of war, and could be founded on no other hypothesis.

Under these circumstances, the complaint against the British Government of having done an unfriendly act in recognizing the rebels as belligerents, had no very serious foundation. The Queen's proclamation of neutrality, published on May 13, was a statement that hostilities existed between the Government of the United States and "certain States styling themselves the Confederate States of America," and a command to British subjects to observe a strict neutrality between the contending parties. Its form and contents were those commonly found in the declarations of neutrals at the outbreak of war. The annoyance it gave to the Government and the elation it caused at the South were due to the fact that it appeared somewhat early in the struggle, and that it was the first recognition from abroad of the strength and organization of the insurgent Government. As a matter of law, Great Britain had the right to declare her-

self neutral, especially after the blockade was proclaimed, as blockade is a purely belligerent act. Her offence, reduced to its exact proportions, consisted in taking the ground of a neutral before the magnitude and force of the insurrection were such as to justify it. But the hopes raised at the South by the proclamation led to the prevalent belief throughout the Union that it was dictated by unfriendly motives; while the undisguised sympathy for the Southern cause shown by the upper classes in England tended to strengthen the impression and to aggravate the wound.

The inception of the blockade was somewhat irregular. Ordinarily a blockade may begin in one of two ways; either by a public announcement coupled with the presence of a force before the blockaded port; or by stationing the force without an announcement. The first is a blockade by notification; the second is a blockade in fact. As breach of blockade only becomes an offence when accompanied by knowledge, actual or constructive, of the existence of the blockade, it is a question of some importance when the blockade begins and how knowledge of it is to be acquired. In a blockade by notification, knowledge is held to have been acquired when sufficient time has elapsed for the notice to have been generally received; and after this time a neutral vessel, by sailing for the blockaded port, has committed an offence and incurred a penalty. With a blockade that is purely *de facto*, on the other hand, knowledge must be obtained on the station, and neutrals have a right to sail for the port and to be warned off on their arrival.

Whether a blockade is initiated as a blockade by notification or as a blockade *de facto*, the indispensable condition of its establishment is the presence of a force at the blockaded port. Actual notice of the fact can never precede the

existence of the fact. The President's two proclamations did not therefore constitute actual notice, because at the date of their issue there was not even a pretence that the blockade existed. Nor do they appear to have been so intended. The idea was rather to publish a manifesto declaring in a general way the intentions of the Government, and then to carry them out as promptly as circumstances would permit.

The blockade therefore began as a blockade *de facto*, not as a blockade by notification. During the summer of 1861 vessels were stationed at different points, one after another, by which the blockade at those points was separately established. Notices, of a more or less informal character, were given in some cases by the commanding officer of the blockading force; but no general practice was observed. When Captain Poor, in the Brooklyn, took his station off the Mississippi, he merely informed the officer commanding the forts that New Orleans was blockaded. Pendergrast, the commanding officer at Hampton Roads, issued a formal document on April 30, calling attention to the President's proclamation in relation to Virginia and North Carolina, and giving notice that he had a sufficient force there for the purpose of carrying out the proclamation. He added that vessels coming from a distance, and ignorant of the proclamation, would be warned off. But Pendergrast's announcement, though intended as a notification, was marked by the same defects as the proclamation. The actual blockade and the notice of it must always be commensurate. At this time, there were several vessels in Hampton Roads, but absolutely no force on the coast of North Carolina; and the declaration was open to the charge of stating what was not an existing fact.

The importance of these early formalities arises from the

fact that the liability of neutral vessels depends on the actual existence of the blockade, and upon their knowledge of it. Until the establishment of the blockade is known, actually or constructively, all vessels have a right to be warned off. When the fact has become notorious, the privilege of warning ceases. In the statement about warning, therefore, the President's proclamation said either too much or too little. If it was intended, as the language might seem to imply, that during the continuance of the blockade—which, as it turned out, was the same thing as during the continuance of the war—all neutral vessels might approach the coast and receive individual warning, and that only after such warning would they be liable to capture, it conceded far more than usage required. If it meant simply that the warning would be given at each point for such time after the force was posted as would enable neutrals generally to become aware of the fact, it conveyed its meaning imperfectly. In practice, the second interpretation was adopted, in spite of the remonstrances of neutrals; and the warnings given in the early days of the blockade were gradually discontinued, the concessions of the proclamation to the contrary notwithstanding. The time when warning should cease does not appear to have been fixed; and in one instance at least, on the coast of Texas, it was given as late as July, 1862. The fact of warning was commonly endorsed on the neutral's register. In some cases the warnings had the same fault as Pendergrast's proclamation, in being a little too comprehensive, and including ports where an adequate force had not yet been stationed. The boarding officers of the Niagara, when off Charleston, in May, warned vessels off the whole Southern coast, as being in a state of blockade, though no ship-of-war had as yet appeared off Savannah; and the Government paid a round sum to

their owners in damages for the loss of a market, which was caused by the official warning.

The concession of warning to neutrals at the port, if it had continued through the war, would have rendered the blockade to a great extent inoperative. Vessels would have been able to approach the coast without risk of capture, and to have lain about the neighborhood until a good opportunity offered for running past the squadron. In other words, the first risk of the blockade-runner would have been a risk of warning, instead of a risk of capture; and the chances in his favor would have been materially increased. The courts, as well as the cruisers, disregarded the proclamation as soon as the blockade was fairly established, and held, in accordance with English and American precedents, that warning was unnecessary where actual knowledge could be proved.

It is probable that when the blockade was proclaimed it was thought that the measure could be adequately carried out by stationing a small squadron at the principal commercial ports, supplemented by a force of vessels cruising up and down the coast. The number of points to be covered would thus be reduced to four or five on the Atlantic and as many more on the Gulf. Had this expectation been realized, the blockade would have been by no means the stupendous undertaking that it seemed to observers abroad. Acting upon such a belief, the Government entered upon its task with confidence and proceeded with despatch. The Niagara, which had returned from Japan on April 24, was sent to cruise off Charleston. The Brooklyn and Powhatan moved westward along the Gulf. Before the 1st of May, seven steamers of considerable size had been chartered in New York and Philadelphia. One of these, the Keystone State, chartered by Lieutenant Woodhull, and intended es-

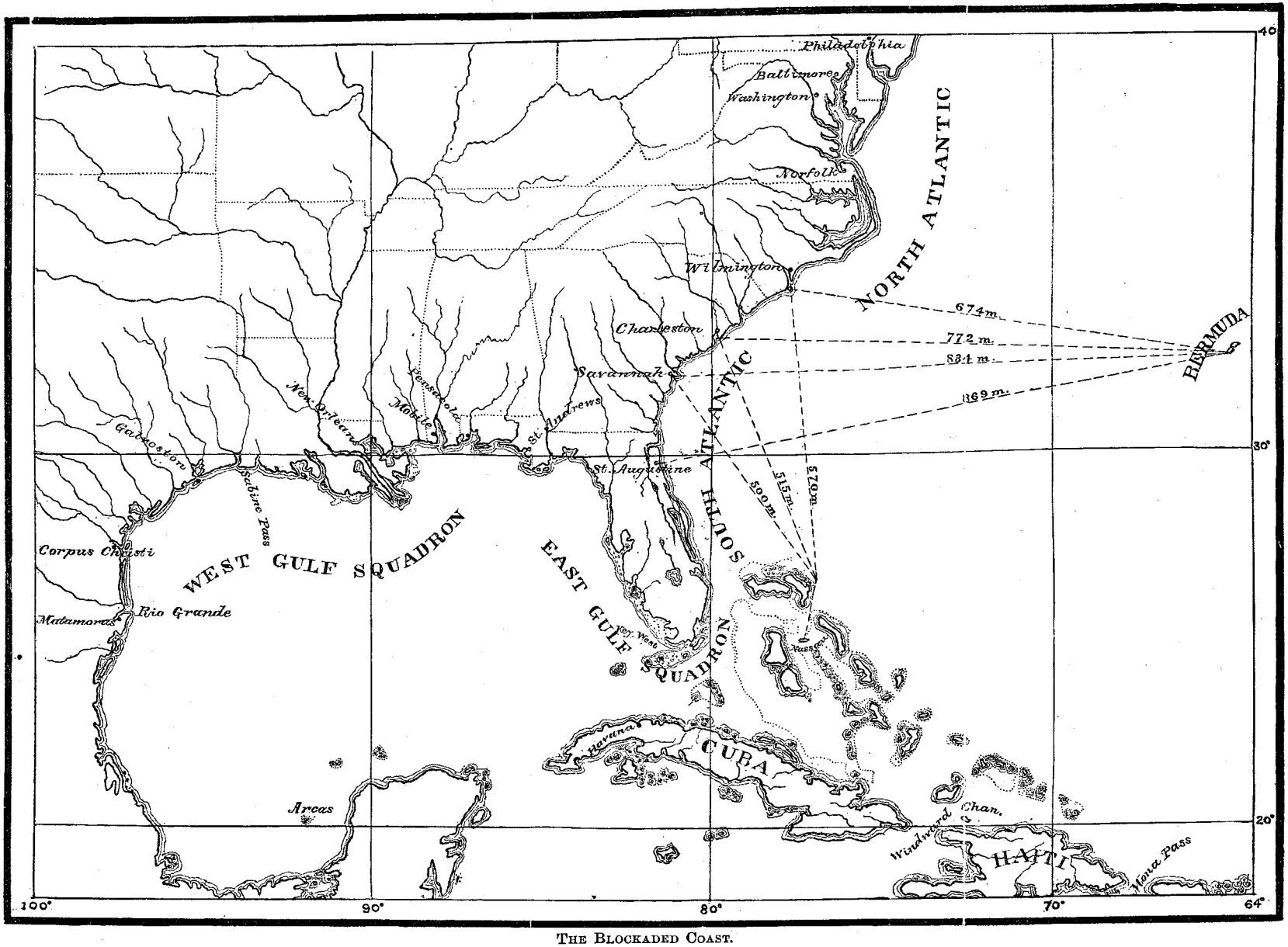
pecially for use at Norfolk, was at her station in Hampton Roads in forty-eight hours after Woodhull had received his orders in Washington to secure a vessel. The screw-steamer South Carolina, of eleven hundred and sixty-five tons, purchased in Boston on May 3, arrived off Pensacola on June 4; and the Massachusetts, a similar vessel in all respects, and bought at the same time, was equally prompt in reaching Key West.

Notwithstanding these efforts, the blockade can hardly be said to have been in existence until six weeks after it was declared, and then only at the principal points. When the Niagara arrived off Charleston on the 11th of May, she remained only four days; and except for the fact that the Harriet Lane was off the bar on the 19th, there was no blockade whatever at that point for a fortnight afterward. The British Government called attention to this fact, and suggested that a new blockade required a new notification, with the usual allowance of time for the departure of vessels; but the State Department did not regard the blockade as having been interrupted. Savannah was blockaded on the 28th of May. In the Gulf, Mobile and New Orleans received notice on the 26th from the Powhatan and the Brooklyn; and a month later the South Carolina was at Galveston. At the principal points, therefore, there was no blockade at all during the first month, and after that time the chain of investment was far from being complete. Indeed it could hardly be called a chain at all, when so many links were wanting. Even Wilmington, which later became the most important point on the coast in the operations of the blockade-runners, was still open, and the intermediate points were not under any effective observation.

As liability for breach of blockade begins with the mere act of sailing for the blockaded port, the distance of this

port from the point of departure becomes an important consideration to the blockade-runner. The longer the distance to be traversed the greater the risk; and some method of breaking the voyage must be devised, so that as much of it as possible may be technically innocent. The principal trade of the South during the war was with England; and it became an object to evade liability during the long transatlantic passage. For this purpose, all the available neutral ports in the neighborhood of the coast were made entrepôts for covering the illegal traffic.

There were four principal points which served as intermediaries for the neutral trade with the South; Bermuda, Nassau, Havana, and Matamoras. Of these Nassau was the most prominent. Situated on the island of New Providence in the Bahamas, it is only about one hundred and eighty miles in a straight line from the coast of Florida. Florida, however, was not the objective point of the leading blockade-runners. It had neither suitable harbors nor connections with the interior. The chief seats of commerce on the Eastern coast were Savannah, Charleston, and Wilmington. The run to these points from Nassau was from five hundred to six hundred miles, or three days, allowing for the usual delays of the passage. For such trips, small quantities of coal were needed, which gave great room for stowage of cargo. There was no great depth of water at Nassau, which was an advantage to the blockade-runners; and the cruisers generally took their station off Abaco Light, fifty miles away. New Providence was surrounded by numbers of small islands, over whose waters, within a league of the shore, the sovereignty of a great power threw a protection as complete and as effective as that of guns and fortifications. A vessel bound to Nassau from one of the blockaded ports must have been hard-pressed indeed if she could not



THE BLOCKADED COAST.

find a refuge. The navigation among the islands was dangerous and difficult, the channels were intricate, and reefs and shoals abounded; but skilful pilots were always at the command of the blockade-runners.

Nassau was a place of no special importance before the war. Its inhabitants lived chiefly by fishing and wrecking. But with the demands of the moment, it suddenly became a commercial emporium. Its harbor was crowded with shipping. Its wharves were covered with cotton-bales awaiting transportation to Europe, and with merchandise ready to be shipped for the blockaded country. Confederate agents were established here, and took charge of the interests of their Government in connection with the contraband trade. Money quickly earned was freely spent, and the war, at least while it lasted, enriched the community.

Bermuda shared, though in a less degree, the profits of the blockade-running traffic. Its connection was closest with Wilmington, which was six hundred and seventy-four miles distant, and which was the favorite port of the blockade-runners, especially in the last year of the war. In the Gulf, Havana had a similar importance. The run to the coast of Florida was only a little over one hundred miles. But Key West was inconveniently near, the Gulf blockade was strict, and after New Orleans was captured, the trade offered no such inducements as that on the Atlantic coast. Nevertheless it is stated by Admiral Bailey, on the authority of intercepted correspondence of the enemy, that between April 1 and July 6, 1863, fifty vessels left Havana to run the blockade.

The situation of Matamoras was somewhat peculiar. It was the only town of any importance on the single foreign frontier of the Confederacy. Situated opposite the Texan town of Brownsville, on the Rio Grande, about forty miles

from its mouth, and in neutral territory, it offered peculiar advantages for contraband trade. The Rio Grande could not be blockaded. Cargoes shipped for Matamoras were transferred to lighters at the mouth of the river. On their arrival at Matamoras they were readily transported to the insurgent territory. Accordingly, in 1862, the place became the seat of a flourishing trade. The sudden growth of the city was a notorious fact, as was also the cause that led to it. Yet the Government was unable to put a stop to the traffic, unless evidence could be brought to show that the cargoes were really destined for the enemy. Several vessels bound for Matamoras were captured and sent in, but in most of the cases the prize court decreed restitution, on the ground that a neutral port could not be blockaded, and therefore there could be no breach of blockade in sailing for it. Even in the case of the Peterhoff, which was captured near St. Thomas under suspicious circumstances, and whose papers showed Matamoras as her destination, only the contraband part of the cargo was condemned.

When the advantage of a neutral destination was fully understood, it became the practice for all the blockade-runners out of European ports to clear for one or the other of these points, and upon their arrival to wait for a favorable opportunity to run over to their real destination. Nobody could be deceived by this pretence of an innocent voyage; and the courts, looking only at the final destination, condemned the vessels when there was evidence of an ultimate intention to break the blockade. This decision rested upon an old principle of the English prize-courts, known as the doctrine of continuous voyages, according to which the mere touching at an intermediate port of a vessel engaged in an illegal voyage could not break the continuity of the voyage or remove the taint of illegality. Hence, if a vessel cleared

from Liverpool with the intention of merely touching at Nassau, and then proceeding to Charleston, and if this intention could be proved from the papers, the character of the cargo, and the examination of persons on board, the two voyages were held to be one, and condemnation followed.

In order to meet the new difficulty, a new device was adopted. Cargoes were sent out to Nassau, and were there transshipped, sometimes directly, from vessel to vessel, in the harbor, sometimes after being landed on the wharf; and thence were transported in a new conveyance to the blockaded port. Return cargoes were transshipped in the same way. This had a double advantage. It made the continuity of the transaction much more difficult of proof, and it enabled the capitalists engaged in the trade to employ two different classes of vessels, for the service for which each was specially adapted. For the long voyages across the Atlantic heavy freighters could be used, of great capacity and stoutly built; and the light, swift, hardly visible steamers, with low hulls, and twin-screws or feathering paddles, the typical blockade-runners, could be employed exclusively for the three days' run on the other side of Nassau or Bermuda. But here again the courts stepped in, and held that though a transshipment was made, even after landing the cargo and going through a form of sale, the two voyages were parts of one and the same transaction, and the cargo from the outset was liable to condemnation, if the original intention had been to forward the goods to a blockaded port. Nor did the decisions stop here. As all the property, both ship and cargo, is confiscated upon proof of breach of blockade, it was held that the ships carrying on this traffic to neutral ports were confiscable, provided the ultimate destination of the cargo to a blockaded port was known to the owner. In the words of the Chief Justice of the Supreme Court, "The

ships are planks of the same bridge, all of the same kind, and necessary for the convenient passage of persons and property from one end to the other."

The adoption of this rule by the highest courts in the United States raised a loud outcry on the part of those interested in the traffic, and was severely criticised by publicists abroad, especially by those who favored, in general, the continental view of the laws of war. The United States were accused of sacrificing the rights of neutrals, which they had hitherto upheld, to the interests of belligerents, and of disregarding great principles for the sake of a momentary advantage. In truth, however, the principle adopted by the court was not a new one, though a novel application was made of it to meet a novel combination of circumstances. It had formerly been applied to cases where neutrals, engaged in illegal trade between two ports of a belligerent, had endeavored to screen the illegality of the voyage by the interposition of a neutral port, with or without the landing of goods and the employment of a new conveyance. In these cases Lord Stowell held that the continuity of the voyage was not broken, unless the cargo was really imported into the common stock of the neutral country. That the principle had not been applied to blockades was due to the fact that circumstances had never called for it, as the practice of breaking a blockade had never before been carried out on such a scale, with such perfect appliances, and by the use of such ingenious devices. The really difficult question before the court was as to the sufficiency of the evidence in each case. It was to be expected that every artifice in the nature of simulated papers, pretended ownership, false destination, and fictitious transfers would be adopted to escape liability; and it was the business of the court to penetrate all these disguises, and to ascertain the real char-

acter of each transaction. It is probable that in no case was injustice done in brushing aside and disregarding the various ceremonies, more or less elaborate and artificial, that were performed over blockade-running cargoes at Nassau and Bermuda; and it must often have happened that the ingenuity of shippers was rewarded by a decree of restitution for the want of technical evidence, when there was no moral doubt as to the vessel's guilt.

As a last resort, the blockade-running merchants adopted an expedient so original and so bold that it may almost be said to have merited success. As cargoes from Liverpool to Nassau ran a risk of capture, the voyage was broken again, this time not by a neutral destination, but by one in the country of the very belligerent whom the trade was to injure. Goods were shipped to New York by the regular steamship lines, to be carried thence to Nassau, and so to find their way to the blockaded territory. It was supposed that the United States would not interfere with commerce between its own ports and those of a neutral. This expectation, however, was not well-founded. The Government of the United States, although federal in its organization, was not so impotent in regard to the regulation of trade as was that of Great Britain in enforcing the neutrality of its subjects; and if action could not be taken through the Courts, it could be taken through the custom-houses. As soon as it was discovered at New York that the trade with Nassau and Bermuda was assuming large proportions, instructions were issued to collectors of customs in the United States to refuse clearances to vessels which, whatever their ostensible destination, were believed to be intended for Southern ports, or whose cargoes were in imminent danger of falling into the hands of the enemy; and if there was merely ground for apprehension that cargoes were destined for

the enemy's use, the owners were required to give ample security.

The instructions were perfectly general in character, naming no particular port or country. The agents of the blockade-runners, however, styling themselves merchants of Nassau, adopted a tone of righteous indignation, and actually had the effrontery to complain of this "unjust discrimination" against what they ingenuously called the trade of the Bahamas. As if, indeed, the Bahamas had had any trade, or Nassau any merchants, before the days of blockade-running! They succeeded, however, in persuading Earl Russell to take up the diplomatic cudgels in their behalf; but from the long correspondence that followed, the English Government, being clearly in the wrong, derived little satisfaction, and a stop was put to the traffic.

The character of the blockade changed materially as the war went on. At first the prevailing idea seems to have been that its object was to put a stop to legitimate trade, and that this object was secured by the official declaration. The squadrons seem to have been employed rather to comply with the requirements of international law, and to make the prohibition binding upon neutrals, than as being themselves the agency by which the prohibition was to be enforced, and without which it was only so much waste paper. This idea had some foundation in view of the fact that from the beginning, though the blockading force was then inconsiderable, the regular course of trade at the Southern ports was actually interrupted, neutrals for a time respecting the proclamation, or being satisfied to receive their warning and to go elsewhere. In place of the regular commerce, however, a contraband trade grew up, little by little, which, beginning with any materials that came to hand, and carried on chiefly by people along the coast, gradually grew to con-

siderable proportions. Then, and then only, was the true character of the blockade recognized, and measures were taken, by increasing the force and by perfecting its organization, to make the watch so close as really to prevent egress and ingress. But by this time the capital embarked in the business was so large as to secure the construction of vessels built especially for the purpose, beautifully adapted to the work, and far more difficult to capture. Therefore, while the efforts of the blockaders were redoubled, the difficulties before them were vastly increased. The old traditional idea of a blockade, maintained by a few large vessels moving up and down before a port, at a distance, gave place to the entirely novel practice of anchoring a large number of small and handy steamers in an exposed position close to the bar at the entrance of the blockaded harbors; and the boldness with which, after the first six months, men kept their vessels close in with the shore and manfully rode out the gales at their anchors—a thing which seafaring men, as a rule, had regarded as impossible, and which would have appalled the stoutest captains of former times—showed as clearly as the actual engagements the real stuff of which the navy was made.

As to the legal efficiency of the blockade after the first six months, there can be no question; and by the end of the second year its stringency was such that only specially-adapted vessels could safely attempt to run it. If proof of its efficiency was needed, it could be found in the increased price of cotton and in the scarcity of manufactured goods at the South. In the last year it became as nearly perfect as such an operation can be made. Taking its latest development as a type, it is probable that no blockade has ever been maintained more effectually by any State; and it is certain that no State ever had such a blockade to maintain.

Apart from its enormous extent, it had four characteristics which mark it as wholly unprecedented: in the peculiar formation of the shore, which gave almost a double coast-line throughout, penetrated by numerous inlets, giving access to a complicated network of channels; in the vicinity of neutral ports friendly to the blockade-runners; in the cotton-monopoly of the South, which made the blockade a source of irritation to neutrals; and finally, but the most important consideration of all, in the introduction of blockade-running vessels propelled by steam.

The success of this undertaking, so unprecedented both in its magnitude and difficulty, can best be judged by the results. The number of prizes brought in during the war was 1,149, of which 210 were steamers. There were also 355 vessels burned, sunk, driven on shore, or otherwise destroyed, of which 85 were steamers; making a total of 1,504 vessels of all classes. The value of these vessels and their cargoes, according to a low estimate, was thirty-one millions of dollars. In the War of 1812, which has always, and justly, been regarded as a successful naval war, the number of captures was 1,719. But the War of 1812 was waged against a commercial nation, and the number of vessels open to capture was therefore far greater. Of the property afloat, destroyed or captured during the Civil War, the larger part suffered in consequence of the blockade. Moreover, in the earlier war, out of the whole number of captures, 1,428 were made by privateers, which were fitted out chiefly as a commercial adventure. In the Civil War the work was done wholly by the navy; and it was done in the face of obstacles of which naval warfare before that time had presented no example or conception.

As a military measure, the blockade was of vital importance in the operations of the war; and it has been com-

monly said that without it hostilities would have been protracted much longer, and would have been far more bitter and bloody than they were. Its peculiar importance lay in the isolation of the Southern States and in their dependence upon the outside world for the necessaries of life. The only neutral frontier was along the Rio Grande; and the country, for many miles on both sides of the boundary, offered few facilities for trade or transportation. All supplies must come from the seaboard; and the purely agricultural character of Southern industry made supplies from abroad a necessity. Had the position of the two opponents been reversed, and an efficient blockade maintained against the Northern ports, it would have told with far less severity than at the South.

Besides the exclusion of manufactured goods, and especially of munitions of war, which was one of the prime objects of the blockade, its second and equally important object was to prevent the exportation of cotton, with which at this time the Southern States supplied the world. The amount of floating capital at the South was never large; land and slaves were the favorite forms of investment; and the sale of cotton was therefore the main source of income. When exportation was cut off, the Government was deprived of its revenues for the war, and the people of the very means of existence. It was the common impression at the South that the rest of the world, and especially England, had too great an interest in the cotton supply to tolerate a prohibition on exportation; and it was believed, or at least hoped, that the blockade would prove a fatal measure for its originators, by the injury it would work abroad. The injury was not over-estimated; and it doubtless had its effect upon the sympathies of the interested foreign state. Lancashire, the great centre of the cotton

manufacture, was compelled to close its mills; and the distress that resulted among the operatives may be estimated by the fact that, two years after the war had begun, no less than ten millions of dollars had been disbursed by the Relief Committees. But the British Government, whatever may have been its disposition, had at no time a plausible pretext for intervention; and the blockade continued to be enforced with increased rigor.

As the war went on, the naval forces, securing the cooperation of small bodies of troops, gradually obtained a foothold at various points and converted the blockade into a military occupation. These points then became the headquarters of the different squadrons—ports for rendezvous, refitment, and supply, for the "repairs and coal" that were forever drawing away the blockaders from their stations at critical moments. By the spring of 1862 all the squadrons were well provided in this respect, though some of the centres of occupation were occasionally recovered by the enemy. Especially on the coast of Texas, blockade and occupation alternated at the different Passes throughout the war, partly in consequence of the want of troops to hold the occupied points. Curiously enough, too, these centres of occupation became in a small way centres of blockade-running—Nassaus and Bermudas on a diminutive scale. Norfolk, Beaufort in North Carolina, Hilton Head with its sutler's shops, Pensacola, and New Orleans each carried on a trade, prosperous as far as it went, with the surrounding coast. At New Orleans, the blockade of Lake Ponchartrain was kept up long after the city was taken, not to prevent access to the port, but to capture the illicit traders that cleared from it; and Farragut was obliged to remonstrate sharply with the Collector for the readiness with which papers covering the trade were issued by the custom-house.

CHAPTER III.

THE CHESAPEAKE.

THE blockade began, both in name and in fact, at Hampton Roads, and here it continued to be maintained with the highest efficiency. The only attempt to raise it was that made by the Merrimac in March, 1862; and after this attempt was defeated, the blockading squadron remained in undisturbed possession until the close of the war. The safe and commodious anchorage in the Roads, its nearness to Washington, and the protection afforded by Fortress Monroe made it a convenient naval rendezvous; and for this reason it seems to have been adopted as the station for the flag-ship of the North Atlantic squadron. Its importance as a blockading station, especially in the early part of the war, was due to the fact that it commanded the entrance to the James and Elizabeth Rivers, upon one of which lay the Confederate capital, and upon the other their principal naval dépôt. The events of the first year, however, which took place in and about the Roads, had little to do with the outside blockade, and properly form an episode by themselves, which has its beginning and end in the loss and the recovery of Norfolk.

The loss of the Norfolk Yard at the outbreak of the war has been already alluded to. This Yard had always been extensively used as a dépôt for arms and munitions of all kinds; and in the spring of 1861 it contained a very large

supply. The ordinary work was going on actively; and there was nothing to be seen on the spot to indicate that a crisis was at hand. The vessels at the Yard comprised an old ship-of-the-line, the Pennsylvania, which was used as a receiving ship; five large sailing-vessels, laid up in ordinary; the sailing-sloops Germantown and Plymouth; and the brig Dolphin. The last three were ready for sea. The steam-frigate Merrimac, whose importance was greater than that of all the others combined, was undergoing repairs in her machinery.

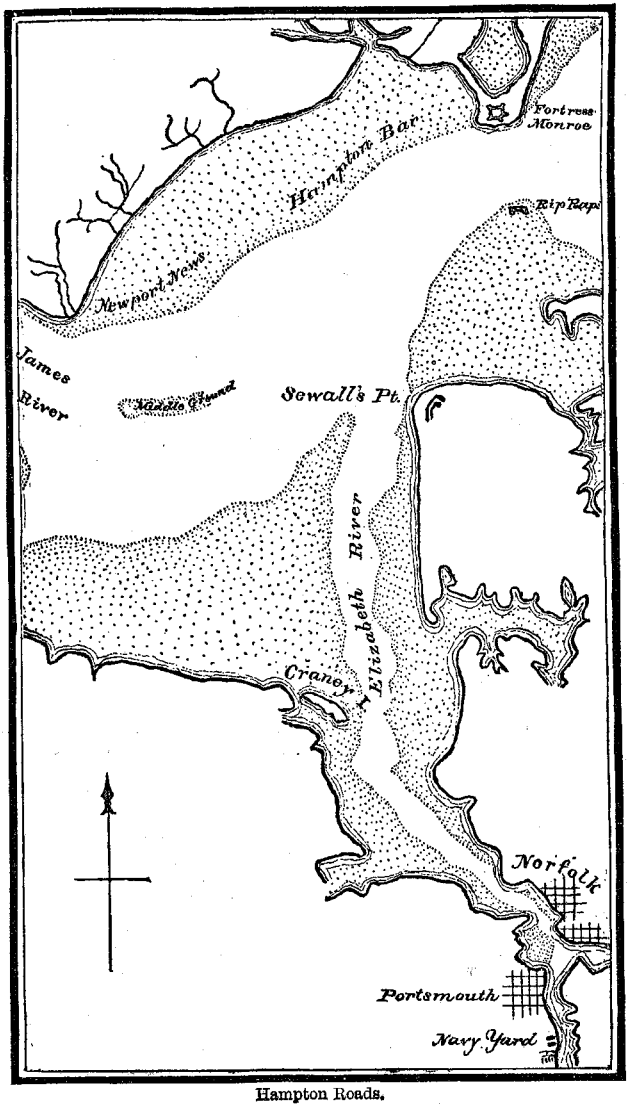
The Navy Yard was situated on the left bank of Elizabeth River, nearly opposite the town of Norfolk, and nine miles above Sewall's Point, where the narrow channel that forms a continuation of the river enters the Roads. There were only a few seamen and marines to hold it, the community outside was unfriendly, and the employees were only waiting for the action of the State to range themselves against the Government. The majority of the officers were Southern men, and were in sympathy with the Southern cause. Late in March, the Cumberland, the flagship of the Home Squadron, came in from the Gulf and was sent to Norfolk. She had a crew of 300 men, and a heavy battery, and the towns on both sides of the river were at her mercy, if she chose to attack them. As a sailing sloop-of-war, she could not be of material assistance in bringing off the threatened vessels; but she held the key to the position.

The State convention of Virginia had been in session since the middle of February, but nothing had yet been done which indicated its final action. The secret session, at which the ultimate question was to be decided, began on the 16th of April. Up to the critical moment the idea had prevailed in Washington that any action tending to show a want of confidence in public sentiment in Virginia would crystallize the opposition to the Union, and drive the State into secession.

This idea had found expression in the instructions issued to the Commandant of the Yard, Commodore McCauley, who was repeatedly warned to take no steps that would give rise to suspicion of hostile intention. On the 10th of April, as affairs grew more threatening, the Commandant was ordered to put the shipping and public property in a condition to be moved out of danger; but at the same time he was cautioned not to give needless alarm. Two days later, orders were given for the Merrimac to be prepared with the utmost despatch to proceed to Philadelphia; and as it was stated that the necessary repairs to the engine would take four weeks, the Engineer-in-Chief of the Navy was sent down in person to forward matters. He was the bearer of a letter from the Secretary of the Navy to Commodore McCauley, which contained these words:

"The Department desires to have the Merrimac removed from the Norfolk to the Philadelphia Navy Yard with the utmost despatch. The Engineer-in-Chief, Mr. B. F. Isherwood, has been ordered to report to you for the purpose of expediting the duty, and you will have his suggestions for that end carried promptly into effect."

On the afternoon of Wednesday, the 17th, it was reported by Isherwood, the Engineer-in-Chief, that the Merrimac was ready for steam; and fires were started the next morning at daybreak. Everything was in readiness to proceed to sea, and officers and men were detailed for the vessels that were to go out. But the Commodore, still influenced by the desire to allay suspicion, and by the assertions of some of his officers that if the Merrimac were removed Virginia would certainly go out of the Union, could not bring himself to take decided action, notwithstanding the explicit instructions of the Department; and at two in the afternoon, he ordered the fires to be hauled. Meantime the enemy were taking



Hampton Roads.

advantage of every hour of delay. Troops were thrown into Norfolk in considerable numbers, and batteries were erected opposite the Yard. Light-ships had already been sunk in the narrow channel off Sewall's Point, and other obstructions were put in position on the subsequent night. McCauley sent a message to the Commanding General, Taliaferro, to the effect that if he continued to throw up works in a threatening position, the Commodore would regard it as an act of war, and fire upon them. In reply, General Taliaferro disclaimed any knowledge of the existence of the batteries; and McCauley was obliged to rest satisfied with this answer. Lieutenant Selfridge of the Cumberland volunteered to take the Dolphin down to Craney Island, and prevent any further obstructing of the river; but the Commodore, though at first consenting, finally refused to give him permission.

On Friday, the 19th, Commodore McCauley resolved to destroy the principal vessels. It is hard to say why he arrived at this conclusion, the Merrimac's engine having been reported ready and her fires lighted the day before. The time for heeding the sensitiveness of the population was now past; and, in this respect, it made little difference whether the other ships were sunk and the Cumberland went out alone, or whether they all left the place together. Nothing, however, was done during the day. On Friday night the guns in the parks were spiked—an injury which could be repaired in a few hours. At the same time, a quantity of ordnance stores was put on board the Cumberland. On the next day, the Southern officers on duty at the Yard resigned or deserted; the destruction or removal of the property was continued; and finally, the four ships were scuttled.

Already on the 18th, Commodore Hiram Paulding had been directed by the Department to proceed to Norfolk with the Pawnee, then lying at Washington, and take command of the

vessels, using force, if necessary, to prevent them from falling into the hands of the enemy. He was also ordered to destroy what he could not bring off before abandoning the Yard. At the same time, officers were sent to New York and Philadelphia to charter steamers, and to proceed with all despatch to Hampton Roads.

The Pawnee left Washington on Friday, and arrived at Fortress Monroe on the afternoon of Saturday. Here she took on board Captain Wright of the Engineers, and a regiment of Massachusetts volunteers. At this very moment, the work of disabling the vessels at the Navy Yard had begun. Two hours later, at eight o'clock in the evening, the Pawnee came in sight of Norfolk. The Cumberland was lying off the Yard, and went to quarters as the strange vessel approached. A fresh wind, blowing down the stream, prevented her from making out the Pawnee's answer to her hail, but the latter could hear the voice of the officer commanding the Cumberland's pivot gun, asking if he should fire. On board the Pennsylvania, which was lying below the Cumberland, Lieutenant Allen, seeing the imminence of the danger, with extraordinary presence of mind, called out to the commanding officer, asking him to cheer the approaching vessel. In an instant it was done; and the Pawnee was saved from what seemed an inevitable catastrophe.

It had been Paulding's intention to make a disposition of the vessels at various points between Norfolk and the mouth of the river in such a way as to command the channel. He would have been able to hold this position until the arrival of the newly-chartered steamers, when he could have brought off all the ships in safety. But the action which had been taken only two hours before at the Yard forestalled his plan; and though the Pawnee and Cumberland were a really formidable force, which, with the infantry regiment,

could have held the enemy in check until either reinforcements arrived or the property was removed—or, at least, until the work of destruction was completed—Paulding decided to burn the principal buildings, and abandon the Yard. For this purpose parties were hurriedly organized; one under Commander Alden to prepare the storehouses and workshops; another under Commander Sands for the ship-houses; a third to distribute combustibles among the sinking vessels; and a fourth, under Commander John Rodgers, assisted by Captain Wright, to blow up the dry-dock. An attempt was made to disable the guns that had been spiked, by knocking off the trunnions; but this was unsuccessful.

Shortly before two in the morning, the reports came from the various parties that all was ready. A little delay was occasioned at this point by the Commandant of the Yard. The veteran Commodore, with obstinate gallantry, refused to leave his post. Finally Alden was sent to bring him off. All the officers and men were withdrawn except eight, who were divided among the three firing parties. The Pawnee left the wharf, took the Cumberland in tow, and started down the river. Two boats were left behind, one for the firing parties on shore, the other for that which was to destroy the ships. At 4.20 a rocket was fired as a signal, and in a few minutes ship-houses, shops, and vessels were in a blaze.

The people on shore were brought safely off, except Rodgers and his party, who had far to go, and who were cut off from the wharf by the burning buildings. They passed out into the town, and obtained a boat; but the river was now lighted by the conflagration, and they had not gone far before they were obliged to surrender.

Though a few shops and houses were burnt, the work was done so hurriedly that the best part of the valuable material

at the Yard fell into the hands of the enemy. The dry-dock was not destroyed, as the fuse failed to ignite the powder; but whether from accident or from the work of other hands has never been discovered. The magazine, with great numbers of loaded shells, and one hundred and fifty tons of powder, had already been seized. Two thousand guns of all descriptions were left practically uninjured, three hundred of them being new Dahlgren guns of various calibres. Besides the guns, machinery, steel plates, castings, construction materials, and ordnance and equipment stores in vast quantities came into the possession of the Confederates; and severe as the loss of so much material would have been by itself to the Federal Government, it was rendered tenfold greater by supplying the necessities of the enemy.

The latter immediately set about utilizing their new acquisition. The captured Dahlgren guns were distributed throughout the country, and many were the occasions when the Government had cause to regret the irreparable disaster which had supplied the enemy so cheaply with a priceless armament of first-class modern ordnance. The Germantown and Plymouth were raised and restored, but the Confederates had neither time nor money to waste in equipping them for sea. The Merrimac was also raised, and though her upper works were destroyed, her hull and boilers, and the heavy and costly parts of her engine were but little injured. A board of officers, of which Lieutenant John M. Brooke was the principal member, prepared a design for converting her into an ironclad, by constructing upon her hull an armored casemate with inclined sides and submerged eaves. The plates were made under Brooke's superintendence at the Tredegar foundry, and it was hoped that the vessel would be invulnerable, even against the powerful broadsides of the United States fleet.

While the Confederates were thus preparing their ironclad, the Federal Government was at work upon the construction of a suitable antagonist. The war, for the moment, was being carried on, not at Hampton Roads, but at Norfolk and Brooklyn, and the victory was to depend not only upon the bravery of the officers, but upon the speed of the mechanics. It was a race of constructors; and in spite of the difficulties at the South, and the comparative facilities at the command of the Department at Washington, the Confederates were the winners. The secret of their success lay in promptness of preparation. On the 10th of June Brooke was ordered at Richmond to prepare the designs and specifications of an ironclad vessel, and on the 23d an engineer and a constructor were associated with him in the work. The board reported without delay, and work on the Merrimac was begun at once. On the other hand, nothing was done at Washington until the meeting of Congress. The extra session began July 5, and the appropriation was made August 3. The ironclad board was convened on the 8th of the same month. Its report was made September 16; and the contract for the Monitor was not completed until October 4. To this delay may be directly traced the action of the 8th of March, and the destruction of the Congress and the Cumberland.

The hull of the Monitor was built at the Continental Iron Works, at Greenpoint, Brooklyn, from Ericsson's plans and under his supervision. The vessel was begun in the latter part of October. The mechanics worked in three gangs, each for the space of eight hours, so that the work, when finally undertaken, went on without interruption night and day. The construction of the vessel was pushed forward so rapidly that on the 30th of January, 1862, not quite four months after the signing of the contract, the Monitor was launched.

The new structure consisted of a small iron hull, upon

which rested a large raft, surmounted by a revolving turret. The hull was one hundred and twenty-four feet long, and thirty-four feet wide at the upper edge. The raft projected at the bow and stern, its total length being fifty feet greater than that of the hull. Its overhang amidships was three feet eight inches wide, gradually increasing towards the bow and stern. The raft was five feet deep, and was protected by a side armor of five one-inch iron plates backed by oak. The deck was covered with two half-inch plates, over timber laid on heavy wooden beams. The turret was armored with eight one-inch plates, and its roof was protected by railroad iron. In it were two XI-inch Dahlgren guns. The pilot-house was placed on deck, in front of the turret, and was built of square iron bars or logs, notched together, with a bolt through the corners. On the top of the pilot-house was an iron plate, an inch and a half thick, set in a ledge without fastenings.

The Department selected Lieutenant John L. Worden for the command of the Monitor. He was ordered on January 13, while the vessel was still on the stocks. Lieutenant S. Dana Greene volunteered to go in her, and at Worden's request was ordered as executive officer. Two acting-masters, Stodder and Webber, also joined her. There were four engineer officers, of whom the senior was First Assistant-Engineer Isaac Newton. Chief-Engineer A. C. Stimers made the passage in the vessel, as the Government inspector, to report upon her machinery. The crew were volunteers, selected by Worden from the receiving-ship North Carolina and the frigate Sabine; and "a better one," to quote Worden's statement, "no naval commander ever had the honor to command."

The first cruise of the Monitor was a novel experiment and, as the event showed, full of hazard. Had she been intended merely as a floating battery to protect the harbor in which

she was built, the service would have called for no extraordinary sacrifice. But she was to go to sea; and many experienced officers, both in the navy and in the merchant service, doubted seriously her ability to keep afloat in any but the calmest weather, and regarded the enterprise as desperate—an opinion which the Monitor's subsequent career fully justified. If she sank, she would sink quickly; and there was small chance that any of the devoted men penned up in her submerged hull would escape. All this was well understood by her officers and men; and with a courage and self-devotion of no common order, they voluntarily accepted the conditions, and prepared to meet the danger.

The general plan of the Monitor, as originally invented by Ericsson, was little less than an inspiration of genius. But the first vessel of the type was by no means perfect in its details, and many improvements were made in those subsequently built. The defects, for grave defects they were, had a marked influence upon both her sea-going and her fighting qualities, and put her at a great disadvantage as compared with her successors. Her armored deck or raft was attached to the hull by a single set of rivets, which were unequal to the strain caused by a heavy sea striking the projecting bow from underneath. Her smoke-pipes and blower-pipes projected only a few feet above the deck, and could hardly fail to ship large quantities of water in a heavy sea. In action, her weakest point was the pilot-house. Its rude structure, that of an iron log hut, was ill-calculated to resist the blow of a heavy projectile. Its roof was detached, merely resting by its weight on the walls. Its position on the deck forward of the turret was disadvantageous, as it precluded end-on fire when the vessel was approaching an enemy, and reduced the circular sweep of the guns by nearly eight points. But the worst feature of the arrangement was the separation of the

captain who was manœuvring the ship from the lieutenant who was working the turret and firing the guns. Each was completely cut off from the other, except by a speaking-tube, which opened in the floor of the movable turret, and through which the sound would only pass when the turret was in its normal position. The experience of the first Monitor led to the simple device of putting the pilot-house over the turret, a change that was suggested by Newton, the engineer of the vessel. Finally the machinery for turning the turret, a wheel and rod connected by gearing with the turret-engine, was so defective that the turret was equally slow in starting, and, once started, in coming to a stop; and there was hardly time to point the guns before the muzzles had swept by their target. But considering the time in which she was built, the wonder is not that she was imperfect, but that she was in anywise ready; and it was well for the country that she did not wait another day to complete her preparations.

The first trial of the Monitor was made February 19, on the day that she was delivered at the Navy Yard. She was put in commission on the 25th, when a second trial took place; but her steering gear was not in working order, and she did not go out of the East River. At a third trial, a week later, she steamed down to Sandy Hook, and tried her guns. The mechanics were still at work upon her; indeed, the vessel was hardly completed when she left New York, though the workmen were busy during the night before she sailed. Finally, at 11 o'clock on the morning of Thursday, March 6, she started down the harbor; and in the afternoon she was fairly at sea on her way to the Chesapeake.

The passage down was difficult and dangerous. The Monitor was in tow of the Seth Low, a small tug, and was accompanied by two unseaworthy gunboats, the Currituck and Sachem. The ten days between the commission of the Mon-

itor and her departure had given the crew little time for practice in the management of the novel craft, with its complicated mechanism. The wind was moderate during Thursday night and Friday morning; but about noon, off the Delaware, it freshened to a strong breeze from the northwest, and caused a rough sea, which broke over the vessel's deck, forcing the water in floods through the hawse-pipes and under the turret. In the afternoon the sea increased, and breaking over the smoke-pipe and blower-pipe, caused the blower-bands to slip and break. This stopped the draft in the furnace, and filled the engine-room and fire-room with gas. Newton, with the other engineers and the firemen, strove in vain against the gas, trying to repair the injury, and they were only rescued as they lay unconscious on the floor of the engine-room. As the engines were now useless either for propulsion or pumping, the water gained rapidly. The hand-pump was used and the men set to bailing, but with little effect, as the water could only be carried off over the wall of the turret. At last the tug was headed for the shore. After five hours' steaming, the vessels came into smoother water; the engine-room was cleared of gas, the blower-bands were repaired, and the engine once more moved slowly.

So matters continued until shortly after midnight, when the Monitor, in crossing a shoal, suddenly ran into a heavy head-sea. The water came up through the anchor-well, forced the air through the hawse-pipe, and flowed in a stream over the ward-room table to the berth-deck. Efforts were made to close the hawse-pipe, and the rush of water was partly checked. But the sea now broke violently over the deck, and again entered the blower-pipes. Another disaster seemed imminent. The head wind prevented Worden from hailing the tug, and in the hurry of preparation no arrangement had been made for signalling at night.

Every sea that dashed the spray over the blowers was anxiously watched; and every few minutes word came from the engine-room that the engine could not go much longer unless the water was kept out. About this time the wheel-ropes jumped off the steering wheel, owing to the pitching of the ship, and became jammed. The vessel was now unmanageable and began to sheer about wildly; but the tow-rope held, and half an hour's work repaired the injury. After five critical hours, daylight broke, and the tug was ordered to go nearer the shore. By eight o'clock the danger was over. At four in the afternoon of the 8th of March the Monitor passed Cape Henry. Immediately afterward the hawser parted, but the vessel was now in smooth water.

In the absence of Flag-Officer Goldsborough, the Commander-in-Chief of the North Atlantic blockading squadron, who was engaged at this time in the expedition against Roanoke Island, the senior officer present in Hampton Roads was Captain John Marston of the Roanoke. The force consisted of the Roanoke and the Minnesota, lying near Fortress Monroe, and two sailing-vessels, the Congress and the Cumberland, at anchor off Newport News. All were admirable vessels of their class. The Congress was a fifty-gun frigate, and though rebuilt, or rather built anew, in 1841, represented the type of 1812. The Cumberland was a sloop-of-war of twenty-four guns. The Roanoke and the Minnesota were screw-frigates of forty guns. These vessels have been already referred to. They were the pride of the navy, and before the war had been regarded as the highest and most perfect type of the men-of-war of the period. Yet it required but the experience of a single afternoon in Hampton Roads, in the month of March, 1862, to show that all of them were antiquated, displaced, superseded, and that a new era had opened in naval warfare.

The Merrimac, which had been a sister ship of the Minnesota and Roanoke, was now completed and in commission at Norfolk, under her new name of the Virginia. She was to all intents a new vessel. Her masts had been removed, and her casemate, which sloped at an angle of forty-five degrees, and resembled the roof of a house, had been armored with two layers of wrought-iron plates, each two-and-a-half inches thick, with a seven-inch wooden backing. She was armed with six IX-inch Dahlgren guns and two 32-pounder Brooke rifles in broadside, and VII-inch Brooke rifles on pivots in the bow and stern; and a cast-iron ram projected eighteen inches from her bow.

The Congress and Cumberland had been lying off Newport News for several months. Their ostensible duty was to blockade the James River; but it is not very clear how a sailing-vessel at anchor could be of any use for this purpose. Most of the old sailing-vessels of the navy had by this time been relegated to their proper place as school-ships, store-ships, and receiving-ships, or had been sent to foreign stations where their only duty was to display the flag. Nothing shows more clearly the persistence of old traditions than the presence of these helpless vessels in so dangerous a neighborhood. Although the ships themselves were of no value for modern warfare, their armament could ill be spared; and they carried between them over eight hundred officers and men, whose lives were exposed to a fruitless sacrifice.[1]

Commander William Smith, who had commanded the Congress for six months, had been detached early in March. He turned over the command to his executive, Lieutenant Joseph B. Smith, but remained on board while waiting for his steamer, and during the engagement of the 8th he

[1] Captain Fox, in his testimony before the Select Committee, says that the sailing-vessels were left in Hampton Roads at the request of the military authorities.

served as a volunteer. Radford, the commander of the Cumberland, was attending a court of inquiry on board the Roanoke when the Merrimac came out, and the command of the sloop devolved on Lieutenant Morris. When the Merrimac was reported, Radford landed, and rode to Newport News; but he only arrived in time to see the end of the action. Both ships were therefore fought by their first lieutenants; but they could not have been defended with more resolution and gallantry, and no skill would have availed to alter the final result.

So many rumors about the Merrimac had been current in the fleet, without any visible results, that the prevalent feeling in regard to her was one of skepticism. It was known that extensive alterations had been made in the vessel, but it was not supposed that her powers of resistance would render her shot-proof under the fire of such broadsides as the two vessels could bring against her. Moreover, her sister ships, the Roanoke and Minnesota, lay below near the fort. A careful lookout was kept up, however; the ships were anchored with springs on their cables, and half the watch slept at quarters.

On the 6th of March, the frigate St. Lawrence came in, a vessel in all respects similar to the Congress. But so far from increasing the force to be opposed to the Merrimac, she only added another to the list of probable victims.

On Saturday, the 8th, a little before one o'clock in the afternoon, while the Monitor was still outside the Capes, the Merrimac finally came out from Norfolk. She was under the command of Franklin Buchanan, whose ability and energy had won him a high place in the esteem of his brother-officers in the navy before the war. She was accompanied by two gunboats, the Beaufort and Raleigh, of one gun each. Turning directly into the channel by which she could

reach Newport News, the Merrimac approached the two vessels at anchor. The latter had been cleared for action, the Cumberland when the enemy was sighted, and the Congress after he had entered the James River channel. They would have been no better off if they had got under way; the wind was light, and their tug, the Zouave, was not powerful enough to tow them off. Soon after two o'clock the Merrimac opened fire with grape from her bow gun. Passing along the starboard side of the Congress, whose shot rebounded from her iron side like pebbles, she steered directly for the Cumberland. The latter received her with a discharge of shot which entered the port, knocked off the muzzles of two guns, and killed or wounded nineteen men, but did not stop her progress. Approaching steadily, bows on, she raked the sloop with her pivot gun, and keeping her way, struck her full under the starboard fore-channels, delivering her fire at the same time. The force of the blow drove the Merrimac's ram so far into the planking that it was wrenched off, as she withdrew; and a hole was opened in the side of the Cumberland, into which the water rushed in a full stream.

The bow of the Cumberland immediately began to settle, and her fate was decided. Nevertheless she continued to fight with the persistence and energy of desperation. The gun's crews kicked off their shoes, and stripped to the waist. Tanks of cartridges were hoisted on the gun-deck and opened, and round after round was fired at the ironclad. Never did a crew fight a ship with more spirit and hardihood than these brave fellows of the Cumberland while the vessel was going down. Nor was it a mere idle display of gallantry, this holding on till the last; for in these days, in naval battles, the game is not over until the last gun is fired, and a chance shot may recover the day for a seemingly beaten combatant.

For three-quarters of an hour, from the time when the Cumberland was struck until she sank, the enemy's fire was concentrated upon her with terrible effect. A shell passing through the hatch burst in the sick-bay, killing four of the wounded. On the berth-deck, the wounded men were lifted upon racks and mess-chests, to keep them from drowning; and as the water rose, those who fell on the upper decks were carried amidships and left there. The Merrimac hailed and demanded a surrender; but Morris returned a refusal. Already, the boats had been lowered and made fast in a line on the shore side. At half-past three, the forward magazine was drowned, and five minutes later the order was given to the men to leave quarters and save themselves. The water had now risen to the gun-deck; a last shot was fired as the ship heeled over to port, and officers and crew jumped for their lives into the water. A moment more, and the Cumberland, with her ensign still flying at the peak, sank to her tops.

While the Merrimac was occupied with the Cumberland, three steamers, the Patrick Henry, Jamestown, and Teazer, which had been lying at the mouth of the James River, ran past the batteries at Newport News, and joining the other gunboats, opened a brisk fire upon the Congress, which told severely upon her crew. Seeing the fate of the Cumberland, Smith sought to escape the enemy's ram by running ashore. He set the jib and topsails, and with the assistance of the tug, ran up on the flats, hoping in this way to delay the battle until the other frigates should arrive; but his movement was only escaping destruction in one form to meet it in another. No sooner was the Congress hard and fast than the Merrimac, taking a position astern of her, at a distance of one hundred and fifty yards, raked her fore and aft with shells; and the smaller steamers joined in the attack with

spirit and effect. The Congress could only reply with her two stern guns, and these were soon disabled.

The unequal contest lasted for an hour. The old frigate could do nothing. Her decks were covered with the dead and dying; her commander was killed, and fire had broken out in different parts of the ship. The affair had ceased to be a fight; it was simply a wholesale slaughter. As the Minnesota had run aground, there was no prospect of relief; and Lieutenant Pendergrast, upon whom the command had fallen, to prevent the useless carnage, hoisted a white flag.

The Beaufort and Raleigh were sent alongside the Congress to receive possession and to remove the prisoners; but a sharp fire of artillery and small arms from the shore drove them off. The Teazer was then ordered to set fire to the Congress, but she also was beaten back. The Merrimac thereupon renewed her fire, using incendiary shot, and the people of the Congress, who had remained passive while the contest was going on over and around them, manned their boats and escaped to the shore. The ship, left to herself, continued to burn slowly, and at one o'clock the next morning she blew up.

While these battles were in progress, the two screw-frigates, which formed the only effective force on the ground, made an effort to get into action, but not with any great success. The Minnesota, under Captain Van Brunt, was the first to move, getting under way soon after the enemy was sighted, at a signal from the Roanoke. As she passed Sewall's Point, the batteries opened fire on her, but did not stop her progress. After steaming five miles she grounded. She was then a mile and a half from the scene of action. When the abandonment of the Congress left the Merrimac free to engage a new antagonist, she turned her attention to the stranded frigate. Fortunately for the latter, the Merrimac drew too

much water to approach within less than a mile of her position; and her fire at this distance was ineffective. The Patrick Henry and Jamestown, taking their position on the bow and stern of the Minnesota, did her more injury with their rifled guns than did their powerful consort. The Minnesota's fire had no effect upon the Merrimac, but she succeeded in beating back the gunboats; and during two or three hours of conflict, neither side gained or lost.

The Roanoke, which was disabled by a broken shaft,[1] got under way soon after the Minnesota, and with the assistance of a couple of tugs, moved slowly in the direction of Newport News. She went far enough to see the Cumberland sink and the Congress surrender. Soon after the second event, she grounded; but the tugs managed to tow her head around and to get her afloat. Sending the tugs to assist the Minnesota, the Roanoke now withdrew and dropped down to her anchorage.

As the Roanoke was on her way back, the St. Lawrence passed her, making her way laboriously to the scene of action in tow of a gunboat. Captain Purviance, with a gallantry that deserved a better instrument, was endeavoring to bring his fine old fifty-gun frigate to battle with the ironclad. Fortunately for him and for his ship, he also went aground,

[1] Captain Fox, in his testimony before the Select Committee on March 19, 1862, says: "The shaft of the Roanoke was broken about the 5th of November, and it was believed that it could be repaired in about two months. That was the report made to us. But upon inquiry, it was found that every forge in the country capable of doing the work was employed. There being a large number of contracts out for steamers, every one of which must have a shaft, every available forge in the country was running to the utmost of its capacity. Finally, we found one establishment that agreed to forge the shaft, but refused to turn and finish it, which, of itself, is as important and difficult a matter as the forging. The Government had no adequate means to turn such an enormous piece of forging. They undertook it, however, with such means as they had at the New York Navy Yard, and it is now about finished, although it broke every piece of machinery they had which was put upon it, and special machinery had to be made for it."

while still at some distance from the enemy, against whom he discharged a series of futile broadsides. Night was now approaching; and the St. Lawrence slowly returned to her place in the roads below.

At seven o'clock the Merrimac ceased firing, and withdrew to Sewall's Point. She had done a good day's work. She had sunk one of her opponents, and burnt another. Only daylight was needed to capture or exterminate the rest. She saw her prey within her grasp; and by all human calculation the whole force must fall into her hands on the next day. The conflict had left her without any material injury; and she returned to her anchorage fully satisfied with the work of the day, and the prospects for the morrow.

But an event had already occurred which put a new aspect upon affairs in Hampton Roads. At four in the afternoon the Monitor had passed Cape Henry. Her officers had heard the heavy firing in the direction of Fortress Monroe, and the ship was stripped of her sea-rig and prepared for action. A pilot-boat, spoken on the way up, gave word of the disastrous engagement that had just ended; and presently the light of the burning Congress confirmed the news. At nine o'clock the Monitor had anchored near the Roanoke, and Worden went on board to report.

In order to carry out the project of opening the Potomac River, explicit orders had been given to Captain Marston to send the Monitor directly to Washington. Similar orders had been sent to Worden, but they only reached New York two hours after he had sailed. The state of affairs was such, however, that Marston and Worden were more than justified in disregarding the orders. No sane man would have done otherwise. Worden accordingly proceeded to the assistance of the Minnesota, which was still aground off Newport News. Acting-Master Samuel Howard volunteered to act as pilot. Be-

fore midnight the Monitor had joined the Minnesota; but the frigate failed to get afloat at high water, and the Monitor remained by her during the rest of the night.

At daylight on the morning of Sunday, March 9, the Merrimac was discovered with her attendant gunboats under the batteries at Sewall's Point. The Minnesota lay still in the same position, apparently helpless. The diminutive iron battery beside her was hardly noticed; and at half-past seven the Merrimac was under way, confident of repeating, on a larger scale, the victory of the day before. Buchanan had been disabled by a wound, and she was now commanded by Lieutenant Catesby Jones. She steamed down leisurely toward the Rip Raps, turned into the Minnesota's channel, and opened fire while still a mile away. She succeeded in putting a shot under the Minnesota's counter, near the water line, but did no further injury. The Monitor's anchor was up, her men at quarters, her guns loaded, and everything ready for action. She immediately got under way, to engage as far as possible from the Minnesota, and, to Van Brunt's surprise and relief, headed directly for the Merrimac's starboard bow, covering the frigate. Worden reserved his fire until he was close upon the enemy; then, altering his course, he gave orders to commence firing, and, stopping the engine, passed slowly by. The Merrimac returned the fire, but with little effect; the turret was a small target, and the projectiles passed over the low deck. Shell, grape, canister, and musket balls, flew about in every direction, but did no injury. Acting-Master Stodder carelessly leaned for a moment against the turret, and a shot striking the outer wall, produced a concussion that disabled him. As the turret was struck the shot glanced off from its curved side; and though, from the imperfections of the machinery, it was regulated with difficulty, it continued to revolve as freely as ever.

After passing the Merrimac, Worden turned, and, crossing her stern, attempted to disable her screw, which he missed by a few feet. Returning, he passed up along her port side, firing deliberately. The vessels were so close that several times they nearly came in contact. Presently they separated, and the Merrimac attacked the Minnesota. In shifting her position, she grounded, but got off soon after. The frigate received her as she approached with a discharge from her full broadside and X-inch pivot; of which Van Brunt observed, somewhat extravagantly, that "it would have blown out of water any timber-built ship in the world." But the days of timber-built ships were numbered, and nothing proved it more clearly than Van Brunt's ineffectual broadside. The Merrimac replied with a shell from her rifled bow-gun, which entered the berth-deck amidships, tore four rooms into one, and set the ship on fire. The flames were soon extinguished. A second shell exploded the boiler of the tugboat Dragon. Van Brunt concentrated his broadside upon the ironclad, and fifty solid shot struck her side with no more effect than the pelting of hail-stones. By the time she had fired her third shell, the Monitor had interposed again; and the Merrimac, running down at full speed, attempted to repeat her successful attack on the Cumberland. Worden saw the movement, and suddenly putting his helm hard-a-port, he gave his vessel a broad sheer, receiving the blow of the ram on his starboard quarter, whence it glanced off without doing any injury.

During the engagement, Worden had taken his place in the pilot-house, from the lookout-holes of which he was able to see the course of the action and to direct the working of the ship and of the guns. Greene had charge of the turret and handled the battery. These two men fought the ship. Acting-Master Stodder was at first stationed at the wheel that

started the revolving-gear, and when he was disabled, Chief-Engineer Stimers volunteered to take his place, and did the best that could be done in the exhausting work of turning the refractory turret. The powder division on the berth-deck was in charge of Acting-Master Webber. The pay-master and captain's clerk, also stationed on the berth-deck, passed the orders from the pilot-house. The men had gone into the engagement worn out, having had no rest for forty-eight hours, and little to eat. But they were picked men, and during the short time that Worden had been with them he had won, in an extraordinary degree, their confidence and regard. Accordingly they did their work with unflinching courage and resolution.

The situation in the turret was a difficult one. Shut up in a revolving iron cask, on a moving platform, and cut off from the captain except through slow and imperfect communication by passing the word, when minutes and even seconds were important, Greene fought under heavy disadvantages. The direction of the bow and stern and of the starboard and port beam were marked on the stationary flooring, but the marks were soon obliterated, and after one or two revolutions it was impossible to guess at the direction of the ship or the position of the enemy. The only openings through which anything could be seen were the gunports; and these were closed except at the moment of firing, as an entering shot would have disabled the guns. Curiously enough, neither of the port-stoppers was struck, though the edges of the ports and the turret wall between them were jagged and dented by the Merrimac's shot. At last the difficulties became so great, the revolutions so confusing, and the mechanism governing the movements of the turret so little under control, that it was left stationary, and the ship was fought and the guns pointed by the helm.

After fighting for two hours, the Monitor hauled off to hoist shot into the turret. At half-past eleven, the engagement was renewed. The enemy now concentrated his fire on the pilot-house, which was the weakest part of the vessel. At a moment when Worden was looking through one of the openings, a shell struck the wall at the opening, and exploded. The explosion fractured one of the iron logs of the frame, and lifted half-way off the iron hatch that rested insecurely on the top. Worden's eyes were filled with powder and slivers of iron, and he was blinded and stunned. Blind as he was, he could see the stream of light from the roof, and unable to determine the extent of the injury, he had the presence of mind to give orders to put the helm to starboard and sheer off. With the captain disabled and the quartermaster dazed by the shock, it was some minutes before word was passed to the turret of the disaster in the pilot-house. When Greene came out and passed forward he found the captain at the foot of the ladder, stunned and helpless, his face black and streaming with blood. Leaving him to the surgeon, Greene mounted to the pilot-house, while Stimers replaced him in the turret; and the vessel, which during these moments of unavoidable delay had been without a captain, and steaming no one knew whither, once more faced the enemy.

Seeing the Monitor draw off, Van Brunt, under the supposition that his protector was disabled and had left him, prepared for the worst, and made ready to destroy his ship. But, at this point, the Merrimac withdrew to Norfolk. As she moved off, Greene fired at her twice, or at most three times. He then returned to the Minnesota, and remained by her until she got afloat. To have followed the Merrimac under the batteries of Sewall's Point would have been running a greater risk than the circumstances would warrant,

considering the important interests at Hampton Roads, of which the Monitor afforded the sole protection.

It appears that the movements of the Monitor, at the time when there was no captain to direct her, led others besides Van Brunt to suppose that she had given up the fight; and the assertion has since been confidently made that she was beaten and driven off by the enemy. The statement is not borne out by the facts, as the Monitor only went off a short distance into shoal water, and presently renewed the combat. But assuming for the moment that the Merrimac was left in possession of the field, why did she not continue her operations? The retreat of the Monitor would have left matters in precisely the situation in which the Merrimac supposed them to be when she came out in the morning. It is to be presumed that her object then was to destroy the Minnesota. The Monitor prevented her for four hours from doing this; now, however, if the Monitor had retreated, why did she not attack the frigate?

Instead of continuing the fight, the Merrimac steamed to Norfolk. Jones gives as his reason for returning that he believed the Minnesota to be entirely disabled. What ground he had for forming such a belief does not appear. It has also been suggested that his pilots led him to suppose that delay would prevent him from crossing the bar. But what need had he to cross? The bar was a mile above Sewall's Point; he had anchored safely the night before under the battery, and after destroying the Minnesota—supposing that the Monitor had disappeared—he could do the same again, and go up to Norfolk at his leisure. If, however, his injuries were so great that he was compelled to lose no time in returning to Norfolk, it would seem that instead of his having defeated the Monitor, the Monitor had defeated him. In truth, the claim that the Merrimac was victorious is singu-

larly bold, in view of the fact that half an hour after the last shot was fired the Minnesota was lying aground in the very spot she had occupied in the morning, the Monitor was lying alongside her, neither of them being materially injured, and the supposed victor was steaming as fast as possible to Elizabeth River, in order to cross the bar before the ebb-tide.

Though both the ironclads were severely pounded in the engagement, neither had developed fully its offensive strength, and all things considered they got off rather easily. The only serious casualty on either side was the injury received by Worden. The Merrimac leaked somewhat from the collision of her unarmed stem with the Monitor's overhang, and the plates of her armor were broken where they were struck, but the wooden backing was not penetrated. The roof of the Monitor's pilot-house was partly displaced, and one of its beams was cracked; but otherwise the vessel was left intact. She was struck twenty-one times; eight times on the side-armor, twice on the pilot-house, seven times on the turret, and four times on deck. The deepest indentations on the sides were four inches, on the turret two inches, and on the deck one inch. Had the Monitor's guns been depressed to strike the enemy at the water line, where there was only one inch of armor, or had the latter concentrated his fire on the pilot-house of the Monitor, which was her weakest point, the result might have been more decisive. So with the ordnance. The service charge for the XI-inch guns was fifteen pounds, and the Bureau had enjoined upon Worden to limit himself to this, though it was found later that thirty pounds could be safely used; and on the other hand, owing to the great demand among the Confederates for projectiles at other points, and to the supposition that she would have only wooden vessels to encounter, the Merrimac was not sup-

plied with solid shot, which would have been far more effective against armor than shells.

No single event of the naval war produced more momentous results than the victory of the Monitor. The first day's battle in Hampton Roads had shown that the enemy possessed an engine of destruction whose offensive powers were a new revelation in maritime warfare. There was nothing at hand to offer even a show of effective resistance. On that memorable Saturday night dismay and consternation pervaded the fleet; the Merrimac had the frigates at her mercy, and the waters of Hampton Roads under her control. To all appearances the confidence of the country in its navy was on the point of being rudely shaken by the sudden destruction of a large force of its most powerful ships. The blockade was about to be raised at the point where it had seemed to be most firmly established. A roadstead whose occupation was of the highest strategic importance was about to pass into the hands of the enemy; and the proposed plan of an invasion of the Peninsula would be rendered impracticable if the army's base and communications were threatened by the Merrimac. It was even feared that the ironclad would issue from the Chesapeake and levy contributions on Northern ports; and though it was afterward known that she could not have gone to sea with safety, the fact that she was at large and that her egress was unchecked would have produced incalculable mischief both at home and abroad.

But the renown of the Monitor and of the gallant officer who commanded her rest no less on the courage and conduct that carried her to victory than on the importance of the action and the dramatic interest that surrounded it. The expedition had started from New York as a forlorn hope. To Worden it was doubly so, for he had left a sick-bed to as-

sume the command, and he had been told by his physician that he could hardly hope to come back alive. With a fortitude beyond all praise he held to his purpose, and carried the experimental craft through her first perilous sea-voyage. After two sleepless days and nights he entered Hampton Roads, only to find that the fleet was demoralized and that the whole weight of the crisis rested upon him. With hardly a moment for rest or for preparation, he took his untried vessel boldly into action with an enemy whose powers had just been proved in a successful engagement, and whose enormous size caused his little battery to sink into comparative insignificance. The close of the battle found the enemy in retreat, the blockade unbroken, the fleet saved, and the Roads reconquered. For these overwhelming results, and for the skill and heroism that achieved them in the face of extraordinary difficulties, the names of Worden and the Monitor will always be linked by the country in affectionate remembrance.[1]

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[1] Though not, strictly speaking, within the province of history, it may be worth while to quote here, as it has never before been made public, a touching letter which was sent to Worden by the crew of the Monitor at the time when he was lying in Washington disabled by his wound. As an expression of genuine feeling from rough and untrained men, and as showing the enthusiastic devotion which Worden had gained from his crew, its interest is both human and historical.

To Captain Worden.

"HAMPTON ROADS, April 24th, 1862.
"U. S. MONITOR.

"*To our Dear and Honored Captain.*

"DEAR SIR: These few lines is from your own crew of the Monitor, with their kindest Love to you their Honored Captain, hoping to God that they will have the pleasure of welcoming you back to us again soon, for we are all ready able and willing to meet Death or any thing else, only give us back our Captain again. Dear Captain, we have got your Pilot-house fixed and all ready for you when you get well again; and we all sincerely hope that soon we will have the pleasure of welcoming you back to it. . . . We are waiting very patiently to engage our Antagonist if we could only get a chance to do so. The last time she came out we all thought we would have the Pleasure of sinking her. But we all got disap-

After the battles of the 8th and 9th of March, Buchanan was relieved, in consequence of his wound, by Commodore Tattnall, who assumed command of the "naval defences of the waters of Virginia" on the 29th. His fleet was composed of the same vessels that had taken part in the two actions. The Merrimac came out of dry-dock on the 4th of April. She had been thoroughly repaired, and was in as good condition as before the engagement. Another layer of iron had been partially put on, a new ram had been adjusted, and she was furnished with solid shot. Her only weak points were in her ports, which were without covers; and in her engines, upon which full dependence could not be placed.

On the morning of April 11, the Merrimac steamed down the river, and came out into Hampton Roads. Goldsborough had now returned from the Sounds. The Minnesota, with the Monitor and the other vessels of the squadron, was lying at Fortress Monroe, or a little below; and the Merrimac took her position between Sewall's Point and Newport News, out of range of the guns of the fort.

Goldsborough, impressed with the importance of keeping the Merrimac in check, in order that she might not interfere with McClellan's operations, and in accordance with the wishes of the Department, was inclined to take no unnecessary risk, and to do nothing that would precipitate a conflict.

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pointed, for we did not fire one shot and the Norfolk papers says we are cowards in the Monitor—and all we want is a chance to show them where it lies with you for our Captain We can teach them who is cowards. But there is a great deal that we would like to write to you but we think you will soon be with us again yourself. But we all join in with our kindest love to you, hoping that God will restore you to us again and hoping that your sufferings is at an end now, and we are all so glad to hear that your eyesight will be spaired to you again. We would wish to write more to you if we have your kind Permission to do so but at present we all conclude by tendering to you our kindest Love and affection, to our Dear and Honored Captain.

"We remain untill Death your Affectionate Crew

"THE MONITOR BOYS."

He had no intention of taking the offensive, or of engaging, except under the most favorable circumstances. Additions to his force were expected to arrive shortly, and the situation was considered too critical to leave anything to chance. No action therefore took place, the vessels of the squadron having steam up, but remaining in their position near the fort.

A large number of transports, store-ships, and chartered vessels were lying at this time in or about the Roads. Goldsborough had cautioned them about the danger of lying near Hampton, and most of them had withdrawn below the fort. On the 11th, however, two brigs and a schooner, employed by the Quartermaster's Department, were still lying between Newport News and Hampton Bar. By Tattnall's direction the Jamestown and Raleigh steamed across, captured the vessels, and brought them over to Sewall's Point, in full sight of the fleet. Humiliating as the incident was, it was not of sufficient importance to change Goldsborough's plan, supposing that his plan was right. In the occurrences of this day, the Department commended Goldsborough's action, and it left to his discretion the conduct of subsequent operations.

Matters remained in this position for nearly a month, the squadron having been increased during this time by the addition of the new ironclad Galena, the Vanderbilt, and other vessels. In May it became apparent to the Confederates that the progress of military operations would compel the abandonment of Norfolk, and consultations were held by the military and naval authorities as to the disposition of the Merrimac. Early on the morning of May 8, the United States steamers Galena, Aroostook, and Port Royal were sent up the James River. The Merrimac was at Norfolk, and a demonstration was made by the rest of the squadron against the battery at Sewall's Point. Presently the Merrimac came down the river. It was not Goldsborough's intention to

make a serious attack on the fort, his object being merely to ascertain the strength of the works and the possibility of effecting a landing of the troops.

The Monitor had orders to fall back into fair channel way, and only engage the Merrimac seriously in such a position that the Minnesota and the other vessels could run her down, if an opportunity presented itself. According to Goldsborough, "the Merrimac came out, but was even more cautious than ever. The Monitor was kept well in advance, and so that the Merrimac could have engaged her without difficulty had she been so disposed; but she declined to do it, and soon returned and anchored under Sewall's Point." [1]

On the 10th, Tattnall learned that the fort at Sewall's Point had been abandoned, and that the United States troops, having landed at Ocean View, were rapidly advancing on Norfolk. By the evening Norfolk had surrendered, and he resolved to withdraw to the James River. The pilots informed him that they could take the ship up with a draft of eighteen feet. The Merrimac drew twenty-two feet, and preparations were made to lighten her. After working half the night, and stripping the ship so that she was unfit for action, the pilots, apparently not wishing to go out, declared that it would be impossible to take her up as far as Jamestown Flats, the point to which McClellan's army was supposed to have occupied the river. Tattnall thereupon concluded to destroy his

[1] It is impossible to reconcile the statements of the two opposing commanders, in regard to the events of this day. Tattnall says: "We passed the battery and stood directly for the enemy for the purpose of engaging him, and I thought an action certain, particularly as the Minnesota and Vanderbilt, which were anchored below Fortress Monroe, got under way and stood up to that point, apparently with the intention of joining their squadron in the roads. Before, however, we got within gunshot, the enemy ceased firing and retired with all speed under the protection of the guns of the Fortress, followed by the Virginia, until the shells from the Rip Raps passed over her. The Virginia was then placed at her moorings near Sewall's Point."

ship; and, setting her on fire, he landed his officers and men and escaped by way of Suffolk. At five o'clock on the morning of the 11th the Merrimac blew up.

Possession of Norfolk being now resumed, active operations came to an end, and the blockading station at Hampton Roads ceased to be the scene of conflict. The Monitor, after remaining all summer in the James River, was sent to Washington for repairs in September, and two months later returned to Hampton Roads.

The career of the Monitor was now nearly over. On the afternoon of the 29th of December, she set out for Beaufort, N. C., in tow of the Rhode Island. Admiral Lee had left the time of departure at the discretion of Bankhead, the commander of the Monitor; and the latter chose a clear pleasant day, when a light wind was blowing from the southwest, and everything promised fair weather. The passage to Beaufort was about as long as that from New York to Hampton Roads. The Monitor was accompanied by the Passaic, which was in tow of the State of Georgia. All went well until the morning of the second day, when the ships began to feel a swell from the southward. Gradually the wind freshened, and the sea broke over the pilot-house of the Monitor. The weather was threatening all day, with occasional squalls of wind and rain: but the bilge-pumps were kept at work, and the ironclads remained free from water.

As evening came on, and Hatteras was passed, matters began to grow worse. The wind increased and hauled to the southward, causing a heavy sea. As the Monitor rose to the swell, the projecting armor of her bow received the shock of the advancing wave full on its flat under-surface, coming down with a clap like thunder. The sea rose fast, submerging the pilot-house, and forcing its way into the turret and

blower-pipes. Trenchard, who commanded the Rhode Island, stopped his vessel, to see if the Monitor would not ride more easily or make less water; but the inert mass of iron only fell off and rolled heavily in the trough of the sea. Again the Rhode Island started, with the Monitor yawing and plunging behind her. The strain on her forward overhang had loosened the plates under her bow, and she began to leak; and though all the pumps were working, the water gained on them fast. At ten o'clock it became evident that no efforts would avail to save the ship; and Bankhead made the signal of distress, cut the hawser, and ranged up under the lee of the Rhode Island. Boats were lowered, and the dangerous work began of removing the crew of the sinking ironclad, over whose deck the seas were now breaking in quick succession. As the vessels touched, ropes were thrown over the Rhode Island's quarter; but the crew could not or would not seize them. The Rhode Island's cutter took off a boat-load of men successfully, but the launch was stove by the working of the Monitor; and Trenchard, finding that his own vessel was imperilled by the sharp bow and sides of her companion, was obliged to move away.

It was now nearly midnight; the ship was sinking fast, the rising water had put out the fires, engines and pumps had stopped, and again the Monitor fell off into the trough of the sea, where she rolled sluggishly. Seeing this, Bankhead let go the anchor, which brought her head to wind. The greater part of the crew had now been rescued; but a few had been washed overboard, and twenty or so still remained on board, waiting for the boats to return. During these trying moments Bankhead set a bailing party at work, not in the hope of reducing the water, but to give occupation to his men. Slowly and cautiously the last boat approached, keeping off with her oars from the side of the ironclad, and while Bank-

head held the painter she took off the remnant of the crew,—all but a few poor fellows who, dazed and terrified, could not be made to leave the turret. Last of all Bankhead jumped in, and the boat pulled toward the Rhode Island, and was got safely on board. A few moments more, and the Monitor slowly settled and disappeared.