THE CRUISER BROOKLYN IN A BATTLE.

How the Powerful Armorclad Is Manipulated--Dangers and Difficulties and Methods of Overcoming Them.

EVERY EMERGENCY GUARDED AGAINST.

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A battleship or cruiser is her beautiful white coat of paint, with numerous stripes, about the masts, yards and edges of the woodwork, the brass plates and coverings polished till they gleam like gold in the sunshine, only the muzzles of her guns protruding slightly, almost coyly, from portholes or mounted on barbette, is "a thing of beauty" either swinging at her anchor chains or dashing ahead through the waters, which her propeller churns into foam at the stern. But in days of battle, when the white color has been changed to a dull lead that soon looks grimy and gives her the appearance of a soiled dove, with guns staring at length from wide open ports, the holiday attire stripped from her, she makes a forbidding and ominous picture. In time of actual engagement she seems to be nothing more than a metal hull that has been converted into a death dealing instrument to work havoc and destruction upon those she regards as antagonists. The dove has been metamorphosed into a vulture. The genial crew are stern and relentless, apparently inspired with a murderous fury, as they fight this gigantic machine of war, to sweep away all that obstructs their passage or view and even with seeming wanton cruelty to pounce upon a helpless adversary.

The battle, however, is only the podiscourse. The drum beats "to quarters." The boatswain's whistle has its monotone. Everything outside on the upper deck is placed within the confines of the bulwarks or housed in special designed compartments. The captain mounts into the conning tower and with him the executive officer and the navigator and perhaps a seaman gunner. In this steel cage, about six feet in diameter, are the wheel, a signal board marking the tubes and an electric button or two by which the captain may shoot a torpedo if he desires. The commanding officer may remain in here during the battle and steer the ship with his own hands, or, like Dewey, he may stand out on the bridge in front, a target for all the enemy's ships.

Some of the men, sailors and marines, are posted to the fighting top with their rifles and rifles. Others—the great majority, in fact—are sheltered in the forward and after turrets with the big guns, in charge of a lieutenant or lieutenant commander. The hatches are screwed down, and about the

THE EMBARKATION OF UNITED STATES TROOPS FROM PORT TAMPA, FLA.

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feat alive. If they did not dash and fire and stab, the enemy would. It is all a "trick of the trade." How does the ship fight in battle? What are the circumstances and conditions surrounding her in the hour of conflict? Possibly the following theoretical analysis may give some idea of a fight on the sea.

There are two ships in our navy known distinctively as "armored cruisers," the New York and the Brooklyn. There are several "protected cruisers," all these vessels being named after cities, as are also the "armored cruisers," and there are still others known simply as "cruisers."

The armored cruiser Brooklyn, for instance, has a steel hull, an displacement tonnage of 9,700, in respect to twin screws and has a main battery of 15 guns and a secondary battery of the same number. Her displacement is 9,215 tons. She can make 20 knots, which is more than 23 land miles an hour. Her cost was $2,516,000. In the main battery are eight 8 inch and twelve 6 inch rifles. In the secondary battery are twelve 6 pounder rifles, four 1 pounder and four Gatlings.

The Brooklyn is a model man-of-war, and as she varies practically all the types of guns that are found on the ships of our navy her operation in a boat peculiarly instructive. That is, she has the guns, excepting the 13 inch, that are carried on first class battleships, second class battleships, armored and protected.

In case of immediate battle her main deck is in the vicinity of the engines, "ready for action." The deck below that, which was originally the gun deck, is now known as the berth deck and is always kept in perfect repair. Active preparations are made for the coming combat. Rows of gun powder and shrapnel and packages of gun cotton, with piles of shells and other projectiles, have been hoisted up the hatchways. There is no longer a line of men extending from the guns to the magazine ready to receive orders for further ammunition and execute them with great celerity, as there was in the days of the old frigates. Machinery of steam and hydraulic motive power furnishes the shells and even fires the guns. There are still, however, buckets of water by the swabbing of the guns and to sop away gross, powder and possibly blood. There are regularly placed in certain positions, while every man and officer has his distinct place and duty to perform.

Quietly that all await the signal for firing from the commanding officer who has through his commanding tubes ordered the engines to be moved down near the enemy to be intercepted, as into the engineers, the firemen, the coal heavers of the ship, under the eyes of officer fights the engineers, the firemen, the coal heavers and the men there are at hard at work, with little knowledge of what may be going on above them unless an exploding shell reaches the deck of their ship. Men distributes the machinery, or an 8 inch projectile are that of Dewey's flagbearer at Manila, rains death or overwhelming disaster from the deck.

Otherwise the fact of enemy is soon should be their, and then they come on into the light of day to rejoice with their comrades.

But of the battle who can tell? The ship is steaming down in an irregular course, perhaps in concentric circles, the express purpose of matching this method of attack. Every big gun is pointed, and the men putting the shells down hard either to the right or left, thundering a starboard broadside at the enemy. The men in the forward or after turret are continuously shoveling shell and shot into their antagonists, while from the fighting top a marksman, seeing or sensing enfilading fire is going on, for while the men in the turrets are watching for the points of the compass the navigator and perhaps a seaman gunner, in this steel cage, about six feet in diameter, are the wheel, a signal board marking the tubes and an electric button or two by which the captain may shoot a torpedo if he desires. The commanding officer may remain in here during the battle and steer the ship with his own hands, or, like Dewey, he may stand out on the bridge in front, a target for all the enemy's ships.

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is an opportunity to re-enforce and it would be taking desperate chances to attempt to bring up during the stress of battle, the crew there would be materially weakened in efficiency, and this misadventure might deny success or even fatally turn the tide of battle. A big gun in the turret or on the gun deck may burst from too constant firing, or from some cause it may become ineffective. Then it is nothing more than useless steel and a hindrance instead of an aid.

There are tragedies enacted from torrying guns that strike terror to men's hearts. It is like a harrowing brawl on the frontier, only accentuated in horror and noise and casualties resultant. Again, there is a limit to human endurance. The mental and physical tension is enormous. It little matters whether the sun is beating down with tropical heat or the cold winds of autumn are swirling about the waves. The commanding, the turning of somewhere, the rapid firing, lifting, piling, running to and fro, all result in such violent exercise that in the ordinary close quarters where the artificial temperature has risen to 100 degrees or more, the men working the guns, shirtless, barefooted, sometimes without shoes, are bathed in the most profuse perspiration.

As Admiral Dewey did in the bay of Manila, a halt must then be called, or the men will drop dead at their posts from exhaustion. A hot meal must then be provided, eating in "a smoke" for half an hour or so. Then if the Dewey's crew had wrought havoc with the enemy and it is only a question of another short commanding to end the struggle, he can go back with perhaps a few men to a private "metal" among his intimates at home. His attitude of mind may be somewhere a good deal like this. For instance, the author of the New York, who captured the Pedro, will receive $12 each.

If, on the contrary, there has not been any decisive success, if there is another unfired gun destroyed ship and but little damage has been inflicted upon the foe, the situation is a doubtful one, either, the man-of-war's men will give her trousers a pulsated bath and go back to his duty not as deserving perhaps, but yet as determined.

The manner who rolls the powder keg and trucks the top shell is only required to display ordinary intelligence. The man who swabs and primes and works the loading gear and other apparatus requires great presence of strength and confidence to orders, but the gunner's mate and the seaman gunner are of trained experience, proud of their vocation and feeling the dignity of emperors electricians.

If the admiral or commodore, or whoever may be in charge, is wounded seriously, his first captain immediately assumes command. In turn, if that officer becomes incapacitated, then the next ranking captain becomes the leader. If that officer, in succession, is obliged to quit his post or die among his men, then the next ranking captain or commander or lieutenant commander, as the case may be, takes charge of the fleet and directs its operations and maneuvers.

While the officers are all masters of seamanship and gunnery and are capable of devising new and original means of attack and defense, it would be unfair to ignore the humble gunner, upon whose work dependent is placed the anxious steel and a hindrance instead of an aid.

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So while the admiral, the commodore, the captain and all the officers gain the credit or assume the responsibility of either victory or defeat, the sailor who has risen above his primitive grade to that of a petty officer is deserving of much commendation for the part he plays in the too heavy turmoil when the hideous flame and whistling hails, the shriek of shells and the rattling din of Gatlings intermingled with the peppery report of rifles are putting the question of naval supremacy or demonstrating the weakness of iron walls and stone casemates against modern projectiles fired with immense power and traveling with almost incredible speed.

THOMAS H. JAMIESON.

Coal For War Vessels.

If the present war lasts for a year, it is expected by the navy department that at least 1,000,000 tons of coal will be used by our warships. Last year the consumption was only 128,251 tons, which cost $555,000. The case is very different now, when every vessel is in commission and hundreds of auxiliary craft are added.

The navy has to pay all sorts of prices for coal, varying from $1.40 to $4 per ton, the latter being the price at certain South American ports.

Before the war began it cost the government $2.90 per ton at Key West, whereas the price has since risen to $3.50.

Two steel piers are being built by the navy department for coaling purposes at the Dry Tortugas, each of them 314 feet long, and also two steel sheds, each capable of containing 10,000 tons of coal. These sheds will be equipped with the latest hoisting apparatus, which is able to handle the coal in enormous quantities. Giant shovels, each holding two tons, will dive into the holds of the colliers, scrab the coal, lift it out and drop it into the shells through hatches in the roofs.

It takes a lot of coal to run a warship. At Rio de Janeiro recently the Oregon shipped 1,000 tons. Traveling at her ordinary cruising rate of 11 knots, she consumed about 25 tons in 24 hours, so that she could keep going at this speed for 21 days, covering 5,544 knots, or 6,336 statute miles. Under forced draft the Oregon is capable of making nearly 17 knots, but her fuel consumption would run up to 250 tons every 24 hours, and her supply would last for only six days.

Every 48 tons taken on board sinks her one inch. The big cruiser New York can carry 1,200 tons of coal and can make 13 knots running 300 miles a day. Going at the rate of 21 knots she uses more than three times that quantity.

"Refreshments" In Scotland.

In the course of the arguments before the house of lords in a case in which the necessity for additional refreshment accommodation at Oban station arose, Lord Watson, himself a Scotchman, interposed and remarked that refreshments without part of Scotland had only one meaning, and that was whisky.

Our Country's Great Resources.

One result of the war which every American citizen must contemplate with pride is the centering of the attention of the world upon the fact of the enormous resources of this country. One thing is surely accomplished—the vanquishing of other nations of our great power in producing everything needed in the event of hostilities being prolonged. Not only are the Spanish army and navy now calling on our fleet, but we can feed several other nations at the same time.

All of the war material, as well as the supplies for our army and navy, is produced here and by citizens whose patriotism is well known. Our armor plate is the best in the world, and Russia is so the convinced of the fact that she has recently placed an order with American manufacturers for a quantity sufficient for two battleships. Japan is also buying. The armor piercing and disappearing shot and shells made here are not equaled on the face of the globe. Other countries understand this and are buying. Our rifles are such that they are so far ahead of the rest of the world that they practically stand alone. All the strongholds Cubans about the island are equipped with the Lyman, a modern torpedo made in the United States after the Whitehead pattern and so much more effective than the original that the British and Austrian manufacturers are despondent. One dirigible torpedo eclipses everything of its kind in Europe and are being sought after by foreign powers.

Everything is produced here. Nothing is lacking, from hard tack to 12 inch guns and from armor plating shells for a battleship. Much of this credit is due to American genius and enterprise and capital, which should be patronized in preference to all others.

Our manufacturers have built all of late buying vessels for the navy to meet an emergency nobody questions our ability to build warships as good as the best. Our enterprise and capital enable us to turn out fast and powerful fighting ships and while we are congratulating ourselves on this grand showing there is authority should remember that we will need more battleships two or three years hence and that now is the time to make the contracts. Very many small yachts are ready to be turned into gunboats, torpedo boats, dispatch boats and auxiliary craft. At no distant day the United States will be the best market for war material of all kinds, and the attention of other nations is already directed hitherward.

Our War Against the Pirates.

The Mediterranean sea less than 10 years ago was infested with pirates, who took into captivity the ships and crews of such nations as had not in some way made peace with or paid tribute to the Barbary powers. Several American vessels suffered at the hands of these buccaneers, and at one time in a single cruise ten of our vessels were captured, and in November, 1785, the number of American prisoners at Algiers was 115.

To the day of Algiers the United States, the other powers paid enormous tribute, and to fulfill one treaty it cost nearly $1,000,000. In 1799, having fallen behind in our payments of tribute, we sent four armed vessels to the dey to remonstrate, and our ambassadors, presenting these gifts, was forced to kiss the hand of the piratical potentate.

The cost of buying freedom for our ships from the Barbary powers had amounted in 1801 to more than $2,000,000.

The United States finally made up its mind that this was a position which no longer could be endured.

On the 14th of May, 1801, after repeated insults and demands, the pasha of Tripoli cut down the flagstaff of the American consulate in Tripoli and notified the consul that he declared war.

Under Commodore Dale the Enterprise left Hampton Roads and arrived at Gibraltar at the beginning of July, 1801. It appeared off Tripoli and Tunis before the pirates of the Mediterranean had any thought of such a visitor and met the Tripolitan corsair, the Tripoli, and left it after an engagement of three hours a complete wreck, having killed or wounded 20 of the men and escaping with every man of its own crew unharmed. This was the real beginning of the war with Tripoli.

President Jefferson was disinclined to engage further in hostilities without an act of congress notwithstanding Tripoli had declared war. Although something was done against the piratical powers in 1801 and 1802, nothing in the way of actual, elaborate war was again on until 1804, congress having passed an act two years before which was virtually a declaration of war.

Commodore Preble in 1803 left for the Mediterranean with a new squadron of two frigates, two brigs and three schooners. By an accident one of his best ships fell into the enemy's hands, but he afterward found opportunity to destroy the vessel and deprive the corsairs of its use.

On the 25th of July, 1804, after much wandering up and down the waters of the Mediterranean, Commodore Preble's entire squadron took its station before Tripoli, and with the bombardment of the capital on the 3d of August began a contest which was marked by great skill in energy and a heroism in the American navy which were the admiration of the world. It was here that the famous exploit of Decatur occurred in 1804. Before the end of the year the Tripolitans were glad to make terms with this country, and the treaty then established was the necessary foundation of our American commerce by the Barbary powers.

A Spanish Sympathizer Routed.

A young American girl staying temporarily with a family abroad had been made to feel recently the pro-Spanish tendencies of some of the people. One evening at dinner a young man, pointing to his glass of beer, attracted the attention of the company present by aptly remarking to our representative:

"See this glass of beer. The dark brown represents Spain, solid and substantial, while the fresh represents the United States."

"Yes," was the quiet reply, "but I believe the United States is on top."

To cover his confusion the young man quickly drank his beer only to be forthwith confronted by the statement, "And after drinking, the United States still remains."

LINGO OF THE SEA.

In the early days of English naval organization vessels of war had double prows, a military one for fighting purposes and another of manners for ferry plying duties. In consequence large number of English sea terms have a military origin.

The ship's cook was once a great man, and there are terminus on record in his being promoted for efficient preparations of food. The ship's steward was originally the cellerer.

The title captain is not a naval but a military title. Originally the real captain of a ship was a "marine." A military officer was placed on board, though he knew nothing of nautical matters. Gradually his importance increased, while that of the master diminished proportionately, till at the present day the master's office is practically become obsolete. Commodore comes from the Spanish "comendador."

At that time the rank of admiral was unknown, and the chief officer of the squadron was called a commander, or captain. The term admiral as now used is derived from the Arabic "amir" or "emir," a commander, as in "amir al bahr," commander of the sea. The only English form was "admiral" and is still preserved as such by the French.

Another corner from the Latin "anchora" or "anrora," which so in 400 B. C. meant simply a large stone with a hole through it.

The peculiarity of so many portions of a ship's rigging bearing names derived from the trappings of a horse can only be accounted for from the fact that the early warships were manned by soldiers as well as sailors, the natural consequence being that they ride soldiers adapted some of their terms to meet their fancy. Among the various ropes, etc., will be found bridles, whips, bits, stirrups and the like.

Boatswain is derived from the Saxon "swain," a servant. The term quartermaster, used in both the army and navy, appears to be confusing and anomalous. In the army it is the title of a commissioned officer who performs important and responsible duties. In the navy he is simply a warrant officer directing subordinate duties. In old ships and in ships times his position was a more important one, so much so that he was considered to be the fourth part of the mast; hence the term quartermaster.

The terms larboard and starboard come from the Italian "questra bordo" and "sinistra bordo," which by rapid delivery became starboard and larboard, but owing to the strong similarity of sound they were changed into starboard and port (Latin "porta," to carry). The term port is also the original form having been the cause of many accidents.

The cockpit, in the lowest part of the vessel below water, used during sea action for the treatment of the wounded, is derived from the old days of the English sport of cockfighting, but this has now endeavored and is now known as the "Bate"-why, no one can explain.