FIGHTING CRAFT OF THE FUTURE

Modern Battle Ships the Mainstay of the World's Navies

By Charles H. Cramp
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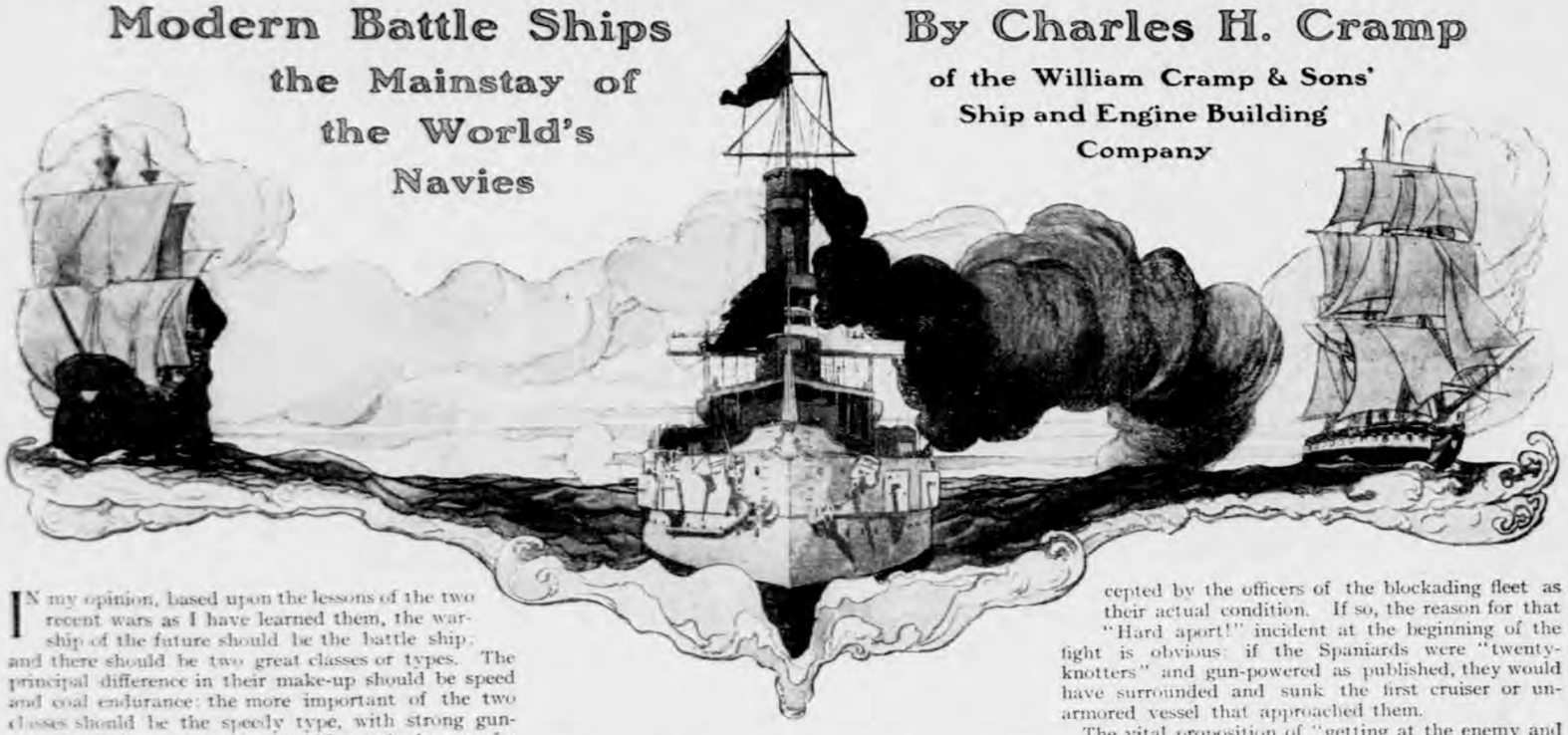


IN my opinion, based upon the lessons of the two recent wars as I have learned them, the war-ship of the future should be the battle ship, and there should be two great classes or types. The principal difference in their make-up should be speed and coal endurance: the more important of the two classes should be the speedy type, with strong gun-power. A slower class, that would permit the use of a greater number of heavy guns, would comprise the second-type ships. The latter would serve admirably to defend harbors from within and to attack forts. I cannot see that the question whether the armament of such ships be ten or twelve inch guns is important. Damage effected by the twelve-inch gun, with its awkward accessories, during the wars between Spain and the United States and Russia and Japan, hardly justifies its use.

Therefore, ships of both types should carry ten-inch guns, with a greater number upon the battle ship of the second type—which I would call "A Sea-going Coast Defender." Ships of the first type also might be described as "Coast Defenders," because they could defend our shores by attacking an enemy's coast and compelling the presence of that enemy's vessels at home.

The importance of speed in connection with the ships of the first type is so obvious as not to require discussion.

The Minotaur class of ship, that the British are now "laying down," evidences the Admiralty's faith in the first type. The propriety of their construction is unassailable.

In combination with these important fighting factors, of course I would not overlook certain other craft that I consider necessary accessories, namely, torpedo-boats, or, rather should I say, torpedo gun-boats—swift despatch-boats and scouts. This is the point at which to say that we must not overlook the real utility of the torpedo-boat.

Such are my views, stated with severest brevity.

What the war-ship of the future will be is a question I cannot answer decidedly. We naturally would assume that the fighting ships, built from time to time, in their make-up will have the improvements suggested by the lessons and experiences of actual warfare, but that is never the case. The lessons of Manila, Santiago and Port Arthur have been interpreted according to the bias of observers, historians or amateurs. The writers of the last class have prejudices, like other men. Sometimes they follow certain leaders who are always to the fore with positive and dogmatic assertions: frequently these men state their views, denounce in advance all persons who disagree with them, and conclude by asking the frank opinion of other people.

From my viewpoint, the most important lessons I have gathered from the recent naval battles, and had impressed upon me sometime before, are that the gage of efficiency must be the condition of the boilers and the engines. These must be of not only good design and excellent construction, but must be kept in perfect order by the engineer and his crew, all members of which must be trained, intelligent and industrious men.

The difficulty with the fleet at Port Arthur, for example, was not confined to the destructive damages done by the unexpected attack of the torpedo-boats while the ships were at anchor; the incapacity for prompt defense was due to the fact that the machinery of all the Russian ships was in deplorable condition. The vessels that were not injured in the attack were not in any better condition as fighting factors than the damaged ones, owing to their inefficient machinery and accessories.

The complete destruction of the Spanish fleet at Santiago was due to the wretched condition of the engines and boilers on the ships: the mechanical inefficiency was the real gage of the fighting capacity of each ship and of the aggressive power of the fleet. With the exception of the Colon, those ships were designed and constructed by a reputable Scotch firm, which had established itself in Spain and sent there its foremen and best skilled labor. The ships were delivered to the Spanish Government in good condition, were correctly rated as twenty-knot armored cruisers, and were so considered by our naval authorities; but, owing to the neglect of the engineering force, their actual speed hardly equaled ten knots. Had they been able to go even fourteen knots, when they steamed out that beautiful Sunday morning, most of them would have escaped, because the boilers of most of the ships in the blockading fleet were in bad condition. Our fleet was not prepared for such an aggressive act—on some vessels, half the boilers were empty of water. The engines of the Massachusetts, Oregon and two other ships were in normal condition. The Massachusetts, which was not in the fight, after the war made a speed exceeding that of her contract trial, and before she went to a dry-dock for repairs.

Had the Massachusetts and New-York remained at their stations, the Spanish fleet would have been sunk as fast as the ships appeared outside the harbor's mouth.

I have been informed by a distinguished officer, who was in the battle off Santiago de Cuba, that the standard of the twenty-knot Spanish ships was accepted by the officers of the blockading fleet as their actual condition. If so, the reason for that "Hard aport!" incident at the beginning of the fight is obvious: if the Spaniards were "twenty-knotters" and gun-powered as published, they would have surrounded and sunk the first cruiser or unarmored vessel that approached them.

The vital proposition of "getting at the enemy and getting away again" cannot be cried down the wind; like the ghost of Banquo, it "will not down." I quote from a letter of mine, written in April last, that further states my position:

"Regarding the subject of boilers: No matter what kind of boilers these ships may have had, or how thoroughly they were constructed, they could not have remained efficient for the first year, because the firemen, coal-passers and the entire engine-room personnel up to the engineers had no experience whatever in 'firing' any kind of boilers. The firemen had been taken, as the Captain stated, directly from the country. We know the result. While the engineers, as a rule, were educated far beyond the class of experts who ordinarily run engines, they were unable to train the men under them, because they had not had any experience as firemen themselves. Nor was there an intermediate class of people, as in some other navies, to help the chief engineers.

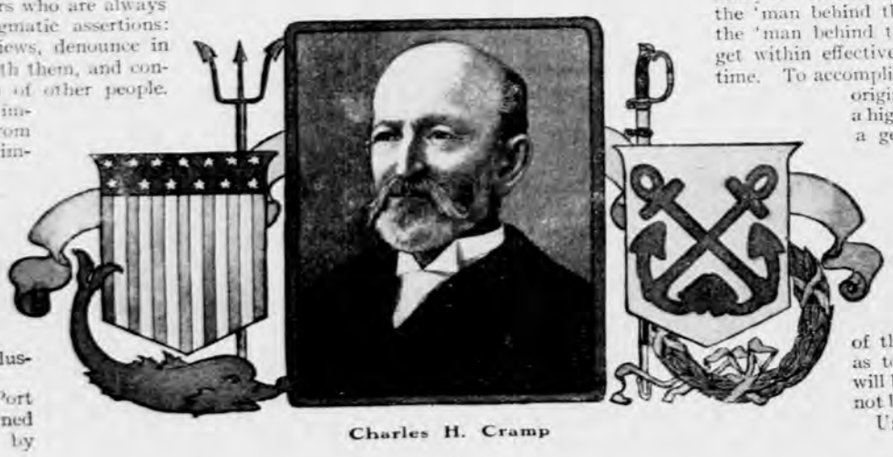
"We have found the same trouble in our navy. The English navy, the best equipped of any in this world with engine-room artificers, stokers and handy men, has had its trials and tribulations.

"All sorts of schemes have been attempted to overcome these difficulties. English writers now suggest that all dock laborers be trained as stokers, so that whenever expert firemen are wanted the Admiralty can draw upon that class of labor. In addition, a large number of boys, about fourteen years of age, are under instruction as stokers. What must the United States navy expect except trouble, therefore, if the English, with more practical engineers than any other country can boast and a larger army of workmen to draw upon, confesses to constant discouragement?

"All these complications have arisen from the adoption of water-tube boilers; and, as I have frequently said, if such boilers are to be used, it is indispensable that the engine-rooms be equipped with trained men.

"The troubles of the English and French with defective boilers and incompetent stokers have induced many of their writers on naval subjects to assert that the 'man behind the shovel' is more important than the 'man behind the gun.' What is necessary is to get within effective distance in the quickest possible time. To accomplish this, the boilers must have been, originally, of superior make, and kept at a high standard of efficiency. . . . In a general way, the introduction of water-tube boilers has revolutionized naval engineering, and has had extraordinary effects upon the capabilities of a war-ship or a fleet. One British Admiral describes the pending contest over the best type of boiler for war-ships as 'The Battle of the Boilers.' Some of the best English authorities go so far as to say that sea battles of the future will be decided by the boilers in the hold, not by the guns in the turrets or on deck."

Until recently, comparisons of strength



Charles H. Cramp

and efficiency of the world's navies were nothing more than a parade on paper—a Brassey list of battle ships, armored cruisers, cruisers, guns, etc., with fictitious speed and horse-power. A determination of the actual efficiency of the ships never has been made, and from the nature of the data supplied, could not be made.

Our war with Spain gave rise to the first doubts as to the representations made by the governments of the world regarding the true conditions of their fighting ships. The accepted rating given by Spain was proved to be incorrect. The sea fighting between Russia and Japan has swept away forever the last vestige of the old rating. Japan has appeared in the open as a first-class sea power; while Russia still must be rated as an undetermined factor in naval strength. An examination of Clowes or Brassey, previous to 1898, gives Russia tremendous preponderance in sea power over Japan. We know better now. Japan was treated with scant courtesy by these lexicographers—in fact, Japan rated no higher than some of the small South American States.

Splendid as has been the advance in details of construction during the past fifteen years, no opportunity has justified the enormous expenditures in certain types of large fighting ships or to establish the correctness of their designs, under conditions of actual battle. Naval experts have declared that no lessons were taught at Santiago, because "battle ship did not meet battle ship." This is true; but battle ship did not meet battle ship at Port Arthur. Therefore the crucial contests at these two places have not added greatly to our information.

The annual construction programs of the naval powers generally follow the precedents set by some one of the competitors in the race of war-ship building. Only a little while ago, the large, high-speed cruiser class, like the Blake and Blenheim, was in vogue; this fancy was followed by the Powerful and Terrible, which Great Britain built chiefly because Russia had laid down the keels of the Rossia and Rurik. Now, England has gone mad over the colossal battle ship, merely because other Powers are adding to their navies that kind of ships.

The contagion has spread to this country. It is argued here that we must build an Ajax or Hercules, forsooth, to fight a Jupiter or Mars of another nation—as if the fighting was to be done as it was in the days of chivalry! Two ships of the same class may never meet. Wisely directed Powers to-day have large navies, composed of ships of all types, and all of these vessels can do some fighting and the individual ships are likely to be scattered over the planet when war occurs, so that the large ship may never meet her echo, unless the navies of the two warring powers could meet in mid-ocean to settle the question of supremacy.

I was aware of the arming of Japan, and in an article entitled "Coming Sea Power," published in the North American Review," October, 1897, made the first public announcement of the progress of the Island Empire toward a place among the naval powers of the world. But my statements did not attract attention, for many reasons. I did not disclose all the information in my possession regarding the [illegible] of Japan; likewise, I was regarded as an [illegible] of Japan, when I was nothing of the kind. However, to put it mildly, my views of Japan's [illegible] were thought to be utterly visionary and extravagant. The events of the war now in progress have more than justified my predictions, although I am as much astonished as are the rest of mankind.

While the Japanese were building these ships at Armstrong's and elsewhere, they were training the hands of men with particular reference to the mechanical requirements of modern war-ships. Extraordinary methods were employed to instruct stokers and other accessory laborers.

I find in Louis Livingston Seaman's new book, "From Tokio Through Manchuria With the Japanese," an important paragraph on the education of [illegible]

"There was one building at Kure, the operation in which revealed to me more than any other thing I saw the thoroughness of Japan's far-sightedness in preparing for war. It was a low shed where [illegible]

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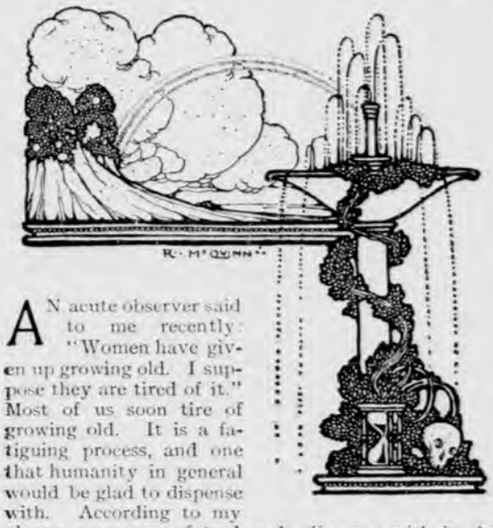
THE SECRET OF ETERNAL YOUTH

By Robert Hichens

Author of "Green Carnation," Etc.



AN acute observer said to me recently: "Women have given up growing old. I suppose they are tired of it." Most of us soon tire of growing old. It is a fatiguing process, and one that humanity in general would be glad to dispense with. According to my observer, women of to-day do dispense with it; but men do not. He went on to remark: "A modern man of forty, as a rule, appears his age. A modern woman of forty appears, say, thirty to thirty-two." I was ungallant enough to hint at little feminine methods and mysteries to which most men are strangers; but he took me for a walk in the park, and soon forced me to acknowledge that many women who do not "make-up" do not seem anything like their age.

Why is it? I myself am acquainted with women of forty-five, fifty, fifty-five, who "make-up" little or not at all, and yet who seem to me, and I believe to all the world, by no means middle-aged, and in some cases positively young. What is the secret of this eternal youth? People who live exceedingly quiet lives in the country, whose greatest dissipation is a rare garden party, whose hour for bed is ten, and whose hardest labor is a game of tennis, or the gentle weeding of a border, declare that in these is eternal youth to be found.

Others say that a quiet mind is the best "make-up" in the world, and that the mind cannot be quiet in a great city. Certainly one of the youngest-looking women for her age whom I have ever seen does live one of these peaceful lives, far away from the roar of traffic and the gaieties so many of us cling to. She is famous, and she says she is forty-one, yet in bright daylight she appears more often than not like a radiant young girl. The whole world has rung with her name, yet she cares nothing for the world. She adores peace, fresh air, simplicity, early hours, and, as I have said, at forty-one she is like a beautiful young girl.

And so, rest is the recipe for this beloved eternal youth that we all long for!

One can hardly affirm this. Think of two great women, Mme. Patti and Mme. Sarah Bernhardt. They are both amazing in many ways, most amazing in their preservation of youth. For some years, of course, the former has led a rather retired life in Wales. But how she has toiled in the past, singing perpetually in opera and concerts, making enormous tours all over the world, surrounded and interrupted incessantly by worshipers who came to pay that homage which is doubtless grateful, but which is certainly exhausting to its recipient!

She has found the recipe for eternal youth in work rather than in repose, for not always has she lived among the mountains of Craig-y-Nos.

Mme. Bernhardt, however, is a much more striking instance of one who finds in unremitting work the secret of perpetual youth. She is never at rest. Hers is the most extraordinary life of which I know anything. She thinks nothing of playing a gigantic part eight or nine times a week. This would be more than enough for most people. But, besides doing this, she accomplishes a thousand other things. In Paris she entertains incessantly. When she is on tour, she is bombarded by visitors. Invitations pour in upon her.

Between the acts of the play there is a procession of callers to her dressing-room. Frantic admirers follow her from Paris to London, and besiege her with offerings of flowers. Authors flock to her hotel with plays. Being good-natured, she often goes to parties got up in her honor. She gives away prizes; she recites for charities; she appears at bazaars. At midnight anxious hosts await her at supper. The whole of the business of a great theater is on her shoulders. When does she learn her parts? When does she study "Hamlet," commit "L'Aiglon" to memory? Nobody knows. Perhaps between one o'clock at night and dawn. Only in her [illegible] by the sea does she occasionally rest. Yet even there she often rises at six. She shoots, she [illegible] she sails, she plays tennis, she entertains a swarm of friends. Not in rest, but in labors great as the Labors of Hercules, in everlasting excitement, does she find eternal youth.

As a rule the women by whose youthfulness I have been struck most have been famous workers. Miss Kendal in every respect is far younger than most women of her age. Successful work certainly seems to foster youthfulness in women.

Men who work hard and successfully, on the other hand, often appear care-worn and elderly before their time. I could mention a number of well-known men who seem considerably older than their ages, but comparatively few who appear younger.

Women are becoming cleverer than men are in this way, as in so many other ways. In comparing the women who live quiet country lives with those who drain life to the dregs, I must say that my theories, and those of many doctors, have been upset. Age, in the heart of the country, seems generally to make its appearance just when one would expect it to do so. Country women of fifty usually appear fifty. I believe that a perpetual calm is decidedly aging, and that too much repose, even in fine air, induces a heaviness, a phlegm, which show youth quickly to the door. The human vegetable is seldom or never young. It always seems what we discreetly call "a good age." But the surest way of preserving youth is to keep your interest in people and things.

Are modern women more keenly interested in their lives than modern men are in theirs, and is this the secret of their remarkable youthfulness? Certainly the modern woman's life is constantly becoming more varied, more full. She does a thousand things now that she used to leave undone. Both in work and in play she has a far better time. Perhaps that is why she is getting to appear so preposterously young. She is gazing toward the horizon of time, and watching the far-off figures of coming joys, against a sky in which there are not so many clouds as there used to be. Her youth should put man on his mettle. With her beside him he ought to be ashamed to appear care-worn, to become fat or bald or fretful. Let him imitate woman, and soon we shall have found the philosopher's stone. We shall be what we feel, and we shall feel always, say, twenty-two.

THE SPIRIT

By Kate M. Cleary

'Tis the spirit that does it, my dear, my dear,
'Tis the spirit that does it ever,
And the power of the will is resistless still
As the rush of a mighty river.

'Tis the spirit that moves the mountains, dear,
That tunnels in awesome wonder,
Till the steam steed's spray, and its brazen bray,
Are merged in vaults of thunder.

"There shall be no Alps!" Napoleon cried,
"Unconditional surrender!"
Gallant words indeed, that prove our need
Of defier—and defender!

'Tis the spirit that makes fair women work
In the slums of the sullen city,
Or bids them go into war's red glow,
Thrilled with passion and with pity.

'Tis the spirit that makes the women at home,
Whose souls with fear are shaking,
Smile back the children's innocent smile,
Lest they set those young hearts aching.

'Tis the spirit that sets the feet of men
A-climb on the Klondike passes;
That cleaves the desolate jungle through,
And the gloom of the grim morasses.

'Tis the spirit that plans, creates and delves,
'Tis the spirit that often cheated,
And lashed by the flail of adversity's hail
Is ne'er conquered—though oft defeated.

'Tis the spirit that does it, my dear, my dear,
'Tis the spirit that does it ever,
So here's to the will that's resistless still
As the rush of a mighty river!

Fighting Craft of the Future

(Continued from page 8)

were trained to distribute coal evenly and regularly over the great furnaces under the boilers of war-ships. Probably no other nation ever thought of making such preparations for training, what might be called its cheapest labor, in expeditious methods of work. Here were long lines of men doing nothing for hours together except shoveling. They were not shoveling coal, but large stones and pebbles supposed to represent coal, into a series of ovens. The pebbles were dumped, from time to time, upon an iron floor. The men then shoveled them back again into the supposed furnaces of war-ships. Hour after hour this work went on, the stokers seeming to execute their tasks with as much enthusiasm as if actually on board a war-ship and engaged in hostile operations."

This explains the extraordinary means Japan employs to train her stokers and all other accessories to war-ship administration. When a builder of battle ships sends one of his creations on her trial trip, he exercises the utmost care in the selection of the stokers who are to tend the furnaces. The adoption of water-tube boilers makes the stoker's part in the war game vastly more important than formerly. The man in the stoke-hole will settle the "Battle of the Boilers" to which I have referred.

Since writing the foregoing, I have read with great interest the last report of Admiral Converse of the Bureau of Navigation. I thoroughly agree with him on the "Battle Ship and Destroyer" controversy, although he does not refer to damages done by destroyers, before war was declared, by the unexpected attack of the torpedo-boats at Port Arthur. He deals with conditions in actual battle. He says:

"Early events of the hostilities in the Far East and subsequent accounts of various exploits, in all of which torpedoes or submarine mines had a prominent part, have given rise to considerable discussion as to the relative values of battle-ships and torpedo craft—especially the larger type of torpedo-boat destroyers. Some writers have gone so far as to declare the usefulness of the battle ship at an end and to incur the expense of building more sheer waste. It is too soon to draw final conclusions from the teachings of this war, but already there are signs that sentiment adverse to battle ships has been unsettled, if not altogether abandoned, in the minds of many people.

"Although a hundred and more torpedo-boats and destroyers have been actually engaged for five months against battle ships, exposed to attack times without number, we have yet to learn authoritatively of a torpedo from a torpedo vessel causing the total loss of a single battle ship. Those that have been sunk owed their destruction to submarine mines, anchored or broken adrift, torpedo vessels not contributing to the result, except by the confusion and sense of greater danger due to their presence. It is evident that in the final summary of losses the achievements of torpedo vessels will count less than was at first supposed. It cannot be claimed, therefore, that so far there has been anything to discredit the battle ship as a type; nor is any such outcome to be expected from this war, whatever may be the casualties among battle ships.

"To wage successful warfare with a naval force requires now, as it has required in all ages, a type of vessel which shall combine in the most effective manner, the qualities of offense, mobility, defense, endurance, self-maintenance. Such vessels are battle ships, and they constitute the main strength and reliance of a navy. Other types—armored cruisers, protected cruisers, torpedo vessels—possess all or some of these qualities, but in degrees so different as to unfit them for the heavy encounters which the battle ships are designed to endure without disablement.

"It is no revelation that a battle ship's existence is menaced by torpedo vessels. Such a risk always has been admitted, and provision is made against it in the construction of the vessels themselves by the method of interior subdivision also by giving squadrons of heavy ships the protection afforded by torpedo-boat destroyers and other light vessels.

"With regard to torpedo vessels, it will be recalled that after the war with Spain not a few persons said that the torpedo-boats were of no practical value for war purposes. The moral effect alone of the torpedo, it is safe to say, will prevent this opinion being further entertained, notwithstanding that the tangible results so far achieved by the automobile torpedo are less than at first reported."

As shown by recent "Message and Report," the President and Secretary of the Navy practically indorse the views of Admiral Converse.

The newspapers recently contained cable despatches announcing the final destruction of the Russian fleet of battle ships in Port Arthur harbor. That end of a fine lot of ships fully justifies what I have said about the gage of efficiency in fighting craft of all kinds. Had the machinery of these ships been in good condition, they could have dashed out of that harbor long ago, and some of them ought to have escaped, because the Russians outnumbered the Japanese in battle ships. The operations at 203 Metre Hill appeal to me as a conclusive demonstration of the capabilities of heavy guns, mounted on land, as coast defenders. Battle ships have no chance in a fight with fortifications, properly equipped with guns of equal or larger caliber than those afloat. Arguments against the use of high-caliber guns on battle ships do not apply to their effectiveness behind fortifications. I am now more convinced than ever in favor of the fast battle ship; but a floating battery should not be a craft that relied solely upon its colossal proportions.

I hardly expect the war-ship of the future to fully meet all the results gathered from the lessons of Manila, Santiago and Port Arthur. Amateurs and mountebanks will appear with extravagant and fantastic projects that will divert attention and cost millions of good money. I have a painful remembrance of the disastrous effects of the Ericsson craze in the Civil War, the blunders of which are not entirely outgrown. Prior to the Rebellion, we had in this country as wise ship-builders as lived—their equals are not alive to-day! (The American model, the clipper ship, the transatlantic packet ship were not only the best of their kinds, but there were no other kinds, anywhere). Capable ship-builders, naval constructors and designers were swept off their feet by the Monitor craze. The naval constructors of that period stood on exactly the same plane as the ship-builders to which I refer, but they were overthrown. Our ship-yard, I believe, was the only one that survived destruction. I have a vivid recollection of the extravagancies, persecutions and threats employed against naval officers, of staff or line, and every ship-builder or private citizen who had the temerity to combat the Ericsson craze.

About eighty per cent. of the prominent naval officers were antagonistic to the Monitor type of fighting ship. Having been in the thick of this fight, I can speak from experience. The country was impoverished—for five hundred million dollars of the national debt is directly and indirectly a consequence of "the Monitor madness."

It was not until Secretary Chandler's administration of the Navy Department that a beginning of the new navy was made, followed by the able régimes of Secretaries Whitney and Tracy, who gave encouragement to talent, wherever met.

I often have been described as an "old fogy" by amateurs and "smart Alecks"; but I have had the comfort of seeing my critics relegated to obscurity, one after another, and yet new fools are born every hour.