

What Our Navy Needs

Secretary Daniels, in an Interview, Says the First Requisite Is 100 Per Cent Efficiency for Personnel and Material. Every One in a Responsible Position Must Keep the Good of the Whole Navy Constantly Within His Vision. The Addition of Men, Munitions and Ships. Measures for Increasing the Efficiency of the Enlisted Men—Development of the Naval Militia—Advisory Board to Aid Scientific and Inventive Activities.

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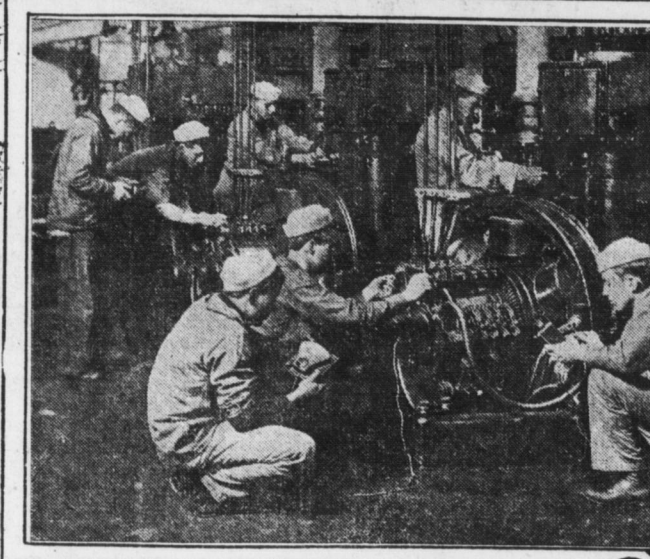
"THE first need of the American navy," says Secretary of the Navy, "is 100 per cent efficiency for our personnel and our material, and this can be attained only by every officer and enlisted man keeping himself and everything entrusted to him in perfect condition. I mean by this that every one in a responsible position must keep the good of the whole navy constantly within the range of his vision; he must not allow his horizon to be bounded by the limits of his immediate command. The captain must look beyond his own ship and have a mind to the success of the squadron to which he is attached; the admiral, looking beyond his own fleet, must be prepared at any time for a possible junction with another fleet. The bureau chief must not have his vision to be narrowed to the bounds of his bureau, but be thinking how to co-ordinate it with the other bureaus for the good of the navy. I have confidence that we are steadily advancing in this respect all the while."

"The second requirement of the navy is the addition of such men, munitions and ships as may be necessary. These additions in men and material can be obtained only by the action of Congress. The secretary has no authority to make such additions, but I will make suitable recommendation in my annual report."

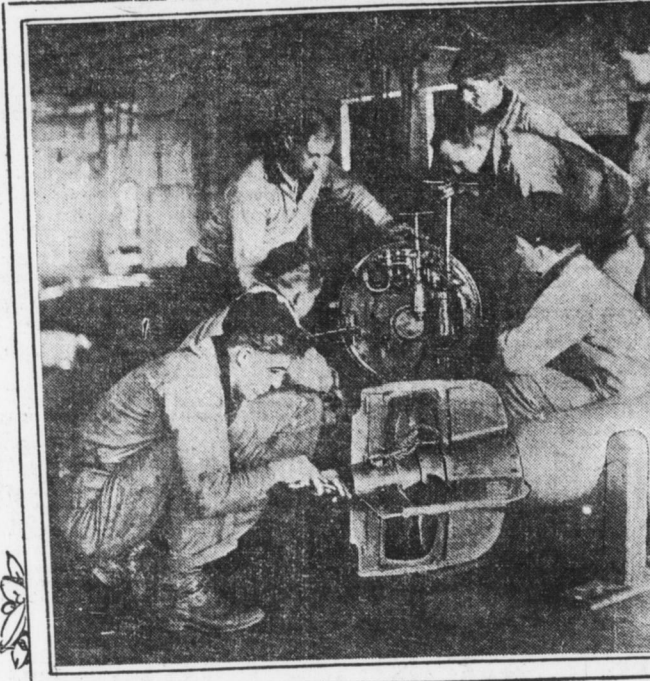
"The European conflict has confirmed the need of changes advocated by our experts. Our Congress, which is responsible to the nation, not only for carefully conserving the public funds, but for maintaining a navy for the common defense, will doubtless act with the same patriotic motives which prompted the last Congress to provide for more submarines than the department had originally recommended, because subsequent to my report the performances of submarines in European waters showed the worth of such craft, especially in harbor and coast defense, and I asked Congress in my hearings to appropriate for as many additional submarines as the revenues would permit."

"It is the duty of my department to lay before Congress the needs of the navy, especially with respect to those matters which the European conflict has proven to be of real value. Thus Congress will be able to deliberate and act intelligently, and to my recommendations we can add that the navy has maintained itself up to the highest state of excellence. I do not doubt for an instant that Congress will add whatever the navy may need."

"But, since Congress will make appropriations only for what the people



TRAINING ENLISTED MEN IN THE SCHOOL OF ELECTRICITY



TRAINING SIGNALMEN ON A DREADNAUGHT USING FLAGS, CONE AND THE SEMAPHORE

DOUBLE PROPELLERS AND DOUBLE RUDERS OF MOTIVE END OF WHITEHEAD TORPEDO

believe to be right, I am always glad to have published all proper information—of failures as well as of successes—in order that thoughtful people may know our own resources and what they may possibly be called upon to meet. The people can then make their own deductions as to what additions they should insist upon having made for the navy."

"Of course, the more spectacular things are hydroaeroplanes, fast ships and submarines; but one must not forget measures for increasing the efficiency of the enlisted men by the creation of a naval militia and the creation of the advisory board to aid scientific and inventive activities."

The hydroaeroplane, which differs from the ordinary flying machine in that, by means of pontoons, instead of wheels, it is able to rest upon and to take flight from the water, has demonstrated its usefulness. The difficulty of procuring and being able to make long flights over the sea with no chance to come to earth for rest and repair, is very great.

In August, 1914, the English navy possessed some of various designs. It is believed that their number has been considerably increased, for it is said, 300 air pilots are now attached to this service. They have done good scouting service, and have made some raids upon German stations in Belgium. The French and Russians are believed to have had but few hydroaeroplanes when war was declared.

The Germans possessed few, if any, of these machines for their navy, but their aeroplanes have done fine service for their fleets in scouting from Kiel to Heligoland and out upon the North and Baltic seas. It is probable that if Admiral Graf von Spee's fleet had possessed one or more of these fliers he would not have been led into attack upon the English at Falkland with the loss of his entire fleet.

One of the most important things for the allies is to maintain a safe way to transport troops and munitions from England to France, and many have wondered why the German submarines did not prevent the sending of these supplies instead

of concentrating their efforts upon the destruction of merchant and passenger ships. The reports indicate that the great number of French and English destroyers and swift cruisers which patrol these waters, assisted by aeroplanes, drive the submarines away. The latter is not very potent at night, and in the daylight, if the water is clear, its shadow betrays its presence to the keen observer in the aeroplane. His signal by wireless or otherwise calls the destroyers, who hover about the undersea boat, which must then completely submerge for safety. The swift boats follow her course, if possible, and either drive her away or keep her harmless. Apparently bombs from the aeroplane have not been very dangerous to the submarine, which can usually, with her deck guns, put the aeroplane to flight. The Zeppelins have done some good scouting, but very little damage by bombing, except to non-combatants. As a menace they have been a success.

Congress last year appropriated \$1,000,000 for the development of the hydroaeroplane for our navy. The office of aeronautics has been very busy, although the number of our airships so far is very insignificant, but an enormous amount of experimental work has been successfully accomplished, and in consequence the navy now has on hand sixteen machines of various types, and has contracted for the early delivery of eight new machines representing three new types. About thirteen officers now are in training for pilots, and the service has thirteen especially trained for naval work.

Eventually one or more of these machines for scouting should be on every large ship in the navy. One machine does not cost much. But they must be of light construction, and hence are very fragile, so that they cannot maintain a large fleet of them. The economic value in actual war is incalculable.

The army has very few aeroplanes, and only sixty men in training to become pilots. The English and the French armies had, it is said, several hundred aeroplanes when the war broke out. No one knows how many they now have, but some inference may be drawn both as to their value and as to the progress of landing that the fact that England alone is ordering them at the rate of 3,000 a month. Much good is hoped for from the use of the joint aeronautic board of the army and navy.

Speed in ships of all classes is of the utmost value. For example, if the Blucher had possessed the speed of her consort, she would have escaped from the Lion and the Tiger in the North sea fight, and if those ships had not possessed speed greater than that of the consorts the Blucher would not have been overtaken. Speed on the part of the destroyers and light cruisers has made them the one source of dread to the submarine, and the speed of the large submarine destroyers of the times. Speed has been the slogan of the naval war and the decisive factor in almost every engagement.

But a German fleet—the greatest with one exception the world has ever known; one which could cover any landing that a Teutonic army might make on the English coast—lies behind mined and fortified harbors in Kiel and Heligoland, because nowhere outside, but within call, lies the one mightier fleet of British dreadnaughts and superdreadnaughts, ships without unusual speed but encased in strong armor and filled with powerful guns, able to receive as well as to give blows.

The policy of the United States navy has been to maintain the ship which can defeat its enemy when it comes to grips. The supreme object of the navy is to maintain an absolute line of defense against invasion, and it may be that this can be done best by means of the swift ships able to escape or to choose attack.

The swift, heavily armed battle cruiser, wherein armor is sacrificed to speed, is very expensive to build and to maintain.

Whether it should supersede the slower, but more powerful dreadnaughts, whether they are a necessary supplement to them, or whether for the purpose of defense, armor should make way for speed, are questions to be determined only by most careful study by the ablest men of the navy, when they are known, of the European naval war.

The United States navy has no battle cruisers and no provision for their construction. It has an old armored cruiser of about 14,000 tons displacement, one-time speed of twenty-two knots, and main batteries of four eight-inch and four six-inch guns.

It has five first-class cruisers, of about 5,500 tons and a speed of twenty-one knots; four second-class cruisers, fifteen third-class cruisers of between 3,000 and 4,000 tons—all old boats of a type no longer constructed—and some mounted with guns of varied size, slow speed and venerable age.

In July, 1914, England had ten battle cruisers of more than 22,000 tons; Germany, eight of nearly the same class; Japan, two of 32,000 tons.

Torpedo boats, as originally conceived, were small, of very high speed, designed to dash singly or in flotillas upon hostile ships which they sought to destroy by means of a torpedo launched with considerable accuracy from the torpedo tube with which they were provided. They have been superseded by the destroyer, which was designed to drive off the torpedo boat, and by the more lately developed submarine. The torpedo boat has become of little consequence, but the destroyer is one of the most important classes of boat, and the one about which still lingers some of the picturesque legends of the fighting ship, even though their graceful hulls are filled with powerful, complicated, whirling machinery.

Shortly before the outbreak of the war England had 167 of these destroyers, of which some of the latest were credited with a speed of thirty-six knots; Germany had 150, France 84, besides 135 torpedo boats; Italy 68, and Austria-Hungary 39.

The United States has 62 of them. The best are about 300 feet long, 30 feet beam, draw 9 feet, have a displacement of 1,000 tons, burn oil fuel, have a speed of 19 knots, have a ship's company of a hundred men and officers and carry two or more 18-inch tubes for Whitehead torpedoes. The oldest of these boats were completed in 1900. Six new ones to be a little larger and rather more speedy than any of the others will soon be under construction.

"Bushnell's torpedo," the first American submarine, in 1777 failed to destroy the flagship of the British squadron in New York harbor only because his torpedo could not be properly discharged. But submerged, he sailed under the fleet and demonstrated the possibility of this type of boat. His invention was, through the aid of Thomas Jefferson, American minister to France, made known to the French. About 1818 Holland, in this country, constructed his submarine, somewhat similar to the

Bushnell, with engines added. Laubeuf, in France, completed his design about the same time. Later the Italian Laurenti designed a type of submarine. These are the three leading designs in use.

In 1888, 111 years after Bushnell's attack, the French built the first modern submarine for their navy. Other nations soon followed, Germany being about the last of the great nations to adopt them.

One can do no more than guess at the present numbers of these boats. Just before the war, according to Domville-Fife, an English engineer, the leading nations were supplied about as follows: England had 82 built and 22 building—nearly all of the Holland type. They ranged, the A class with a length of 150 feet, a speed of 11 knots on the surface and 7 knots submerged, to their Z class, with a length of 176 feet, a displacement of 800 tons and a speed of 16.10 knots, and a cruising range of 5,000 miles. Two of these boats sailed from England to Sydney, Australia, without convoy, 13,000 miles. Of the twenty-two new boats then building some were of the Laurenti, some of the Laubeuf and some of a new, the Vicker's, type. Some of these are of 1,500 tons displacement and have a designed speed of 20.12 knots.

When war was declared France had ninety-two submarines in active service with nine large ones under construction. Russia had thirty-seven submarines in service and nineteen under construction.

At this time Germany was said to have thirty submarines, all of which had been put in perfect condition, their older boats modernized and six new ones nearly completed. A large personnel had been trained and their submarine fleet was ready. Their speed is supposed to run from twelve to eight knots in their early boats to the U 29 class of 900 tons and a speed of eight to ten knots. The German heavy oil engines have stood the hardest tests and probably "stand up" better than any others.

The Austrian navy had six submarines and the Italian nineteen when war was declared. The latter also having eight of nearly 1,000 tons under construction. More than 20,000 especially trained enlisted men and officers are manning the submarines now opposed to each other in war. Officers and men of peculiar fitness and thorough training are required, otherwise a mishap puts the boat out of commission.

Other authorities make all these numbers rather lower, but the difference arises because they have disregarded the smaller and nearly obsolete boats, which Domville-Fife has included. In the American navy there are thirty-seven submarines in service. They range from the Plunger and Fulton of the A class to the latest boats, but their speed and designs are not made public. There are actually in various stages of

construction. Among them is the Schley, designed to make a surface speed of twenty knots. Congress has made appropriations for eighteen more, two of which are to be of seagoing type and are expected to make twenty-five knots.

Aside from the many other purposes of the submarine in this country, it has always been regarded as possessing great value for coast defense.

Annoyance and damage would attend an attack of warships upon our coast, but no invasion could follow until transports were sent to convey the necessary troops. Whether this could be done successfully is a question which cannot be determined except by experiment. There are demonstrations pointing either way. The British fleet cannot lie very close to the German coast, because the submarines of the latter are too dangerous. The German submarines cannot prevent the transportation of men and arms from England to France, because the aeroplanes, destroyers and scout cruisers guard the way too effectively.

In July, 1914, England had thirty-six submarines in service and twenty-three under construction. The efficiency of a fighting ship, when it goes into commission, depends upon the constructor, and thereafter upon the way it is handled and maintained. This involves the departmental supervision and the ship's company.

The last Congress passed a naval reserve bill to attract the men to enroll and to establish an organized body of highly trained men ready to respond when called upon in time of need to man the reserve ships of the navy. It is too early to determine how effectively this will operate, but for the months of March, April and May, the re-enlistment were respectively 61, 73 and 82 per cent, as against 58 per cent before the bill went into effect.

The last reports of the naval militia are not available, but the navy is leading all the aid in its power to develop this branch, because it brings into contact with the service men of a first-rate type, who need only seasoning to be of great value as an addition to the reserve.

No mention is here made of colliers, hospital ships, repair ships, scout cruisers or mother repair ships for submarines.

No thought has been directed to the use of the navy for any purpose other than as the first line of defense against invasion.

There is no doubt if the great conflict were confined to Germany and England, and the fleet of the latter could be bottled up, that the German army would successfully invade England, but the English navy could not be defeated, so the island would be



SECRETARY OF THE NAVY, JOSEPHUS DANIELS

safe. Except that it takes days, instead of hours, to cross the sea, the same principle applies as being an invasion of this country. Ships cannot be built in a few weeks or months. Years are required for a submarine or a destroyer, and several for a battleship, at least in time of peace. Men cannot be trained in a short time. Six months are required to prepare a recruit, and the crew of a battleship cannot be improvised.

It is not claimed that the figures given above are exact, since no navy in the world will allow its stated figures to be made public, but they are as nearly accurate as they can be made and are sufficiently accurate for purposes of comparison.

No attempt has been made to draw deductions or inferences; any one who thinks will do it for himself.

Efficiency.

JULIUS S. MORGAN, grandson of J. P. Morgan, who spent some time in Paris as a military chauffeur, related in New York, among other very interesting experiences, the following story:

"The Germans," said young Mr. Morgan, "are not so wonderfully efficient as they are generally thought to be. Their long and careful preparation for the war gave them a handicap over the allies. They are apt to forget this handicap and put their success down to their efficiency."

Mr. Morgan smiled.

"When I hear all this efficiency talk," he said, "I remember the prisoner. A prisoner interned in a prisoners' camp in France was being interrogated by an official delegated by a neutral country to report on the treatment of French prisoners of war. To the official's questions the prisoner responded in bad English thus:

"Yes, sirrah, I be full comfortable. Eating me comes regularly and in satisfaction. I have not much to work, I am given to read and in health I am good. The bed is to sleep in, very comfortable and letters from home me arrive."

The official before passing to the next prisoner said:

"Thank you. And what is your profession, please?"

"A professor in English at home, sirrah," the prisoner answered, not without a touch of pride."

A Poor Dresser.

BERRY WALL, who for a number of years has been America's undisputed arbiter of elegant attire—or, to put it more colloquially, king of the duds—condemned in New York the apparel of a young millionaire.

"He has lots of clothes," said Mr. Wall, "but he wears them wrong. He wears a plaid lounge suit where he ought to wear a black morning coat. He wears on 5th avenue costumes intended for country walks or for yachting cruises."

"In fact," Mr. Wall concluded, "he's the sort of chap who would put on an aviator's rig to take a ride in the subway."

No Money for Meat.

SIR CECIL SPRING-RICE praised at a dinner in Washington the pensions and allowances made by the English government in the present war.

"The English government after this war," he said, "won't have to be charged with neglect, parsimony or ingratitude."

"After this war the schoolboy's definition of a veteran won't have the ring of truth that it may have sometimes had in the past."

"A schoolboy, you know, once wrote in his examination paper:

"An old soldier is called a vegetarian."

Good Criticism.

YOU don't have to be a military expert to know very well just how the war is going," said Henry Clews at a dinner in New York.

An old fellow was talking to me about the war the other day. His ignorance of tactics and strategy, his ignorance even of geography, was immense. He passed, however, as acute a war judgment as Maj. Morant of the Berliner Tagblatt or Col. Remington of the London Times could do. His criticism was this:

"No matter, say, sir, them there Dardanelles is showin' themselves to be better fighters than anybody thought they would."

Painful Experience.

EDWARD F. CROKER, ex-chief of the New York Fire Department, discussing the terrible steamboat disaster on Lake Michigan last month, said:

"A strict enforcement of the steamboat laws would have averted this disaster. But we don't enforce our laws till we learn by experience their necessity."

"Experience, the suffering of experience—we are nothing without that."

"With a pensive smile he ended:

"The burst of knowledge is always the result of a very hard whack from the hammer of experience."