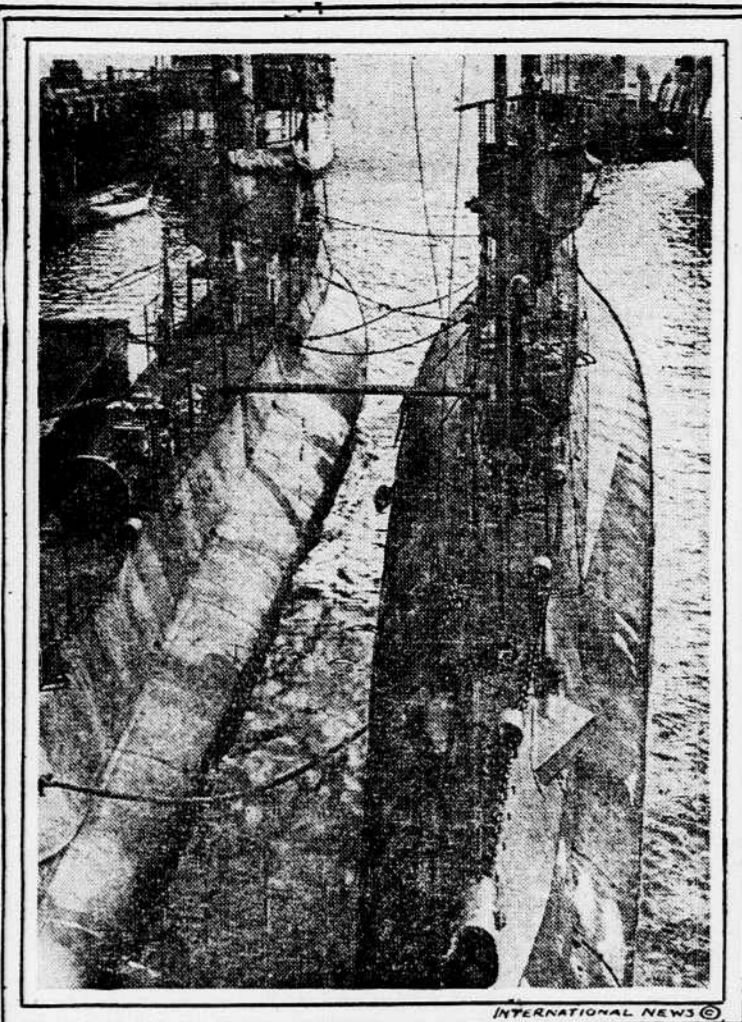


U. S. Navy Leads in Development of the Submarine

But Perfection Has Yet to Be Obtained in the Under-Water Craft—This Country Leads in All Except Numbers—Submergence Forms a Defense Not to Be Overcome by Any Known Means of Attack—Appropriations Made by Congress for Submarines—The Two Classes—Problems of the Naval Constructors—Importance of Speed—European War Forces Respect for Tiny Fighters—Boats Being Constructed by the Allies and Germany. Under-Water Endurance—Most Famous of Present-Day Craft.



INTERNATIONAL NEWS

K-5 AND K-6 AT DOCK IN BOSTON NAVY YARD.

THE perfection of the submarine has not been attained, and the progress of its development is so rapid that what took place last month passes into history and is not the standard for next month's construction. But, with it all, the United States is, except in numbers, the leader of the world's navies in the development of this type of craft.

The submergence to invisibility of the submarine is a defense not to be overcome by any known means of attack. Only when it comes sufficiently near the surface to deliver its torpedo is it vulnerable to the assault of hostile gun or gunfire. Many of the brightest and most scientific minds in the world are engaged upon the problem of how to resist and how to attack submarines, and so far no conclusive answer has been found.

Paris, in Midst of War, Prepares Autumn Fashions for American Women

Special Correspondence of The Star. PARIS, June 15, 1915. CREAMING styles are in the air.



COAT CAPES, HUMPED, BOX PLEATED AND FLOUNCED, BORDERED WITH WIDE BANDS. girls, rich girls, poor old ladies with no back teeth, aye, and blooming brides of manical business men will spread themselves in their jackets with snaky standing collars, spotted like a pard, in long straight coats, yoked, flounced and scalloped, ruffed like clowns (but it is weazel); in shaped

coats of brocade, flaring, swelling, ermine cuffs on flowing sleeves, vast square-cut ermine collars, and— Vladimir Grunwaldt told me, Michailovich Grunwaldt, his father, confessed it. "It is not our fault," said Vladimir. "It is the love of the beautiful." He referred especially to little dogs, cats, rats and rabbits. "It is almost paradoxical. "Rich American women set the pace," he said, "by loving only beautiful things." This is the Rue de la Paix, remember. He showed me bunches of silvered sable, the most precious in the world, worth \$1,000 per skin. They were all most a dull amaranthine black "with little white hairs" as the American women call it.

ly, to run away from it. A speed of twenty-five knots puts all but the submarines at its mercy. At a very few of them can make that speed. And while the submarine does not dare on the surface to approach within range of the guns of a warship, that speed will enable it to maneuver about the dreadnaughts and superdreadnaughts. The latter are not fast enough to withdraw from the sight of a twenty-five-knot submarine, which could keep up the chase until opportunity came for using the torpedo. The increased power and steaming radius will enable it to reach an attacked point with certainty and in a reasonable time. Such a submarine would have little difficulty in sailing from Kiel to the Bardenelles, and would probably be able to "duck" all interfering warships.

When it is remembered that the speed of the crack destroyer Albat, with a displacement of 1,175 tons, is only 25 knots, or 42 knots faster than the new boat, which must be designed to run under the surface, as well as upon it; must carry the weight of her storage batteries and electric motors, which occupy spaces that otherwise might be given up to engine room, and the extra weight of metal giving the strength to stand the pressure of water at a depth of 200 feet, it will be seen that the naval engineers have a rather difficult problem, which is further complicated by the fact that the Diesel engines usually placed in submarines are neither as well understood nor as powerful as the steam engines.

Up to the outbreak of the European war no one treated the submarine with much respect, except the few officers of the lower rank who had commanded and knew them, and the very progressive officers of higher rank, who are always looking for an innovation or an invention, the possession of which means a great advantage to the navy. To those men and Secretaries of the Navy the existence and development of the submarine is due, for they are all based upon the invention of the American, Holland, and our navy acquired and developed the first practical submarine.



AROUND THE CONNING TOWER.

There is quite a general error as to the time a submarine can run under water. It depends upon the degree of its power used. But, generally speaking, its supply of electricity is exhausted in about six hours, and then it can go no farther until it comes to the surface and, with the power taken from its surface engines, recharges the storage batteries. The Germans early in the war in the North Sea resorted to the very clever ruse of having an innocent-looking trawler, disguised as a neutral, tow

their boats, while under water, to their destination. But this time of running is not the limit of its underwater endurance, which may be three days or even longer. Indeed, it is not unusual for one to rest on the bottom for a day or more to wait for bad weather or some other trouble on the surface to pass away. It is said that last fall an English submarine was lying in this position on the bottom of the Baltic when, for some apparently trivial reason, one of the officers told the captain he would like to go to the surface. His command went up and look around. The first thing that came into their perspective was a small German submarine lying directly across their bow, within easy range of their torpedoes. One shot was enough. Of course, the submarine was in great danger, for if the gunboat had seen her first a shot from the quick-firers might have put the sea serpent out of commission.

It is supposed that the most famous of the submarines came to its end when her gallant commander took the daring chance of deliberately coming to the surface in the midst of an English squadron and opened torpedo fire upon them. Unfortunately for him, he missed his first shots, and before he could submerge, an English dreadnaught hit him down. It is said that as the great prow went into the broadside of the submarine a little crunching sound was heard, and the rest of the big boat had gone home, leaving but a vestige remained of the



INTERNATIONAL NEWS

A "JACK IN A BOX."

hands of moleskin three deep on the yoked coat of the flower-faced shopgirl. How? Why? Moleskin is made out of little dogs. And rabbits. Ermine ruffs, square turn-over collars, ermine cuffs and edgings, even a hat, all these things are made of moleskin. It is the emblem of purity and honor without stain. Ermine, you say, is expensive. Since the middle ages, it has garbed royalty and the judges of men. Ermine is made from the white domesticated marten.

It is not our fault, he repeated. "It is a world current." Never were natural skins so dear. No matter. The market is continually rising. It makes no difference. Since the war broke out in August last, there has been no market. It is nothing. The Leipzig fair took place, for Germany only. Great quantities of beaver and astrakhan were sold, for richer sheep, lamb, and other skins. What do women know or care, in Paris and New York? The times are ripe. The war strikes the hour of new outfits. Ermine, chinchilla, sable-tails, ptouis (itch), light fox, mole and flying-squirrel are the extremely fashionable furs for trimmings.



SHOULDER CAPES, WITH FALLING TAILS AS BIG AS APRONS, SKIRTS SIX DEEP IN FUR BANDS.

Shoulder capes, with falling tails as big as aprons, skirts six deep in fur bands. "Perfumes" blurted out a man who stood by. Vladimir frowned slightly. He admitted, simply, the existence of fur perfumes, as such. "Women like them," he said. "How avoid moths?" I repeated to the furriers. "Insure!" laughed Vladimir. Such, indeed, is the practice of fashionable women, even with their imitations, who have it lumped with the storage, never keeping their furs at home through the summer. Naturally, the great houses refuse to tell their trick. The premiums are all pure profit. I told them they never lose a skin or garment.



INTERNATIONAL NEWS

ALL HANDS ON DECK.

crew or of the boat, which will be mentioned in all histories of submarines, the U. S. aeroplane goes above it contributes as much to their success as that of the pilot to the air machine. The captain must possess peculiar qualifications not the least of which is the ability to secure the absolute confidence of his crew. A certain evenness of nerve and a nerve and brain that work like lightning in an emergency, or he will not be able to keep his boat in order or to save it in case of accident. It is generally recognized by military men of both army and navy that this country is open to an attack in case of need this time could be shortened, but not so very much, and a patriot holds that no defensive value in time of war.

The early boats, sent to the Philippines and to western waters with the idea that they were drawing to the end of their usefulness and would never be brought back, have behaved well, and, with the exception of the F-4, which was sunk at Hawaii, have been giving very little trouble, although constantly cruising and submerging in the competitions which are carried on. The newer and supposedly stronger and better boats were retained on the Atlantic coast, and for some reason these are the ones which have given most trouble. Their showing after the recent review in New York harbor has drawn a question mark over the value of these boats, and it has accordingly reorganized the flotilla, putting Capt. Grant in command, charged with the duty of ascertaining, and, if possible, removing, the causes of the trouble, for there is no good reason why the Atlantic flotilla should not make a showing even better than the older boats in the Pacific. Since the middle ages, it has been the custom of the boats which go below the surface of the water as an

That the affairs of nations, through commerce and exchange, are so intimately interwoven and modern means of communication have so far annihilated distance that complications may arise which the most temperate statesmanship cannot overcome. Then will come the strain upon the first line of the country's defenses—the navy. It has never failed in any task assigned to it. But the daring seaman-ship of John Paul Jones would avail him nothing in his old converted merchantman if he had to meet a modern gunboat. The Constitution and the Essex would be easily overtaken and sunk by a destroyer, and the greatest battleships of all time will go down before the elusive submarine. Not that the battleships are no longer necessary, but if the fleet of the American navy were supplemented by a sufficient number of submarines, no nation would take the risk of sending to our shores an army in transports until the submarines were controlled, and so far there is no way known of controlling them or even of detecting their presence with certainty, and they are about to strike their fatal blow.

It is hard to be exclusive these days. Girls who wish to hold your heads up, ask for Asiatic chinchilla. Real, no imitation. They are real chinchilla mice, except that they come from the Himalayas, Tibet, Mongolia, Siberia. To be precise, they are very tiny rats. The Russian countess she counted on making millions. The countess, but, unfortunately or fortunately, they have to be worked to imitate their own skins. "Moleskin" is a name for the vast stock which has piled up soon for a time. August is destined to delight the modest purses of good women. "Up! Up! Every one shall have fur trimming." Striped and zebraed, banded, edged and spotted, tailed and hooded, solid, floured, collared, ruffed and bordered, the good women will disport themselves in new shapes, humped and scalloped, ruffed and bordered, eye, scalloped, or in lone lines vertically ring-stripped. What do I know? They are silhouettes adapted to fur trimmings.

"Queer!" I said, quitting the great Parlourhouse of real furs was, however. "Queer," replied Vladimir, "but beautiful. Our sympathies are with all women who glad that they shall have fur trimmings." STERLING HELLOG. Albino Lake Trout. Monkeys in Heraldry. Seven Chances. THE good business man turns everything—weather, war, crops—to practical use in his business. The speaker was George W. Perkins, the millionaire of New York. He continued: "It is the clever girl turns everything to practical use toward getting settled in life, you know. "I said the other day to a girl: "Well, have you learned to swim yet this summer?" "Yes," she answered, "seven times." The Two Classes. THE late Charles Frohman used to divide Americans into two classes—those who dine in evening dress and those who dine in their shirt sleeves. "To put it better," Mr. Frohman would say, "the two great American classes are, first, those who dress for dinner, and second, those who dress for dinner."