

BATTLESHIP TEXAS
KAPOK: AMERICA'S LIFESAVER
VIRTUAL LESSON

CORK LIFE JACKETS

Throughout the late nineteenth century and the beginning of the twentieth century, various nations used cork life jackets aboard small fishing boats and large ocean liners like the RMS Titanic. The cork, placed into a canvas vest or life jacket, gives these jackets a distinctive, rigid, and blocky shape.

OBSTACLE RACE
A BOARD THE TEXAS
THANKS GIVING DAY
VERA CRUZ MEX.

CORK LIFE JACKETS BEING WORN ABOARD THE USS TEXAS IN 1914.

ORIGINS OF CORK

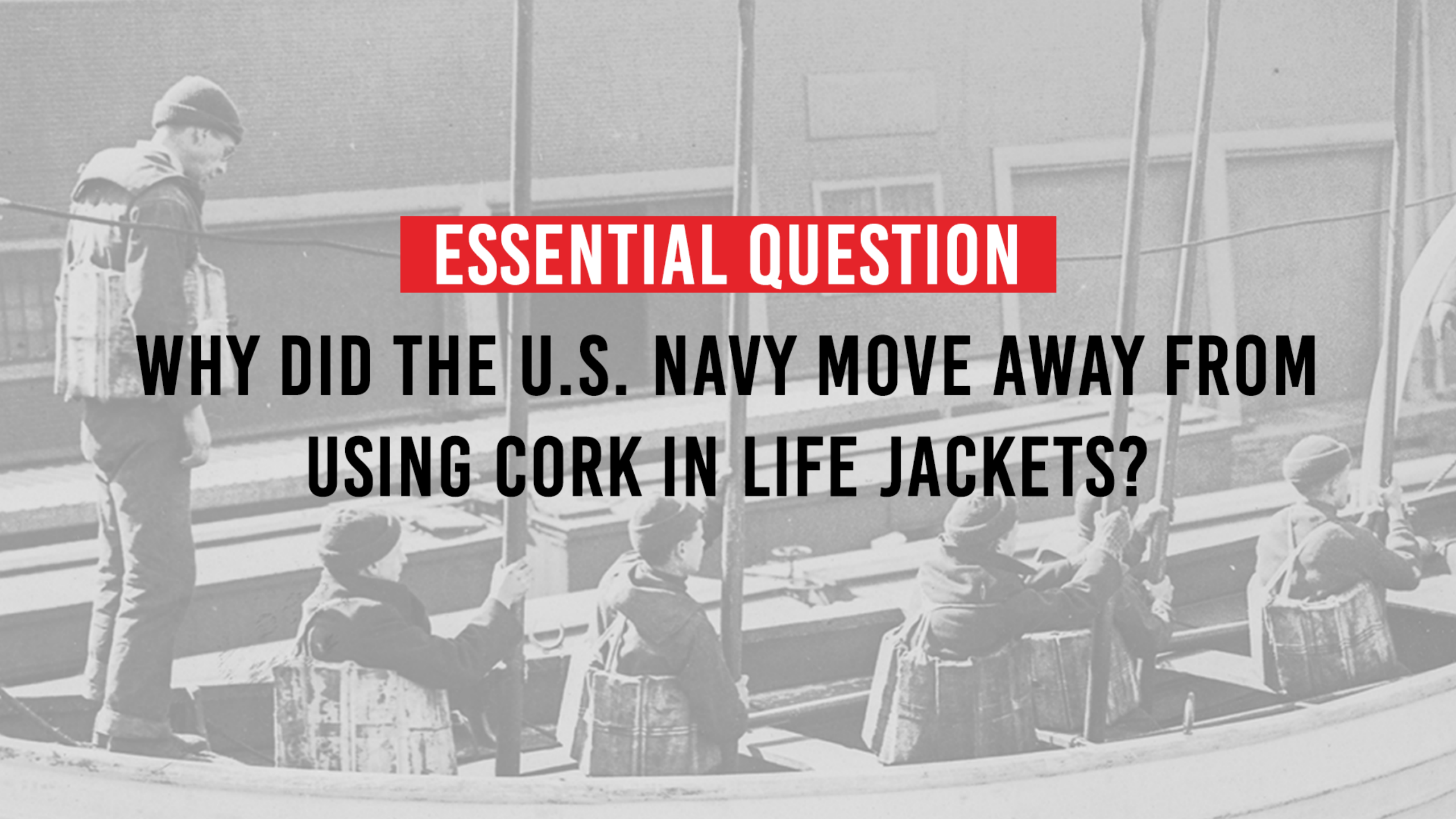
Cork comes from the bark of the *Quercus suber* tree, which grows in large numbers throughout southwestern Europe and northern Africa, in countries such as Portugal, Spain, Italy, Algeria, and Morocco. The bark is carefully harvested from the tree without cutting it down, leading to most trees living an average of 200 years.





PROBLEMS WITH CORK

Despite the cork's high buoyancy properties, the slabs were bulky and heavy, and many wearers found them uncomfortable. Additionally, those forced to abandon ship and jump into the ocean could sustain serious injuries to the neck, arms, and collarbones. The United States Navy considered these shortcomings when looking for a material to fill their new life jacket.

A black and white photograph of a ship's deck. In the foreground, a sailor stands on the left, looking down. Several other sailors are seated or kneeling on the deck, wearing life jackets. The background shows the ship's structure and windows.

ESSENTIAL QUESTION

**WHY DID THE U.S. NAVY MOVE AWAY FROM
USING CORK IN LIFE JACKETS?**

KAPOK LIFE JACKETS

As early as 1915, the United States Navy began producing its life preservers using a vegetable fiber filler known as kapok. The material was extremely buoyant, pliable, and could resist water for lengthy periods when wet, making it a near-perfect fit for the Navy's needs.



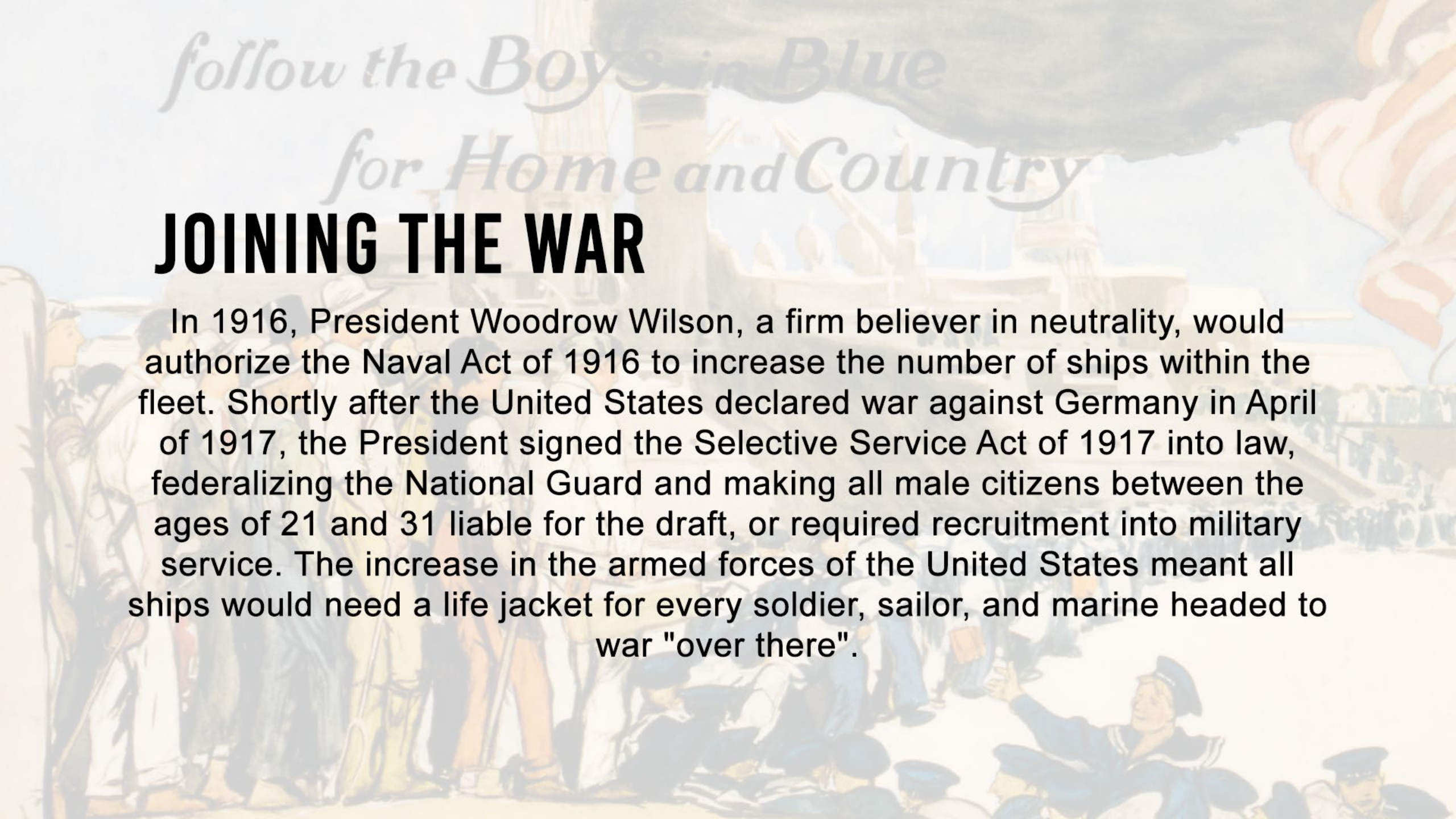
ORIGINS OF KAPOK

The kapok fiber is sourced from the pods of a kapok tree, or *Ceiba Pentandra*, native to tropical regions with distinct dry and rainy seasons, including Java, India, Burma, and the Philippines. Inside the tree's pods is a lightweight, silky fiber with a water-resistant outer waxy coating, which helps disperse the seeds when the pod blooms.



KAPOK LIFE JACKETS IN WWI



The background of the slide features a faded, artistic illustration. It depicts a group of soldiers in various uniforms, some standing and others sitting or lying down, suggesting a scene of rest or aftermath. In the upper right, there's a large, stylized American flag. The overall tone is historical and somber.

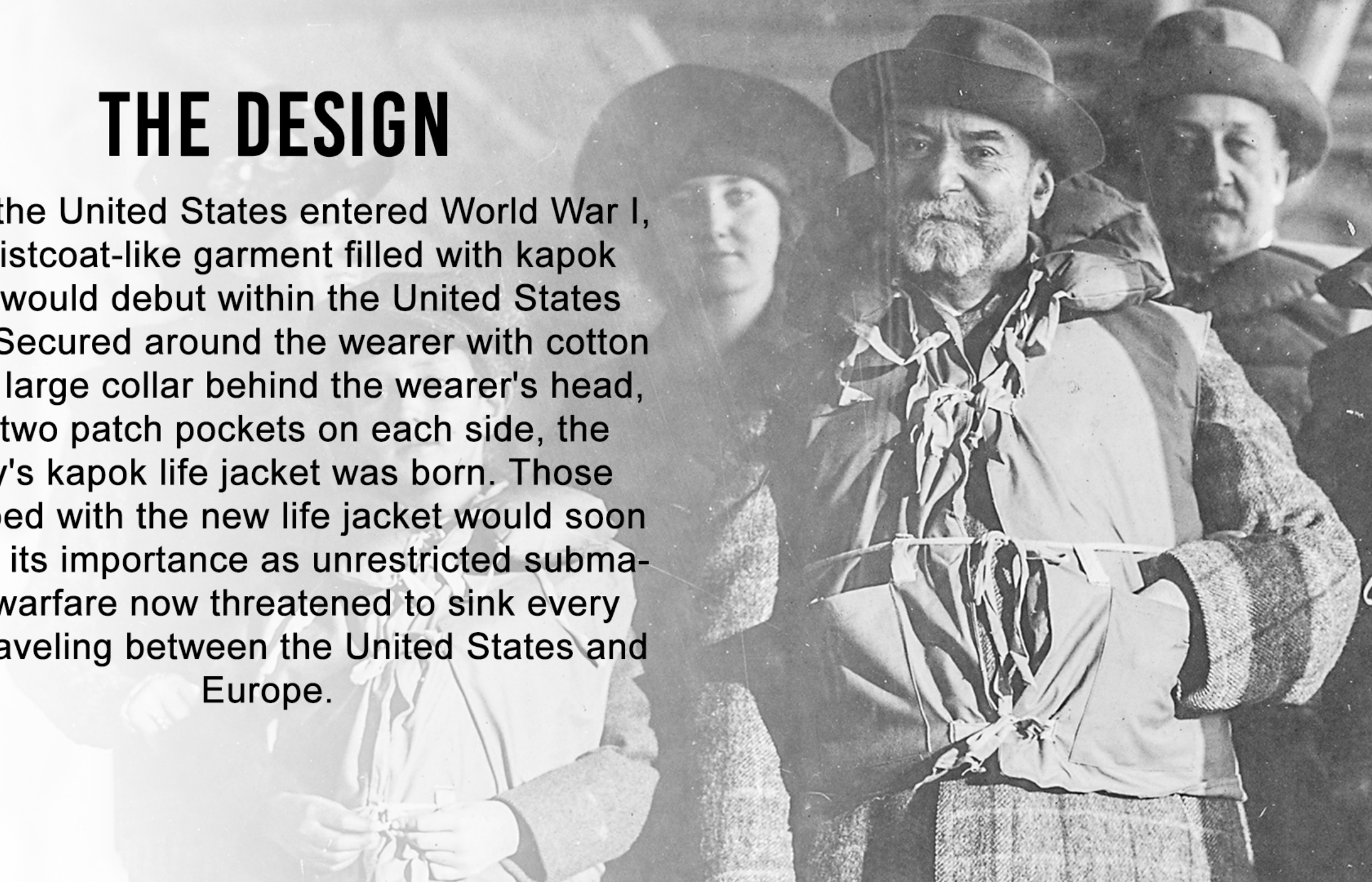
Follow the Boys in Blue for Home and Country

JOINING THE WAR

In 1916, President Woodrow Wilson, a firm believer in neutrality, would authorize the Naval Act of 1916 to increase the number of ships within the fleet. Shortly after the United States declared war against Germany in April of 1917, the President signed the Selective Service Act of 1917 into law, federalizing the National Guard and making all male citizens between the ages of 21 and 31 liable for the draft, or required recruitment into military service. The increase in the armed forces of the United States meant all ships would need a life jacket for every soldier, sailor, and marine headed to war "over there".

THE DESIGN

When the United States entered World War I, a waistcoat-like garment filled with kapok fiber would debut within the United States Navy. Secured around the wearer with cotton ties, a large collar behind the wearer's head, and two patch pockets on each side, the Navy's kapok life jacket was born. Those equipped with the new life jacket would soon realize its importance as unrestricted submarine warfare now threatened to sink every ship traveling between the United States and Europe.

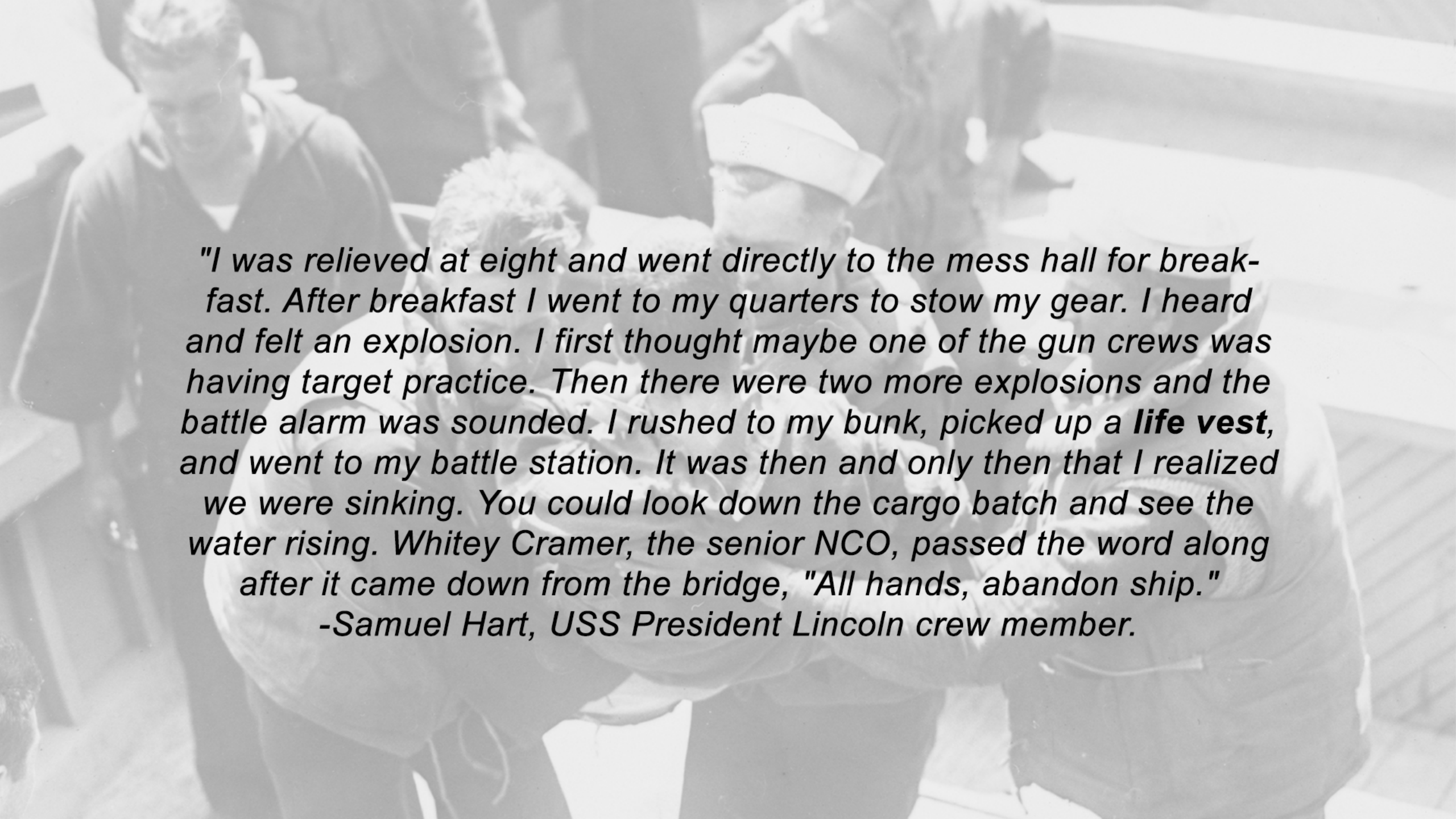


THREATS AT SEA

On May 31, 1918, the troop transport, USS President Lincoln, was underway to New York from Brest, France, when a German U-boat attacked it. The crew and passengers donned their life jackets, lowered the lifeboats, and abandoned the ship by jumping into the North Atlantic Ocean, relying on their kapok life jackets to keep them afloat as they swam for safety. Miraculously, of the seven hundred crew and passengers, only twenty-six were lost, with all survivors rescued by destroyers the next day.



Survivors of the President Lincoln on board the U.S.S. Warrington.
Lincoln's crew in the foreground. Brest, France, June 1, 1918.

A black and white photograph of a ship's deck. In the background, several crew members are visible. One man in the center wears a white sailor's cap and a light-colored uniform. To his left, another man is seen from the side, wearing a dark shirt. The deck is made of wooden planks, and there are some equipment or structures visible in the distance.

*"I was relieved at eight and went directly to the mess hall for breakfast. After breakfast I went to my quarters to stow my gear. I heard and felt an explosion. I first thought maybe one of the gun crews was having target practice. Then there were two more explosions and the battle alarm was sounded. I rushed to my bunk, picked up a **life vest**, and went to my battle station. It was then and only then that I realized we were sinking. You could look down the cargo hatch and see the water rising. Whitey Cramer, the senior NCO, passed the word along after it came down from the bridge, "All hands, abandon ship."*

-Samuel Hart, USS President Lincoln crew member.

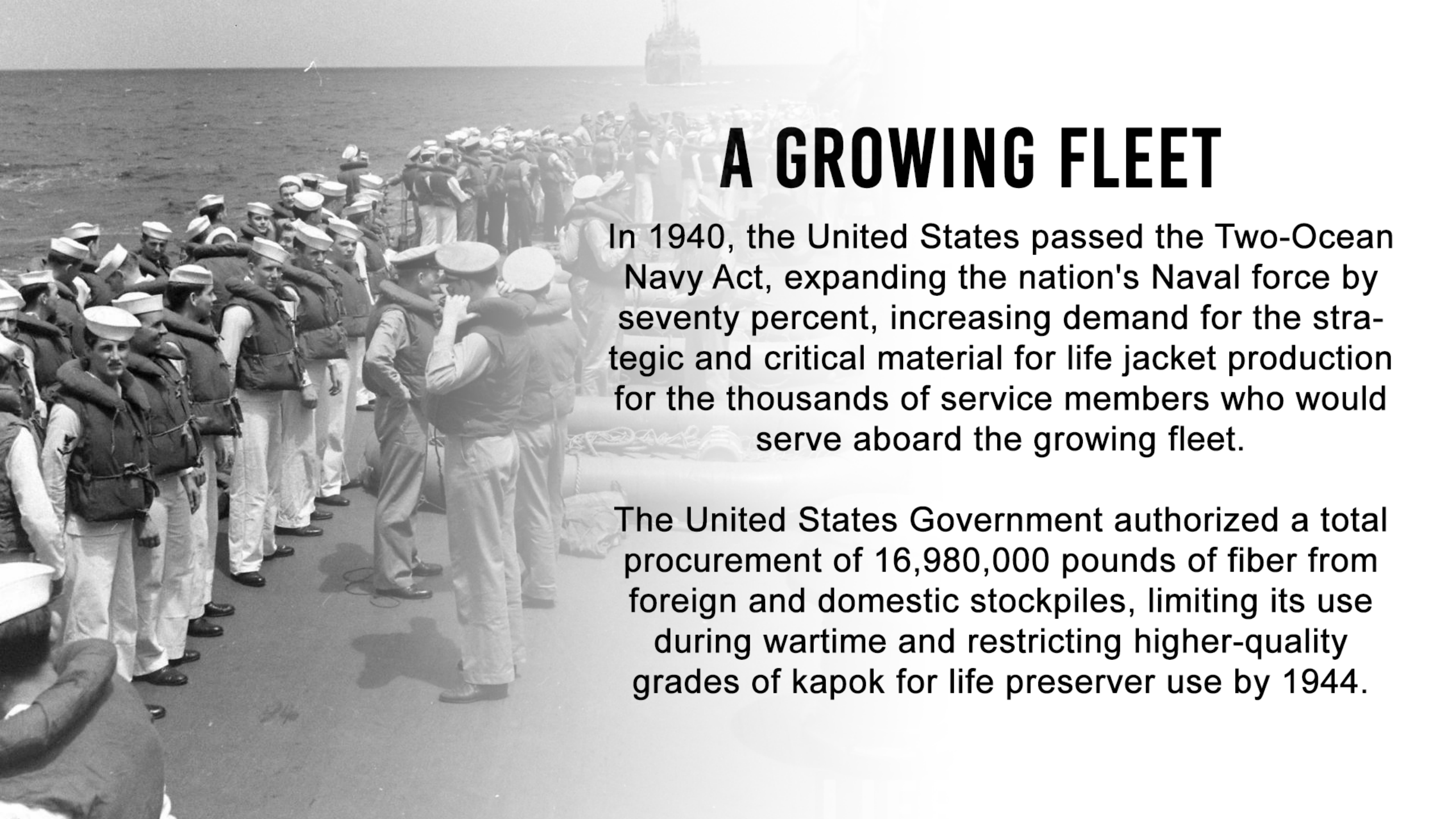
A black and white historical photograph showing a large group of World War I soldiers on a beach. Many of the soldiers are wearing life jackets, indicating they are preparing for or engaged in amphibious operations. They are pulling on ropes, possibly to move landing equipment or secure a beachhead. The soldiers are dressed in standard WWI military uniforms, including tunics and various styles of caps.

ESSENTIAL QUESTION

**HOW DID WORLD WAR I INFLUENCE THE USE
OF KAPOK LIFE JACKETS?**



KAPOK LIFE JACKETS IN WWII



A GROWING FLEET

In 1940, the United States passed the Two-Ocean Navy Act, expanding the nation's Naval force by seventy percent, increasing demand for the strategic and critical material for life jacket production for the thousands of service members who would serve aboard the growing fleet.

The United States Government authorized a total procurement of 16,980,000 pounds of fiber from foreign and domestic stockpiles, limiting its use during wartime and restricting higher-quality grades of kapok for life preserver use by 1944.



JOINING THE WAR

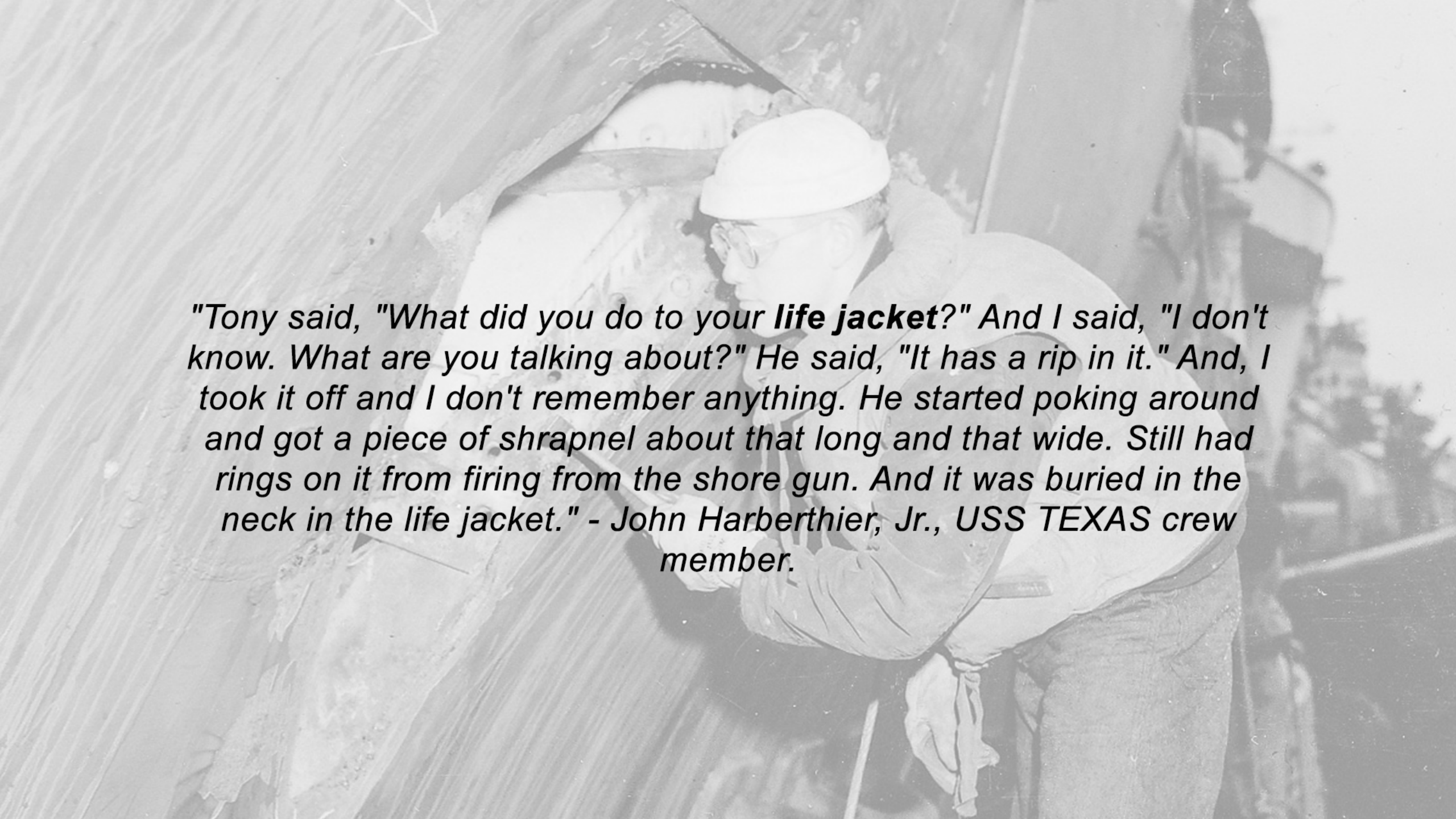
The continued expansion of the Japanese Empire throughout the Pacific in late 1941, following the attack on Pearl Harbor, meant the United States had lost access to the Dutch East Indies, the colony responsible for providing ninety-five percent of the country's imported kapok. This loss of a major supplier caused the United States to continue collecting and stockpiling as much of the resource as possible.

MORE THAN JUST A LIFE JACKET

As German shells continued to straddle the USS TEXAS on June 25, 1944, one sailor had noticed a rip in another sailor's kapok life jacket, and upon further investigation, discovered a piece of shrapnel lodged in the neck piece.

The life jacket had prevented the stray shrapnel from injuring the wearer, possibly saving his life without ever touching the water.





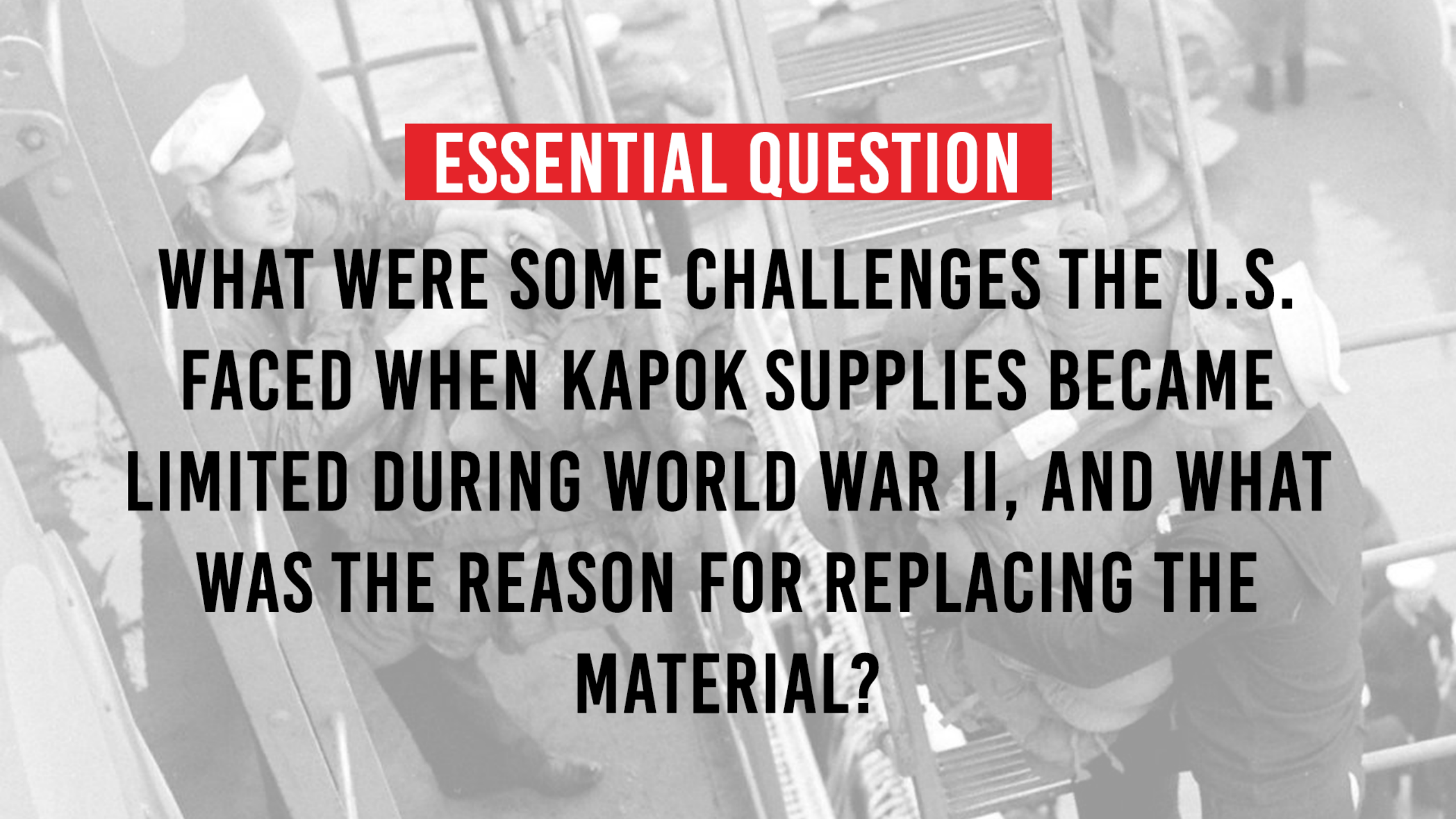
*"Tony said, "What did you do to your **life jacket**?" And I said, "I don't know. What are you talking about?" He said, "It has a rip in it." And, I took it off and I don't remember anything. He started poking around and got a piece of shrapnel about that long and that wide. Still had rings on it from firing from the shore gun. And it was buried in the neck in the life jacket." - John Harberthier, Jr., USS TEXAS crew member.*

REPLACING KAPOK

While kapok proved an excellent material for life jackets, the United States Navy searched for available substitutes throughout the war.

Investigations were done on alternative natural materials available in the country, such as milkweed floss, wax-treated cotton, and cattail floss, which showed promise but were never used in large numbers. Even synthetic alternatives, such as fibrous glass, underwent testing and evaluation, providing favorable characteristics. Adopting a fibrous glass filler as a replacement for Navy lifesaving equipment ended the use of kapok in future life jackets.



A black and white photograph of a ship's deck. In the foreground, a sailor in a white cap and dark uniform is looking down at something in his hands. To his right, another sailor is partially visible, also in uniform. The background shows the complex structure of the ship's deck with various metal beams, ladders, and equipment. The overall scene suggests a busy, industrial environment from the mid-20th century.

ESSENTIAL QUESTION

WHAT WERE SOME CHALLENGES THE U.S. FACED WHEN KAPOK SUPPLIES BECAME LIMITED DURING WORLD WAR II, AND WHAT WAS THE REASON FOR REPLACING THE MATERIAL?