Mine Warfare: A History of Power and Effectiveness

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July 15 marked the 76th anniversary of the commissioning of the Navy's first purpose-built minelayer USS Terror (CM 5) in 1942. Prior to USS Terror, mines were laid using a variety of vessels. The need for this designated minelayer showed the utility of sea minefields.

Sea mines have arguably been one of the most efficient and prolific weapons in naval history, and one of the most controversial. They are relatively inexpensive, easy to use, and can be dispersed in exceedingly large numbers and across great distances. They have shaped the battle space and blocked waterways during every major U.S. conflict since the American Revolution. But one aspect of mine warfare is often overlooked: method in which these mines were laid.

Sea mines were first used by the United States during the American Revolution. In 1777, Captain David Bushnell, of the Continental Army, created the first sea mine by hurling powder kegs into the Delaware River to strike and explode against the British warships at anchor near Philadelphia. These mines were extremely primitive and proved to be extremely dangerous, but failed to block the British forces. They were not stationary which meant the threat only lasted a few moments.

By the Civil War, sea mines had matured into a reliable weapon used for coastal defenses. These mines or "torpedoes" were placed underwater and armed by hand. They waited for unsuspecting ships to make the slightest contact with them, triggering an underwater explosion meant to rupture the ship's hull. They were more commonly used by the Confederate Forces, and sunk a total of twenty-seven Federal ships. Though as deadly as these mines were, they did not always stop the Union Navy. The Confederates laid approximately 90 torpedoes in defense of Mobile Bay.

USS Terror (CM 5) enters the water after being christened June 1941.

The Battle of Mobile Bay, 5-12 August 1864

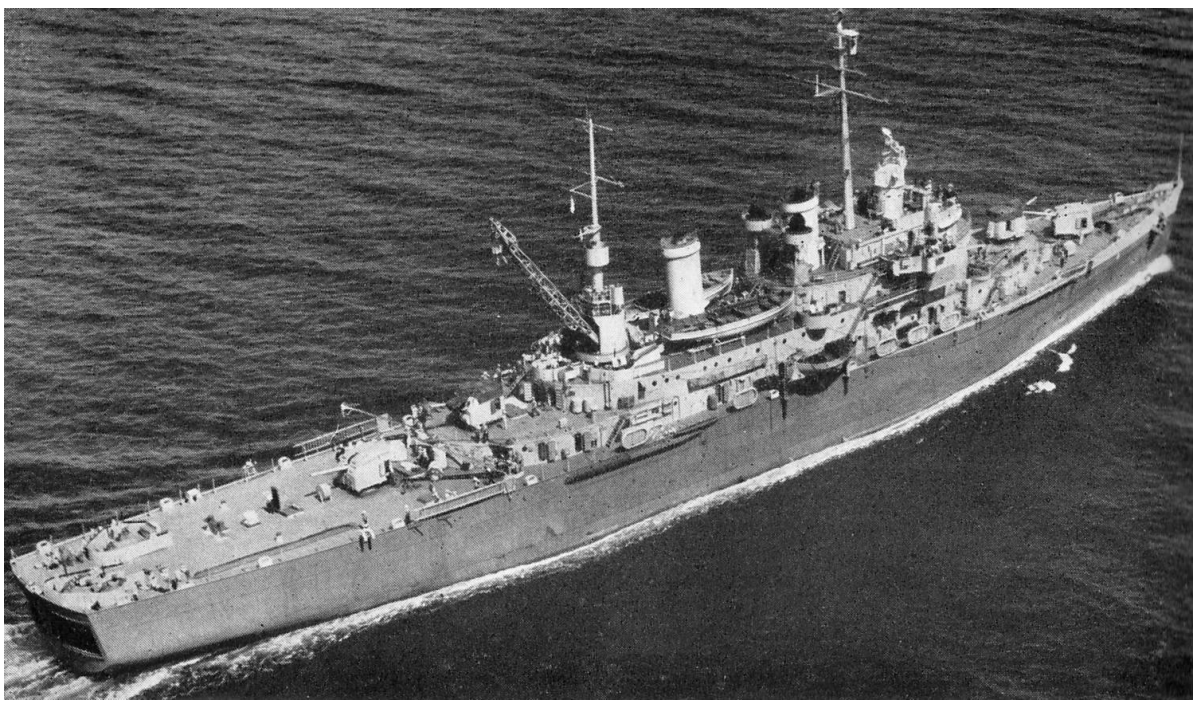
During the famous battle in 1864, USS Tecumseh struck a mine and was sunk. After seeing his lead ship destroyed, Rear Admiral David Farragut made a risky decision to continue with the assault, delivering the renowned order, "Damn the torpedoes! Full speed ahead!" He captured Mobile Bay and scored a major victory for the Union. Farragut correctly assumed that the remaining mines had become inert after being submerged underwater for too long. This Union success showed the need to maintain a minefield by laying fresh mines.

In World War I the Allied Forces developed a contact mine that would detonate when the steel hull of the ship would touch a copper wire antenna attached to the mine. These mines were highly volatile, and therefore; required constant "re-seeding". The U.S. Navy assembled a squadron of short-range minelayers that dropped mines around the clock. This massive logistic effort successfully sank six German U-Boats during the last month of the War, limiting the range capability of Kaiser's Navy.

World War II featured two types of mines – the first being the iconic contact moored mines – the black metal sphere covered with horns, suspended underwater by an anchor chain. Like its predecessors, this contact mine would detonate after making contact with a ship. The second mine – considerably more sophisticated – was the influence mine. It rested on the ocean floor and was activated by sensors that detected magnetic disturbances caused by metal ships passing above, or by the sound of the ship's machinery.

During the War, the United States and the United Kingdom produced more than 300,000 sea mines that were used in the waters surrounding Europe and in the Pacific. A total of 1,700 enemy ships were sunk by the explosive devices, crippling supply lines into both Japan and Germany. USS Terror (CM-5) was instrumental during this campaign in both Africa and the Pacific. Prior to her commissioning, minelayers were small crafts with limited ocean-going endurance. USS Terror's speed, size, and ability to transport massive amounts of munitions made her the perfect hub for mine warfare operations. She also demonstrated the need for a mobile mine warfare headquarters. On January 22, 1945, she became the flagship for the newly commissioned Commander, Minecraft U.S Pacific Fleet.

Mines circa 1909. These later developed into contact mines and influence mines in World War II.



USS Terror (CM 5) as flagship for Commander, Minecraft U.S. Pacific Fleet

As flagship, she coordinating all mining and de-mining efforts in the Pacific Theater, until being struck by a kamikaze on May 1, 1945. Though she was relieved as flagship, her accomplishments proved to be a huge military success that ultimately helped the Allies win the War and shaped the mine warfare command structure in place today.

Guest Blog written by MCMRON 3 (https://href.li/?http://www.public.navy.mil/surfor/comcmron3/Pages/default.aspx#.W05w8dMvxoM).

Information in this article is derived from the following sources:

July 1975 Naval Surface Weapons Center (NSWC) Technical Report on Mine Warfare History and Technology. (http://www.dtic.mil/dtic/tr/fulltext/u2/a017318.pdf (https://href.li/?http://www.dtic.mil/dtic/tr/fulltext/u2/a017318.pdf))

USS Terror (CM-5) Wikipedia page (https://en.wikipedia.org/wiki/USS_Terror_(CM-5) (https://href.li/?https://en.wikipedia.org/wiki/USS_Terror_(CM-5)))

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