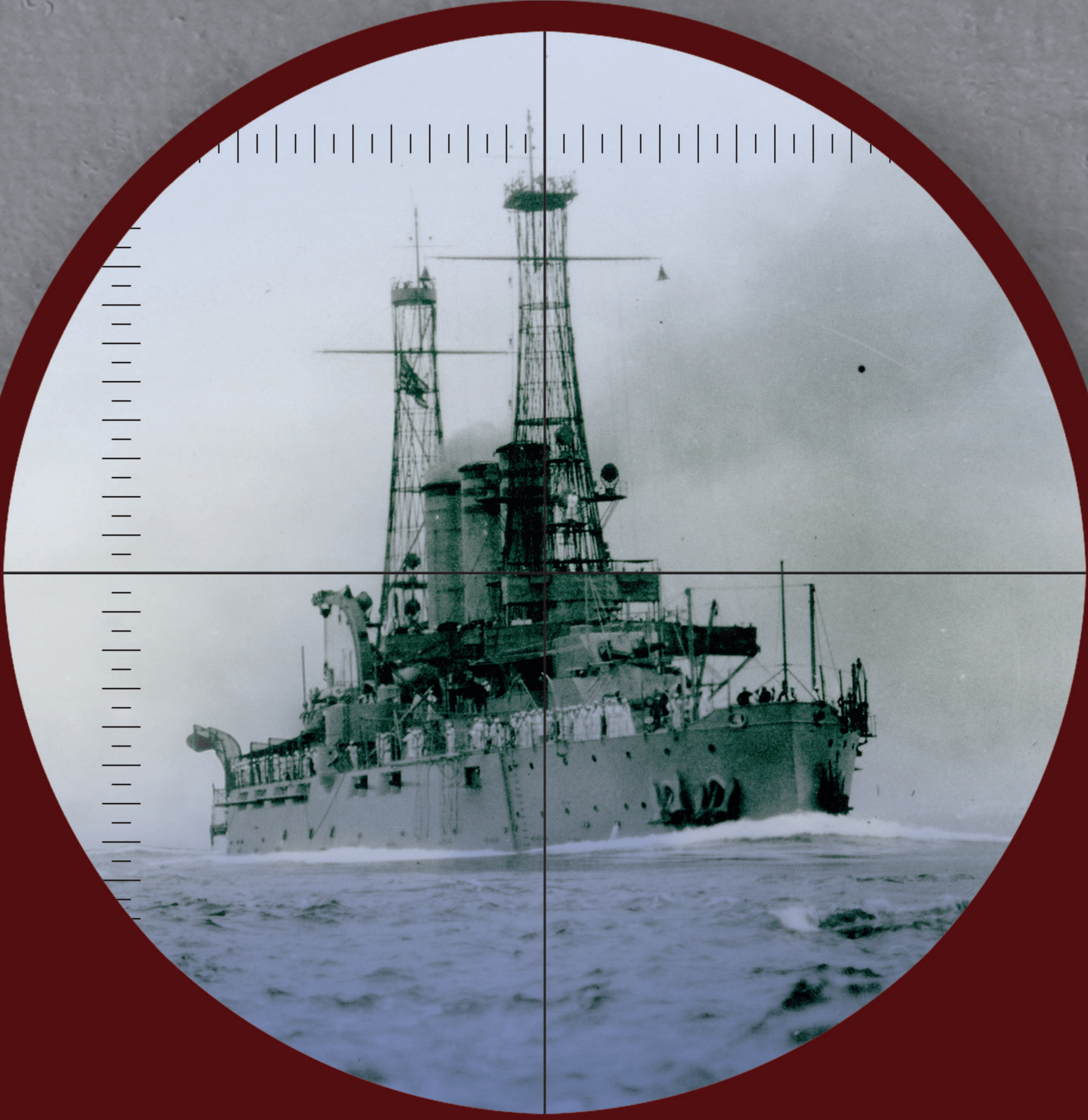


Deceiving the Eye



In Plain Sight



The U-boat commander peering through his periscope at a distant ship would predict its course by determining its orientation from distinctive features such as its bow and funnels, and estimate the distance by comparing its apparent length to its actual known length. With experience, these simple methods were highly effective.



Razzle Dazzle camouflage made it difficult to determine which side of the ship the observer was seeing by distorting the apparent position of distinct parts of the ship. Until the ship came near enough for the observer to see through the camouflage, it was almost impossible to accurately judge the target's heading.

Razzle Dazzle did not attempt to hide a ship, since the smoke of a ship's coal-fired engines made that impossible. Instead, it distorted a ship's appearance so U-boat commanders would incorrectly predict where to submerge and wait for their prey.

To execute a surprise attack, a U-boat had to dive and remain almost still while a target approached. Being in the right position required good planning and an accurate assessment of the target's course. Razzle Dazzle interfered with that assessment, leaving the U-boat well out of the target's path and torpedo range.



Jones' team developed an elaborate test theater that simulated the observation of ships in miniature. To recreate sea conditions, researchers viewed models from all aspects under varied lighting, through periscope-like optics.

America's Razzle Dazzlers

In March 1918, the U.S. Navy established a new department, the Camouflage Section — composed of artists and scientists, working in Design and Research Subsections, respectively — to develop and approve anti-submarine camouflage for Navy warships, and direct similar efforts in the merchant marine.



Harold Van Buskirk

Harold Van Buskirk was an architect and member the Submarine Defense Association, a research and development company making camouflage for the merchant marine. After joining the U.S. Naval Reserve, he was appointed to head the new Camouflage Section.



Everett Warner

Everett Warner — artist, art critic, and U.S. Naval Reserve officer — worked with Thomas Edison during World War I, before being appointed to head the Design Subsection, based in Washington, D.C.



Loyd Jones

Loyd Jones, chief physicist for the Eastman Kodak Company, was selected to lead the Research Subsection, based in Rochester, New York. There, Jones invented various methods for testing Razzle Dazzle designs in miniature.