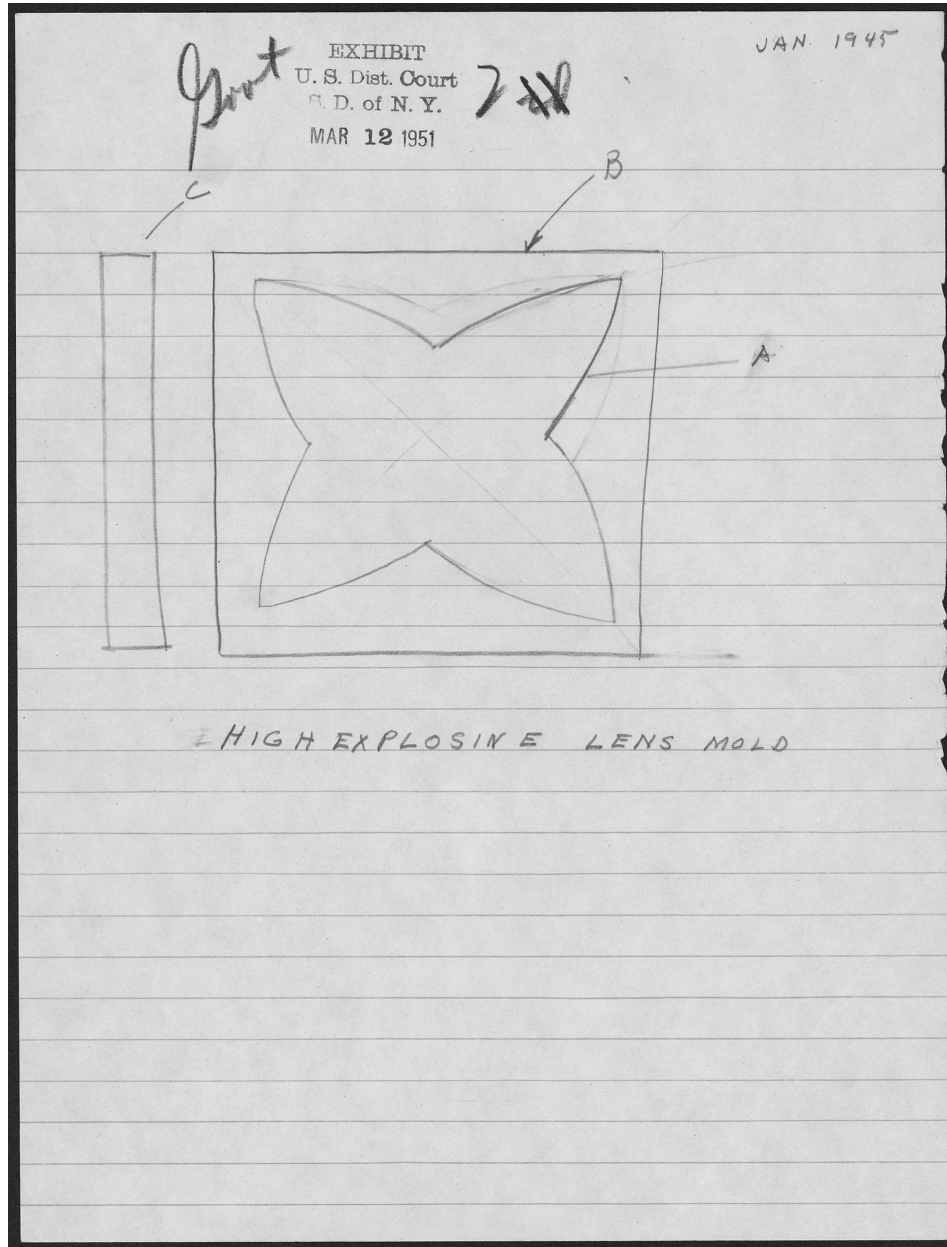


United States v. Rosenberg, et al.

Atomic Bomb Sketches Entered as Trial Evidence, 1951

Compiled for Echo & Chronicle. Both sketches below were reproduced by David Greenglass at the 1951 espionage trial and entered as Government Exhibits 7 and 8. They originate from Records of U.S. Attorneys, Record Group 118, held by the National Archives and Records Administration, and are public domain as work product of the federal government.

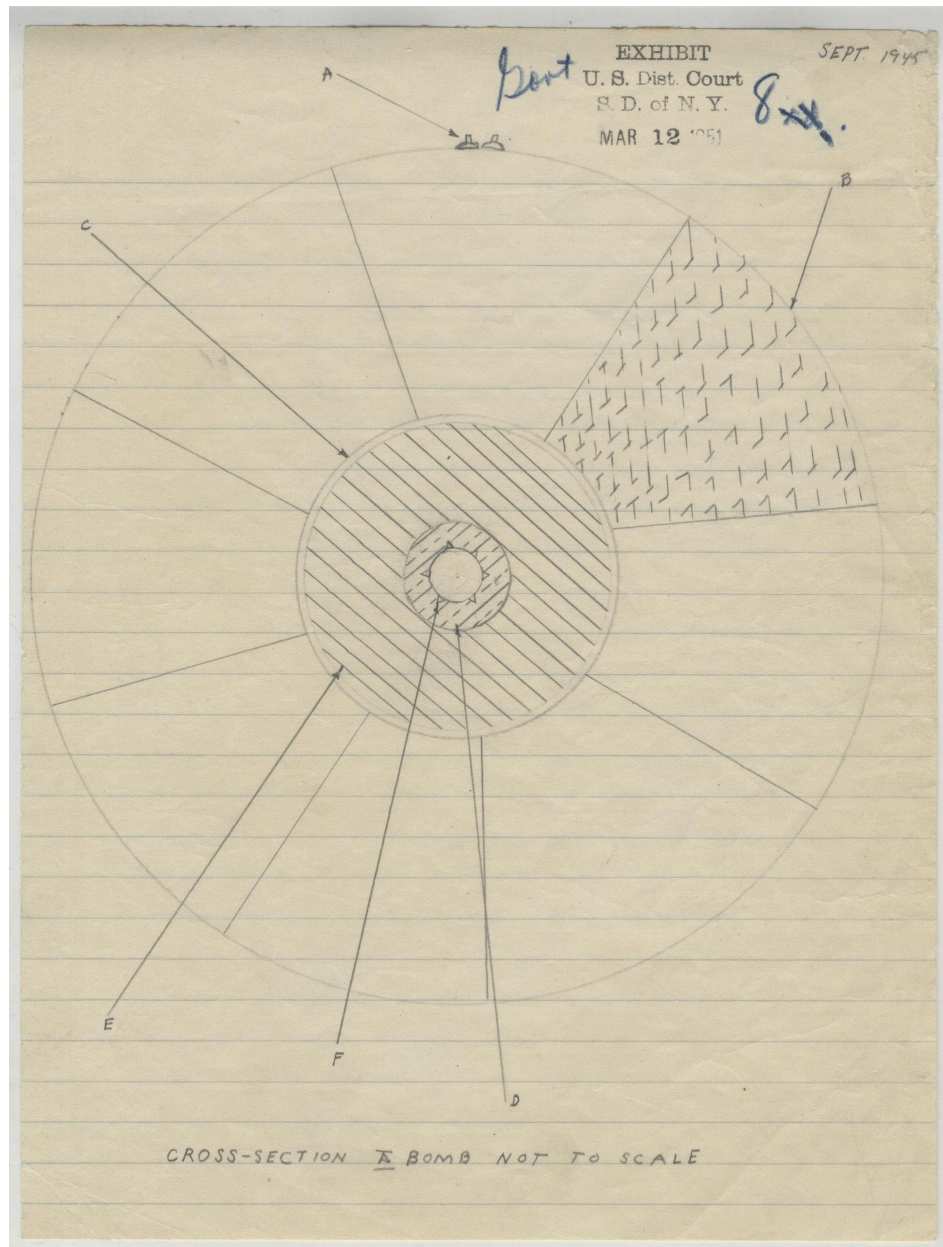
Government Exhibit 7: High Explosive Lens Mold Sketch



Reproduced by David Greenglass at trial, this sketch depicts the mold used to cast one of the precisely shaped high-explosive “lenses” that surrounded the core of an implosion-type atomic bomb. The four-pointed shape (labeled A, B, C) represents the cross-section of the lens segment; arranged in sequence around a sphere, these lenses were designed to focus an explosive shock wave evenly inward to compress the bomb's fissile core. Greenglass testified he passed an earlier version of this sketch to Julius Rosenberg in 1945 while stationed at Los Alamos.

Source: U.S. vs. Julius & Ethel Rosenberg and Morton Sobell, Government Exhibit 7, dated January 1945, entered into evidence March 12, 1951. Records of U.S. Attorneys, Record Group 118. National Archives Identifier 278747.

Government Exhibit 8: Cross-Section of Bomb Sketch



The most consequential document in the case. This is the cross-section sketch of an implosion-type atomic bomb that Greenglass testified he drew and gave to Julius Rosenberg in September 1945. The diagram shows the bomb's layered structure as concentric circles: the hatched wedge in the upper right represents one section of high-explosive material forming the outer shell, while the small marks at the very top (labeled A) represent the detonators set into that shell. The labeled arrows (B through F) trace inward through the explosive layer toward the dense metal tamper and, at the center, the fissile core. The handwritten note "not to scale" appears beneath the title. Physicists including Harold Urey and J. Robert Oppenheimer later said this sketch, on its own, was too vague to meaningfully advance Soviet bomb design.

Source: U.S. vs. Julius & Ethel Rosenberg and Morton Sobell, Government Exhibit 8, dated September 1945, entered into evidence March 12, 1951. Records of U.S. Attorneys, Record Group 118. National Archives Identifier 278753.