



Trinity atomic bomb test, Alamogordo, July 1945

The Gadget

*We knew the world would not be the same.
A few people laughed, a few people cried.
Most people were silent.*

Robert Oppenheimer

A HUNDRED FEET BELOW, THE Scientists are taking bets on whether they are about to trigger The End of the World. Meanwhile, high up in the tower, the Engineer is just trying not to shit his pants.

He is in the midst of a torrential rainstorm. Thunder and lightning are striking all around the steel-roofed tower, rattling the crudely built shack's thin, corrugated metal walls and periodically lighting up the dark, moonless night.

And he is sitting next to an atom bomb.

In the curious way that scientists and engineers like to familiarize their inventions, they had nicknamed it 'The Gadget.'

A spherical, grey, five-ton steel contraption criss-crossed by a complex array of cables, switches and detonators and suspended from an steel beam in the tower's cramped wooden shack, it was more officially known as a 'Y-1561 plutonium implosion device' — one of three such weapons in America's fledgling nuclear arsenal as of mid-1945.

Because he was still in his mid-twenties and childless — and therefore considered the most expendable among the team — the Director had chosen the Engineer to climb up into the tower at nightfall to 'babysit' the bomb and prevent any attempts at sabotage.

The tower was open to the west. Peering out into the night, the Engineer could look out across the desert the Spanish called *Jornada Del Muerto* (*Journey of Death*) contemplating the chain of events that had led him here to New Mexico — if scarcely capable of imagining those soon to come.

230 miles northwest lay Los Alamos, where 2,500 scientists and technicians had assembled the bomb—a mere fraction of the 130,000 workers involved in giving it birth. 300 miles beyond that was Uravan, Colorado, where the bomb's uranium was mined and milled by Indian workers uneducated to the dangers of radioactivity. (The town would become so deadly that it would later be demolished down to its last boarding house.)

And still further, the Hanford Reservation, where a huge, hastily-built reactor produced the plutonium core now sitting in the heart of the bomb. (It would later be deemed the most toxic site in the Western Hemisphere.)

Due west was Nevada, where over 900 more nuclear bombs would be exploded over the following decades. And 6,000 miles beyond that, Tinian Island, where three weeks later a B-29 would carry a bomb named 'Little Boy' 1,300 miles further north to a city called Hiroshima—where a man named Tsutomu Yamaguchi would watch it kill 140,000 people.

Just three days later, another bomber would carry 'Fat Man'—a nearly-identical twin of the Gadget—to another city called Nagasaki, where the badly-burned man would arrive home with the terrible news, just in time to witness a second city incinerated and 74,000 lives extinguished.

And finally, beyond Japan lay Russia ... The Cold War. The threats. The near misses. The endless proliferation. The warheads that would be cranked out like mere 'gadgets'—over 125,000 in all—at a cost of trillions of dollars. The weapons stockpiles that would accumulate in ever growing accuracy and lethality, as schoolchildren the world over were taught to cower beneath their desks in anticipation of a threat too frightening for even their parents to comprehend or explain.

But that was all in the uncertain future, and the Engineer had more immediate concerns. Nobody knew for sure that tomorrow's test would even work. (Hadn't an unarmed run three days ago indicated that it would likely fail?... And hadn't the detonating unit also failed the following day?... And as the triggering device's designer, wasn't the Engineer himself to blame for the failures?)

Worse yet, no one knew if the bomb's core had been damaged when the Gadget broke loose while being raised up the tower, falling 50 feet onto a pile of mattresses.

But the Engineer needn't have worried. The rain would stop. The clouds would part, and he would join the nervous, chain-smoking Director, the General and the others, taking his appointed place at the 'chicken switch'—the only person capable of stopping the test once the final countdown began.

Generously sharing his suntan lotion, the Physicist would solicit bets on whether the bomb might accidentally cause the atmosphere to ignite—and if so, whether it would incinerate only Nevada or the entire planet.

And on the fateful morning of July 16, 1945, for the first time in Earth's 3-1/2 billion year history, there would be two sunrises in the same place: Alamogordo, New Mexico—one natural, one man-made.

Shortly after midnight, the phone finally rings. The Engineer can barely make out the Director's faint voice through the makeshift phone line, but the message is clear enough.

Glancing once last time at the dark, foreboding sphere, he makes his way down the ladder, the Director's message replaying in his mind: "It's all clear!... The danger has passed!... *You can come down now.*"

Nearly a century later, an anxious World still awaits its own 'all clear' phone call. ■