

THE SECRET LAB IN TUXEDO PARK  
THAT CHANGED THE WORLD

A PEEK INSIDE  
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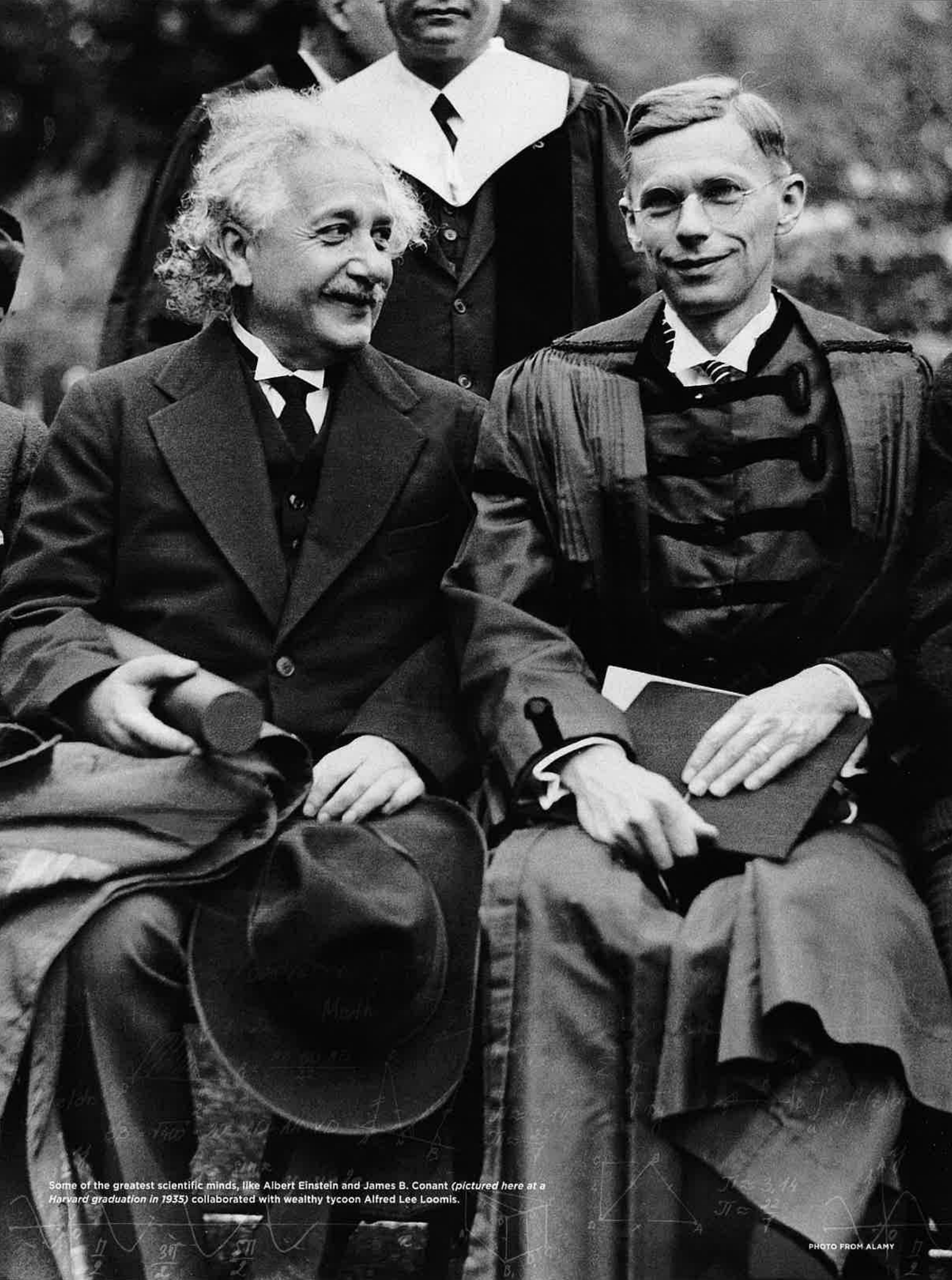
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Some of the greatest scientific minds, like Albert Einstein and James B. Conant (pictured here at a Harvard graduation in 1935) collaborated with wealthy tycoon Alfred Lee Loomis.

# THE SECRET LAB IN LAB IN TUXEDO PARK

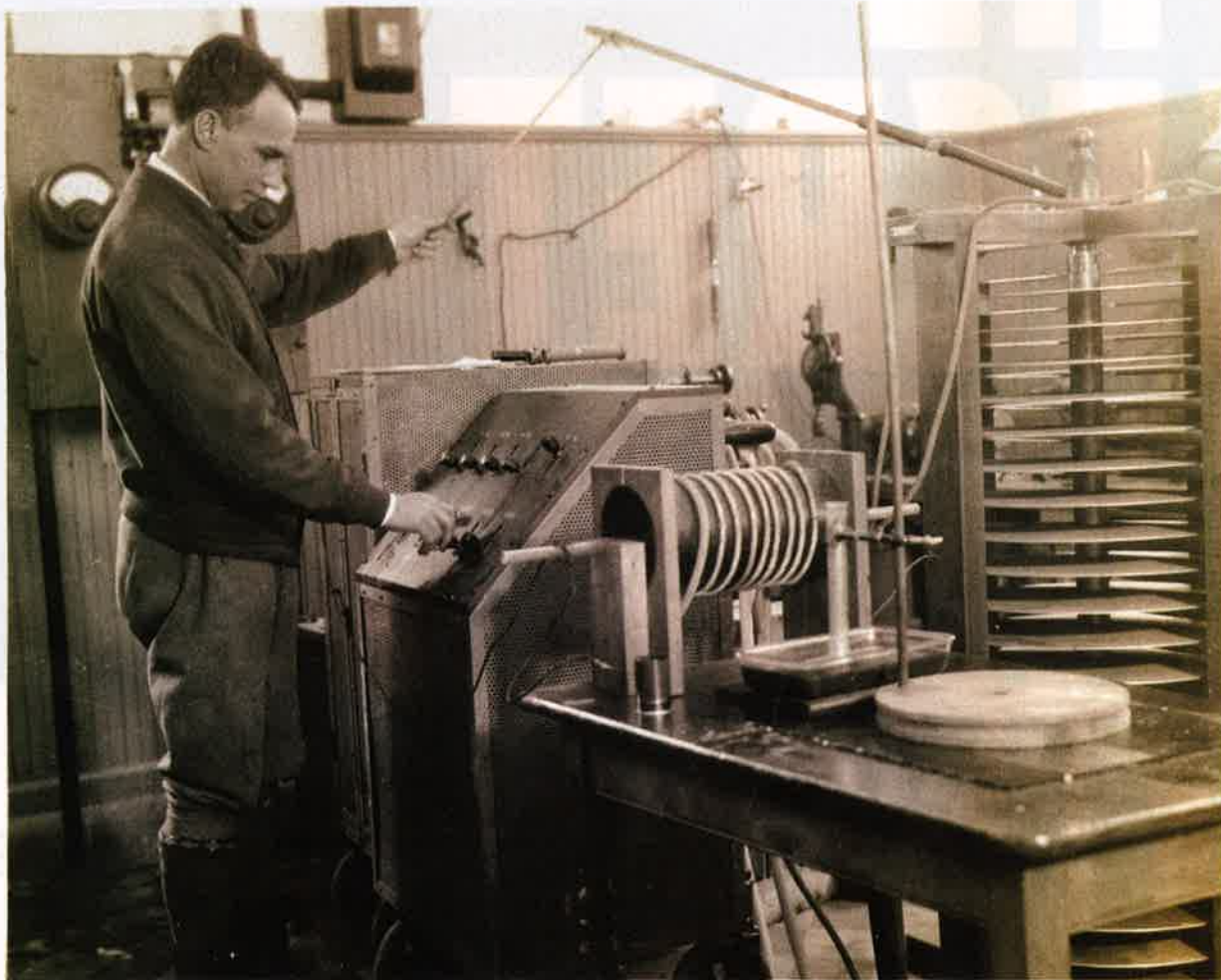
**T**uxedo Park, the tony, grandly gated community in Orange County, wasn't named after the fancy dinner jacket. It was the other way around. Tuxedo comes from a Lenape word, *tucsedo* or *p'tuxseepu*, which means crooked water or crooked river. The area was first used as a hunting grounds for the well-heeled in the late 19th century. They liked it so much, some of them decided to live there, creating one of the wealthiest addresses in the wealthy Gilded Age. When the gentlemen of the day adopted a new style of dinner jacket, fresh from Savile Row, at an annual ball, the jacket from that day forward took the name of the town. The place was so extended-pinky swank, it's where Emily Post wrote her famous *Etiquette: The Blue Book of Social Usage*.

All of which is to set the tone for what happened here, in this rare air, in the 1920s and 1930s, when one of Tuxedo Park's own, a scion of money who made vastly more of it, was leading a secret life.

The man was Alfred Lee Loomis. His friends knew he was an amateur scientist who, for years, had funded a laboratory in the "Tower House" of his stately mansion. What his peerage peers did not know,

A PALACE  
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ROLE IN  
WINNING  
WWII.

BY DAVID LEVINE



(Above) Alfred Lee Loomis in his Tower House lab in Tuxedo Park

however, was that, as war in Europe loomed, he was deeply involved in helping the United States play technological catch-up with Germany. He sat in on early meetings of the Manhattan Project, and his work, in conjunction with the world's greatest scientists and the federal government, led to the creation of radar, without which many believe the Allies may have been defeated. Yet the story of this secret lab and this eccentric genius was virtually forgotten until only recently.

### Explosions Rattle the China

Jennet Conant remembers hearing stories about the lab from her grandfather, James B. Conant, a noted chemist, president of Harvard, and the key scientific advisor on the Manhattan Project. He had worked with Loomis on the National Defense Research Committee's Microwave Committee. The Council's mission was to oversee scientific research directed toward the impending war effort. But James

Conant didn't talk much about this. "Every now and then, if other scientists came over for a drink and to reminisce, they would refer to this Wall Street tycoon who played this incredible role in the war," Jennet Conant says. "Loomis operated on a plane so far above what academic scientists could — the money and influence, and boundless confidence. This amazed and amused my grandfather."

Later, as an accomplished journalist, Jennet Conant set out to document the story, and published *Tuxedo Park: A Wall Street Tycoon and the Secret Palace of Science that Changed the Course of World War II*, in 2002. The story was so outrageous, even esteemed experts found it hard to believe Loomis had accomplished so much, until they were presented with documented evidence. "A lot of people were like, 'I can't believe I never heard of this before,'" says Rob Rapley, the director of the film, *The Secret of Tuxedo Park*.

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— Jennet Conant



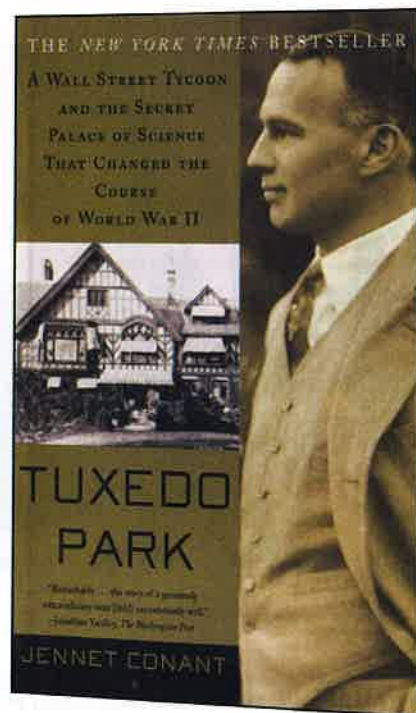
(Above) James Conant (front, center) at a meeting at the Radiation Laboratory, with some of the country's leading scientists (from left) Ernest Lawrence, Arthur Compton, Vannevar Bush, Karl Compton, and Alfred Lee Loomis

Alfred Lee Loomis was born with the bluest of blue blood in 1887. Phillips Academy, Andover, Yale, Harvard Law School, hereditary member of the Rhode Island Society of the Cincinnati, married to a society gal, corporate lawyer, extended pinky. But his passion was science. During World War I he was a ballistics expert and invented a gadget called the "Loomis Chronograph" to measure the muzzle velocity of artillery shells.

After that war he left the law and switched to finance, making gobs of money funding the electrification of the country. In 1926, he bought an empty, 16,000 sq ft Tudor mansion, built around 1900 for the financier Spencer Trask. A year later, Loomis foresaw economic troubles ahead, and converted all his assets to gold — thereby avoiding the Crash of 1929, and then buying up lots of distressed stock in its aftermath and making even more gobs of money.

With more cash than most major universities, he turned the mansion's tower into, arguably, the best-equipped lab in the nation. He flew in the world's leading scientists to collaborate, including — *quel scandale!* — Jews, like Albert Einstein and Werner Heisenberg, along with foreign undesirables like Niels Bohr, Enrico Fermi, and other future members of the Physics Hall of Fame. Don't think the neighbors weren't peeking through their silk curtains. "Tuxedoites took note of the odd comings and goings at the big house on the hill, and the lab and visiting scientists soon became the subject of rumors: 'Strange outlanders with flowing hair and baggy trousers were settling down for weeks and months on end,'" Conant writes in her book.

"I suppose it's an unlikely sanctuary because Tuxedo Park was





(Top, center) A present-day look at the building that was the Loomis Lab; (above) The leaders of the Manhattan Project (from left) Vannevar Bush, James Conant, and project director Gen. Leslie Groves, with civil engineer Franklin Matthias on a trip to inspect the Hanford, WA, plutonium production site.

a residential community for the elite,” says Johanna Yaun, Orange County Historian. (It should be noted, though, that later on, during the war years, “when many Jewish scientists were forced to flee their homes, Tuxedo Park became a sanctuary where they could live and continue their research under the patronage of Alfred Lee Loomis,” Yaun adds.)

During these years, Loomis and his staff published important papers in the fledgling areas of spectrometry, electro-encephalography, precise time measurement, and even sleep study. Einstein himself called the place “a palace of science.” Yet few knew what was really happening up in the Tower. “Guests would become upset when the china rattled when bombs went off,” Conant says.

### Radar Love

While much of America remained stridently isolationist, Loomis knew that war was inevitable. And he knew that the U.S. was woefully behind in terms of technology. He devoted his attention to a microwave radar system to detect airplanes, which he tested by loading equipment into a Tuxedo Park diaper truck, driving to a golf course, and aiming it at traffic.

President Franklin Roosevelt had created a science advisory board, the National Defense Research Committee (which included James Conant). Loomis was tabbed to head the microwave radar section, but his research wasn’t getting anywhere. Then, the Germans blitzed England. Learning that the British had advanced technology,



Loomis attended a 1940 meeting in Washington D.C. at which the British, with Churchill's blessing, turned over many of their trade secrets — including a key radar component, called a cavity magnetron, that was a thousand times stronger than any he knew of and which allowed radar equipment to be made small enough to fit into an airplane. Eureka!

This great advance, however, was the demise of his Tuxedo Park lab. Loomis was now in partnership with the federal government, which had more money than even he could raise. He packed up everything, found a building on the campus of the Massachusetts Institute of Technology, gathered together hundreds of scientists, including six future Nobel laureates, and spearheaded the MIT Radiation Laboratory, forever known hence as the Rad Lab.

He never set foot in his Tuxedo Park home again.

At MIT, the Rad Lab perfected radar technology that, among other achievements, helped sink German U-boats, guide and track parachute troops, and target land-

based batteries and incoming Luftwaffe aircraft during the D-Day invasion. "Once the Rad Lab was up and going, the scientists took over, and Loomis became more of an administrator," Rapley says. "But he had played a critical role in critical times. His finest hours are 1939–40, when no one else was paying attention and he was working frantically hard to counter the Nazi threat."

After the war, those who worked at the Rad Lab liked to say that the atomic bomb ended the war, but radar won it. By then, Loomis had dropped out of public view. This was partly because, well, that's how he was raised. "He was high society, where you should only be mentioned in the press three times — your birth, your marriage, and your obituary," Conant says. It likely also had something to do with the fact that for years he had conducted an affair with the young wife of one of his lab assistants. Loomis subsequently had his society wife declared incompetent and placed in an asylum, so he could obtain a quick divorce and marry his mistress. (*Quel scandale, part deux!*) They moved to Long Island, where they

lived quietly until his death in 1975.

The Tuxedo Park house changed hands a few times, was turned into apartments in the 1950s, and is now owned by developer Michael Bruno, owner of the Tuxedo Hudson Company. "It's a spectacular structure in excellent condition, and the location is within Tuxedo Park," Bruno says. "Doesn't get much better than that." He knew the home's history, but, "I didn't know the windows were Tiffany," he says. "We could probably sell them for nearly what we paid for the entire building, but I would never do that!"

Tenants occupy the now nine-unit building. "I'm currently living in Albert Einstein's old room," says Michael R. Coleman, Director of Community Outreach for the Orange Media Group. His roommate is John Watson, a US naval officer and inventor. Though all the old equipment is long gone, the presence of Loomis' secret lab remains, Coleman says. "You can feel the energy here, whether you are spiritual or not," he says. "I don't really believe in that, but there is definitely an energy here."