Determined to find a cheap way to produce aluminum, Charles Hall spent countless hours experimenting in his backyard shed. Once he succeeded, the mass production of aluminum required funding and a market. So Hall went off to Pittsburgh, where wealth and opportunity awaited him. He secured a meeting with the Mellon brothers, who welcomed new ideas like Hall’s, and invested in business ventures, the expansion of markets, and research and development.

The burgeoning aluminum industry, the expanding steel and rail industries, and the numerous other businesses serving the city required an ever-increasing workforce. These diverse and growing populations also fueled the city’s sophistication by supporting new cultural centers such as Oakland, which boasted libraries, museums, and public parks, as well as developing communities like the Hill District, which fostered a vibrant jazz tradition of national renown.

To showcase the qualities and potential uses for aluminum, Alcoa created aluminum violins. Although successfully used in some school and camp music programs, these violins never gained widespread use by musicians who preferred traditional wooden instruments.
The Union Trust Company, established by Henry Clay Frick and Andrew Mellon, downtown Pittsburgh.


The Mellon Family

Although Thomas Mellon immigrated to Western Pennsylvania in 1818 with his Scotch-Irish farming family, he left the agrarian path to pursue a business and intellectual life, and he encouraged his sons to do the same. Ever the overbearing presence, he sent his sons frequent, detailed letters of instruction when they were away from his watchful eye. In 1870 he opened T. Mellon & Sons Bank, cultivating his sons to take over.

It was his sons Andrew and R.B. Mellon, often called the first venture capitalists, who expanded the wealth and influence of the bank far beyond what Thomas ever imagined. Their innovative funding turned ideas into reality, encouraging growth and a concentration of ground-breaking industries in the Pittsburgh area. They also established the Mellon Institute, which used academic research and development to fuel industrial progress. Through savvy investments, the brothers secured a controlling interest in many of the region’s major industries.

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Marketing a New Metal: Aluminum

Aluminum existed before Charles Hall’s experiments in the late 1800s, but it was expensive to produce and used solely for luxury items. The initial investors in the Hall process—the Pittsburgh Reduction Company—saw potential in the light and versatile metal, but they needed more capital to fund research and create a demand for aluminum. The Mellons also believed in aluminum’s potential and supplied the necessary backing to expand facilities and enable production.

The next challenge was convincing industrial and individual consumers to use this new type of metal, which was initially an additive in steel. Owners of the Pittsburgh Reduction Company sought a viable commercial market in order to survive.

Although aluminum proved too soft for typical horseshoes, these lightweight metal shoes, produced in 1900, worked perfectly for horse racing.

Alcoa produced its own aluminum kettle after it failed to convince existing fabrication companies to take a chance on the new metal. This 1910 tea kettle demonstrates one of aluminum’s first successful uses.
Andrew Carnegie

Andrew Carnegie is remembered as both “overly proud of attainment and extremely fond of applause,” two traits that guided his shrewd business acumen and his grand philanthropic gestures. Known as the world’s most successful steelmaker, he amassed a fortune from his Pittsburgh companies throughout the late 19th century and garnered unparalleled wealth and worldwide recognition for the great sums of money he later gave away.
First Commercial Broadcast: KDKA

In the days when there were few regulations for radios, Westinghouse engineer Frank Conrad built a makeshift studio in his garage and played records over the airwaves. His supervisor at Westinghouse, Harry P. Davis saw Conrad’s hobby as a great way to sell more radios, and they applied for the first commercial radio license. On October 27, 1920, they received the call letters KDKA and set up a small studio in Westinghouse’s East Pittsburgh Works. On November 2, KDKA broadcast the presidential election results between Harding and Cox, credited as the first commercial radio broadcast.

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Elektro the Mechanical Man

Marguerite Smith had a date for the 1939 New York World's Fair. Seven feet tall and weighing over 250 pounds, he smoked cigarettes, could count to 10 on his fingers, and traveled with his little dog Sparko. Smith was one of several women who helped showcase the talents of Elektro the Mechanical Man made by the Westinghouse Electric Company. The Westinghouse Pavilion’s hourly show at the two-year long fair proved to be most memorable and crowd-pleasing. Visitors lined up to watch the world’s first voice-activated robot. He walked, talked, and could identify the difference between the colors red and green—all with eclectic electric charm and polite, pre-recorded conversation.
Father Cox’s Army

It’s 1932, three years after “Black Tuesday” and the stock market crash that led into the Great Depression. Thousands of Pittsburghers are jobless. Many live in a makeshift shantytown in the Strip District—their “homes” pieced together with scrap wood, tarpaper, and burlap. From his parish at nearby Old Saint Patrick’s Catholic Church, Reverend James Cox witnessed the suffering firsthand. In January 1932, he led nearly 25,000 unemployed Americans to Washington, D.C. His “army” garnered so much media attention that the country’s next president, Franklin D. Roosevelt, who made the poor a central focus of his campaign, actively sought Cox’s endorsement. Father Cox’s march also illustrated the growing role of the Catholic Church in addressing social issues of the day.

Gus Greenlee, 1896-1952

William Augustus Greenlee, born in North Carolina, moved to Pittsburgh just before the start of World War I. In 1917 he was drafted into the U.S. Army and served in the 367th Regiment as a machine gunner. Discharged in 1919, Greenlee returned to Pittsburgh where he drove a cab and sold liquor during prohibition. In the 1930s he opened the first Crawford Grill nightclub at Wylie Avenue and Townsend Street in the lower Hill District. In 1943 Crawford Grill Number 2 premiered at Wylie Avenue and Elmore Street. After Greenlee’s death in 1952 Joseph Robinson operated the Grill and then his son William “Buzzy” Robinson took over. In addition to nightclubs and running numbers, Greenlee owned the Pittsburgh Crawfords Negro League baseball team from 1930 to 1938. He built the first African American owned and operated stadium for professional sports, Greenlee Field, on Bedford Avenue.
Jazz at the Crawford Grill

Night clubs, dance halls, and other venues such as the Hurricane Club, the Ellis Hotel, the Webster Grill, the Blue Note, the Bamboola, the Savoy Ballroom, Harlem Club, and the Crawford Grill gave jazz a cultural footing in the Hill District and other areas of the city. More than any other, the Crawford Grill is known beyond Pittsburgh as a cultural landmark.

There have been three Crawford Grill restaurants over the years. The first opened its doors at Wylie Avenue and Crawford Street in 1931. In 1943, Joseph Robinson introduced Crawford Grill number 2 at Wylie Avenue and Elmore Street. In 1948, a third Crawford Grill opened on Bidwell Street and Pennsylvania Avenue.

Mary Lou Williams grew up in East Liberty. In the late 1940s and 1950s, her home on Hamilton Terrace in New York City was the gathering place for many jazz musicians including Bud Powell, Thelonious Monk, Dizzy Gillespie, Tadd Dameron, and others who played their compositions—creating the new sound of bebop.

Ahmad Jamal played piano by age 3, and at age 7 took lessons with Mary Cardwell Dawson, founder of the National Negro Opera Company located on Apple Street in Homewood-Brushton.
Journalist Frank E. Bolden, Jr.

Even as U.S. troops remained segregated during World War II, African American Frank E. Bolden was the only correspondent to interview U.S. President Franklin D. Roosevelt, British Prime Minister Winston Churchill, Soviet Premier Josef Stalin, India leaders Mahatma Gandhi and Jawaharlal Nehru, and founder of Pakistan Muhammad Ali Jinnah.

A reporter, writer, and editor for the *Pittsburgh Courier* from 1933 to 1962, Bolden was later assigned to the China-Burma-India Theater of Operations where he interviewed General Chiang and Madame Kai-Shek. He was one of two correspondents covering African American troops at Fort Huachuca, Arizona, and the Tuskegee Army Air Corps in Tuskegee, Alabama. At war’s end, Bolden was among the few correspondents cited by the War Department for “Distinguished Reporting during World War II.”

William A. Johnston, a native of Sewickley, served as a Second Lieutenant with the 15th Air Force of the 332nd Fighter Group of the Tuskegee Army Air Corps from 1944 to the end of the war. Afterwards, Johnston worked for the Federal Aviation Administration and flew as a corporate pilot.
An Invention Helps Win WWII

General Dwight Eisenhower called the jeep one of the three inventions that won World War II. Western Pennsylvania is the birthplace for the world-famous jeep, one of the most significant military inventions in modern history. In 1940, 19 months before America went to war, the U.S. Army requested bids for a reconnaissance car that would take the place of the horse and provide a go-anywhere gun platform. Big automakers such as Ford and Willys-Overland found the Army’s strict requirements for a lightweight, four-wheel drive vehicle impossible to meet in the 49-day deadline. But little American Bantam Car Company of Butler, Pa., thought it could do the job. Nearly bankrupt, the owners staked everything on the challenge. After five days of frantic brainstorming, Bantam presented the design for the vehicle that would help win WWII while revolutionizing the auto industry. Though Bantam developed the prototype, it couldn’t manufacture the jeeps in the huge volume needed by the Army and, ironically, the production contract went to Ford and Willys-Overland.
Rosie the Riveter

Westinghouse artist J. Howard Miller created one of the most iconic images of female empowerment. In 1942, Miller used a photograph of a Michigan factory worker as inspiration for his legendary poster showing a Westinghouse Electric worker rolling up her sleeves to lend muscle to the Allied war effort. The woman depicted in the famous poster, however, was not yet called “Rosie the Riveter.” Rosie herself actually originated in 1943 when a popular American song by Redd Evans and John Jacob Loeb coined the name. Shortly thereafter, Norman Rockwell’s painting, “Rosie the Riveter,” published on the cover of the May 29, 1943, Saturday Evening Post, contributed to the mythical figure’s popularity. Because of its wide distribution and powerful, aesthetic appeal Miller’s “We Can Do It” and the name “Rosie the Riveter” eventually became one in the same.

Using research funds from Westinghouse Electric Corporation, Clinton R. Hanna pioneered a gun stabilizing device in 1940 that allowed American tanks to fire accurately while in motion. Using a gyroscopic principle he had developed for use in steel mills, Hanna’s gun stabilizer eliminated 96% of the jars and jolts that caused moving tanks to fire off-target. The technology gave the Allies an advantage over German tanks, which had to stop in order to fire accurately. Clinton Hanna received a presidential citation for his invention in 1942.