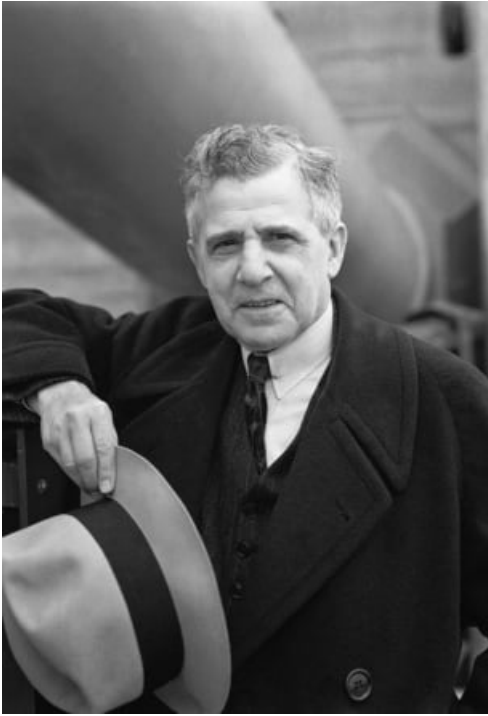

Joseph Baermann Strauss – the man who built the world’s most beautiful bridge

28 April 2018 | Alexandra Felts

As the Statue of Liberty is the landmark of New York, the Golden Gate Bridge is that of San Francisco — and it has been for the past 80 years. This spectacular suspension bridge was conceived by a small man who thought big, Joseph Strauss, and who dreamed of building bridges from a very young age...

One of the greatest attractions of the 1915 San Francisco World Exposition was the Aeroscope, a giant steel apparatus built on the principle of the folding bridge, which lifted 100 passengers over 60 metres in the sky and provided them with a magnificent view of the Golden Gate entrance to the bay. For a long time, the city wanted direct access across the Golden Gate, much to the chagrin of the ferry companies and the railways, but a viable solution was never offered — that was until Joseph Baermann Strauss, an engineer from Ohio, brought his Aeroscope to town. Built on this framework, the Golden Gate Bridge was completed in spring of 1937, and all of San Francisco came out to celebrate the spectacular 2.7km-long suspension bridge. It was — and still is — a West Coast landmark, with a bold and timeless elegance that rivals even that of the Statue of Liberty.



Born in Cincinnati, Ohio, in 1870, Joseph Strauss, the son of German-born Jewish immigrants, announced at a very early age that he would one day build the largest building in the world. In his school thesis, the budding engineer, who hailed from an artistic family, stunned his professors at the local university with the concept of a railroad bridge spanning the Bering Strait to connect Alaska and Russia. Although that bridge never came to fruition, after graduation, Strauss worked as an assistant at the university and as a draftsman, until, at barely 30, he found work in a design office in Chicago and was involved in drafting several drawbridges across the Chicago River. In 1904, he went out on his own and began designing suspension bridges.



At just 5ft 1in tall, Joseph Strauss was often 'diagnosed' with a Napoleon complex — not least by Charles Ellis, the structural engineer and mathematician behind the designing of the breath-taking bridge who was unrecognised for his work due to a dispute with Strauss. A typical visionary, Strauss didn't tolerate any criticism from neither friend nor foe. Although, it must be said that the young engineer, whose design firm had already worked on the Arlington Memorial Bridge across the River Potomac in Washington, D.C., did have to endure many a challenge — even before construction began. In 1933, there were political and social protests over funding the bridge due to the ongoing Great Depression. And once that was dealt with, Strauss had to tackle the issue of the environmental unrest in the area, as the region is known to be hit by earthquakes and hurricanes, fog is an everyday occurrence, and the current is very fast, reaching up to seven knots.



Strauss had originally designed a kind of cantilever bridge in 1921 but had eventually abandoned the concept, which would have become too expensive, too heavy, and too lengthy — not to mention that many San Francisco residents found the design ugly — in favour of a bridge that could be stretched between two piers. Never before had such a long suspension bridge been built — more than a million rivets and 130,000 kilometres of the strongest steel cables ensure that it stretches just under 70 meters over the Bay of San Francisco. Underwater steel chambers were created to anchor the mighty pillars in the seabed — a difficult task for the underwater welders, who had to fight the strong current and the changing of the tide.



Of the approximately 200,000 commuters crossing the toll bridge today, few realise that this was one of the most dangerous jobs in the world at the time. Ten lives were taken before the completion of bridge, when a scaffold overturned and catapulted the workers into the bay. “This bridge lives — it’s an organism that breathes,” an observer is said to have called out at that time. But the uncompromising and committed Strauss continued with the project, enforcing helmets to be worn on the construction site — one of the first to do so — and installing a safety net. Supposedly, the “Halfway to Hell Club” was created by those who repeatedly found themselves crashing into it — better than the alternative. In 1934, halfway through construction, a major earthquake hit the bay, and although the rudimentary buildings wavered, they still stood after the shock.



If the United States Navy had its way, the Golden Gate Bridge would've been painted black and yellow. But the builders had their own vision, and the landmark was painted the legendary International Orange, a colour it still wears to this day. Even though a bank had invested around 30 million dollars to secure the start of construction of the bridge, the city was unsure of how it could afford to maintain the massive landmark. Ever the problem solver, Strauss suggested a toll for all those who cross, and so it has been for the past 80 years. While a great achievement, it had its own toll on Strauss, and he died shortly before the opening of the bridge. In his honour, a bronze image of the great man was to be erected on his *chief d'oeuvre*, but unfortunately, the decision was overturned by his many adversaries. Not to have the great man go unrecognized, his widow financed the building of the statue in 1941, which still overlooks his masterpiece to this day and bears the inscription: 'Joseph B. Strauss, 1870-1938, The Man Who Built the Bridge'.

Photos: Getty Images

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