

Brooklyn Bridge

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Completion Date

1883

Project Type

Bridges

Location

New York, NY

70 42 22.0 N, 73 59 48.8 W

On May 24, 1883, with schools and businesses closed for the occasion, New York celebrated the opening of the Brooklyn Bridge. Also known as the Great East River Bridge, it was built over 14 years in the face of enormous difficulties. Deaths, fire in the Brooklyn caisson, and a scandal over inferior materials all added to the turmoil. The bridge is one of the most well-recognized symbols of American engineering, and remains the unofficial Eighth Wonder of the World.

John A. Roebling designed the bridge, but died before construction began. His son Washington Roebling was then appointed chief engineer, but became ill during construction; so his wife Emily Roebling took on some of his duties. It is possible the bridge would not have been completed without her meticulous efforts in inspection and management.

Facts

- The suspension system was initially designed in iron, but was changed to steel to reduce the dead load weight.
- The bridge's 1,595.5-foot span broke all world records for span length.
- The 276.5-foot towers took three years to complete and were higher than New York's tallest office building.
- This was the first time that galvanized steel wire was used in cable construction. The four cables are each nearly 16 inches in diameter and each contains over 5,000 galvanized steel, oil-coated wires.
- "To guard against vertical and horizontal oscillations and to ensure that degree of stiffness in the flooring which is absolutely necessary to meet the effects of violent gales in such an exposed situation, I have provided six lines of trusses." John Roebling, 1854, Brooklyn Bridge proposal

- Men known as cable-spinners would use a four-foot-wide swaying catwalk to supervise workers as they inserted wires into the cables.

The deck was originally divided to provide two elevated railroad tracks, two trolley car tracks, a single-lane road, and a 15-foot-wide walkway.

Resources

- 1.** Alan Trachtenberg, Brooklyn Bridge: Fact and Symbol (Chicago: University of Chicago Press, 1965, 1979)
- 2.** David McCullough, The Great Bridge: The Epic Story of the Building of the Brooklyn Bridge (New York: Simon & Schuster, 1972; paperback edition by Avon Books in 1976); 1983, Simon & Schuster.
- 3.** Dogancay, Burhan, Bridge of Dreams : The Rebirth of the Brooklyn Bridge
- 4.** Pascoe, Elaine, The Brooklyn Bridge (Building America), 1999, Blackbirch Marketing.



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