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STORIES of New Jersey

John Augustus Roebling, son of a tobacco manufacturer, was born in 1806 in Muhlhausen, Germany. His mother had great ambition for this boy, her youngest son, and by many sacrifices, managed to have him educated at the Royal University of Berlin. Roebling distinguished himself in the studies of engineering, architecture, bridge construction, hydraulics and philosophy. Shortly after his graduation he decided to join 60 or 70 others in migrating to the new land of promise--the United States.

On arriving here in August, 1831, the group decided on farming for their future. Some turned to the Southland with its great plantations. Roebling, with others, because of their strong opinions against slavery, decided on the North and purchased 700 acres on the slope of the Allegheny ridge, about 25 miles from the then new town of Pittsburgh. There they founded the village of Germania, now called Saxonburg.

These were the days when new transportation methods were being developed to carry goods to the ever-widening frontier. Railroads were in their infancy, but lumbering canal boats loaded with coal and merchandise were hauled along artificial waterways by mules and horses. This captured the interest of the engineer in Roebling who had discovered that he had little talent for farming. In 1837 he got a job as Assistant State Engineer, and soon he was building dams and locks on the canals. The problem of sending the freight boats over mountains interested him immediately. At the base of a mountain these boats were floated into cradles that were hauled up by ropes to the next water stretch. Occasionally the rope, however stout, would break, and cradle, boat, cargo and passengers would go crashing down the mountain.

Roebling remembered having read that a German had twisted strands of wire into rope and decided to develop the idea. He purchased a quantity of steel wire, went back to his farm in Saxonburg and taught his friends and neighbors how to weave it into rope. His methods were crude but the result was startling: the wire rope held under great loads, and it was flexible enough to pass over the windlass. Soon this strong, tensile wire rope was replacing hemp rope for hauling tow boat cradles and for tow lines.

Canals sometimes had to cross natural rivers over which wooden aqueducts had to be built. These were costly and unsafe, for frequently their supporting piles and abutments would be crushed and destroyed by ice in the river. Roebling conceived the idea of a cross-river aqueduct suspended from wire cables anchored to the land. This, he argued, would be much safer because it would eliminate piers and posts in the river.

Learning of a new canal to be built across the Allegheny River at Pittsburgh, he laid his plans and calculations before the engineers. He frankly admitted that what he was proposing had never been done before and he was staking his reputation on its success. He finally persuaded them that the advantage to be gained justified the risk. The project proved so successful that Roebling received many commissions for similar cross-river aqueducts, several of which are still in use.

It was but a step from a suspension aqueduct to a suspension bridge, but Roebling realized that he would need larger shops, machinery and possibly, mills to develop the ideas that were taking shape in his mind. His friend Peter Cooper had iron foundries in Trenton and urged him to locate there. In 1848 he