

STORIES of New Jersey

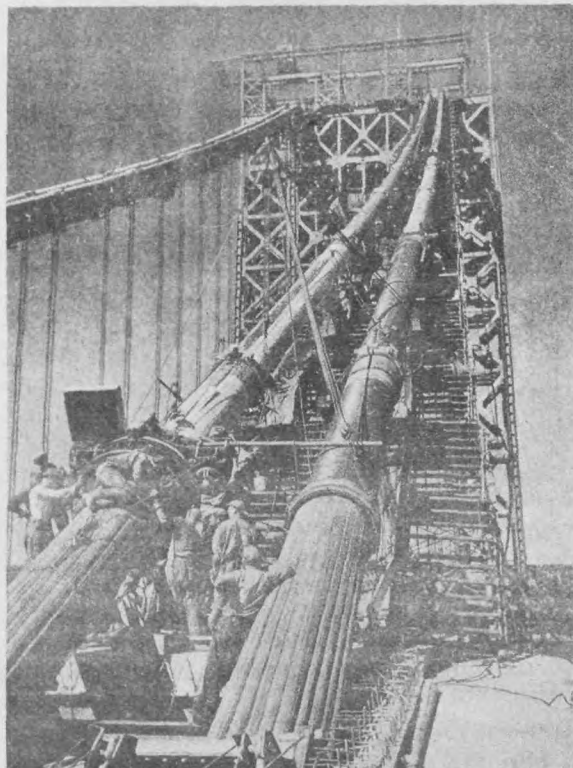
Brooklyn Bridge was a reality. Colonel Roebling remained partially paralyzed till he died at the age of 84 in 1926.

About 1900 Colonel Roebling and his brothers, Ferdinand and Charles, decided to withdraw from the competitive field of engineering contracts and concentrate all the energies of the firm on the perfection of its products.

While the name of Roebling is generally associated in the public mind with huge wire cables and wire rope and it still continues to make these, the company also makes a wide variety of wire, covering almost every commercial and technical field, from the four and one-half inch diameter steel wire rope, down to the infinitesimal wire in the eye piece of the telescope.

Wire can now be drawn so fine that it would take many strands to equal the thickness of a human hair. Perhaps the most amazing of the products of the industry are the cables of copper wire used in the telephone service. For these the individual wires are covered with paper of various colors, which acts not only as a protection but enables men at the opposite ends of a long cable to identify the wires with which the connection is to be made. Steel wires about the size of the common lead pencil, seem like a fragile substance from which to suspend great bridges. Yet these wires, when woven into cable, can support many times their own dead weight.

MODERN BRIDGES



Wrapping Parallel Cables

The ever-present question-- which is the largest bridge--may be answered in several ways. If we judge by length of span, the distance between the towers, the new Golden Gate Bridge at San Francisco, with its main span of 4,200 feet and its total cable length of 7,640 feet from anchorage to anchorage, is the largest in the world. Measured in cable strength, the George Washington Bridge is the largest even though the span is only 3,500 feet and the cable length from anchorage to anchorage is 4,200 feet. But its cable strength is 350,000 tons as compared to the 193,304 tons for the San Francisco Bridge. The George Washington Bridge is not yet complete. Its massive cables are designed to support a second roadway when required by increasing traffic.

Because of their great size, bridge cables are spun on the site. Every reach of the wire is laid flat and separate and when all are in place they are bound together in strands. There are 61 strands in each of the four cables.