small screw coupling, which can never unscrew, the invention of
Colonel Roebling and A. V. Abbott. At the anchorage the wire "re-
turns" around a "shoe," and so is carried from shore to shore until
the cable is complete. It is then closely wrapped, forming a solid
cylinder 15\(\frac{3}{4}\) inches in diameter. The total length of each cable is
3,578 feet, and it contains 3,589 miles of wire.

Upon the four great cables thus composed, the suspended su-
perstructure depends. To avoid any lateral strain upon the towers,
the cables are in no way fastened to them, but rest on movable "sad-
dles" at the point of contact. These saddles, with their burdens,
move to and fro upon 45 iron rollers of 3\(\frac{1}{8}\) inches diameter, which
readily yield to the varying tension of the wires as the weight is
shifted from the land to the river span, or vice versa.

A temporary structure called the "foot-bridge," was thrown
across the river during the cable-making, for the convenience of con-
struction. It was much higher than the roadway of the permanent
bridge, following the cables over the summits of the towers, instead
of passing through the arches. A trip across the foot-bridge on a
clear, cool day, afforded an exciting and pleasurable novelty. The
unaccustomed head would be dizzy, and both hands nervously clutch
the wire hand-rails. Between the slats on which one walked were
glimpses of gleaming water, and decks of toy ships and ferry boats