The greatest weight which the cables and stays will ever have to support was stated at 4,753 tons.

Allowing six times, we get $4,753 \times 6 = 28,518$ tons.
Deduct supporting power of stays $= 15,000$ "

Leaves for the cables to support $= 13,518$ "

The tension resulting from this weight is $13,518 \times 1.64 = 22,170$ tons.

Tension of one cable $= 5,542$ "

And this will be the tension each chain will have to support.

Now estimating the ultimate strength of good steel bars at 50 tons per square inch, the section of each chain will be $5,542 \div 50 = 111$ square inches.

Allowing 40 tons $= 139$ "

" 30 " for wr’t iron $= 185$ "

" 25 " " " $= 222$ "

Whether steel or iron bars should be employed, and of what qualities, will be decided by their relative strength and relative cost. We want the greatest amount of strength for the least amount of money, let it be iron or steel, home made or manufactured abroad.

As the anchor links descend, their tension diminishes. It is safe to estimate the tension of the two last or vertical links at two-thirds of the tension of the first or horizontal link.

So far as the cables and chains are enclosed in masonry, they will be protected against rusting by a thorough grouting with cement.

The location of the anchorage on the New York