I am not disposed to underrate the great force of a severe gale, when directed towards the suspended work, and I am also fully aware, that herein lies the great danger to all suspension bridges of ordinary design. But my system of construction differs radically from that formerly practised, and I have planned the East River Bridge with a special view to fully meet these destructive forces. It is for the same reason that, in my calculation of the requisite supporting strength, so large a proportion has been assigned to stays in place of cables.

The East River Bridge will form a large truss of 1,600 feet span and of a depth of 150 feet. The towers form one supporting element, the framing of the floor forms the second, and the extensive system of stays forms the third. The stays are arranged in four distinct planes, connected by the floor. The latter in connection with the stays will support itself without the assistance of the cables. If the structure is viewed in this light, it will make a different impression upon those who are in the habit of associating with the idea of a suspension bridge the picture of a free swinging pendulum. The weight of the superstructure, without cables, will be 2,675 tons. Now the supporting power of the stays alone will be 15,000 tons; ample to hold up the floor. If the cables were removed, the Bridge would sink in the centre, but would not fall.

To uphold the centre of the Bridge, to provide for greater strength and security, and to maintain