In this calculation the maximum weight on the road and footways is assumed at 30 lbs. per superficial foot, which is the actual weight of a dense crowd of people, moving freely and promiscuously. More weight can be placed on the floor, but not without packing. It is further assumed, that the superstructure is suspended to four cables, of 11 inches diameter each, made of the best quality of steel wire, and which are assisted by 280 stays, each stay of an ultimate strength of 100 tons neat. The aggregate strength of the cables and stays will be equal to six times the tension, that will result from the above maximum weight.

The data for these calculations I shall hereafter communicate fully in a more detailed report. I will only add here, that the question whether iron wire or steel wire should be used in the cables, need not be decided now. If iron wire is employed, the cables will have to be nearly 15 inches diameter in place of 11 inches for steel.

To guard against vertical and horizontal oscillations, and to insure that degree of stiffness in the flooring, which is absolutely necessary to meet the effects of violent gales in such an exposed situation, I have provided six lines of iron trusses, which run the whole length of the suspended floor from anchor wall to anchor wall. The iron floor beams which are spaced, in pairs, 7 feet 6 inches apart, intersect the longitudinal trusses at right angles, and are riveted to the middle cords and to the upright posts. The height of each truss is 12 feet, the floor being laid above the centre, so that the