height of truss, with the cross beams on the top of the lower stringers. By suspending the beams below the stringers, 16 feet trusses will give sufficient space. I propose the following plan, Fig. 37, Pl. 10, for an 80 feet bridge, which, by diminishing or increasing the length or number of pannels, or bearing points, may be suited to any span from 70 to 150, or perhaps 200 feet, with probably as good economy, to say the least, as any plan in use. The scale of this plan is the same as that of the preceding, 1 to 100 for length, and 1 to 30 for other dimensions.

This I call a double-cancelled truss; there being two crossings of the diagonals in the centre of each pannel, or between each two consecutive bearing points.

The lower stringer is formed mainly as in the preceding plan, being 21 inches in width horizontally, and 9 inches deep. From the end to within a foot of the first cross beam, the space between the two portions of the stringer is 13 inches. Thence, to about midway between the 2d and 3d beam, the space is 9 inches; and thence to the centre, 5 inches; and so for the other half. The outside courses are 4 inches thick for the whole length, spliced with the double-lock splice. Opposite the 9 inch space, a 2 inch plank is added, and opposite the 5 inch space, a 4 inch piece, locked by a single lock on to the 2 inch plank just mentioned, as seen in the figure.

The upper stringer is 19 inches from outside to outside, and 9 inches deep. Each half is composed of a 5 inch course on the outside throughout, with a 2 inch course on the inside, between the points over the second cross beam from each end.

The end braces, are in two pieces of $9 \times 6$ inches, with a 7 inch space between; the lower end fitted into an inch boxing inside, and a 1$\frac{1}{2}$ inch boxing on the top of the stringer pieces; the end resting on the abutment. Between the two pieces at the foot, passes the diagonal $e$, being reduced at the end, to a width corresponding with $e$ space that receives it. This piece also extends down