wide. All the verticals, diagonals and suspension chains, or chords, are connected with each other and with the lower chord and towers by pin joints. The towers are composed of posts made of plates and channel bars, latticed, and are braced both transversely and diagonally.

The shore piers, on which the arms of the Cantilever rest, are similar to the towers, and anchored to the foundation so as to resist both compression and tension.

The floor consists of iron cross-floor beams, made of plates and angle irons and of longitudinal iron stringers, braced by diagonal lateral rods. The main cross-floor beams are suspended from the pins at each panel point.

The sidewalks are carried on brackets fastened to the vertical posts above the main floor. The central span is a Pratt truss, with pin connections, and a double system of diagonals. The posts and upper chords are made of plates and channel bars, and the tie rods and lower chords of flat bar links as in ordinary spans of that class. This span merely rests upon the outer ends of the arms of the two Cantilevers, one end being provided with rollers to allow of expansion and contraction.

Not only is the structure rigid, economical and capable of erection with great ease and without danger of disaster or interference with the navigation, but it seems to us capable of still further improvement by revising the general proportions, the most economical arrangement of which, it may well be, the designer has not attained in so novel a plan.

The sections of the compression members have been calculated by the formula given in the specifications for parts exceeding twenty-four radii of gyration, which results in strains of about 9,000 pounds per square inch, and some of these members, therefore, have relatively less section than the corresponding parts in the design of Clarke, Reeves & Co.

Some of the wind strains are also deficient in consequence of an under estimate of the developed surface exposed by some of the parts.

In addition to this we may call attention to the following minor deficiencies:

1. There is no provision made for carrying the wind strains past the openings in the central towers through which the roadways run. This can readily be overcome by suitable portals.