of diagonals and verticals, which have no interchange of action between one another. Now, each of these sets may have its own lower chord, also acting independently, each of the other, but uniting at the same point at the foot of the king brace, which is common to both sets of web members.

In such case, the two chords (which we may call sub-chords), may be one above the other, and composed of links or eye-bars, extending horizontally across two panels; the links or bars of one sub-chord connecting opposite the centre of those in the other, and the uprights in one set, being as much longer than those in the other, as the distance, vertically, between the upper and lower sub-chords.

By this means, about one-half of the extra material in chord connections would be saved; and a more uniform stress upon the chord bars secured, than would be practicable, even with 4 links acting upon one connecting pin.

**Detached, and Concrete Plans of Construction.**

CXXVI. In the plan of Trapezoidal truss had under consideration in the last few preceding sections, the several members are formed in separate pieces, to be erected in place, and connected by screws, bolts, connecting pins, &c., as the parts of wooden bridges and building frames are erected, after being framed and prepared, each for its particular place.

There is another mode of construction, in which members and parts of members are permanently riveted together in place; or, in case of small bridges, the whole structure is permanently put together at the manufactory, and transported by water or rail to the place of erection and use. The former of these may