the strut channels, and the head may afford a bearing for the vibration-rod pin. This connection is to be used when the lateral strut channels are so small that there is no room for a pin to pass through the connecting T-plate which attaches the lower channel. When, because of their large diameter, the lower lateral rods cannot be attached to the chord pins, but must be connected by vertical pins passing through the lateral strut jaws, they must be made to pull on the middle point of each of the latter pins by using a double eye on one of the rods, with a space between large enough to admit the eye of the other rod. This is to avoid all tendency to rotate the lateral strut about its axis. The rods can be retained in place by fillers above and below.

With this detail, there is a tendency to break the jaw through the pin holes, because of the moment of the longitudinal component of the lateral rod stress: the jaw plate must therefore be made wide enough to properly resist this moment. The easiest way to proportion the plate is to assume its dimensions, and to find its resistance to bending, neglecting the area lost by the pin holes (which area is close to the neutral surface), and making up for the omission by providing a little extra resistance.

To illustrate the method, let us take a two-inch lateral rod, making an angle of forty-five degrees with the planes of the trusses, and let the distance between centres of pin bearings be six inches. The stress on such a rod is $3.14 \times 7.5 = 23.55$ tons, and the bending-moment on the pin is $\frac{1}{2} \times 23.55 \times 3 = 35.3$ inch tons, corresponding (*vide* Table XII.) to a diameter of three inches and a fourth. The distance from the axis of the pin to the centre of the jaw bearing will be about $1\frac{5}{8}'' + 2'' + 1'' + \frac{3}{8}'' = 5''$. The longitudinal component of the stress on the lateral rod is $23.55 \times 0.7 = 16.5$ tons, making the moment on the jaw about $5 \times 16.5 = 82.5$ inch tons. The thickness of the jaw plate should be $\frac{5}{8}''$, and let us assume the width to be $7''$. The resisting-moment is given by the well-known formula,

$$M = \frac{RI}{d_1},$$