of the diagonal, is increased by \((6 - 4.05)E = 1.95E\). This can not be, without producing tension upon diagonals \(7\sqrt{9}\) and \(7/9\). Since then these members can not be entirely without action, and as previously shown, they can not have as much action as the decussation theory assigns to them, it follows, in this case, that they must act, but with less intensity than the theory assigns them.

In this case, as well as in that of Fig. 18, the result would be changed somewhat, by taking into the calculation the weight of structure, which would change to a small extent, the relation between the maximum stresses of diagonals, and the stresses they sustain under a full load. For the stress due to weight of structure, is constant, and that due to variable load, is greater upon most of the diagonals, under certain conditions of a partial, than under a full load. Hence, while \(5\sqrt{7}\) sustains (under full load), only \(1\frac{1}{2}\) maximum upon that part of the material provided for variable load, it sustains a full maximum upon the part provided to sustain weight of structure. It is easy enough to take these things all into account, in estimating the amount of decussation in special cases. Still, it is doubtful whether any better practical rule can be adopted, than the one previously given, \([XVIII]\); namely, to estimate stresses upon both hypotheses, and take the highest estimate for each part.

Decussation in Trusses with Verticals.

LIX. In trusses of this class with odd panels, and diagonals crossing two panels, as in Fig. 20, it will be seen, on subjecting them to analysis, such as was explained with reference to Fig. 18 \([xvi]\), that, while in trusses of even panels, the figures in the second line