and two outside, of the top chord and posts. The widths of the main diagonals should, for the sake of appearance, increase from the centre of the bridge to the ends. For the same reason, it is well to have all the chord bars of the same, or nearly the same, depth; the correct area of section being obtained for each panel by varying the thickness and the number per panel. In large bridges it is permissible to reduce the depth of the chord bars towards the ends of the span in order to economize on the pins. It is also permissible, when there are several chord bars in the same panel, to employ depths varying by a quarter of an inch, provided that the bars of smaller depth be placed on the inside.

As stated in the "General Specifications," where chord bars are trussed to resist the buckling effect of the wind pressure, the intensities of working-stress for the trussed bars on the net section should be reduced to four tons for bridges of Class A, and to five tons for those of Classes B and C.

"Chord packing" is a term applied to the arrangement of the chord bars, diagonals, posts, and beam hangers upon the bottom chord pins. It is a matter of great importance, but is very often neglected. The three principal considerations to be kept in mind while arranging the packing are, that the bending-moments on the pins are to be made as small as possible, that the packing is to be made as close as circumstances will permit, and that there be sufficient clearance to avoid all chance of finding the space between the post channels too narrow when the bridge is being erected.

The width of the packing is dependent, not only upon the number and thickness of the bars, but also upon the width of the top chord plate. The latter is often, in its turn, dependent upon the chord packing.

The usual arrangement is to pack the main diagonals, counters, and beam hangers inside of the posts, and the chord bars outside; bringing the latter, however, within the batter braces at the shoes, unless the end panel contain four bars per truss, when two should go outside, and two inside. It is not absolutely necessary that the chord bars pull in the exact line of the trusses; an inch or two of deflection in twenty feet being