backed in cooling), and a width, a little over one-half that of the side plate.

The resisting power may be estimated as in the table of negative resistances under the head of square, &c., pieces, calling the width of side plates the diameter, and using the column under \( \frac{1}{8} \), for trusses supporting 12 feet or more width of flooring, and the column headed \( \frac{1}{4} \), in case of trusses supporting a width of 10 feet or less, to each truss.

The intermediate cross bars should have about the same thickness of plate as the side portions, a depth, about \( \frac{2}{3} \) that of side plates, and top plate not less than \( \frac{3}{4} \) as wide as the top plate of side portions.

End cross-bars should have a top width of about \( \frac{2}{3} \) the width of side plates, and cross-section sufficient to sustain a whole gross panel load for the truss, by transverse resistance. If it have a depth equal to \( \frac{1}{4} \) of its length, and a form of section as strong as a rectangular bar, it will safely sustain 1,000 to 1,200 lbs. to the inch; and it is recommended to allow one inch of section in each end cross-bar to every 1,000 lbs, sustained at the joint. Then, there being two cross bars together, the point will be doubly secure.

Semicircular notches in the ends of contiguous arch pieces, form a vertical circular hole at the joint, for the passage of the vertical member.

When the side plates are thin, the thickness should be increased for a few inches from the end, to afford a suitable bearing surface at the joint; and the ends of arch pieces should be fitted (usually by planing), to a proper bevel to form a fair joint.

The joints, however, are sometimes formed by cutting taper key seats (as seen in Fig. 28),