TRUSS ROD FRAME.

Two wrought-iron bent truss rods $1\frac{1}{4}$ in. diameter, each in two pieces, with screwed ends $1\frac{3}{8}$ in. diameter, are on outside of intermediate timbers. The ends of each half of truss at centre of car to be connected by a double-headed nut or turn-buckle at least nine inches long, and at alternate ends screwed with right and left hand thread. In the course of rods from the centre towards end of car, they pass under cast-iron shoes on under side of transoms, then over shoe on top of packing-pieces on top of bolster (so as to be close to floor) and then through the head stock, which is provided with cast-iron washers $7'' \times 4'' \times \frac{7}{8}''$ thick, having inclined faces to give proper bearing to face of truss nuts. All shoes for rod are secured in place by the paps or pins cast on them being tightly driven into shallow holes drilled in timber. The packing-piece, $4'' \times 6'' \times 1' 9\frac{1}{2}''$ long, over bolster extends only from side-sill to intermediate, and is secured to bolster by $\frac{3}{8}''$ wrought iron spikes.

FRAMING.

Side sills, centre floor and intermediate timbers framed to headstock by double tenons $2\frac{1}{2}''$ long as follows: Commencing at top $1\frac{3}{4}''$ shoulder, $1\frac{1}{2}''$ tenon, $2\frac{1}{2}''$ space, $1\frac{1}{2}''$ tenon, and $1\frac{3}{4}''$ shoulder. Headstock fastened to side sill at each corner by one $\frac{3}{4}''$ joint-bolt $12''$ long. Headstock fastened to centre floor timbers by two $\frac{3}{4}''$ joint bolts $12''$ long. Headstock, centre and intermediate timbers placed as shown in drawing.

Centre of Bolster $4' 10\frac{1}{2}''$ from outside of headstock. The distance from outside of headstock to centre of transoms, $13' 6''$.

The headstock and side sill to be secured at each corner on inside by inside corner castings, which are fastened on by four $\frac{3}{4}''$ bolts at each corner; outside casting will be high enough to clip the corner-post, as shown in drawing.

Transoms to be gained $1''$ for side-sills, centre and intermediate floor timbers, and fastened to intermediate and centre floor timbers with one $\frac{5}{8}''$ bolt, $1' 4\frac{3}{4}''$ long, to each timber

Door, end, and intermediate posts framed with tenons, $2''$ long at top and $2\frac{1}{2}''$ at bottom, all $1''$ thick and of the full width of each of the various posts, and to have $1''$ shoulder on outside, fitting tightly into their various mortices, set perfectly vertical and parallel with each other and with king-posts, end and side door-posts; end, king-posts, and side door-posts to project $\frac{7}{8}''$ outside of framing, and flush with sheeting, king-posts with $\frac{1}{4}''$ rebate, and door-posts with $\frac{3}{4}''$ rebate, for sheeting; king-posts having square bearing, and being checked for outside lip of brace shoe.

Top plates secured to Archrails by one wrought-iron knee strap at each corner made out of $2'' \times \frac{3}{8}''$ iron, each secured by two $\frac{1}{2}''$ bolts, $4\frac{3}{4}''$ long, one on each side, which also go through top inside corner casting and secure the same.

Archrails and Carlines to be framed into top plates by double tenons $1''$ long, as follows, flush with bottom of top plates. Commencing at bottom, $1''$ shoulder, $\frac{7}{8}''$ tenon, $1\frac{1}{4}''$ space, $\frac{7}{8}''$ tenon, and $1''$ shoulder, each end secured to plates by one $\frac{1}{2}''$ joint bolt $9''$ long.

Corner

The belt rail which runs all round car, except past the side doors, is secured to posts by one, and to braces by one $\frac{1}{2}''$ cup headed bolt; all nuts under sheeting; belt rail also to be fastened to ▬▬ posts by one $\frac{1}{2}''$ joint bolt $9''$ long; also short $\frac{5}{8}''$ rod from corner post to first post on side, as specified; belt rail to be framed as follows: checked for posts $1\frac{3}{4}''$, and checked for braces $1\frac{3}{4}''$, and brace checked for belt rail $\frac{1}{4}''$, the posts being checked for belt rail $\frac{1}{4}''$. Braces to be furnished with cast-iron shoe or pocket, which allows end of braces to be cut square, as shown in drawing.