Fig. 2 shows the manner of adjusting the horizontal braces in floor-beams.

Fig. 3 represents the skew-back, which is cast in two pieces, the hindmost part aa being the buttress of the main part bb. The heels of the arch-braces rest in cast-iron shoes, between which and the abutting steps of the skew-back, adjusting-screws operate to push the braces forward when required in raising or adjusting the truss.

Fig. 4 shows the arrangement of the chord-splices.

Fig. 5 shows the intersection of the counter-brace and main-braces. The counter-braces are cut off at their intersections with the main or panel-braces, and their connection carried around the latter by means of the cast plates shown at dd, these plates are connected across the truss by bolts passing within cast tubes acting as struts, as at ff.

Fig. 6 shows the connection of the upper tie-beams with the chords, braces, and counter-braces.

The principal rafters foot upon the casting c between the tie-beams.

Fig. 7 shows the manner of securing the rail to the rail-joist or string-piece. The rail-joists and floor-beams are tied together by a vertical bolt at each intersection. The rail is fastened to the rail-joist by double-headed bolts.

All the principal abutting surfaces of the timbers are separated by cast-iron plates, and every joist has an independent adjustment by means of screw-bolts or wedges.

Material in one span of 133 feet in the clear of abutments, or 145 feet from end to end of skew-backs:

Timber, 63,000 feet B. M.
Cast-iron, 57,156 pounds.
Wrought-iron, 15,840.

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CANAL BRIDGE, SECTION 6, PENN. RAILROAD.

This bridge has some resemblance to that on Sec. 5, exhibited in Plate 10. The principal differences are the absence