Draw Bridges.

And while the action upon diagonals and verticals may be a little greater in case of the latter, the extra material in the tower frame of the former, is thought to be an overbalance for any such excess, even including the greater thrust and tension in the continuation of chords over the turn-table, which takes place in plan Fig. 72.

In regard to convenience of construction and appearance of structure, also, as well as economy of material, the latter plan is thought to possess some advantage. Still opinions and tastes may vary as to this, as well as in regard to other matters.

Regarding the ratio of length to depth of truss, the same rules should govern in plan 71, as in the case of stationary bridges of like span. In spanning channels of 50 or 60 feet in width, on plan 72, the head room required for the traffic will govern, and depth from 15 to 18 feet, according to span, and the purposes of the bridge, whether for common or railroad travel, will probably be found expedient. In general, circumstances will probably dictate a variation of ratio (of depth of truss to length of span), ranging from \( \frac{1}{5} \) to \( \frac{1}{3} \).

**Turn Table.**

CLXXVI. The same plan of turn table is applicable with equal advantage to either of the two above described plans of swing bridge trussing.

A common, perhaps the most common, form of turntable for draw bridges, is composed of rollers \( aa \), Fig. 73, arranged in circular form, and rolling between two metallic circular rails, of which one, \( bb \), is fastened to the supporting pier \( p \), and the other, \( cc \), inverted, and attached to the under side of the bridge superstructure.