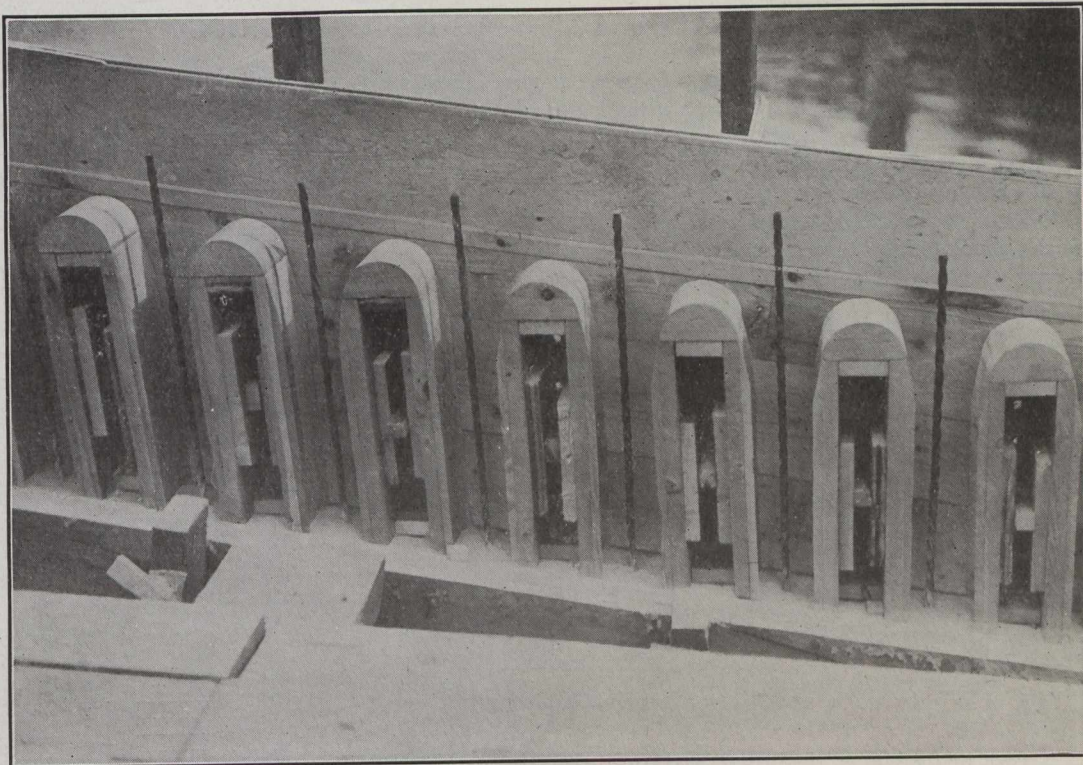


Fig. 5.
Details of Forms for
Handrailing.



The order in which the concrete was placed is as follows: First, the abutments up to the springing; second, the arch rib working from both ends at the same time in order to produce symmetrical deformations in the falsework; third, the parapet walls; fourth, the spindles and railing.

Three types of surface finishing are used on the exposed surfaces of this bridge. The projecting ends of the arch ring are given a so-called pebble surface finish. The finish

was secured as follows: Concrete, three or four inches thick, made with lake shore pebbles, one-half to two inches in diameter, was placed next to the forms. Before this concrete had firmly set, the forms were removed and the mortar was scrubbed out from around the pebbles with fine wire brushes, thus leaving the pebbles projecting and making the arch ring more pronounced. The parapet walls were given a cement wash finish, which was applied as follows: After the concrete had set, the forms were removed and all air holes filled with mortar and the surfaces rubbed down with carborundum brick. When a smooth, even surface had been obtained a very thin wash of cement was applied. This wash leaves a

uniform and neat surface and proves to be a very satisfactory method of finishing concrete surfaces. The spindles and railing (Fig. 6) were made with concrete, the stone in which was crushed granite of different shades. Before this concrete had firmly set the forms were removed and the mortar brushed out from around the stone with fine wire brushes. When the concrete had become well set, the top railing was smoothed down with carborundum brick. If the concrete at times became too firmly set to allow the use of the wire brushes, a 1:1 solution of muriatic acid was used to aid in the removal of the mortar from around the stone.

The top of the arch ring is waterproofed with three-ply of Samson ready roofing, laid with hot tar and pitch mixed in equal proportions.

Concrete sidewalk paving was laid on the top of the sand fill between the spandrel walls, care being taken to provide plenty of longitudinal and transverse expansion joints.

Three expansion joints were provided in the railing, one at the centre and one at each quarter point. The joint is a simple keyed joint in the parapet wall, and in

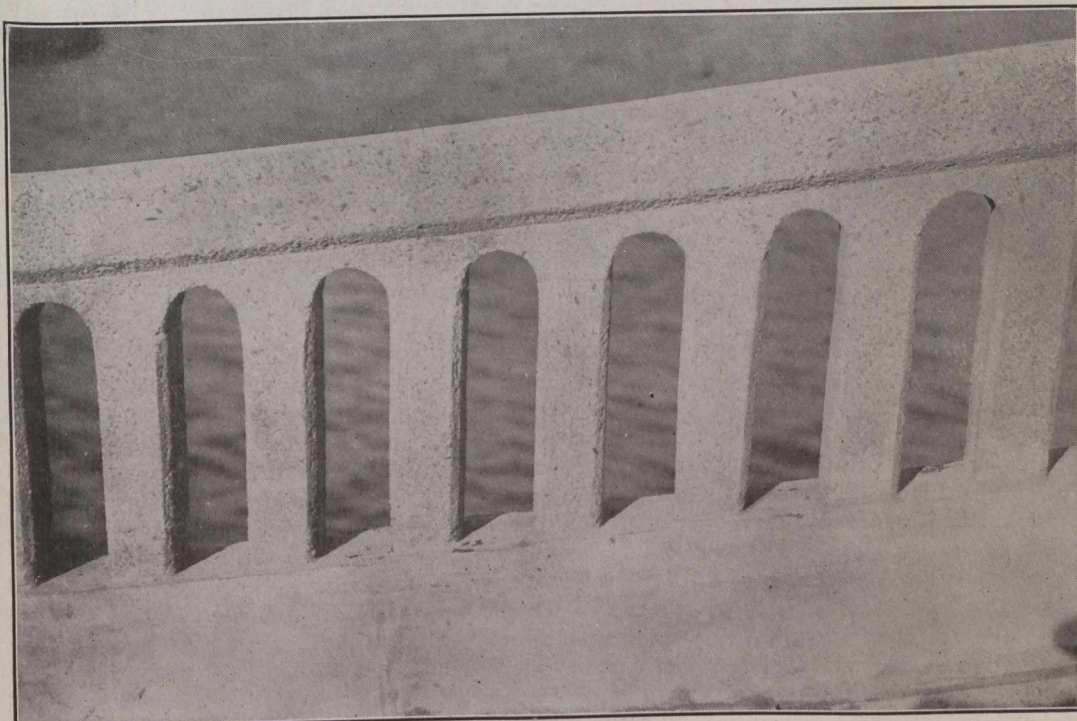


Fig. 6.
Detail of Handrail
Finish.