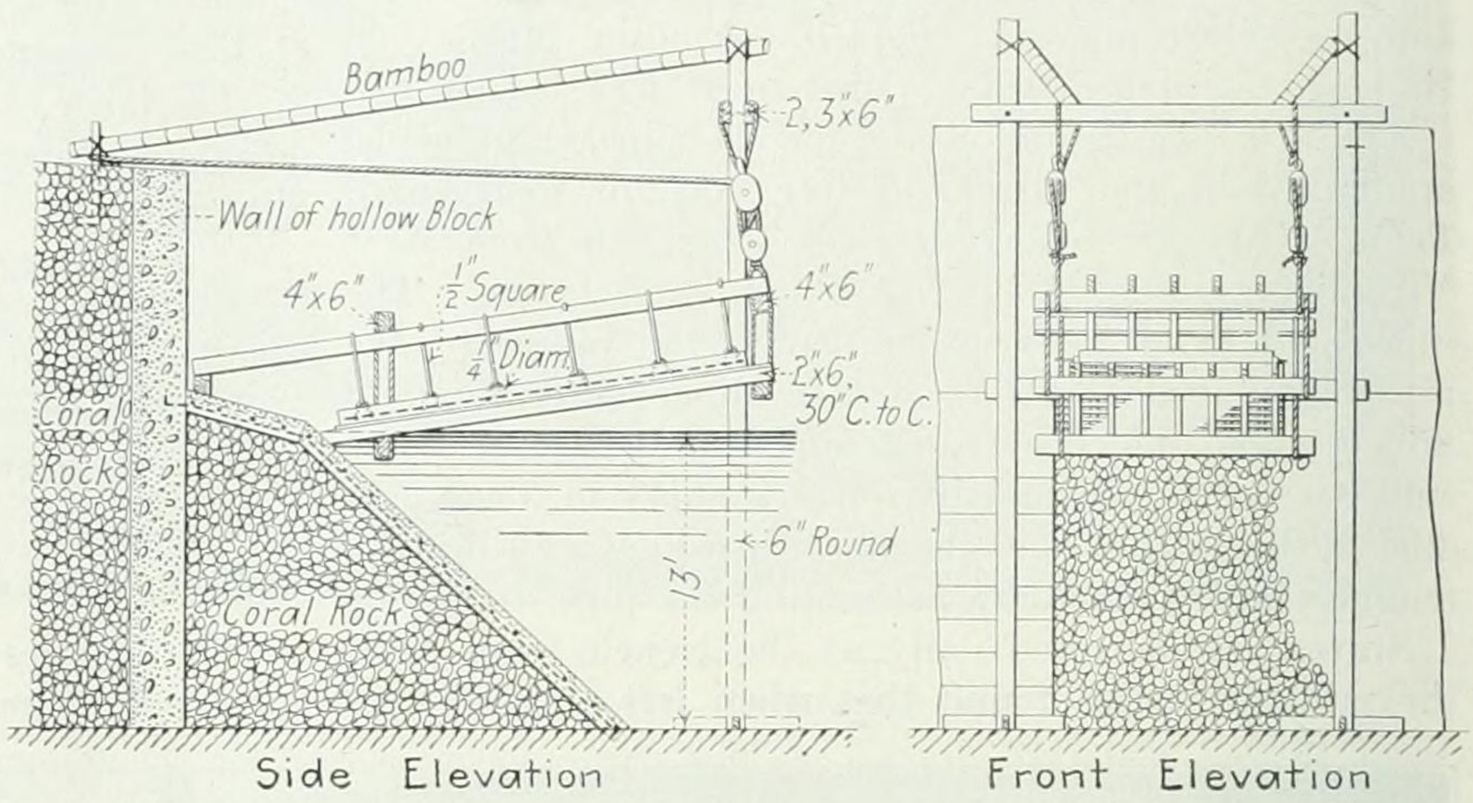
Decorating a City Bridge with Structural-Steel Portals

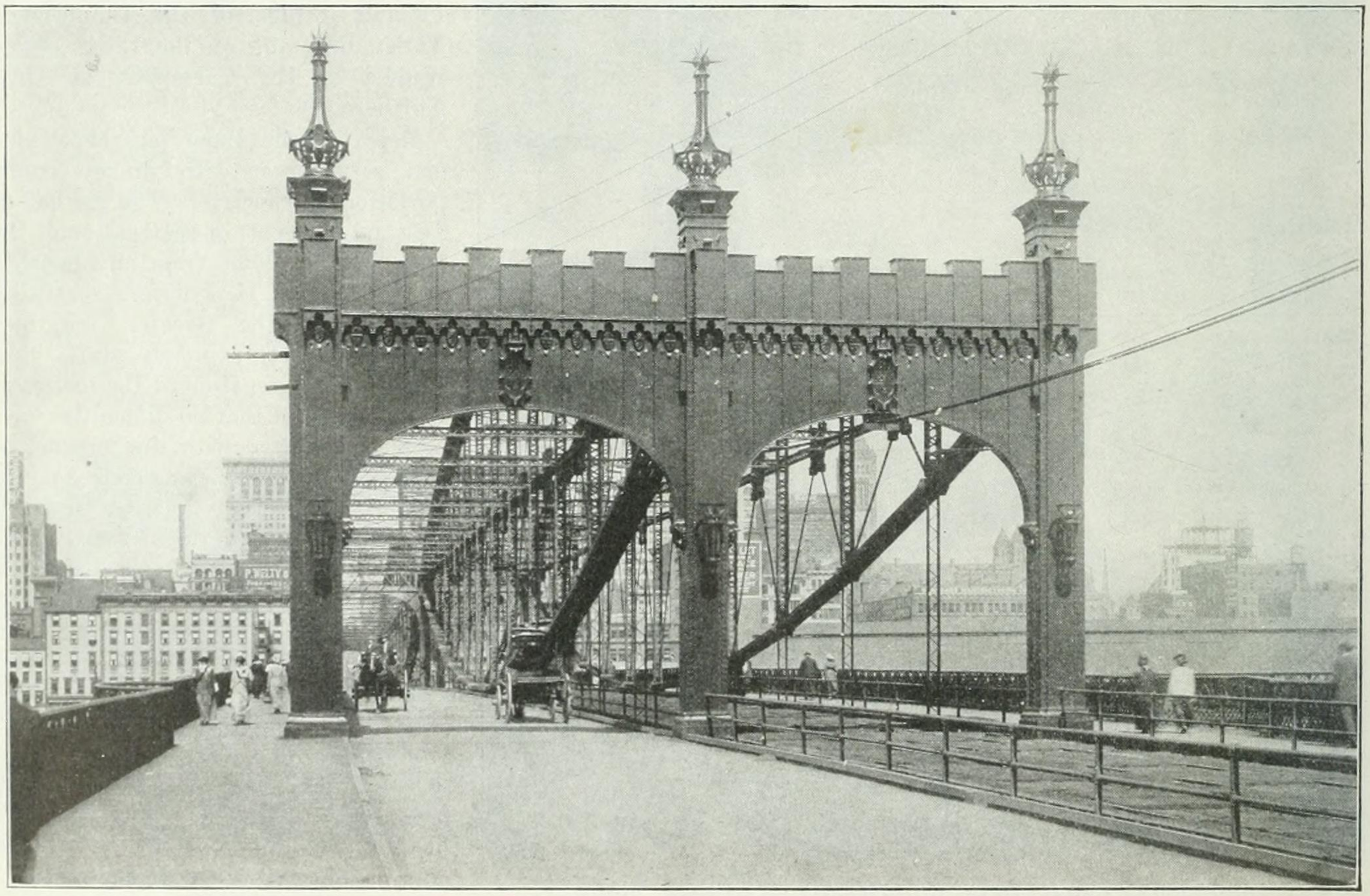
The most pretentious bridge portals in the United States are those recently applied to the Smithfield bridge across the Monongahela River in Pittsburgh. The old bridge, built in 1883, had cast-iron portals. It was at first a two-truss single-roadway bridge, but in 1890 the east (right-hand) truss was added, making a second roadway. As this roadway was narrower than the first one, and required specially narrow street cars, it was widened in 1911 by moving the east truss 4 ft. farther eastward. At this time the old cast-iron portals were removed. They had proved a nuisance, incidentally, because they made it impossible to paint the end-posts, and considerable rusting occurred at certain points in these posts. Some strengthening was needed here, and this has been accomplished by filling the end-posts with concrete, rammed under the top plate and bearing at the bottom on new upper-bearing castings, which were placed in sections inside the posts and over the pins. The new structural-steel portals built around the end-posts were also filled with concrete. These portals were designed by Stanley L. Roush, architect in the office of N. S. Sprague, Superintendent, Bureau of Engineering, Department of Public Works of the city. The Des Moines Bridge and Iron Co. fabricated the steelwork. The Thomas Lane Co. was contractor.

Placing Cast Concrete Slabs on Underwater Revetments

In repairing the Calumpang dike in the Province of Batangas, P. I., the design called for the placing of a reinforced-concrete slab protection on a rock fill to be deposited outside the existing hollow concrete wall dike. This rock fill extended only a foot or so above water level, so that most of the slab protection had to be laid under water. For this somewhat novel condition a special method of construction was devised in which slab sections were molded above water and after setting lowered to place. It is described in the "Quarterly Bulletin" of the Philippine Bureau of Public Works.



METHOD USED IN PHILIPPINE ISLANDS IN PLACING SUBAQUEOUS CONCRETE SLAB REVETMENT



NEW SOUTH PORTAL OF SMITHFIELD ST. BRIDGE OVER MONONGAHELA RIVER, PITTSBURGH

An ornamental structural-steel portal, replacing old cast-iron portals. The oldest part of the bridge dates from 1883