

since the inception of the important enterprise. It is not with the purpose of giving a history of the original organization of the bridge company, or to enter into a discussion of the merits of the long, expensive and vexatious course of litigation which has followed the inauguration of the project, that this article has been written, but principally to furnish a plain and intelligible description of the bridge itself. The incorporated name of the company is "The Willamette Iron Bridge Company." The capital stock has been fixed at \$200,000.00. The officers of the company are William Beck, president and treasurer; C. F. Swigert, secretary; William Beck, Rufus Mallory, Charles Wiberg, C. F. Swigert and John W. Brazee, board of directors.

In connection with the work of building the bridge it is not out of place to state that operations have been, and still are, under the immediate charge of Mr. H. C. Campbell, who represents the contractors. Mr. Campbell has had long experience in the construction of various important bridges in the East, and is in every respect competent to handle an undertaking of such magnitude. Active operations were commenced about the first of September, 1886.

For several months a force of men was employed in quarrying stone, in the vicinity of Oswego, and another force engaged at Fisher's landing, on the Columbia, getting out dimension stone, of which the piers have been constructed. In building the spans, work was commenced, for convenience, at the eastern end. For each span, rows of piles were driven, temporarily, on which cross timbers were laid. These constituted the false work, and were merely to support the permanent spans until they could be securely braced and "keyed up." The false work was then torn away.

The best materials obtainable—wood,

stone, iron and steel—have been used in building the bridge, and the most experienced workmen employed in putting them together. The iron cylinders for the tubular piers were manufactured in Pittsburg, and the plates put together by Messrs. Trenkmann & Wolff, of this city. All the heavy castings were made by the Willamette Iron Works. Iron for the long spans was made in San Francisco. The entire structure was designed by the Pacific Bridge Company, of Portland, and is a splendid specimen of bridge architecture. The structure is what is known as the "Pratt Truss Bridge." It rests on seven piers, three of which are built of stone, the others being immense iron tubes, filled with stone and cement. Pier No. 1 stands one hundred and sixty feet east of the Morrison street wharf. The foundation consists of piles, strong timbers, stones and cribbage. Ninety-four large, sound, red fir piles were driven firmly into the bed of the river, and capped with square timbers twelve by fourteen inches, and cross-capped with timbers ten by twelve inches. Around these piles a strong cribwork of timber was built, the lower sides resting on the bed of the river, the space between the crib and piling being filled with stone. The tops of these piles have been sawed off at a point two and one-half feet below the lowest water mark, so that none of the timbers used in the foundation will ever be above the water line, or exposed to atmospheric influence. Repeated experiments have demonstrated that timber thus submerged will remain sound for an indefinite period. The dimensions of the wood work of this pier are, length, forty-four feet and four inches; width, thirteen feet. The masonry resting on this is thirty-two feet in length by nine feet in width, at the base, and rises to the floor of the bridge, thirty-five feet two and one-half inches above the lowest stage of water