PHOENIXVILLE BRIDGE WORKS.

OFFICE OF

THE PHŒNIX BRIDGE COMPANY,

Successors to CLARKE, REEVES & CO.,

Engineers, Contractors, and Builders of Bridges, Viaducts, Roofs, etc., of Iron and Steel,

No. 410 WALNUT STREET, PHILADELPHIA.

SINCE the presentation of our last album in 1873, the rapid increase in the variety and amount of our business, in the design and manufacture of bridges and of all kinds of structures of iron and steel, renders it necessary for us to exhibit to the public, and to our friends and customers particularly, the present state of constructive engineering as existing at the works of The Phoenix Bridge Company.

By a recent reorganization the Phoenixville Bridge Works, heretofore known under the firm-name of Clarke, Reeves & Co., are conducted under the corporate title of The Phoenix Bridge Company. By this reorganization we have assumed the entire business of that firm, and have perfected arrangements with The Phoenix Iron Company, which gives us additional facilities for concentrating the productive plant of that company upon the construction of our bridges, roofs, viaducts, piers, etc. Our present capacity thus reaches a yearly amount of 30,000 to 35,000 tons of finished material, with facilities which permit of further increase, if required by any unusual demand.

With machinery of the most improved character and an experience extending back almost to the very commencement of iron bridge-building in this country, it is believed that The Phoenix Bridge Company has unexcelled, if, indeed, equalled facilities for meeting the demands of the most advanced engineering practice.

It is our intention at the present, as it has been in the past, in the first place, to admit no material in our constructions except that of the very best quality, and which, by its nature, is best adapted to the resisting of the stresses acting upon it; and, in the second place, by a careful study of the circumstances of each case, to so design all parts, both main and detail, as to enable them to exert the resisting capacity of the metal in the simplest, most direct, and consequently most advantageous manner, thus attaining that greatest desideratum in all correct constructive design, viz., combined economy of material and expense.

Our situation is such that the quality of the material entering into our constructions is completely under our control. Essentially, all of our material is produced by The Phoenix Iron Company, whose resources are so extensive and plant so complete that every stage of manufacture from the ore to the finished bar or shape is included within their works and performed on their premises. Thus every part of the process of production may be so adjusted and co-ordinated to the others, that any quality or grade of material best adapted to any particular construction may be secured with certainty. The high reputation of "Phoenix" iron for constructive purposes is undoubtedly due to this unity of design governing the effects of the different stages of production for the purpose of securing a definite end.

CHARACTER OF TRUSS.

Each individual type of truss possesses some particular merit of its own; but long experience in American bridge-practice has shown that the type originally developed by Pratt in wood and Whipple in iron, when designed in proper proportions, combines the greatest number of advantages for all usual circumstances. Our early selection and development of this truss for the great majority of ordinary cases, together with its later almost universal adoption in American practice, constitute gratifying evidences of the correctness of the general principles on which we have developed our designs.

Extraordinary circumstances, such as those of unusual length of span, difficulties of erection, etc., render advisable other types of truss, like the cantilever, or those with varying contours, or those having chords wholly or partially continuous.

Our varied facilities and extensive experience with such unusual structures, both in designing and erecting, enable us to meet the exigencies of those cases where they are