Plate.—A piece of flat iron wider than a bar. The common distinction between the two is that a plate is attached to something else, and acts with it, while a bar is an independent member.

Plate Girder.—A beam, built of plates and angles, used to span a small opening, generally less than forty feet.

Pony Truss.—A truss so shallow as not to permit the use of overhead bracing.

Portal.—The space between the batter braces at one end of a bridge. Sometimes the term is applied to the portal bracing, though incorrectly.

Portal Bracing.—The combination of struts and ties in the plane of the batter braces at a portal, which transfers the wind pressure from the upper lateral system to the abutment or pier.

Portal Strut.—A strut belonging to the portal bracing. (Plate I.)

Positive Rotation.—Rotation in the direction of the hands of a watch.

Post.—A vertical strut. (Plate I.)

Pratt Truss (called also the “Murphy-Whipple,” or “Quadrangular” truss).—A single-intersection truss with vertical struts and diagonal ties.

Quadrangular Truss.—See Pratt truss.

Radius of Gyration.—The radius of gyration of any surface in reference to an axis is the distance from the axis to that point of the surface in which, if the whole area were concentrated, the moment of inertia in reference to the axis would be unchanged. It is therefore equal to the square root of the ratio of the moment of inertia over the area.

Ream.—To enlarge a rivet hole.

Reamer.—A tool for enlarging rivet holes.

Re-enforcing Plate.—A plate used for the purpose of providing additional pin bearing, or strength, to compensate for material cut away. (Plate II., Figs. 11 and 13.)

Resolve.—To divide a force into component parts.

Rivet.—A short piece of round iron tightly connecting two or more thicknesses of metal, and having, when in place, a head at each end.

Roadway.—The passage-way of a bridge for vehicles; usually means clear roadway, q. v.

Rod.—A piece of round iron.

Rolled Beam.—An I-beam. (Plate II., Fig. 2.)

Roller.—See expansion roller.

Roller Frame.—A light frame of iron for holding the rollers in position. (Plate II., Fig. 9.)

Roller Plate.—The plate upon which the rollers rest, and which itself rests upon the masonry.

Rope Sling.—See sling.

Run.—A line, or string; as, a run of joists.

Set.—The extension or compression of a piece of material under stress.

Shear, or Shearing-Stress.—The resistance which a body offers to the passage, or to the tendency to passage, of one section along the next consecutive section.