Jaw. — A connection on the end of a strut similar to that shown on Plate II., Fig. 13.
Joint. — A place where two abutting or lapping pieces are connected.
Joist. — A timber beam that supports part of the floor and its load. (Plate I.
and Plate II., Fig. 13.)
Knee, or Knee Brace. — See bracket.
Lacing. — A system of bars, not intersecting each other at the middle, used
to connect the two channels of a strut in order to make them act as one
member. (Plate II., Fig. 12.)
Lacing-Bar. — A bar belonging to a system of lacing.
Lateral Rod. — A tension diagonal of a lateral system. (Plate I.)
Lateral Strut. — A compression member of a lateral system. (Plate I.)
Lateral System. — A system of tension and compression members forming
the web of a horizontal truss connecting the opposite chords of a bridge. Its
purposes are to transmit wind pressure to the piers or abutments, and to
prevent undue vibration from passing loads.
Latticing. — A system of bars crossing each other at the middle of their
lengths, used to connect the two channels of a strut in order to make them
act as one member. (Plate II., Fig. 12.)
Lattice Bar. — A bar belonging to a system of latticing.
Leg. — One of the two portions of an angle iron separated from each other
by the bend.
Lever Arm. — The perpendicular from the centre of moments to the line
of action of a force. The lever arm of a couple is the perpendicular distance
between the lines of action of the two equal and parallel forces.
Live Load. — The moving or passing load upon a structure.
Linville Truss (also called “Double Quadrangular,” “Whipple,” and
“Double System Pratt” truss). — A truss with vertical posts and diagonal
ties spanning two panels. It is the truss represented on Plate I.
Lock Nut. — See check nut.
Loop Eye. — An eye on the end of a rod or square bar, elongated into the
form of a loop, as shown on Plate II., Fig. 16.
Lower Falsework. — The falsework below the level of the lower chords.
Main Diagonal. — A tension member of a truss, sloping upward towards
the nearer end of the span. Main diagonals in iron bridges are not adjust-
able.
Moment. — The product of a force by its lever arm.
Moment of Inertia. — Represented by the equation, \( I = A\rho^2 = \Sigma r^2 dA \),
where \( A \) is the area of the section considered, \( \rho \) the radius of gyration, and \( r \)
the distance of any point from an assumed line lying either in the surface or
outside of it: in other words, the moment of inertia of a surface about any
axis is the product of the area by the square of the radius of gyration; or
it is the summation of the products of each differential of the area by the
square of its distance from the axis. If the axis lie in the surface, the
moment of inertia is called a surface moment of inertia; while, if the axis