the stream, across which longitudinal pieces were placed to span the openings; these were strengthened by a framework on top, consisting of two oblique braces with a straining-beam.

The same kind of a frame is much used at present for spanning short intervals; it possesses sufficient vertical strength, but has no counter-bracing, and consequently would be deficient in stiffness. For a foot-bridge, particularly one which does not rest upon stone supports, its flexibility would not be a serious objection. When stone supports are used, every precaution must be taken to prevent vibration, as it breaks the mortar of the joints, loosens the stones, and rapidly ruins the structure.

A bridge built by Palladio across the river Brenta, was precisely similar in principle to the above. This bridge also was built on piles, but the braces and straining-beams, instead of being above the roadway forming part of the balustrade, were placed below and framed into the piles, which extended up to the level of the roadway. This bridge was surmounted by a roof supported by Doric columns, connected below by a light handrail.

BRIDGE OVER THE TORRENT AT CISMORE.

BY PALLADIO. Span 108 feet.

FIG. 80.

This bridge must have been a good one for small spans. The arrangement is such that the pressures are transmitted to the abutments with very little tendency to produce a change of figure. The rise at the point A, which would be produced by the action of a weight at B, is counteracted by the resistance of the tie A C.

One of the most remarkable designs of Palladio consisted of two parallel or concentric arches connected by diagonal braces.