reaching from Foot to Elbow. But for the through bridge, the guys $g$, anchored to the abutments, are somewhat objectionable for long spans, as the contraction of superstructure by cold, tends to produce an over-strain upon the guys. Moreover, this arrangement requires additional length of abutments and piers. To obviate these objections, not very serious ones perhaps, the device of staying the bridge upon only one side, by a double-acting guy, (thrust and tension,) which only slightly sways the bridge to the right or left, as the superstructure expands or contracts with change of temperature, but not so as to be detrimental to stability.

Another device is, to have the end brace spread laterally from the elbow down to the foot, giving a width of bearing—say $2\frac{1}{2}'$ wide, for a truss $16'$ or $18'$ high. This, perhaps, is as good a plan as any, for bridges of 120 or 130 feet, and may be more.

But, as still another device for the purpose, I would suggest the introduction of two or more long beams of wrought iron, extending 5 or 6 feet outside of the trusses, say at the first thrust uprights from the ends; (as over figures 2 2, F. 46;) with guys running down from the upper chord to the ends of such long beams. In F. 57, $eg$ represents the upper part of a guy for the purpose here stated.

The latter is a device never carried into actual practice, but one thought to be worthy of consideration along with others for the same purpose.