question, making it necessary to state, that after having spent much time in efforts to perfect some truss of this particular outline, and much had been accomplished in ascertaining the nature and intensity of the various forces involved, which led to a more judicious disposition of the parts, and by which a large increase of strength had been effected with the original quantity of material, it was nevertheless evident that there existed defects, which were inherent, and which no amount of material, however large, the most perfect distribution of the same, nor the highest degree of workmanship, could possibly obviate.

Prominent among these defects, was the absence of any mode of action, by which the truss itself could be made to counteract the increased vertical strain toward its ends.

The use of spur braces, arches, tension rods, and other extraneous expedients, has already been referred to, all of which having failed to meet the requirements of the case, as indeed, every appliance must, which does not form an integral portion of the truss itself.

All bridges having their chords parallel, as has already been stated, exhibit the same uniformity of action, which may be illustrated by reference to Fig. 9, in which A, A, is