to any and every other now in use, as the writer is well aware, that in the almost infinite variety of circumstances which the engineer is called upon to provide for, the parallel girder must frequently be laid aside for other and more appropriate appliances. But of this we feel compelled to insist that it is the most practical application of the true theory of the action of forces in a parallel girder now in existence.

Hitherto our comparative investigations have been confined to the two questions, of economy of construction and adaptability to long spans, and in these we have shown the Isometrical Truss to be founded on sound principles. But there are other considerations involved in the discussion, which are of great importance in arriving at a proper conclusion, and they may be generally expressed by the terms compensation and adjustability.

The first is understood to be the ability of a structure to adapt itself to the varying circumstances of a changeable temperature and load; and the second, relates to the facilities presented for restoring it to a normal condition, rendered necessary by the deteriorating influences of time. In regard to compensation, the very nature of the construction of the Isometrical Truss, involving as it does, equal equilateral triangles in all directions, involves perfect uniformity of action under either circumstance of change of temperatures or load, hence there can be no distortion of figure within the limits of a maximum load, and the truss is therefore practically rigid.

In order to illustrate the necessity of proper adjusting facilities in a truss, the following diagram shows the change which takes place in any one panel of a parallel girder, under the action of a load or the deteriorating influence of time.

A deflection below the normal position of the truss manifestly causes a compressive strain on the diagonals $a, a, a$, and a tensile strain upon $b, b, b$. So long as this strain does not exceed the elastic limit of the material, these members will of themselves force a return to the normal immediately upon the removal of a load, and since