diagonals go upon each upright (except the endmost); that of the rod running downward toward the centre going above the other, the better to prevent interference with the cross-bars of arch pieces, as will be understood by reference to C, Fig. 27.

The eyes lie in horizontal positions, the rod in each case being bent to the required pitch to meet the connecting block. The bend should be as near as may be to the eye, without preventing a fair bearing of the eye upon the collar, or the subjacent eye. Care should be taken to have fullness and strength in the neck of the eye, that it may withstand the indirect strain at that point.

The proper sizes for diagonals and chords should be such, in common road and street bridges, as to afford at least one square inch of cross-section for each 15,000 lbs. of stress produced by the greatest load to which such bridges are liable, which in the author's opinion, should be estimated at about 100 lbs. to each square foot of bridge flooring, exclusive of weight of structure; a rule which he originally adopted, and has adhered to in practice with most satisfactory results. Many bridges have been constructed with lighter proportions than this rule would require, some of which have endured, while others have failed.

It is true that ordinary road bridges are seldom exposed to 100 lbs. to the foot of floor surface, but it is nevertheless, deemed expedient to provide for such a contingency.

The modes of estimating stresses of different parts of the truss, have been fully discussed in preceding pages, [xxvii &c.], and it seems unnecessary in this place, to specify more particularly the dimensions of the several members of the truss.