CHAPTER XIII.

PROPORTIONING OF OTHER DETAILS.

The sizes of stay plates used at the ends of systems of latticing or double-riveted lacing are given in Table XXXII., and the sizes of those used at the ends of systems of single-riveted lacing, in Table XXXIII. The headings of these tables fully explain their use.

Stay plates are to be employed at the middle of posts (vide Plate II., Fig. 15) when the diagonals are halved, and connected by pins passing through the posts; their sizes being taken from the before-mentioned tables. Stay plates, if they can be so called, are also to be used on the lower portal struts, for the purpose of attaching the knee braces.

Pin bearings are sometimes figured, counting in both re-enforcing plates and web; but the latter is often omitted. This would be necessary when the holes in the web are bored independently of those in the re-enforcing plates, for then it is very improbable that the different holes will coincide; but, when the re-enforcing plates are riveted to the web before boring, such a precaution is not only unnecessary, but is a waste of material.

By consulting Table XXVIII. can be found at a glance, accurately enough for all practical purposes, the thickness of web of any Union Iron-Mills channel bar, when the weight is given, or vice versa.

Where re-enforcing plates act also as splice plates, there should be one on each side of the web in order to insure a good, substantial joint; although the practice in the building of small bridges is to omit the outer plate when the pin bearing does not demand its use.

The length of a simple re-enforcing plate depends upon the