

With regard to the relative *merits* of this kind of chord,—it requires 14 per C. of extra section on account of rivet holes, through the whole length. For splice-plates and rivets, at least an equal amount should be allowed, making 28 per C., for waste material, over and above the net available length and cross-section. The corresponding waste in the Link chord, and the Eye-plate chord described on page 221, can scarcely exceed 10 per C., if used in connection with wrought iron pins.

Hence, the advantage as to economy of material, seems decidedly in favor of the latter plans; and the cost of manufacture, can hardly be estimated in favor of the former. If the riveted chord, then, have any high claim to favor and preference, it is mostly owing to the fact, that being manufactured cold, it escapes the deteriorating effects frequently resulting to iron, in the process of forging and welding, and the risk of flaws, and imperfect cohesion of the welded surfaces. How far this consideration should be regarded as an offset, or an overbalance to the 18 or 20 per C. of material lost in the splices, I think further experience and observation can alone determine.

It seems desirable that a series of careful experiments should be made, for the purpose of showing whether the Link can, with reasonable labor and pains in making and fitting, be made as strong and reliable at the ends, as in the straight portions of the link. If so, its superiority must be manifest.