Note 19, To Pages 64 & 65.

It is possible, and perhaps probable, that a part of the discrepancy pointed out between the results of Experiment and Calculation, as to the lateral strength of Cast Iron, is owing to the assumption of too low an estimate for the Positive strength of of that material; namely, 18,000 lbs.

Note 20, To Page 67.

1. The diagonal bars in the end Arch-pieces, mentioned about half way down the page, have uniformly been omitted; and may be regarded as unnecessary, if the work be properly proportioned and adjusted.

2. The manner represented in F. 14, Pl. I. of connecting the arch and chord at the ends, by twisting the links, is somewhat objectionable, as it exposes them to an indirect strain, besides presenting an awkward appearance. Several bridges have been constructed in this way, but a better plan, and one universally used of late, is, to have the links open at one end, and terminating with screws and nuts. The screws pass through the foot of the arch, one above the other, the lower one being the longer by the thickness of the nut, for convenience. See F. 49. giv-