these parts so tabled or indented into each other alternately, as, when the log or logs on one side be withdrawn, those on the opposite side, by their toothings, take the full charge of the whole weight or strain; consequently any part may be taken out of one side of the rib, at one time, and repaired with the greatest ease and facility.

Second. As every fourth lever or king-bent is tenoned into the cap and archivolt-rails, whereby the queen-bents which fill the intermediate space are protected from the side pressure of any more weight than their own furnishes, it is obvious that there cannot exist more additional pressure on the levers remaining, than that which was produced by the former weight the absent levers bore. And as the end-grain of every single log, in its respective station, will be able to furnish a resistance to more pressure than double the weight of the semi-rib projecting beyond the part where the log or logs are taken out can afford, were it even disunited in the centre, there can be no doubt of those bents that remain bearing the half of that proportion, when united.

Third. Each defective log on the sides of each rib can be taken out of its place by the most simple means, namely, by unscrewing three or four iron bolts, or starting so many trunnels and string-pieces, if of wood. A new log is then moulded to its shape, and placed in its stead, with similar ease. The only scaffolding required for this service being two lad-