

These crank wheels are to be secured to the crank shaft, in such a manner that the crank pins are at right angle to each other.

11th. CRANK SHAFT FOUNDATION-PLATES.—These foundation-plates are two in number, and are of different shape. 1st.—The first or the one nearest to the Turbine Chamber is to be 10 feet 9 inches total length, and is to be 15 inches high and 18 inches wide on top and bottom, its shape is that of a $\sqsupset$, arranged with ribs and filets as shewn on the plan; the section of metal is to be $1\frac{1}{2}$ inch over, except those parts that fasten to the bridge on top of Turbine Chamber, and to the pump foundation-plate, also where the crank shaft pedestals rest upon; in all these parts it is to be 2 inches thick when finished. On the base, where the crank shaft rests upon, there is to be a depression $1\frac{1}{2}$ inch deep by 6 inches wide.

This foundation-plate is firmly secured to the Turbine bridge, as described in the article "Bridge on top of Turbine."

On the other extremity there is to be a projection as shewn on plan, with its face made true to the inclined position of the pump foundation-plate.

This foundation-plate is to be held to its position on the stone foundation by means of 3 foundation bolts, described in the article "Foundation Bolts," and at the lower base of the foundation-plate there are to be provided three bosses 6 inches diameter and 2 inches thick, independent of the thickness of the base plate, provided with 3 inches holes through them.

These holes may be cast in. All other holes in Pedestals and Caps, though not mentioned above, will have to be bored and fitted to the bolts. 2nd The second foundation plate, or the one furthest from the Turbine Chamber, is to be 15 feet 9 inches total length, 15 inches high, 18 inches wide, and is to be made like the other in the shape of a $\sqsupset$, arranged with ribs and filets as shewn on the plan; the sections of metal are also to be $1\frac{1}{2}$ inch all over, except at those parts which fasten to the pump foundation-plate, or whereon the bridge for counter shaft and crank shaft pedestals rest on; on those parts the iron is to be 2 inches thick when finished. On the extremity furthest from the Turbine there is to be a projection as shewn on plan, with a face made true to the inclined position of the pump foundation-plate. This foundation-plate is to be provided in its base with 5 bosses, 6 inches outside diameter, 2 inches thick in addition to the thickness of the base, and each is to have a 3-inch hole to receive a foundation bolt. Both these foundation-plates are to be set so as to present a level surface at those parts which receive the pedestals, and before being finally bolted down, a substantial bed of sulphur is to be run between the base and the stone foundation so as to secure a good junction between foundation and plates.