

curve is to be extended to the outer periphery by horizontal lines radiating from the axis; said buckets are to be ground smooth after they are bent to the proper curve, and after being firmly secured they are to be made still more solid by shringing four wrought iron bands on the outside of said buckets—said bands are, when finished, to occupy the height of the movable wheel, or $11\frac{1}{2}$ inches; before shringing them on the buckets are to be made true to the diameter of eight feet. Said wrought iron bands after being shrung on are to be turned off to 8 feet $\frac{3}{4}$ inch scant; the bottom and top of rim and buckets are also to be made true, and both movable and stationary wheels are to be gauged to the number of square inches given on the plan.

7th. **TURBINE SHAFT.**—The Turbine Shaft is to be made of wrought iron, 14 feet 4 inches total length, and in its main part $8\frac{1}{2}$ inches diameter, when finished; said shaft is to be turned all over, and fitted first, to the moveable wheels; second, to the upper part of step; third, to the stuffing box of Turbine cover; fourth, to the bevel pinion; fifth, to the pedestal over the bevel pinion.

8th. **STEP ARRANGEMENT.**—The step arrangement is to be composed of upper and lower part in cast iron and centre in *lignum vitae*, said centre to be 15 inches diameter, and the whole to be of the dimensions shewn on the plan. The base and working parts, and also that part that is to fasten to the shaft, are all to be turned and fitted also with *lignum vitae*. The upper part is to be fastened on the shaft by means of steel pointed set screws. The *lignum vitae* is to have two deep grooves across the face and through the centre, one inch diameter hole that connects with one inch diameter wrought iron pipe brought in connection with the ascending main. Said pipe is also to be provided with a filtering apparatus and stop cocks. The lower part in cast iron is to be firmly secured to the cross-bridge by means of 8 bolts $\frac{3}{4}$ inch diameter.

9th. **CROSS-BRIDGE.**—The cross-bridge is to be of cast iron, and is to be formed of 4 arms $1\frac{3}{4}$ inch thick, and of the form shewn on the plan, said cross-bridge is to have a top plate 24 inches in diameter, which is to be set horizontally in the 4 lugs of the turbine cylinder, where in said 4 arms are to be secured by means of set screws tapped into the turbine cylinder. The lower part of the step is to be set central to turbine cylinder.

10th. **COLUMN.**—The column under the cross-bridge is also to be made in cast iron, of the dimensions shewn on the plan, the bottom and top to be faced true and to be fitted and bolted to the bottom or foundation plate, also to the cross-bridge.