

The Nave is to be  $6\frac{1}{2}$  inches in length on the Axle, by  $8\frac{1}{2}$  inches diameter on the face, and  $9\frac{1}{2}$  inches diameter in the centre, soundly welded together, clean and well formed at the Spokes, bored out to one uniform gauge of 5 inches diameter to fit the Axle; slotted opposite the end of a spoke to receive the steel key, faced on both ends, and turned to shape in the lathe up to the shoulders of the spokes.

The Tyres are to be 5 inches wide by  $1\frac{1}{2}$  inches thick in the centre of the tread when finished. They are to be soundly welded and well blocked or rolled, and made true laterally on a side face plate, then turned and bored out to the proper section, as shewn by the drawings, and to an exact gauge or diameter, so as to fit any of the wheels (which are also to be turned to one uniform gauge) and shrunk on and secured thereto by "Gibson's Patent Annular Key Fastening." When finished, each wheel shall balance accurately—that is to say, the centre of gravity shall be exactly in the centre of the wheel, and such measures shall be adopted to test this as the Engineer may direct.

The Axles shall be either of the Patent Shaft and Axletree Company's, or Thorneycroft and Company's.

The Tyres shall be either Bowring Company's, Patent Shaft and Axletree Company's, or Thorneycroft's Charcoal.

The Wheels are to be keyed on the Axles to a standard gauge, equidistant from the centres of the journals, and 4 feet  $9\frac{1}{2}$  inches in the clear of the inside edges of the tyres, and otherwise to fit exactly the standard gauge. The whole to be made according to the drawing, and to the satisfaction of the Engineer.

The Tyres, Axles, and forged Skeletons, are to be of the best materials of their respective kinds. The Wheels, when keyed on, are to be perfectly concentric with, and equidistant from the journals, and true on both edges. All Wheels, Tyres or Axles proving defective in workmanship or materials, after due trial, will be rejected, and are to be replaced at the expense of the manufacturer. All necessary gauges are to be provided by him, and they must be approved before being used. None of the work is to be painted until examined by the Engineer or his Inspector, and approved by the Engineer.

#### PAINTING.

The whole of the wood work outside and underneath to be painted with three coats of oil colour, of a brown shade of approved description.

All the iron work, including the wheels and axles, to be painted with two coats of black.

The Company's Initials, the Name of the Waggons, the load to be carried by it, and its number, to be painted on each side, in large letters and figures, to correspond with the rest of the Company's Waggons.

#### GENERALLY.

The whole of the materials and workmanship shall be of the best description of their respective kinds, and in strict accordance with the form, arrangement and intent of the drawings and Specification.

The Manufacturer is immediately to prepare a complete set of full sized working drawings of the several detail parts for the Engineer to examine, and if approved, to sign, and duplicate copies of the same to be retained by the Engineer, and should any deviation from such drawings be discovered in the articles when executed, such articles will be rejected, unless such deviation shall have been previously sanctioned by the Engineer in writing.

The Manufacturer is to pay all Patent Right and Royalties which may be due to any Patentee or other persons, so as to relieve the Company from all claims in respect of any costs beyond the contract price.

No advantage is to be taken of any omission of detail in this Specification, or in the drawings, as full explanation will be given should any part not be sufficiently described, shewn, or understood.