apart. According to circumstances they are supported by brackets or span wire, flexible suspension being employed throughout. The insulators are of a special type, with long insulating bolts, and the wires are held by very short mechanical clips which pivot from the insulating bolt. The method of supporting the high tension feeders and the trolley wires, the type of insulators used and the trolley insulators are shown in Figs. 9, 10 and 11.



The 3,000 volt current is taken from the trolley lines by a sort of bow trolley made up of two copper rollers 16 inches long and 3¼ inches diameter. These rollers which are mounted in the same axial line revolve upon steel ball bearings and are separated by 5 inches of hard wood saturated in parafine under pressure. The current is transmitted by the rollers to highly insulated wires through carbon brushes held against the copper rollers. The current in this way is not allowed to pass through the steel bearings. The trolley wires are held 18 feet above the track.

An arrangement inside the cab permits the lowering, by compressed air, of the trolley arms to disconnect the car from the overhead circuit. The high tension wires on the cars are all protected by grounded metallic tubing.

This road has been in operation only since the 15th of October, 1902, and little data as to power consumption is yet available. I

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