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# United States Patent [19] Chandler et al.

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[54] **COPPER TROLLEY WIRE AND A METHOD OF MANUFACTURING COPPER TROLLEY WIRE**

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[\*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

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[21] Appl. No.: **08/884,985**

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[51] Int. Cl.<sup>7</sup> ..... **C22C 9/00**

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[52] U.S. Cl. .... **148/432**

[58] Field of Search ..... 148/432

### [57] ABSTRACT

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Copper trolley wire consisting essentially of at least 99.90% copper and at most 0.10% of a metal selected from the group consisting of silver, cadmium, tellurium, titanium, magnesium, manganese, chromium, zirconium, tin and combinations thereof, has a minimum tensile strength well exceeding that listed in ASTM Standard B47-95a for copper trolley wire. The copper trolley wire has a uniform fine grain size. The copper trolley wire is manufactured using a process of casting a copper rod of the appropriate composition, hot working or “conforming” the cast rod to reduce its diameter, and then cold working it to form the desired wire by drawing it through one or more dies. Preferably, no annealing step is used.

**9 Claims, 4 Drawing Sheets**

