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(54) **APPARATUS FOR PRODUCING METAL POWDER BY ELECTROWINNING**

(75) Inventors: **John O Marsden**, Phoenix, AZ (US);  
**Scot P Sandoval**, Morenci, AZ (US);  
**Antonioni C Stevens**, Thatcher, AZ (US);  
**Timothy G Robinson**, Scottsdale, AZ (US);  
**Stanley R Gilbert**, Thatcher, AZ (US)

(73) Assignee: **Freeport-McMoran Corporation**, Phoenix, AZ (US)

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This patent is subject to a terminal disclaimer.

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**C25B 9/08** (2006.01)

(52) **U.S. Cl.** ..... **204/269**; 204/267; 204/275.1; 204/278.5; 204/281; 204/284; 205/574; 205/575; 205/576; 205/588; 205/602; 205/603

(58) **Field of Classification Search** ..... 204/269, 204/267, 275.1, 278.5, 281, 284; 205/574, 205/575, 576, 588, 602, 603

See application file for complete search history.

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*Primary Examiner*—Bruce F Bell  
(74) *Attorney, Agent, or Firm*—Snell & Wilmer L.L.P.

(57) **ABSTRACT**

This invention relates to an apparatus for producing a metal powder product using either conventional electrowinning or alternative anode reaction chemistries in a flow-through electrowinning cell. A new design for a flow-through electrowinning cell that employs both flow-through anodes and flow-through cathodes is described. The present invention enables the production of high quality metal powders, including copper powder, from metal-containing solutions using conventional electrowinning processes, direct electrowinning, or alternative anode reaction chemistry.

**20 Claims, 3 Drawing Sheets**

