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[54] **METHOD FOR THE PRODUCTION OF A PURIFIED MOO_3 COMPOSITION**

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[58] **Field of Search** 423/53, 55, 58, 423/54, 606, 593; 210/761, 912

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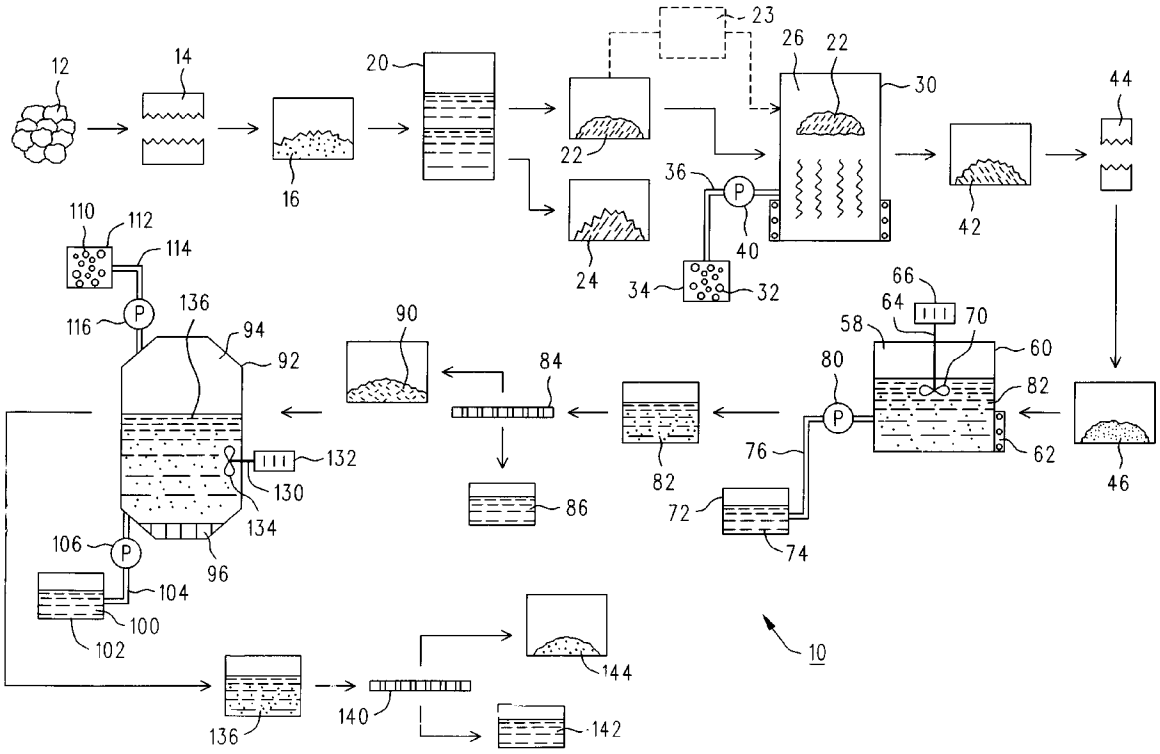
[57] **ABSTRACT**

A method for producing purified MoO_3 from MoS_2. MoS_2 is initially oxidized to generate an impure MoO_3 product containing metallic contaminants and molybdenum sub-oxides. This product is then slurried with a primary water supply to yield a first slurry in which part of the contaminants are dissolved. Preferred slurry temperatures are 25°–97° C. The resulting solid intermediate MoO_3 product is removed from the slurry leaving the dissolved contaminants. Next, the intermediate MoO_3 product is slurried with a secondary water supply to yield a second slurry in which the remaining contaminants are dissolved. Second slurry temperatures of 150°–250° C. are employed in the presence of an oxygen-containing gas. These conditions oxidize molybdenum sub-oxides to yield MoO_3. The resulting purified solid MoO_3 product is then removed from the second slurry. This process is highly efficient and avoids using liquid reagents other than water (including acids).

19 Claims, 1 Drawing Sheet