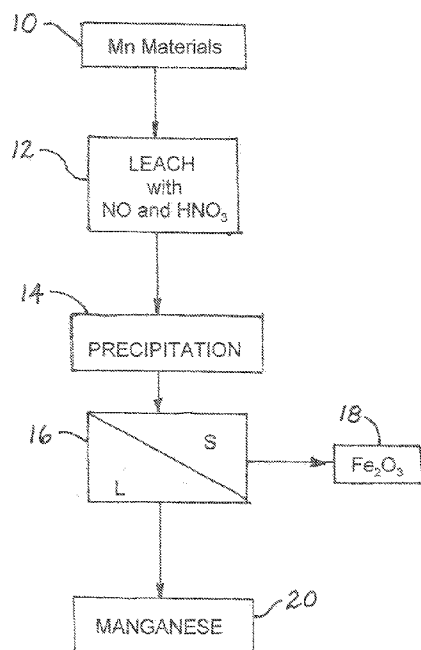




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(54) Title: TREATMENT OF MANGANESE-CONTAINING MATERIALS

**Fig. 1**

(57) Abstract: An improved method for treating manganese-containing materials, such as seafloor manganese nodules, by leaching with aqueous HNO₃ and NO gas, and more particularly to methods for recovering valuable constituents from such nodules, especially manganese, cobalt, nickel, iron, and copper. It also provides a method to leach manganese material to release the titanium, vanadium, cerium, molybdenum and other metals from the manganese oxides and to make them available to be recovered.



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