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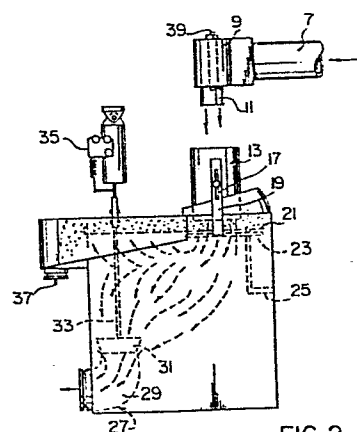
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**GILL JENNINGS & EVERY 53-64 Chancery Lane**  
**London WC2A 1HN(GB)**(54) **Cascade flotation process and apparatus for carrying out the process.**

(57) Minerals and metals are separated from a crushed ore mixture of crushed ore, aqueous solution, and flotation agent by allowing the mixture to fall freely from one or more outlets (11) into a container (1), so entrapping air during the free fall and encouraging the development of a large quantity of froth. Air entrainment is enhanced by passing the mixture to the outlets (11) via a header (9) in which air is drawn in through an air inlet pipe (39).

**FIG. 2****EP 0 098 902 A3**

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## EUROPEAN SEARCH REPORT

Application number

EP 82 30 3547

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. <sup>3</sup> )
X	US-A-2 416 066 (S. PHELPS)  * Column 2, lines 10-26; column 3, line 44 - column 4, line 7; figures 1-4 *	1,5,8,10	B 03 D 1/14
Y		2,3,7,9	
Y	--- GB-A- 104 367 (MINERALS SEPARATION) * Page 4, lines 18-53; figures 1,2 *	2,7	
A		4,6	
Y	--- US-A-3 255 882 (J.P. McCARTY et al.) * Column 1, line 59 - column 3, line 51; figure *	3,9	TECHNICAL FIELDS SEARCHED (Int. Cl. <sup>3</sup> )  B 03 D
X	--- EP-A-0 041 728 (VOITH) * Page 4, lines 1-28; page 6, lines 9-25; figures 1,4,5 *	1,5,10	
A	--- US-A-1 780 022 (W. LITTLEFORD) * Page 1, lines 42-92; figure *	2-4	
	--- -/-		
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 04-09-1984	Examiner LAVAL J.C.A
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. <sup>3</sup> )
A	US-A-1 380 650 (J. HEBBARD) * Page 2, lines 18-43; figures 1,2 *	2,7	
A	--- US-A-1 869 732 (J. ASSELSTINE)		
A	--- US-A-1 442 306 (D. STONEBRAKER) -----		
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int. Cl. <sup>3</sup> )
Place of search THE HAGUE		Date of completion of the search 04-09-1984	Examiner LAVAL J.C.A
<b>CATEGORY OF CITED DOCUMENTS</b> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			