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54 **Molten metal handling vessels.**

57 Molten metal handling vessels e.g. ladles for holding e.g. molten steel having slide gate valves for controlling the flow of molten metal therefrom. Apparatus (1,20) has a container (2,21) to hold a supply of particulate matter (3,22), the container having an outlet and means (6,25) for opening and closing the outlet for controlling the flow of particulate matter from the container and means (4,8,23,30) for conveying the particulate matter to the bore of a slide

gate valve assembly of a vessel.

The apparatus enables particulate matter to be accurately conveyed to a slide gate bore without the need for steelworks personnel to be exposed to the hazardous task of applying particulate matter manually to very hot vessels. In addition the apparatus enhances the free-opening of slide gate valves by reducing the incidence of blocked slide gate valve assemblies.

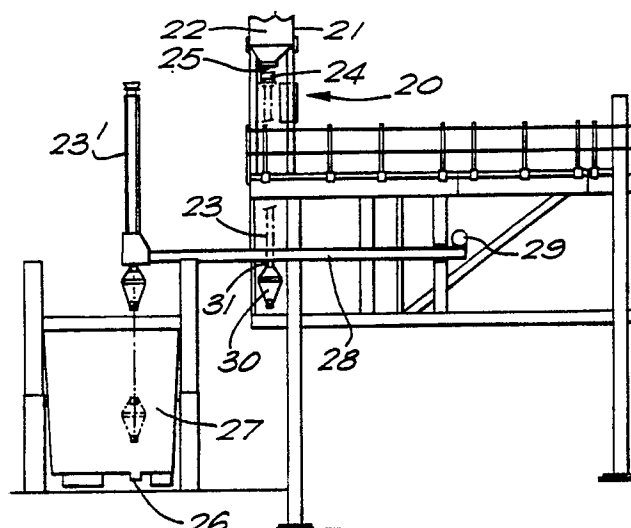


FIG. 3.



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number

EP 89 30 3586

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.4)		
A	FR-A-2 491 364 (F. MORIVAL) * claim 1 * ---	1	B 22 D 41/08		
A	DE-A-2 816 867 (CENTRO SPERIMENTALE) * claim 9 * ---	1			
A	PATENT ABSTRACTS OF JAPAN vol. 11, no. 333 (M-637)(2780), 30 October 1987; & JP-A-62114748 (SUMITOMO) 26.05.1987 -----	1			
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)		
			B 22 D 41/00 B 22 D 11/00		
The present search report has been drawn up for all claims					
Place of search BERLIN		Date of completion of the search 31-08-1990	Examiner GOLDSCHMIDT G		
<table><tr><td>CATEGORY OF CITED DOCUMENTS 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</td><td>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</td></tr></table>				CATEGORY OF CITED DOCUMENTS 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
CATEGORY OF CITED DOCUMENTS 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				