

Title (en)
APPARATUS FOR DISCHARGING MATERIAL AT A HIGH TEMPERATURE FROM A VESSEL, ESPECIALLY SPONGE IRON FROM A SHAFT FURNACE

Publication
EP 0081475 B1 19860702 (DE)

Application
EP 82890173 A 19821123

Priority
AT 523081 A 19811207

Abstract (en)
[origin: US4407489A] A discharge implement is provided, which is operable to discharge sponge iron from a shaft furnace and constitutes the bottom structure of the shaft furnace and is formed with flow passages for a cooling liquid. In order to ensure a uniform discharge, the discharge implement consists of a grate, which comprises parallel grate bars, which are non-circular in cross-section and are operable to perform rotational oscillations about their respective longitudinal axes. The grate bars are hollow so that they can conduct a cooling liquid, and they surround and are radially spaced from an inner tube, which has at least one opening, through which the interior of the inner tube communicates with the annular space defined between the inner tube and the shell of the grate bar.

IPC 1-7
C21B 13/02; **F27B 1/20**

IPC 8 full level
B65G 13/00 (2006.01); **B65G 39/00** (2006.01); **C21B 13/00** (2006.01); **C21B 13/02** (2006.01); **F27B 1/21** (2006.01)

CPC (source: EP US)
C21B 13/02 (2013.01 - EP US); **F27B 1/21** (2013.01 - EP US)

Cited by
DE102016112969A1; CN110392486A; WO2018010995A1

Designated contracting state (EPC)
BE DE FR GB IT LU NL SE

DOCDB simple family (publication)
EP 0081475 A2 19830615; **EP 0081475 A3 19830817**; **EP 0081475 B1 19860702**; AT 373624 B 19840210; AT A523081 A 19830615; DE 3271900 D1 19860807; JP S58104107 A 19830621; JP S6046353 B2 19851015; US 4407489 A 19831004

DOCDB simple family (application)
EP 82890173 A 19821123; AT 523081 A 19811207; DE 3271900 T 19821123; JP 21283282 A 19821206; US 44576982 A 19821130