

Title (en)

BORING RAM WITH A TURN-AND-PULL REVERSING DEVICE

Publication

EP 0331913 B1 19930512 (DE)

Application

EP 89102099 A 19890208

Priority

DE 3807831 A 19880310

Abstract (en)

[origin: US4953626A] A ram boring machine having a pull-and-turn reversing gear which comprises a striking piston axially displaceable in a tubular housing and a rotatably mounted control pipe with control openings such that forward and backward movement of the machine is controlled by moving the control openings over corresponding radial control openings in the striking piston, the control pipe having at least two parts with the rear part (viewed in the ramming direction) being connected to a supply hose, being relieved of the working pressure, and being connected to the bearing pipe by way of a force-loaded locking device which can be unlocked axially by traction on the supply hose against the loading force. This arrangement on the one hand prevents undesired reversal and on the other hand enables reversal to be effected under pressure.

IPC 1-7

E21B 4/14; **E21B 7/26**

IPC 8 full level

E21B 11/02 (2006.01); **E21B 4/14** (2006.01); **E21B 7/26** (2006.01)

CPC (source: EP US)

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Cited by

RU200308U1; EP0578942A1; EP0454947A1; RU2655493C1

Designated contracting state (EPC)

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DOCDB simple family (publication)

US 4953626 A 19900904; AT E89363 T1 19930515; DE 3807831 C1 19890511; DE 58904304 D1 19930617; EP 0331913 A2 19890913; EP 0331913 A3 19910612; EP 0331913 B1 19930512; JP 2893342 B2 19990517; JP H01284688 A 19891115

DOCDB simple family (application)

US 30603389 A 19890202; AT 89102099 T 19890208; DE 3807831 A 19880310; DE 58904304 T 19890208; EP 89102099 A 19890208; JP 5179189 A 19890303