

Title (en)
Nozzle means for rotary drill bits.

Title (de)
Düse für Drehbohrmeissel.

Title (fr)
Duse pour trépan de forage rotatifs.

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Application
EP 90308487 A 19900801

Priority
US 50204690 A 19900330

Abstract (en)
A rotary drill bit (10) has fluid discharge nozzles (36A, 36B, 36C) positioned between adjacent pairs of roller cutters (20A, 20B, 20C). A fluid discharge nozzle (36A) provides a stream of drilling fluid (44) toward an adjacent roller cutter (20A) inclined radially outwardly toward the side wall (34) of the bore hole (30) and slanted toward the roller cutter (20A) for first striking the side wall (34), and then sweeping inwardly across the bore hole bottom (32) in a flat high velocity stream tangential to bit rotation and beneath the cutting elements (26) during cutting engagement of the gage row (28D) with the formation. <IMAGE>

IPC 1-7
E21B 10/18

IPC 8 full level
E21B 10/18 (2006.01)

CPC (source: EP)
E21B 10/18 (2013.01)

Citation (search report)
• [YD] US 4741406 A 19880503 - DEANE JOHN D [US], et al
• [Y] US 4369849 A 19830125 - PARRISH JOHN D
• [A] EP 0171899 A1 19860219 - REED TOOL CO [US]
• [AP] WO 9005830 A1 19900531 - MINI GAZOVOI PROMY SSSR [SU]

Cited by
GB2315509A; GB2315509B; US6142247A; US9033066B2; US6290006B1; WO0019055A1

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