

Title (en)
FLUID OPERATED HAMMER HAVING DRILL BIT CLEARANCE MEANS

Publication
EP 0083507 A3 19830907 (EN)

Application
EP 82307000 A 19821230

Priority
AU PF215082 A 19820104

Abstract (en)
[origin: EP0083507A2] A fluid operated hammer comprising a cylindrical casing (11) having a bore for slidably receiving a piston (26), a top sub (12) mounted at one end, a drill bit (13) mounted to the other end by means of a chuck (14), a feed tube (20) concentrically mounted within the upper end of the bore of the casing and extending downwardly into the casing, said feed tube being connectible to a fluid source through said top sub. The piston is slidably mounted within the bore of said casing over said feed tube (20). The feed tube (20) is provided with at least one aperture (24) in the walls of said feed tube, and at least one port (27, 29) provided at each end of the piston. Each port opens at spaced locations into the bore of the piston to periodically communicate with said aperture (24) as a result of sliding movement of the piston over the feed tube to alternately drive the piston towards and away from the drill bit to impact thereon and to drive the piston away from the drill bit. A further aperture (40) is provided in said feed tube (20) to communicate with the space between said drill bit (13) and said piston (26) when said hammer is in the "blow-down" position. The drill bit (13) is mounted in the chuck (14) in such manner that when in the "blow-down" position there is communication between said space and the exterior of the hammer through the zone between the drill bit and the chuck.

IPC 1-7
E21B 4/14

IPC 8 full level
E21B 4/14 (2006.01)

CPC (source: EP)
E21B 4/14 (2013.01)

Citation (search report)

- [X] GB 1552975 A 19790919 - ATLAS COPCO AB
- [A] GB 2054705 A 19810218 - DRESSER IND
- [A] GB 2052608 A 19810128 - DRESSER IND
- [A] US 4015670 A 19770405 - REAR IAN GRAEME
- [A] US 4084647 A 19780418 - LISTER WILLIAM
- [A] US 4146097 A 19790327 - CURINGTON ALFRED R
- [YP] EP 0043291 A1 19820106 - REAR IAN GREAME
- [YP] EP 0048142 A1 19820324 - REAR IAN GRAEME

Cited by
US4932483A; WO9854433A1

Designated contracting state (EPC)
DE FR GB SE

DOCDB simple family (publication)
EP 0083507 A2 19830713; EP 0083507 A3 19830907; AU 9176182 A 19830714; ZA 8327 B 19831026

DOCDB simple family (application)
EP 82307000 A 19821230; AU 9176182 A 19820104; ZA 8327 A 19830104