

Title (en)
PERCUSSIVE DRILLS

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Application
EP 82304174 A 19820806

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Abstract (en)
[origin: EP0081897A1] The invention relates to percussive drills for earth boring, and particularly to so-called valveless drills. In such drills it is important to allow, cyclically, compressed air to pass into the bore hole to clear debris through a central hole in the bit which central hole needs to be closed to allow the return stroke of the piston. This has been provided for hitherto by a short tube usually of plastics material, secured to the innermost end of the bit so that as the piston approaches the bit on the drive stroke the tube engages in a counterbore in the piston to seal the bore through the bit. Such short tubes are frequently damaged causing cessation of operation of the drill whilst down the hole, a circumstance that is to be avoided. The objective of the invention is to avoid the above disadvantage, which objective is met by a construction comprising an outer wear tube (1), compressed air inlet means (2) to one end of the wear tube, chuck means (3) for holding a drill bit (4) to the opposite end of the wear tube, a cylinder (5) located within the wear tube with an annular gap therebetween, an air diverter (6) located at the end of the cylinder towards the air inlet, a sealing bearing (7) located at the end of the cylinder towards the chuck, and a piston (10) within the cylinder, said piston having a portion (15) of reduced diameter adapted to pass through the sealing bearing to strike a bit held in the chuck, and there being porting (8, 9) to direct air to one side or the other of the piston to provide a drive and a return stroke.

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Cited by
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