

Title (en)
Trench cutter.

Title (de)
Grabenfräse.

Title (fr)
Fraise pour creuser des tranchées.

Publication
EP 0496926 A1 19920805 (EN)

Application
EP 91101361 A 19910201

Priority
EP 91101361 A 19910201

Abstract (en)
The milling cutters (3, 4) are suspended on pivot arms (15, 16). Those pivot arms (15, 16) are pivotably mounted to an intermediate support structure (18). The pivot axes (24) of the pivot arms (15, 16) extend perpendicularly to the axes of rotation (3, 4) of the milling cutters (3, 4). These pivot arms (15, 16) are operated by hydraulic actuators (20). Therefore, in operation the milling cutters (3, 4) will oscillate over the bottom of a trench (11) being excavated such that no center ridge remains at the bottom of the trench which would call for additional operational procedures in order to be removed. Furthermore, the intake (35) of the suction pipe (34) for the removing of the milled off matter by means of a slurry being circulated is located close to the zone where the milling takes place. Therefore, the efficiency of the circulated volume of the slurry regarding the volume of milled material taken along is much improved. Because the milling cutters (3, 4) can pivot, their thickness can be smaller in spite of covering the complete width of the trench being excavated. Accordingly, they can act with a much higher pressure per surface unit onto the ground, thus enabling the use of rock bits such that also hard rock can be milled. <IMAGE> <IMAGE>

IPC 1-7
E02D 17/13

IPC 8 full level
E02D 17/13 (2006.01); **E02F 3/20** (2006.01)

CPC (source: EP)
E02D 17/13 (2013.01); **E02F 3/205** (2013.01)

Citation (search report)
• [X] EP 0109907 A2 19840530 - SOLETANCHE [FR]
• [X] US 3683522 A 19720815 - ROUSSEAU LOUIS, et al
• [X] DE 3805868 A1 19890907 - HOCHTIEF AG HOCH TIEFBAUTEN [DE]
• [A] DE 3602387 C1 19870604 - HOCHTIEF AG HOCH TIEFBAUTEN
• [A] FR 2211027 A5 19740712 - SOLETANCHE [FR]
• [A] DE 2655317 A1 19780608 - SCHYMURA HEINZ JUERGEN
• [X] PATENT ABSTRACTS OF JAPAN vol. 12, no. 466 (M-772)(3313) December 7, 1988 & JP-A-63 189 526 (TONE BORING)

Cited by
DE19838513C2; EP1486620A1; FR2856088A1; EP0716190A1; RU2705984C1; DE102005017093B4; EP0735199A1; DE19754399A1; US6085446A; DE19754399C2; US8039540B2; US7572859B2; US11519153B2; US8058350B2; US6429250B1; US8640364B2; US7367143B2; US7114271B2; US7700690B2; EP3688234A1; JP2005002785A; EP2378002A1

Designated contracting state (EPC)
AT BE CH DE DK ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)
EP 0496926 A1 19920805

DOCDB simple family (application)
EP 91101361 A 19910201