

Title (en)

Drill bit having a shank with grooves.

Title (de)

Bohrmeissel mit einem Nutenaufweisenden Einsteckende.

Title (fr)

Foret comprenant une queue avec des rainures.

Publication

EP 0355071 B1 19940420 (FR)

Application

EP 89402184 A 19890801

Priority

FR 8810616 A 19880805

Abstract (en)

[origin: US4943192A] The present invention is directed toward a drill bit which firstly comprises two locking grooves (1,1') diametrically opposed with respect to each other, and secondly, also diametrically opposed, with respect to each other, a first driving groove (3) and a second driving groove (4) associated with a locking groove (2) by being superimposed thereon. The driving groove (4) is advantageously angularly offset with respect to the associated locking groove (2) so as to have, in the drill bit driving zone, the lateral faces of the two associated grooves almost merged. This permits an extension of the friction zone so as to increase the wear resistance thereof, while the opposite lateral faces or edges of the superimposed grooves defines projecting locking surfaces (7) insuring proper locking of the drill bit.

IPC 1-7

B25D 17/08; **E21C 3/34**; **B25D 17/02**; **B23D 51/00**

IPC 8 full level

B25D 17/02 (2006.01); **B25D 17/08** (2006.01); **B23B 51/00** (2006.01)

CPC (source: EP US)

B25D 17/02 (2013.01 - EP US); **B25D 17/088** (2013.01 - EP US); **B25D 2217/0034** (2013.01 - EP US); **Y10T 279/17042** (2015.01 - EP US); **Y10T 408/907** (2015.01 - EP US)

Cited by

EP0662369A1; EP0645218A3; EP0662370A1; EP0665088A1; EP0657253A3; US5529444A; EP0729810A1; EP0579579A1; US5397203A

Designated contracting state (EPC)

BE CH DE ES FR GB IT LI NL SE

DOCDB simple family (publication)

EP 0355071 A1 19900221; **EP 0355071 B1 19940420**; AU 3927489 A 19900208; AU 621645 B2 19920319; CA 1314736 C 19930323; DE 68914748 D1 19940526; DE 68914748 T2 19941124; DK 174145 B1 20020722; DK 369389 A 19900206; DK 369389 D0 19890727; FI 893705 A0 19890804; FI 893705 A 19900206; FI 90637 B 19931130; FI 90637 C 19940310; FR 2635039 A1 19900209; FR 2635039 B1 19901102; IE 63396 B1 19950419; IE 892529 L 19900205; IT 1231322 B 19911128; IT 8921359 A0 19890728; JP 2819159 B2 19981030; JP H0366510 A 19910322; NO 893161 D0 19890804; NO 893161 L 19900206; US 4943192 A 19900724

DOCDB simple family (application)

EP 89402184 A 19890801; AU 3927489 A 19890803; CA 606847 A 19890727; DE 68914748 T 19890801; DK 369389 A 19890727; FI 893705 A 19890804; FR 8810616 A 19880805; IE 252989 A 19890804; IT 2135989 A 19890728; JP 20152289 A 19890804; NO 893161 A 19890804; US 38436989 A 19890725