

Title (en)  
Auger drill

Title (de)  
Spiralbohrer

Title (fr)  
Fleuret hélicoidal

Publication  
**EP 1041240 B1 20031217 (EN)**

Application  
**EP 00106647 A 20000328**

Priority  
JP 8895599 A 19990330

Abstract (en)  
[origin: EP1041240A2] A method of constructing high-friction piles in the ground is provided, wherein the amount of excavated soil from prebored holes can be reduced, and the total number of piles which must be set for a pile foundation can be reduced. An auger is utilized which comprises an elongated shaft (1) and a helical blade (2, 3) extending around the shaft (1) and projecting radially from the periphery of the shaft (1). The shaft comprises a first helical blade (2) along the length of the main portion thereof with an inclination angle in the positive direction of rotation and at least one second helical blade (3) only along the top portion of the shaft (1) with an inclination angle in the opposite or reverse direction as that of the first helical blade (2). When drilling such an auger into the ground, the agitated soil is thrust sideways into the ground so that a plastic zone (A) is formed around the hole up to a prescribed range. Next, a hardening agent (4) is poured into the hole, and then a support or reinforcement material (5) is inserted into the hardening agent (4) before the hardening agent (4) hardens completely. The support material (5) and the plastic zone (A) surrounding the hole form together a monolithic pile. <IMAGE>

IPC 1-7  
**E21B 10/44**; **E21B 17/22**

IPC 8 full level  
**E02D 3/12** (2006.01); **E02D 5/34** (2006.01); **E21B 7/00** (2006.01); **E21B 17/22** (2006.01)

CPC (source: EP)  
**E21B 17/22** (2013.01)

Cited by  
CN110206029A; CN102002942A; CN105401893A; JP2018135683A; CN110878553A; CN110552645A; EP2133507A1; CN105735907A; US8322458B2

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