11 Publication number:

0 217 995 A3

12

EUROPEAN PATENT APPLICATION

21) Application number: 85830279.7

22 Date of filing: 12.11.85

(a) Int. Cl.4: **E 21 B 7/20,** E 21 B 10/32,

E21 B 10/44, E21 B 17/08,

E 02 D 7/28

30 Priority: 08.10.85 IT 4864685

Applicant: Soc. PACCAGNELLA S.n.c. di Paccagnella Celso & Co., Via Emanuele Filiberto, 25, I-45011 Adria (Ro) (IT)

43 Date of publication of application: 15.04.87 Bulletin 87/16

(7) Inventor: Paccagnella, Danilo, Via Emanuele Filiberto, 25, I-45011 Adria (RO) (IT)

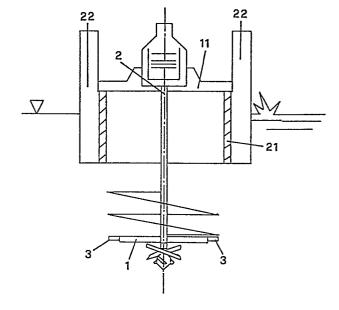
84 Designated Contracting States: AT BE CH DE FR GB LI

Date of deferred publication of search report: 19.10.88 Bulletin 88/42

Representative: Mascioli, Alessandro, Prof.Dr., c/o A.N.D.I. Associazione Nazionale degli Inventori Via Lima, 35, I-00198 Roma (IT)

A device that may be applied to perforating drills for the drilling of foundation holes, and the insertion and stabilization of

A device that may be applied to perforating drills comprising an expansion headpiece (1) with a determined rotation sense and retraction by motion inversion, that will perform holes of a diameter adapted to the reinforcement tube (of steel, cement or other), a pusher (11) having the function of causing the penetration of the reinforcement tube or the hooking simultaneously to the drilling of the hole, which will therefore be reinforced in one single stage, and a reinforcement tube (21), provided with a series of tongues (22), outwardly fixed, for stabilizing the foundation relating to flexion and torsion and assure the structural connection between the different stage of said tube. Each single component element of the device may be applied to perforating drills or in connection with one or two of the other elements, according to the requests.







EUROPEAN SEARCH REPORT

85 83 0279

| | DOCUMENTS CONSI | DERED TO BE RELEV | 7 A NITE | 7 |
|--|--|---------------------------------|-----------------|---|
| Category | Citation of document with i | ndication, where appropriate | Relevant | CLASSIFICATION OF THE |
| A | | K. TAKECHI KOUMUSHO) | to claim | E 21 B 7/20 |
| A | US-A-4 494 613 (TA * Claim 1; column 3 | MAKI et al.) , lines 55,56 * | 1,2,3,4 | E 21 B 10/32 E 21 B 10/44 E 21 B 17/08 |
| A | AT-A- 363 044 (STA HANS LEFFER GMbH) * Claim * | AHL- UND APPARATEBAU | 1 | E 02 D 7/28 |
| A | US-A-3 077 235 (GOV * Claim 1 * | VIN) | 1 | |
| A | US-A-3 779 025 (GOI * Column 3, lines 62 | OLEY et al.) 2-66 * | 1,4,5 | |
| A | US-A-4 010 966 (VAN * Abstract * | NDEN BOSCH) | 1,4,5 | |
| A | US-A-4 258 788 (PAT * Abstract * | TON et al.) | 1,4,5 | TECHNICAL FIELDS SEARCHED (Int. Cl.4) E 21 B |
| | The present search report has been | ı drawn up for all claims | - | |
| Place of search THE HAGUE Date of completion of the search 01-08-1988 | | | Examiner | |
| | | HEDEMA | HEDEMANN, G. A. | |

EPO FORM 1503 03.82 (P0401)

- A: technological background
 O: non-written disclosure
 P: intermediate document

- D: document cited in the application L: document cited for other reasons
- &: member of the same patent family, corresponding document