



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
27.02.2008 Bulletin 2008/09

(51) Int Cl.:
B21D 11/12 (2006.01) B21F 1/00 (2006.01)

(43) Date of publication A2:
07.11.2007 Bulletin 2007/45

(21) Application number: **07106878.7**

(22) Date of filing: **24.04.2007**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

(71) Applicant: **Anagnostopoulos, Antonios**
15126 Kiffisia, Attikis (GR)

(72) Inventor: **Anagnostopoulos, Antonios**
15126 Kiffisia, Attikis (GR)

(30) Priority: **04.05.2006 GR 2006100262**

(74) Representative: **Rosenich, Paul**
Patentbüro Paul Rosenich AG
BGZ
9497 Triesenberg (LI)

(54) **Method and Machine for Production of Three-Dimensional Stirrups**

(57) Method and machine for production of three-dimensional stirrups (1a) with two converging legs (4,5), from rods, wire or other material of any cross-section, wherein first is produced with the aid of a bending head (19) by making two bending operations a planar stirrup (9) with parallel legs. Afterwards, utilizing a mechanism (25) located immediately following this bending head (19), which mechanism includes an arm (16) that may move in reciprocation with the aid of a suitable mechanism (18) and has a hook (17) at its end, the free leg (5) of the planar stirrup (9) is trapped by the hook (17). This trapped free leg (5) is pulled towards the opposite leg (4) as arm (16) reciprocates, covering an appropriate distance. Finally, the third dimension is generated by bending simultaneously at locations (12, 13) with a suitable bending mechanism (22) that is located after the mechanism (25).

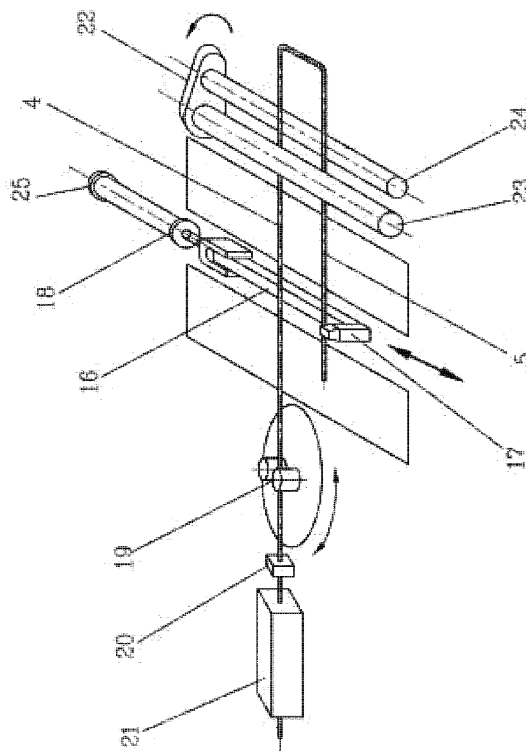


Fig. 11



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 07 10 6878

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	DE 41 17 955 A1 (HIENDL HERIBERT [DE]) 3 December 1992 (1992-12-03) * column 4, lines 27-42 * * column 4, line 50 - column 5, line 38; figures 4-7 *	1-5	INV. B21D11/12 B21F1/00
A	-----	6-10	
X	FR 2 657 547 A (MURE ETS [FR]) 2 August 1991 (1991-08-02) * page 5, line 30 - page 6, line 20; figures 1-4 *	1-5	
A	-----	6-10	
A	DE 34 16 678 A1 (DIETRICH WOLF JUERGEN) 17 January 1985 (1985-01-17) * page 18, line 22 - page 20, line 9; figures 1-5 *	1-10	
A,D	----- US 2 782 832 A (SHAW JR RALPH M) 26 February 1957 (1957-02-26) * the whole document * -----		TECHNICAL FIELDS SEARCHED (IPC) B21D B21F E04C E04G
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 21 January 2008	Examiner Knecht, Frank
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

4

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 07 10 6878

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

21-01-2008

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 4117955	A1	03-12-1992	NONE
FR 2657547	A	02-08-1991	NONE
DE 3416678	A1	17-01-1985	NONE
US 2782832	A	26-02-1957	NONE