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(54) Wire feeding device in a rotary stapling machine

(57) A wire advancement device (90) and a method in a rotary stapling machine which wire advancement device comprises a wire source (91, 92), an advancement system (93, 94) and a driving motor (95) arranged so that wire (T) from the wire source is continuously advanced via the advancement system to a first and a second wire introduction assembly (41, 42) mounted in a staple pick-up zone (31) in the rotary stapling machine, and that the wire introduction assemblies are provided with cutting edges that co-operate with the corresponding cutting edges of stapling forks (21, 21'), the cutting edges being arranged to cut off a length of wire advanced to the wire introduction assemblies (41) and forming a staple blank at each revolution the stapling fork (21) passes the wire introduction assembly (41), as well as that guide means (43, 44) are arranged to allow that the first wire introduction assembly (41) only delivers staple blanks to one of the stapling forks (21) and to allow the second wire introduction assembly (42) to only deliver staple blanks to the other one of the stapling forks (21') by the guide means (43, 44) providing a displacement of the respective wire introduction assembly (41, 42) in the direction away from the stapling cylinder to allow free passage of a stapling fork (21, 21').

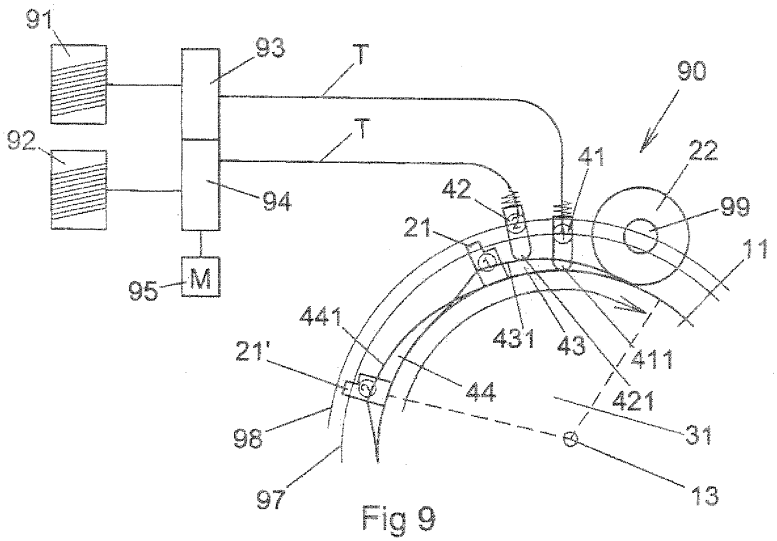

Fig 9

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EUROPEAN SEARCH REPORT

Application Number
EP 10 16 0764

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	GB 2 027 630 A (KOENIG & BAUER AG) 27 February 1980 (1980-02-27) * page 1, lines 13-15 * * page 1, lines 46-64 * * page 1, line 108 - page 2, line 2 * * page 2, lines 7-10 * * page 2, lines 49-68 * * page 2, line 76 - page 3, line 28; claims; figures * -----	1-13	INV. B42B4/02 ADD. B27F7/23 B41F13/66
A	GB 519 247 A (GOSS FOSTER LTD) 20 March 1940 (1940-03-20) * page 2, lines 46-60 * * page 3, line 58 - page 4, line 84; figures * -----	1	
A	US 4 750 661 A (PANE MARIO [IT]) 14 June 1988 (1988-06-14) * column 5, lines 11-48; figures * -----	1-13	
A	US 5 390 905 A (MELCHIOR WOLFGANG [DE]) 21 February 1995 (1995-02-21) * column 3, line 60 - column 4, line 22 * * column 4, lines 40-45 * * column 4, line 68 - column 5, line 30 * * column 5, line 59 - column 6, line 15; figures * -----	1-13	TECHNICAL FIELDS SEARCHED (IPC) B27F B41F B42B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	27 May 2014	Cametz, Cécile

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27-05-2014

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2027630 A	27-02-1980	CH 641728 A5	15-03-1984
		DD 145246 A5	03-12-1980
		DE 2835510 A1	14-02-1980
		FR 2432920 A1	07-03-1980
		GB 2027630 A	27-02-1980
		IT 1122735 B	23-04-1986
		JP S636359 B2	09-02-1988
		JP S5528894 A	29-02-1980
		SE 434620 B	06-08-1984
		SU 969148 A3	23-10-1982
		US 4223823 A	23-09-1980
GB 519247 A	20-03-1940	NONE	
US 4750661 A	14-06-1988	AT 82723 T	15-12-1992
		DE 3687150 D1	07-01-1993
		EP 0205144 A2	17-12-1986
		IT 1185103 B	04-11-1987
		JP S6253894 A	09-03-1987
		US 4750661 A	14-06-1988
US 5390905 A	21-02-1995	DE 4227930 A1	24-02-1994
		EP 0586926 A2	16-03-1994
		JP H0785953 B2	20-09-1995
		JP H06171265 A	21-06-1994
		RU 2102243 C1	20-01-1998
		US 5390905 A	21-02-1995

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82