



(11) **EP 1 350 604 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
25.07.2007 Bulletin 2007/30

(51) Int Cl.:
B25C 1/04 (2006.01) B25C 1/00 (2006.01)

(43) Date of publication A2:
08.10.2003 Bulletin 2003/41

(21) Application number: **03252176.7**

(22) Date of filing: **07.04.2003**

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

(30) Priority: **05.04.2002 US 369884 P**

(71) Applicant: **Stanley Fastening Systems L.P.**
East Greenwich, Rhode Island 02818 (US)

(72) Inventors:
• **Burke, Brian C.**
Barrington
Rhode Island 02806 (US)

• **Canlas Jr., Prudencio S.**
North Kingstown,
Rhode Island 02852 (US)
• **Simonelli, David D.**
Conventry,
Rhode Island 02816 (US)

(74) Representative: **Laight, Martin Harvey**
Beck Greener
Fulwood House
12 Fulwood Place
London WC1V 6HR (GB)

(54) **Fastener driving device**

(57) A fastener driving device (10) comprises a housing having a chamber constructed and arranged to contain compressed air, a cylinder (34) disposed within the housing, a piston (26) disposed within the cylinder and movable between upper and lower positions within the cylinder, a fastener striker (33) connected with the piston, a main valve (38) and trigger valve (36). The main valve is formed from a resilient material having a first portion (42) thereof sealingly engaged with a first portion (74a, 74b) of the cylinder. The main valve has a second portion (39) thereof movable between a sealing position with a second portion of the cylinder and an unsealed position as a result of flexing of the resilient material. The unsealed position permitting the compressed air to force the piston to move from the upper position to the lower position to enable the fastener striker to move through a fastener driving stroke. The trigger valve (36) is carried by the housing. The trigger valve is actuatable to vary air pressure in the vicinity of the main valve to enable the second portion (39) of the main valve to move from the sealing position to the unsealed position.

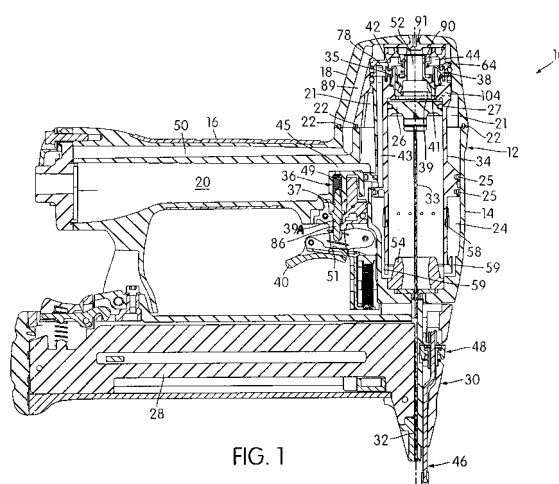


FIG. 1

EP 1 350 604 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 03 25 2176

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	US 4 688 710 A (MASSARI JR DONALD J [US] ET AL) 25 August 1987 (1987-08-25) * columns 8-10; figures *	1-9,12,13	INV. B25C1/04 B25C1/00
Y	-----	10,11	
X	US 3 822 819 A (WILSON S ET AL) 9 July 1974 (1974-07-09) * column 4; figures *	1,2,8,9	
Y	-----	3,4,10,11	
Y	US 4 039 113 A (MALES ROBERT E) 2 August 1977 (1977-08-02) * columns 4,7; figures *	3,4,10,11	
A	-----	7,12,13	
A	US 6 173 963 B1 (HO ROMAN [TW] ET AL) 16 January 2001 (2001-01-16) * columns 1,3; figures *	1,2,5,6,8,9,12	
A	GB 1 199 060 A (FASTENER CORP [US]) 15 July 1970 (1970-07-15) * page 2, line 108 - page 3, line 65; figure 1 *	1,2,5,6,8,9,12	TECHNICAL FIELDS SEARCHED (IPC) B25C
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 15 June 2007	Examiner David, Radu
CATEGORY OF CITED DOCUMENTS 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 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			

1
EPO FORM 1503 03.82 (P04C01)

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

EP 03 25 2176

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.

15-06-2007

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4688710 A	25-08-1987	AU 578764 B2	03-11-1988
		AU 5020485 A	10-07-1986
		CA 1259451 A1	19-09-1989
		CN 85109408 A	16-07-1986
		DE 3582021 D1	11-04-1991
		DE 8534353 U1	22-05-1986
		DK 566085 A	08-06-1986
		EP 0184468 A1	11-06-1986
		ES 8700121 A1	01-01-1987
		FI 854802 A	08-06-1986
		GR 852944 A1	13-02-1986
		IN 166485 A1	19-05-1990
		JP 1919685 C	07-04-1995
		JP 6049278 B	29-06-1994
		JP 61182782 A	15-08-1986
		NO 854735 A	09-06-1986
		NZ 214211 A	12-02-1988
		PT 81616 A	02-01-1986
		ZA 8508747 A	30-07-1986
US 3822819 A	09-07-1974	AU 5815773 A	23-01-1975
		BE 802089 A1	05-11-1973
		CA 987185 A1	13-04-1976
		DE 2331028 A1	24-01-1974
		FR 2191980 A1	08-02-1974
		GB 1403280 A	28-08-1975
		IT 990988 B	10-07-1975
		JP 49043744 A	24-04-1974
		ZA 7304353 A	29-05-1974
US 4039113 A	02-08-1977	NONE	
US 6173963 B1	16-01-2001	NONE	
GB 1199060 A	15-07-1970	CA 923651 A1	03-04-1973
		DE 1728624 A1	25-11-1976
		DE 1603785 A1	25-03-1971

EPO FORM P0459

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