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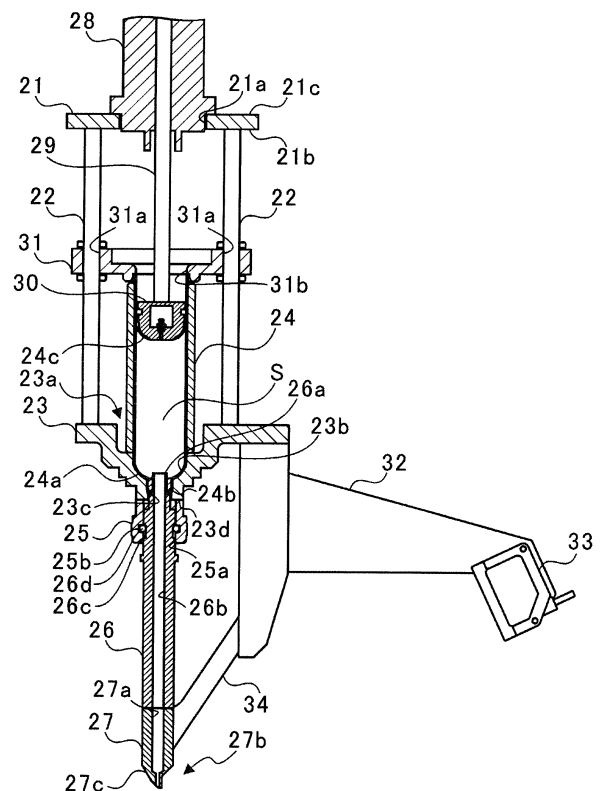
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(54) **SEALANT DISCHARGING APPARATUS**

(57) A sealant discharging apparatus (1) includes a cartridge (24), a nozzle member (27), and a cartridge receiver (23). The cartridge includes a projection member (24b) at a tip end (24a) and stores sealant therein. The projection member has a thread groove (23b) internally. The nozzle member includes a terminal end insertable in the projection member. The cartridge receiver includes a first tapered member in which the projection member is insertable. The first tapered member has a gradually decreasing inner diameter in a tip end direction in which the projection member is insertable.

FIG. 3





EUROPEAN SEARCH REPORT

Application Number
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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 2016/023233 A1 (HAYASHI HIDEKI [JP]) 28 January 2016 (2016-01-28)	1,4	INV. B05C5/02 ADD. B05C17/005
A	* paragraph [0148] * * figure 8 *	2,3	
X	US 5 074 443 A (FUJII HIDEYO [JP] ET AL) 24 December 1991 (1991-12-24)	1,4	
A	* column 5, line 37 - column 6, line 8 * * figure 2 *	2,3	
X	US 2001/020629 A1 (FUJII HIDEYO [JP]) 13 September 2001 (2001-09-13)	1,4	TECHNICAL FIELDS SEARCHED (IPC) B05C
A	* paragraph [0034] - paragraph [0035] * * figure 2 *	2,3	
A	US 2009/206112 A1 (FORT WESLEY C [US] ET AL) 20 August 2009 (2009-08-20)	1-4	
	* paragraph [0017] - paragraph [0019] * * figure 2 *		
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 26 March 2020	Examiner Roldán Abalos, Jaime
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			

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

EP 19 20 2417

5 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
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26-03-2020

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2016023233 A1	28-01-2016	CN 104918712 A	16-09-2015
		EP 2946840 A1	25-11-2015
		JP 5629866 B1	26-11-2014
		JP WO2014112381 A1	19-01-2017
		US 2016023233 A1	28-01-2016
		WO 2014112381 A1	24-07-2014

US 5074443 A	24-12-1991	NONE	

US 2001020629 A1	13-09-2001	JP 4399072 B2	13-01-2010
		JP 2001157862 A	12-06-2001
		US 2001020629 A1	13-09-2001

US 2009206112 A1	20-08-2009	NONE	
