

(19)



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(11)

EP 0 734 777 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
20.08.1997 Bulletin 1997/34

(51) Int Cl.⁶: **B05B 5/053**

(43) Date of publication A2:
02.10.1996 Bulletin 1996/40

(21) Application number: **96301943.5**

(22) Date of filing: **21.03.1996**

(84) Designated Contracting States:
DE FR GB

(30) Priority: **28.03.1995 US 412053**

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(54) Electrostatic ionizing system

(57) An electrostatic ionizing system for use in connection with a sprayer (10) for spraying conductive liquid particles, having a conductive needle (20) positioned near the centre of the sprayer (10), sprayed particle pattern (24), the needle (20) having a diameter of less than

about 250 micrometers and a needle tip sharpened to have a radius of curvature (R) of less than about 50 micrometers, and a second electrode (12) spaced approximately four inches (10.16cm) from the needle (20) and being formed as a part of said sprayer (10).

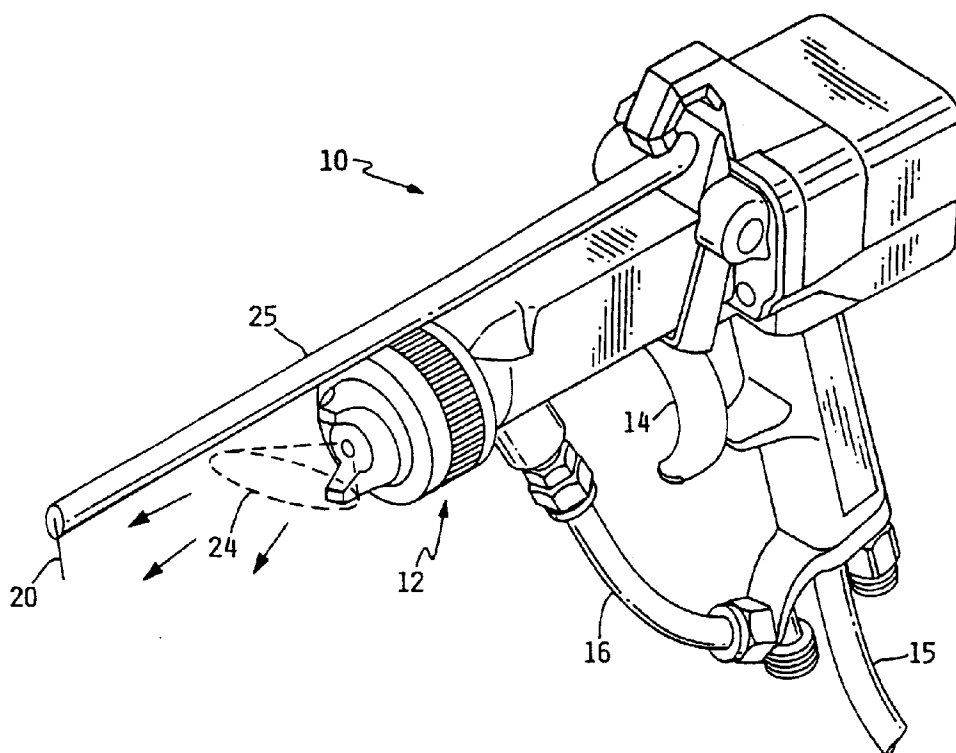


FIG. 1

EP 0 734 777 A3



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EUROPEAN SEARCH REPORT

Application Number
EP 96 30 1943

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
Y	FR 2 224 212 A (MUELLER ERNST KG) 31 October 1974 * page 1, line 30 - page 2, line 25 * * page 4, line 20 - line 23 * * page 6, line 36 - page 7, line 25; figures *	1,2,4-6, 12	B05B5/053
Y	US 4 219 864 A (GRUNENFELDER HANS ET AL) 26 August 1980 * column 2, line 44 - line 54 * * claim 13; figures *	1,2,4-6, 12	
A	US 4 343 828 A (SMEAD ROBERT G ET AL) 10 August 1982 * column 3, line 23 - line 43 * * column 5, line 12 - line 15; figures 2-4 *	1-4,6,7, 12	
A	US 2 959 353 A (CROSKEY ET AL) * column 2, line 63 - column 3, line 62; figure 2 *	1-4,6,7, 12	TECHNICAL FIELDS SEARCHED (Int.Cl.6)
A	US 4 079 894 A (HARJAR MARTIN J ET AL) 21 March 1978 * column 11, line 24 - line 51 * * column 12, line 30 - line 35 *	1-4,6,7, 12	B05B
A	FR 2 304 411 A (REDELEC) 15 October 1976 * page 1, line 31 - page 2, line 21 * * page 5, line 21 - line 26 * * page 5, line 36 - page 6, line 10; figures 3,4 *	1,4,6	
A	EP 0 469 775 A (HUGHES AIRCRAFT CO) 5 February 1992 * claims 1,2,4,13-15; figures *	1,3,4, 7-10,12	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 18 June 1997	Examiner Brévier, F
<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>			

EPO FORM 1503 03.82 (P04C01)



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EUROPEAN SEARCH REPORT

Application Number
EP 96 30 1943

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	US 5 344 676 A (KIM KYEKY00N ET AL) 6 September 1994 * column 3, line 22 - line 25 * * column 3, line 44 - line 54; figure 2 * ---	1,3,4, 7-10,12	
A	WO 94 18011 A (TONEJET CORP PTY LTD ;LIMA MARQUES LUIS (AU)) 18 August 1994 * page 4, line 34 - page 5, line 3 * * page 7, line 26 - line 31 * ---	1,3,4, 7-10,12	
A	US 4 744 513 A (MEISNER ROLAND-ANDREAS ET AL) 17 May 1988 * column 4, line 51 - line 60 * -----	1,3,4, 7-10,12	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
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