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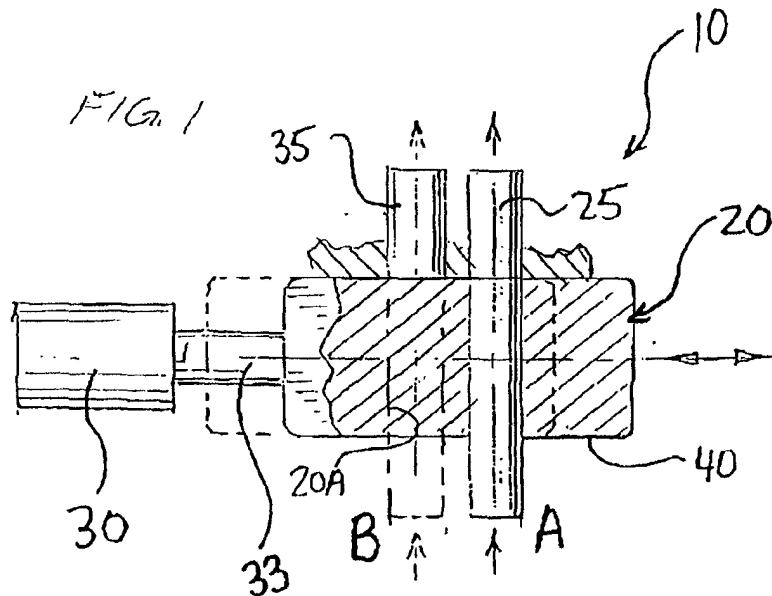
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(54) **Improved powder feeding apparatus for threaded articles**

(57) A continuous-flow powder feeding device for use in applying powder to threaded articles. A by-pass line (25) permits powder to constantly circulate through a powder supply line (35). In response to a signal that

a threaded article is in a position for powder to be applied, the powder supply line is automatically moved out of communication with the by-pass line (25), and into communication with a powder application line (35).





European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 98 65 0061

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)
X	US 4 138 161 A (PAYNE ROBERT D) 6 February 1979 (1979-02-06) * abstract * * column 1, line 19 - line 29 * * column 2, line 4 - line 29 * * column 2, line 42 - column 3, line 57 * * figures * ---	1-7,9,10	B05B7/14
D,A	US 5 362 327 A (SESSA EUGENE ET AL) 8 November 1994 (1994-11-08) * column 1, line 14 - line 16 * * column 3, line 59 - line 65 * * column 5, line 43 - line 48 * ---	3,4,6,8	
A	US 3 805 833 A (TEED G) 23 April 1974 (1974-04-23) -----		
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.CI.7)
			B05B F16K
Place of search	Date of completion of the search	Examiner	
THE HAGUE	12 October 2000	Barré, V	
CATEGORY OF CITED DOCUMENTS		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	
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			

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

EP 98 65 0061

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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12-10-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4138161 A	06-02-1979	AT 362849 B	25-06-1981
		AT 576478 A	15-11-1980
		AU 3874278 A	14-02-1980
		BE 869585 A	01-12-1978
		BR 7805082 A	29-05-1979
		CA 1090852 A	02-12-1980
		DE 2834262 A	22-02-1979
		DK 349378 A	10-02-1979
		FR 2399875 A	09-03-1979
		GB 2002708 A, B	28-02-1979
		IT 1099003 B	18-09-1985
		JP 1364150 C	09-02-1987
		JP 54030237 A	06-03-1979
		JP 61030830 B	16-07-1986
		NL 7807617 A	13-02-1979
SE 7807469 A	10-02-1979		
US 5362327 A	08-11-1994	US 5090355 A	25-02-1992
		US 5141771 A	25-08-1992
		CA 2045463 A	21-04-1991
		DE 69031916 D	12-02-1998
		DE 69031916 T	16-04-1998
		EP 0495909 A	29-07-1992
		ES 2112842 T	16-04-1998
		JP 2604280 B	30-04-1997
		JP 5501223 T	11-03-1993
		WO 9105614 A	02-05-1991
US 3805833 A	23-04-1974	NONE	