

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: **89118784.1**

(51) Int. Cl.⁵: **B41J 2/295**

(22) Date of filing: **10.10.89**

(30) Priority: **31.10.88 US 264535**

(43) Date of publication of application:
09.05.90 Bulletin 90/19

(84) Designated Contracting States:
DE FR GB

(88) Date of deferred publication of the search report:
19.09.90 Bulletin 90/38

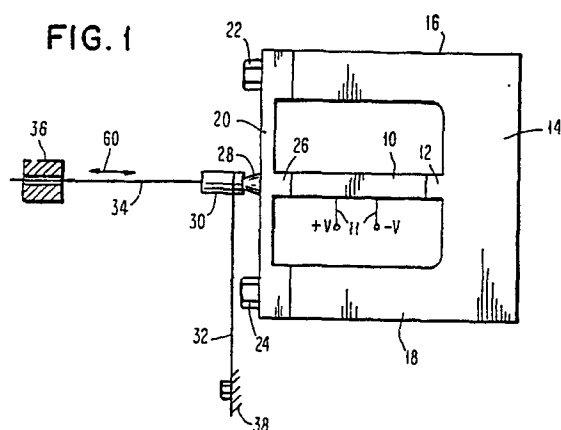
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(54) **Matrix printer actuator.**

(57) An impact printer is described which includes a shock wave generator means (10), a print hammer (30), and a solid wave guide (28) interposed between the shock wave generator and print hammer (30). The solid wave guide (28) acts to transmit a shock wave from the shock wave generator to the print hammer (30) to cause its movement towards a substrate upon which printing is to occur. In a preferred embodiment, the shock wave generator comprises a piezoelectric or electrostrictive actuator, which actuator is held in compression by a frame (12, 26) that prevents any substantial longitudinal movement thereof. In a further preferred embodiment, circuitry is connected to the actuator for detecting, after an actuation, the return of the hammer (30) into contact with the solid wave guide (28). In response to that detection, the circuitry provides a signal (80) which enables operation of the shock wave generator.





European Patent
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EUROPEAN SEARCH REPORT

Application Number

EP 89 11 8784

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.5)
Y	PATENT ABSTRACTS OF JAPAN vol. 12, no. 321 (M-736)(3168) 31 August 1988, & JP-A-63 89353 (UCHIKAWA) 20 April 1988, * the whole document *	1-3, 5	B41J2/295
A	---	4, 6-8, 10, 11	
Y	PATENT ABSTRACTS OF JAPAN vol. 10, no. 375 (M-545)(2432) 13 December 1986, & JP-A-61 167582 (OTA) 29 July 1986, * the whole document *	1-3, 5	
A	---	4, 6-8, 10, 11	
A	PATENT ABSTRACTS OF JAPAN vol. 11, no. 78 (M-570)(2525) 10 March 1987, & JP-A-61 233559 (UCHIKAWA) 17 October 1986, * the whole document *	1-3, 6, 10, 11, 15	
A	PATENT ABSTRACTS OF JAPAN vol. 8, no. 191 (M-322)(1628) 4 September 1984, & JP-A-59 81181 (INOUE) 10 May 1984, * the whole document *	1, 2, 10, 11, 14	TECHNICAL FIELDS SEARCHED (Int. Cl.5)
A	US-A-4480934 (HERMAN) * column 3, line 49 - column 5, line 5 * * figure 1 *	1, 2, 10-13	B41J
A	EP-A-266977 (NCR CORPORATION) * the whole document *	1-4, 9, 10	
A	PATENT ABSTRACTS OF JAPAN vol. 11, no. 67 (M-566)(2514) 28 February 1987, & JP-A-61 225067 (OTA) 06 October 1986, * the whole document *		
D,A	US-A-4613241 (KITAGAWA) -----		
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 24 JULY 1990	Examiner ADAM E.M.P.
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			