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# **EUROPEAN PATENT APPLICATION**

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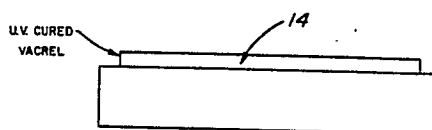
(54) **Process for fabricating laminated structures of improved structural integrity.**

(57) This patent application discloses a process for fabricating printhead structures for use in thermal ink jet printers. In this process, a thin film resistor substrate (10) is bonded to a flat orifice plate (12) by means of an adhesive polymer (14) to which heat and pressure are applied for a predetermined time. This pressure is applied to the outer surfaces of the orifice plate (12) and substrate (10) respectively and hydrostatically transmitted to the adhesive polymer (14) in such a manner as to apply pressure uniformly across the surface of the polymer (14). This application of uniform pressure is accomplished in spite of contours and other surface irregularities that may exist on either the materials being bonded or the heat staker members which apply heat and pressure to these members.

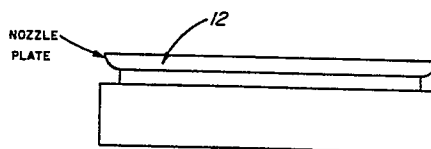
In a preferred embodiment of the invention, the above hydrostatic transmission of pressure is accomplished by means of a "waterbed" sandwich structure (16) in which a liquifiable material (22) is enclosed between layers (18,20) of flexible foil material.



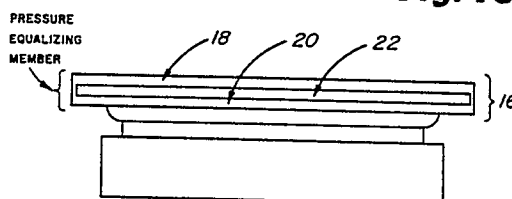
**Fig. 1A**



**Fig. 1B**

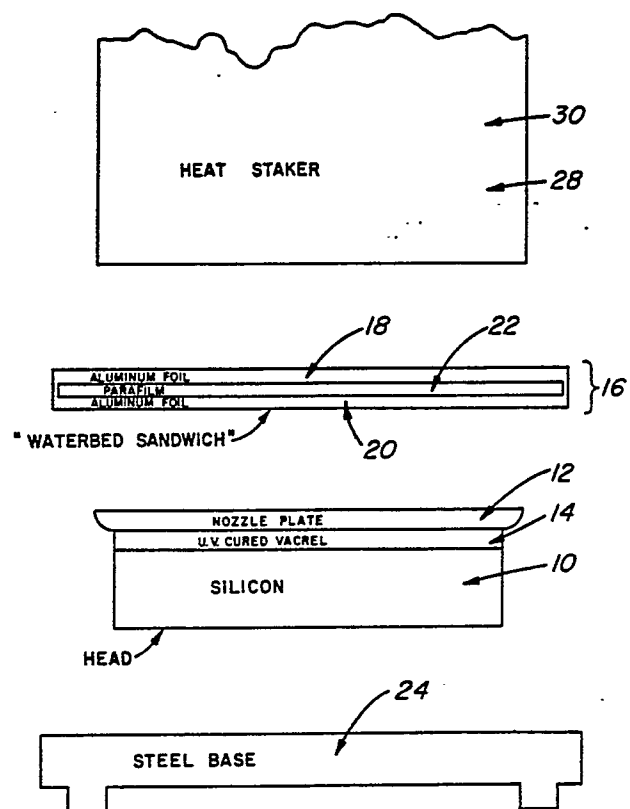


**Fig. 1C**



**Fig. 1D**

**EP 0 231 790 A3**



**Fig. 1E**



EP 87 10 0520

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.4)
A	DD-B- 98 641 (J. HEINECKE et al.) * claim 4, figure 4 * ---	1,3	B 41 J 3/04 B 32 B 31/20 H 01 L 49/02
A	DE-B-2 430 015 (TH. GOLDSCHMIDT AG) * whole document * ---	1,3,4	
A	DE-A-2 627 442 (BECKER & VAN HUELLEN NIEDERRHEINISCHE MASCHINENFABRIK) * figure 2 * ---	3	
A	DE-A-3 222 874 (CANON K.K.) * abstract * ---	1	
A	DE-A-3 150 109 (CANON K.K.) * abstract; figure 8 * -----	1	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			B 32 B 31/20 B 32 B 35/00 B 41 J 3/04
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 10-03-1989	Examiner ZOPF K
<b>CATEGORY OF CITED DOCUMENTS</b> 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			