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54 **Printhead-carriage alignment and electrical interconnect lock-in mechanism.**

57 A printhead cartridge and carriage assembly (10) is provided comprising:

- (a) a carriage (12);
- (b) a snap-spring (62) for securing a printing cartridge (14) in position on the carriage; and
- (c) an interconnect strip (16) for supplying electrical signals to the cartridge, including a force loading spring pad (24) for urging a portion of the interconnect strip (1b) against a portion of the cartridge.

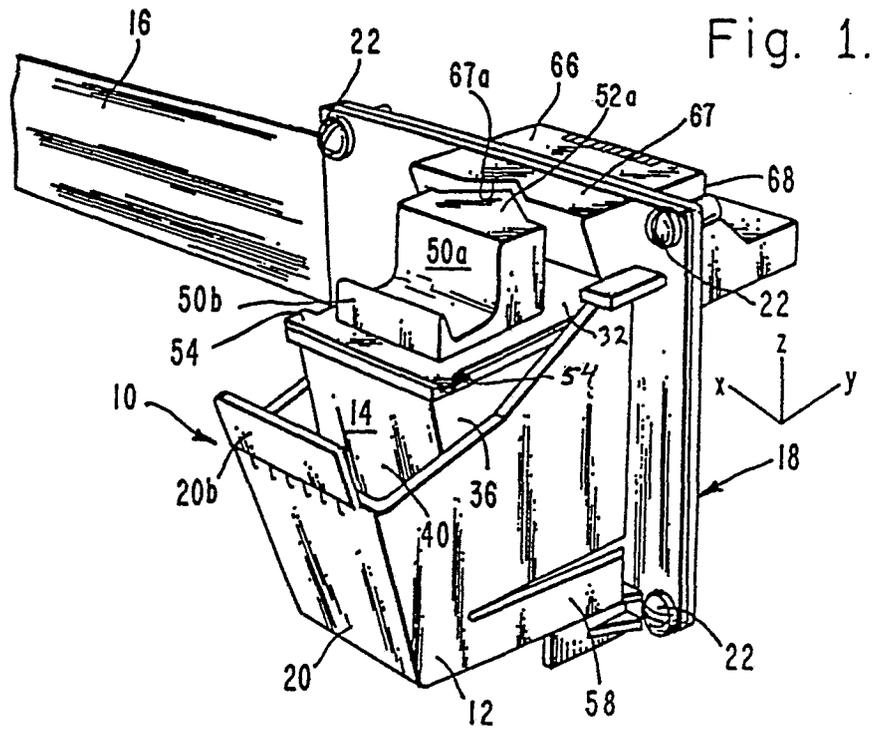
The cartridge has top (32), bottom (34), sides (36, 38), front (40) and rear (42) surfaces and includes a printhead (44) on the bottom surface, an electrical contact strip (46) on the back surface connected to the printhead (44), referencing pads (56) on the side surfaces, and a lip (64) on the back surface for accepting the snap-spring (62).

Referencing surfaces (60) are provided for receiving the referencing pads on the cartridge. The

spring pad (24) urges the interconnect strip (16) against the electrical contact of the cartridge.

The printhead cartridge/carriage assembly of the invention requires only one hand of the operator to both insert and lock the cartridge in position. Further, the cartridge/carriage assembly (10) provides simultaneous alignment of the printhead (44) in the X, Y, and Z directions. Finally, contact between the printhead (44) and the interconnect strip (16) is reliably made each time the cartridge is inserted and locked in position, thereby ensuring proper nozzle firing each time.

**EP 0 313 205 A3**





DOCUMENTS CONSIDERED TO BE RELEVANT			EP 88308397.4
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
E	<u>WO - A1 - 88/07 935</u> (SIEMENS AG) * Abstract; page 2, lines 15-19; page 9, lines 27-37; page 10, lines 1-10; claims; fig. 1,3,5 *	1,3,4	B 41 J 25/30 B 41 J 3/04
A	---	8,15, 16,23, 24	
A	<u>EP - A2 - 0 122 577</u> (SIEMENS AG) * Totality *	1,3, 16,20, 23	
A	<u>EP - A2 - 0 158 017</u> (NEC HOME ELECTRONICS LTD.) * Fig. 1; abstract; claims *	1,16	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			B 41 J
The present search report has been drawn up for all claims			
Place of search VIENNA		Date of completion of the search 19-12-1989	Examiner LANG
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			