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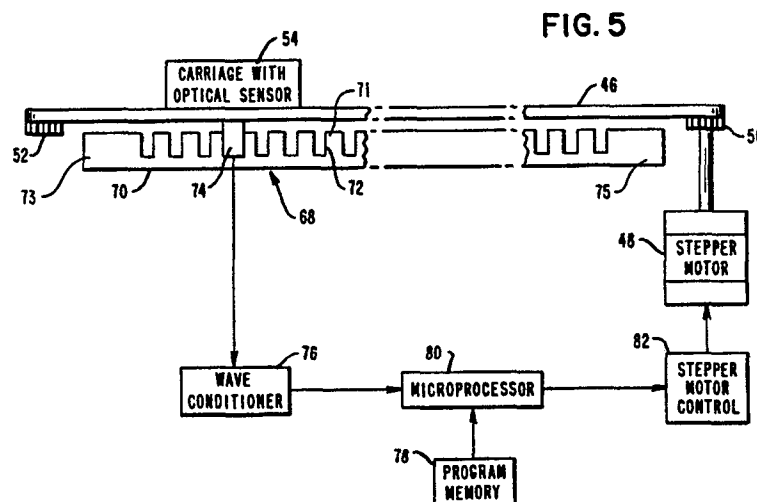
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54 **A control system for a printer.**

57 The invention relates to a control system for controlling the movement of a print head (22) mounted on a carriage (54) in a printer (12). A timing strip (68) is molded integral with the frame (69) of the printer (12) and positioned under the carriage (54). An optical sensor (74) is secured to the underside of the carriage (54) and positioned to straddle the tim-

ing strip (68) as the carriage is driven back and forth across the printer (12). Control means (76,78,80) responsive to output signals from the optical sensor (74) verify when the carriage (54) is at a home position and detects when a jam condition has occurred.





| 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) |
| D,A                                                                                                                                                                                                                     | US-A-4 338 035 (KONDO et al.)<br>* Column 2, line 60 - column 3, line 5;<br>figure 1 *<br>---                                                                   | 1,3,7                                                                                                                                                                                                                                                                                 | B 41 J 19/20                                  |
| A                                                                                                                                                                                                                       | PATENT ABSTRACTS OF JAPAN, vol. 7, no. 63 (M-200)[1208], 16th March 1983; & JP-A-57 207 080 (TOKYO SHIBAURA DENKI K.K.) 18-12-1982<br>* Whole abstract *<br>--- | 1,2                                                                                                                                                                                                                                                                                   |                                               |
| A                                                                                                                                                                                                                       | WO-A-8 503 036 (NCR CORP.)<br>* Page 7, lines 1-12; figure 8 *<br>---                                                                                           | 1,4,6,7                                                                                                                                                                                                                                                                               |                                               |
| A                                                                                                                                                                                                                       | EP-A-0 141 243 (MECHATRON SYSTEMS)<br>* Page 14, line 34 - page 15, line 9;<br>figure 3A *<br>---                                                               | 2                                                                                                                                                                                                                                                                                     |                                               |
| A                                                                                                                                                                                                                       | PATENT ABSTRACTS OF JAPAN, vol. 7, no. 145 (M-224)[1290], 24th June 1983; & JP-A-58 56 885 (SANYO DENKI K.K.) 04-04-1983<br>---                                 |                                                                                                                                                                                                                                                                                       | TECHNICAL FIELDS SEARCHED (Int. Cl.5)         |
| A                                                                                                                                                                                                                       | PATENT ABSTRACTS OF JAPAN, vol. 9, no. 80 (M-370)[1803], 10th April 1985; & JP-A-59 209 895 (RICOH K.K.) 28-11-1984<br>-----                                    |                                                                                                                                                                                                                                                                                       | B 41 J                                        |
| The present search report has been drawn up for all claims                                                                                                                                                              |                                                                                                                                                                 |                                                                                                                                                                                                                                                                                       |                                               |
| Place of search<br>THE HAGUE                                                                                                                                                                                            |                                                                                                                                                                 | Date of completion of the search<br>21-09-1990                                                                                                                                                                                                                                        | Examiner<br>JOOSTING T.E.D.                   |
| <b>CATEGORY OF CITED DOCUMENTS</b>                                                                                                                                                                                      |                                                                                                                                                                 |                                                                                                                                                                                                                                                                                       |                                               |
| X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document |                                                                                                                                                                 | T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>.....<br>& : member of the same patent family, corresponding document |                                               |