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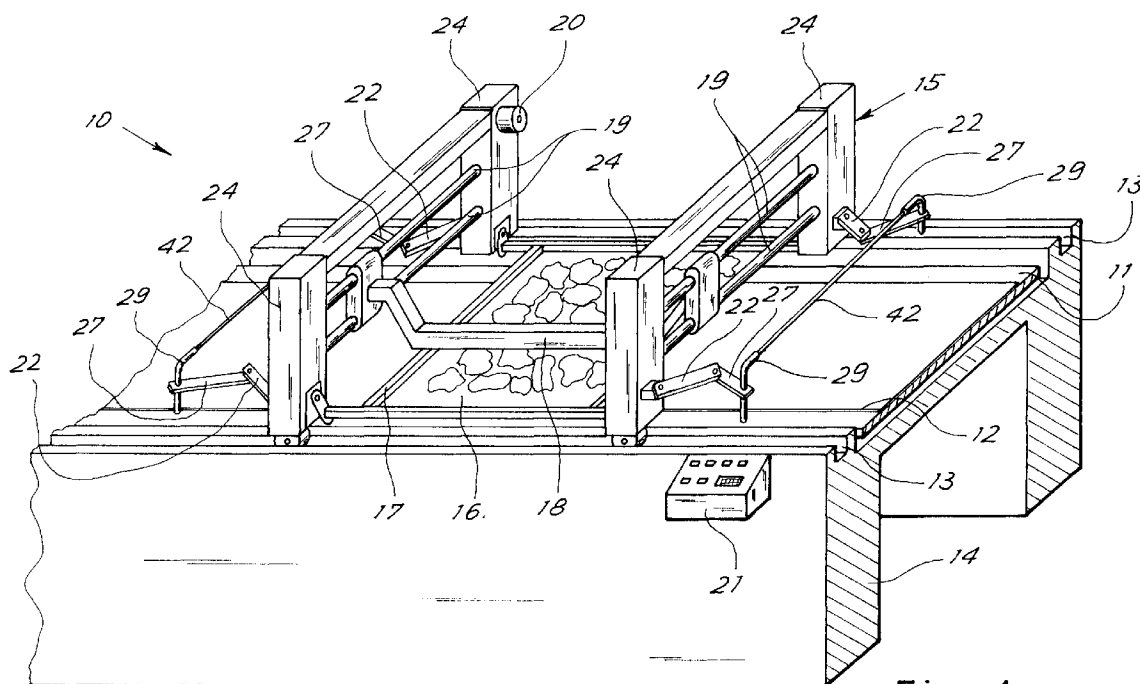
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### (54) **Moving-frame printing machine frame-holding carriage with obstacle-detection sensor**

(57) Printing frame-holding carriage (15) for printing machines (10) for ribbon-like products (12) of the type moving on the machine along the ribbon between preset printing positions and equipped with motor means (20) and motion control means (21) and characterized in that

it comprises means (22,27,29,42) of detection of the presence of obstacles along the motion trajectory. The detection means are connected to control means (34,35) for stopping the carriage (15) upon detection of an obstacle.



**Fig. 1**

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# EUROPEAN SEARCH REPORT

Application Number  
EP 97 20 0122

| 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.6)     |
| Y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | DE 11 96 158 B (IGNACIO SAGNIER VIDAL)<br>see whole document<br>---                                 | 1-17                                                | B41F15/36<br>B41F33/00<br>B41F15/08<br>B41F33/04 |
| Y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EP 0 458 098 A (JENKNER, ERWIN)<br>* column 1, line 1 - column 4, line 19;<br>figures 1-4 *<br>---  | 1-17                                                |                                                  |
| Y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | US 3 106 890 A (J. SCHMITT)<br>* column 1, line 10 - column 11, line 11;<br>figures 1-10 *<br>----- | 11-14                                               |                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                     |                                                     | TECHNICAL FIELDS<br>SEARCHED (Int.Cl.6)          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                     |                                                     | B41F<br>F16P<br>B41L                             |
| The present search report has been drawn up for all claims                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                     |                                                     |                                                  |
| Place of search<br>MUNICH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                     | Date of completion of the search<br>31 October 1997 | Examiner<br>Greiner, E                           |
| <p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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/>&amp; : member of the same patent family, corresponding document</p> |                                                                                                     |                                                     |                                                  |

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