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(54) Sheet feeding apparatus

(57) A stack height control assembly that is remote from the feedhead (50). A floating coupler and sensor flag arrangement (150) is mounted so that it is engaged with a paper supply drawer as the drawer is moved into an operative position. The feedhead (50) acts as the stack height sensor and through a mechanical engagement with the sensor, which is removed and remote from the supply drawer, signals as the stack (54) is depleted and the elevator mechanism should raise the stack (54). This control scheme removes complex electrical connectors from the drawer assembly and allows a wide range of substrates to be fed from the paper supply drawer By allowing the sensor/coupler arrangement to float so as to align with the drawer, the need for extremely tight manufacturing and assembly tolerances with respect to the drawer/sensor arrangement is also obviated.

As a result of incorporating the stack height sensor into the feedhead, several advantages are realized. There is no additional drag imparted to the sheets as the result of a sensing arm or other sensing member. This also reduces the possibility of skewing the sheets with an additional sensing member. The feedhead, due to the normal force required to acquire the sheets also provides an accurate measurement of stack height. The normal force of the feedhead also eliminates and inaccurracies that could be caused by curled sheets in a feed tray. The stack height is also measured "on the fly" as the sheets are being acquired and fed, thus providing an efficient stack height sensing scheme.

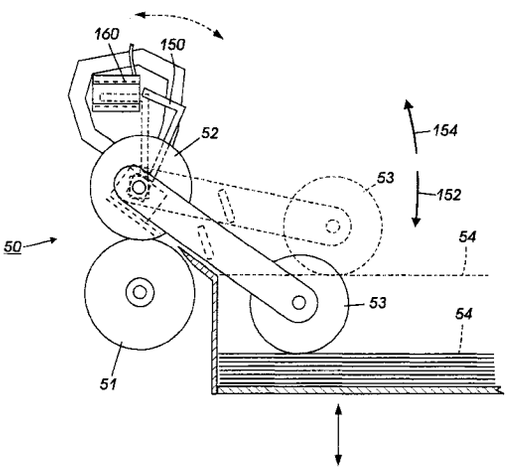

FIG. 2

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EUROPEAN SEARCH REPORT

Application Number
EP 97 30 0142

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)
X A	US 3 981 497 A (FEINSTEIN JR PAUL ET AL) * claims 1-3; figures 1,2 * * column 5, line 4 - column 6, line 40 * ---	1-3,5-8 4,9,10	G03G15/00
X	CH 616 388 A (RUENZI KURT) * claim 1; figures 1,2 * * page 2, right-hand column, line 52 - line 67 * ---	1,6	
A	PATENT ABSTRACTS OF JAPAN vol. 014, no. 029 (M-922), 19 January 1990 -& JP 01 267233 A (TOSHIBA CORP), 25 October 1989, * abstract; figures 1-6 * ---	1,6	
A	EP 0 555 091 A (FUJITSU LTD) * column 1, paragraph 1; figures 1,4,5 * * column 10, line 29 - column 11, line 44 * ---	1,6	
A	EP 0 357 012 A (KONISHIROKU PHOTO IND) * claim 1; figures 1,3 * * column 8, line 46 - line 49 * -----	1,6	TECHNICAL FIELDS SEARCHED (Int.Cl.6) G03G B65H

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	18 February 1998	Greiser, N

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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