

Title (en)  
Sheet feeding apparatus

Title (de)  
Blattzufuhrvorrichtung

Title (fr)  
Dispositif d'alimentation de feuilles

Publication  
**EP 0784242 A2 19970716 (EN)**

Application  
**EP 97300142 A 19970110**

Priority  
• US 58382996 A 19960111  
• US 58383096 A 19960111

Abstract (en)  
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 inaccuracies 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. <IMAGE>

IPC 1-7  
**G03G 15/00**

IPC 8 full level  
**B65H 1/14** (2006.01); **G03G 15/00** (2006.01)

CPC (source: EP)  
**B65H 1/14** (2013.01); **G03G 15/6511** (2013.01); **B65H 2511/15** (2013.01); **G03G 2215/00383** (2013.01); **G03G 2215/00396** (2013.01); **G03G 2215/00729** (2013.01)

Citation (applicant)  
• US 5033731 A 19910723 - LOONEY JOHN H [US]  
• US 4589645 A 19860520 - TRACY MICHAEL J [US]

Cited by  
EP2033915A3

Designated contracting state (EPC)  
DE FR GB

DOCDB simple family (publication)  
**EP 0784242 A2 19970716; EP 0784242 A3 19980415; EP 0784242 B1 20030903**; DE 69724481 D1 20031009; DE 69724481 T2 20040401

DOCDB simple family (application)  
**EP 97300142 A 19970110**; DE 69724481 T 19970110