

Title (en)  
Web registration measurement system.

Title (de)  
System zum Messen des Bahnregisters.

Title (fr)  
Système de mesure du positionnement d'une bande.

Publication  
**EP 0184907 A1 19860618 (EN)**

Application  
**EP 85308164 A 19851108**

Priority  
GB 8428368 A 19841109

Abstract (en)  
Web register measurement apparatus for use with a travelling web (30) carrying register marks (32, 34) of a predetermined shape and predetermined spacing along the direction of web travel includes an optical reader head (10) which has a lamp (20) for producing a light spot on the web (30) and a photodetector (45) for detecting light reflected from the spot on the 20 web (30). The photodetector (45) in use produces an output signal 70 representative of the intensity of the reflected light. A pattern-recognizing unit 12, e.g. a computer or a microprocessor, is provided to analyse the output signal 70 to determine the exact centre of the signal 70, i.e the moment of the minimum value 73 of the intensity of the reflected light by fitting the best slopes 71, 72 to the actual waveform of the signal 70. By determining the time intervals between the occurrences of such minimum values, lateral and/or longitudinal registration errors are deducible. A mask (24) is interposed either between the lamp (20) and the web (30) or between the web (30) and the photodetector (45), the mask (24) carrying a pattern which consists of at least one light-transmitting area (25, 125, 225, 325, 425) and non-transmitting area(s) and which is correlated with the register marks (32, 34) so as to produce a well-defined transition in the magnitude of the photodetector output (70, 71, 72).

IPC 1-7  
**B65H 23/04**; **B65H 26/00**; **G01B 11/14**

IPC 8 full level  
**B65H 43/08** (2006.01); **B41F 33/00** (2006.01); **B41F 33/14** (2006.01); **B65H 23/04** (2006.01); **G03G 15/00** (2006.01)

CPC (source: EP)  
**B41F 33/0081** (2013.01); **B65H 23/046** (2013.01)

Citation (search report)  
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Designated contracting state (EPC)  
AT CH DE FR GB IT LI

DOCDB simple family (publication)  
**EP 0184907 A1 19860618**; GB 8428368 D0 19841219; JP S61167557 A 19860729

DOCDB simple family (application)  
**EP 85308164 A 19851108**; GB 8428368 A 19841109; JP 24908485 A 19851108