Title (en)

Process of detecting double feeding of postal items by image analysis of the upright items

Title (de)

Verfahren zum Erkennen von Doppelabzügen von Postsendungen durch Bildanalyse der aufrechten Sendungen

Title (fr)

Procédé pour détecter des envois postaux en prises multiples par analyse de l'image du chant des envois

Publication

EP 1770037 A1 20070404 (FR)

Application

EP 06121014 A 20060921

Priority

FR 0552919 A 20050928

Abstract (en)

The method involves moving postal items on edge above a camera, and forming a grayscale image of the bottom sides of the items. The image is analyzed for the purpose of detecting the presence of any overlapping items. The image is transformed into a binary image that causes a boundary defined by a pale zone to represent the bottom side of the item. The binary image extends between two dark zones, and the boundary has right and left profiles. The profiles are analyzed for the purpose of detecting any profile discontinuity that is indicative of the presence of overlapping items.

IPC 8 full level

B65H 7/12 (2006.01)

CPC (source: EP US)

B65H 7/125 (2013.01 - EP US); B65H 2301/321 (2013.01 - EP US); B65H 2511/413 (2013.01 - EP US); B65H 2511/524 (2013.01 - EP US); B65H 2553/42 (2013.01 - EP US); B65H 2553/45 (2013.01 - EP US); B65H 2701/1315 (2013.01 - EP US); B65H 2701/1916 (2013.01 - EP US); Y10S 209/90 (2013.01 - EP)

Citation (search report)

- [DA] WO 03047773 A2 20030612 - SIEMENS DEMATIC POSTAL AUTOMAT [US]
- [DA] FR 2841487 A1 20040102 - SOLYSTIC [FR]

Cited by

FR2948109A1; US8764009B2; WO2011007077A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

EP 1770037 A1 20070404; **EP 1770037 B1 20080827**; AT E406333 T1 20080915; DE 602006002463 D1 20081009; ES 2309912 T3 20081216; FR 2891168 A1 20070330; FR 2891168 B1 20071019; PT 1770037 E 20081114; US 2007071284 A1 20070329; US 7835540 B2 20101116

DOCDB simple family (application)

EP 06121014 A 20060921; AT 06121014 T 20060921; DE 602006002463 T 20060921; ES 06121014 T 20060921; FR 0552919 A 20050928; PT 06121014 T 20060921; US 52756606 A 20060927