

Title (en)

Security devices for security substrates

Title (de)

Sicherheitsvorrichtungen für Sicherheitssubstrate

Title (fr)

Dispositifs de sécurité pour substrats sécurisés

Publication

**EP 2028017 A2 20090225 (EN)**

Application

**EP 08252744 A 20080819**

Priority

GB 0716496 A 20070823

Abstract (en)

A security device (10) for security substrates, such as paper, used for making security documents, such as bank notes, has anti-counterfeitable features. The security device comprises a first opaque layer (14) and a second opaque layer (15), said opaque layers each having a plurality of clear regions (18,19). A first fluorescent layer (16) is positioned between the first and second opaque layers and a second fluorescent layer (17) is positioned which is separated from the first fluorescent layer by one of the opaque layers. The first and second fluorescent layers exhibit different visible colours under ultraviolet light. The clear regions (18) in the first opaque layer form indicia and the clear regions (19) in the second opaque layer overlap with only some of the clear regions in the first opaque layer such that only a portion of the indicia are visible in transmitted light.

IPC 8 full level

**D21H 21/42** (2006.01); **B42D 25/29** (2014.01); **B42D 25/351** (2014.01); **B42D 25/355** (2014.01); **B42D 25/373** (2014.01); **B42D 25/378** (2014.01);  
**B42D 25/387** (2014.01); **B42D 25/45** (2014.01)

CPC (source: EP GB US)

**B42D 25/29** (2014.10 - EP GB); **B42D 25/328** (2014.10 - EP); **B42D 25/351** (2014.10 - EP); **B42D 25/355** (2014.10 - EP);  
**B42D 25/36** (2014.10 - EP); **B42D 25/364** (2014.10 - EP); **B42D 25/369** (2014.10 - EP); **B42D 25/373** (2014.10 - EP US);  
**B42D 25/378** (2014.10 - EP US); **B42D 25/382** (2014.10 - EP); **B42D 25/387** (2014.10 - EP); **B42D 25/45** (2014.10 - US);  
**D21H 21/42** (2013.01 - EP); **B42D 25/382** (2014.10 - GB); **B42D 25/387** (2014.10 - GB); **B42D 2033/04** (2022.01 - GB);  
**B42D 2033/08** (2022.01 - GB); **B42D 2033/10** (2022.01 - GB); **B42D 2033/16** (2022.01 - GB); **B42D 2033/20** (2022.01 - GB);  
**B42D 2033/26** (2022.01 - GB); **B42D 2035/02** (2022.01 - GB); **B42D 2035/08** (2022.01 - GB); **B42D 2035/12** (2022.01 - GB);  
**B42D 2035/20** (2022.01 - GB); **B42D 2035/24** (2022.01 - GB); **B42D 2035/34** (2022.01 - GB)

Citation (applicant)

- EP 0059056 A1 19820901 - PORTALS LTD [GB]
- EP 0319157 A2 19890607 - PORTALS LTD [GB]
- GB 2323814 A 19981007 - PORTALS LTD [GB], et al
- EP 0303725 A1 19890222 - GAO GES AUTOMATION ORG [DE]
- EP 0319157 A2 19890607 - PORTALS LTD [GB]
- WO 2006051231 A2 20060518 - ARJOWIGGINS SECURITY [FR], et al
- EP 0860298 A2 19980826 - GIESECKE & DEVRIENT GMBH [DE]
- WO 03095188 A2 20031120 - RUE DE INT LTD [GB], et al
- EP 1141480 A1 20011010 - RUE DE INT LTD [GB]
- WO 03054297 A2 20030703 - GIESECKE & DEVRIENT GMBH [DE], et al
- GB 2395959 A 20040609 - RUE DE INT LTD [GB]
- US 4652015 A 19870324 - CRANE TIMOTHY T [US]
- WO 0039391 A1 20000706 - RUE DE INT LTD [GB], et al
- WO 03091953 A2 20031106 - RUE DE INT LTD [GB], et al
- WO 03091952 A2 20031106 - RUE DE INT LTD [GB], et al

Cited by

DE102017009477A1; WO2012014151A1; JP2016524554A; JP2016525959A; EP3090880A1; DE102015005082A1; EP2401163A4;  
CN111761962A; US10479128B2; EP4091831A1; EP2946139A4; US2016333526A1; US10036125B2; US2011042023A1; US8430994B2;  
CN105324250A; EP3088202A3; CN114340907A; US10336123B2; WO2010096914A1; WO2014113042A1; US2019061408A1; EP3470236A1;  
US10682879B2; US10981409B2; EP3939802A1; US11400747B2; WO2022002366A1; WO2014188194A1; WO2017149284A1;  
WO2009109343A3; WO2011061495A1; WO2012153116A1; EP4049853A1; FR2963356A1; CN103038418A; KR20130132390A; EP2803497A1;  
EP2803498A1; CN105263718A; RU2649747C2; RU2652052C2; US2017116808A1; US10395461B2; US8720951B2; US9463659B2;  
US10179472B2; US11887427B2; WO2021074591A1; US9751355B2; US9908361B2; US10011141B2; WO2014184739A3; WO2014184738A3;  
WO2011073602A1; WO2015183243A1; WO2022069486A1; EP2946139B1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

**EP 2028017 A2 20090225; EP 2028017 A3 20150826; EP 2028017 B1 20170111;** GB 0716496 D0 20071003; GB 2452078 A 20090225;  
GB 2452078 B 20091223

DOCDB simple family (application)

**EP 08252744 A 20080819;** GB 0716496 A 20070823