

Title (en)

OPTICALLY VARIABLE SECURITY ELEMENT HAVING REFLECTIVE AREA

Title (de)

OPTISCH VARIABLES SICHERHEITSELEMENT MIT REFLEKTIVEM FLÄCHENBEREICH

Title (fr)

ÉLÉMENT DE SÉCURITÉ OPTIQUEMENT VARIABLE À ZONE DE SURFACE RÉFLÉCHISSANTE

Publication

**EP 3793841 A1 20210324 (DE)**

Application

**EP 19726572 A 20190516**

Priority

- DE 102018004052 A 20180518
- EP 2019000147 W 20190516

Abstract (en)

[origin: WO2019219237A1] The invention relates to an optically variable security element (12) for securing valuable objects, having a substrate (22) with a reflective area (20), the extent of which defines an x-y plane and a z axis perpendicular thereto, wherein the reflective area (20) contains a plurality of reflective portions (30), and each portion (30) has multiple identically oriented reflective facets (32), and an orientation of each facet (32) relative to the x-y plane is defined by indicating its normalised normal vector (n). The projection of the normal vector into the x-y plane defines an inclination direction (r) of the facet. The length (L) of a facet is its dimension in the inclination direction; the width (B) of a facet is its dimension perpendicular to the inclination direction in the x-y plane, and the height (H) of a facet is its dimension in the z direction. According to the invention, the identically oriented facets (32) in the reflective portions (30) are arranged with decreasing length (L) and decreasing height (H) in their common inclination direction (r).

IPC 8 full level

**B42D 25/328** (2014.01); **B42D 25/364** (2014.01); **B42D 25/373** (2014.01)

CPC (source: EP)

**B42D 25/328** (2014.10); **B42D 25/364** (2014.10); **B42D 25/373** (2014.10)

Citation (search report)

See references of WO 2019219237A1

Designated contracting state (EPC)

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**DE 102018004052 A1 20191121**; CN 111757812 A 20201009; CN 111757812 B 20220809; EP 3793841 A1 20210324;  
EP 3793841 B1 20230712; WO 2019219237 A1 20191121

DOCDB simple family (application)

**DE 102018004052 A 20180518**; CN 201980014503 A 20190516; EP 19726572 A 20190516; EP 2019000147 W 20190516