

Title (en)
SUN PROTECTION DEVICE

Title (de)
SONNENSCHUTZVORRICHTUNG

Title (fr)
DISPOSITIF DE PROTECTION SOLAIRE

Publication
EP 1456497 A1 20040915 (DE)

Application
EP 02799738 A 20021204

Priority
• DE 10161938 A 20011217
• EP 0213738 W 20021204

Abstract (en)
[origin: WO03052232A1] The invention relates to a sun protection device comprising at least one flat optical element (F) consisting of an at least partially transparent material and having two sides facing each other, one (E) of said sides being embodied in a non-structured flat manner, and the other (S) comprising parallel, linearly extending prismatic structural elements (SE) which periodically repeat themselves in the lateral direction. The structured side (S) comprises a surface (O) which is at least largely coparallel in relation to the unstructured flat side (E), the structural elements (SE) projecting past said surface. The inventive device is characterised in that the structural elements (SE) respectively comprise a triangular cross-sectional surface having a lateral edge (C) and two lateral flanks (A, B) which protrude above the surface, the lateral flank (A) being associated with a defining surface (A*) and the lateral flank (B) being associated with a defining surface (B*). Furthermore, at least two adjacent structural elements are laterally separated from each other by a section (D) of the surface (O), the lateral flank (A) forms an angle $90^\circ - \alpha$ with the surface, and forms an angle $\alpha + \beta$ with the lateral flank (B), and the lateral flank (B) forms an angle $90^\circ - \beta$ with the surface.

IPC 1-7
E06B 9/24

IPC 8 full level
E06B 9/24 (2006.01)

CPC (source: EP US)
E06B 9/24 (2013.01 - EP US); **F24S 50/80** (2018.04 - EP US); **E06B 2009/2417** (2013.01 - EP US); **Y02B 10/20** (2013.01 - EP US); **Y02E 10/40** (2013.01 - EP US)

Citation (search report)
See references of WO 03052232A1

Citation (third parties)
Third party :
• US 2714815 A 19550809 - NORDSTROM CARL E
• US 4357074 A 19821102 - NARDINI GIAN V
• DE 19631933 C2 20001005 - LORENZ WERNER [DE]
• EP 0823645 A1 19980211 - LORENZ WERNER DR [DE]
• US 5952081 A 19990914 - LORENZ WERNER [DE]
• EP 1072752 A1 20010131 - LORENZ WERNER DR [DE]

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SI SK TR

DOCDB simple family (publication)
WO 03052232 A1 20030626; DE 10161938 A1 20030618; EP 1456497 A1 20040915; US 2005068630 A1 20050331

DOCDB simple family (application)
EP 0213738 W 20021204; DE 10161938 A 20011217; EP 02799738 A 20021204; US 49888304 A 20041201