

Title (en)  
PROTECTION DEVICE FOR USE IN CLIMBING

Title (de)  
SCHUTZVORRICHTUNG ZUM KLETTERN

Title (fr)  
DISPOSITIF DE PROTECTION DESTINÉ À ÊTRE UTILISÉ DANS L'ESCALADE

Publication  
**EP 4223374 A1 20230809 (EN)**

Application  
**EP 23152531 A 20230119**

Priority  
GB 202201549 A 20220207

Abstract (en)  
A protection device for use in climbing of the type known as a "spring-loaded camming device" - abbreviated "SLCD" - is disclosed. The camming device comprises a shaft (10) and a head (14) mounted on the shaft. The head includes a plurality of cam lobes (20) carried on at least one cam axle (16), each cam lobe being capable of rotation about a pivot axis centred on the cam axle, with an increasing lobe angle  $\omega$  between a retracted position and an expanded position. Each cam lobe has a cam surface (30) that extends about the axis with a working range of contact angles  $\omega_{\text{min}} \leq \omega \leq \omega_{\text{max}}$ . The cam surface (30) is at a radial distance  $r$  from the axis that continually increases with  $\omega$ . In at least one of the cam lobes (20) the distance  $r$  of the cam surface from the axis is a modified logarithmic spiral that has a cam angle  $\alpha$  that decreases with an increase in  $\omega$ ; The head also has biasing means that operate to bias the cam lobes towards the expanded position.

IPC 8 full level  
**A63B 29/02** (2006.01)

CPC (source: EP GB)  
**A63B 29/024** (2013.01 - EP GB)

Citation (applicant)  

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