

Title (en)  
Ball-grab spear.

Title (de)  
Fangdorn mit Kugeln.

Title (fr)  
Harpon à billes.

Publication  
**EP 0461819 A2 19911218 (EN)**

Application  
**EP 91305153 A 19910607**

Priority  
GB 9012911 A 19900609

Abstract (en)  
A ball-grab spear for undershot fishing. The spear comprises a mandrel, a cage disposed about said mandrel and movable relative thereto in two mutually orthogonal directions, an array of wedging ramps formed on the periphery of said mandrel, a matching array of radial apertures in said cage, and a plurality of balls disposed individually between a said ramp and a said aperture to be wedged radially outwards of said mandrel through said apertures by relative movement of said mandrel and said cage in either of said two mutually orthogonal directions. The spear can be locked to the bore of a downhole fish, e.g. a stuck anchor, by any selected combination of lift and/or torque.

IPC 1-7  
**B66C 1/56; E21B 31/20**

IPC 8 full level  
**E21B 31/20** (2006.01)

CPC (source: EP)  
**E21B 31/20** (2013.01)

Cited by  
EP1454033A4; GB2280459A; GB2280459B; GB2527202A; GB2527202B; NO343772B1; US10119373B2; IT201800010510A1; US8166620B2; US9810364B2; US9927058B2; US9488203B2; US9879708B2

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DE DK FR GB IT NL

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