

Title (en)  
UNIVERSAL STEPPED INTERNAL GRIP WRENCH

Publication  
**EP 0058219 B1 19841128 (DE)**

Application  
**EP 81103750 A 19810515**

Priority  
DE 8104183 U 19810216

Abstract (en)  
[origin: EP0058219A1] 1. A universal stepped wrench for radiator connection nipples or return flow nipples, having the following features : it has a square end (1) and an engagement end which, for inch measurement nipples, comprises in a sequence of reducing cross-section, a plurality of hexagonal stepped engagement portions (2, 3, 4, 5) formed with opposite grooves (6, 7, 8, 9) therein, the cross-section of the grooves being semi-circular, characterised by the following steps : at the engagement end, only hexagonal screw head shapes are provided for 1", 3/4", 1/2" and 3/8" nipples and approximately 14 mm, 10 mm, 20 mm and 15-16 mm are used as lengths ; the engagement portion for 1/2" nipples is stepped between thickness of 13.8 and 12 mm and the lengths of these steps are about 14 mm and 6 mm ; the grooves (6, 7, 8, 18, 9) are disposed at two opposite surfaces of the hexagon ; the width of the groove cross-section decreases from 5-6 mm in the case of the thickest engagement portion (2) to 3-3.5 mm at the thinnest portion (5).

IPC 1-7  
**B25B 13/54**

IPC 8 full level  
**B25B 13/54** (2006.01); **B25B 15/00** (2006.01)

CPC (source: EP)  
**B25B 15/008** (2013.01)

Cited by  
US8037788B2; GB2285940A; DE4341658A1; DE4341658C2; US10390867B2; US11045234B2; US8496690B2; US8685068B2; US9757171B2; KR100834889B1

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