

Title (en)

METHOD OF MAKING IN A METAL PIECE A THOROUGHFARE HOLE HAVING EDGE-REINFORCEMENTS ON BOTH ENDS, AND ALSO TOOL AND APPARATUS FOR CARRYING OUT THE METHOD

Publication

**EP 0085888 A3 19840328 (DE)**

Application

**EP 83100629 A 19830125**

Priority

US 34667982 A 19820208

Abstract (en)

[origin: US4428214A] A flow drilling tool including a blunt-ended prepunch portion for punching a circular slug from the workpiece as the tool is rotated and moved axially with respect to the workpiece. Thereafter, a circular forming portion is rotated in contact with the workpiece to increase the length and diameter of the punched hole. The prepunch permits formation of a rimmed hole in a single step by eliminating predrilling. Variations and irregularities in the length and thickness of the rim portion surrounding the hole are reduced, and ragged tapered surfaces on the rim portion are eliminated. The axial location of the hole relative to the workpiece is controlled by adjusting the speed of rotation of the tool and the axial pressure of the tool against the workpiece, and by preheating the workpiece.

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**B21D 31/02**; **B21C 37/29**

IPC 8 full level

**B21J 5/10** (2006.01); **B21C 37/29** (2006.01); **B21J 13/02** (2006.01)

CPC (source: EP US)

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Citation (search report)

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