

Title (en)  
COLD-HEADED STANDOFF

Title (de)  
KALTGESTAUCHTER ABSTANDSHALTER

Title (fr)  
DOUILLE-ENTRETOISE A TETE FORGEE A FROID

Publication  
**EP 1425141 A4 20040630 (EN)**

Application  
**EP 03784731 A 20030318**

Priority  
US 0307832 W 20030318

Abstract (en)  
[origin: WO2004014620A1] A process for cold forging a metal fastener such as a self-clinching standoff includes a punch and die set at the final head trimming station which produces the shear burr only on the underside of the fastener head where it is not visible after installation. At this station, a fastener blank (16) having a tubular barrel and a temporarily formed circular head is placed into a bore of the punch (23) with a barrel of the fastener residing in the bore with the underside of the circular head abutting an end face of the punch. The forging apparatus then moves the die toward the top side of the fastener until a polygonal cutting edge of the die (12) shears metal from around the edges of the circular head of the fastener blank. Movement of the die stops when the cutting edge lies beyond the underside of the head of the fastener. At this point, a knock-out pin (21) which is reciprocal within the bore of the punch forcibly ejects the fastener through a passage in the die to a point beyond an opposite side of the die. The forging apparatus then moves the die away from the punch and, once the die is clear of the punch, a stripper sleeve (25) which is reciprocal about the outside surface of the punch moves from a retracted position over the end of the punch removing a residual scrap ring (18) from around the outside of the punch.

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IPC 8 full level  
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Citation (search report)  
• [YA] US 1636691 A 19270726 - HEAMES RICHARD M, et al  
• [YA] US 4590780 A 19860527 - BACHMANN ERNST [CH]  
• See references of WO 2004014620A1

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