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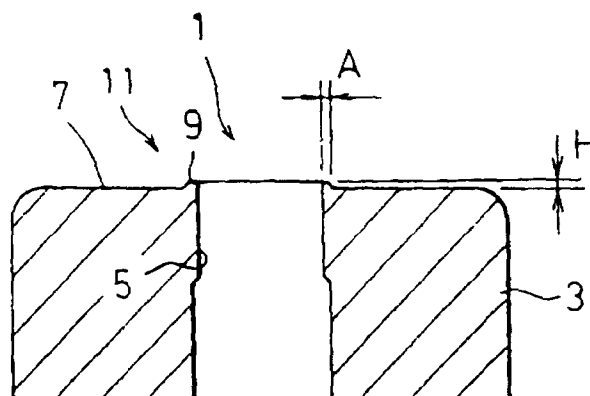
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(54) **Die unit for punching operations**

(57) A die unit for performing punching operations in cooperation with a punch unit is disclosed. The die unit includes a die body (3) formed with a die hole (5) extending in an axial direction for receiving a cutting edge of the punch body (17), and with an upper surface portion (7) extending in a plane normal to the axial direction. The die unit also includes a projecting portion

(11) formed along the perimeter of the die hole (5) on the upper surface portion (7) of said die body (3). With this die unit, punching operations can be performed on a workpiece without producing a burr that projects downwards below the lower surface of the workpiece. Thus burr removing operations are dispensed with after the punching operations.

FIG.3



EP 0 734 799 A3



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EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	US-A-3 211 034 (ANDRIES) * the whole document *	1	B21D28/24 B21D28/16
X	--- PATENT ABSTRACTS OF JAPAN vol. 012, no. 340 (M-740), 13 September 1988 & JP-A-63 101029 (TAKIRON CO LTD), 6 May 1988, * the whole document *	1	
A	---	4	
X	PATENT ABSTRACTS OF JAPAN vol. 016, no. 094 (M-1219), 9 March 1992 & JP-A-03 275224 (HITACHI CABLE LTD), 5 December 1991, * abstract *	1,2	
A	--- GB-A-914 793 (KIENZLE APPARATE)		
A	--- PATENT ABSTRACTS OF JAPAN vol. 011, no. 021 (M-555), 21 January 1987 & JP-A-61 195719 (MATSUSHITA ELECTRIC WORKS LTD), 30 August 1986, * abstract *		TECHNICAL FIELDS SEARCHED (Int.Cl.6) B21D
A	--- PATENT ABSTRACTS OF JAPAN vol. 011, no. 269 (M-621), 2 September 1987 & JP-A-62 072438 (HITACHI LTD), 3 April 1987, * abstract *		
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 7 February 1997	Examiner Peeters, L
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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