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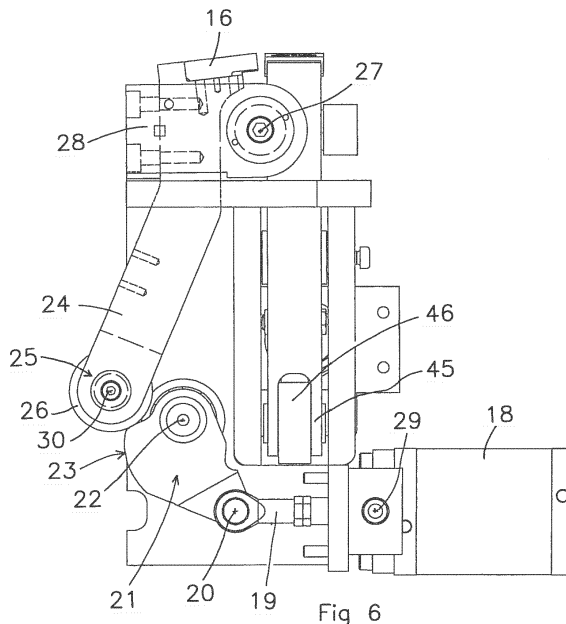
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**(54) Device and method for forming a thickened head on the head ends of a metal rod element**

(57) A device for forming a thickened head (5) on a head end of a metal rod element (2) comprises a clamping device for clamping the metal rod element (2), whilst leaving an end portion having the head end free. The device comprises a deformation body (16) for plastically deforming the end portion of the metal rod element in order to form the thickened head, as well as a drive device for driving the deformation body. The drive device is pro-

vided with a drive unit (18) and a transmission element (21) drivably connected to the drive unit. The transmission element is pivotable about a pivot axis (22) and is provided with a cam track (23). The drive device comprises a lever arm (24), which at one end abuts against the cam track (23) of the transmission element and at an opposite end is provided with the deformation body (16). The lever arm (24) is hingeable about a hinge axis (27) running substantially parallel to the pivot axis (22).



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EUROPEAN SEARCH REPORT

Application Number  
EP 11 18 6683

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	EP 1 002 733 A1 (DEN BRINK B V VAN [NL]) 24 May 2000 (2000-05-24) * paragraph [0009] * * paragraph [0014] - paragraph [0021]; figures 1-12 *	1-11,15	INV. B21F5/00 B21F45/00 B65D25/32
A	CH 550 635 A (AIDA ENG LTD) 28 June 1974 (1974-06-28) * figures 1,9-12 *	1-11,15	
A	DE 100 27 680 A1 (WENGENROTH VOLKER [DE]) 14 December 2000 (2000-12-14) * figure 1 *	1-11,15	
			TECHNICAL FIELDS SEARCHED (IPC)
			B21F B21G B65D
<del>The present search report has been drawn up for all claims</del>			
Place of search <b>Munich</b>		Date of completion of the search <b>9 February 2012</b>	Examiner <b>De Backer, Tom</b>
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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EPO FORM 1503 03.82 (P/04C01)



Application Number

EP 11 18 6683

**CLAIMS INCURRING FEES**

The present European patent application comprised at the time of filing claims for which payment was due.

- Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):
- No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

**LACK OF UNITY OF INVENTION**

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:  
1-11, 15
- The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION  
SHEET B**

Application Number  
EP 11 18 6683

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-11, 15

Apparatus for forming a knob to the end of a metal rod element and method of forming a thickened head on the head ends of a metal rod element

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2. claims: 12-14

combination of a first and a second clamping body

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

09-02-2012

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1002733 A1	24-05-2000	DE 69902736 D1	10-10-2002
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CH 550635 A	28-06-1974	NONE	
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DE 10027680 A1	14-12-2000	NONE	
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82