



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
09.06.1999 Bulletin 1999/23

(51) Int. Cl.⁶: **B21K 1/76**

(43) Date of publication A2:
14.10.1998 Bulletin 1998/42

(21) Application number: **98106367.0**

(22) Date of filing: **07.04.1998**

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE**
Designated Extension States:
AL LT LV MK RO SI

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(30) Priority: **08.04.1997 IT BO970210**

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(54) **Apparatus for producing an outer body for the head of a ball joint**

(57) Apparatus (1) for producing a outer body (2) for ball joint, the said outer body (2) comprising an upper part (3) in the form of a head and a lower part (4) in the form of a leg; the apparatus (1) comprising

- a cutting station for producing substantially cylindrical metal workpieces;
- at least one cold forming station (10) in which the initial workpiece is shaped with two cylindrical parts (3, 4);
- at least one cold forming station (20, 30) in which the part (3) having the larger diameter is formed with four sides (6a, 6a, 6b, 6b) in pairs parallel to one another;
- at least one cold shaping station (40, 50) acting to confer on the part (3) a curvilinear form having two sides (6b, 6b) and an enlarged flat shape on the remaining two sides (6a, 6a)
- means for displacing the workpiece;
- a control unit (11).

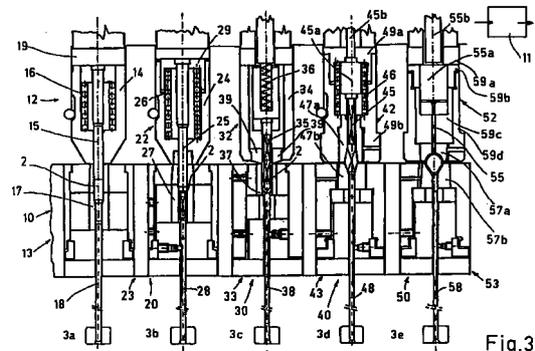


Fig.3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 98 10 6367

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			B21K
Place of search	Date of completion of the search	Examiner	
THE HAGUE	15 April 1999	Gerard, O	
CATEGORY OF CITED DOCUMENTS		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	
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			

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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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
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