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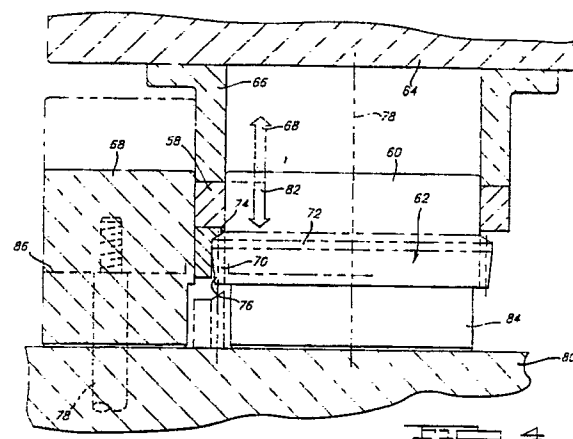
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**Cold extrusion process for internal gear teeth.**

A cold extrusion process for forming internal gear teeth comprising machining an internal ring gear blank (58) with precision internal and external diameters, mounting the ring on a pilot diameter of a mandrel (62) on which is formed external die teeth (70) having a metal forming region, a metal guiding entrance region and a tapered metal flow exit region, mounting a support ring (68) around the mandrel (62) and the workpiece (58) and pressing the workpiece through the support ring and through the die teeth (70) in sequential steps, the initial step resulting in formation of internal teeth in the workpiece (58) for a substantial axial length of the workpiece and the following step resulting in forcing a subsequent blank against the workpiece (58) by the press (64) which results in full internal tooth formation, the finished gear being removable as the support ring (68) and mandrel (62) are retracted to the original position and as a subsequent workpiece is loaded on the pilot diameter of the mandrel (62).





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## EUROPEAN SEARCH REPORT

Application Number

EP 89 30 7588

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.5)
D,A	US-A-3 910 091 (S.K. SAMANTA) * claim 1; figure 4 * ---	1	B 21 C 23/18 B 21 K 1/30
D,A	US-A-4 622 842 (B.I. BACHRACH et al.) * claims 1,2 * ---	1	
X	DE-B-2 325 837 (RENAULT) * figures 1,2; claim 1 * ---	1-3	
A	DE-A-3 639 739 (HONDA) * claim 1; figures 1,3 * ---	1	
A	EP-A-0 088 867 (NISSAN) * claim 1; figure 5 * -----	1	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			B 21 C B 21 K
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 24-08-1990	Examiner SCHLAITZ J
<b>CATEGORY OF CITED DOCUMENTS</b>			
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	