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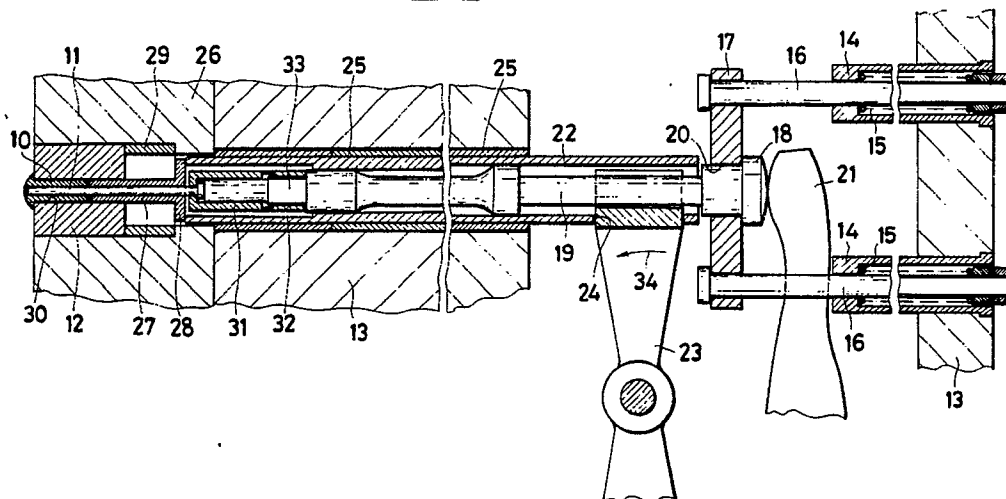
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54 **Improved extraction device associated with the extrusion pin in a machine for the production of wholly tubular rivets.**

57 An extraction device associated with the extrusion pin (11) in a machine for the production of wholly tubular rivets (10), wherein the extrusion pin (11) is driven to translate inside the frame of the machine inside a bore (30) provided in a die (12), by an inner rod (19) lined-up with the extrusion pin (11) and driven by a first lever (21), where the inner rod (19) is coaxially located so as to slide inside a

tubular rod (22), operatively driven in correspondence of the die (12) by a second lever (23), wherein in front of the tubular rod (22) an extraction sleeve (27) is located, which is provided with an inner, coaxial bore, so as to be able to receive the extrusion pin (11), and has an outer size equivalent to that of the bore (30) provided in the die (12).

Fig.1





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.4)
X	AU-B- 437 854 (OLYMPIC FASTENING SYSTEMS) * Page 6, paragraph 2; page 9, paragraph 2; page 10, paragraph 2; figures 1,4,5 *	1,2,5	B 21 J 13/14 B 21 K 1/60
A	---	4	
X	GB-A-1 596 641 (AVDEL LTD) * Page 2, line 99 - page 3, line 19; figures 1-4 *	1,2	
A	---	3,4	
A	US-A-2 705 333 (FRIEDMAN) * Column 2, lines 45-57; claims 1-3; figures 1-6 *	1,2	
A	DE-A-1 627 580 (OLYMPIC SCREW & RIVET CORP.) -----		
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			B 21 J B 21 K
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 15-02-1990	Examiner BARROW J.
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			