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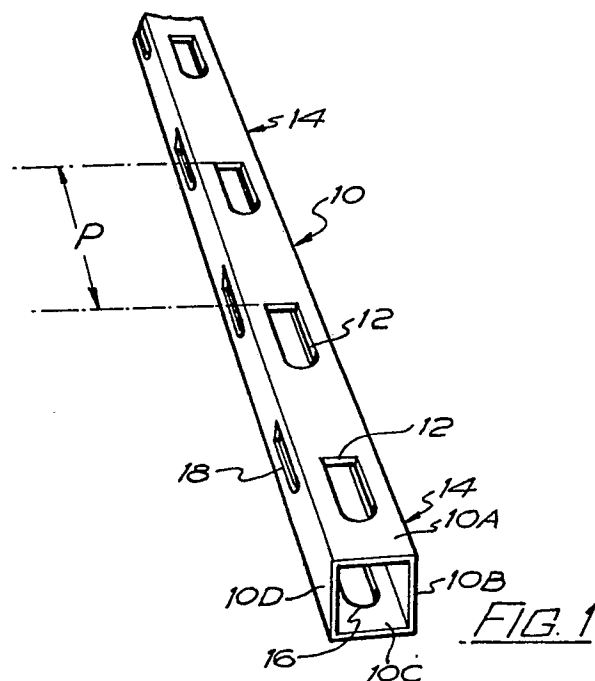
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(54) Method of and apparatus for producing punched tube.

(57) This invention provides a method of and apparatus for punching apertures in the walls of square sectioned steel tube. An elongated square sectioned mandrel is supported horizontally by and is connected at a rear end to roller decking so that a square tube can be fed onto the mandrel and can be used to feed the tube off the mandrel step by step, whilst between steps the tube is punched at the front end of the mandrel by a punch die on a punch head which moves laterally of the mandrel and into a punch recess in the mandrel. The punch head also has a guide pin which engages a guide recess in the mandrel before the punch die engages the punch recess to ensure that the punch die and punch recess are accurately aligned and that the apertures will be evenly spaced along the length of the tube.



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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.4)
X	FR-A- 775 413 (SMIDTS) ---	1-18	B 21 D 28/28
X	US-A-4 052 880 (CULLINAN) ---	1-18	
X	US-A-3 376 725 (ANDREWS) ---	1-18	
X	GB-A-2 075 403 (BURNER) ---	1-18	
X	GB-A-2 024 690 (OSTHOFF) ---	1-18	
X	FR-A-1 064 483 (CHERIFIENNE) ---	1-18	
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X	US-A-1 764 129 (TRUMBLE) ---	1-18	
A	US-A-3 738 209 (RALEIGH) ---	1-18	TECHNICAL FIELDS SEARCHED (Int. Cl.4)
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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 05-09-1989	Examiner SCHOOF G.G.
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			