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(54) **Method and apparatus for manufacturing steel drums**

(57) Method for manufacturing steel drums comprising the stages:

- (1) uncoiling a steel strip (1) from a coil
- (2) manufacturing from the strip in a continuous process a spirally welded tube (6) with a diameter mainly equal to the diameter of the drum to be manufactured, whereby the pitch angle is set in dependency of the width of the steel strip
- (3) cutting off from the spirally welded tube pieces (8) with a length mainly equal to the body length of the drum to be manufactured
- (4) providing the drum body with lids on both of its ends.

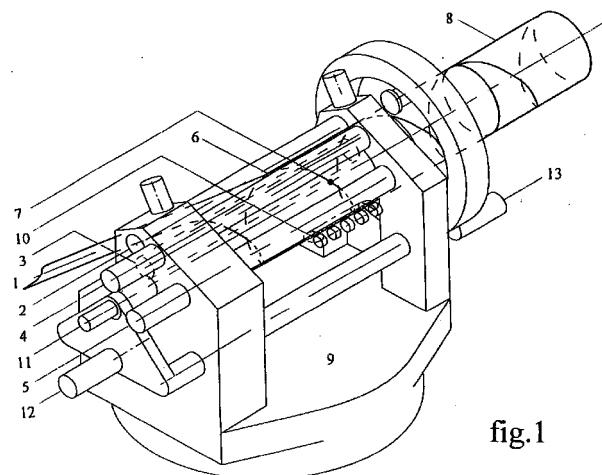


fig.1

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EUROPEAN SEARCH REPORT

Application Number
EP 97 20 0891

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.6)
X	DE 19 40 139 A (KORKAN ANSTALT) 12 March 1970	3	B21D51/20
Y	* page 6, paragraph 2 * * page 12, paragraph 2-3; figure 3C * ---	1,2,4	
Y	DE 20 46 284 B (HOESCH MASCHINENFABRIK DEUTSCHLAND) 16 September 1971 * column 2, line 5 - line 29 * ---	1,2,4	
A	US 3 210 980 A (SENGEL, K.) 12 October 1965 * figures 5,6 * ---	1-4	
A	US 3 383 488 A (BANDURA JAMES ET AL) 14 May 1968 * column 1, line 59 - line 70; figure 16 * ---	1-4	
A	FR 2 356 460 A (PLAN AN PA PLANUNG ANLAGE PATE) 27 January 1978 * page 1, line 17 - line 19 * -----	1-4	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6) B21D B21C
Place of search BERLIN		Date of completion of the search 26 November 1998	Examiner Korth, C-F
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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