

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) Publication number:

0 348 596 A3

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: 89102566.0

(51) Int. Cl.⁵: **B21B 21/04**

(22) Date of filing: 15.02.89

(30) Priority: 30.06.88 IT 2117788

(43) Date of publication of application:
03.01.90 Bulletin 90/01

(84) Designated Contracting States:
AT BE CH DE ES FR GB GR IT LI LU NL SE

(88) Date of deferred publication of the search report:
02.10.91 Bulletin 91/40

(71) Applicant: **INNSE INNOCENTI
SANTEUSTACCHIO S.p.A.**
20, Via A. Franchi
I-25127 Brescia(IT)

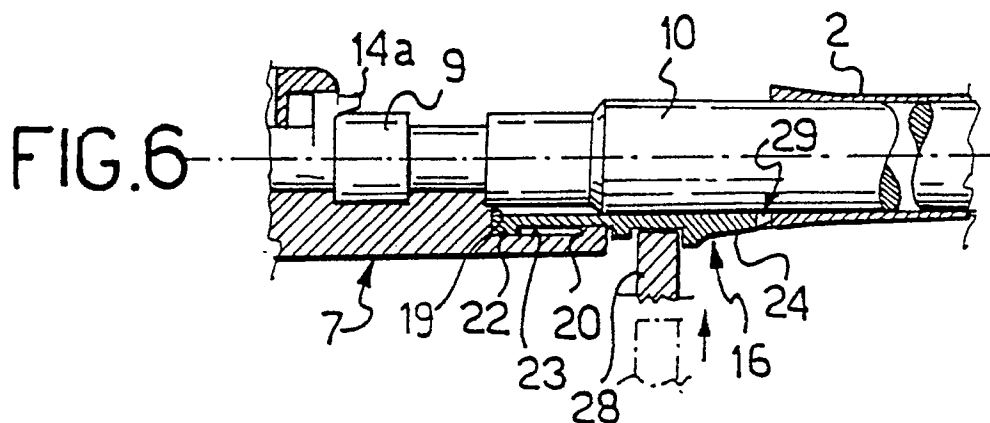
(72) Inventor: **Maccarini, Carlo c/o J.P. Calmes
Consultants
Le Tilleul
CH-1618 Chatel St. Denis(CH)**
Inventor: **Quecchia, Giorgio
Viale Resistenza, 15
I-20094 Corsico (Milan)(IT)**
Inventor: **Sardelli, Bruno c/o J.P. Calmes
Consultants
Le Tilleul
CH-1618 Chatel St. Denis(CH)**

(74) Representative: **Vannini, Torquato et al
JACOBACCI-CASETTA & PERANI S.p.A. 7 Via
Visconti di Modrone
I-20122 Milan(IT)**

(54) **A pilgrim-process rolling mill for hot rolling pipes.**

(57) In a pilgrim-process rolling mill, the mandrel-breaker bush (16) is mounted to the spindle (7) on which it is guided for movement between two stop ledges (19,20) in axial alignment relationship with the

mandrel (10) accommodating seat (16). Thus, the rolling mill reliability can be improved and replacement of the bush at each rolling course eliminated.



EP 0 348 596 A3



European
Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 89 10 2566

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)
E	EP-A-0 348 589 (INNSE INNOCENTI SANTEUSTACCHIO) * Whole document * - - -	1-10	B 21 B 21/04
E	EP-A-0 348 588 (INNSE INNOCENTI SANTEUSTACCHIO) * Columns 2-4; figure 1 * - - -	1-10	
X	GB-A-1 092 718 (TUBE MILL HOLDING) * Pages 5,6; figures 3,4,9,10 *	1,2	
A	- - -	3-7	
A	SU-A-4 506 03 (POLISHCHUK)(15-12-1974) * Figure 1 * & SOVIET INVENTIONS ILLUSTRATED, Sections General/Mechanical, week 7539, accession no. 75-65044W [39], Derwent Publications Ltd, London, GB - - -	1	
A	DE-A-2 043 812 (INNOCENTI) * Pages 3-5; figures 1,3 *	1	
A	FR-A-2 264 603 (INNOCENTI SANTEUSTACCHIO) * Pages 3-5; figures 1,2 *	1	
A	SU-A-7 403 18 (TYR)(15-06-1980) * Figures * & SOVIET INVENTIONS ILLUSTRATED, Sections General/Mechanical, week D07, 25th March 1981, accession no. 11128D/07, Derwent Publications Ltd, London, GB - - - - -	1	
The present search report has been drawn up for all claims			
Place of search		Date of completion of search	Examiner
The Hague		10 July 91	ROSENBAUM H.F.J.
CATEGORY OF CITED DOCUMENTS 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 T: theory or principle underlying the invention			