



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 489 215 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
21.09.2005 Bulletin 2005/38

(51) Int Cl.7: **D06B 5/16**

(43) Date of publication A2:
22.12.2004 Bulletin 2004/52

(21) Application number: **04076647.9**

(22) Date of filing: **04.06.2004**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IT LI LU MC NL PL PT RO SE SI SK TR**
Designated Extension States:
AL HR LT LV MK

(72) Inventor: **Ronchi, Francesco**
20050 Sovico (Milan) (IT)

(74) Representative: **Coppo, Alessandro**
**Ing. Barzanò & Zanardo Milano S.p.A.,
Via Borgonuovo, 10
20121 Milano (IT)**

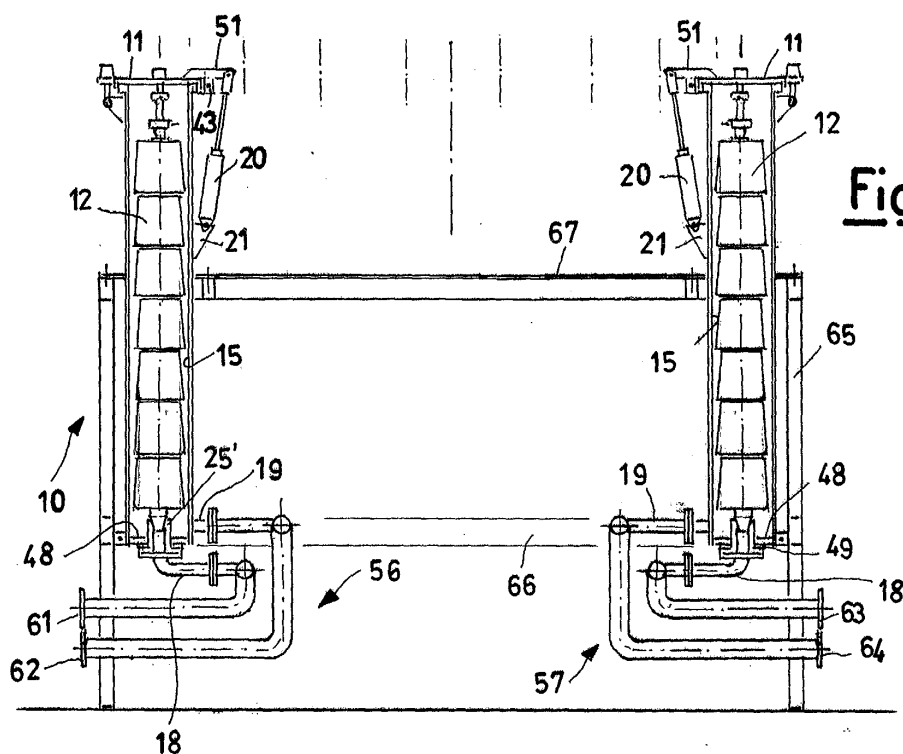
(30) Priority: **16.06.2003 IT MI20031209**

(71) Applicant: **MASTER s.a.s. di Ronchi Francesco &
C.
20050 Macherio (Milano) (IT)**

(54) **Dyeing or bleaching apparatus for yarn packages**

(57) Dyeing or bleaching apparatus of yarns wound on reels or similar packages, comprising a plurality of small vertical dyeing boilers (15) arranged on a single circumference each suitable for receiving a mobile reel-

holding shaft (13) able to be removed at the same time as the others for the subsequent centrifugal water-removal and drying operations, functioning in a reduced bath able to be impregnated even at fractional capacities with a constant bath ratio and productivity.



EP 1 489 215 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 04 07 6647

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.7)
D,Y	WO 02/095113 A (MASTER S.A.S. DI RONCHI FRANCESCO & C.) 28 November 2002 (2002-11-28) * the whole document *	1-15	D06B5/16
Y	JP 49 087869 A (-) 22 August 1974 (1974-08-22) * figures *	1-15	
D,A	WO 02/095114 A (MASTER S.A.S. DI RONCHI FRANCESCO & C.) 28 November 2002 (2002-11-28) * the whole document *	1-15	
A	PATENT ABSTRACTS OF JAPAN vol. 014, no. 057 (C-0684), 2 February 1990 (1990-02-02) & JP 01 282380 A (HISAKA WORKS LTD), 14 November 1989 (1989-11-14) * abstract *	1	
A	DE 22 39 369 A (FRAUCHIGER AG MASCHINENFABRIK) 22 February 1973 (1973-02-22) * claims 1,2,8-10 *	1	TECHNICAL FIELDS SEARCHED (Int.Cl.7) D06B
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 29 July 2005	Examiner D'Hulster, E
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			

 1
EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 04 07 6647

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

29-07-2005

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 02095113	A	28-11-2002	IT MI20011115 A1	25-11-2002
			AT 293715 T	15-05-2005
			BR 0209924 A	27-07-2004
			CN 1511208 A	07-07-2004
			DE 60203796 D1	25-05-2005
			WO 02095113 A1	28-11-2002
			EP 1390575 A1	25-02-2004
			US 2004139769 A1	22-07-2004

JP 49087869	A	22-08-1974	JP 55023949 B	26-06-1980

WO 02095114	A	28-11-2002	IT MI20011116 A1	25-11-2002
			BR 0209925 A	27-07-2004
			CN 1520478 A	11-08-2004
			WO 02095114 A1	28-11-2002
			EP 1390574 A1	25-02-2004
			US 2004144139 A1	29-07-2004

JP 01282380	A	14-11-1989	JP 1651962 C	30-03-1992
			JP 3020510 B	19-03-1991

DE 2239369	A	22-02-1973	CH 535610 A	15-04-1973
			BE 787512 A1	01-12-1972
			DE 2239369 A1	22-02-1973
			FR 2150122 A5	30-03-1973
			IT 963852 B	21-01-1974
