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(30) Priority: **22.04.2003 IT fi20030045 U**

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(54) **Pervious semi-rigid bobbin of molded plastics material for spools of yarn intended for treatments in dye works**

(57) On its cylindrical wall the bobbin has adjacent longitudinal rows of holes (5) of substantially rectangular shape with the short sides (5A) orientated circumferentially and the long sides (5B) curving towards the inside of the hole, the holes in one row being offset with respect to those in adjacent longitudinal rows in such a way as to create undulating longitudinal linear structures (9) between the longitudinal rows of adjacent holes (5); the curved longitudinal edges of each hole can lie alongside each other in the intermediate zone following uniform radial compressive stressing of the transverse cross-section of the bobbin, while longitudinal shortening of the bobbin is made easier.

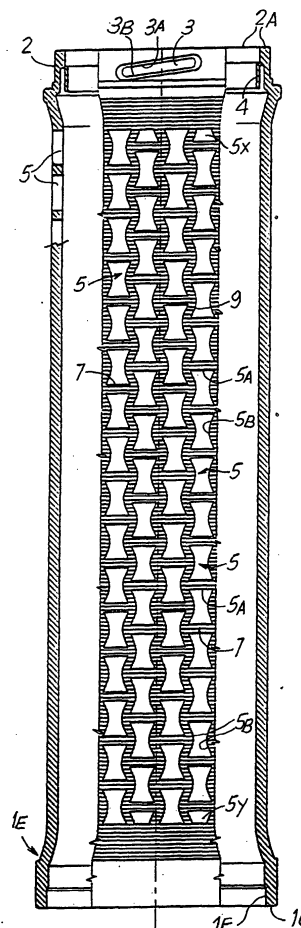


Fig. 2

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EUROPEAN SEARCH REPORT

Application Number
EP 04 42 5274

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)
A	US 3 936 009 A (LIVINGSTONE STANLEY) 3 February 1976 (1976-02-03) * column 2, line 6 - line 51; figures 1,2 *	1	D06B23/04 B65H75/10
A	EP 1 048 773 A (SONOCO PLASTICS GMBH) 2 November 2000 (2000-11-02) * paragraph [0023]; figures 1,4 *	1,4	
A	CH 118 212 A (MARKOVSKY & CO) 16 December 1926 (1926-12-16) * figure 1 *	1	
A	WO 01/23656 A (ROMAGNOLI TIZIANO ; MARIPLAST SPA (IT)) 5 April 2001 (2001-04-05) * figure 1 *	1	
A	DE 16 10 973 A (HERMANNS JOSEF) 1 April 1971 (1971-04-01) * figure 1 *	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			D06B B65H
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 22 July 2004	Examiner Kising, A
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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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☒ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

1-3



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LACK OF UNITY OF INVENTION
SHEET B

Application Number
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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-3

An injection molded bobbin of plastics material having substantially rectangular holes with long sides being curved inwards towards the holes and short sides being circumferentially oriented and wherein the holes in one row being offset with respect to those in adjacent rows in such a way as to create undulating longitudinal linear structures between the longitudinal rows of adjacent holes.

2. claim: 4

Bobin of plastics material comprising a surface capable of receiving turns of stock yarn with at least one slot to retain said turns, wherein said slot or slots are slightly inclined.

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

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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
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22-07-2004

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