

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) Publication number:

0 364 653 A3

(12)

EUROPEAN PATENT APPLICATION(21) Application number: **89102995.1**(51) Int. Cl.⁵: **B41N 7/06**(22) Date of filing: **21.02.89**(30) Priority: **30.09.88 JP 246587/88**(43) Date of publication of application:
25.04.90 Bulletin 90/17(84) Designated Contracting States:
AT CH DE FR GB IT LI(88) Date of deferred publication of the search report:
06.02.91 Bulletin 91/06(71) Applicant: **KABUSHIKI KAISHA TOKYO KIKAI
SEISAKUSHO
26-24, Shiba 5-chome Minato-ku
Tokyo(JP)**(72) Inventor: **Shiba, Noriyuki
44-19, Kamimeguro 3-chome, Meguro-ku
Tokyo(JP)**
Inventor: **Okamura, Yuichi
44-11, Kamimeguro 3-chome, Meguro-ku
Tokyo(JP)**(74) Representative: **Patentanwälte Deufel- Schön-
Hertel- Lewald- Otto
Isartorplatz 6
D-8000 München 2(DE)**(54) **Inking cylinder used in a printing apparatus and method for producing the inking cylinder.**

(57) An inking cylinder adapted for a keyless inking system of a printing apparatus comprises a cylindrical base member, and an ink receiving layer covered over the surface of the cylindrical base member. The ink receiving layer is composed of a flexible substrate and many fine spherical members (and hard material powder) uniformly dispersed in the flexible substrate. External shell of each the fine spherical members is partially ruptured by grinding force and its hollow interior is opened. The ink on the cylinder surface is caught by this opened hollow interior of each the fine spherical members.

A method for producing the above inking cylinder comprises a first step for uniformly dispersing fine spherical members (and hard material powder) in a substrate, a second step for covering the substrate dispersed with the fine spherical members on a surface of a cylindrical base member to form an ink receiving layer on the base member, and a third step for grinding the surface of the ink receiving layer so that the fine spherical members in the surface region are partially grinded and their shells are ruptured to open the hollow interior of the fine spherical members.

EP 0 364 653 A3



European
Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 89 10 2995

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)
X	FR-A-6 124 10 (V-M.DULPHY ET AL.) * figure 3 * - - -	1	B 41 N 7/06
X	US-A-3 345 942 (R.R.MELTZ) * claim 1; figure 1 * - - -	1	
X	DE-B-1 135 930 (L.BEUTEL) * page 3, lines 34 - 36; figure 2 * - - -	1,2,15,16	
A	DE-A-3 525 045 (P.SAUER DRUCKWALZENFABRIKEN) * figure 8 * - - -	1	
X	DE-A-1 153 387 (REINHOLD GUSTAV KUPFER) * the whole document * - - -	3,4,8	
X	DE-C-4 642 18 (DR.H.BECKMANN) * the whole document * - - -	3,4,8	
A	FR-A-2 095 534 (DUNLOP HOLDINGS LIMITED) * the whole document * - - -	7	
A	US-A-2 247 540 (F.C.YANES) * the whole document * - - -	1	TECHNICAL FIELDS SEARCHED (Int. Cl.5)
E	EP-A-0 343 250 (KINYOSHA CO. LTD) * the whole document * - - - - -	1-16	B 41 N
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of search 04 December 90	Examiner RASSCHAERT 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			