



PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : B65H 18/00, 19/22 // 18/02		A1	(11) International Publication Number: WO 96/38362
			(43) International Publication Date: 5 December 1996 (05.12.96)
(21) International Application Number: PCT/US96/07456		(81) Designated States: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).	
(22) International Filing Date: 22 May 1996 (22.05.96)			
(30) Priority Data: 08/459,212 2 June 1995 (02.06.95) US			
(71) Applicant: THE PROCTER & GAMBLE COMPANY [US/US]; One Procter & Gamble Plaza, Cincinnati, OH 45202 (US).			
(72) Inventors: McNEIL, Kevin, Benson; 8126 Creek Woods Place, Maineville, OH 45039 (US). LOCKWOOD, Fredrick, Edward; 3801 O'Leary Avenue, Cincinnati, OH 45236 (US). BYRNE, Thomas, Timothy; 7745 Cedar Falls Lane, West Chester, OH 45069 (US).			
(74) Agents: REED, T., David et al.; The Procter & Gamble Company, 5299 Spring Grove Avenue, Cincinnati, OH 45217 (US).		Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.	

(54) Title: METHOD OF WINDING LOGS WITH DIFFERENT SHEET COUNTS

(57) Abstract

A web winding apparatus (90) and a method of operating the apparatus are disclosed. The apparatus can include a turret assembly (200), a core loading apparatus (1000), and a core stripping apparatus (2000). The turret assembly (200) supports rotatably driven mandrels (300) for engaging hollow cores (302) upon which a paper web (50) is wound. Each mandrel (300) is driven in a closed mandrel path (320), which can be non-circular. The core loading apparatus (1000) conveys cores (302) onto the mandrels (300) during movement of the mandrels (300) along the core loading segment (322) of the closed mandrel path (320), and the core stripping apparatus (2000) removes each web wound core (302, 51) from its respective mandrel (300) during movement of the mandrel (200) along the core stripping segment (326) of the closed mandrel path (320). The turret assembly (200) can be rotated continuously, and the sheet count per wound log (51) can be changed as the turret assembly (200) is rotating. The apparatus (90) can also include a mandrel (300) having a deformable core engaging member (3100). The sheet count or web length per wound log (51) can be varied by varying the rotational speed of the turret assembly (200) relative to the rotational speed of the bedroll (59) from which the web (50) is transferred to the turret assembly (200).

