(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
14 October 2010 (14.10.2010)

PCT

(10) International Publication Number
WO 2010/118001 A3

(51) International Patent Classification:
B65H 29/14 (2006.01)

(21) International Application Number:
PCT/US2010/030066

(22) International Filing Date:
6 April 2010 (06.04.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/167,026 6 April 2009 (06.04.2009) US

(71) Applicant *(for all designated States except US)*: **KERN GLOBAL LLC** [US/US]; 3940 Gantz Road, Suite A, Grove City, OH 43123 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **BURI, Reinhard** [DE/DE]; An der Halde 25, 78166 Donaueschingen/Pfohren (DE).

(74) Agents: **URTEAGA, Ramon, A.** et al.; Wood, Herron & Evans, LLP, 2700 Carew Tower, 441 Vine Street, Cincinnati, OH 45202-2917 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:
3 June 2011

(54) Title: ACCUMULATING APPARATUS FOR DISCRETE PAPER OR FILM OBJECTS AND RELATED METHODS

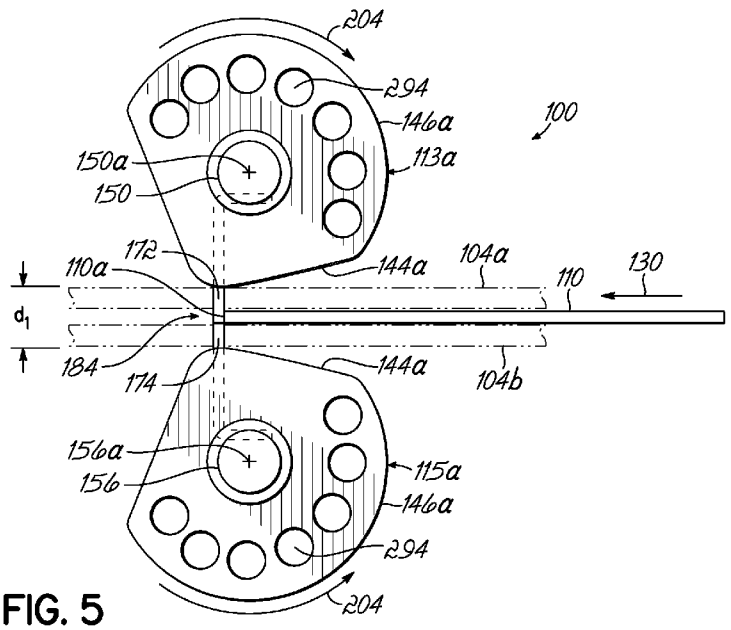

FIG. 5

(57) Abstract: An apparatus (100) is provided for accumulating discrete paper or film objects (110) traveling in a machine direction (130). A first accumulator (113a) element of the apparatus (100) is rotatable about a first axis of rotation (150a). A second accumulator element (115a) is disposed in confronting relationship with the first accumulator element (113a) and has a first, generally flat surface (144a), and a first arcuate surface (146a). Both of these surfaces (144a, 146a) are rotatable about the first axis of rotation (150a) and the first accumulator element (113a) has a first angular position that defines a first gap (184) relative to the second accumulator element (115a) for receiving the objects (110) there between. The first accumulator element (113a) has a second angular position that defines a second gap (284) relative to the second accumulator element (1 15a) for moving the objects (110) in the machine direction (130), with the second gap (284) being smaller than the first gap (184).

WO 2010/118001 A3