

Title (en)

Method of manufacturing a hygiene paper product, apparatus for such manufacture and hygiene paper product

Title (de)

Verfahren zur Herstellung eines Hygienepapierprodukts, Vorrichtung zur Herstellung und das Hygienepapierprodukt

Title (fr)

Procédé de fabrication d'un produit hygiénique en papier, l'appareil pour une telle fabrication et le produit hygiénique en papier

Publication

EP 1527898 A1 20050504 (EN)

Application

EP 03024997 A 20031030

Priority

EP 03024997 A 20031030

Abstract (en)

The present invention relates to a method of manufacturing a hygiene paper product (1) comprising the steps of providing a continuous paper web (12), moving the continuous web (12) in the direction of its longitudinal extension, applying a repetitive creative structure relative to the longitudinal extension of the web as a first pattern (3) to the web by means of a first roll (16,17,18,19,20;33a,33b), applying a repetitive functional structure relative to the longitudinal extension of the web as a second pattern (2) to the web by means of a second roll (22,23;25,26) wherein the method of manufacturing of the present invention enables the first pattern (3) to be in register with the second pattern (2) by concurrently controlling the repetitive surface speed of the continuous web (12) and the phasing between the first roll (16,17,18,19,20;33a,33b) and the second roll (22,23;25,26). Further, the present invention relates to an apparatus (10,13,21,28,32) for conducting the method of manufacturing a hygiene paper product (1) obtained by the method of the present invention, and to a hygiene paper product (1) thus obtained.

IPC 1-7

B41M 1/24; **B41F 19/02**; **D21H 27/02**

IPC 8 full level

B41F 19/02 (2006.01); **D21H 27/02** (2006.01); **B41M 1/24** (2006.01)

CPC (source: EP)

B41F 19/02 (2013.01); **D21H 27/02** (2013.01); **B41M 1/24** (2013.01)

Citation (search report)

- [XA] EP 1304215 A1 20030423 - SCA HYGIENE PROD AB [SE]
- [X] WO 9938679 A1 19990805 - SPRINGS WINDOW FASHIONS DIV [US]
- [A] GB 2036649 A 19800702 - DITZEL GMBH GEBR
- [A] WO 9735695 A1 19971002 - PROCTER & GAMBLE [US]
- [DA] US 3594552 A 19710720 - ADAMSON ROBERT G, et al
- [A] US 5123343 A 19920623 - WILLER ROBERT A [US] & EP 0958112 B1 20020828 - PROCTER & GAMBLE [US]

Cited by

CN101637365A; AU2006333550B2; EP2975177A1; EP2379329A4; AU2009327615B2; JP2018532375A; WO2010071543A1; US8844437B2; WO2007078363A1; WO2017136614A1; WO2017055784A1; US7785696B2; US11813148B2; US10195091B2; US10632736B2; US10913261B2; US11292242B2; US11571884B2; US7887676B2; US7918972B2; US8007640B2; US8083893B2; US7524404B2; US11730639B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1527898 A1 20050504; AU 2004291216 A1 20050602; AU 2004291216 A2 20050602; AU 2004291216 B2 20091210; BR PI0415656 A 20061219; CN 1845825 A 20061011; CN 1845825 B 20100623; EP 1677988 A1 20060712; EP 1677988 B1 20141203; MX PA05012971 A 20060316; RU 2006118709 A 20071210; RU 2350473 C2 20090327; WO 2005049326 A1 20050602

DOCDB simple family (application)

EP 03024997 A 20031030; AU 2004291216 A 20040820; BR PI0415656 A 20040820; CN 200480025169 A 20040820; EP 04741421 A 20040820; EP 2004009360 W 20040820; MX PA05012971 A 20040820; RU 2006118709 A 20040820