

Title (en)

APPARATUS AND PROCESS FOR APERTURING AND STRETCHING A WEB

Title (de)

VORRICHTUNG UND VERFAHREN ZUM PERFORIEREN UND STRECKEN EINES NETZES

Title (fr)

APPAREIL ET PROCESSUS D'OUVERTURE ET D'ÉTIREMENT D'UNE BANDE

Publication

**EP 2841037 A2 20150304 (EN)**

Application

**EP 13725229 A 20130425**

Priority

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Abstract (en)

[origin: WO2013163360A2] Apparatuses and processes for aperturing and stretching a web are disclosed. In one embodiment, the method involves feeding a web into a nip that is formed between at least one pair of intermeshing rolls. The first roll is a raised ridge rotary knife aperturing roll and the second roll is a ring roll; both rolls comprise ridges and grooves. The first roll comprises a plurality of spaced-apart teeth extending outwardly from the top surface of the ridges, said teeth having tips, wherein the top surface of said ridges are disposed between the tips of said teeth and the bottom surface of said grooves. These apparatuses and processes enable a web to be formed which comprises apertures having greater open area than previously achievable with traditional processes and apparatuses.

IPC 8 full level

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Citation (examination)

- US 2010201024 A1 20100812 - GIBSON FREDRICK WILLIAM [US], et al
- US 2008217809 A1 20080911 - ZHAO JEAN JIANQUN [US], et al
- US 2011024940 A1 20110203 - QURESHI KHALID [US], et al
- US 2008221538 A1 20080911 - ZHAO JEAN JIANQUN [US], et al
- See also references of WO 2013163360A2

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