

Title (en)
Forming dry laid webs.

Title (de)
Herstellung trockengelegter Bahnen.

Title (fr)
Formage à sec de nappes.

Publication
EP 0032044 A1 19810715 (EN)

Application
EP 80304688 A 19801222

Priority
• US 10614179 A 19791221
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• US 10614479 A 19791221

Abstract (en)
A method and apparatus for forming an air-laid web (60) of dry fibres suitable for use in a wide variety of products ranging from bath and facial tissues having basis weights on the order of 13 lbs./2880 ft.<2> to 18lbs./2880 ft.<2> to products having basis weights on the order of 19 lbs./2880 ft.<2> to 40 lbs./2880 ft.<2>, or even heavier, on a high-speed production basis, yet wherein the web produced, irrespective of basis weight, is characterised by random array of individualised fibres substantially undamaged by mechanical action and having a controlled cross-directional profile, and by its freedom from nits, pills, rice and the like, thereby improving both the appearance and the tensile strength of the web. The apparatus includes a 2-dimensional flow control and fibre screening system and a forming chamber (79) wherein a) substantially no cross-flow forces are created at the fibre feeding, screening and forming stages so as to ensure that the cross-directional profile of the web produced is controlled within desired limits and permitting formation of high-quality webs of virtually any desired width; b) the fibres are subjected to only minimal mechanical disintegrating action at all stages of the process subsequent to hammermilling, and, thus, shortening, curling and/or rolling of the fibres into pills, rice, or nits is minimized and, to the fullest extent possible, eliminated. Those pills, rice, nits and/or aggregated fibre masses present in the fibre stream fed to and/or through the flow control and fibre screening system are preferably centrifugally and tangentially separated from individualised fibres and soft fibre flocs across the full width of the apparatus.

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Citation (search report)
US 4176427 A 19791204 - NEUENSCHWANDER RUDOLF [US]

Cited by
BG64687B1; GB2142351A; GB2240789A; GB2240789B; FR2794475A1; CN100390338C; WO9926496A2; WO03039276A1; WO03039277A1; US6434795B1; WO9105109A1; WO0073547A3

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