

Title (en)
Twin-wire former

Title (de)
Doppelsieb-Former

Title (fr)
Formeur a deux toiles

Publication
EP 0933473 A2 19990804 (DE)

Application
EP 98121729 A 19981114

Priority
DE 19803591 A 19980130

Abstract (en)

The double fourdrinier assembly, at a papermaking or cardboard prodn. machine to produce a fiber web, has a sharply angled downwards path for the double fourdriniers directly after the web forming roller (30) to develop a web from the pulp flow. The downwards fourdrinier path is at an angle (a) to the theoretical vertical of 10-50 degrees and pref. ≤ 45 degrees. A deflection unit (42) moves the path of both fourdriniers (11,12) for the downwards and angled alignment into the horizontal or a slight incline. The angle of the fourdrinier path round the web forming roller (30) can be varied by a swing movement at the stock inlet and the breast roller for the upper fourdrinier (12) round the rotary axis of the roller (30). A curved shoe structure (36), for the web development, lies at the upper fourdrinier (12) on its downwards path, opposite at least one deflector at the lower fourdrinier (11) or pliable bar (38) pressed against it. At least one pliable bar is pressed against the upper fourdrinier (12) at the circumference of the web development roller (30). An equal pressure water extraction stage is at the angled downwards path of the fourdriniers, with a static section against one fourdrinier (12) while the other section is pressed against the other fourdrinier (11) at an adjustable pressure, using plates or plate segments in both sections. The water extraction unit is permeable to liquid, and pref. perforated. In another form, the two fourdriniers (11,12) within the double fourdrinier zone are only in contact with static water extraction units (36,37) apart from the roller (30). A suction unit is at the lower fourdrinier (11) at the fourdrinier separation point on the downwards path. After separation, the lower fourdrinier (11) continues on an angled and downwards path, and pref. over a further water extraction unit, and the web is picked off (8,9) from the lower fourdrinier (11). At the end of the downwards fourdrinier path, the two fourdriniers (11,12) pass round a suction roller within the loop of the upper fourdrinier (12), and a lower suction system separates the lower fourdrinier (11) and the web from the upper fourdrinier (12). The double fourdrinier can be free of web forming bars. Directly after the web development roller (30), a pref. perforated guide plate with a convex curvature can be at the upper fourdrinier (12).

Abstract (de)

Ein Doppelsieb-Former zur Herstellung einer Papierbahn aus einer Faserstoffsuspension hat zwei Siebbänder (Untersieb 11 und Obersieb 12), die miteinander eine Doppelsiebzone bilden. In einem ersten Abschnitt der Doppelsiebzone, in dem die beiden Siebbänder (11, 12) über eine Formierwalze (30) laufen, bilden die beiden Siebbänder unmittelbar an der Formierwalze miteinander einen keilförmigen Einlaufspalt (28), der unmittelbar von einem Stoffauflauf (26) die Faserstoffsuspension aufnimmt. In einem zweiten Abschnitt der Doppelsiebzone laufen die beiden Siebbänder (11, 12) mit der dazwischen sich bildenden Faserstoffbahn über weitere Entwässerungselemente (36, 37). Wesentlich ist, daß die Doppelsiebzone unmittelbar ausgehend von der Formierwalze (30) steil nach unten verläuft. <IMAGE>

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IPC 8 full level
D21F 9/02 (2006.01); **D21F 9/00** (2006.01)

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Cited by
US6875309B2; EP0894894A3; CN106574442A; DE102008002278A1; DE102008002280A1; WO0183882A3; WO2009153164A1; WO2009147198A1; US7332060B2; EP1075568B1

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