

Title (en)  
PAPERMAKING

Publication  
**EP 0041056 B1 19840808 (EN)**

Application  
**EP 81850084 A 19810518**

Priority  
• SE 8003948 A 19800528  
• US 23864581 A 19810226

Abstract (en)  
[origin: EP0041056A1] In making paper from an aqueous papermaking stock, a binder comprising colloidal silicic acid and cationic starch is added to the stock for improving the paper or the retention of the stock components, or is added to the white water for reducing the pollution problems or recovering values from the white water. The cationic starch of the binder has a degree of substitution of not less than 0.01, and the weight ratio of cationic starch to SiO<sub>2</sub> is between 1:1 and 25:1.

IPC 1-7  
**D21D 3/00; D21F 1/82**

IPC 8 full level  
**D21F 1/82** (2006.01); **D21H 17/29** (2006.01); **D21H 17/68** (2006.01); **D21H 21/52** (2006.01); **D21H 23/76** (2006.01)

CPC (source: EP)  
**D21F 1/82** (2013.01); **D21H 17/29** (2013.01); **D21H 17/68** (2013.01); **D21H 21/52** (2013.01); **D21H 23/765** (2013.01)

Cited by  
US4882087A; US4946557A; TR24973A; US5571494A; US5688482A; US5707493A; US5891305A; US5368833A; US5643414A; US5149370A; EP0348366A3; US5127994A; EP0603727A1; AU635365B2; US5447604A; EP0257772A1; US4849055A; US4925530A; US4810301A; EP0490425A1; US5277764A; AU654306B2; EP0234513A1; EP0080986A3; WO8301970A1; US6355141B1; US7431798B2; EP0786476A1; LT3224B; US6841039B1; AU717544B2; GB2292394A; GB2292394B; US5942086A; EP0490424A1; US5288317A; DE3837746C1; EP0310959A1; US4964954A; US10214859B2; WO9110776A1; WO0246529A1; WO9622244A1; WO9107351A1; DE102008000811A1; US8168040B2; US8454796B2; US10626558B2; EP0786475A2; US8440768B2; US9975781B2; US10801162B2; US11274399B2; US11732421B2; EP1620599B2

Designated contracting state (EPC)  
AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)  
**EP 0041056 A1 19811202; EP 0041056 B1 19840808**; AR 231848 A1 19850329; AT E8916 T1 19840815; AU 546999 B2 19851003; AU 7051481 A 19811203; BR 8103345 A 19820216; DE 3165370 D1 19840913; ES 502531 A0 19830216; ES 8304247 A1 19830216; FI 68283 B 19850430; FI 68283 C 19850812; FI 811628 L 19811129; MX 158106 A 19890109; NO 161334 B 19890424; NO 161334 C 19890802; NO 811811 L 19811130; NZ 197223 A 19840531; SU 1228793 A3 19860430

DOCDB simple family (application)  
**EP 81850084 A 19810518**; AR 28549781 A 19810528; AT 81850084 T 19810518; AU 7051481 A 19810513; BR 8103345 A 19810528; DE 3165370 T 19810518; ES 502531 A 19810527; FI 811628 A 19810527; MX 18745381 A 19810523; NO 811811 A 19810527; NZ 19722381 A 19810527; SU 3315051 A 19810527