

# CPC COOPERATIVE PATENT CLASSIFICATION

## D TEXTILES; PAPER

### PAPER

## D21 PAPER-MAKING; PRODUCTION OF CELLULOSE

## D21F PAPER-MAKING MACHINES; METHODS OF PRODUCING PAPER THEREON

### WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

<b>1/00</b>	<b>Wet end of machines for making continuous webs of paper</b>	1/38	. . Pads
1/0009	. {Regulating the freeness of the pulp}	1/40	. . Rolls
1/0018	. {Devices for dispensing fibres in a fluid}	1/42	. . Jets
1/0027	. {Screen-cloths}	1/44	. Watermarking devices
1/0036	. . {Multi-layer screen-cloths}	1/46	. . Dandy rolls
1/0045	. . . {Triple layer fabrics}	1/48	. Suction apparatus ( <a href="#">suction rolls D21F 3/10</a> )
1/0054	. . {Seams thereof}	1/483	. . {Drainage foils and bars}
1/0063	. . {Perforated sheets}	1/486	. . . {adjustable}
1/0072	. . {Link belts}	1/50	. . Suction boxes with rolls
1/0081	. . {with single endless strands travelling in generally parallel convolutions}	1/52	. . Suction boxes without rolls
1/009	. {Fibre-rearranging devices}	1/523	. . . {Covers thereof}
1/02	. Head boxes of Fourdrinier machines	1/526	. . . . {consisting of endless moving belts}
1/022	. . {Means for injecting material into flow within the headbox}	1/54	. Skimming devices, e.g. froth ledges
1/024	. . {Details of the feed chamber}	1/56	. Deckle frame arrangements
1/026	. . {Details of the turbulence section}	1/58	. Deckle straps
1/028	. . {Details of the nozzle section}	1/60	. Cylinder moulds
1/04	. Head boxes of cylinder machines	1/62	. Sand traps
1/043	. . {with immersed cylinders}	1/64	. Magnetic separators
1/046	. . {with non-immersed cylinder}	1/66	. Pulp catching, de-watering, or recovering; Re-use of pulp-water
1/06	. Regulating pulp flow	1/68	. . using hydrocyclones ( <a href="#">hydrocyclones B04C</a> )
1/065	. . {Shock-absorbing devices}	1/70	. . by flotation
1/08	. Regulating consistency	1/72	. . using funnels
1/10	. Wire-cloths ( <a href="#">production of wire-cloths B21F</a> )	1/74	. . using cylinders
1/105	. . {Multi-layer wire-cloths}	1/76	. . . with suction
1/12	. . Seams thereof	1/78	. . . with pressure
1/14	. . . welded	1/80	. . using endless screening belts
1/16	. . . sewn	1/82	. . adding fibre agglomeration compositions
1/18	. Shaking apparatus for wire-cloths and associated parts	<b>2/00</b>	<b>Transferring webs from wet ends to press sections</b> { <a href="#">handling webs in general B65H</a> }
1/20	. . in Fourdrinier machines	<b>3/00</b>	<b>Press section of machines for making continuous webs of paper</b>
1/22	. . in cylinder machines	3/02	. Wet presses
1/24	. Tilting, raising, or lowering mechanisms for wire-cloths	3/0209	. . {with extended press nip}
1/26	. . in Fourdrinier machines	3/0218	. . . {Shoe presses}
1/28	. . in cylinder machines	3/0227	. . . . {Belts or sleeves therefor}
1/30	. Protecting wire-cloths from mechanical damage	3/0236	. . . . . {manufacturing methods}
1/32	. Washing wire-cloths or felts	3/0245	. . . . . {Means for fixing the sleeve to the roller end}
1/325	. . {with reciprocating devices}	3/0254	. . . {Cluster presses, i.e. presses comprising a press chamber defined by at least three rollers}
1/34	. Construction or arrangement of spraying pipes	3/0263	. . . . {Sealing arrangements therefor}
1/345	. . {Spraying-pipe cleaners}	3/0272	. . {in combination with suction or blowing devices}
1/36	. Guiding mechanisms ( <a href="#">suction rolls D21F 3/10</a> )	3/0281	. . {in combination with a dryer roll}
1/365	. . {for controlling the lateral position of the screen}		

3/029	. . {using special water-receiving belts}	7/006	. {Cutting the edges of the paper-web}
3/04	. . Arrangements thereof	7/008	. {Steam showers}
3/045	. . . {including at least one extended press nip}	7/02	. Mechanical driving arrangements
3/06	. . Means for regulating the pressure	7/04	. Paper-break control devices
3/08	. . Pressure rolls	7/06	. Indicating or regulating the thickness of the layer; Signal devices
3/083	. . . {perforated}	7/08	. Felts
3/086	. . . {having a grooved surface}	7/083	. . {Multi-layer felts}
3/10	. . Suction rolls, e.g. couch rolls	7/086	. . {Substantially impermeable for transferring fibrous webs}
3/105	. . . {Covers thereof}	7/10	. . Seams thereof
<b>5/00</b>	<b>Dryer section of machines for making continuous webs of paper</b>	7/12	. . Drying
5/001	. {Drying webs by radiant heating}	<b>9/00</b>	<b>Complete machines for making continuous webs of paper</b>
5/002	. . {from infra-red-emitting elements}	9/003	. {of the twin-wire type}
5/003	. . {Shutter means}	9/006	. . {paper or board consisting of two or more layers}
5/004	. {Drying webs by contact with heated surfaces or materials}	9/02	. of the Fourdrinier type
5/005	. . {in a fluid bed}	9/04	. of the cylinder type
5/006	. {Drying webs by using sonic vibrations}	9/043	. . {with immersed cylinder}
5/007	. {Drying webs by contact with sorbent bodies}	9/046	. . {with non-immersed cylinder}
5/008	. {Drying webs by direct contact with gas flames}	<b>11/00</b>	<b>Processes for making continuous lengths of paper, or of cardboard, or of wet web for fibre board production, on paper-making machines</b>
5/009	. {Drying webs by centrifugal treatment}	11/002	. {by using a foamed suspension}
5/02	. Drying on cylinders	11/004	. {by modification of the viscosity of the suspension}
5/021	. . {Construction of the cylinders}	11/006	. {Making patterned paper}
5/022	. . {Heating the cylinders}	11/008	. {Making apertured paper}
5/024	. . . {using electrical means}	11/02	. of the Fourdrinier type
5/025	. . . {using combustion gases}	11/04	. . paper or board consisting on two or more layers
5/027	. . . {using a heat-transfer fluid between the heating means and the cylinder shell}	11/06	. of the cylinder type
5/028	. . . {using steam}	11/08	. . paper or board consisting of two or more layers
5/04	. . on two or more drying cylinders	11/10	. Making imitation mould-made paper
5/042	. . . {in combination with suction or blowing devices}	11/12	. Making corrugated paper or board
5/044	. . . . {using air hoods over the cylinders}	11/14	. Making cellulose wadding, filter or blotting paper
5/046	. . . . {using pocket ventilation systems}	11/145	. . {including a through-drying process}
5/048	. . . {in combination with other heating means}	11/16	. Making paper strips for spinning or twisting
5/06	. . Regulating temperature	<b>13/00</b>	<b>Making discontinuous sheets of paper, pulpboard or cardboard, or of wet web, for fibreboard production (making discontinuous sheets of board in moulds <a href="#">D21J</a>; drying paper, pulpboard, or cardboard, in discontinuous sheet form <a href="#">F26B</a>)</b>
5/08	. . Arrangement of steam points in the cylinders	13/02	. Making hand-made paper
5/10	. . Removing condensate from the interior of the cylinders	13/04	. on cylinder board machines
5/12	. Festoon drying	13/06	. . Format rolls
5/14	. Drying webs by applying vacuum	13/08	. . . Automatic cut-off rolls
5/143	. . {through perforated cylinders}	13/10	. using board presses
5/146	. . {Vacuum seals}	13/12	. . Platen presses
5/16	. Drying webs by electrical heating		
5/162	. . {Resistance heating}		
5/165	. . {Inductive heating; Capacitive heating}		
5/167	. . {Microwave heating}		
5/18	. Drying webs by hot air		
5/181	. . {on Yankee cylinder}		
5/182	. . {through perforated cylinders}		
5/184	. . . {Surfaces thereof}		
5/185	. . {Supporting webs in hot air dryers}		
5/187	. . . {by air jets}		
5/188	. . . . {Blowing devices}		
5/20	. Waste heat recovery		
<b>7/00</b>	<b>Other details of machines for making continuous webs of paper</b>		
7/001	. {Wire-changing arrangements}		
7/003	. {Indicating or regulating the moisture content of the layer}		
7/005	. {Wire-tensioning devices}		