

1) Family number: 41954816 (US2010062672A)

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Title: APPARATUS AND PROCESS FOR THE PRODUCTION OF A NON-WOVEN FABRIC

Abstract: In an apparatus for the production of a non-woven fabric of filaments, where a plurality of filaments are extruded, cooled, stretched and collected on a mobile support, the means of collecting the filaments include furthermore, a gas permeable mobile support element (28), an aspirator (29) and one or more aspiration ducts (33C-36C), the collecting means being insulated from the environment air.

Classifications:

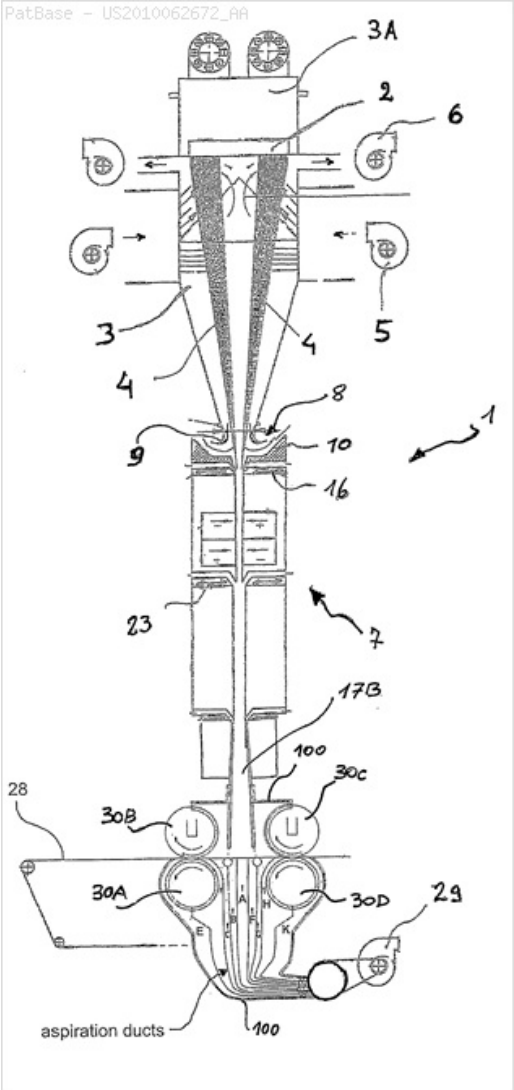
International (IPC 8-9): D01D5/08 D01D5/098 D02G3/44 D02J1/22 D04H3/02 D04H3/16 (Advanced/Invention);

D01D5/08 D02G3/44 D02J1/22 D04H3/02 D04H3/16 (Core/Invention)

CPC: Y10T428/2915 D04H3/16 D01D5/0985 D01D7/00 D04H3/016 D04H3/033 Y10T442/69

European: D01D5/098B D01D7/00 D04H3/016 D04H3/033 D04H3/16

US: 264/103 264/103S 425/66 425/66S 425/72.2 425/83.1 428/365 428/365S 442/409 442/409P



Family:

Publication number	Publication date	Application number	Application date
AT519874 E	20110815	AT20070859069T	20071217
DE602006012527 D1	20100408	DE200660012527T	20061215
DE602007016507 D1	20111020	DE200760016507T	20071217
EP1939334 A1	20080702	EP20060425840	20061215
EP1939334 B1	20100224	EP20060425840	20061215
EP2099958 A1	20090916	EP20070859069	20071217
EP2099958 B1	20110810	EP20070859069	20071217
US2010062672 AA	20100311	US20070516060	20071217
US8591213 BB	20131126	US20070516060	20071217
WO08075176 A1	20080626	WO2007IB03944	20071217

Priority:

EP20060425840 20061215 EP20070859069 20071217 WO2007IB03944 20071217

Probable Assignee: FARE SPA

Assignee(s): (std): FARE ROSALDO ; FARE SPA
Assignee(s): FARE AND 8242 ROSALDO ; FARE S P A ; FARE S P A FAGNOANO OLONA ; FARE FAGNOANO OLONA SPA
Inventor(s): (std): FARE ROSALDO
Inventor(s): FARE AND 8242 ROSALDO
Agent(s): FRANKE AND PARTNER PATENT U RECHTSANWAELTE INTELLECTUAL PROPERTY LAW FIRM; GISLON GABRIELE; HESS PATENT LAW FIRM PC; HESS PATENT LAW FIRM LLC; ROBERT J
Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

2) Family number: 42758480 (US2009004313A)

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Title: APPARATUS FOR MAKING A SPUNBOND WEB

Abstract: An apparatus for making a spunbond web has a deposition surface, a spinneret above the surface for producing filaments that move downward along a path toward the surface, and a cooling chamber below the spinneret. Cool process air is supplied to the chamber to cool the filaments as they pass downward through the chamber. A laterally closed stretching unit downstream of the cooling chamber has laterally closed side walls that have portions that diverges downward. A connecting region between the stretching unit and the cooling chamber substantially excludes access of air from outside to the filaments as they pass from the cooling chamber to the stretching unit so that the filaments drop from the stretching unit onto the deposition surface.

Classifications:

International (IPC 8-9): B29C55/30 D01D4/02 D01D5/08 D01D5/088 D01D5/092 D01D5/098 D01D5/12 D04H1/72 D04H1/736 D04H17/00 D04H3/00 D04H3/16 (Advanced/Invention)

International (IPC 1-7): B29C43/46 B32B5/02

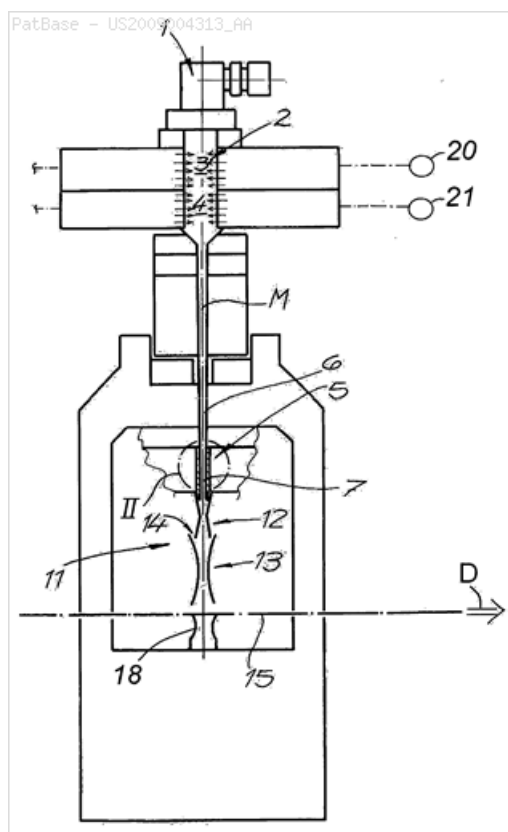
CPC: D01D5/0985 D04H3/16

European: D01D5/098B D04H3/16

US: 425/382.2 425/464 425/66 425/66P 425/72.2

JP F-Term: 4L045 4L045/AA05 4L045/BA06 4L045/DA23 4L045/DA41 4L045/DA45 4L045/DA60 4L047 4L047/AB03 4L047/EA05

JP F-Index: D01D5/098 D04H1/72/B D04H1/736 D04H3/16



Family:

Publication number	Publication date	Application number	Application date
BRPI0803610 A2	20090505	BR2008PI03610	20080630
BRPI0803610 B1	20170627	BR2008PI03610	20080630
CA2635329 AA	20081229	CA20082635329	20080618
CA2635329 C	20120807	CA20082635329	20080618
CN101333730 A	20081231	CN200810131780	20080627
CN101333730 B	20101110	CN200810131780	20080627
DE502007012337 D1	20131205	DE200750012337T	20070629
DK2009163 T3	20140113	DK20070012793T	20070629
EP2009163 A1	20081231	EP20070012793	20070629
EP2009163 B1	20131002	EP20070012793	20070629
ES2440244 T3	20140128	ES20070012793T	20070629
IL192000 A0	20090211	IL20080192000	20080605
IL192000 A1	20120229	IL20080192000	20080605
IN01012KO2008 A	20090424	IN2008K001012	20080610
IN268725 B	20150918	IN2008K001012	20080610
JP2009013559 A2	20090122	JP20080165256	20080625
JP5094588 B2	20121212	JP20080165256	20080625

PL2009163 T3	20140331	PL20070012793T	20070629
US2009004313 AA	20090101	US20080146573	20080626
US7762800 BB	20100727	US20080146573	20080626

Priority:

EP20070012793 20070629 CA20082635329 20080618

Probable Assignee: REIFENHAUSER GMBH AND CO MASCHF KG

Assignee(s): (std): FREY DETLEF ; GEUS HANS GEORG ; REIFENHAEUSER GMBH AND CO KG ; REIFENHAEUSER GMBH AND CO MASCHF KG ; REIFENHAUSER GMBH AND CO KG MASC ; REIFENHAUSER GMBH AND CO KG MASCHINENFABRIK ; REIFENHAEUSER MASCH ; REIFENHAUSER GMBH AND CO MASCHF KG

Assignee(s): REIFENHAEUSER GMBH AND CO KG MASCH ; REIFENHAUSER GMBH AND CO KG MASCH ; REIFENHAEUSER GMBH AND CO MAS KG ; REIFENHAEUSER GMBH AND CO KG MASCHINENFABRIK ; REIFENHAEUSER GMBH AND CO KG MAS

Inventor(s): (std): HANS GEORG GEUS ; GEUS HANS GEORG ; FREY DETLEF ; DETLEF FREY

Inventor(s): DETLER FREY

Agent(s): MCFADDEN FINCHAM; ANDREJEWSKI HONKE PATENT U RECHTSANWAELTE GBR; ROHMANN MICHAEL ET AL; ROHMANN MICHAEL; LEHMANN MARIA ISABEL; REINHOLD COHN AND PARTNERS; KF ROSS PC; ANDREW

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL PL PT RO RS SE SI SK TR

3) Family number: 28645638 (US2003113394A)

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Title: APPARATUS FOR PRODUCING A NONWOVEN WEB

Abstract: In the production of a spunbond web by aerodynamically stretching thermoplastic filaments from a spinneret, the stretching nozzle is formed by two nozzle-forming units each of which has a temperature control device, especially a heater, to minimize deformation at the stretching nozzle defining wall. The result is a reduction in the tolerance of the basis weight of the spunbond web.

Classifications:

International (IPC 8-9): D01D4/00 D01D5/084 D01D5/098 D01D5/12 D01F6/00 D04H3/00 D04H3/02 D04H3/03 D04H3/033

D04H3/16 (Advanced/Invention);

D01D4/00 (Advanced/Non-invention);

D01D5/00 D01D5/12 (Core/Invention)

International (IPC 1-7): D01D 5/12 D01D4/00 D01D5/084 D01D5/098 D01D5/12 D01D50/84 D01D50/98 D01D7/00 D01F6/00 D04H3/00 D04H3/02 D04H3/03 D04H3/16

CPC: D04H3/033 D01D5/084 D01D5/0985 D04H3/03 D04H3/16

European: D01D5/084 D01D5/098B D04H3/03 D04H3/033 D04H3/16

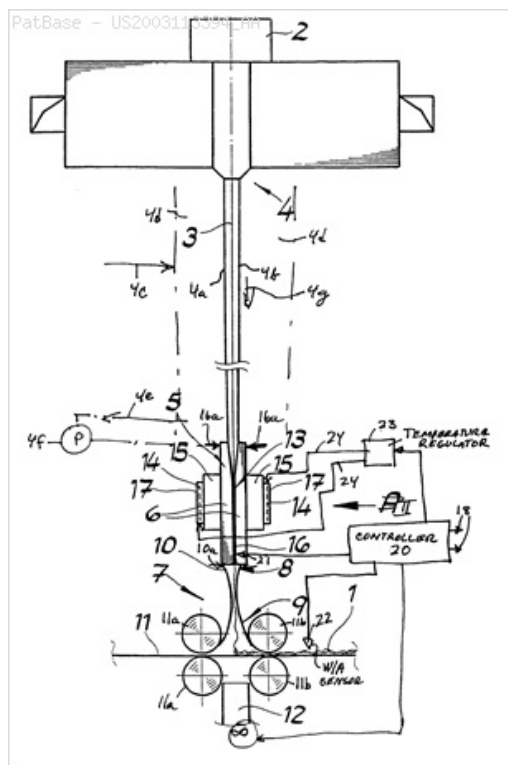
US: 425/140 425/143 425/143S 425/169 425/170 425/326.1

425/326.100S 425/377 425/377S 425/66 425/66P 425/72.2 425/72.200S

JP F-Term: 4L045 4L045/AA05 4L045/BA01 4L045/DA15 4L045/DC01

4L047 4L047/EA05

JP F-Index: D01D5/098 D04H3/16



Family:

Publication number	Publication date	Application number	Application date
AT406470 E	20080915	AT20010129946T	20011217
BRPI0205177 A	20040629	BR2002PI05177	20021212
BRPI0205177 B1	20131126	BR2002PI05177	20021212
CA2412719 AA	20030617	CA20022412719	20021126
CA2412719 C	20070116	CA20022412719	20021126
CN1274896 C	20060913	CN20021052453	20021128
CN1427106 A	20030702	CN20021052453	20021128
DE50114266 D1	20081009	DE20015014266	20011217
DK1323852 T3	20081117	DK20010129946T	20011217
EP1323852 A1	20030702	EP20010129946	20011217
EP1323852 B1	20080827	EP20010129946	20011217
ES2214983 T1	20041001	ES20010129946T	20011217
ES2214983 T3	20081216	ES20010129946T	20011217
JP2003213561 A2	20030730	JP20020351432	20021203

JP3645887 B2	20050511	JP20020351432	20021203
KR100493981 B1	20050613	KR20020079595	20021213
KR20030051303 A	20030625	KR20020079595	20021213
MXPA02012303 A1	20060914	MX2002PA12303	20021211
MY129489 A	20070430	MY20020004335	20021120
SI1323852 T1	20081231	SI20010030865T	20011217
TH26710 B	20090923	TH20021003908	20021018
TH60212 A	20031230	TH20021003908	20021018
US2003113394 AA	20030619	US20020294480	20021114
US6908292 BB	20050621	US20020294480	20021114

Priority:

EP20010129946 20011217 CA20022412719 20021126

Probable Assignee: REIFENHAUSER GMBH AND CO MASCHF

Assignee(s): (std): MASCH FABRIC REIFENHAUZE GMBH ; REIFENHAEUSER MASCH ; REIFENHAUSER GMBH AND CO KG MASC ; REIFENHOUSER GMBH AND CO MASCHIN ; REIFENHAUSER GMBH AND CO MASC KG ; REIFENHAEUSER GMBH AND CO KG

Assignee(s): REIFENHAEUSER GMBH AND CO MASCHF KG ; REIFENHAEUSER GMBH AND CO MASCHF ; REIFENHAEUSER GMBH AND CO KG MASCHINENFABRIK ; REIFENHAEUSER GMBH AND CO MASCHINENFABRIK ; ROSNER FALK ; SCHOMER UDO ; SIEVERS KARSTEN ; REIFENHOUSER GMBH AND CO MASCHINENFABRIK ; REIFENHAUSER GMBH AND CO MASCHF KG ; REIFENHAUSER GMBH AND CO KG MASCHINENFABRIK ; REIFENHAUSER GMBH AND CO MASCH ; REIFENHAUSER GMBH AND CO MASCHF ; REIFENHAUSER GMBH AND CO MASCHINENFABRIK ; MASCHINENFABRIC REIFENHAUZE GMBH ; REIFENHAEUSER GMBH AND CO MAS FAB ; FREY DETLEF ; GEUS HANS GEORG ; HOFEMEISTER HANS JURGEN

Inventor(s): (std): HESS H G ; HOFEMEISTER HANS JUERGEN ; HOFEMEISTER HANS JURGEN ; HOFEMEISTER H J ; LESNA F ; ROESNER FALK ; ROSNER FALK ; SCHOMER UDO ; SIEVERS KARSTEN ; HJ HOFEMEISTER ; HG HESS ; F LESNA ; LESNA H G HESS H J HOFEMEISTER ; FRAY DETLEF ; FREY DETLEF ; GEUS HANS GEORG

Inventor(s): H G HESS ; H J HOFEMEISTER ; KARSTEN SIEVERS ; HG HESS HJ HOFEMEISTER F LESNA ; HANS JURGEN HOFEMEISTER ; HANS JUERGEN HOFEMEISTER ; HANS GEORG GEUS ; H G HESS H J HOFEMEISTER F LESNA ; FALK ROSNER ; FALK ROESNER ; DETLEF FREY ; DETLEF FRAY ; UDO SCHOMER

Agent(s): BORDEN LADNER GERVAIS LLP; ROHMANN MICHAEL ET AL; DUBNO HERBERT; HERBERT

Designated states: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC NL PT SE SI TR

4) Family number: 701996 (GB1159601A)

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Title: IMPROVEMENTS RELATING TO NON-WOVEN TEXTILE WEBS

Abstract: 1,159,601. Laminated non-woven webs. JOHNSON and JOHNSON. 14 July, 1966, No. 31710/66. Heading B5N. [Also in Division D1] A non-woven web comprises individual synthetic textile filaments of from 1-10 denier, each having an irregular sinuosity presenting looped portions which overlap and engage looped portions of adjacent filaments, the individual filaments in a unit section of the web each having a length in its sinuous form substantially equal to that of the unit section, and in its straightened form substantially equal to that of the associated filaments, the web being substantially uniform and the filaments all lying in the same general direction. The web is made by presenting a tow of synthetic filaments to a liquid flowing through a chamber to convey the tow through the chamber, the liquid moving faster than the tow to maintain the tow under tension, uniformly applying divergent forces to the tow while in said liquid to spread the tow into a web, and collecting the filaments at a slower speed than the speed of the tow in the liquid whereby the filaments assume a sinuous form. In a preferred embodiment the chamber 44 through which the tow 40 is conveyed is basically of rectangular cross-section, the width increasing from entrance to exit and the height decreasing from entrance to exit to provide the divergent forces. The web so formed is dried to remove the liquid conveying medium which may be water or alcohol. A non-woven fabric is made by laminating the web with further so-formed webs, the directions of the filaments lying at an angle to those of adjacent webs, or by laminating the web with one or webs of staple fibres. The layers are united by adhesive applied in a pattern. The filaments may be polyamide, polyester, acrylic, vinylic, cellulosic, polyolefin or polyurethane filaments.

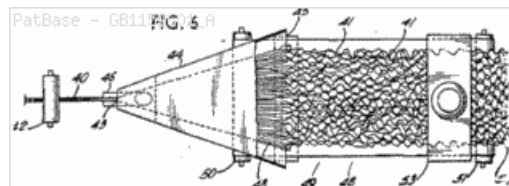
Classifications:

International (IPC 8-9): A61F13/00 D04H3/005 D04H3/016 D04H3/04 (Advanced/Invention)

International (IPC 1-7): D04H5/00

CPC: A61F13/00004 A61F2013/00744 D04H3/005 D04H3/016 D04H3/04

European: A61F13/00 D04H3/005 D04H3/016 D04H3/04



Family:

Publication number	Publication date	Application number	Application date
GB1159601 A	19690730	GB19660031710	19660714

Priority:

GB19660031710 19660714

Probable Assignee: JOHNSON AND JOHNSON

Assignee(s): (std): JOHNSON AND JOHNSON

Inventor(s): (std): HARMON CARLYLE

Inventor(s): CARLYLE HARMON

5) Family number: 14318874 (US5766646A)

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Title: Apparatus for making a fleece from continuous thermoplastic filaments

Abstract: A fleece-making apparatus has a vertically extending and horizontally elongated process shaft having upper and lower ends, a nozzle head at the upper shaft end for emitting a multiplicity of continuous thermoplastic strands that descend in the shaft as a curtain, and a foraminous conveyor belt at the lower shaft end for receiving and conveying away the filaments. A main stream of air flows downward in the shaft from the upper shaft end to the lower shaft end and through the belt for cooling and stretching the filaments and depositing the filaments on the belt. A pair of horizontally elongated and downwardly open second inlet slots flank the curtain of filaments below the upper shaft end, a pair of horizontally elongated third inlet slots flank the curtain of filaments below the second slots, and a pair of horizontally elongated third outlet slots flank the curtain of filaments below the third inlet slots and above the lower end. A controller including at least one blower connected to the slots directs second streams of air downward into the shaft from the second inlet slots, introduces third streams of air into the shaft through the third slots, and withdraws air from the passage through the third outlet slots for looping the cooled and stretched filaments prior to deposition on the belt.

Classifications:

International (IPC 8-9): D01D11/02 D01D5/098 D04H3/02 D04H3/03 D04H3/16 (Advanced/Invention);

D01D11/00 D01D5/08 D04H3/02 D04H3/16 (Core/Invention)

International (IPC 1-7): D01D11/02 D01D5/092 D01D5/098 D04H3/02 D04H3/03

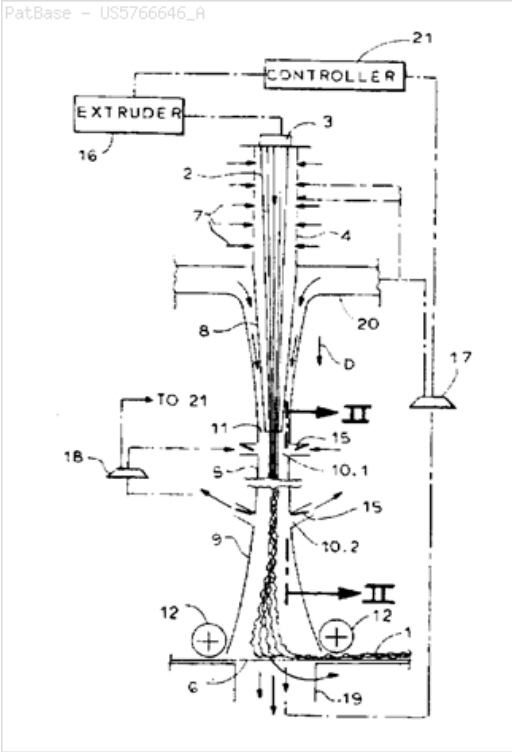
CPC: D04H3/16

European: D04H3/16

US: 264/168 264/210.8 425/72.2 425/722

JP F-Term: 4L045 4L045/AA05 4L045/CB01 4L045/DA08 4L045/DA22 4L045/DA23 4L045/DA45 4L045/DC26 4L045/DC50 4L047 4L047/AA14 4L047/AA19 4L047/AB03 4L047/EA06

JP F-Index: D01D11/02 D01D5/098 D04H3/02 D04H3/03/B D04H3/037



Family:

Publication number	Publication date	Application number	Application date
DE19521466 A1	19961219	DE19951021466	19950613
DE19521466 C2	19990114	DE19951021466	19950613
IT1283007 B1	19980403	IT1996MI00970	19960514
ITMI960970 A0	19960514	IT1996MI00970	19960514
ITMI960970 A1	19971114	IT1996MI00970	19960514
JP3135498 B2	20010213	JP19960100447	19960422
JP9095854 A2	19970408	JP19960100447	19960422
US5766646 A	19980616	US19960659039	19960603

Priority:

DE19951021466 19950613

Probable Assignee: REIFENHAUSER GMBH AND CO MASCHF

Assignee(s): (std): REIFENHAEUSER MASCH

Assignee(s): REIFENHAEUSER GMBH AND CO MASCHINENFABRIK 53844 TR ; REIFENHAEUSER GMBH AND CO MASCHINENFABRIK ; REIFENHAEUSER GMBH AND CO MASCHINENFABRIK 53844 TROISDORF DE ; REIFENHAEUSER GESELLSCHAFT MIT BESCHRANKTER HAFTUNG AND COMPAGNIE MASCHINENFABRIK ; REIFENHAEUSER GES MIT BESCHRANKTER HAFTUNG AND COMP MASCHF ; REIFENHAEUSER GMBH AND CO MAS FAB ; REIFENHAUSER GMBH AND CO MASCHINENFABRIK ; REIFENHAUSER GMBH AND CO MASCHF ; REIFENHAUSER GMBH AND CO MASCH

Inventor(s): (std): KUNZE BERND DR ; KUNZE BERND ; HANSU GEORUKU GEUSU ; FREY DETLEF ; DETOREFU FURAI ; DETLEF FREY ; BERUNTO KUNTUE ; GEUS HANS GEORG

Inventor(s): FREY DETLEF 53844 TROISDORF DE ; KUNZE BERND DR 53773 HENNEF DE ; GEUS HANS GEORG 53539 NIEDERKASSEL DE

6) Family number: 30533717 (US5800840A)

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Title: APPARATUS FOR PRODUCING A SPUN-BOND WEB FROM THERMOSPLASTIC ENDLESS FILAMENTS

Abstract: An apparatus for producing spun-bond fleece has the process shaft connected to a source of process air and opening into a depositions shaft centrally thereof and flanked by streams of air bypassing the process shaft. The result is a random jumbling of the fibers as they deposit on the moving belt such that a uniform filament density and homogeneous mesh width are obtained without singularities and without conglomeration of the filaments in the shafts.

Classifications:

International (IPC 8-9): D04H3/02 (Advanced/Invention);

D04H3/02 (Core/Invention)

International (IPC 1-7): B29C47/34 D04H3/02

CPC: Y10S264/75 D04H3/16 D04H3/02

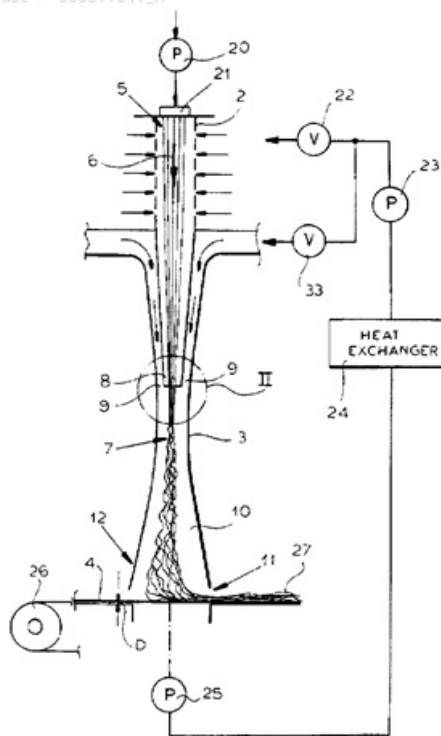
European: D04H3/02 D04H3/16

US: 264/168 264/DIG.75 425/7 425/72.2

JP F-Term: 4L047 4L047/AB03 4L047/BA08 4L047/BD01

JP F-Index: D04H3/02

PatBase - US5800840_A



Family:

Publication number	Publication date	Application number	Application date
DE19504953 A1	19960822	DE19951004953	19950215
DE19504953 C2	19990520	DE19951004953	19950215
IT1281999 B1	19980306	IT1996MI00205	19960205
ITMI960205 A0	19960205	IT1996MI00205	19960205
ITMI960205 A1	19970805	IT1996MI00205	19960205
JP2718916 B2	19980225	JP19960022565	19960208
JP8296164 A2	19961112	JP19960022565	19960208
US5800840 A	19980901	US19960597016	19960205

Priority:

DE19951004953 19950215

Probable Assignee: REIFENHAUSER GMBH AND CO MASCHF

Assignee(s): (std): REIFENHAEUSER MASCH

Assignee(s): REIFENHAUSER GMBH AND CO MASCH ; REIFENHAUSER GMBH AND CO MASCHINENFABRIK ; REIFENHAUSER GMBH AND CO MASCHF ; REIFENHAUSER GMBH AND CO MASCHINENFABRIK ; REIFENHAEUSER GMBH AND CO MASCHINENFABRIK 53844 TROISDORF DE ; REIFENHAEUSER GES MIT BESCHRANKTER HAFTUNG AND COMP MASCHF ; REIFENHAEUSER GESELLSCHAFT MIT BESCHRANKTER HAFTUNG AND COMPAGNIE MASCHINENFABRIK ; REIFENHAEUSER GMBH AND CO MAS FAB ; REIFENHAEUSER GMBH AND CO MASCHF ; REIFENHAEUSER GMBH AND CO MASCHF 53844 TROISDORF DE ; REIFENHAEUSER GMBH AND CO MASCHINENFABRIK 53844 TR

Inventor(s): (std): DETOREFU FURAI ; HANSU GEORUKU GEUSU ; HANS GEORG GEUS ; DETLEF FREY ; FREY DETLEF ; GEUS HANS GEORG

Inventor(s): FREY DETLEF 53844 TROISDORF DE ; GEUS HANS GEORG 53539 NIEDERKASSEL DE

7) Family number: 9112694 (US5460500A)

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Title: APPARATUS FOR PRODUCING A NONWOVEN SPUN-FILAMENT WEB OF AERODYNAMICALLY STRETCHED FILAMENT OF A PLASTIC

Abstract: A spun-filament nonwoven web is deposited on a sieve belt from a spinning head producing a curtain of thermoplastic filaments which traverse a cooling chamber by drawing the filaments in a drawing nozzle separate from the cooling chamber and passing the filaments through a delivery unit and in the form of a jet pump, air flow through which is controlled at least in part by a suction blower below that sieve belt.

Classifications:

International (IPC 8-9): D01D5/098 D04H3/02

D04H3/03 (Advanced/Invention);

D01D5/08 D04H3/02 (Core/Invention);

D04H (Subclass/Invention)

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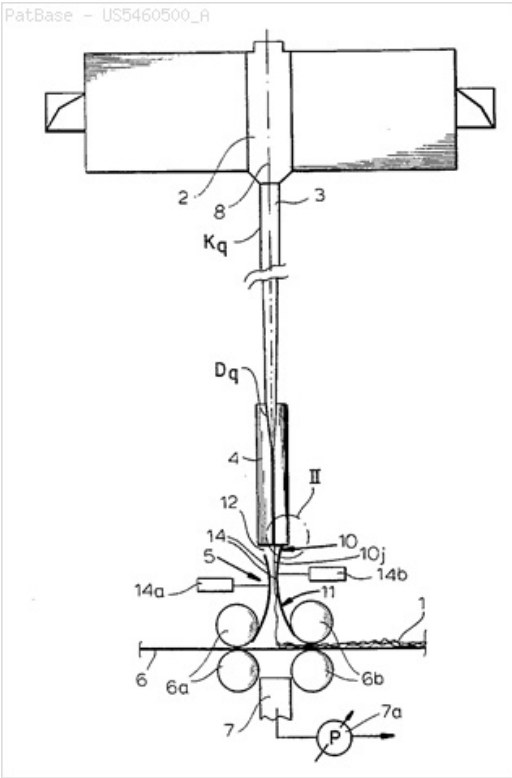
D04H3/02 D04H3/03 D04H3/16

CPC: Y10S425/017 D04H3/02

European: D04H3/02

US: 264/210.8 264/211.15 264/40.3 264/403 264/518 425/66 425/72.2 425/722 425/DIG.17

JP F-Term: 4L045 4L045/AA05 4L045/BA01 4L045/CB10 4L045/DA19 4L045/DA27 4L045/DA41 4L045/DA45 4L045/DA60 4L047 4L047/AB03 4L047/BD01 4L047/EA06
JP F-Index: D01D5/098 D04H3/03/A D04H3/033



Family:

Publication number	Publication date	Application number	Application date
CA2121383 AA	19941017	CA19942121383	19940415
CA2121383 C	19990323	CA19942121383	19940415
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ITMI940624 A1	19941017	IT1994MI00624	19940331
JP2556953 B2	19961127	JP19940076031	19940414
JP7109657 A2	19950425	JP19940076031	19940414
US5460500 A	19951024	US19940227977	19940415

Priority:

DE19934312419 19930416

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