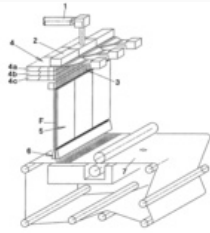
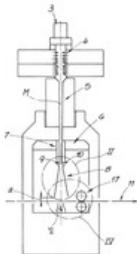
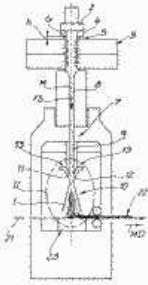
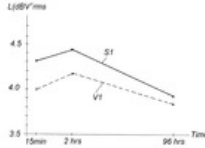
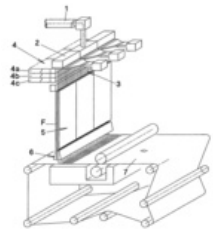
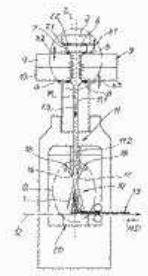
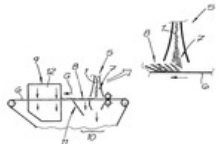
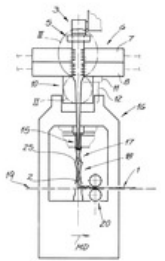
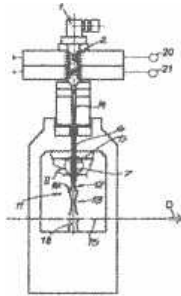
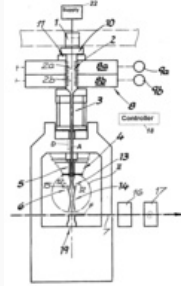
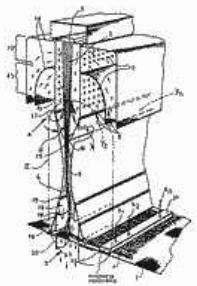
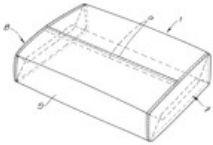
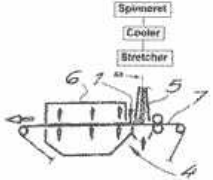
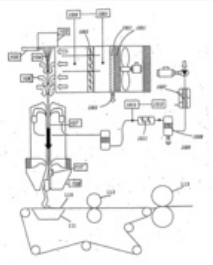
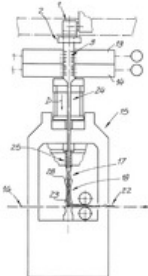
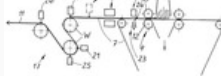
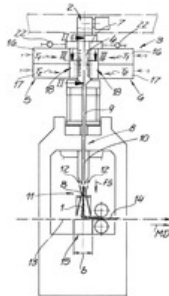
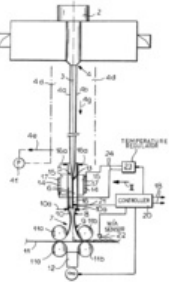
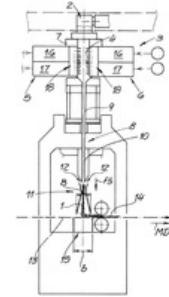
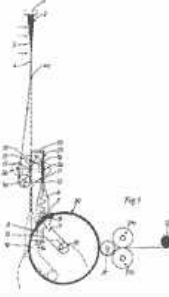


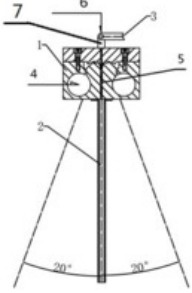
Patent families - 62 results						
#	 	Title	Publication number	Publ. date	Applicant/Assignee	
1.		Installation for producing a spunbonded fabric web whereof the diffuser is distant from the drawing slot device	EP1332252	2003-08-06	ANDRITZ PERFOJET ICBT PERFOJET RIETER PERFOJET	100 %
The invention concerns an installation for producing a spunbonded fabric web comprising a diffuser (6) defining for the filaments a passage with diverging cross-section and a conveyor (7) for receiving the filaments coming out of the diffuser. The uniformity of the web is enhanced by means of a device separating the filaments by electrostatic process mounted at a higher level than the bottom of the passage 						
2.		Method and device for manufacturing a spunbonding fabric made of filaments and spun fabric	EP3088585	2016-11-02	REIFENHAUSER MACHINE FACTORY OF LEFFINHAUSER REIFENHAUSER MASCHINENFABRIK	81 %
A method of making a spun-bond nonwoven fabric of thermoplastic filaments has the steps of first spinning the thermoplastic filaments, then cooling the spun filaments, and then conducting the cooled and spun filaments in a travel direction through a stretcher with primary air such that the primary air exits a downstream end of the stretcher with the filaments at a predetermined primary air volume/flow VP. The filaments and substantially all of the primary air are passed together as a flow from the downstream end of the stretcher into a diffuser. Secondary air is introduced into the flow at a secondary air volume/flow VS such that a ratio VP/VS of the primary rate VP to the secondary rate is equal to at least 4.5 and the primary and secondary air flow with the filaments in the travel direction through the diffuser. (From US9982367 B2) 						
3.		Device for the manufacture of woven material from continuous filaments	EP3382081	2018-10-03	REIFENHAUSER MACHINE FACTORY OF LEFFINHAUSER REIFENH USER REIFENHAEUSER MASCH REIFENHAUSER MASCHINENFABRIK 1 more...	80 %
An apparatus for making spunbond from continuous thermoplastic filaments has a spinneret for spinning the continuous filaments and advancing them in a filament-travel direction, a cooler for cooling the filaments, a stretcher for stretching the filaments, a depositing device including a foraminous belt extending in a machine direction transverse to the filament-travel direction for deposition of the filaments as a nonwoven web and conveyance away from the stretcher, a diffuser between the stretcher and the foraminous belt so that filaments and primary air from the stretcher enter into the diffuser, and a suction device for extracting air through the foraminous belt at an extraction region underneath the diffuser outlet and having a width b in a machine direction that is greater than a width B of the diffuser outlet. The diffuser forms upstream and downstream secondary air-inlet gaps at opposite ends through which secondary air is aspirated into the diffuser. (From US2018282926 A1) 						
4.		Spunbond nonwoven fabrics made from continuous fibres	EP3569753	2019-11-20	FIBERTEX PERSONAL CARE REIFENHAUSER MASCHINENFABRIK FIBERTEX PERSONAL CARE A MACHINE FACTORY OF LEFFINHAUSER REIFENHAUSER 1 more...	79 %
The invention relates to a spunbonded fabric of endless filaments made of thermoplastic plastic, wherein the endless filaments are designed as multi-component filaments having a core/sheath configuration. The filaments contain at least one lubricant, the lubricant being present exclusively or at least to 90 wt. % in the core component. The mass ratio between the core component and the sheath component is 65:35 to 80:20. The proportion of the lubricant is 250 to 5500 ppm with respect to the total filament. (From US2019194826 A1) 						

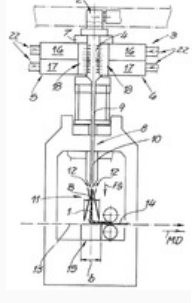
5.	Method and device for producing spinning fleece	EP1967628	2008-09-10	REIFENHÄUSER TRUETZSCHLER NONWOVENS FLEISSNER MACHINE FACTORY OF LEFFINHAUSER REIFENHAUSER 1 more...	79 %	Production of spun-bonded fabric comprises forming web from spun filaments on belt and passing it through wetting unit before consolidation using high-pressure water jets and lifting from belt for further processing Production of spun-bonded fabric comprises spinning, cooling and stretching filaments and forming a web (11) from them on a belt (7) and passing it through a wetting unit (16, 17). It is then consolidated using high-pressure water jets and lifted from the belt for further processing. An independent claim is included for apparatus for carrying out the production method with a high-pressure water jet consolidation unit (23) mounted downstream from a wetting unit, a web lifting unit and post-treatment units (26, 27) downstream from the consolidation unit.	
6.	Installation for producing a spunbonded fabric web with filament diffuser and separation by electrostatic process	EP1332251	2003-08-06	ANDRITZ PERFOJET RIETER PERFOJET	79 %	The invention concerns an installation for producing a spunbonded fabric web comprising a diffuser (6) defining for the drawn filaments a passage with diverging cross-section and a conveyor (7) receiving the filaments coming out of the diffuser. The uniformity of the web is enhanced by means of a device separating the filaments from one another by electrostatic process mounted at a higher level higher than the bottom of the passage.	
7.	Device for the manufacture of woven material from continuous filaments	EP3382082	2018-10-03	REIFENHAUSER MACHINE FACTORY OF LEFFINHAUSER REIFENH USER REIFENHAUSER MASCHINENFABRIK REIFENHÄUSER	78 %	An apparatus for making a nonwoven spunbond web has a spinneret for making endless filaments moving in a predetermined direction. A monomer extractor downstream from the spinneret has an upstream extractor end face directed upstream and forming a gap with a downstream spinneret end face. A cooler downstream of the extractor for the filaments has an upstream cooler end face forming with a downstream extractor end face a second gap. A stretcher downstream of the cooler for the cooled filaments has an upstream stretcher end face forming a third gap with the downstream cooler end face. The filaments are deposited on a web former by the stretcher to form the nonwoven spunbond web. A deformable seal for seals one of the gaps, and means connected to the deformable seal press the seal against the end faces forming the one gap with a variable pressure or contact face. (From US2018282925 A1)	
8.	Method and apparatus for making a spunbonded nonwoven fabric	EP1930492	2008-06-11	REIFENHÄUSER FEN HO LAI ADVISORS GESELLSCHAFT & MITO BESHURENKUTERU HUFF TSUNGU BETTER COMPANION GESELLSCHAFT LEE MEMORIAL LIBRARY FABRIEK DATE COMMAND MACHINE FACTORY OF LEFFINHAUSER REIFENHAUSER REIFENHAUSER MASCHINENFABRIK	77 %	Process and assembly for production of spun-bonded fleece from endless filaments using endless curled and crinkled fibers In a process to produce spun-bonded fleece from endless filaments, a proportion of the filaments are naturally crinkled or curled. The filaments are deposited on a moving conveyer that advances towards a bonding station. The bonding station consists of an overhead hot gas blower directed at the fleece fibres. The fibres are deposited essentially in parallel array in-line with the direction of travel. The filament curl is generated either before or after deposit on the conveyer. Further claimed is a commensurate fleece production and bonding unit.	
9.	Device for manufacturing non-woven material	EP3199671	2017-08-02	REIFENHAUSER MASCHINENFABRIK MACHINE FACTORY OF LEFFINHAUSER REIFENHAUSER REIFENHÄUSER	77 %	An apparatus for making a spunbond nonwoven from monofilaments of thermoplastic synthetics has a spinneret for spinning and emitting the filaments in a travel direction, a cooler downstream of the spinneret for cooling the spun filaments, and a stretcher downstream of the cooler for stretching the filaments. An intermediate passage extending in the travel direction between the cooler and the stretcher has upstream and downstream converging passage sections. The upstream passage section in the travel direction of the filaments having a shorter length than the downstream passage section in the travel direction of the filaments. A ratio BE/BA of an inlet width BE to an outlet width BA of the downstream passage section is 1 to 4. (From US10385491 B2)	

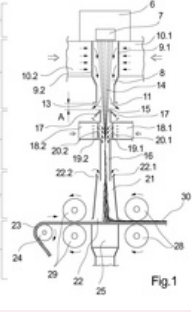
10.	Method for manufacturing non woven material	EP2009163	2008-12-31	REIFENHAUSER MACHINE FACTORY OF LEFFINHAUSER REIFENHAUSER MASCHINENFABRIK REIFENHÄUSER	77 %	
Spun bond web making apparatus, has connecting region excluding access of air from outside to filaments as they pass from cooling chamber to stretching unit, where filaments drop from stretching unit into deposition belt The apparatus has a unit for supplying cool process air to a cooling chamber (2) to cool a set of filaments as they pass downwards through the cooling chamber. A laterally closed stretching unit (5) downstream of the cooling chamber has laterally closed side walls that have downwardly diverging portions. A connecting region between the stretching unit and the cooling chamber excludes access of air from outside to the filaments as they pass from the cooling chamber to the stretching unit, where the filaments drop from the stretching unit into a deposition belt (15).						
11.	Method and device for manufacturing a spunbonding fabric made of cellulose filaments	EP1936017	2008-06-25	REIFENHAUSER MACHINE FACTORY OF LEFFINHAUSER REIFENHAUSER MASCHINENFABRIK REIFENHÄUSER	77 %	
The filaments are spun by a spinneret (1) from a cellulose solution. They enter a cooling chamber (2) with two cooling sections (2a, 2b). Here the filaments are subjected to process- or cooling air in two different quantities, temperatures and/or humidities. The filaments are spun as lyocell filaments. The solution of cellulose is a mixture with water and a tertiary amine oxide. The cellulose concentration is 1-22 wt%. Air is supplied to the two sections, 2, 2b respectively, in a preferred ratio 4.5 : 10. Temperatures in these sections are 18-80[deg] C (2a) and 18-35[deg] C (2b). Aerodynamic stretching (4) follows cooling. This in turn is followed by laying, but first it is ensured that the cellulose is coagulated. Following laying, the fleece is treated with an aqueous medium or is washed. It is then dewatered. The preferred spinneret perforation density is 1.5-7.5 holes/cm 2>. The connection between cooling chamber and stretching unit is sealed from the exterior. A laying unit (6) with a diffuser (13, 14) is used between the stretching unit and the further laying equipment. An independent claim IS INCLUDED FOR the equipment used. (From EP1936017 A1)						
12.	Apparatus for making a spun-filament fleece	US4820142	1989-04-11	REIFENHAUSER RAIFUENHOIZERU UNTO REIFENHAEUSER MASCH REIFENHAUSER MASCHINENFABRIK REINFENHAUSER	77 %	
The fleece spinning unit has a spinning nozzle system, a cooling shaft, a stretching aperture, a diffuser shaft, a continuously moving fleece receiving conveyor and a device for feeding process air and for drawing outflowing air through the fleece receiving conveyor. The cooling shaft has a shaft wall provided with a plurality of air orifices. Thus process air required for the cooling is fed into the cooling shaft and is at least partially drawn through the fleece receiving conveyor. The thickness of the spun fleece is measurable on the fleece receiving conveyor downstream of the diffuser shaft in the transport direction. A measured value/set-point comparison is made and on deviation of the measured value from the set-point the setting angles of opposing air control flaps which are located at the entrance of the stretching aperture are changed. On a positive deviation of the measured value of the thickness from the set-point the setting angle is increased. On a negative deviation from the set-point the setting angle is decreased.						
13.	Weldable spun-bonded fabric, method for the preparation of a weldable spun-bonded fabric and package	EP3216905	2017-09-13	REIFENHAUSER MASCHINENFABRIK MACHINE FACTORY OF LEFFINHAUSER REIFENHAUSER	76 %	
A weldable spun-bonded nonwoven has endless filaments of a thermoplastic plastic that contain at least 3 wt % of at least one filler to improve the weldability of the spun-bonded nonwoven. In addition the endless filaments are monocomponent filaments. (From US2018002851 A1)						

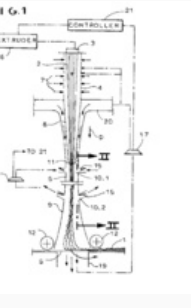
14.	Process and device for making a nonwoven fabric	EP1726699	2006-11-29	REIFENHAUSER FEN HO LAI ADVISORS GESELLSCHAFT & MITO BESHURENKUTERU HUFF TSUNGU BETTER COMPANION GESELLSCHAFT LEE MEMORIAL LIBRARY FABRIEK DATE COMMAND MACHINE FACTORY OF LEFFINHAUSER REIFENHAUSER MASCHINENFABRIK REIFENHÄUSER	76 %	
Production of a spun fleece from endless filaments used for hygienic applications and in filtering technology comprises spinning filaments with natural ripples, depositing on a deposition device and solidifying with a fluid Production of a spun fleece (1) from endless filaments comprises spinning filaments with natural ripples, depositing on a deposition device (4) and feeding the deposited filaments with the deposition device into a solidification device (6) in which the filaments are solidified with a fluid. An independent claim is also included for a device for producing a spun fleece. Preferred Features: Solidification is thermal solidification using a hot fluid. The filaments with the natural ripples are multiple component filaments with a side/side arrangement and/or a core/sleeve arrangement.						
15.	Spunbond tower with an electrostatic device	EP2337882	2011-06-29	ANDRITZ PERFOJET RIETER PERFOJET	76 %	
The invention relates to a spunbond tower that includes a die (103), a device (106) for cooling the filaments formed by the die, a device (107) for stretching the cooled filaments, a system (108) for forming a non-woven web (110) on a mat, said system including an electrostatic device (117) and a dehumidifier mounted at least on a formation air inlet between the bottom of the stretching device and the top of the formation system.						
16.	Device and method for the manufacture of woven material from continuous filaments	EP3199672	2017-08-02	REIFENHAUSER MACHINE FACTORY OF LEFFINHAUSER REIFENHAUSER MASCHINENFABRIK REIFENHÄUSER	76 %	
An apparatus for making a spunbond nonwoven from endless filaments of a thermoplastic synthetic resin has a spinneret for spinning the filaments in a filament-travel direction into a spinning zone and a monomer aspirator downstream of the spinneret and having two vacuum intake ports flanking the spinning zone zone, horizontally confronting each other, and each extending transversely to the direction opposite one another. Suction means connected to the two ports withdraws gas through both the vacuum intake ports. The suction and/or the ports are set up to vary the flow through the vacuum intake ports such that substantially more gas flows through one of the ports than through the other. (From US10465319 B2)						
17.	Method and device for the manufacture of nonwoven material from filaments	EP2128320	2009-12-02	REIFENHAUSER MACHINE FACTORY OF LEFFINHAUSER	75 %	
The method comprises melt-spinning filaments by a spinning device and subsequently cooling, stretching and/or removing from a deposition area for fleece web (11), which is pre-strengthened through mechanical stretching. A hydrophilic fluid medium is subjected in the fleece web after deposition of the filament and before the mechanical stretching of the fleece web, which is end-strengthened subsequently through hydrodynamic and/or hydraulic solidification. The end-strengthened fleece web comprises a specific weight per area of greater than 100 g/m 2>. The method comprises melt-spinning filaments by a spinning device and subsequently cooling, stretching and/or removing from a deposition area for fleece web (11), which is pre-strengthened through mechanical stretching. A hydrophilic fluid medium is subjected in the fleece web after deposition of the filament and before the mechanical stretching of the fleece web, which is end-strengthened subsequently through hydrodynamic and/or hydraulic solidification. The end-strengthened fleece web comprises a specific weight per area of greater than 100 g/m 2>. The fluid medium is subjected in a quantity of 0.4-15% on the weight of the dried fleece web and/or the weight of the dried surface section of the fleece web in the fleece web. The mechanical stretching of the fleece web is carried out with a stretching density of below 70 E/cm 2>. The fleece web is pre-moistened after deposition of the filament and before the mechanical stretching of the fleece web. The water jet treatment is carried out during the hydraulic strengthening and/or final strengthening with a high-pressure water-jet beam (20, 21) over the top of the fleece web and with high-pressure water-jet beam below the bottom side of the fleece web. The high-pressure water-jet beams are processed during the hydraulic strengthening and/or final strengthening. The high-pressure water-jet beam with highest hydraulic strengthening has a portion of 40% of the total hydraulic strengthening. The total hydraulic strengthening is below 0.8 kWh/kg. The hydraulic strengthening is carried out with a high pressure water jet beam that has a hole thickness of smaller than 30 hpi. The hydraulic strengthening and/or final strengthening by a water jet device (17) is processed with high pressure water jet beam that has a hole thickness of 0.10-0.16 mm. The water jet device is operated with a water pressure of 220 bar and the high pressure water jet beam is processed with a water pressure of 130-220 bar. The final strengthened fleece web has a speci fic weight per area of greater than 150 g/m 2>. An independent claim is included for a device for producing spunbonded fabrics made of filaments of thermoplastic plastic.						

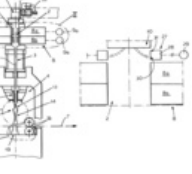
18.	Device and method for the manufacture of woven material from continuous filaments	EP3575468	2019-12-04	REIFENHAUSER Machine factory of Ieffinhauser Co., Ltd REIFENHAUSER MASCHINENFABRIK REIFENHÄUSER	74 %	
An apparatus for making spunbonded nonwoven from continuous thermoplastic filaments has a spinneret for downwardly emitting the continuous filaments in a filament direction, a cooling chamber directly beneath the spinneret for receiving the filaments from the spinneret and cooling the spun filaments with cooling air and having relative to a longitudinally extending machine direction a pair of longitudinal sides extending parallel to the machine direction and a pair of transverse sides extending substantially perpendicular to the machine direction between the longitudinal sides. Respective air-supply manifolds on the transverse sides feed cooling air therefrom into the cooling chamber. The cooling air is extracted from the cooling chamber at the longitudinal sides. A stretcher directly beneath the cooling chamber receives and elongates the cooled filaments, and a device deposits the stretched filaments as a band and conveys the band off in the machine direction. (From US2019360140 A1)						
19.	Device for making a spunbond web	EP1323852	2003-07-02	REIFENHAUSER LIFE ENFORCER GESELLSCHI YUTTO MITO BEZI ULTEN TEL HAFU TONG & COMPAGNIE MATHEINENHUA BRIG FEDERAL REPUBLIC OF GERMANY 5 3 8 4 4 TROISDORF SHIPPICHER STRAUSS 4 6 4 8 MACHINE FACTORY OF LEFFINHAUSER REIFENHAUSER MASCHINENFABRIK	74 %	
A spunbond web producing-apparatus has a spinning head to produce a curtain of thermoplastic synthetic resin filaments, a stretching nozzle between a pair of nozzle-forming units to stretch the filaments, a foraminous belt to collect the filaments in the form of spunbond web, and temperature control device(s) to control the temperature of the unit(s) and reduce basis weight tolerances of the web.						
20.	Device for the manufacture of woven material from continuous filaments	EP3575470	2019-12-04	REIFENHAUSER MACHINE FACTORY OF LEFFINHAUSER REIFENHAUSER MASCHINENFABRIK REIFENHÄUSER	74 %	
An apparatus for making spunbonded nonwoven has a spinneret for emitting the continuous filaments in a filament-travel direction, a cooling chamber downstream in the direction from the spinneret and receiving the filaments, and two air-supply manifolds flanking the chamber for feeding cooling air thereinto transverse to the direction. A flow straightener for equalizing flow of the cooling air on the filaments is provided in at least one of the air-supply manifolds and has passage walls forming a plurality of flow passages that extend transversely to a filament-travel direction. A flow cross section of the flow straightener is greater than 85% (preferably more than 90%) of a cross-sectional size of the straightener, a ratio of a length L of the flow passages to an inner diameter Di of the flow passages L/Di is 1 to 15, (From US2019360123 A1)						
21.	Process and apparatus for producing spunbonded nonwoven	EP0480550	1992-04-15	KARL FISCHER INDUSTRIEANLAGEN INVENTA FISCHER 13509 BERLIN	74 %	
A process and apparatus for producing spunbonded nonwovens from a melt extrudable material is proposed, in which the filaments are processed in sheet form essentially in parallel until the laying-down operation. They are subjected to a coupled mechanically aerodynamic drawing, the filament sheet being guided with as large a wrapping angle as possible over at least one pair of drawing rollers and being drawn off from the last roller via an air gap. In this case, the air gap is situated with its inlet directly in the vicinity of the separation point of the filament sheet from the last roller.						

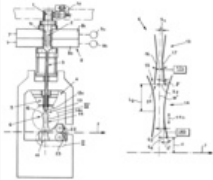
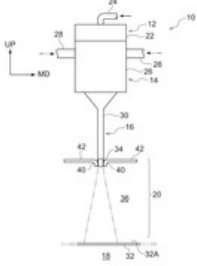
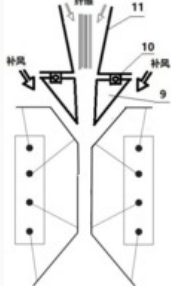
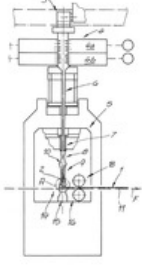
22.	Triangular box type net laying device	CN111254587	2020-06-09	DALIAN TIANMA SOLUBILITY NONWOVEN	74 %
The invention relates to a lapping device on a spun-bonded non-woven fabric production line, in particular to a triangular box type lapping device, which is used for the diffusion lapping of large tows consisting of multiple fibers after the spun-bonded non-woven fabric is mechanically stretched and belongs to the technical field of textile equipment. The method comprises the following steps: the filament sucking device is characterized in that a compressed air inlet is formed in one side of a shell of the filament sucking device, a triangular box type diffuser is connected to the lower portion of the filament sucking device, and a reciprocating rotary swing mechanism is further arranged on the filament sucking device in the direction opposite to the compressed air inlet; the triangular box type lapping device is adopted, so that the multi-fiber composition is dispersed and lapped in large tows in mechanical stretching, the working efficiency of the mechanical stretching spunbond production is improved, the number of stretching rollers is reduced, the operation is simple, and great convenience is brought to the production of non-woven fabrics by the mechanical stretching spunbond.					
					

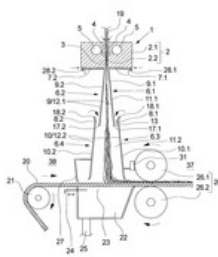
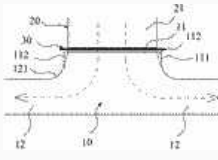
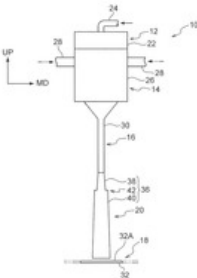
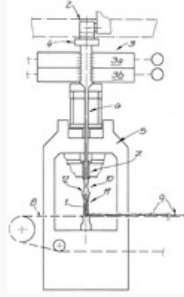
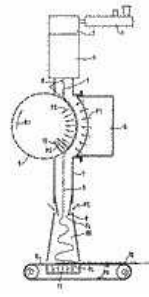
23.	Device and method for the manufacture of woven material from continuous filaments	EP3575469	2019-12-04	REIFENHAUSER MACHINE FACTORY OF LEFFINHAUSER REIFENHAUSER MASCHINENFABRIK REIFENHÄUSER	73 %
An apparatus for making spunbonded nonwovens has a spinneret for emitting continuous thermoplastic filaments in a filament-travel direction, a cooling chamber downstream in the direction from the spinneret for cooling the spun filaments with cooling air, two manifolds on opposite sides of the cooling chamber opening transversely of the direction into the cooling chamber, and a respective conduit having a conduit cross-sectional area and connected to each manifold for feeding cooling air thereto. The conduit cross-sectional area increases toward the manifold to a manifold cross-sectional area, and manifold cross-sectional area is at least twice as large as the conduit cross-sectional area. At least one flow straightener is provided upstream from the cooling chamber in each manifold for orienting air flow in an air-flow direction, and at least one perforated planar homogenizing element is provided in each manifold for homogenizing the cooling air flow. (From US2019360138 A1)					
					

24.	Device for producing a spun-bonded fleece	EP2912222	2015-09-02	OERLIKON TEXTILE	73 %
A device for producing a spun-bonded fleece from synthetic filaments is described. The device has a spinning device, a cooling device, a stretching device, a guiding device and a stacking device. A cooling shaft of the cooling device, a processing shaft of the stretching device and a diffuser of the guiding device for guiding the filaments interact, wherein a cooling air is fed to the cooling shaft and a process air is fed separately to the processing shaft. In order to make possible a separation of the cooling air from the process air and obtain an even guiding of the filaments, according to the invention a short free path is formed between a filament outlet of the cooling shaft and a filament inlet of the process shaft in which the cooling air can be removed into the surroundings.					
					

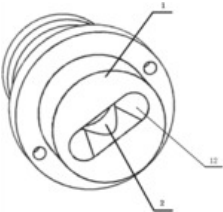
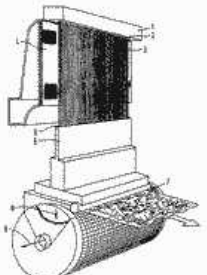
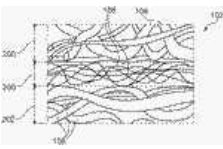
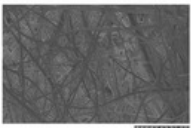
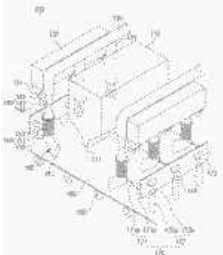
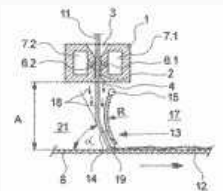
25.	Apparatus for making a fleece from continuous thermoplastic filaments	US5766646	1998-06-16	REIFENHAUSER REIFENHAUSER MASCHINENFABRIK	73 %
A fleece-making apparatus has a vertically extending and horizontally elongated process shaft having upper and lower ends, a nozzle head at the upper shaft end 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.					
					

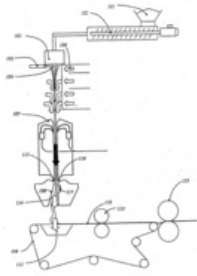
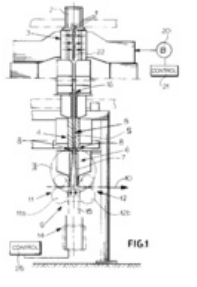
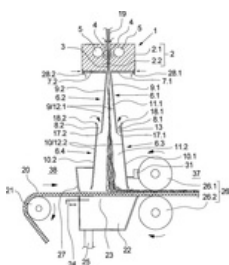
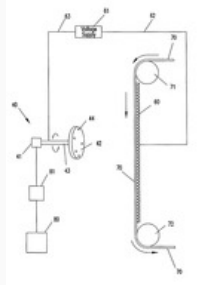
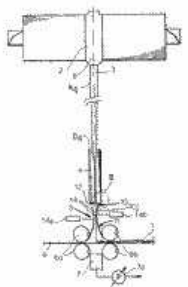
26.	Apparatus for the continuous production of a spunbonded web	EP1340843	2003-09-03	REIFENHAUSER MACHINE FACTORY OF LEFFINHAUSER REIFENHAUSER MASCHINENFABRIK	71 %
Apparatus for producing spunbonded fabric from aerodynamically stretched thermoplastic filaments has feed chamber for cooling air divided into two sections, through which air at different temperatures is fed Apparatus for producing spunbonded fabric from aerodynamically stretched thermoplastic filaments comprises a spinneret (1), a cooling chamber (2), into which cooling air is fed from a feed chamber (8), a stretching unit (4) with stretching channel (5) and a moving wire (7), on which the fabric is laid down. The air feed chamber consists of two sections (8a, 8b), through which air at different temperatures is fed.					
					

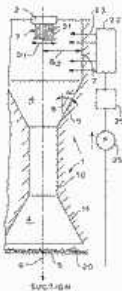
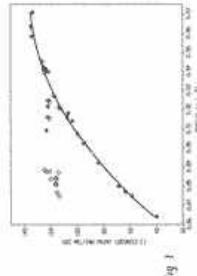
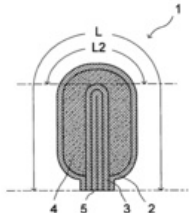
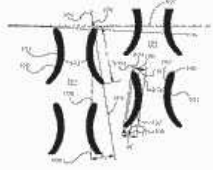
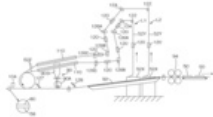
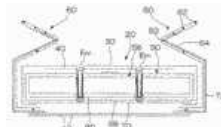
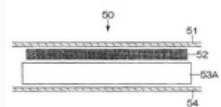
27.	Apparatus for the continued production of a spunbonded web	EP1340842	2003-09-03	REIFENHAUSER FEN HO LAI ADVISORS GESELLSCHAFT & MITO BESHURENKUTERU HUFF TSUNGU BETTER COMPANION GESELLSCHAFT LEE MEMORIAL LIBRARY FABRIEK DATE COMMAND MACHINE FACTORY OF LEFFINHAUSER	71 %	
Spun-bond web production apparatus comprises at least two mutually independently controllable suction zones beneath belt for drawing air and including primary suction zone at which greater part of filaments are drawn onto belt A spun-bond web production apparatus comprises a spinneret for producing descending thermoplastic synthetic resin filaments; receiving device for receiving filaments; continuously movable collecting foraminous belt; and at least two mutually independently controllable suction zones beneath the belt for drawing air and including a primary suction zone at which a greater part of the filaments are drawn onto the belt. A spun-bond web production apparatus comprises a spinneret (1) for producing descending thermoplastic synthetic resin filaments; receiving device below the spinneret and receiving filaments for aerodynamically stretching the filaments; continuously movable collecting foraminous belt (7) displaceable longitudinally in a web-producing direction below the receiving device to produce a spun-bond web; and at least two mutually independently controllable suction zones (11) beneath the belt for drawing air through and in succession in the web-producing direction, and including a primary suction zone at which a greater part of the filaments are drawn onto the belt and at least one other suction zone.						
28.	Non-woven fabric manufacturing device, non-woven fabric manufacturing method, and non-woven fabric	EP3438339	2019-02-06	MITSUI CHEMICALS	71 %	
A diffusing unit of an apparatus for manufacturing a non-woven fabric is provided with a diffusion space between a jet nozzle and a moving belt of a collecting unit, an opening of a sub nozzle is arranged side-by-side with an opening of the jet nozzle, and the sub nozzle jets air from the opening. The jet nozzle jets, toward the moving belt, plural filaments together with air. The air jetted from the jet nozzle forms a conveying flow that gradually spreads and flows in the diffusion space, and the plural filaments are diffused by this conveying flow and are sent toward the moving belt to be collected. The air jetted from the sub nozzle flows along the air flow around the conveying flow and suppresses air in the diffusion space from entering the conveying flow.						
29.	Tangential air supplement device for spun-bonded non-woven fabric equipment	CN111155240	2020-05-15	HONGDA RESEARCH INSTITUTE	70 %	
The invention provides a tangential air supplement device for spunbonded nonwoven equipment, which comprises a wedge knife board and an air supplement adjusting device below the wedge knife board, wherein the adjusting device comprises a side board and a movable frame, the side board comprises a left side board and a right side board, the movable frame comprises a front frame and a rear frame which are symmetrically arranged, the front frame and the rear frame respectively comprise a fixed frame and a movable frame, two ends of the fixed frame are respectively and fixedly connected with the left side board and the right side board, the movable frame is arranged on the fixed frame, the movable frame is provided with diffusion boards, the two diffusion boards form a diffusion air duct, the position of the movable frame is adjusted by a lifter, and the shape of the diffusion boards is adjusted by adjusting rods on the fixed frame. In the tangential air supplement device for the spun-bonded non-woven fabric equipment, the diffusion plate is adjustable in shape, and the air supplement gap can be adjusted, so that the diffusion effect is enhanced through the adjusted diffusion plate and the adjusted air supplement gap.						
30.	Composite sheet material, system, and method of preparing same	WO2019/222097	2019-11-21	FITESA SIMPSONVILLE GARY BEALL ENTERPRISES	70 %	
A system and associated method for preparing a composite sheet material is provided. The system includes a nonwoven fabric source; a collection surface onto which a nonwoven fabric is deposited; a carding device disposed downstream of the nonwoven fabric source overlying the collection surface, the carding device including a main cylinder, an air source configured to provide a stream of air; an air manifold having an air inlet in communication with the air source, an air outlet, a fiber inlet, an interior channel, and a fiber outlet. The air outlet is positioned to direct an air stream against a surface the cylinder to dislodge fibers from the surface of the cylinder. The dislodged fibers enter the fiber inlet and flow to the fiber outlet at which point the fibers are deposited onto a surface of the nonwoven fabric. The fabrics are then bonded to form a coherent sheet material.						
31.	Device and method for the manufacture of material from continuous filaments	EP3239378	2017-11-01	REIFENHAUSER MASCHINENFABRIK MACHINE FACTORY OF LEFFINHAUSER REIFENHAUSER	69 %	
An apparatus for making nonwoven has a spinning device for spinning continuous filaments and moving the spun filaments in a vertical travel direction along a vertical travel path and a mesh belt below the spinning device, traveling in a horizontal direction, and having a multiplicity of vertically throughgoing openings distributed generally uniformly over its surface and of which a portion are plugged. A cooler and a stretcher are provided along the path downstream of the spinning device and above the belt for cooling and stretching the filaments and depositing the cooled and stretched filaments at a predetermined deposition location on the belt. A blower underneath the belt at the deposition location aspirates air through the openings and thereby holds the deposited filaments down on the belt. (From US2017314163 A1)						

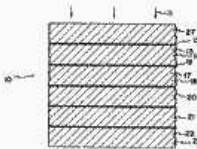
32.	Device and method for guiding and depositing synthetic filaments onto a non-woven fabric	EP2584076	2013-04-24	OERLIKON TEXTILE	69 %	
Apparatus comprises a discharge device (1); a depositing belt arranged below the discharge device; and many guiding devices arranged between the discharge device and the deposit belt. The guiding devices form many inter-connected guiding lines in a pair-wise manner, to guide a filament curtain formed by the filaments. The guiding devices comprise many air inlet slots arranged below the discharge device, to supply a secondary air. At least one of the air inlet slots is associated with many air guiding elements arranged on one of the guiding devices. An independent claim is also included for guiding and depositing the synthetic filaments to form the fleece, comprising: cooling many extruded filaments, stripping and stretching the extruded filaments as a filament curtain by a generated primary air flow; directing the filament curtain with the primary air stream as a fiber stream in the direction of the depositing belt by a guiding path; and supplying many partial streams of secondary air to the fiber stream for influencing a fiber formation in the fleece. At least one of the partial streams of the secondary air is supplied to the side adjacent to the filament curtain at an inflow angle of the fiber stream across the depositing belt. (From EP2584076 A1)						
33.	Spun-bonded suction bellow for production line	CN202830416	2013-03-27	JINJIANG XINGTAI NON WOVEN PRODUCTS	69 %	
The utility model discloses a spun-bonded suction bellow for production line. The spun-bonded suction bellow comprises an air inlet and an air outlet, wherein the air inlet faces a diffusion duct and is communicated with the air inlet; the inner wall surface of the air inlet is of upright surface structure; the air inlet and the air outlet are connected via a curved transition surface; and the width of the air inlet is larger than that of an interface of the diffusion duct. Compared with the spun-bonded suction bellow for production line of the prior art, the spun-bonded suction bellow for production line of the utility model solves the problems of non-woven products that the quality of both sides is poor, weight deviation is big, and the trimming is not neat, thereby greatly increasing the effective utilization rate of cutting coils in subsequent processes.						
34.	Device for manufacturing non-woven fabric and method for manufacturing non-woven fabric	EP3428333	2019-01-16	MITSUI CHEMICALS	68 %	
An apparatus for manufacturing a non-woven fabric, the apparatus including a diffusing shaft, and the diffusing shaft including: a first shaft portion disposed at an upper side of the shaft and provided with a slit-shaped air guide, wherein filaments are supplied together with air from an inlet side of the air guide to an outlet side of the air guide; a second shaft portion disposed at a lower side of the shaft, having an inlet side that is communicated with an outlet side of the first shaft portion and an outlet side that is disposed to face a collecting unit that collects the filaments, wherein an opening width along a machine direction of the inlet side of the second shaft portion is larger than an opening width along a machine direction of the first shaft portion; and a stepped portion provided at a connecting portion between the outlet side of the first shaft portion and the inlet side of the second shaft portion and connecting the outlet side of the first shaft portion to the inlet side of the second shaft portion.						
35.	Method and device for producing a non-woven fabric from fibres	EP3382080	2018-10-03	MANN & HUMMEL REIFENHAUSER MACHINE FACTORY OF LEFFINHAUSER MAN & HUMMEL GESELLSCHAFT MITO BESCHLENKTEL HAFTUNG REIFENHAUSER MASCHINENFABRIK	68 %	
The invention relates to a method for producing a nonwoven fabric from fibres, wherein the fibres are spun by means of at least one spinneret, are cooled and then deposited on a collection device to form a nonwoven web. The nonwoven web undergoes hot fluid bonding during at least two consecutive bonding steps. In a first bonding step, the surface of the nonwoven web is subjected to a hot fluid and, in a second bonding step, the surface of the nonwoven web is also subsequently subjected to a hot fluid and, in addition and at the same time, surface pressure is exerted on the nonwoven web. (From US2020024780 A1)						
36.	Process and apparatus for producing a spun-fiber web from synthetic polymer	US5211903	1993-05-18	SILVER PLASTICS JIRUBAA PURASUTEIKUSU SILBER PLASTICS	68 %	
A process and an apparatus for producing a spun-fiber web from filaments of a synthetic polymer which includes a device for taking off the filaments and a web-depositing device with suction unit wherein the filaments are taken off mechanically by means of a take-off roll with a unit for the defined raising of the frictional force between the roll surface and the filaments, the filaments being exposed, in particular, to a vacuum and/or to pressurized air.						

37.	Bulky nonwoven fabric with enhanced compressibility and recovery	WO2020/103964	2020-05-28	PFN GIC PFNONWOVENS CZECH S R O REIFENHAUSER MASCHINENFABRIK	68 %	
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42.	Silk separator and spinner special for spun-bonded non-woven fabrics	CN105887334	2016-08-24	TIANDINGFENG NONWOVENS	67 %
A silk separator special for spun-bonded non-woven fabrics comprises a housing (1) and a shunting plug (2). A gradually varying fluid channel (13) is formed inside the housing (1) from an inlet (11) end and an outlet (12) end. The shunting plug (2) is arranged at the internal channel at the outlet (12) end, and a cross section of the shunting plug (2) is gradually increased from the outlet (12) end to the inlet (11) end. The silk separator has the following advantages that an outlet is designed to be in a shape of a U-shaped or V-shaped ring, the airflow direction can be effectively controlled, airflow swirling is prevented, the silk flock direction control in the web forming process is improved, and improvement of silk flock uniformity is promoted. The internal channel is in streamlined design, the cross section is gradually increased, silk flock diffusion is driven by airflow diffusion, and the silk separating purpose is achieved.					
					
43.	Process and apparatus for conveying and for laying continuous filaments bundle with air force	EP0598463	1994-05-25	GERKING LDER 14195 BERLIN KARL FISCHER INDUSTRIEANLAGEN	67 %
An apparatus for delivering and depositing groups of continuous threads or filaments, which are conveyed by means of a gas flow and which are introduced substantially parallel into a passage having a corresponding cross-section is proposed, the gas flow accompanying the threads upon entering the upper part of the passage is accelerated to high speed and is then decelerated and the threads are deposited on a moving depositing surface. The gas flow delivering the threads flows at high speed through the passage preferably provided with parallel walls and then is decelerated by the suction of part of the gas in the lower passage area laterally through openings in the passage walls. (From US5439364 A)					
					
44.	Optically transparent wet nonwoven cellulose fiber fabric	EP3385430	2018-10-10	LENZING RENTZING AKZIENG GEZEL SHAFT	67 %
A nonwoven cellulose fiber fabric (102), in particular directly manufactured from lyocell spinning solution (104), wherein the fabric (102) comprises a network of substantially endless fibers (108), wherein different ones of the fibers (108) are located at least partially in different distinguishable interconnected layers (200, 202), and wherein the fabric (102) is optically transparent when wet.					
					
45.	Elastic nonwoven made from thermoset fibers	US20150108063	2015-04-23	DU PONT DE NEMOURS	66 %
The present invention is directed toward a nonwoven fiber web material comprised of thermoset fibers that has a machine direction and a cross direction with elastic stretch and recovery properties in the cross direction.					
 FIG. 1					
46.	Apparatus for manufacturing non-woven fabric comprising activated carbon	KR101352955	2014-01-23	AEGIS	66 %
The purposes of the present invention are to prevent a malfunction of a mixture among polymer filaments, activated carbon, and air mixtures and to improve an adhesive ability. In addition, the apparatus decreases activated carbon consumption so that it reduces the manufacturing cost of non-woven fabric. Since it is able to control the ejection position and direction of activated carbon spraying from polymer filaments and air mixtures, the apparatus for manufacturing non-woven fabric provides an ability of manufacturing various sizes of non-woven fabrics comprising activated carbon. In order to materialize the purposes of the present invention, polymer is accommodated inside, the apparatus includes a polymer supplying unit (110) with a first nozzle (111) that sprays polymer filaments on the bottom; an activated carbon supplying unit (120) arranged in the both sides of the polymer supplying unit; an air supplying unit (130) which is counter-located inside of the activated carbon supplying unit (120); a venturi tube (140) which mixes activated carbon flowing through the activated carbon supplying unit (120) and air supplying unit (130) and air; an adjusting joint (150) which connects the first gear on the venturi tube (140); an activated carbon and air ejecting unit (160) equipped with a second nozzle (161); polymer filaments which are connected to the other end of the adjusting joint; and an ejection position adjusting unit (170) which adjusts an ejection position and direction of the second nozzle (161) connecting the activated carbon and air ejecting unit (160).					
					
47.	Process and device for making a nonwoven web by depositing synthetic fibers	EP1712668	2006-10-18	SAURER OERLIKON TEXTILE	66 %
Deposition of synthetic filaments on advancing deposit belt to form non-woven web, by unilaterally deflecting filament stream in advancing direction of deposit belt immediately before filament stream impacts upon deposit belt Deposition of synthetic filaments on advancing deposit belt (8) to form non-woven web by melt spinning downwardly advancing filaments; drawing off filaments in row shaped arrangement utilizing a fluid feed and accelerating the filaments into guide channel so that fluid feed and filaments leave the guide channel as filament stream; collecting filament stream on advancing deposit belt; and unilaterally deflecting filament stream in advancing direction of deposit belt immediately before the filament stream impacts upon the deposit belt in such a manner that filaments impact at less than 90[deg]. An independent claim is also included for an apparatus for depositing synthetic filaments on advancing deposit belt to form non-woven web (12), comprising: (1) a drawing unit (1) arranged below a filament spinneret and comprising a guide channel (2) having a slot-shaped filament inlet (3) and a slot-shaped filament outlet (4); (2) fluid inlets communicating with the guide channel and which are connected to a fluid source; (3) a deposit belt; and (4) a deflecting unit (13) for deflecting the filament stream leaving the filament outlet unilaterally in the advancing direction of the deposit belt.					
					

48.	Apparatus for producing a non-woven web with dust removal	EP2334851	2011-06-22	ANDRITZ PERFOJET RIETER PERFOJET	65 %	
The invention relates to equipment for producing a non-woven web, comprising a device (107, 108) for driving a filament packet, using an air stream, towards a conveyor (101) and an electrostatic device (117) arranged so as to apply electrostatic forces to the filaments of the driven packet, characterised by a means (801, 804) for removing dust from the driving air stream.						
49.	Apparatus for the continuous production of a spun-bond web	US5814349	1998-09-29	REIFENHAUSER REIFENHAUSER MASCHINENFABRIK	61 %	
An apparatus for the continuous production of spun-bond web separates the in-lowing process air section including the aerodynamic drawing shaft at which the thermoplastic filaments form a spinneret are drawn, from the depositing section in which the filaments are passed through a diffuser and deposit in an entangled form as spun-bond web on a perforated sieve belt. The suction below the belt and the process air blower are independently controlled as part of the separation and the drawing channel forms an air lock while an air inlet gap is provided between the drawing channel and the inlet of the diffuser to further separate the two sections. The resulting apparatus has a high versatility with all products made and materials which can be used.						
50.	Apparatus useful for guiding and depositing synthetic filaments to form a fleece, comprises discharge device, depositing belt, and many guiding devices with many air inlet slots associated with air guiding elements, to supply secondary air	DE102011119112	2013-05-23	OERLIKON TEXTILE	61 %	
Apparatus comprises a discharge device (1); a depositing belt arranged below the discharge device; and many guiding devices arranged between the discharge device and the deposit belt. The guiding devices form many inter-connected guiding lines in a pair-wise manner, to guide a filament curtain formed by the filaments. The guiding devices comprise many air inlet slots arranged below the discharge device, to supply a secondary air. At least one of the air inlet slots is associated with many air guiding elements arranged on one of the guiding devices. An independent claim is also included for guiding and depositing the synthetic filaments to form the fleece, comprising: cooling many extruded filaments, stripping and stretching the extruded filaments as a filament curtain by a generated primary air flow; directing the filament curtain with the primary air stream as a fiber stream in the direction of the depositing belt by a guiding path; and supplying many partial streams of secondary air to the fiber stream for influencing a fiber formation in the fleece. At least one of the partial streams of the secondary air is supplied to the side adjacent to the filament curtain at an inflow angle of the fiber stream across the depositing belt. (From DE102011119112 A1)						
51.	Bag house elements	EP1317316	2003-06-11	DONALDSON DONAL DSON KOMPANI INK	58 %	
The filter structures commonly known as a bag house or a filter bag or an air filter with a bag construction can be made by preparing the bag assembly, either in a tubular or a bi-fold construction by placing a layer of fine fiber on the upstream surface of the filter media structure. The filter assembly includes a filter cabinet with an interior component. The filter component is suspended within the filter cabinet interior. The filter component includes a frame or support for the filter media. The frame or support holds the filter bags such that the filter bags are suspended from the frame in the cabinet interior. The intake air enters the cabinet, passes through the filter assembly and exits the cabinet. The air must pass first into the fine fiber layer, the filter media and then the exterior of the cabinet.						
52.	Apparatus for producing a nonwoven spun-filament web of aerodynamically stretched filament of a plastic	US5460500	1995-10-24	REIFENHAUSER REIFENHAUSER MASCHINENFABRIK	58 %	
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.						

53.	Stationary-pressure apparatus for producing spun-bond web	US5571537	1996-11-05	REIFENHAUSER REIFENHAUSER MASCHINENFABRIK	57 %	
Nonwoven spun-bond is produced by a stationary pressure apparatus in which the shaft below the spinneret has an inlet section followed by the downwardly converging intermediate section, a drawing section and a diffuser opening above the collecting belt through which air is drawn by a suction device. The process air velocity profile has an intersection point with the drawing value at the intermediate section and the distance between the intersection point and the spinneret is smaller than the distance between the intersection point and the bottom end of the drawing section.						
54.	Fibers made from copolymers of ethylene/alpha-olefins	EP1859083	2007-11-28	DOW GLOBAL TECHNOLOGIES	55 %	
A fiber is obtainable from or comprises an ethylene/a-olefm interpolymer characterized by an elastic recovery, Re, in percent at 300 percent strain and (1) cycle and a density, d, in grams/cubic centimeter, wherein the elastic recovery and the density satisfy the following relationship: $Re > 1481 - 1629(d)$. Such interpolymer can also be characterized by other properties. The fibers made therefrom have a relatively high elastic recovery and a relatively low coefficient of friction. The fibers can be cross-linked, if desired. Woven or non-woven fabrics can be made from such fibers.						
55.	Inter-labium product and surface-side sheet capable of disintegration in water for the inter-labium product	EP1541104	2005-06-15	UNICHARM	54 %	
An inter-labium product capable of disintegration in water, fitted to the inter-labium part; and a surface-side sheet for inter-labium product that simultaneously realizes comfortability at wearing of the inter-labium product and capability of water disintegration such that the inter-labium product is disintegrated when thrown in flush water of water closet after use. The surface-side sheet for use in an inter-labium product fitted to the inter-labium part is comprised of hydrophilic fibers composed of single fibers and fibril fibers having fuzzes branched from the surface thereof, wherein at least some of the branched fuzzes link the single fibers and the fibril fibers to each other. Thus, not only can the wet tensile strength be increased but also inter-fibrous bonds are slowly decomposed in the presence of a large amount of water to thereby enable disposal of the inter-labium product in a flush toilet. Furthermore, since no resin is used, the inter-labium product is free from resin leaching to thereby avoid problems, such as itching and skin roughness, caused by the resin leaching. <IMAGE>						
56.	Article with nonwoven web component formed with loft-enhancing calender bond shapes and patterns	EP2688536	2014-01-29	PROCTER & GAMBLE P G	54 %	
An article having as a component a section of nonwoven web formed predominately of polymeric fibers is disclosed. The section of nonwoven web may have a pattern of consolidating bonds impressed on the surface. The bonds may have at least one bond shape; and the bond shape may have a perimeter with a greatest measurable length and greatest measurable width. The perimeter may have a convex portion and an aspect ratio of length/width of at least 2.5. Other features may be imparted relating to the density and orientations of the bonds relative machine and cross directions of the web. The bond shape reflects the shape of a corresponding bonding protrusion on a bonding roller. It is believed that the shape, density and/or orientation of the bonding protrusions affect air flow through the bonding nip in a way that may be utilized to enhance loft of the resulting bonded nonwoven web.						
57.	Method of manufacturing absorbent and absorptive article	WO2007/023965	2007-03-01	DAIO SEISHI	54 %	
[PROBLEMS] To manufacture an absorbent enabling the free design of specified performances such as date, thickness, elasticity, density, and rigidity. [MEANS OF SOLVING THE PROBLEMS] When a filament assembly (52Z) is formed by opening a tow (52Y), the plurality of tows (52Y) are fed to opening devices (110), respectively, to form the plurality of filament assemblies (52Z). These filament assemblies are collectively arranged to manufacture a single absorbent.						
58.	Absorbable article	WO2007/049725	2007-05-03	DAIO SEISHI	53 %	
[PROBLEMS] To improve the shape stability of a filament assembly and increase the fitting properties to the skin of a wearer. [MEANS FOR SOLVING PROBLEMS] In an area where an absorber (56) having an assembly of filaments is placed, a groovy emboss (Em) is formed along approximately a lengthwise direction on at least both sides of a crotch of a wearer. The emboss (Em) extends from a top sheet (30) and reaches the absorber (56).						
59.	Humor absorbent article	EP1774940	2007-04-18	DAIO SEISHI JAPAN ABSORBENT TECHNOLOGY INSTITUTE	53 %	
[Subject] To obtain a body fluid absorbent article with the perfect protection against the body fluid leakage. [Means for Solving Problem] In the body fluid absorbent, the body fluid retainable absorbent member 53A is disposed under the face sheet 51. Then, the body fluid permeable absorbent member 52, which include the assembly of fibers in tows, is disposed between the face sheet 51 and the body fluid retainable absorbent member 53A.						

60.	Process for forming non-woven filamentary structures from fiber-forming synthetic organic polymers	US33338992	1967-08-29	DU PONT DE NEMOURS	53 %
(FR1311875) 932,482. Fibrous fabrics. E. I. DU PONT DE NEMOURS & CO. Dec. 14, 1960 [Dec. 15, 1959 (2)], No. 42991/60. Drawings to Specification. Class 42 (2). [Also in Group IX] A non-woven filamentary structure e.g. a batt, mat, web or sheet, comprises continuous synthetic organic filaments disposed in a random, loopy configuration uniformly throughout the structure without a pattern of parallelism between the filaments. The filaments may have crimp e.g. 30-100 three-dimensional helical crimps per inch, as may be induced or modified by controlled relaxation or shrinkage of the structure, and the surface of the structure may bear an embossed pattern. Normal finishing treatments e.g. buffing, felting, shearing, brushing, printing, napping may be applied. A process for making the structure comprises electrostatically charging a zero- or low-twist bundle of continuous synthetic organic filaments (generally containing less than 5% by weight of moisture) forwarding the bundle under tension toward a receiving surface, reducing the amount of tension to permit separation of the individually charged filaments by mutual repulsion thereof before they reach the surface which is so positioned that the direction of movement of the filaments is changed when they impinge thereagainst so that the filaments are deposited on the surface according to the specified pattern. The surface, which may be earthed or charged oppositely to the filaments in order to hold securely the filaments deposited thereon, is provided by a solid or foraminous plate, screen, belt or rolls, or by a liquid: it may move continuously or intermittently with or without reciprocal and/or circular motion or be shaped to produce a preformed article or predetermined contour. The filaments may be charged by a corona discharge maintained in the vicinity of the bundle, or by triboelectric contact e.g. with guides and/or a forwarding aspirator, and the charge may be uniformly maintained or alternate (to produce transverse loops in the structure). The filaments may be of polyamides such as polyhexamethylene, adipamide, polycaproamide and/or copolymers thereof; polyesters such as polyethylene terephthalate, poly(hexamethylene-xylylene terephthalate) and/or copolymers thereof; polyhydrocarbons such as polypropylene polyethylene, polyurethanes, polycarbonates; polyacetals, polyacrylics, vinyl polymers, vinylidene polymers, cellulose. Additives e.g. conductive salts such as lithium chloride, or minor quantities of a comonomer e.g. 2% of sulphoisophthalate ester incorporated during preparation of polyethylene terephthalate, to render the filaments responsive to the electrostatic treatment, may be employed. Conductivity may be imparted to freshly formed filaments by spinning or grafting a conducting sheath thereabout. Filaments of different materials may be blended. The cross-section of individual filaments may be modified e.g. as a Y or ribbon cross-section, to provide enhanced triboelectric contact with a charging surface. A binder is applied to the structure by spraying on to the charged filaments (and the binder particles may be oppositely charged to the fibres) dipping in a solution or dispersion, or as low melting fibres (which are rendered adhesive by heat or solvents) introduced by aspiration or cospinning. The filaments may be bonded at spaced points throughout the structure. Binder fibres may be of polycaproamide or copolymers or melt blends thereof (with polyhexamethylene) or isophthalate copolymers, or filaments of reduced orientation of, polyethylene terephthalate for the latter. In the preparation of one binding material, an aqueous dispersion of an elastomer containing polyethylene acrylate and polyvinyl acetate, to which is added diepoxide resin, butylated melamine formaldehyde resin and titanium dioxide, is converted to fibrils which are used in the form of a slurry. A batt may be compacted by pressing, and stabilized by heating to fuse individual filaments at points of filament crossings or by a controlled electric discharge at intervals throughout the main structure, or by needle punching. (From GB932482 A)					
61.	Filter material construction and method	EP1028794	2000-08-23	DONALDSON DONAL DSON KOMPANI INK	52 %
A preferred filter media is provided. The media includes a fine fiber web secured to the surface of a coarse fiber support. A preferred filter media (10), comprising multiple layers of fine fiber media (15, 19) separated by coarse fiber support (14, 18) is provided. Advantageous filter constructions result and are provided. Also according to the disclosure, methods for using such arrangements to filter are provided.					
62.	Method to make an article comprising a polymer concentrate	EP1879944	2008-01-23	EXXONMOBIL CHEMICAL PATENTS BAYER HEALTHCARE BAYER INTELLECTUAL PROPERTY BAYER PHARMA BAYER PHARMACEUTICALS 2 more...	43 %
This invention relates to a method to make an article comprising the steps of combining a semi-amorphous polymer having a heat of fusion of less than 70 J/g with a plasticizer and optionally one or more additives, to produce a polymer concentrate, combining the polymer concentrate with one or more final materials to produce an article precursor; and forming the article at least partially from the article precursor, wherein the polymer concentrate preferably shows no visible phase separation as demonstrated by the polymer concentrate having no visually detectable loss of the plasticizer after a portion of the polymer concentrate is aged on an absorbent surface for 24 hours at 25°C. An article produced by the method is also disclosed.					