

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2009/120048 A1 (WERTZ JOHN A [US] ET AL) 14 May 2009 (2009-05-14) * paragraphs [0055] - [0082], [0211], [0212] *	1,2,8-14	INV. B01D29/50 B01D39/16 B01D39/18
A	US 8 172 092 B2 (GREEN THOMAS B [US] ET AL) 8 May 2012 (2012-05-08) * abstract; figures 4,5 *	1,2,8-14	
A	US 2011/168622 A1 (LUCAS DANIEL [US]) 14 July 2011 (2011-07-14) * abstract; claims; figures *	1,2,8-14	
A	US 2013/001155 A1 (NEUBAUER SEBASTIAN [DE] ET AL) 3 January 2013 (2013-01-03) * paragraphs [0034] - [0054] *	1,2,8-14	
A	US 2011/259813 A1 (WERTZ JOHN A [US] ET AL) 27 October 2011 (2011-10-27) * claims 20-23 *	1,2,8-14	
			TECHNICAL FIELDS SEARCHED (IPC)
			B01D
The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
Place of search		Date of completion of the search	Examiner
The Hague		27 September 2016	Plaka, Theophano
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... & : member of the same patent family, corresponding document	

### CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

- Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):
- No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

### LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- All further search fees have been paid within the fixed time limit. The present (supplementary) European search report has been drawn up for all claims.
- As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- Only part of the further search fees have been paid within the fixed time limit. The present (supplementary) European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- None of the further search fees have been paid within the fixed time limit. The present (supplementary) European search report has been drawn up for those parts of the European patent application which relate to the first mentioned in the claims, namely claims:  
1, 2(completely); 8-14(partially)

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1, 2(completely); 8-14(partially)

A filter media, comprising: a first layer comprising a first plurality of fibers, wherein the first plurality of fibers are synthetic fibers formed by a meltblown process or a centrifugal spinning process, and wherein the first plurality of fibers has an average fiber diameter of greater than about 1.5 microns; a second layer comprising a second plurality of fibers, wherein the second plurality of fibers are synthetic fibers formed by a meltblown process or a centrifugal spinning process, and wherein the second plurality of fibers has an average fiber diameter of less than or equal to about 1.5 microns; and a third layer comprising a third plurality of fibers, wherein the third plurality of fibers comprises cellulose fibers, wherein the second layer is positioned between the first and third layers.

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2. claims: 3(completely); 8-14(partially)

A filter media, comprising: a first layer comprising a first plurality of fibers; a second layer comprising a second plurality of fibers; and a third layer comprising cellulose fibers, wherein the third layer has an air permeability of greater than or equal to about 400 L/m sec and less than or equal to about 2000 L/m sec, and a Mullen Burst strength of greater than or equal to about 200 kPa and less than or equal to about 500 kPa, and wherein the second layer is positioned between the first and third layers.

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3. claims: 4(completely); 8-14(partially)

A filter media, comprising: a first layer comprising a first plurality of fibers, wherein the first layer has a first air permeability and a first mean flow pore size; a second layer comprising a second plurality of fibers, wherein the second layer has a second air permeability and a second mean flow pore size; and a third layer comprising a third plurality of fibers and a plurality of perforations, wherein the first air permeability is higher than the second air permeability and/or wherein the first mean flow pore size is higher than the second mean flow pore size.

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4. claims: 5(completely); 8-14(partially)

A filter media, comprising: a first layer comprising a plurality of fibers; and a second layer comprising cellulose fibers and a plurality of perforations.

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

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5. claims: 6(completely); 8-14(partially)

A filter media, comprising: a first layer comprising a first plurality of fibers, wherein the first layer has a first air permeability and a first mean flow pore size; a second layer comprising a second plurality of fibers, wherein the second plurality of fibers comprises fibrillated fibers, and wherein the second layer has a second air permeability and a second mean flow pore size; and a third layer comprising a third plurality of fibers, wherein the third plurality of fibers comprises cellulose fibers or synthetic fibers, and wherein the third layer has a third air permeability and a third mean flow pore size, wherein each of the first and third air permeabilities is higher than the second air permeability and/or wherein each of the first and third mean flow pore sizes is higher than the second mean flow pore size, wherein the first layer, the second layer, and the third layer are discrete layers, wherein the second layer is positioned between the first and third layers.

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6. claims: 7(completely); 8-14(partially)

A filter media, comprising: a first layer comprising a first plurality of fibers, wherein the first plurality of fibers comprises synthetic fibers, and wherein the first layer has a first air permeability and a first mean flow pore size; a second layer comprising a second plurality of fibers, wherein the second plurality of fibers comprises synthetic fibers, and wherein the second layer has a second air permeability and a second mean flow pore size; and a third layer comprising a third plurality of fibers, wherein the third plurality of fibers comprises synthetic fibers, and wherein the third layer has a third air permeability and a third mean flow pore size, wherein each of the first and third air permeabilities is higher than the second air permeability and/or wherein each of the first and third mean flow pore sizes is higher than the second mean flow pore size, wherein the first layer, the second layer, and the third layer are discrete layers, wherein the second layer is positioned between the first and third layers.

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 14 75 4942

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

27-09-2016

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