



Quality Insights

## Patentcloud Quality Insights Annotation Report

***Brita LP v. Ecolife Technologies, Inc. et al***

ITC-337-TA-3588

Focus on: U.S. Pat. No. 8,167,141

Filing date: Dec. 23, 2021

# Table of contents

Click on a page number to read

## Claim Construction and § 112 Invalidity

Map claims to specification and file wrapper [3](#)

## § 102 and § 103 Invalidity

Prior Art Finder [10](#)

Family Prior Art [12](#)

Semantic Prior Art [14](#)

Comparison tools [17](#)

Prior art downloads [20](#)

## Organized Prosecution and PTAB History

View key events [22](#)

Searchable file wrapper [27](#)

PDF downloads [29](#)

Side-by-side PDF and OCR [31](#)

---

# Map claims to specification and file wrapper

# Map claims to specification - '141

Which claim terms are or are not in the specification?

Claim Analysis > Claim# 1

Find relevant specification content as intrinsic evidence for claim term interpretation

38 Terms Identified in This Claim [Click to Select Terms](#)

**Select Text**

Highlight text from within the claim with your cursor and click on the tooltip "Select Terms" to find references in the Specification.

Claim# 1

A **gravity-fed water filter**, comprising **filter media** including at least **activated carbon** and a **lead scavenger** wherein the filter achieves a **Filter Rate** and Performance (**FRAP**) factor of about 350 or less according to the following formula:

$F R A P = [V * f * c e] [L * 2]$  where:

V=volume of the **filter media** (cm3), f=average **filtration unit time** over **lifetime L** (min/liter), ce=effluent **lead concentration** at end of **lifetime L** when **source water** having a pH of 8.5 contains 90-120 **ppb** (µg/liter) **soluble lead** and 30-60 **ppb** (µg/liter) **colloidal lead** greater than 0.1 µm in diameter, and L=**filter usage lifetime** claimed by a **manufacturer** or **seller** of the **filter** (gallons).

**Claim Analysis finds** these terms in the spec: **“activated carbon”, “lead scavenger”, “Filter Rate”, “FRAP”,** as well as other terms that are highlighted in red.

# Map claims to specification - '141

Which claim terms are or are not in the specification?

Select Text	Claim# 1
Highlight text from within the claim with your cursor and click on the tooltip "Select Terms" to find references in the Specification.	A gravity-fed water filter, comprising: <span style="border: 1px solid black; padding: 2px;">Select Terms</span>
	filter media including at least <span style="border: 1px solid black; padding: 2px;">activated carbon</span> and a lead scavenger; wherein
	the filter achieves a Filter Rate and Performance (FRAP) factor of about 350 or less according to the following formula:
	$F R A P = [V * f * c e] [L * 2]$ where:
	V=volume of the filter media (cm <sup>3</sup> ), f=average filtration unit time over lifetime L (min/liter), ce=effluent lead concentration at end of lifetime L when source water having a pH of 8.5 contains 90-120 ppb (µg/liter) soluble lead and 30-60 ppb (µg/liter) colloidal lead greater than 0.1 µm in diameter,
	and L=filter usage lifetime claimed by a manufacturer or seller of the filter (gallons).

Review the selected claim element and see how it is defined in the patent specification and related figures.

Selected elements of '141 Claim 1    Selected elements of Claim '1 in Spec

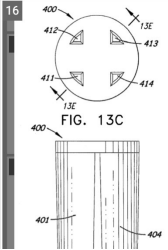
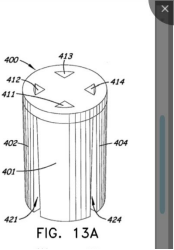
Figures of '141

Claim Terms	Content	Figures of '141
<div style="border: 1px solid black; padding: 5px;"> <p><span style="border: 1px solid black; padding: 2px;">activated</span> <span style="border: 1px solid black; padding: 2px;">carbon</span></p> <p>The selected clause includes the following keywords:</p> <p><span style="border: 1px solid black; padding: 2px;">activated</span> (69)</p> <p><span style="border: 1px solid black; padding: 2px;">carbon</span> (95)</p> </div>	<p>[0227] The CMC blocks were evaluated for flow rate performance and lead reduction performance against colloidal lead challenge water prepared as defined in NSF/ANSI 53 Protocol (2007). In addition to testing the gravity fed <span style="border: 1px solid black; padding: 2px;">carbon</span> blocks, several mixed media filters, containing granular <span style="border: 1px solid black; padding: 2px;">activated</span> <span style="border: 1px solid black; padding: 2px;">carbon</span> and ion exchange resin, were tested for comparative performance.</p> <p>[0162] Embodiments comprising multiple-core, multiple-cavity, and/or multiple-sub-block solid profile filter media will work with many different block sizes; for example, large and small, and long and short block shapes. The preferred blocks may be considered three-dimensional rather than sheet-like or substantially two-dimensional. The filter blocks of the preferred embodiments comprise <span style="border: 1px solid black; padding: 2px;">activated</span> <span style="border: 1px solid black; padding: 2px;">carbon</span> block consisting of <span style="border: 1px solid black; padding: 2px;">activated</span> <span style="border: 1px solid black; padding: 2px;">carbon</span> particles (agglomerates and binder particles that are formed to</p>	

# Map claims to specification and Complaint - '141

Does the allegedly infringing product element fall within or outside the patent's scope?

Claim Terms	Content
<p><b>activated carbon</b></p> <p>The selected clause includes the following keywords:</p> <p><b>activated</b> (69)</p> <p><b>carbon</b> (95)</p>	<p>[0227] The CMC blocks were evaluated for flow rate performance and lead reduction performance against colloidal lead challenge water prepared as defined in NSF/ANSI 53 Protocol (2007). In addition to testing the gravity fed <b>carbon</b> blocks, several mixed media filters, containing granular <b>activated carbon</b> and ion exchange resin, were tested for comparative performance.</p> <p>[0162] Embodiments comprising multiple-core, multiple-cavity, and/or multiple-sub-block solid profile filter media will work with many different block sizes; for example, large and small, and long and short block shapes. The preferred blocks may be considered three-dimensional rather than sheet-like or substantially two-dimensional. The filter blocks of the preferred embodiments comprise <b>activated</b></p>

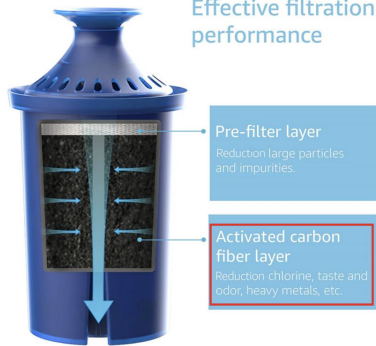
✎ With the claim scope interpretation from **Claim Analysis**, verify your findings against the complaint.

Answer the question:

**Does the alleged Invention element fall within or outside the patent's scope?**



The Aqua Crest AQK-06L Replacement Pitcher Water Filter ("Aqua Crest Product") includes, literally or under the doctrine of equivalents, every element of claims 1-6 of the '141 patent, and the Aqua Crest Product when used with a compatible Brita container includes, literally or under the doctrine of equivalents, every element of claim 23 of the '141 patent.

Claim Language	Aqua Crest Product
	<div style="text-align: right; color: #0070C0;">Effective filtration performance</div>  <p><b>Pre-filter layer</b> Reduction large particles and impurities.</p> <p><b>Activated carbon fiber layer</b> Reduction chlorine, taste and odor, heavy metals, etc.</p>
	<p>Exhibit 2 - <a href="https://www.amazon.com/AQUA-CREST-Longlast-Replacement-Compatible/dp/B085C2ZJMJ">https://www.amazon.com/AQUA-CREST-Longlast-Replacement-Compatible/dp/B085C2ZJMJ</a>; see also <i>id.</i> ("Premium filtration media: The filter employs filtration technology by using a pre-filter layer and high-quality activated carbon fiber to ensure that you and your family get the cleanest water.")</p>

# Map claims to the file wrapper - '141

Which claim terms are in the file wrapper(i.e. examiner's opinion) ?

Disclosure Rate by Prior Art

Claim	Disclosure by Single Reference		Disclosure by Multiple References	
	Prosecution History	Post-Grant	Prosecution History	Post-Grant
#1	0%	83%	0%	83%
#2	0%	100%	0%	100%
#3	0%	100%	0%	100%
#4	0%	100%	0%	100%

Claim #1  
A gravity-fed water filter, comprising: filter media including at least activated carbon and a lead scavenger; wherein the filter achieves a Filter Rate and Performance (FRAP) factor of about 350 or less according to the following formula:  $F R A P = [V * f * c e] [L * 2]$  where: V=volume of the filter media (cm<sup>3</sup>), f=average filtration unit time over lifetime L (min/liter), c<sub>e</sub>=effluent lead concentration at end of lifetime L when source water having a pH of 8.5 contains 90-120 ppb (ug/liter) soluble lead and 30-60 ppb (ug/liter) colloidal lead greater than 0.1 μm in diameter, and L=filter usage lifetime claimed by a manufacturer or seller of the filter (gallons).

From **Claim Insights**, review how the asserted claims were disclosed by the prior art found by the examiner during prosecution and post-grant proceedings.

A higher percentage means more claim elements were disclosed by the prior art.

Claim Insights Summary Table > Claim Table (Claim #1) | Select A Claim 1 2 3 4 5 6 switch between claims

How is each claim element disclosed by cited prior art? Click numbers to find detailed comparison.

The percentage "%" indicates how many keywords in an element being disclosed by a specific references. [Click](#) to find comprehensive explanation of calculation.

All  Prosecution history  Post-Grant  Responded prior arts only

Claims	Prior Art Ref. (e)							
	US6200483	US2006/0000763	US6405875	EP345381	US2008/0110820	US6524477	POSITA	OTHER REFERENCE
#1.01 (100%)	100%	100%	100%	100%	100%	100%	0%	100%
#1.02 (100%)	100%	100%	100%	100%	100%	66%	100%	100%
#1.03 (100%)	100%	100%	100%	100%	100%	100%	60%	100%
#1.04 (0%)	0%	0%	0%	0%	0%	0%	0%	0%
#1.05 (100%)	100%	100%	76%	92%	100%	0%	100%	100%

Disclosure Rate by Prior Art

# Map claims terms to the file wrapper - '141

Why was this patent granted? Which claims were amended and how did the scope change?

Claims	Prior Art Ref. (n)							
	US6200483	US2006/000763	US6405675	EP345381	US2008/0110820	US6524477	POSITA	OTHER REFERENCE
#1.01 (100%)	100%	100%	100%	100%	100%	100%	0%	100%
#1.02 (100%)	100%	100%	100%	100%	100%	66%	100%	100%
#1.03 (100%)	100%	100%	100%	100%	100%	100%	60%	100%
#1.04 (0%)	0%	0%	0%	0%	0%	0%	0%	0%
#1.05 (100%)	100%	100%	76%	92%	100%	0%	100%	100%

All of the limitations of this asserted claim element in '141 were 100% known by Cutler (US6200483).

Answer the question:

**Why was this patent granted?**

Claim Insights Summary Table > Claim Table (Claim # 1) > Claim Element Page (Claim # 1.02) > US6200483 | Select A Claim 1 2 3 4 5 6

Side-by-side comparison; Claim terms not found may imply the reasons for patentability.

1.01 1.02 1.03 1.04 1.05 1.06

**Claim Element**

#1.02 **filter media** including at least **activated carbon** and a lead **scavenger** wherein

Find 8 Result(s) **Rejection from Examiner** Filter Clear All

**Prior Art Ref.** **Cutler '483** [US6200483]

[20160927-Petition](#) [IPR2016-01893](#) [35 U.S.C. § 103](#) [35 U.S.C. § 102](#)

b.

ground 2: claims 1-8, 11-19, and 22-23 are anticipated by cutler ' 483 ..... 36 ' 483  
..... 36

1.

independent claims 1( ' a gravity-fed water filter ' and ' gravity-flow system for filtering water ')and 23( ' gravity-flow system for filtering water ')and 23( ' gravity-flow system for filtering water ')..... 37

2.

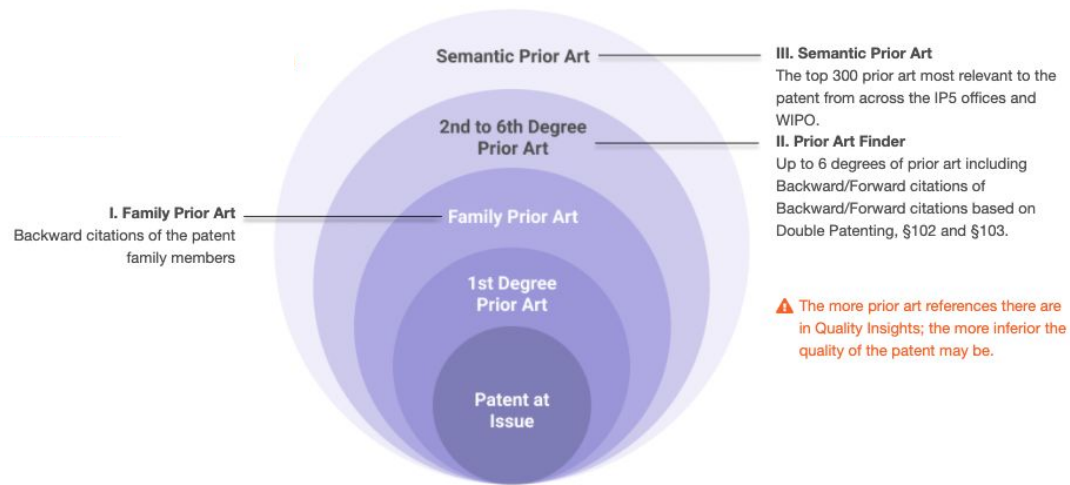
independent claims 1, 23( **filter media** including at least **activated carbon** and lead **scavenger** )..... 37

2.

independent claims 1, 23( **filter media** including at least **activated carbon** and lead **scavenger** ). cutler ' 483 discloses **filter media** with **activated carbon** . cutler ' 483 also discloses **filter media** with a lead **scavenger** . for example, cutler ' 483 teaches "[c]arbon substrates, made by methods known in the art of shaping carbon powders or carbon precursors to eventually be carbonized and activated to form **activated carbon** can also be used '(kaz-1002 at 4:20-23, 25-29; see also 9:49-51, 8:48- 52) . and, cutler ' 483 discloses multiple lead **scavengers** , some agents that are especially suited for lead removal are y-zeolite, gamma alumina, and/or titanium silicate.(id. 3:13-24;kaz-1012 ¶¶141-142) .



# How does Quality Insights generate prior art?



---

# Prior Art Finder

# Prior Art Finder for '141

Review cited and citing patents of '141 from the first to the sixth degree

Filter by:

- Applicability
- Legal Basis (§102 or §103)
- Patent Office
- Legal Status

1st Degree Art

7

2nd Degree Art

17

N Degree Art

84

## N Degree Art

Extend forward/backward citations from the Second Degree Art

Discover prior art's similarity with claim chart format in seconds !

KEEP Mode

Ranked By : Legal Basis (§102 first)



US8167141B2

### 6th Degree List

#### 1st Degree (7)

- US6200483B1
- US20060000763A1
- US20180099238A1
- US20080110820A1
- US20140110325A1
- US20150041390A1
- US20160121249A1

#### 2nd Degree (17)

#### 3rd Degree (20)

#### 4th Degree (20)

#### 5th Degree (20)

#### 6th Degree

	#	Patent No.	Title	Legal Status	Appl. Date	Pub./Issue Date	Assignee (Std)	Applicability
<input type="checkbox"/>	1	<a href="#">US20030147925A1</a>	TOPICAL DERMAL ANTIMICROBIAL COMP...	Abandoned Appl.	1999-09-09	2003-08-07	MANIVANNAN GURUSAMY	(Pre-AIA) § 102(a) (Pre-AIA) § 102(e)(1)
<input type="checkbox"/>	2	<a href="#">US6959820B2</a>	Microporous filter media, filtration systems ...	Active	2003-05-20	2005-11-01	KOSLOW EVAN E	(Pre-AIA) § 102(e)(2)
<input type="checkbox"/>	3	<a href="#">US5019311A</a>	Process for the production of materials cha...	Expired	1989-12-22	1991-05-28	KOSLOW TECHNOLOGIES C...	(Pre-AIA) § 102(a) (Pre-AIA) § 102(b) (Pre-AIA) § 102(e)(2)
<input type="checkbox"/>	4	<a href="#">US20100006507A1</a>	WATER TREATING METHODS	PGPub - Granted	2009-05-13	2010-01-14	PUR WATER PURIFICATION ...	(Pre-AIA) § 102(e)(1)
<input type="checkbox"/>	5	<a href="#">US7712613B2</a>	Water filter materials and water filters cont...	Expired	2008-09-16	2010-05-11	PUR WATER PURIFICATION ...	(Pre-AIA) § 102(e)(2)
<input type="checkbox"/>	6	<a href="#">US6852312B2</a>	Biocidal polystyrene hydantoin particles	Lapsed	2002-10-15	2005-02-08	AUBURN UNIVERSITY	(Pre-AIA) § 102(e)(2)
<input type="checkbox"/>	7	<a href="#">US7144533B2</a>	Microporous filter media, filtration systems ...	Active	2003-05-20	2006-12-05	KOSLOW TECHNOLOGIES C...	(Pre-AIA) § 102(e)(2)

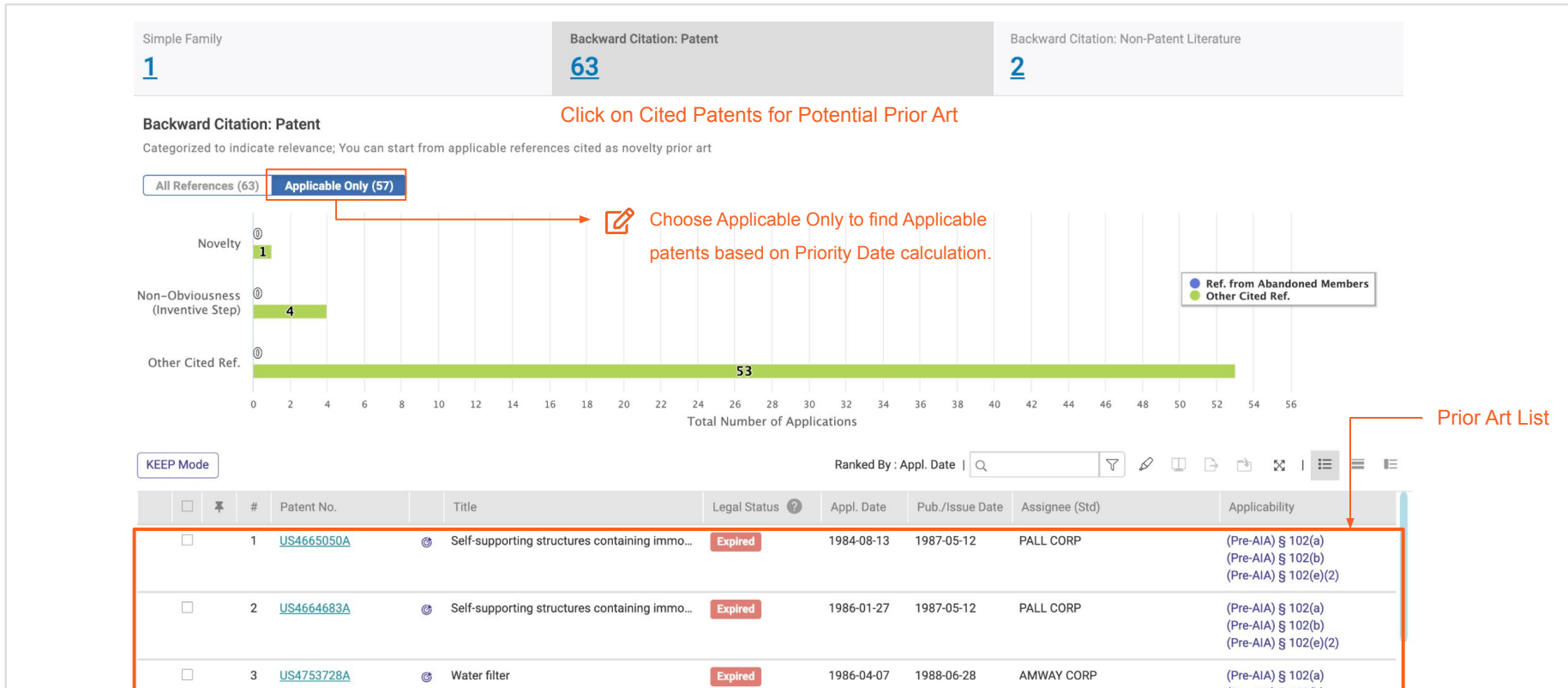
Up to 6th Degree  
Prior Art List

---

# Family Prior Art

# Family Prior Art of '141

Review prior art cited by and cited against the family counterparts when available



---

# Semantic Prior Art

# Semantic Prior Art of '141

Review potential prior art ranked by concept similarity

Across IP5 and WIPO thanks to Patentcloud's proprietary algorithm

Most Relevant US, EP, JP, KR, CN & WO potential prior art references based on **Semantic Similarity** with a patent's first claim and abstract  Select claim text or enter the desired text/keywords

Discover prior art's similarity with claim chart format in seconds! **Prior art references found (within the designated scope) that are deemed as having high semantic similarity will be starred with a ★**

KEEP Mode 11 are of high semantic similarity Ranked By : Relevance

<input type="checkbox"/>	<input type="checkbox"/>	Ranking	Patent No.	<input type="checkbox"/>	★ Title	Legal Status ?	Appl. Date	Pub./Issue Date	Assignee (Std)	Applicability
<input type="checkbox"/>	1	<a href="#">US20020005377A1</a>	<input type="checkbox"/>	★	Filter cartridge for gravity-fed water treatme...	Abandoned	2001-09-19	2002-01-17	PUR WATER PURIFICATION ...	(Pre-AIA) § 102(a) (Pre-AIA) § 102(b) (Pre-AIA) § 102(e)(1)
<input type="checkbox"/>	2	<a href="#">US6290848B1</a>	<input type="checkbox"/>	★	Filter cartridge for gravity-fed water treatme...	Expired	1997-04-16	2001-09-18	PUR WATER PURIFICATION ...	(Pre-AIA) § 102(a) (Pre-AIA) § 102(b) (Pre-AIA) § 102(e)(2)
<input type="checkbox"/>	3	<a href="#">US5225078A</a>	<input type="checkbox"/>	★	Pour-through pitcher filter	Abandoned	1992-03-04	1993-07-06	AMETEK INC	(Pre-AIA) § 102(a) (Pre-AIA) § 102(b) (Pre-AIA) § 102(e)(2)
<input type="checkbox"/>	4	<a href="#">WO1999/010076A1</a>	<input type="checkbox"/>	★	GRAVITY-FLOW FILTRATION CARTRIDGE F...	Abandoned	1998-08-27	1999-03-04	HUGHES DOUGLASS E	(Pre-AIA) § 102(a) (Pre-AIA) § 102(b)
<input type="checkbox"/>	5	<a href="#">US6524477B1</a>	<input type="checkbox"/>	★	Gravity-flow filtration cartridge for the remo...	Abandoned	1998-08-07	2003-02-25	BUHLER RICH	(Pre-AIA) § 102(a) (Pre-AIA) § 102(b) (Pre-AIA) § 102(e)(2)
<input type="checkbox"/>	6	<a href="#">US6405875B1</a>	<input type="checkbox"/>	★	Water filtration device and method	Abandoned	1999-12-15	2002-06-18	CORNING INC	(Pre-AIA) § 102(a) (Pre-AIA) § 102(b)

# Semantic Prior Art of '141

Review potential prior art ranked by concept similarity

**US8167141B2** [↗](#)

Gravity flow filter

\_\_\_\_\_

Overview
History
Claim Analysis
Claim Insights
Family Prior Art
Prior Art Finder
Semantic Prior Art
File Wrapper Search

ⓘ About Semantic Prior Art

**Semantic Prior Art**

Most Relevant US, EP, JP, KR, CN & WO potential prior art references based on [Semantic Similarity](#) within the scope below. [↻ Reset to Default](#)

+ Add text from claims
Submit

[🔍 Discover prior art's similarity with claim chart format in s](#)

Add text from claims ✕

Select A Claim 1 2 3 4 5 6 7 8 9 10 Next 10

A gravity-fed water filter, comprising: filter media including at least activated carbon and a lead scavenger; wherein the filter achieves a Filter Rate and Performance (FRAP) factor of about 350 or less according to the following formula:  $FRAP = [V * f * c_e] / [L * 2]$  where: V=volume of the filter media (cm<sup>3</sup>), f=average filtration unit time over lifetime L (min/liter), c<sub>e</sub>=effluent lead concentration at end of lifetime L when source water having a pH of 8.5 contains 90-120 ppb (µg/liter) soluble lead and 30-60 ppb (µg/liter) colloidal lead greater than 0.1 µm in diameter, and L=filter usage lifetime

Add

↓

✍

adding text from claims to find more related Prior Art



---

# Comparison tools

# Prior Art Comparison (claim chart format)

What does this prior art say about the critical elements?

1.01
1.02
1.03
1.04
1.05
1.06

Find **15** Result(s) | Disclosure Rate 66%

→ Disclosure Rate of Prior Art

Claim Element

#1.02 filter media including at least activated carbon and a lead scavenger; wherein

**Keyword List** ⓘ

- 👁 filter media (15) FW PA
- 👁 activated carbon (6) FW PA
- scavenger (0) FW

**US6290848B1 Content**

Claims

**Claim# 1** A filter cartridge for a gravity - fed water treatment device , comprising : a hydrophilic porous particulate filter having an open upper end , a lower end , and sidewalls therebetween , the hydrophilic porous particulate filter defining an interior volume free from porous particulate filter media ; granular filter media disposed in the interior volume ; and a connecting member sealing said hydrophilic porous particulate filter to a portion of the filter cartridge proximate said upper end of said filter ; wherein the filter cartridge is configured and arranged to establish , with a pressure of about 0.5 lb / in 2 , more than an insubstantial flow rate to allow water to flow by force of gravity through said open upper end , into said interior volume , and through said sidewalls of said hydrophilic porous particulate filter .

---

**Claim# 18** The filter of claim 17 , wherein the carbon in the granular media comprises granular activated carbon .

---

**Claim# 24** The filter cartridge of claim 20 , wherein the porous particulate filter comprises sheet filter media .

---

**Claim# 26** A filter cartridge for a gravity - fed water treatment device , comprising : a hydrophilic , porous particulate filter having sidewalls defining an interior volume , the sidewalls being configured and arranged to allow passage of water by the force of gravity , thereby treating the water ; granular filter media disposed in the interior volume ; and a member sealingly connecting the filter to a portion of the filter cartridge , thereby separating untreated water from treated water .

Answer the question:  
**What does this prior art say about the Claim elements: “activated carbon”?**

Discover prior art similarity with keywords (includes keyword stemming) mapped to the selected prior art reference Abstract, Claims, and Specification.

# Prior Art Comparison (sample output)

Easily generate a table like below

Claim		Claim-Term Interpretation	Semantic Prior Art - '848	3rd Degree Citation Prior Art - B
1	A gravity-fed water filter, comprising:	Refer to Claim Analysis results	0%	.....
	filter media including at least activated carbon and a lead scavenger; wherein	.....	66%	.....
	the filter achieves a Filter Rate and Performance (FRAP) factor of about 350 or less according to the following formula:	.....	33%	.....
	$F R A P = [V * f * c e] [L * 2]$ where:	.....	0%	.....
	V=volume of the filter media (cm <sup>3</sup> ), f=average filtration unit time over lifetime L (min/liter), ce=effluent lead concentration at end of lifetime L when source water having a pH of 8.5 contains 90-120 ppb (µg/liter) soluble lead and 30-60 ppb (µg/liter) colloidal lead greater than 0.1 µm in diameter,	.....	21%	.....
	and L=filter usage lifetime claimed by a manufacturer or seller of the filter (gallons).	.....	25%	.....

System-identified keywords and key phrases (highlighting of other keywords is available)

Results from claim to specification and file wrapper mapping

Results from prior art comparison by claim element

---

# Prior Art downloads

# Prior Art downloads

Select all

Export

Export

#	Patent No.	Title
<input checked="" type="checkbox"/>	1 CN1247662A	Dual use spea
<input checked="" type="checkbox"/>	2 EP0998105B1	Mobile teleph
<input checked="" type="checkbox"/>	3 JPH09-036932A	EXTERNAL R
<input checked="" type="checkbox"/>	4 JPH11-055358A	MOBILE RAD
<input checked="" type="checkbox"/>	5 US5317622	Ringling circuit for use in a telephone set f...



Download patent data in Excel or PDF format for Family Prior Art, Second Degree Prior Art, and/or Semantic Prior Art.

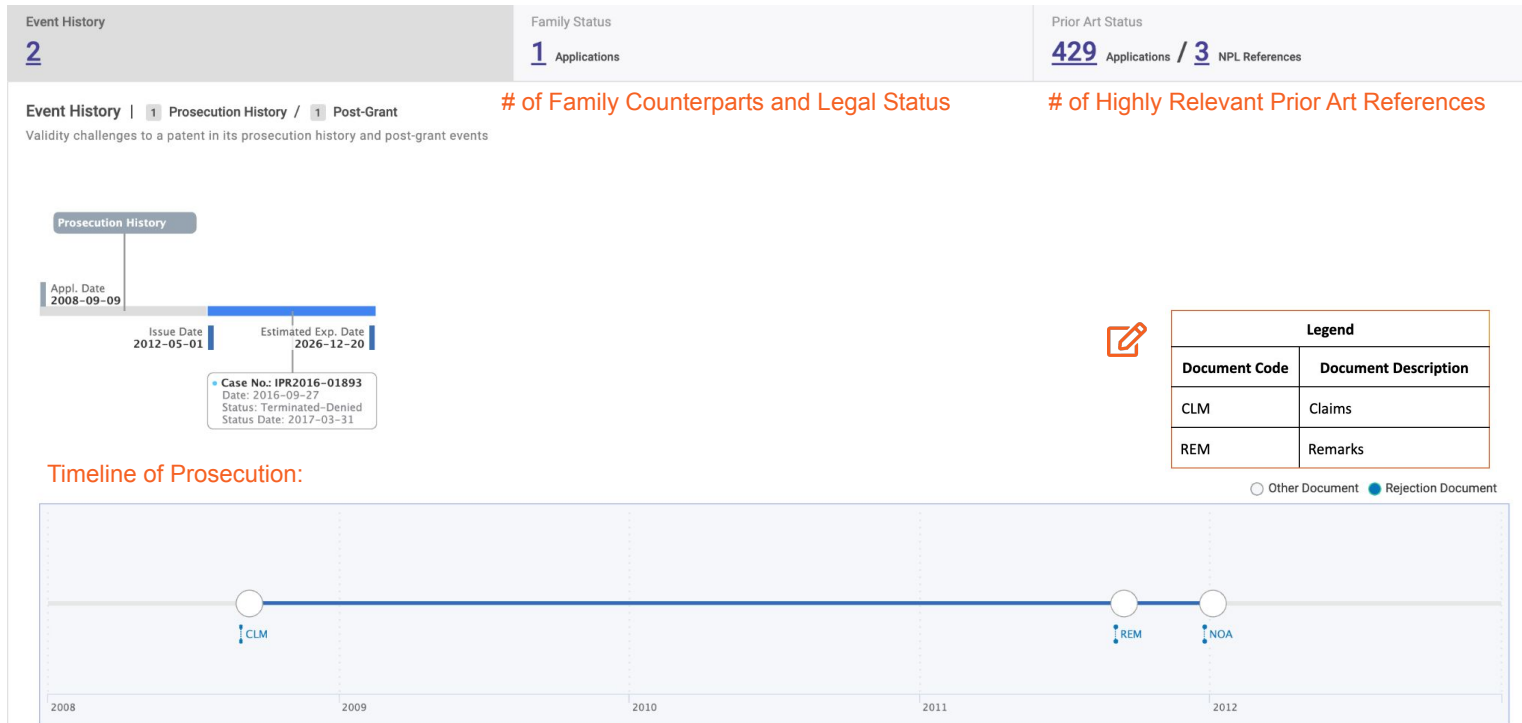
---

# Prosecution and PTAB History

## Key Events

# Key Events - '141

1 Prosecution & 1 Post-Grant



# Key Events - '141

## Prosecution History

**12/207284 Prior Art Ref.** | 0 Ref.

Check prior art cited and the legal basis of these challenges

**Double Patenting** | 0 Ref.

**§ 102** | 0 Ref.

**§ 103** | 0 Ref.

**Summary of 12/207284 History** | 3 Event(s)

Data Last Updated on: 2021-11-13

Descriptions (Code)	Date	Prior Art Ref.
<a href="#">Notice of Allowance (NOA)</a>	2012-01-04	
<a href="#">Applicant Arguments/Remarks Made in an Amendment (REM)</a> <a href="#">Claims (CLM)</a>	2011-09-14	
<a href="#">Claims (CLM)</a>	2008-09-09	

Clickable events for original OAs and their OCR version when available.



# Key Events - '141

## Post-Grant History

Event History

**2**

Family Status

**1** Applications

Prior Art Status

**429** Applications / **3** NPL References

Event History | **1** Prosecution History / **1** Post-Grant

Validity challenges to a patent in its prosecution history and post-grant events

# of Family Counterparts and Legal Status

# of Highly Relevant Prior Art References

Prosecution History

Appl. Date  
2008-09-09

Issue Date  
2012-05-01

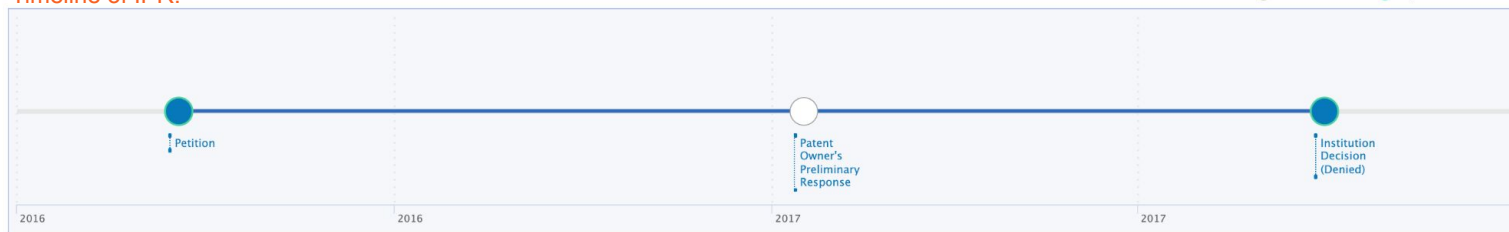
Estimated Exp. Date  
2026-12-20

Click to view each event in summary and details of IPR

Case No.: IPR2016-01893  
Date: 2016-09-27  
Status: Terminated-Denied  
Status Date: 2017-03-31

Timeline of IPR:

Other Document  Rejection Document



# Key Events - '141

## Post-Grant History

IPR2016-01893 Prior Art Ref. | 9 Ref.

Check prior art cited and the legal basis of these challenges

Double Patenting | 0 Ref.

§ 102 | 3 Ref.

[US20060000763](#)  
 Rinker
 [US20080110820](#)  
 Knipmeyer
 [US6200483](#)  
 Cutler '483

§ 103 | 6 Ref.

[US20060000763](#) (1st)  
 Rinker
 [US6200483](#) (1st)  
 Cutler '483
 [EP0345381](#)  
 Woodruff
 [other reference](#)  
 One

[US6405875](#)  
 Cutler '875
 [US6524477](#)  
 Hughes

### Order

ORDERED that the Petition is denied.

Summary of IPR2016-01893 History | 3 Event(s)

Clickable events for original OAs and their OCR version when available.

Direct links to Grounds,

Claims Highlighted and Prior Art Details

Data Last Updated on: 2021-11-15

Descriptions (Code)	Date	Prior Art Ref.
Institution Decision (Denied)	2017-03-31	Grounds 9 ^
Legal Basis	Claims	Prior Art Ref.
35 U.S.C. § 103	claim 9,10,20,21,23,24	<a href="#">Cutler '483 US6200483</a> (1st) One (other reference) <a href="#">Rinker US20060000763</a> <a href="#">Cutler '875 US6405875</a>
35 U.S.C. § 103	claim 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24	<a href="#">Cutler '483 US6200483</a> (1st) <a href="#">Rinker US20060000763</a> <a href="#">Cutler '875 US6405875</a>

---

# Prosecution and PTAB History Search

# Patent File Wrapper Search

Directly discover details in the prosecution history and post-grant proceeding across all documents via a keyword search.

### Cross-Document Search

Enter keyword to find documents including specific legal basis or specific claim terms

▼

[① About File Wrapper Search](#)

**Rejections, Remarks, and Notice of Allowance in Prosecution History** | 13 Records [↓](#)

<input type="checkbox"/> Descriptions (Code) <span style="font-size: 0.8em;">?</span>	Party	Date <span style="font-size: 0.8em;">?</span>
<input type="checkbox"/> Notice of Allowance (NOA)	USPTO	2015-09-24
<input type="checkbox"/> Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2015-06-19
<input type="checkbox"/> Non-Final Rejection (CTNF)	USPTO	2015-03-19
<input type="checkbox"/> Request for Continued Examination (RCEX)	Applicant	2015-03-03
<input type="checkbox"/> Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2015-03-03
<input type="checkbox"/> Final Rejection (CTFR)	USPTO	2014-11-03
<input type="checkbox"/> Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2014-10-15
<input type="checkbox"/> Non-Final Rejection (CTNF)	USPTO	2014-07-15
<input type="checkbox"/> Request for Continued Examination (RCEX)	Applicant	2014-06-26
<input type="checkbox"/> Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2014-06-26
<input type="checkbox"/> Final Rejection (CTFR)	USPTO	2014-02-26
<input type="checkbox"/> Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2014-02-07
<input type="checkbox"/> Non-Final Rejection (CTNF)	USPTO	2013-11-07

Data Last Updated on 2021-04-08

---

# Prosecution and PTAB History PDF Downloads

# PDF Downloads

Download the complete set or just part of the PDF files in the File Wrapper Search.

### Cross-Document Search

Enter keyword to find documents including specific legal basis or specific claim terms

▼

[① About File Wrapper Search](#)

**Rejections, Remarks, and Notice of Allowance in Prosecution History** | 13 Records ↓

<input type="checkbox"/> Descriptions (Code) <span style="font-size: small;">?</span>	Party	Date <span style="font-size: small;">?</span>
<input type="checkbox"/> Notice of Allowance (NOA)	USPTO	2015-09-24
<input type="checkbox"/> Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2015-06-19
<input type="checkbox"/> Non-Final Rejection (CTNF)	USPTO	2015-03-19
<input type="checkbox"/> Request for Continued Examination (RCEX)	Applicant	2015-03-03
<input type="checkbox"/> Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2015-03-03
<input type="checkbox"/> Final Rejection (CTFR)	USPTO	2014-11-03
<input type="checkbox"/> Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2014-10-15
<input type="checkbox"/> Non-Final Rejection (CTNF)	USPTO	2014-07-15
<input type="checkbox"/> Request for Continued Examination (RCEX)	Applicant	2014-06-26
<input type="checkbox"/> Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2014-06-26
<input type="checkbox"/> Final Rejection (CTFR)	USPTO	2014-02-26
<input type="checkbox"/> Applicant Arguments/Remarks Made in an Amendment (REM)	Applicant	2014-02-07
<input type="checkbox"/> Non-Final Rejection (CTNF)	USPTO	2013-11-07

Data Last Updated on 2021-04-08

---

# Prosecution and PTAB History Side-by-side PDF and OCR

# Side by Side: PDF & OCR



Conduct a keyword search in a single document to identify the claim scope quickly and easily. You can even search additional claim terms within rejections.

**Keywords (2)**

Select a Keyword Set ▼

sensor (3) Clear All

flexible substrate (1) ▼

Save to Keyword Set

US9226311B2 - CTNF [2015-03-19]

13/284,674      6 / 18      - 90% +

Page 5

Application/Control Number: 13/284,674  
Art Unit: 2867

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the touch panel taught by Grant by adding drive or sense electrodes made of flexible conductive material as taught by Hotelling since the sensor traces provide level shifting from a low voltage level to a higher voltage level, thus providing a better signal-to-noise ratio for improved noise reduction purposes while the drive traces provide shielding for the sense traces.

Neither Grant nor Hotelling specifically teach wherein the flexible conductive material of the drive or sense electrodes comprises first and second conductive lines that electrically contact one another at an intersection.

However, Gray does teach wherein the flexible conductive material of the drive or sense electrodes comprises first and second conductive lines that electrically contact one another at an intersection (Fig. 2; [0063]: **A number of conductors forming rows and columns of a conductive pattern (e.g., indium tin oxide (ITO)) may be deposited on a substrate composed of polyester or other material on one or more layers of the touchscreen... the row and column oriented conductors may be disposed on the same layer...**; See also Miller US 5,089,672; Col. 2, lines 11-16; Col. 5, lines 1-20; Col. 5, lines 61-68).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Grant and Hotelling by including the conductive lines (rows and columns) taught by Gray for the purpose of "providing paths for signals traveling through the touchscreen" (See Gray; Abstract).

103(a) as being unpatentable over Grant et al. US 2008/0303792 A1 (previously cited and \*\*\* PAGE 5 \*\*\*

Application/Control Number: 13/284,674 Page 4  
Art Unit: 2867

hereinafter Grant) in View of Hotelling et al. US 2008/0158183 A1 (previously cited and hereinafter Hotelling), in further View of Gray et al. US 2010/00451614 (previously cited and hereinafter Gray) and in further View of Frey et al. US 2009/0219257 (Newly cited and hereinafter Frey).

Regarding claim 1, Grant does teach an apparatus (Abstract) comprising:  
a substantially flexible substrate (Abstract: flexible touch sensitive surface); and  
a touch [0004], [0005], [0006], [0006], [0022], [0023], [0027], and [0071], e.g., flexible surface, flexible circuit, and capacitive touch [0004] which must be conductive to receive user input) disposed on the substantially flexible substrate ( see at least Figs. 1A-C; [0009-0011]), configured to bend with the substantially flexible substrate (Figs. 1A-1C, 3 and the corresponding descriptions; [0003]).

Grant does not specifically teach the touch [0004] comprising drive or sense electrodes made of flexible conductive material.

However, Hotelling does teach a touch [0004] (Fig. 2a, 5 and the corresponding descriptions, and the Summary of the Invention, i.e., a touch [0004] comprises of row and column traces made of copper) comprising drive or sense electrodes (see at least Figs. 1 and 2a; [0008, 0030-0033]; claim 9; sense traces formed on a first side of a dielectric substrate; and drive traces formed on a second side of the substrate) made of flexible conductive material ([0008]; traces made of copper or other highly conductive metals running along the edge of the substrate).

\*\*\* PAGE 6 \*\*\*

Application/Control Number: 13/284,674 Page 5  
Art Unit: 2867

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the touch panel taught by Grant by adding drive or sense electrodes made of flexible conductive material as taught by Hotelling since the [0004] traces provide level shifting from a low voltage level to a higher voltage level, thus providing a better signal-to-noise ratio for improved noise reduction purposes while the drive traces provide shielding for the sense traces.

Neither Grant nor Hotelling specifically teach wherein the flexible conductive material of the drive or sense electrodes comprises first and second conductive lines that electrically contact one another at an intersection.

Source: Quality Insights

InQuartik's Proprietary and Copyright©2021. All rights reserved. 32





## QI is a Game Changer

- Take control of a patent at issue with its comprehensive Overview
- Discover claim construction issues and define the claim scope
- Find more relevant prior art references
- Save time to increase productivity for a pitch and win