

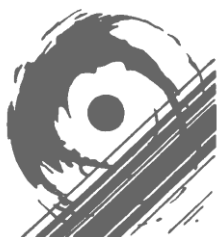
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1	US20110305014	HIGHLY COLLIMATING REFLECTOR LENS OPTIC AND LIGHT EMITTING DIODES The present invention is directed to a beacon light with a light emitting diode (LED) optic. In one embodiment, the LED optic includes at least one LED comprising an LED plane, a first reflector...	1000

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HIGHLY COLLIMATING REFLECTOR LENS OPTIC AND LIGHT EMITTING DIODES

United States Patent Application **20110305014**

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Abstract:

The present invention is directed to a beacon light with a light emitting diode (LED) optic. In one embodiment, the LED optic includes at least one LED comprising an LED plane, a first reflector positioned above the LED plane and comprising a curved cross-section, wherein the at least one LED is positioned approximately 90 degrees with respect to an optical axis of the first reflector and at least one second reflector positioned above the LED plane.

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Inventors:

Peck, John Patrick (Manasquan, NJ, US)

Application Number:

12/815642

Publication Date:

12/15/2011

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F21V1/00; F21V19/00

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20030218876	Ferrule for illuminating umbrella	November, 2003	Wu
20050237742	Combination of hose nozzle and flashlight	October, 2005	Wang
20080247183	BUS STOP ARM AND LAMP FOR BUS STOP ARM	October, 2008	Billingsley
20070047229	LED module and line type LED illumination lamp using the same	March, 2007	Lee
20070279918	Lighted and carved carrying container or handbag	December, 2007	Francis
20080192487	COLLAPSIBLE LAMP SHADE AND ASSEMBLY	August, 2008	Giegerich et al.
20030194189	Inspection wand	October, 2003	Grothe et al.
20050173605	Display shelving device with integrated electrical power supply means for lighting units	August, 2005	Villeneuve et al.
20090059615	Fiber optically enhanced reflective strip	March, 2009	Wainright
20070047223	Finger light	March, 2007	Mundhra et al.
20090237954	LIGHT PIPE ASSEMBLY	September, 2009	Goto et al.

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Claims:

1. A light-emitting diode (LED) optic, comprising: at least one LED comprising an LED plane; a first reflector positioned above the LED plane and comprising a curved cross-section, wherein the central light-emitting axis of the at least one LED is positioned approximately 90 degrees with respect to an optical axis of the first reflector; and at least one second reflector positioned above the LED plane.
2. The LED optic of claim 1, wherein the at least one second reflector comprises a substantially planar surface along an axis substantially parallel to the optical axis of the first reflector.
3. The LED optic of claim 2, wherein the at least one second reflector comprises a substantially planar surface along an axis substantially perpendicular to the central light-emitting axis of the at least one LED.
4. The LED optic of claim 1, wherein the at least one second reflector reflects light to an angle greater than 100° with respect to the central light-emitting axis of the at least one LED.
5. The LED optic of claim 1, further comprising: at least one lens positioned below the LED plane.
6. The LED optic of claim 5, wherein a light emitted from the at least one LED reflects off of the first reflector and then reflects off of the at least one second reflector and then passes through the at least one lens.

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Description:

23. A method, comprising: positioning at least one first reflector above an LED plane of at least one LED, wherein the first reflector comprises a curved-cross section and the at least one LED is positioned approximately 90 degrees with respect to an optical axis of the first reflector; positioning at least one second reflector above the LED plane; positioning at least one lens below the LED plane; and transmitting light from the at least one LED onto the at least one first reflector and the at least one second reflector, wherein the at least one lens collimates light reflected by the at least one second reflector.

BACKGROUND

A beacon light such as, for example, an aircraft obstruction light, can be used to mark an obstacle that may provide a hazard to aircraft navigation. Beacon lights are typically used on buildings, towers, and other structures taller than about 150 feet. Previous beacon lights generally exhibit relatively poor energy efficiency, which can prohibit the use of solar panels to power the beacon light. Previous beacon lights may also contribute to light pollution, i.e., direct light at angles undesirably above and below a specified plane. Previous beacon lights may also be too large and heavy for climbers to carry and therefore may require additional machinery or manpower to be hoisted into position.

Some beacon lights use a single reflector. However, not all of the light emitted from a light source is reflected in a single reflector design. As a result, the emitted light appears de-collimated as some of the light is emitted without reflection or collimation.

SUMMARY OF THE INVENTION

Various deficiencies of the prior art are addressed by the present invention, one embodiment of which is a beacon light having a light-emitting diode (LED) optic. In one embodiment, the LED optic includes at least one LED comprising an LED plane, a first reflector positioned above the LED plane and comprising a curved cross-section, wherein the at least one LED is positioned approximately 90 degrees with respect to an optical axis of the first reflector and at least one second reflector positioned above the LED plane.

In one embodiment, the present invention is generally directed towards an optic. In one embodiment, the optic comprises at least one light emitting means comprising a light emitting means plane, a first reflecting means positioned above the light emitting means plane and comprising a curved cross-section, wherein the at least one LED is positioned approximately 90 degrees with respect to an optical axis of the first reflector and at least one second reflecting means positioned above the light emitting means plane.

In one embodiment, a method comprises positioning at least one first reflector above an LED plane of at least one LED, wherein the first reflector comprises a curved-cross section and the at least one LED is positioned at about 90 degrees with respect to the first reflector, positioning at least one second reflector above the LED plane, positioning at least one lens below the LED plane and transmitting light from the at least one LED onto the at least one first reflector and the at least one second reflector, wherein the at least one lens collimates light reflected by the at least one second reflector.

BRIEF DESCRIPTION OF THE DRAWINGS

So that the manner in which the above recited features of the present invention can be understood in detail, a more particular description of the invention, briefly summarized above, may be had by reference to embodiments, some of which are illustrated in the appended drawings. It is to be noted, however, that the appended drawings illustrate only typical embodiments of this invention and are therefore not to be considered limiting of its scope, for the invention may admit to other equally effective embodiments.

FIG. 1 depicts a side cross-sectional view of a highly collimating optic and light emitting diode (LED);

FIG. 2 depicts a perspective view of an embodiment of the LED reflector optic;

FIG. 3 depicts a perspective view of an embodiment of the angular relationship between the optical axis associated with the reflecting surface of the LED reflector optic depicted in FIG. 2, the central light emitting axis of the LED of the LED reflector optic, and the extrusion axis of the reflecting surface;

FIG. 4 depicts a partial perspective view of an embodiment of a beacon light;

FIG. 5 is a graph depicting a representation of the intensity, versus angular displacement vertically from the optical axis, of light emitted from an embodiment of the beacon light;

FIG. 6 depicts a sectional top view of an embodiment of the reflector of the LED reflector optic depicted in FIG. 2;

FIG. 7 is a graph depicting a representation of the relative intensity, versus angular displacement, of light reflected from three different adjacent reflecting surfaces, and the sum thereof, of an embodiment of the LED reflector optic depicted in FIG. 2;

Match	Document	Document Title
1	US20120170266	EDGE-LIT MODULAR CEILING TILE LIGHT FIXTURES A ceiling tile light fixture includes a ceiling tile and a light fixture disposed within the ceiling tile. The light fixture includes one or more light sources and a waveguide for reflecting light...
2	US20120250305	LED BULB An LED bulb includes one or more light emitting parts including one or more LED chips, a mount including a bulging portion in which one or more mounting surfaces on which the one or more light...
3	US20110267811	SHADING PANEL FOR DISPLAY SYSTEM A shading panel is described for shading light emitting elements of a light emitting diode display system. The shading panel defines a substantially plane panel surface having an upper border and a...
4	US20110044038	LED LAMP An LED lamp includes a heat sink including a supporting plate, a plurality of LEDs mounted on the supporting plate and a light-reflecting member mounted on a top face of the supporting plate. The...
5	US20110019402	LED LAMP An LED lamp includes a heat sink including a supporting plate, a light-reflecting member mounted on a bottom face of the supporting plate, and a plurality of LEDs disposed on the bottom face of the...
6	US20100309664	LED LAMP An LED lamp includes a plurality of LED light units, a connecting member engaged with first ends of the LED light units, a mounting member engaged with second ends of the LED light units, and two...
7	US20110085327	Decorative light display with LEDs A decorative light display has a frame, a plurality of LED support members coupled to the frame and a plurality of LED electrical receptacles. Each receptacle is associated with an LED support...
8	US20110199761	LIGHT FIXTURE A Lighting fixture having a luminaire body which supports the lamps, preferably fluorescent lamps, and has a transparent panel mounted on its light outlet side by means of a panel frame, wherein...
9	US20110228519	LIGHTED DISPLAY CASE HAVING REDUCED GLARE A retail display case includes a case, retail product supports in the case, and a plurality of substantially point light sources in the case. Light sources located at or near eye level of a...
10	US20110194280	LED LIGHT SOURCE FOR HAZARDOUS AREA LIGHTING An LED light source is disclosed that is configured to be retrofit to an existing lamp fixture. The existing lamp fixture is of the type including a ballast housing for providing electrical power....
11	US20120188757	LED LIGHTING FIXTURE A light emitting diode (LED) lighting fixture for achieving a desired illumination pattern includes a support plate and a plurality of panels Connected to the support plate. Each panel has an array...
12	US20120140465	LIGHTING FIXTURE The present disclosure relates to a lighting fixture that is configured to transfer heat that is generated by a light source and any associated electronics toward the front of the lighting fixture....
13	US20120250311	Mounting Bracket for Linear Fluorescent Wet Location Fixture A mounting bracket for mounting "wet" location lighting fixtures. In embodiments, a mounting bracket allows a light fixture to be installed over a new or existing junction box. Gasketing and



US 20110305014A1

(19) **United States**

(12) **Patent Application Publication**
Peck

(10) **Pub. No.: US 2011/0305014 A1**

(43) **Pub. Date: Dec. 15, 2011**

(54) **HIGHLY COLLIMATING REFLECTOR LENS
OPTIC AND LIGHT EMITTING DIODES**

(52) **U.S. CL. 362/235; 29/428**

(76) **Inventor: John Patrick Peck, Manasquan, NJ
(US)**

(57) **ABSTRACT**

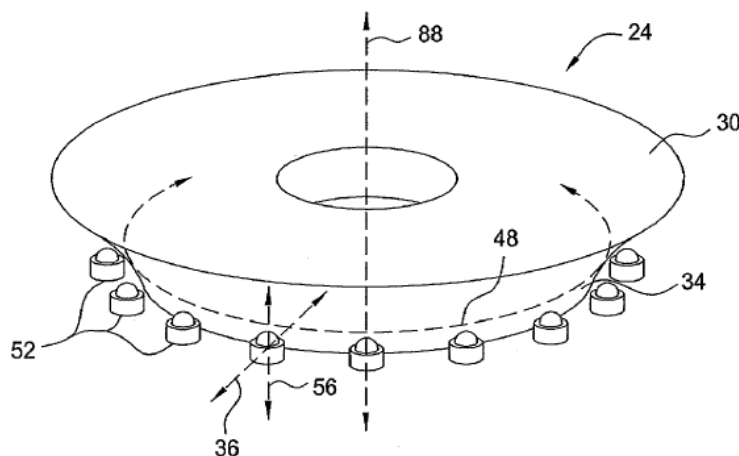
(21) **Appl. No.: 12/815,642**

(22) **Filed: Jun. 15, 2010**

Publication Classification

(51) **Int. CL.**
F21V 1/00 (2006.01)
F21V 19/00 (2006.01)

The present invention is directed to a beacon light with a light emitting diode (LED) optic. In one embodiment, the LED optic includes at least one LED comprising an LED plane, a first reflector positioned above the LED plane and comprising a curved cross-section, wherein the at least one LED is positioned approximately 90 degrees with respect to an optical axis of the first reflector and at least one second reflector positioned above the LED plane.



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ABST/cat	Find all documents containing the word 'cat' in only the abstract. ('ABST' can be replaced with the abbreviation for any text field)
cat AND dog	Find all documents containing both the word 'cat' and the word 'dog'. The two words may be in different fields.
ABST/cat AND dog	Find all documents containing the word 'cat' in the abstract, and the word 'dog' in any field.
TTL/cat NOT dog	Find all documents containing the word 'cat' in the title, but do not include any documents which have the word 'dog' in any field.
(cat OR dog) AND (leash OR fence)	Find all documents that contain either the word 'cat' or the word 'dog', and which also contain either the word 'leash' or the word 'fence.' Note that without the parenthesis this query would be interpreted in an entirely different manner due to binding order of AND versus OR. Parenthesis are very helpful in making sure your query mean what you intend.

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Search term	Word stemming	Matching results would have the word (s)
Compose	On (searches for variants of compose)	Compose, composes, composed, composing, composable, composition etc
Composition	Off (searches for exact word)	Composition
Composition	On (searches for variants of the root word "compose")	Composition, Compositions, Compose, composes, composed, composing, composable etc
Metallic	Off (searches for exact word)	Metallic
Metallic	On (searches for variants of the root word "metal")	Metallic, Metal, Metals etc.

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FreePatentsOnline uses the "^" (caret) operator to facilitate search term weighting. Combine this with relevancy sorting option to display the most accurate results at the top of the list.

The caret - "^" should be followed by a whole number that indicates the relative importance increase. For example, "^2" means that the word is twice as important as a word with no caret, while "^3" means three times as important, etc.

Note: Ensure that there is no space left between the keyword and the weighting operator.

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One point that we must emphasize is that **you must make sure you are familiar with the search language for the database you are using**. Unfortunately, none of the different search engines use the exact same search language. If you assume that you can use the same syntax from one patent searching site to another, you are going to have a problem. Often, that problem will be obvious because a syntax error will be reported when you try to run the query. However, you may not get an error! Your query might run just fine, but since the syntax is different, the query will not mean what you intended it to mean. You will get results for a different query than you intended (which almost certainly means you will miss relevant references), and if you don't realize what you did, you may never even know. Learn the syntax of the site you use!

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2. Boolean Logic

Boolean logic (named after the mathematician George Boole) refers to logical relationships between sets. For our purposes, those sets are the sets of results from a search engine.

For instance, a search for "bicycle" might return one set of references, while a search for "wheel" would return a different set of references (some of which probably overlap with the "bicycle" references). But, what if we want a set of results that encompasses the references for both of those terms? We use Boolean commands to tell the search engine to combine the two sets.

The commands used in Boolean logic include "and", "or", and "not" (the USPTO web site uses "ANDNOT" in place of NOT, but we will use NOT here for the purposes of clarity - just realize that you will need to use ANDNOT when actually searching at the USPTO web site). In the example above, if we wanted to all references that contained "bicycle" or "wheel", the search would simply be: bicycle OR wheel.

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collimating reflector lens

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1	8128257	Curved compact collimating reflectors An LCD can include a Compact Collimating Reflector (CCR), is configured to be located downstream in a light path from an LCD light source, where the CCR is configured to reflect light from the LCD...	1000
2	5442436	Reflective collimator A reflective collimator adjusts an input light beam producing an output light beam parallel to the input light beam. The input light beam is reflected and focused by a first reflector to a second...	846
3	4588253	Infrared collimator An infrared collimator uses a barrel and an infrared energy emitting source mounted at one end of the barrel. A reticle mask over the emission source produces a reticle beam pattern which is...	832
4	7712931	Sweep collimator An optical element is configured for use in conjunction with a directional light source such as an LED to form an illuminator. The optical element includes a light entry surface, a reflector and an...	803
5	5953101	Vision collimator A vision collimator for self-monitoring peripheral vision loss or central visual field limitation. The collimator includes a hand-held collimator housing having a viewing aperture for placement...	788
6	7580192	Collimation lens system for LED A collimation lens system for converging the light from an LED into a light beam, includes a central lens aligned along the optical axis of the LED for converging inner light from the LED, the...	779
7	7495838	Collimation lens group adjustment for laser system A laser system comprising a laser assembly for generating a light beam, and collimation assembly movable axially with respect to the laser assembly and being positioned in the optical path of the...	766
8	7513642	LED collimator element with a semiparabolic reflector The invention relates to an LED lighting device, in particular for motor vehicle headlamps, which comprises an LED element (3), a collimator (1) which emits the light emitted by the LED element (3)...	726
9	7083313	Side-emitting collimator A side-emitting collimator employs a combination of refraction and internal reflection	722

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Classification

Current US Classification (e.g. 100/50) ?
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- US Defensive Publications*: [T953001](#) to [T999003](#)
[T100001](#) to [T109201](#)
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- US Statutory Invention Registration (SIR): [H000001](#) to [H002271](#)
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- US Applications: [20010000001](#) to [20120278962](#)
- European Patents: [EP0000001B1](#) to [EP2473859B1](#)
- European Applications: [EP0000001A1](#) to [EP2519092A1](#)
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- Patent Abstracts of Japan: [JP51111002](#) to [JP2012143156](#)
- WIPO (PCT): [WO/1978/000001](#) to [WO/2012/149585](#)

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Title:

Method of locating and marking veins

United States Patent 5678555

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A method for locating blood vessels in a live human body utilizing infrared scanning and imaging techniques to distinguish relative temperature differences between blood carrying vessels and surrounding human tissue. An infrared imaging camera is used to detect the emissions of an object to differentiate the specific elevated surface temperature associated with blood vessels in a human body and surrounding tissue and marking same by the introduction of a marking device visible through temperature differentiation within the infrared imaging field.

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1	2086388	Reflector lens My invention relates to lenses of the type adapted to act as reflectors, and it is the principal object of my invention to provide a new and improved form and arrangement of parts by virtue of...	1000
2	2687968	Reflex-reflector lens elements	843
3	2610922	Reflex-reflector lens elements	800
4	3490831	REFLECTOR LENS SYSTEM	800
5	4056308	Variable focal length reflector lens system A variable magnification lens in the form of a reflector lens as the equivalent of a symmetrical fulls lens without reflector. The invention is exemplified by a three-element zoom lens having a...	765
6	3762654	LIGHT BEAMING REFLECTOR LENS ASSEMBLY Spotlighting and controlled beaming of illumination from an incandescent filament lamp is effected by use of a bulb having a lens tip envelope and a solid prismatic body enclosing the bulb...	700
7	4497617	Optical system utilizing a variable focal length reflector lens An optical system utilizes a variable focus half-lens reflector system for projecting images onto an image plane without the use of folding mirrors. The half lens is arranged with its optical axis...	533
8	6072712	Compact optical random access memory having a refractive-reflector lens A compact optical memory is disclosed in which data are stored in an optical data layer capable of selectively altering light such as by changeable transmissivity, reflectivity, polarization,...	503
9	5068771	Reflector lens cap and/or clip for LED A light-emitting diode assembly attachable to a display panel, the assembly comprising a light-emitting diode having locking structure thereon, the structure defining a boss; a lens cap receiving...	500
10	6543923	Vehicle lamp A vehicle lamp such as a rear combination lamp comprising: a reflex reflector lens that is fitted in a front lens of the lamp so as to reflect the light from the outside the vehicle lamp back to...	269
11	5150800	Reflector assembly for removable depending encasement to each stirrup to protect a rider and	



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1	3721489	REFLECTOR A reflector and/or tail light for mobile dwellings and the like having means therein for leveling a portable dwelling on uneven terrain.	1000
2	5828493	Reflectors A reflector formed on a base with a thick (0.5 to 2.0 microns) layer of non-porous oxide underlying an aluminum vacuum deposited layer which supports a pair of quarter wavelength...	982
3	6588921	Reflector A reflector for a lamp is provided, the reflector including a vent hole extending through the reflector body. A first enclosure extends into the reflector body from an outer reflective surface, and...	977
4	D523168	Reflector	976
5	D282726	Reflector	974
6	D388725	Reflector	972
7	D615239	Reflector	970
8	D621089	Reflector	969
9	8152333	Reflector A metallic reflector device having one or an array of individual reflector elements for positioning over a corresponding one or array of light sources, preferably comprising one or more light...	968
10	2303113	Reflector This invention relates in general to a new and improved lens reflector system adapted to produce an exceedingly efficient retroreflective auto collimator reflector. An important object of the...	968

Common Fields

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Inventor State (e.g. NY) [US state codes](#) ?

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Domestic References (e.g. 5796187) ?

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1	4609507	Method for casting polymeric gels from volatile mixtures of monomer in open molds and apparatus for performing this method The invention pertains to a method for casting polymeric gels from volatile mixtures of monomers in open molds and to apparatus for performing this method. The principle of the invention resides in...	999
2	4988277	Method for casting polymeric gels from volatile mixtures of monomer in open molds The invention pertains to apparatus for casting polymeric gels from volatile mixtures of monomers in open molds. The principle of the invention resides in the fact that the same concentrations of...	999
3	4519681	Soft lenticular contact lens with negative refraction A soft lenticular contact lens having negative refraction is provided having an outer convex surface comprising a central curved optical zone and a circumferential curved ring linked together by a...	883
4	4322139	Hydrophilic-gel contact lenses adapted into a planarized xerogel state and method for making the same The invention pertains to a method of temporary planarization of hydrogel contact lenses by drying of a lens swollen in a volatile hydrophilic swelling agent and clamped in the planarized state...	883
5	4626388	Method for producing contact lenses by centrifugal casting The invention pertains to a method for producing contact lenses by centrifugal casting in molds inserted as a vertical row into a rotating polymerization column. According to this method of...	883
6	3499862	METHOD OF PREPARING SHAPE RETAINING BODIES OF ORGANIC POLYMER HYDROGELS	883
7	3408429	Method for centrifugal casting a contact lens	883
8	3971376	Method and apparatus for introducing fluids into the body Method and apparatus for feeding fluids to internal body organs. An implant is introduced subcutaneously comprising a capsule having a hollow interior cavity and at least one channel extending	883



Title:

Method for casting polymeric gels from volatile mixtures of monomer in open molds and apparatus for performing this method

United States Patent 4609507

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Abstract:

The invention pertains to a method for casting polymeric gels from volatile mixtures of monomers in open molds and to apparatus for performing this method.

The principle of the invention resides in the fact that the same concentrations of volatile components present in the polymerization mixture are also present in the gaseous state within a protective gas maintained above the free surface of the polymerization mixture, said gaseous volatile components being in the equilibrium state with those in the polymerization mixture at polymerization temperature.

The apparatus for performing said method comprises a main pipe branch which introduces a pure protective gas into a polymerization apparatus and at least one auxiliary pipe branch for saturating the protective gas with a volatile component. These main and auxiliary pipe branches are formed by an inlet pipe connected to a control valve for setting a constant volume flow-rate and further leading to a device for measurement of the flow rate, where their outlet pipes are connected to a common inlet entering the polymerization apparatus and a saturator for a pure volatile component of the monomer mixture is arranged within the auxiliary branch before the outlet pipe.

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Inventors: **Wichterle, Otto (Prague, CS)**
Wichterle, Ivan (Prague, CS)

Application Number: 06/718683

Publication Date: 09/02/1986

Filing Date: 04/03/1985

Export Citation: [Click for automatic bibliography generation](#)

Assignee: Ceskoslovenska, Akademi Ved (Prague, CS)

Primary Class: [264/1.1](#)

Other Classes: 264/2.6, 264/83, 264/85, 264/331.18

International Classes: *G02C7/02; B01J19/00; B29C39/02; B29C39/22; B29C39/42; B29C39/44; C08F2/00; G02C7/04; B29K33/04; B29L11/00; G02C7/02; B01J19/00; B29C39/02; B29C39/22; B29C39/42; C08F2/00; G02C7/04; (IPC-1-7): B29D11/00*

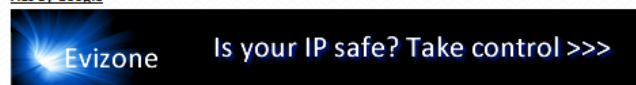
Field of Search: 264/1.1, 264/2.6, 264/83, 264/85, 264/331.18

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US Patent References:

3333034	Casting process	July, 1967	Muller	264/83
2935372	Process of producing shaped bodies by combining reactive intermediates, at least one of which intermediates is in the vapor phase	May, 1960	Steuber	264/83

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Primary Examiner: Michl, Paul R.

Attorney, Agent or Firm: Hoffmann, Dilworth, Barrese & Baron

Claims: We claim:

1. A method of casting a polymeric gel in an open mold from a liquid polymerization mixture containing at least one volatile monomer component dissolved therein which comprises providing a protective gas above the open surface of the polymerization mixture during polymerization, said protective gas prior to coming into contact with said open surface of the polymerization mixture being combined with an amount of said volatile monomer which will be in equilibrium with the volatile monomer present within the polymerization mixture under polymerization conditions.
2. The method of claim 1 wherein polymerization is carried out in a rotating mold.
3. The method of claim 1 wherein the protective gas is at least one inert gas selected from the group consisting of nitrogen, argon and carbon dioxide.
4. The method of claim 1 wherein the polymerization mixture contains hydroxyethyl methacrylate, acrylic acid and a crosslinking agent, the volatile monomer being acrylic acid.
5. The method of claim 1 wherein the protective gas is at least one inert gas selected from the group consisting of nitrogen, argon and carbon dioxide.
6. The method of claim 3 wherein the polymerization mixture contains hydroxyethyl methacrylate, acrylic acid and a crosslinking agent, the volatile monomer being acrylic acid.

United States Patent [19]**Wichterle et al.**[11] **Patent Number:** **4,609,507**[45] **Date of Patent:** **Sep. 2, 1986**

[54] **METHOD FOR CASTING POLYMERIC GELS FROM VOLATILE MIXTURES OF MONOMER IN OPEN MOLDS AND APPARATUS FOR PERFORMING THIS METHOD**

[75] **Inventors:** **Otto Wichterle; Ivan Wichterle, both of Prague, Czechoslovakia**

[73] **Assignee:** **Ceskoslovenska Akademi Ved, Prague, Czechoslovakia**

[21] **Appl. No.:** **718,683**

[22] **Filed:** **Apr. 3, 1985**

[30] **Foreign Application Priority Data**

Apr. 6, 1984 [CS] Czechoslovakia 2657-84

[51] **Int. Cl.⁴** **B29D 11/00**

[52] **U.S. Cl.** **264/1.1; 264/2.6; 264/83; 264/85; 264/331.18**

[58] **Field of Search** **264/1.1, 2.6, 83, 85, 264/331.18**

[56] **References Cited**

U.S. PATENT DOCUMENTS

2,935,372 5/1960 Steuber 264/83
3,333,034 7/1967 Muller 264/83

Primary Examiner—Paul R. Michl

Attorney, Agent, or Firm—Hoffmann, Dilworth, Barrese & Baron

[57] **ABSTRACT**

The invention pertains to a method for casting polymeric gels from volatile mixtures of monomers in open molds and to apparatus for performing this method.

The principle of the invention resides in the fact that the same concentrations of volatile components present in the polymerization mixture are also present in the gaseous state within a protective gas maintained above the free surface of the polymerization mixture, said gaseous volatile components being in the equilibrium state with those in the polymerization mixture at polymerization temperature.

The apparatus for performing said method comprises a main pipe branch which introduces a pure protective gas into a polymerization apparatus and at least one auxiliary pipe branch for saturating the protective gas with a volatile component. These main and auxiliary pipe branches are formed by an inlet pipe connected to a control valve for setting a constant volume flow-rate and further leading to a device for measurement of the flow rate, where their outlet pipes are connected to a common inlet entering the polymerization apparatus and a saturator for a pure volatile component of the monomer mixture is arranged within the auxiliary branch before the outlet pipe.

15 Claims, 1 Drawing Figure

Assignee Country (e.g. JP) [country codes ?](#)
Assignee State (e.g. NY) [US state codes ?](#)
Assignee City (e.g. New York) ?

References

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Foreign References (e.g. JP02292118) ?
Other References (e.g. patent law) ?

Legal/Prosecution Information

Parent Case Information (e.g. 10/007,521) ?
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Assistant Examiner (e.g. Mathew Fenn) ?
Attorney or Agent (e.g. Bacon & Thomas) ?

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2	EP2313386B1	SYNTHESIS ROUTES TO 2(S),4(S),5(S),7(S)-2,7-DIALKYL-4-HYDROXY-5-AMINO-8-ARYL-OCTANOYL AMIDES	1000

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2	DE19740472B4	Verfahren zur Herstellung von expandierten Polypropylen-Partikeln Verfahren zur Herstellung von expandierten Polypropylen(EPP)-Partikeln mit einer Dichte von 10 bis 200 g/l und einem Partikeldurchmesser von 1 bis 10 mm, durch Imprägnieren von 0,1 bis 10 Gew.-% ...	999
3	6677040	Expanded polypropylene particles The invention relates to expanded polypropylene beads having a density of from 5 to 200 g/l and a bead diameter of from 1 to 10 mm which comprise from 0.002 to 20% by weight of graphite particles.	0

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(e.g. 6123456 | EP1659867) [coverage details ?](#)

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Common Fields

All

(e.g. Metal) ?

Title

(e.g. "metal detector") ?

Abstract

(e.g. television) ?

Claim(s)

(e.g. system) ?

Description/Specification

(e.g. "hand-held telephone") ?

Date Fields

Filing Date

to

(mm/dd/yyyy) ?



Title:

SYNTHESIS ROUTES TO 2(S),4(S),5(S),7(S)-2,7-DIALKYL-4-HYDROXY-5-AMINO-8-ARYL-OCTANOYL AMIDES

WIPO Patent Application WO/2010/010165

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Abstract:

The invention relates to a process for the preparation of compounds that are important building blocks in convergent synthesis routes to 2 (S),4(S),5(S),7(S)-2,7-dialkyl-4-hydroxy-5-amino-8-aryl-octanoyl amides or pharmaceutically acceptable salts thereof, such as the compound Aliskiren, and to a process for the preparation of these octanoyl amides, comprising reacting said building block.

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2	DE19740472A1	Expanded polypropylene beads with low thermal conductivity Expanded polypropylene (EPP) beads with a density of 10-200 g/l and a particle diameter of 1-10 mm, contain 0.1-10 wt.% homogeneously dispersed graphite particles. Independent claims are also...	1000

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ASHRAE Journal	Journal of International Business and Economics
Atlantic Geology	Journal of International Business Research
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5	310149737	7 Deadly Scenarios: A Military Futurist Explores War in the 21st Century.
6	310149736	Eisenhower 1956: The President's Year of Crisis--Suez and the Brink of War.
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8	310149734	The evolution of air force targeting.
9	310149733	Lightning strikes and thunder claps: the strategic bomber and air superiority.
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13	310149729	The F-22 acquisition program: consequences for the US Air Force's fighter fleet.

Eisenhower 1956: The President's Year of Crisis--Suez and the Brink of War.



Article Type: Book review

Subject: Books (Book reviews)

Author: Menza, Thomas F.

Pub Date: 11/01/2012

Publication: **Name:** Air & Space Power Journal **Publisher:** U.S. Air Force **Audience:** Trade **Format:** Magazine/Journal
Subject: Military and naval science; Science and technology **Copyright:** COPYRIGHT 2012 U.S. Air Force **ISSN:** [1555-385X](#)

Issue: **Date:** Nov-Dec, 2012 **Source Volume:** 26 **Source Issue:** 6

Topic: **NamedWork:** Eisenhower 1956: The President's Year of Crisis - Suez and the Brink of War (Nonfiction work)

Persons: **Reviewer:** Nichols, David A.

Ike recognizes the British and French rationale for attacking Egypt for what it is--the last gasps of a colonial mind-set that will lead only to more clashes around the world. Eisenhower also understands that President Gamal Abdel Nasser of Egypt is expressing his people's desire to control their own land. Nevertheless, the French, British, and Israeli actions, along with the US Congress's lack of foresight, put on hold for another quarter of a century Eisenhower's efforts in 1956 to establish Egypt as an American ally. In that year, without American approval and military aid, the French and British have to back down and leave Egypt while the Israelis withdraw from the Sinai. The Soviets then diffuse their rhetoric and threats. Eisenhower, the West Pointer and combat general who delivered Western Europe from Nazi bondage in 1945, becomes the Middle East peacemaker in 1956.

Eisenhower's health is indeed an issue. Nichols provides day-to-day updates from his research of diaries and logs, noting that Ike's heart attack and recovery took longer than publicly admitted and that most details of his health problems were withheld from the press. His cardiologist becomes a significant presence in his entourage during 1956. Yet, while the world boils around him, Ike remains the calm in the storm. Few people have ever faced so much in so short a time, in terms of health and duty, as did this man who emerged from a humble, simple, rural Kansas background to become president of the United States. Divulging a little-known part of American history, this book gives readers an understanding of an era, a man, and the issues of his time. Certainly this reviewer now has greater respect for Eisenhower and a deeper appreciation for his role in history.

Given a historian's hindsight of half a century, not all of Ike's actions escape criticism, and Nichols leaves room for such musings and questions. However, we cannot fault Dwight Eisenhower for an effort that kept us out of more war, perhaps a nuclear war, with the phlegmatic, unpredictable, and secretive Soviets while he brought a crisis in the Middle East to a peaceful conclusion. The casual reader will find much of value in Eisenhower 1956, from pivotal history to sheer human drama. Similarly, today's student of this era now has an excellent resource for facts and stories pertaining to the American, military, and Middle Eastern history of the time--and Eisenhower was a significant part of it all.

Postscript: The Soviets built the Aswan Dam and stayed in Egypt until the 1980s. In the city of Aswan, the Russian engineers' quarters--a high-rise concrete apartment located on a bend in the Nile--is now a hotel favored by American tourists, with a fantastic view looking north along the Nile. In 1957 the Egyptians, with international help, cleared the Suez Canal of the war's debris and now operate this conduit of international commerce efficiently and without interruption. Its revenues helped pay for the Aswan dam and other Egyptian civil works projects. Included in frequent, regular, and unimpeded transits of the canal today are US Navy warships and carrier task forces sailing to and from the Arabian Gulf, Indian Ocean, and other parts east. Regarding the confrontation over the Suez Canal, Ike was right.

Maj Thomas F. Menza, USAF, Retired

Colorado Springs, Colorado

Inventor (e.g. Jones Mark) ?

Domestic References (e.g. 5796187) ?
Foreign References (e.g. JP02292118) ?
Other References (e.g. patent law) ?

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2	217041514	Bacterial keratitis and corneal scarring secondary to cosmetic contact lens wear.	907
3	215924952	National outbreak of Acanthamoeba keratitis associated with use of a contact lens solution, United States.	825
4	209164231	Mass spectral determination of fasting tear glucose concentrations in nondiabetic volunteers. Background: There is considerable disagreement regarding the concentration of glucose in tears and its relationship to the concentration in blood. Improved sampling and analysis methods may resolve...	612
5	277000026	Acanthamoeba keratitis--a diagnostic challenge. This is a case study of a 23 year old male diagnosed with Acanthamoeba keratitis. Initial misdiagnosis and inappropriate treatment lead to increased severity of the infection requiring...	567
6	229530841	Analysis of the risk factors predisposing to fungal, bacterial & Acanthamoeba keratitis in south India. Background & objectives: Infective keratitis is rare in the absence of predisposing factors. The pattern of risk factors predisposing to infective keratitis varies with geographical regions...	427



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Brakes	Heat Exchangers	Organic (549)	Sound Amplifiers
Catalysts	Image Detection	Organic (554)	Static IR
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Chamber Devices	Inorganic Compounds	Organic (568)	Surgery (600)
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Coatings	LCDs	Portable Surgical Gear	Television
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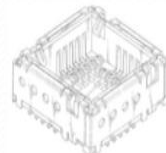
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1	8720946	Gas generator with two pyrotechnic charges A gas generator has two pyrotechnic charges in two chambers having openings for gas outlet to the outside. Only the first chamber is provided with an igniter for first charge. The chambers are...
2	8720945	Gas generator and its manufacturing process A gas generator includes a pyrotechnic charge contained in a chamber delimited by a wall and by two transversal walls. At least one of the walls comprises at least one through hole. A covering...
3	8720341	Multiple output and effect grenade A multiple output and effect grenade is provided, in which an exothermic delay column is utilized to initiate a series of primers via the application of heat to the strike faces thereof, thereby...
4	8720340	Rocket launcher The rocket launcher includes a launching tube that extends vertically from a flat base. The launching tube is of an undefined length and includes an opening adjacent to the bottom distal end where...
5	8720722	Venting mechanism for containers The presently disclosed device provides a method and means for ensuring that containers of all types and sizes are vented or purged to atmospheric or environmental conditions upon the interior or...
6	8720944	Gas generator for restraining device of vehicle A gas generator includes, a housing having a circumferential wall, a first end, and a second end, an inner tube member disposed in the housing, an outer space thereof being a combustion chamber, an...
7	8720342	Low collateral damage fragmentation warhead A fragmentation warhead includes a cylindrical body, and an explosive charge disposed within the innermost part of the warhead body comprised of slidable positionable explosives, their times of...
8	8714069	Mine clearance system and method A mine clearing system and method remotely deploys line charge from a remotely controlled two-wheeled vehicle. The wheels are connected together via a central hub shaft. Individual battery operated...
9	8714090	Time control device for the movement of a micro-machined and safety and arming device comprising such a time control device A time control device for the movement of a micro-machined or micro-engraved counterweight with











US Design Patents - Classification and Popularity

In the United States a design patent can be granted for a "new, original, and ornamental design for an article of manufacture". It may only have a single claim. A design patent lasts for 14 years from the date granted. Design patents **MUST** be for the **design** and not the function or utility of an invention.

Where a design contains both functional and non-functional elements, the scope of the claim will be construed in order to identify the non-functional aspects of the design as shown in the patent.

Furthermore, the scope is limited to the "overall ornamental visual impression". Designs that are hidden in their end use, or are necessary for the proper functioning of the device are not ornamental and therefore not patentable as a design patent.

Below are a few examples, as well as an index of the 33 design classes. The column labeled "popularity" shows the relative number of patents in each class with an orange graph:

<p>D04 Brushware</p>  <p>(Pictured: Electric Toothbrush) (Assignee: Braun)</p>	<p>D06 Furnishings</p>  <p>(Pictured: Task Chair) (Assignee: Herman Miller)</p>	<p>D09 Containers for Goods</p>  <p>(Pictured: Chewing Gum Tin) (Assignee: Starbucks)</p>	<p>D10 Measuring Instruments</p>  <p>(Pictured: Watch Dial) (Assignee: Seiko Watch Co.)</p>
<p>D12 Transportation</p> 	<p>D19 Office Supplies</p> 	<p>D32 Cleaning Machines</p> 	<p>D99 Miscellaneous</p> 

(Pictured: Automobile body
molding kit)
(Assignee: Veilside)

(Pictured: Duck Financial
Transaction Card)
(Assignee: Target)

(Pictured: Vacuum Cleaner)
(Assignee: Dyson)

(Pictured: Automated Teller
Machine)
(Assignee: Diebold)

Class	Title	Popularity
D01	Edible products	<div></div>
D02	Apparel and haberdashery	<div></div>
D03	Travel goods and personal belongings	<div></div>
D04	Brushware	<div></div>
D05	Textile or paper yard goods; sheet material	<div></div>
D06	Furnishings	<div></div>
D07	Equipment for preparing or serving food or drink not elsewhere specified	<div></div>
D08	Tools and hardware	<div></div>
D09	Packages and containers for goods	<div></div>
D10	Measuring, testing, or signalling instruments	<div></div>
D11	Jewelry, symbolic insignia, and ornaments	<div></div>
D12	Transportation	<div></div>
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D22	Arms, pyrotechnics, hunting and fishing equipment	<div></div>
D23	Environmental heating and cooling; fluid handling and sanitary equipment	<div></div>
D24	Medical and laboratory equipment	<div></div>
D25	Building units and construction elements	<div></div>
D26	Lighting	<div></div>
D27	Tobacco and smokers' supplies	<div></div>
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D29	Equipment for safety, protection, and rescue	<div></div>
D30	Animal husbandry	<div></div>
D32	Washing, cleaning, or drying machine	<div></div>
D34	Material or article handling equipment	<div></div>
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Jul 16, 2013	Jul 9, 2013	Jul 2, 2013	Jun 25, 2013	Jun 18, 2013	Jun 11, 2013
Jun 4, 2013	May 28, 2013	May 21, 2013	May 14, 2013	May 7, 2013	Apr 30, 2013
Apr 23, 2013	Apr 16, 2013	Apr 9, 2013	Apr 2, 2013	Mar 26, 2013	Mar 19, 2013
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Jan 29, 2013	Jan 22, 2013	Jan 15, 2013	Jan 8, 2013	Jan 1, 2013	

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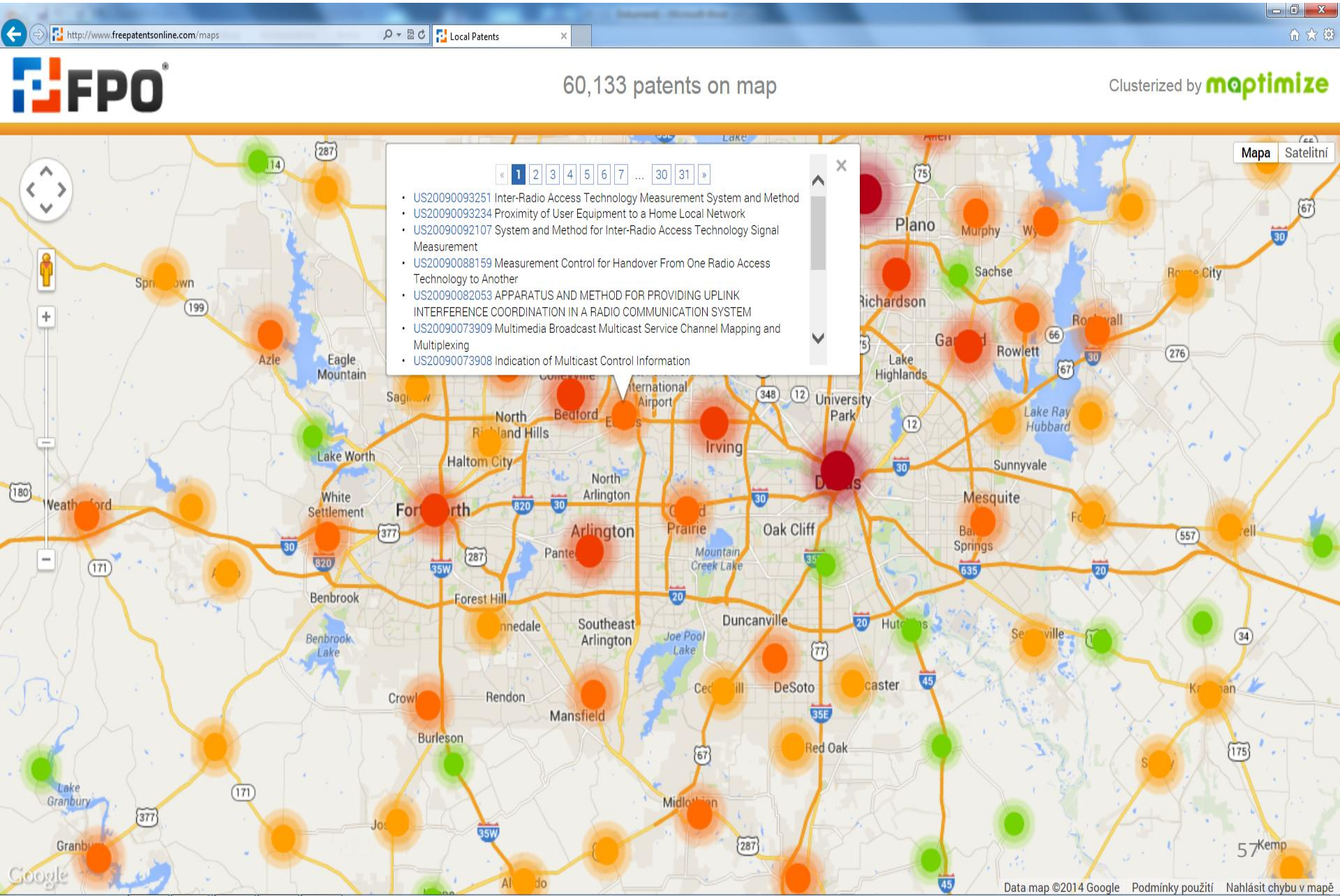
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University of Minnesota	Contrast from rotating frame relaxation by adiabatic pulses Invention for magnetic resonance spectroscopy, and more particularly to contrast from rotating frame relaxation by adiabatic pulses.
University of Southern California	Complexes with tridentate ligands Relating to organic light emitting devices (OLEDs), and more specifically to phosphorescent organic materials used in such devices.
University of Minnesota	Electrospraying apparatus and method for coating particles An electrospraying apparatus and/or method is used to coat particles. For example, a flow including at least one liquid suspension may be provided through at least one opening at a spray dispenser end.
University of Texas	System for creating a turbulent flow of fluid between a mold and a substrate Flow of a fluid between a mold, disposed on a template, and a substrate, the system including, a fluid supply system; and a chuck body having a baffle and first and second apertures - disposed between the baffle and the template, with the first and second apertures in fluid communication with the fluid supply system.
Emory University	Viruses targeted to hypoxic cells and tissues The novel compositions of the invention comprise a recombinant virus genetically engineered to have a hypoxia/HIF-responsive element, or a multiplicity of such elements, operably linked to a promoter which operably linked to a nucleic acids encoding a peptides which regulates or modulates replication of the virus and/or encode a therapeutic molecule.
University of Colorado	Mutant forms of cholera holotoxin as an adjuvant Mutant cholera holotoxins are useful as adjuvants in immunogenic compositions to enhance the immune response in a vertebrate host to a selected antigen from a pathogenic bacterium, virus, fungus, or parasite, a cancer cell, a tumor cell, an allergen, or a self-molecule.
Texas A&M University	Advanced optics for rapidly patterned laser profiles in analytical spectrometry Arrangement of optical devices for the rapid patterning of laser profiles used for desorption and/or ionization sources in analytical mass spectrometry.
University of California Oakland	Nanoscale mass conveyors Individually delivering chargeable atoms or molecules from source particles by mass transport. It comprises a channel; at least one source particle of chargeable material fixed to the surface of the channel at a position along its length; a means of heating the channel; and a means for applying an controllable electric field along the channel whereby the device

Euless, Texas



Inventors:

Cai, Zhijun (Euleless, TX, US)

Young, Gordon Peter (Warwickshire, GB)
 Suzuki, Takashi (Ichikawa, JP)
 WU, Wei (Coppell, TX, US)
 Womack, James Earl (Bedford, TX, US)

Application Number: 11/868879

Publication Date: 04/09/2009

Filing Date: 10/08/2007

Export Citation: [Click for automatic bibliography generation](#)

Assignee: RESEARCH IN MOTION LIMITED (Waterloo, CA)

Primary Class: [455/436](#)

International Classes: *H04Q7/20*

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Related US Applications:

20020013163	Cellular communications device	January, 2002	O'prey
20050020315	Security for mobile communications device	January, 2005	Robertson
20040002358	Receiver unit of a terminal device	January, 2004	Jo
20100090827	Location based proximity alert	April, 2010	Gehrke et al.
20090117887	METHODS FOR BARGING USERS ON A REAL-TIME COMMUNICATIONS NETWORK	May, 2009	Narayanaswamy et al.
20090209277	Satellite Redundancy for Critical Applications	August, 2009	Pinchas et al.
20060246888	Connection failure reporting in wireless communication systems	November, 2006	Bender et al.
20040162066	Isolation and remediation of a communication device	August, 2004	Kuchibhotla et al.



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Submitted by [Erik Reeves](#) on Thu, 10/11/2012 - 10:18

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University Clean Tech Industry News

Stanford Makes Solar Concentrator Available for License

Posted on [September 24, 2012](#)

Stanford researchers have developed a solar concentrator called AGILE, which is now available for license from the university technology transfer office. AGILE stands for Axially Graded Index LEns. The technology is one of more than 20 currently being added to the UTechWatch Clean Tech database.

The Stanford technology concentrates sunlight through a structure including a graded index material. The researchers indicate that AGILE will allow passive concentration of about one order of magnitude without the need to track the sun, and with very low production cost. Most competing concentrating technologies require mechanisms that can track the sun's position.

The Stanford research report states that the technology will require development of robust, low loss and inexpensive graded RI materials. Parties interested in licensing the technology should contact the Stanford technology transfer office.

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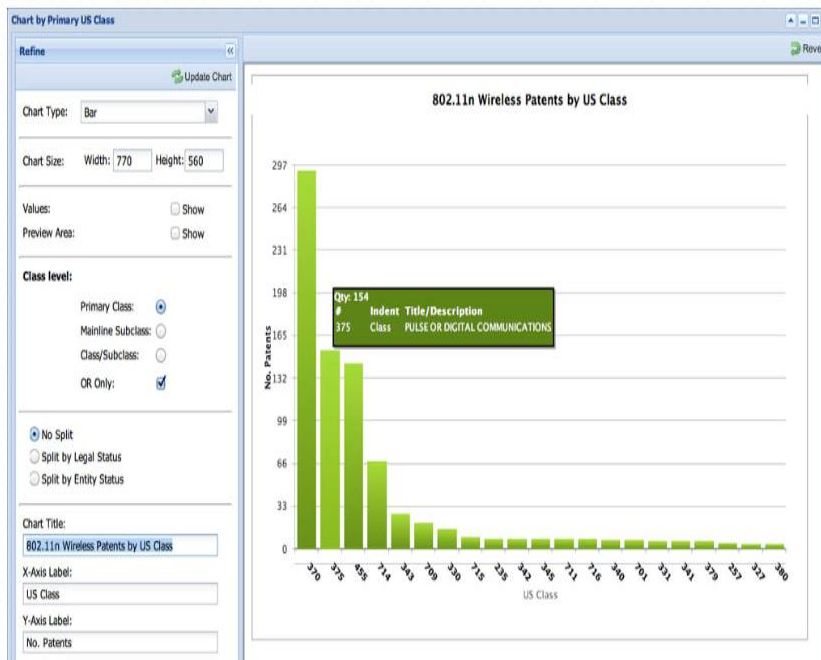
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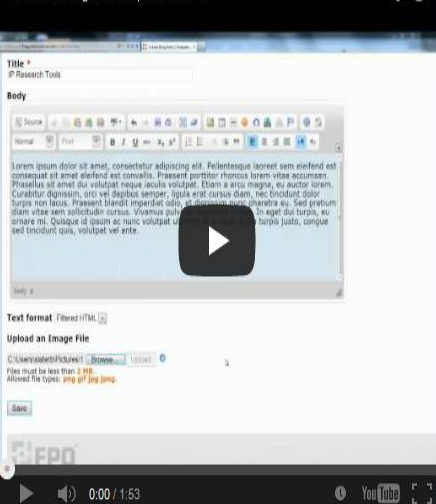
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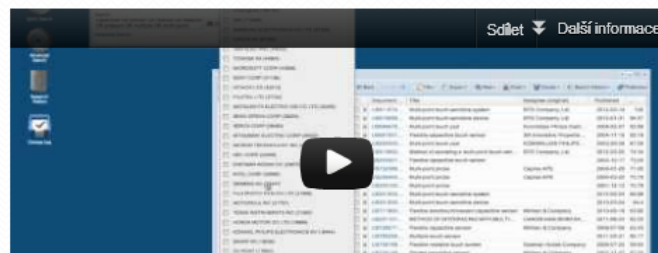
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Application of Reid

Court:

Court of Customs and Patent Appeals

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Application

Patent Appeals No. 5647.

United States Court of Customs and Patent Appeals.

Argued November 8, 1949.

Decided February 2, 1950.

Willard L. Pollard, Jr., Akron, Ohio (Charles M. Thomas, Washington, D. C., and Bernard C. Frye, Akron, Ohio, of counsel), for appellant.

E. L. Reynolds, Washington, D. C., for the Commissioner of Patents.

Before GARRETT, Chief Judge, and JACKSON, O'CONNELL, and JOHNSON, Associate Judges.

JACKSON, Judge.

Appellant appealed from a decision of the Board of Appeals of the United States Patent Office, affirming that of the Primary Examiner, finally rejecting all of the claims of an application, serial No. 594,797, filed May 19, 1945, for Improvements in Manufacture of Films. The involved claims are numbered 1 to 9, inclusive, all of which are directed to a process of producing a transparent flexible self-sustaining wrapping film. Claims 2 and 4 were rejected as being drawn to a nonelected species. The other claims were rejected as unpatentable over the prior art: Groves (British), 437,604, October 28, 1935; Haux, 2,046,378, July 7, 1936; Henderson, 2,330,353, September 28, 1943.

Counsel for appellant in their brief state that claim 1 is the broadest of the involved claims, and a determination of its patentability will apply to all the rejected claims.

Claim 1 reads as follows:

"1. Process for producing a transparent, flexible, self-sustaining wrapping film, which comprises casting upon a support a film of a mixed latex containing dispersed therein (1) a resin selected from the group consisting of polymers and copolymers of vinyl chloride and (2) from about 50% to about 300%, based on the weight of said resin, of a copolymer of the ingredients in which formulae each bracket indicates attachment of a substituent [sic] chosen from the group of substituents embraced thereby, drying said film upon said support, heating said film to from about 275° to 350° F., cooling said film, and stripping said film from said support."