





Welcome

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Intellectual Property: Patents
October 24, 2006
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Patents and the Patent Cooperation Treaty (PCT)



Jasemine Chambers
Group Director on detail to
Office of International Relations
U.S. Patents and Trade Office



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Jasemine C. Chambers, Ph.D.


- Has been a Group Director in Technology Center 1600 since 2000 overseeing the examination of biotechnology, pharmaceutical and organic chemistry patent applications. She represents the USPTO in the Trilateral Biotechnology Working Group in meetings and projects with the European Patent Office and the Japan Patent Office. Jasemine has served as USPTO's project coordinator in the creation of the new PCT Search and Examination Guidelines. She is currently on detail in the Office of International Relations working on China intellectual property issues and patent reform issues.

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Basis for Protection of Patents and Copyright in the U.S

US Constitution, Article 1, Section 8, Clause 8
– “Congress shall have the power ... to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.”


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What is a U.S. Patent?

- It is first and foremost: **“Property”**
- Provides protection only within the United States.
- There is no **World Wide Patent!**
- The patentee must enforce the patent once it is issued

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Types of U.S. Patents

- **Utility**
- **Design**
- **Plant**

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Utility Patent

- Provides a right to exclude others from making, using, selling, offering for sale or importing the claimed invention in exchange for public disclosure of the technology described and shown in the patent specification for a period of 20 years from the filing date.

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First US Patent

Patent No x-1 (July 31, 1790)



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Utility Patent (7,000,000)

United States Patent
O'Brien

(17) Patent No.: US 7,000,000 B1
(18) Date of Patent: Feb. 14, 2006

(51) Int. Cl. G01N 3/00
(52) U.S. Cl. 356/124

(54) Title of the Invention: POLYACRYLAMIDE FIBERS

(57) Abstract: A polyacrylamide fiber is provided. The fiber is formed from a polyacrylamide solution and is characterized by a high degree of crystallinity. The fiber is suitable for use in a variety of applications, including as a component in a composite material.

(50) References Cited

U.S. PATENT DOCUMENTS
4,973,647 A * 11/1978 Whittembury et al.
4,973,648 A * 11/1978 Maeda et al. 131,389
4,973,649 A * 11/1978 Whittembury et al.
4,973,650 A * 11/1978 Maeda et al. 200,637

FOREIGN PATENT DOCUMENTS
WO 94/01271 2/1994
WO 94/01272 2/1994

OTHER PUBLICATIONS
Simpson et al., Microbiology, vol. 141, pp. 1351-1360 (1995)
Vogel et al., Fiber Diffraction Methods, 47, pp. 553-562 (1988)
Applied Fibers Science, F. Hopper, Ed., Chapter 8. E. Ashkin, Academic Press, New York, 1979.
* cited by examiner

Primary Examiner—James O. Wilson
Assistant Examiner—Ernest White

(57) ABSTRACT

This invention pertains to novel fibers made of cellulosic polysaccharides and a process for their production. The fibers of the invention have "cellulose-like" properties but can be produced as continuous filaments on a traditional loom. The fibers are useful in a wide applications.

14 Claims, 4 Drawing Sheet

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Design Patent

- Provides a right to exclude others from making, using, offering for sale, importing or selling the claimed invention in exchange for public disclosure of the ornamental design described and shown in the patent specification for a period of 14 years from the grant date.



Design Patent (D-500,000)

United States Design Patent (110 Patent No.) **US D500,000 S**
 (110 Inventor) **Dyson et al.** (110 Date of Patent) **Dec. 21, 2004**


(170) **AUTOMOBILE BODY**
 (175) Inventors: **Andrew P. Dyson**, West Haverhill, MA
 (175) **Joseph W. Deane**, Haverhill, MA
 (175) **David C. McKinnon**, Haverhill, MA
 (175) **Charles W. Abbott**, West Haverhill, MA
 (170) Assignee: **DaimlerChrysler Corporation**, Auburn Hills, MI (US)
 (171) Date: **14 June**
 (172) Appl. No.: **29/201,094**
 (173) Filed: **Mar. 19, 2004**
 (174) **IPC Class.** **H01L 31/00**
 (175) **Int. Cl. Class.** **H01L 31/00**
 (176) **Field of Search** **H01L 31/00, H01L 31/02, H01L 31/04, H01L 31/06**
 (177) **References Cited**
 (178) **U.S. PATENT DOCUMENTS**
 5,088,226 A * 11/2000 **Deane et al.** 00/202
 6,295,226 B * 11/2001 **Deane et al.** 00/202
 6,295,227 B * 11/2001 **Deane et al.** 00/202
 6,295,228 B * 11/2001 **Deane et al.** 00/202
 6,295,229 B * 11/2001 **Deane et al.** 00/202
 6,295,230 B * 11/2001 **Deane et al.** 00/202
 * cited by examiner






Plant Patent

- Provides a right to exclude others from asexually reproducing, selling or using the claimed plant in exchange for public disclosure of the technology described and shown in the patent specification for a period of 20 years from the filing date.



Plant Patent



United States Patent (19) US0971000P

Lemon (11) **Patent Number: Plant 10,000**

(41) **Date of Patent: Aug. 12, 1997**

(54) **GERANIUM PLANT NAMED "LOIS"** *Primary Examiner—Howard S. Lockler*

(75) **Inventor: David Lemon, Longue, Calif.** *Attorney Agent or Firm—Pulsifer Patent Law and Urechi, LLP*

(73) **Assignor: John Bodger and Sons Company, South El Monte, Calif.**

(21) **Appl. No.: 871,248** **ABSTRACT**

(22) **Filed: Dec. 12, 1989** The cultivar is characterized by its distinctive multi-color presentation, its strong growth habit and continuous flowering provides for superb cuttings and also for quick recovery following wet weather conditions. The blooms exhibit relatively longer post-harvest production compared to that of other Regal varieties.

(23) **Int. Cl.:** A01H 1/00


(24) **U.S. Cl.:** PH:87.12

(50) **References Cited**

U.S. PATENT DOCUMENTS

EP 4,809, 93794 Patent PH:87.12 1 Drawing Sheet


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Types of U.S. Patent Applications

- Provisional utility application
- Non-provisional application

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Provisional Patent Application

- A low-cost way to establish an early effective filing date in a non-provisional patent application with fewer formalities
- Not accomplished by "Invention Disclosure Forms"

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Provisional Patent Application

- Must file a corresponding utility patent application within 12 months in order to benefit from the priority date of the provisional application.

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Non-Provisional Utility Patent Application

Requirements:

- Specification (description)
- Drawings (when necessary)
- Nucleotide and/or amino acid sequence listing (when necessary)
- At least one claim
- Oath or declaration
- Prescribed filing, search and examination fee

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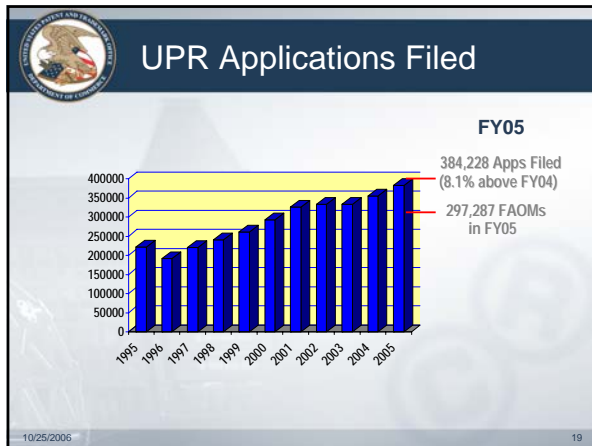
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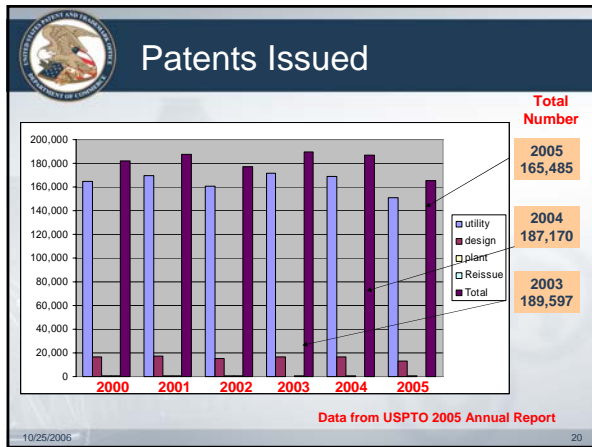


U.S. Patent Statistics

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FY 05 Patent Pendency

| Technology Center | Average 1 st Action Pendency (months) | Average Total Pendency (months) |
|--|--|---------------------------------|
| 1600 - Biotechnology and Organic Chemistry | 23.0 | 32.3 |
| 1700 - Chemical and Materials Engineering | 19.7 | 29.7 |
| 2100 - Computer Architecture Software and Information Security | 32.7 | 43.5 |
| 2600 - Communications | 30.5 | 42.3 |
| 2800 - Semiconductor, Electrical, Optical Systems | 14.5 | 24.9 |
| 3600 - Transportation, Construction, Electronic Commerce | 18.4 | 26.9 |
| 3700 - Mechanical Engineering, Manufacturing and Products | 18.3 | 26.3 |
| UPR Total (as of 9/1/2005) | 21.1 | 29.1 |
| FY 05 Target | 20.7* | 31.0 |

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FY 05 Patent Pendency

¹ "Average 1st action pendency" is the average age from filing to first action for a newly filed application, completed during July-September FY 2005.

² "Average total pendency" is the average age from filing to issue or abandonment of a newly filed application, completed during July-September FY 2005.

* Assuming current input and output estimates, the agency should achieve first action pendency of 21.3 months by the end of FY 2005 and total pendency of 30.2 months.



Statutory Considerations



Patent Examination

- Patent Examiner reviews contents of the application for compliance with all U.S. legal requirements.
- **An applicant is entitled to a patent unless...**



Major Statutory Areas of Patentability Consideration

- 35 U.S.C. §101: **Utility**
- 35 U.S.C. §102: **Anticipation**
- 35 U.S.C. §103: **Obviousness**
- 35 U.S.C. §112, first paragraph: **Enablement and written description**
- 35 U.S.C. §112, second paragraph: **Definiteness**

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35 USC §101

- Whoever invents or discovers any new and useful process, **machine, manufacture, or composition of matter, or any new and useful improvement thereof**, may obtain a patent therefore, subject to the conditions and requirements of this title.

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Utility Guidelines

- **Specific utility**
 - Specific to the claimed invention
- **Substantial utility**
 - Utility that has real-world value
- **Credible utility**
 - Is specific utility credible?

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Utility Guidelines

- Well established utility
 - **A specific utility which is well known**
- If asserted in the specification or immediately apparent to the artisan, and is credible, then it would be acceptable.

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Effect of Prior Art

- A prior disclosure of the claimed invention is said to anticipate the invention and may preclude patentability.

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Effect of Prior Art

- Differs in different jurisdictions
- U.S.: 1-year grace period
 - EU: No grace period
 - JPO: 6-month grace period
 - Singapore: 6-month grace period for learned treatise

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35 U.S.C. §102

Novelty and Loss of Right to Patent

– A person shall be entitled to a patent unless

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

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35 U.S.C. §102

Novelty and Loss of Right to Patent

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

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35 U.S.C. §102

Novelty and Loss of Right to Patent, *cont.*

- (e) the invention was described in — (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent ...

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35 U.S.C. §103

Non-Obvious Subject Matter

- A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that *the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art* to which said subject matter pertains.

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Obviousness

An rejection of "Obviousness" may be based upon:

- Single reference
- Combination of references

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35 USC §112 – Enablement

The specification shall...**enable any person skilled** in the art to which it [the invention] pertains, or with which it is most nearly connected, to **make and use the same...**

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“Wands Factors”

- Breadth of claims
- Nature of the invention
- State of the prior art
- Level of skill in the art
- Level of predictability
- Amount of direction/guidance
- Presence/absence of working examples
- Quantity of experimentation

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35 USC §112, First Paragraph Written Description

The specification shall contain a **written description of the invention, and the manner and process of making and using it**, in such full, clear, concise and exact terms as to enable...

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Written Description Requirement Objectives

- To clearly convey that an applicant has invented the subject matter which is claimed.
- To put the public in possession of what the applicant claims as the invention.
- To prevent applicant from claiming subject matter not fully described in the specification.

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General Principles

- Basic inquiry: Can one skilled in the art reasonably conclude that the inventor had possession (constructive or actual) of the claimed invention at the time the application was filed?
- Written description requirement is a separate and distinct from the enablement requirement.

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Patent Claims

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Patent Claims

- At the end of every patent, the inventor must delineate the invention he/she claims
- The claims of a patent define the scope of the invention covered by the patent
- Claim language can be complicated and requires knowledge of certain terms of art


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Filing Abroad Paris Convention / PCT

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Protection Outside the U.S.

Using a US patent document for priority outside the U.S:

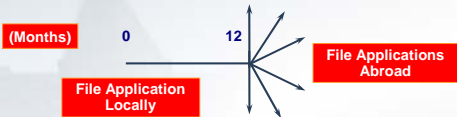
Paris Treaty:
Filing individual patent applications in **each** country where protection is desired, based upon Paris Convention priority (**Must file within 12-months of filing the U.S. patent application**)

Patent Cooperation Treaty:
Filing a single application designating all the countries which are part of the treaty

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Traditional Patent Systems



*Local patent application followed within 12 months by multiple foreign applications claiming priority under Paris Convention:

- Multiple formality requirements
- Multiple searches
- Multiple publications
- Multiple examinations and prosecutions of applications
- Translations and national fees required at 12 months

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Introduction to the PCT

- The PCT functions as a patent application filing system
- There is no “international patent”
- The applicant must still prosecute the international application in each national or regional office in order to obtain a patent

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Purposes of the PCT

- To simplify the process of filing foreign patent applications
- To give every regional and national patent office the benefit of a search and a preliminary report on patentability by a major patent office

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Advantages of the PCT

- To file in up to 127 countries with a single international application
- To delay the expenses associated with:
 - Translations
 - Foreign filing fees
 - Local associates

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Advantages of the PCT

Compliance with the form prescribed for the international application must be accepted by all designated States during national stage

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Advantages of the PCT

- To provide an early indication of pertinent prior art and written opinion as to the novelty, inventive step and industrial applicability of the claimed invention
- To give extra time for assessment of commercial viability in designated states

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PCT System



The diagram shows a timeline from 0 to 30 months. Key events include: File First Application (0), File PCT (12), International Search Report/Written Opinion (16), International Publication (18), File Demand (20), International Preliminary Examination (20), and Enter National Phase (30). Chapter I covers the period from 18 to 20 months, and Chapter II covers the period from 20 to 30 months. An 'OR' indicates that either 'File Demand' or 'International Preliminary Examination' can be chosen.

Local application followed within 12 months by the PCT, claiming priority under the Paris Convention.

- One set of formalities requirements
- International search & publication
- Optional international preliminary examination
- Translations and national fees required at 20 or 30 months, and only if applicant wants to proceed with national phase entry

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Requirements for an International Filing Date

Application must contain:

- An indication that it is intended as an international application filed under the PCT
- A designation of at least one Contracting State
- Name of the applicant
- A description
- One or more claims

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PCT Resources

- Manual of Patent Examining Procedure (MPEP):
 - Chapter 1800
 - Appendix T (PCT and regulations)
 - Appendix AI (PCT Administrative Instructions)
- PCT Help Desk:
 - Phone: 571-272-4300
 - Fax: 571-273-0419

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Trade Secrets

Two fundamental concepts:

- 1) Trade secret must be something that is used in business and which gives the owner a competitive advantage.
- 2) The owner of a trade secret must take reasonable measures to maintain its secrecy.

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Trade Secrets

Most often used to protect proprietary portions of technology:

- Formulae
- Manufacturing processes
- Business strategies
- Business management information
- Customer lists
- Design concepts

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Trade Secrets

- There is the Uniform Trade Secret Act, but trade secret laws vary by state.
- A business must take steps to protect the “secret” material.
 - Limit access to the information, provide the information on a need to know basis
 - Have contractual clauses which prevent the employees from divulging the information

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Trade Secret vs Patent

Trade Secret

- Indefinite
- Not registered or disclosed
- Can be separately discovered
- Remedies only if the secret is illegally appropriated

Patent

- Limited lifetime
- Patents are granted by the USPTO
- Provides protection in exchange for disclosure and provides the rights to exclude others
- Remedies for infringement

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Patents and the Patent Cooperation Treaty



THANK YOU



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