



African Regional Intellectual Property Organization

PROTECTING INVENTIONS: THE ROLE OF PATENTS, UTILITY MODELS AND DESIGNS

By J N Kabare, Senior Patent Examiner, ARIPO

Harare, Zimbabwe: 21 to 24 October, 2014

Making better use of Intellectual Property for business competitiveness and development in Africa

Outline

- Patents and their role
- Utility Models and their role
- Industrial Designs and their role
- Conclusions



Patents



Making better use of Intellectual Property for business competitiveness and development in Africa

What is a Patent?

- A patent is an **exclusive right** granted, by a **State**, for a **limited period**, in respect of an **invention** that meets the **patentability requirements**



What is a patent? cntd

- Invention?
 - An invention is a technical solution to a technical problem of any industry
- Exclusive right?
 - Right to prevent third parties, not having the authorization of the patent holder, from making, using, selling, offering for sale or importing a product or process based on the patented invention without the consent of the patent holder



What is a Patent? cntd

- Limited period?:
 - Minimum of 20 years from filing date
- Territorial?:
 - Invention only protected in the country (or region) in which protection is sought



What is a Patent? ctnd

- Conditions for patentability: The invention must:
 - **Be new or novel (novelty)**
 - Involve an **inventive step** (non-obvious)
 - Be capable of **industrial application** (utility requirement)

Other matters considered:

- Patentable subject matter
- Sufficiency of disclosure
- Unity of invention
- Public order and morality



What is a Patent?

- Structure of a patent:
 - Front page which contains the bibliographic data - (name and address of the applicant, inventor, agent, filing and publication dates,)
 - Description
 - Title of the invention,
 - Technical field of the invention
 - Background art
 - Detailed disclosure of the invention
 - Claims
 - Drawings (where applicable)
 - Abstract



How to apply for a patent?

- File patent application through:
 - National route
 - Regional route
 - International route (PCT)
- NOTE
- Paris Convention provision on priority claim



The Role of Patents

- From a public policy perspective, a patent has two major roles. These include:
 - Protection (exclusive rights) and
 - Disclosure of information
 - » Patent documents constitute a valuable source of legal, technical, business, and policy-related information



The Role of Patents cntd.

- From a business perspective, the role of a patent includes:
 - Creating a strong market position and advantage
 - Helps in obtaining higher profits or returns on investment
 - Provides additional income from licensing or assigning a patent
 - Helps in accessing technology through cross-licensing
 - Aids in accessing new markets
 - Diminishing risks of infringement
 - Creating positive image for an enterprise
 - Enhancing ability to obtain grants and / or raise capital
 - Being a powerful tool to take action against imitators and free riders



Disclosure of information role

- Patent information can be accessed from:
 - Free – of – charge patent databases or
 - Commercial patent databases



Where can free-of-charge patent information be found?

- **Free databases:** tend to be more suitable for initial simple searches
 - A list of national patent databases is available at <http://www.wipo.int/ipdl/en/resources/links.jsp>
 - WIPO's PATENTSCOPE® search service available at <http://www.wipo.int/patentscope>
 - European Patent Office's esp@cenet search service available at <http://ep.espacenet.com>
 - Google Patents (only US patents) at <http://www.google.com/patents>



What is PATENTSCOPE® ?

- WIPO' s patent information portal
- Database of over 2 million international patent applications (PCT)
- National patent collections from more than 20 participating offices including: Argentina, **ARIPO**, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Guatemala, Honduras, Israel, **Kenya** Mexico, Morocco, Nicaragua, Panama, Peru, Republic of Korea, Singapore, **South Africa**, Spain, Uruguay and Vietnam, EPO, LATIPAT
- Free-of-charge
- www.wipo.int/patentscope



Where can commercial patent information be found?

- Commercial databases: value-added patent information on a fee-paying basis
 - A list of such databases and many others can be found on the web-site of the Patent Information Users Group (PIUG) at <http://www.piug.org/vendors.php>
 - Examples:
 - <http://www.lexisnexis.com>
 - <http://www.wipsglobal.com>
 - <http://www.orbit.com>
 - <http://scientific.thomsonreuters.com/>



Nature of patent information

- Patent protection is **territorial** in nature **but**
- Patent information is **global**

- Patent protection is **limited by claims** in scope **but**
- Patent information includes **all information** contained in patent documents

- Patent protection is **time-limited** **but**
- Patent information remains **permanently available**



Nature of patent information (cont' d)

- Patents give their owners a **right to prevent others** from carrying out the invention (manufacturing or marketing) **but**
- Patents **do not prevent others** from learning from the invention



Patents : A unique source of information

- About two-thirds of the technical information revealed in patents is never published elsewhere
- Over 70 million patent documents have been published to date
- Patent documents provide various types of information in a highly standardized format



Bibliographic data

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 April 2004 (22.04.2004)

PCT

(10) International Publication Number
WO 2004/032631 A1

Publication date

Publication number

Classification

(51) International Patent Classification⁷: **A01N 65/00**

(74) Agents: **BENSON, John, Everett et al.**; J.A. Kemp & Co.,
14 South Square, Gray's Inn, London WC1R 5JJ (GB).

(21) International Application Number:
PCT/GB2003/004367

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US,
UZ, VC, VN, YU, ZA, ZM, ZW.

Designated states

(22) International Filing Date: 10 October 2003 (10.10.2003)

Filing date

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0223657.8 10 October 2002 (10.10.2002) GB

Priority date

(71) Applicant (for all designated States except MW, US):
**THE ETHIOPIAN AGRICULTURAL RESEARCH
ORGANISATION [ET/ET]**; P.O. Box 2003, Addis Ababa
(ET).

Applicant

(71) Applicant (for MW only): **PITTARDS PLC** [GB/GB];
Sherborne Road, Yeovil, Somerset BA21 5BA (GB).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(72) Inventor; and

(75) Inventor/Applicant (for US only): **KASSA, Bayoh,
Tiruneh** [ET/ET]; The Ethiopian Agricultural Research
Organisation, P.O. Box 2003, Addis Ababa (ET).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Inventor

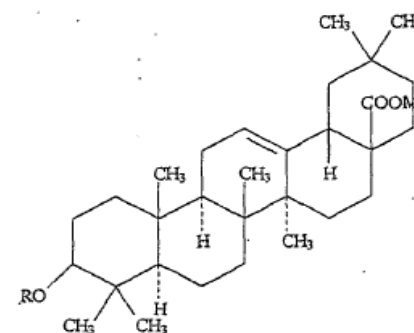


Description (specification)

TREATMENT RELATING TO LEATHER

The present invention relates to a treatment that can be carried out, usually on a leather-producing animal, to avoid or to reduce certain imperfections in the final leather grain that might otherwise result from the animal becoming infested with lice, keds or other ectoparasites or other organisms. Such organisms can cause skin damage which may lead to bacterial or other infection. The treatment can inhibit or prevent the growth or reproduction of such organisms, thus preventing or reducing skin damage or allowing earlier damage to heal. Often the damage is not apparent in the living animal, and only becomes apparent at some stage during tanning of the skin.

The saponins extracted have the following formula:



- Describes how the invention works (addresses a particular technical problem)
- Provides background information on this problem
- Indicates other known solutions to the problem



Claims

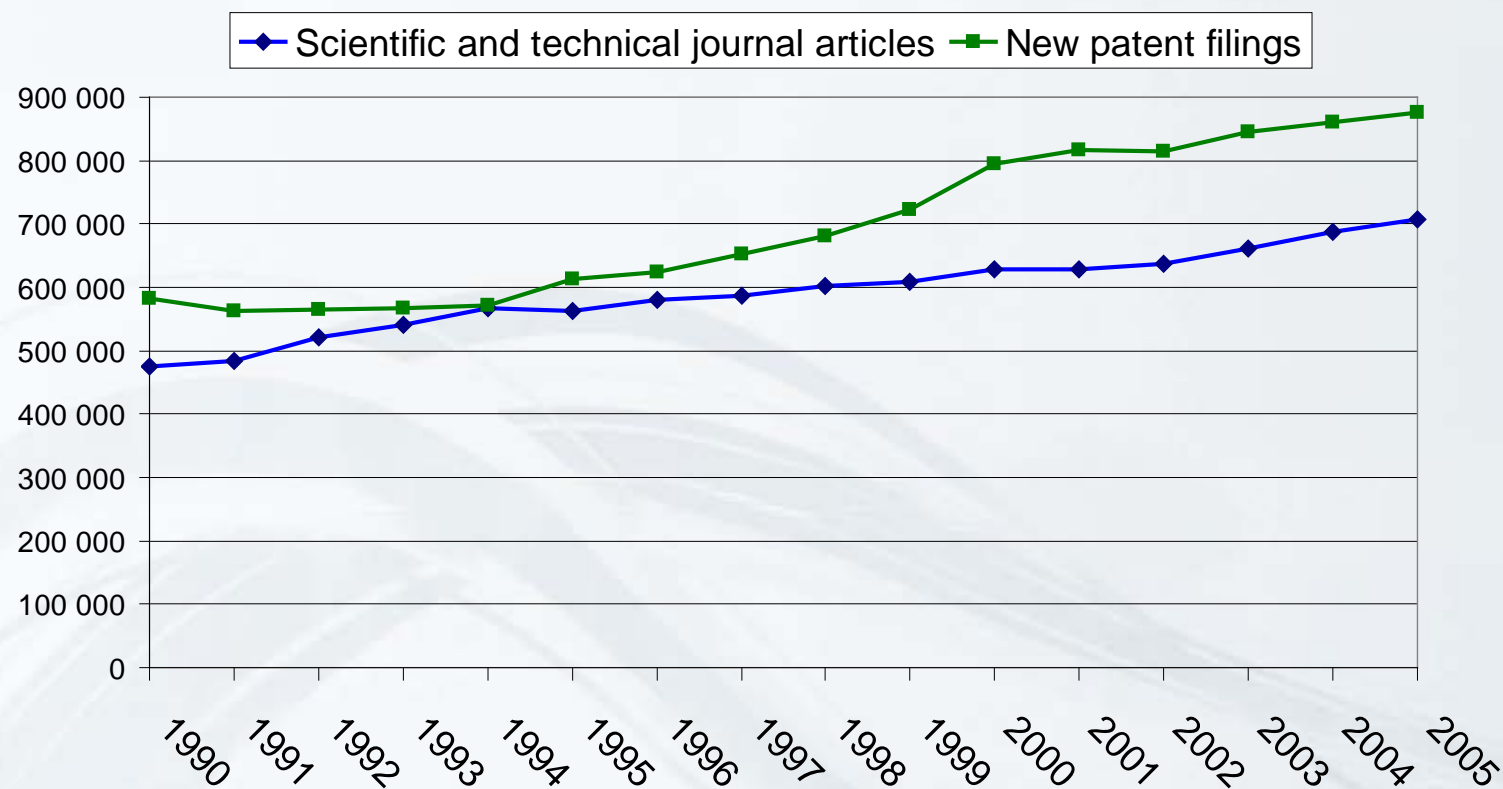
CLAIMS

1. Use of an extract of *Phytolacca* in the manufacture of the medicament for the treatment or prevention of skin infestation by an organism that impairs leather quality.
2. An extract of *Phytolacca* for use in the treatment or prevention of skin infestation by an organism that impairs leather quality.
3. A method of treating a leather-producing animal having or susceptible to skin infestation by an organism that impairs leather quality, which method comprises applying to skin of the animal an extract of *Phytolacca*.

- Define the scope of protection sought by the applicant



New Technical Information Worldwide



Source: WIPO Statistical Database (patent families); World Bank, World Development Indicators (journals)



Making better use of Intellectual Property for business competitiveness and development in Africa

Patent information: New opportunities!

- Many patent collections are now available online in digital format
- Search services and tools have made the exploitation of this information simpler and more cost-effective
- Many search services and tools are available for free!
→ Opportunities exist to open patent information to new constituencies



Uses and users of patent information

- Uses
 - Legal
 - Technical
 - Business
 - Policy
- Users
 - Individual inventors
 - Small and medium enterprises (SMEs)
 - Industry
 - Research institutions
 - Academia
 - Patent attorneys
 - and many others...



Uses of patent information : Legal

- Avoid patent infringement
- Determine the patentability of your inventions
- Draft strong patent applications
- Determine the validity of existing patents and which technologies belong to the public domain



Patent information and the public domain

- Technology disclosed in a patent document may be in the public domain if:
 - The patent application has not been filed in a given country
 - The patent has been refused
 - The patent term has expired, or the patent has not been renewed
 - The disclosed information is not covered by the claims



Example : Pharmaceutical technology

- 127,522 international patent applications (PCT)
- 17% of that number in South Africa
- 1% of that number in ARIPO
- Significant freedom to operate?

Offices		Main IPC	
Name ↕	No ↕	Name ↕	No ↕
PCT	127532	A61K	129370
Australia	33634	C07D	13000
Korea	25603	A61P	3680
South Africa	21939	C07K	2667
Singapore	4528	C12H	2193
Vietnam	4044	A01H	1941
Argentina	3289	C07C	1842
Mexico	2063	A23L	1730
ARIPO	1174	C07H	773
Cuba	130	A61F	722



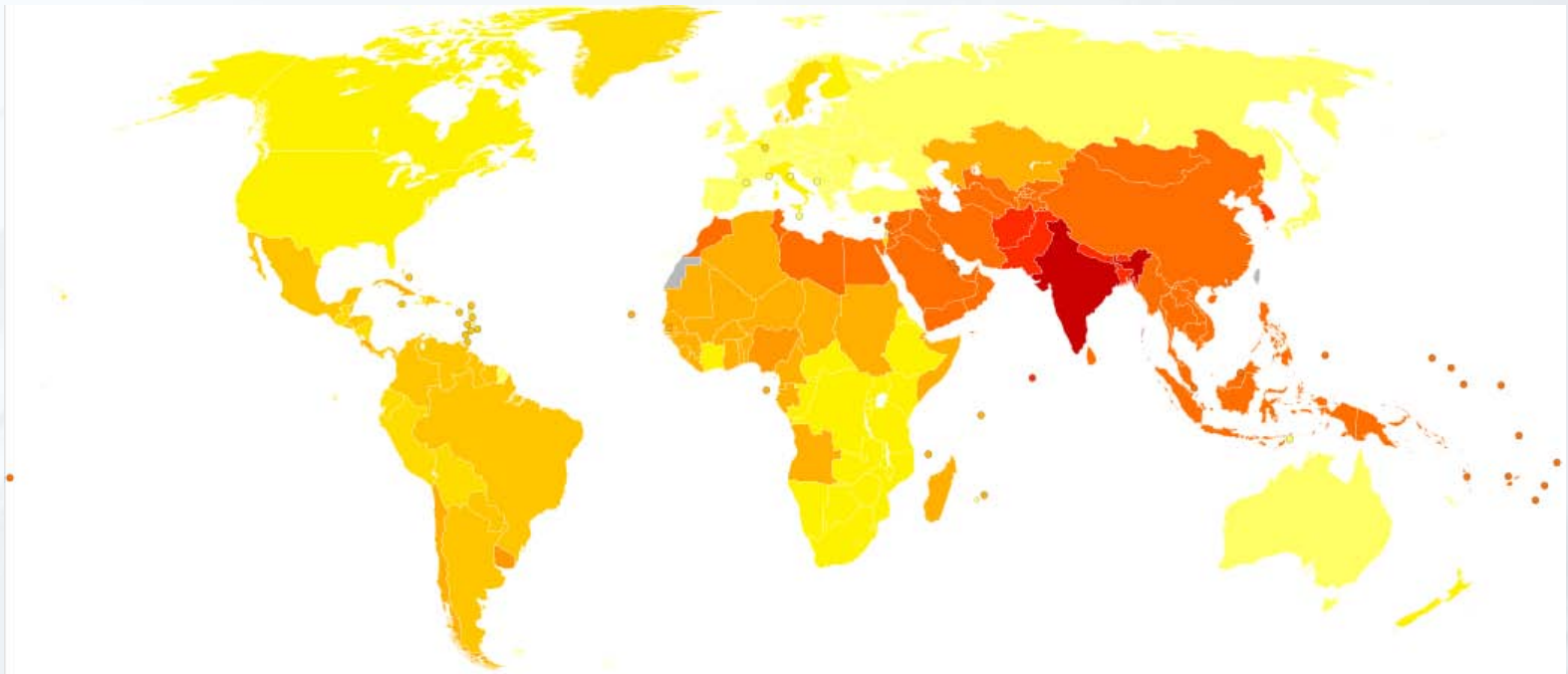
Uses of patent information : Technical

- Develop new solutions to technical challenges faced in the country, or adapt existing technologies to suit local conditions
- Target research resources more effectively (avoid “reinventing the wheel”)



Example : Vaccines for poliovirus

- Though largely eradicated, polio remains an issue in many countries around the world



Vaccines against poliovirus : Accessing patent information

Sort by: Pub Date Desc		Google translate: Original					
No	Ctr	Title	PubDate	Int.Class	App.No	Applicant	Inventor
1.	WO	WO/2010/046935 -COMBINATION VACCINE WITH ACELLULAR PERTUSSIS	29.04.2010	A61K 39/05	PCT/IN2009 /000600	PANACEA BIOTEC LTD.	JAIN, Rajesh
<p>The present invention relates to a combination vaccine comprising a mixture of antigens for protection against diseases such as diphtheria, tetanus, acellular pertussis, and infections caused by <i>Haemophilus influenzae</i> and polio viruses. The present invention also relates to inclusion of antigens for protection against infections caused Hepatitis virus and other pathogens, such that administration of the vaccine can simultaneously immunize a subject against more than one pathogen. The invention in particular relates to a fully liquid stable combination vaccine comprising the antigens as indicated above and the methods for manufacturing the same.</p>							
2.	WO	WO/2010/046934 -COMBINATION VACCINE WITH WHOLE CELL PERTUSSIS	29.04.2010	A61K 39/05	PCT/IN2009 /000599	PANACEA BIOTEC LTD.	JAIN, Rajesh
<p>The present invention relates to a combination vaccine comprising a mixture of antigens for protection against diseases such as diphtheria, tetanus, whole cell pertussis and polio. The present invention also relates to inclusion of one or more antigens in the said combination vaccine, for protection against infections caused by <i>Haemophilus influenzae</i>, Hepatitis virus, and other pathogens, such that administration of the vaccine can simultaneously immunize a subject against more than one pathogen. The invention in particular relates to a fully liquid stable combination vaccine comprising the antigens as indicated above and the methods for manufacturing the same.</p>							
3.	WO	WO/2009/111849 -METHOD FOR STABILIZED VACCINE PRODUCTION	17.09.2009	A61K 39/13	PCT/BR2009 /000058	UNIVERSIDADE FEDERAL DO RIO DE JANEIRO - UFRJ	GASPAR, Luciane Pinto
<p>The present invention relates to vaccines field, more particularly, to th three vaccine strains stabilization of polio, presents in oral vaccine again poliomyelitis (OPV). High hydrostatic pressure is a technology that is extremel safe, clean and economical. Furthermore, a commercial vaccine stabilized b high hydrostatic pressure action avoids the need of electric energy for materi storage.</p>							

- Search in technical information
 → classification : A61K 39/13 ("Medicinal preparations containing antigens or antibodies – Poliovirus")



Vaccines against poliovirus : Record

3. (WO2009111849) METHOD FOR STABILIZED VACCINE PRODUCTION

PCT Biblio. Data Description Claims National Phase Notices **Documents**

Latest bibliographic data on file with the International Bureau ↻

Pub. No.: WO/2009/111849 **International Application No.:** PCT/BR2009/000058
Publication Date: 17.09.2009 **International Filing Date:** 10.03.2009

IPC: **A61K 39/13** (2006.01), **A61K 39/125** (2006.01)

Applicants: UNIVERSIDADE FEDERAL DO RIO DE JANEIRO - UFRJ [BR/BR]; Av. Brigadeiro Trompowski, s/n°, Cidade Universitária, 21044-020 Ilha do Governador, Rio de Janeiro - RJ (BR) *(For All Designated States Except US)*.
GASPAR, Luciane Pinto [BR/BR]; (BR) *(For US Only)*.
FREIRE, Marcos da Silva [BR/BR]; (BR) *(For US Only)*.
DE OLIVEIRA, Andréa Chelbe [BR/BR]; (BR) *(For US Only)*.
DA SILVA, Jerson Lima [BR/BR]; (BR) *(For US Only)*

Inventors: GASPAR, Luciane Pinto; (BR).
FREIRE, Marcos da Silva; (BR).
DE OLIVEIRA, Andréa Chelbe; (BR).
DA SILVA, Jerson Lima; (BR)

Agent: ATEM E REMER ASSESSORIA E CONSULTORIA DE PROPIEDADE INTELECTUAL LTDA.; Praça Floriano, 19/28° andar, 20031-050 Cinelândia - Rio de Janeiro - RJ (BR)

Priority Data: PI 0800357-2 10.03.2008 BR



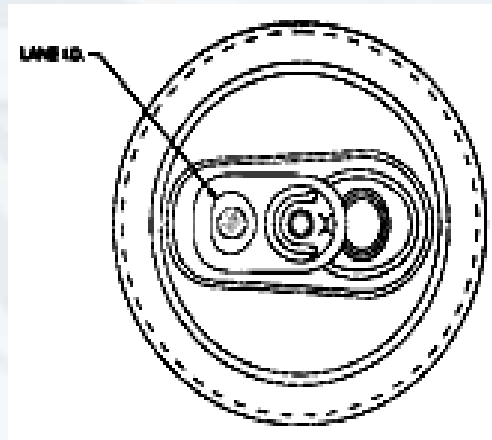
Uses of patent information : Business and policy

- Track research activities of competitors
- Identify opportunity for licensing and joint ventures
- Review trends in specific areas of technology



Example of can opening mechanism licensing:

The inventor of the mechanism licensed the system to Coca-Cola at 1/10 of a penny per can. During the period of validity of the patent the inventor obtained 148,000 UK pounds a day on royalties



Wind power : Accessing patent information

Sort by: <input type="text" value="Pub Date Desc"/>		Google translate: <input type="text" value="Original"/>					
No	Ctr	Title	PubDate	Int.Class	App.No	Applicant	Inventor
1.	WO	WO/2010/078656 -VERTICAL SHAFT WINDMILL WITH GOVERNOR	15.07.2010	F03D 3/00	PCT/CA2010 /000020	SANDERS, John M.	SANDERS, John M.
<p>A governor for vertical shaft windmills for use in a vertical shaft windmill design. The governor is a plurality of pivoting wind channelling panels that are interconnected, and arranged in a pattern around the vertical shaft windmill rotor. Each panel is pivotal about a respective vertical axis so as to move to different angles relative to the periphery of the rotor and relative to the wind. The panels serve three purposes; to render the rotor inert when closed, to govern the speed of the rotor, and to channel wind into the rotor to increase power.</p>							
2.	WO	WO/2010/078723 -AIR CURRENT GENERATING SYSTEM AND METHOD	15.07.2010	F03D 1/04	PCT/CN2009 /070078	PENG, Michael	PENG, Michael
<p>An air current generating system and method, includes an air source, a passage (105), at least a motor-less air pump device (104) and at least a turbine generating set (102, 103); the passage has an air current inlet connected with the air source and an air current outlet; the motor-less air pump device is mounted at the air current outlet and in the natural wind; the turbine generating set at least includes a rotating blade provided in the passage; the motor-less air pump device is driven by the air current from the air source and/or the outside wind to form negative pressure in the passage, absorbs air from the air source continuously and forms an air current in the passage, wherein the air current rotates the rotating blade to drive the turbine generating set to generate electricity.</p>							
3.	WO	WO/2010/078886 -TURBINE POWER PLANT	15.07.2010	F03D 11/00	PCT/EP2009 /008414	ROBERT BOSCH GMBH	TENBERGE, Heinz-Josef
<p>The invention relates to a turbine power plant for generating electrical energy from a fluid flow, comprising a gondola rotatably mounted on a pedestal, particularly a tower, comprising a drivetrain, designed for converting the energy applied to the rotor into electrical energy by means of a rotor driven by the fluid flow and by means of functional components designed for supporting the rotor and/or for supporting the gearbox and/or for converting energy. The invention is characterized in that at least one of the functional components listed above has an operationally fixed connection for transmitting static and dynamic loads from the drivetrain to the tower.</p>							

- Search in technical information
→ classification : F03D ("wind motors")



Wind power : Results clustering

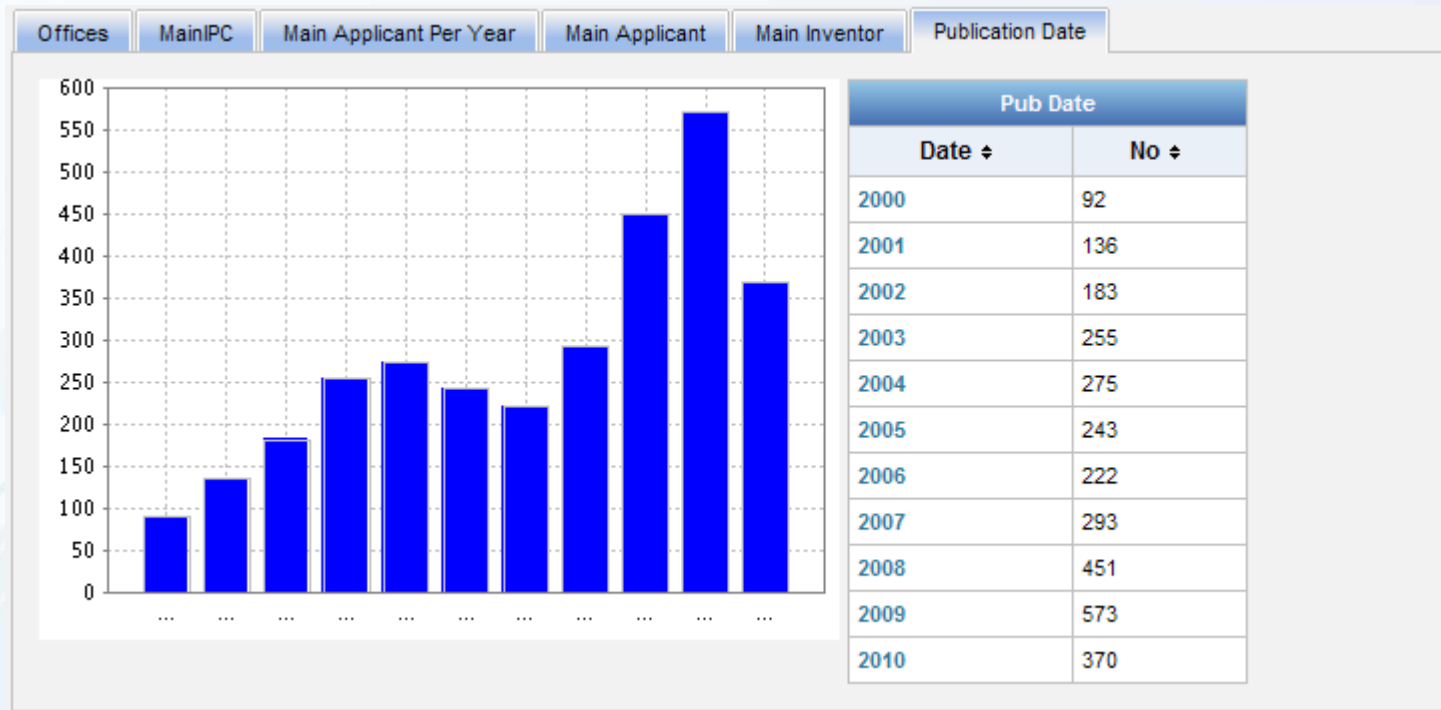
Analysis

Options: Table Graph Options: bar pie

Offices		Main IPC		Main Applicant		Main Inventor		Pub Date	
Name	No ↕	Name ↕	No ↕	Name ↕	No ↕	Name	No ↕	Date ↕	No ↕
PCT	2795	F03D	2791	VESTAS WIND SYSTEMS A/S	203	WOBZEN, Aloys	123	2000	92
Korea	479	F03B	125	WOBZEN, Aloys	127	WOBZEN, ALOYS	53	2001	136
Mexico	194	F01D	33	LM GLASFIBER A/S	65	WON, IN HO	40	2002	183
Argentina	131	E04H	32	MITSUBISHI HEAVY INDUSTRIES, LTD.	61	ALOYS WOBZEN	24	2003	255
South Africa	95	B63H	31	WOBZEN, ALOYS	59	GRABAU, Peter	21	2004	275
Israel	48	B64C	29	REPOWER SYSTEMS AG	48	SIEGFRIEDSEN, Sönke	18	2005	243
Vietnam	12	H02K	28	WON, IN HO	40	NUMAJIRI, Tomohiro	17	2006	222
Cuba	6	B63B	28	SIEMENS AKTIENGESELLSCHAFT	34	STIESDAL, Henrik	15	2007	293
Singapore	5	H02P	25	ALOYS WOBZEN	34	STIESDAL, Henrik	15	2008	451
ARIPO	2	B29C	25	VESTAS WIND SYSTEMS A/S.*	31	HANCOCK, Mark	13	2009	573
						Aloys WOBZEN	12	2010	370

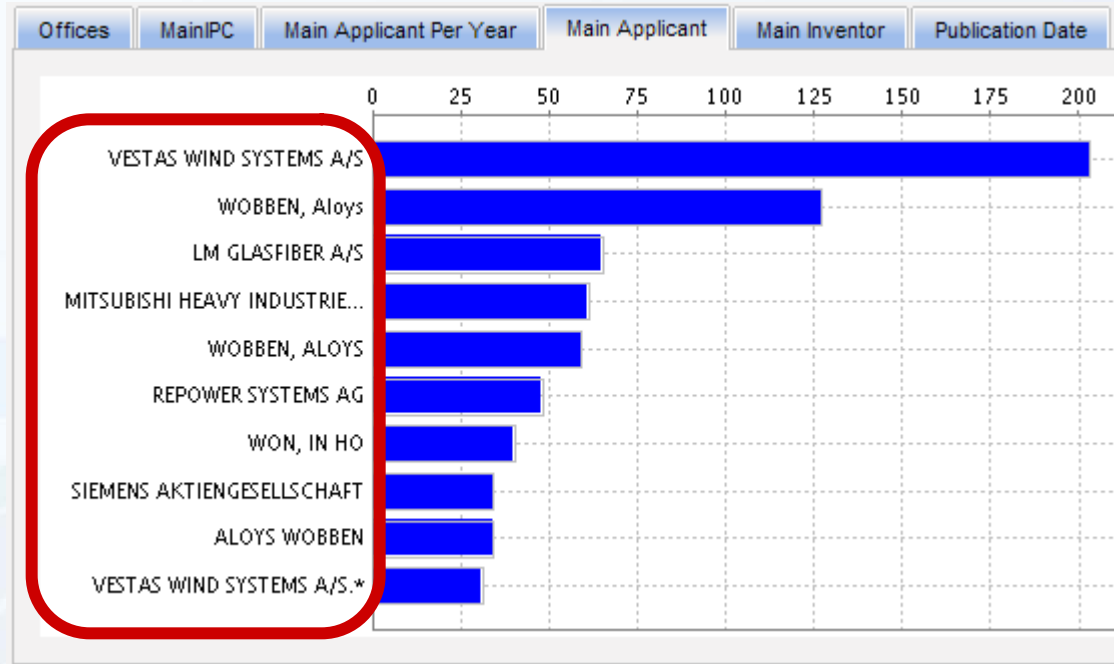


Wind power : Filing trends



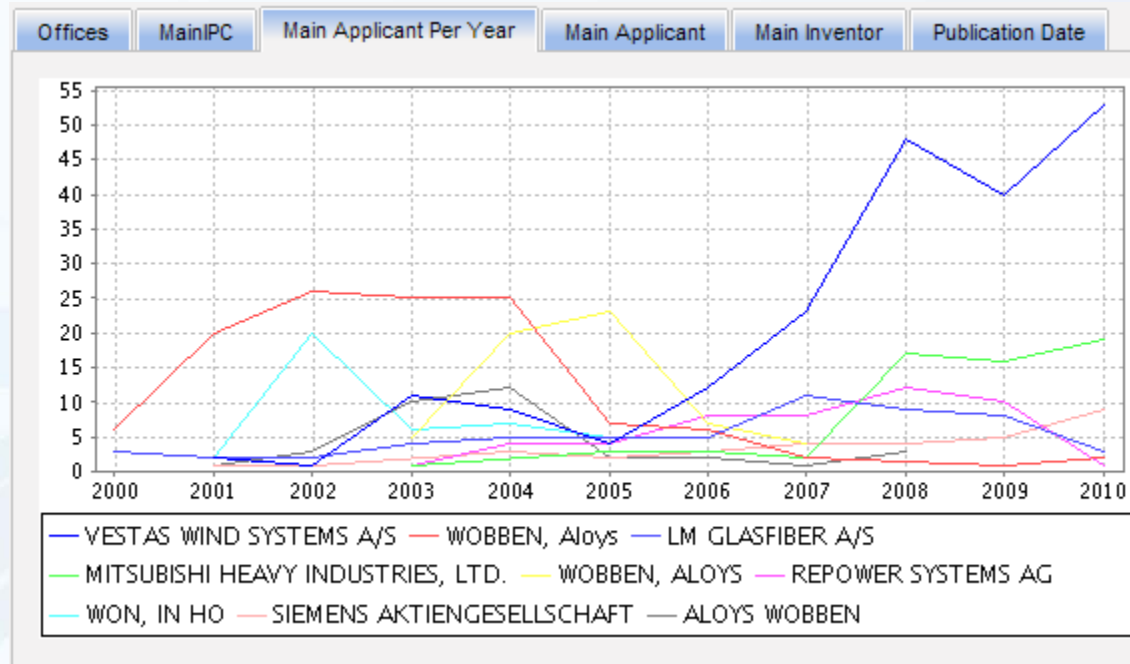
- How is this technology evolving over time?

Wind power : Top applicants



- Who is particularly active in this field of technology?
- From whom can I seek licenses, or with whom can I negotiate partnerships?

Wind power : Filing trends



- How is the patenting activity of these top applicants evolving over time?

Utility Models



Utility models

- Utility models , also known as short-term patents or petty patents or utility certificates, or innovation patents
- Requirements are more or less similar to those of patents but:
 - **Conditions for registration less stringent than for patents**
 - **The term of protection is generally shorter**
 - **Generally cheaper to obtain and maintain**
 - **Registration process generally faster**
 - **Only exists in a limited number of countries**
 - **Format of utility model is very to that of a patent**



The Role of Utility Models

- Similar to that of patents and includes:
 - Public policy perspective:
 - » Protection
 - » Disclosure of information
 - Business perspective
 - » (as in patents above)



Industrial Designs



Making better use of Intellectual Property for business competitiveness and development in Africa

What is an Industrial Design?

Industrial Design:

- Refers only to the *ornamental* or *aesthetic* aspect of a product (appearance of product)
- May consist of:
 - three-dimensional features such as the shape of a product or
 - two-dimensional features such as patterns, lines, or colour of a product or
 - a combination of such features

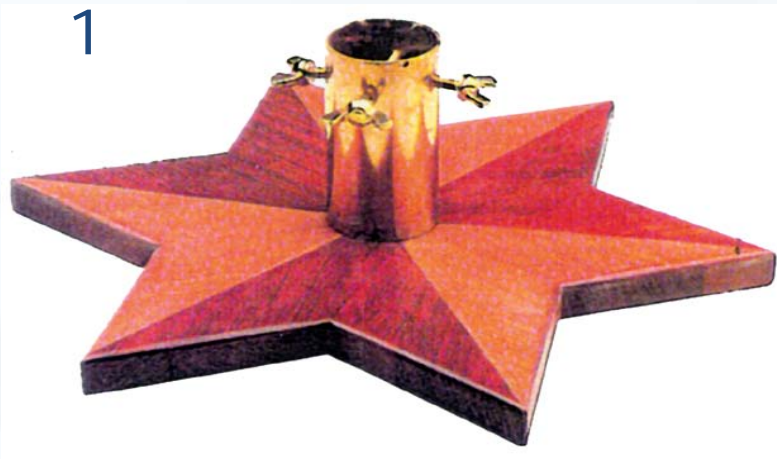


What is an industrial design? Cntd.

- Conditions for registration of industrial design:
 - **New or novel** – if no identical design disclosed to the public before the date of filing
 - **“Original”** – if independently created by the designer and is not a copy or imitation of an existing design
 - **Individual character** – requirement met if the overall impression produced by a design of an informed user differs from the overall impression produced on such a user by any design which has been made available to the public



Individual character... or not

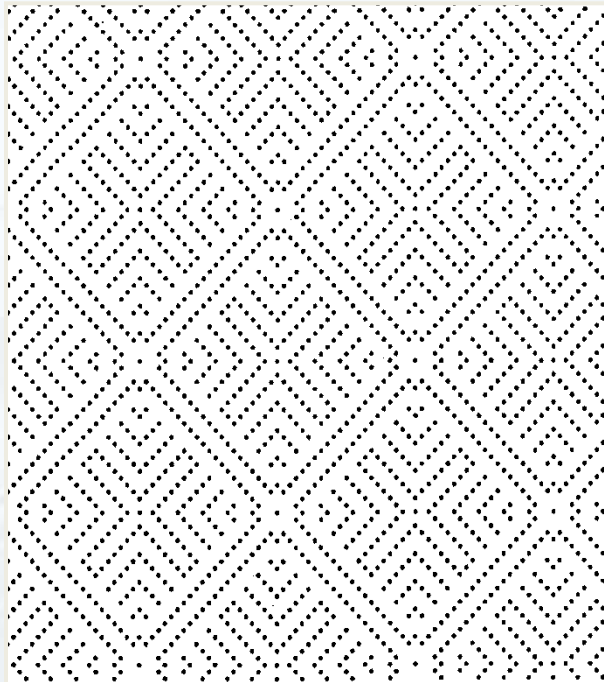


Is 2 a Good or Bad Design if 1 is registered?

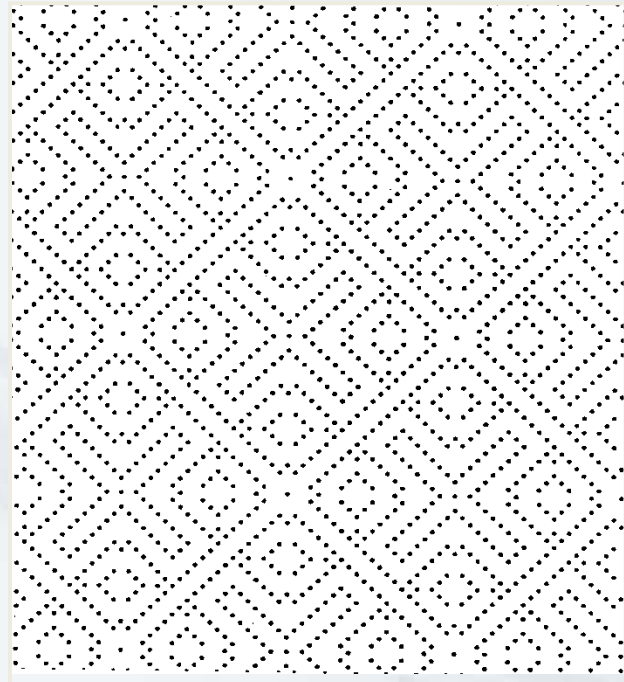


Individual character... or not

1



2



Is 2 a Good or Bad Design if 1 is registered?



Industrial designs cntd

- Designs that do not meet the requirements of novelty, original and individual character include:
 - Designs which are considered to be dictated exclusively by the **technical function** of a product
 - Designs incorporating protected **official symbols or emblems** (such as flags)
 - Designs which are considered to be **contrary to public order or morality**



Industrial designs ctnd.

- Exclusive rights provided by industrial design protection:
 - Right to prevent **unauthorized copying or imitation** by third parties
 - This includes the right to exclude all others from **making, offering, importing, exporting or selling** any product the design is incorporated
- Industrial designs protected for at least 10 years



Consumer Products

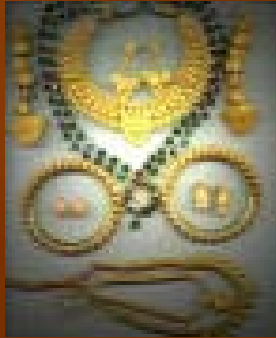


Pharmaceutical Product





Textile & Jewellery



Industrial designs cntd.

- How to protect industrial designs?: File design application through the:
 - National route
 - Regional route
 - International route (the Hague Agreement administered by WIPO)



Industrial designs cntd.

- Role of industrial designs:
 - **Provide protection thereby encouraging creativity and innovation**
 - **Prevent products being copied or imitated by competitors – strengthen competitive position**
 - **Contributes to obtaining fair return on investment – thereby improves profits**
 - **Business assets that can increase the commercial value of a company and its product**
 - **May be licensed or sold**
 - **Encourages fair competition and honest trade practices**



Conclusions

- Protection of patents, utility models and industrial designs create an appropriate incentive for investing in improving competitiveness and thereby encourage creativity and innovation
- Protection not automatic, therefore applications must be filed either through national, regional or international routes
- Patents, utility models and industrial designs provide exclusivity over the exploitation of creative and innovative products, brands and services
- Patents, utility models and industrial design ensures a competitive market place, honest trade practices and overall national development
- Information disclosed in patents and utility models very beneficial





African Regional Intellectual Property Organization

Address: **11 Natal Road, Belgravia, Harare, Zimbabwe**

Tel: **+263 4 794 065 /6/8/54/74**

Fax: **+263 4 794 072/3**

Email: **jkabare@aripo.org**

mail@aripo.org

Website: **www.aripo.org**

**Making better use of Intellectual Property for business
competitiveness and development in Africa**