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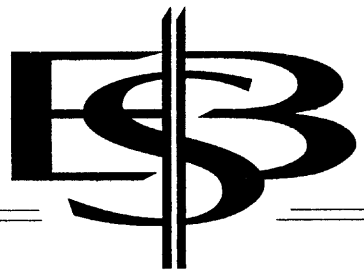

Estonian
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No.2 (1997)

Ott Moorlat, M.Sc., Economics

SOME PROBLEMS OF THE LEGAL PROTECTION OF INDUSTRIAL PROPERTY AND THE CONFLICTS ON THE INTERNET

Tallinn

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Tallinn 1997

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Introduction

In the Estonian economy the problems of the legal protection of industrial property play an increasingly great role.
The evolution from commercial practice to law is almost as closely marked in industrial property as in any other area of commerce.

The material presented in this work comes from the series of the lectures "Protection of Intellectual Property" [13,14].

The Estonian transition from an agricultural society to an industrial and then to an information society is shown graphically in Fig. 1.

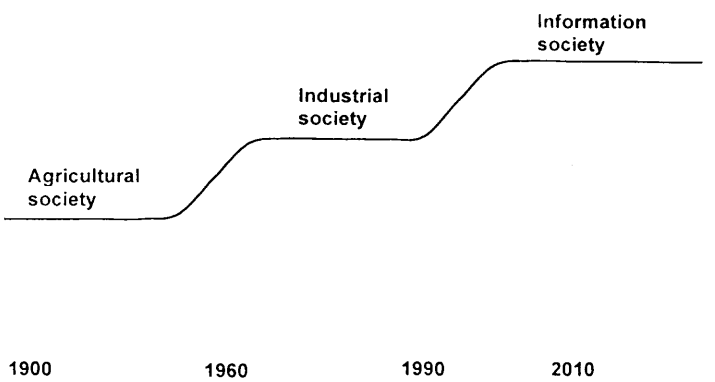

Figure 1 : Directions of growth in Estonia.

Intellectual property is a term used to describe the body of legal rights owned by an individual or company in technology, information, products, processes, designs etc. [1,2,10,12,28].

The legal protection of intellectual property in Estonia is being regulated by the following acts:

1. Trade Mark Act - in force from October 1, 1992;
2. Copyright Law - in force from December 12, 1992;
3. Competition Act - in force from January 1, 1994;
4. Act of Protection of New Varieties of Plants - in force from March 25, 1994;
5. Patent Law - in force from May 23, 1994;
6. Utility Model Law - in force from May 23, 1994;
7. Design Law - in force from 1997.

We live today in a world in which the economical health of nations and the competitiveness of firms is determined largely by the ability to develop, commercialize, and most importantly, to appropriate the economic benefits from scientific and technological innovations [28].

The Internet is the world's largest computer network and was established about 26 years ago. Today, the Internet is a worldwide communication system serving governments, schools, universities, and business [18].

The growth of the Internet has signalled the beginning of a whole new age in communication, commerce, entertainment, and enlightenment [11]. The Internet today is used by 20-50 million people. Millions of persons daily communicate across the Net, sending e-mail, documents, pictures, etc. Companies have established home pages, wherein their customers, or potential customers, can find out about products marketed by the company and may even place orders for goods or services.

The purpose of this work is to discuss about the industrial property rights in Estonia, the increasing number of conflicts involving Internet Domain names and software piracy on the Internet.

I hope this work will bring new thinking to the domain names and trade marks in Estonia.

This work is primarily intended for students, people involved in business and inventors.

Key Words: Intellectual property, industrial property,
copyright, trade mark, Internet, domain name,
patent

1. What is the intellectual property?

The objects of intellectual property are the creations of the human mind, the human intellect. This is why this kind of property is called "intellectual" property.

Intellectual property rights, such as patents, utility models, designs (Fig.2) and copyrights, are an important means used by firms to help protect their investments in innovation (Fig.3) [13].

United States Patent [19]
Kilk et al.

[11] **Patent Number: Des. 356,756**
[45] **Date of Patent: ** Mar. 28, 1995**

[54] **SNOW SLED**

[75] Inventors: **Rein Kilk**, Tartu, Estonia; **Madis Idarand**, Providence, R.I.

[73] Assignee: **Pindi International, Inc.**, Tartu, Estonia

[**] Term: **14 Years**

[21] Appl. No.: **18,749**

[22] Filed: **Feb. 14, 1994**
[52] **U.S. Cl.** **D12/11**; 280/18.1
[58] **Field of Search** D12/6, 11; 280/12.1, 280/18, 18.1

[56] **References Cited**

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3,901,526	8/1975	Scott et al.	280/18.1

FOREIGN PATENT DOCUMENTS

8100698	3/1981	WIPO	280/18.1

Primary Examiner—James M. Gandy
Assistant Examiner—M. Brown
Attorney, Agent, or Firm—Salter & Michaelson

[57] **CLAIM**

The ornamental design for snow sled, as shown.

DESCRIPTION

FIG. **1** is a perspective view of a snow sled showing our new design;
FIG. **2** is a top view thereof;
FIG. **3** is a bottom view thereof;
FIG. **4** is a side view thereof;
FIG. **5** is a front view thereof; and,
FIG. **6** is a rear view thereof.

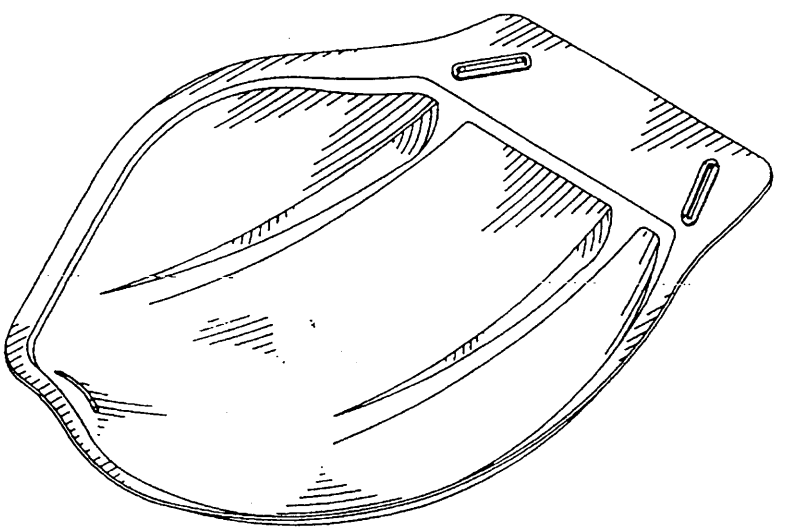

Figure 2: A snow sled designed for children
Designed by Rein Kilk, U.S. patent Des. 356,756

Inventions and transformed technologies are the crystallization of the people's creative activities.

Intellectual property is usually divided into two branches, namely "industrial" property and "copyright". Copyright relates to:

1. scientific discoveries,
2. scientific, literary and artistic works,
3. artistic creations (poems, novels, music, paintings, cinematographic works, etc.).

2. Copyright

The purpose of Estonian Copyright Law is to guarantee the continuous development of culture and the protection of cultural achievements, as well as to create conditions favorable to authors, performers of works, producers of phonograms and radio and television organizations for creation and the use of works.

The Law shall establish:
1) the protection of the specific right (copyright) of the author of literary, artistic and scientific works to the results of their creative activities;
2)the circle of persons who may acquire rights in literary, artistic and scientific works, created by authors, and their rights;
3) the rights of performers, producers of phonograms and radio and television organizations (rights neighbouring on copyright);
4) the limitations on the exercise of copyright and of neighbouring rights in the used works for the benefit of the society;
5) the guarantees for the exercise of copyright and neighbouring rights and the protection thereof.

"Works" for the purposes of this Law mean any original results of a person's creative activities in the literary, artistic or scientific domain, which have been expressed in an objective form and in this form can be perceived and reproduced either directly or by means of a technical device.

The essence of copyright is originality, which implies that the copyright owner originated the work..

Originality does not imply novelty. An author can claim copyright in a work as long as he created it himself, even if a thousand people created it before him. Originality only implies that the copyright claimant did not copy from someone else.

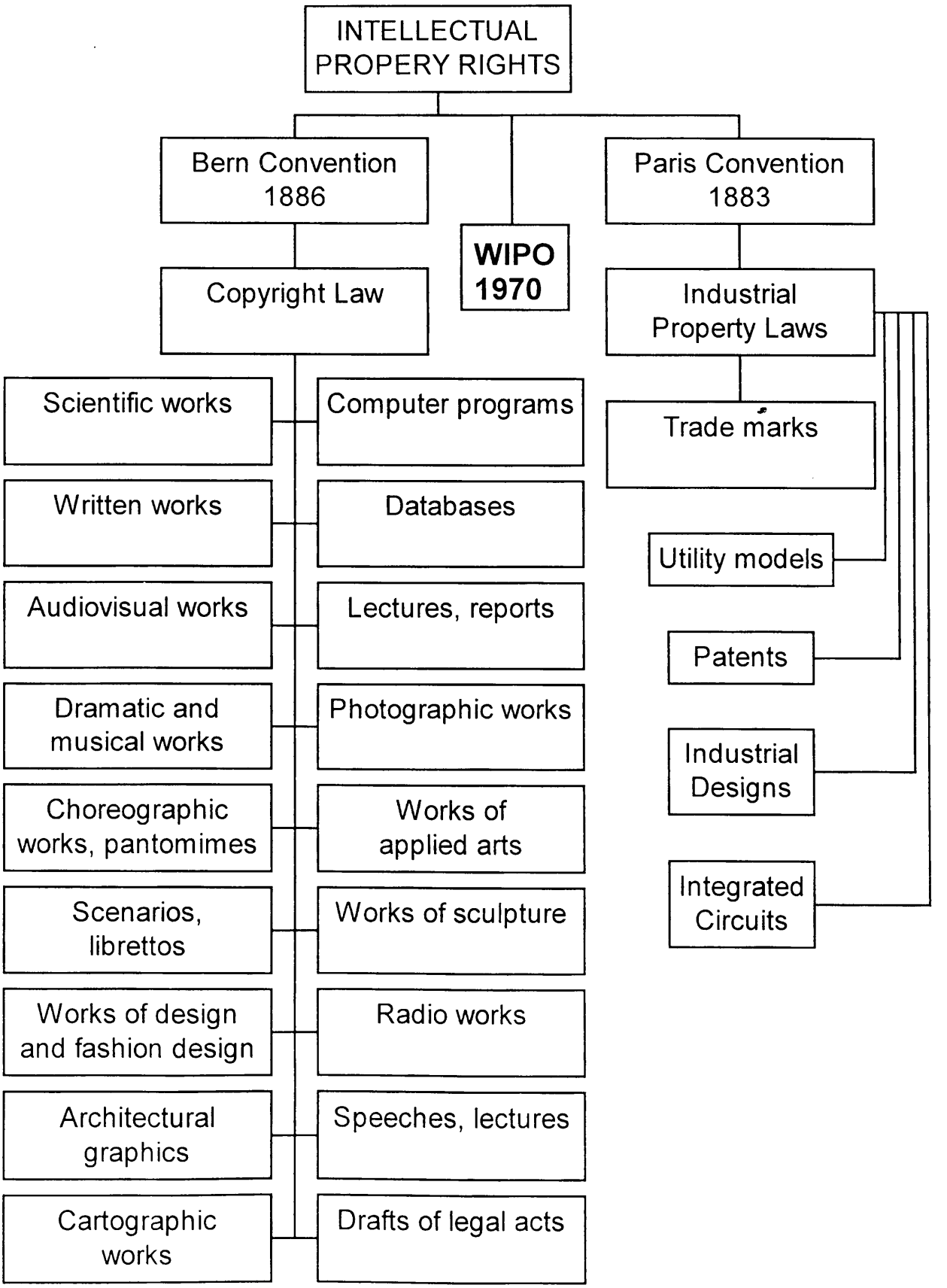

Figure 3: Intellectual property rights

From that position of originality comes the common but true example that an author could gain a copyright on the Romeo and Juliet story as long as he made it up himself and did not copy it from Shakespeare.

Some have said that the use of electronic network will mean the death of copyright as we know it. They claim that the ability to digitally reproduce virtually any audio, visual, or written work in the comfort of your own home or office will make traditional copyright unenforceable [5].

The doomsayers have got it all wrong. There is no doubt that traditional notions of copyright will undergo radical changes. However, one may argue that electronic commerce will prove to be a great boon to copyright owners. Authentication and encryption technology that enables consumer-oriented electronic commerce can also be used to facilitate new means of distributing copyright works, and to receive compensation for the use of those works.

Various proposals have been put forward for systems to meter the use of computer software, video games, and information of all kinds. Many of these proposals involve electronic payments based on actual use of the materials. The production and physical transfer of tangible copies of a work will no longer hold the significance that it does under current copyright laws. In fact, some proposals call for owners of copyright materials to make copies of their works freely available, in order to get them into the hands of potential users. Only when the work is actually used would any payment be levied.

For example, copyright material might be posted on the owner's World Wide Web site. Internet users could visit the site and read the material without any charge. If the information or software was found to be useful, the user would be permitted to download it to their own computer upon payment of a specified royalty. The payment may be made electronically, perhaps using digital cash that had been loaded on the user's computer. Upon receipt of payment, the copyright owner would deliver an authentication code that would prevent the downloaded material from being used by anyone else than the person who had paid for it.

Eventually, more complex systems could be employed to cause a royalty to be paid each time any copyright work is used. The user's computer would keep a record of each time the work had been used. Users would be free to forward copies of the work to as many people as they wanted, because that would simply expand the royalty base. Encryption technology could be used to protect against royalty-free use of the material. Periodic electronic payments would automatically be made to a copyright clearing body that would collect and forward the royalty payments to each copyright holder. According to proponents of such schemes, low royalty rates would encourage legitimate use of copyright materials and a wide user base would provide reasonable compensation to rights holders.

The term "cyberspace" (20,21) was coined by the science fiction author William Gibson in his 1982 novel Nuromancer to describe the environment within which computer hackers operate. In the novel, the activity of hacking - securing unauthorised access to the contents of computer systems - is couched in very physical terms.

The term "computer virus" has entered into popular demonology. The essence of a computer virus is that, like its human equivalent, it may be transmitted from one computer to another.

We can see the home page of "edition 49",
http://www.zzz.ee/edition49/ - Tops in Sound and Form - in the Internet, which offer:

* the world's largest assortment of Estonian Music;
* about 40 contemporary composers with attractive works;
* their entire modern reportery (over 700 works) on MIDI Files;
* absolutely up-to-date music engraving at favorable conditions;
* choir music of the highest standard, also for amateur choirs;
* internationally successful adaptations and arrangements for the concert stage, plus CD recordings of the same;
* music, which storms the hit lists.

3. Trade marks

Of all the intellectual property assets owned by a business, the most important are its trade marks. A healthy trade mark serves as a mental mind-grabber, representing the quintessence of the goodwill of a business. Successful trade marks are the result of a long effort involving research and development / 5-8 / .

Trade mark has the longest lifetime among the industrial property objects given in the Fig. 3 and is the only object under the protection of industrial property that can also exist on all the other objects of industrial property or even on the objects of copyright - for example on the title page of computer programmes or data bases, as a studio sign on the objects of applied arts and so on.

The Estonian Trade Mark Act was the first one of acts on intellectual property to be passed in the Republic of Estonia after the country regained its independence.

The trade mark and service mark (hereinafter; trade mark) is a sign used or intended to be used by natural or legal persons in the course of economic and commercial activities to distinguish their goods or services of the same or similar kind of other natural or legal persons.

Table 1

Division of trade marks applications and registered trade marks in the years 1992-1996 (19)

	1992	1993	1994	1995	1996	1992-1996
Filed Trade mark Applications	1365	11932	2733	2830	2659	21519
by Estonian Applicants	384	1521	543	589	513	3550
Decisions to grant of registration	-	3680	5380	4431	4003	17494

Examples of registered trade marks are given in Fig.4 and Fig.5.
The following signs shall not be registered as trade marks:

* which are not distinctive;
* which are generally used to designate certain types of goods or services;
* which consist exclusively of letters, numerals or signs, and contain exclusively data regarding type, quality, quantity, properties, price, and other characteristics of the goods or services;
* which may mislead the public as to the nature, quality or geographical origin of the goods or services may not be registered;
* which contradict public order or morality;
* which reproduce works of art, literature or music protected by copyright, or the names of such works;
* family names or portraits, if detrimental to property or other rights of the persons concerned;
* which are identical or confusingly similar to trade marks registered or pending registration in Estonia, in the name of a third party, for the same type of goods or services;
* which are identical or confusingly similar to an earlier trade mark owned by a third party for goods or services of a different kind, if registration may mislead the public and provide an unfair advantage or be detrimental to the distinctiveness or repute of the third party's trade mark, unless his consent is provided;
* names of firms or parts of such names, if they are not owned by the applicant.

According to the Commercial Code (entered into force from September 1, 1995), a business name or firm is the name entered in the commercial register under which a trader operates.
A business name shall not be misleading with regard to the legal form, area of activity or scope of activity of the trader.
A name contained in a trade mark protected by law in Estonia shall not be used in a business name without the consent of the owner of the trade mark.
The business name of a commercial undertaking shall be clearly distinguishable from other business names entered in the commercial register in Estonia. If the given name and surname of a sole proprietor for which an application for entry in the register is made are the same as a given name and surname already entered in the register as a business name or as a part thereof, the applicant of the entry shall render his or her business name clearly distinguishable by adding or omitting appendages.

The Internet presents special problems for Commercial Code, Trade Mark and Copyright Law (16, 22-27).

4. Domain name

Millions of persons daily communicate across the Net, sending e-mail, documents, pictures etc. To send mail or to visit a Web page, one has to know the address where one wants to go [11].

Any computer connected to the net is a "host". Every host computer has a name, or a "domain name address", consisting of two or more words separated by periods. For example, the computers at Estonian Travel Guide are named "travel.digit". The naming scheme for host computer is fairly flexible; a single host computer may have a single name, a single host computer may have several different names, or several host computers (on the same network) may share the same name [4,11].

The domain name address of a computer can be divided into two basic parts: the "domain name" and the "host name". The domain name refers to the network to which the particular computer is connected. For example, the names of all of the computers on Tartu University end in the domain name "ut". The host name refers to the name of a particular computer on that network. For example, "math" is the name of a particular computer on the Tartu University Mathematical Faculty.
There are several possible levels of domain names.

Domain	Usage
com	For commercial organizations (i.e., businesses)
edu	Educational organizations
gov	Governmental organizations, non-military
org	Other organizations
net	Network resources
mil	Military

All domain names have at least one top level. The Internet was started in the US, and there were used six possible top level domain names:
As the Internet became a worldwide network, there needed to be a way to give foreign countries responsibility for their own names, the " top level country domain", which consists of two letters, added at the end of the domain name. For example, "au" is the country code for Australia, "ee" for Estonia.

5. The Domain Name System Structure

The Domain Name System is a method to administer names by giving different groups responsibility for subsets of the names. Each level in this system is called a domain.

The domain name is used by individuals or companies in at least two common situations:
1. it will be part of an individual's e-mail address, for example "martin@lbi.ee" (table 2);
2. the domain name will necessarily be a part of the URL (Uniform Resource Locator) used by World Wide Web browsers to find the Web page stored on a computer.
For example, Estonian Business School's World Wide Web URL is "http://www.ebs.ee/.

The URL consists of 3 main parts:
1. Data Type
2. Host Name
3. Data location and name

The most used data type descriptors are:
http:// Describes the data type being in "World Wide Web" format
ftp:// File Transfer Protocol

In the beginning of 1996 currently more than 170,000 .com domain names have been registered and about 1,500 domain names applications are being received each day.

The domain name is often a trade mark itself (table 3).

Domain names are allocated by the InterNIC or other regional registry on a first-come first-served basis. Unlike trade marks, where an identical trade mark can coexist for very different products or services, on the Internet only one unique identifier can exist throughout the world. This will create a potential problem for owners of identical trade marks as only one business can own the trade mark as a domain name on the Internet.

Some persons or companies have been registering the name or trade mark of a competitor as a domain name.

* How should InterNIC treat conflicts between parties who own the same trade mark in Estonia, but have registered it for different goods (unlike trade mark law which permits both marks to be registered if there are not confusingly similar, only one .com domain name is available)?

* How should InterNIC treat conflicts between parties who have registered the same trade mark in different countries for the same goods (once again, trade mark law would permit the two registrations to co-exist in most circumstances, but only one COM domain name registration is available)?

On April 1997 seven new top level domain names will sit alongside the current six top level names [9]. The new names are:
.firm for business,
.store for sites offering goods for purchase,
.web, .arts, .rec for recreation and entertainment,
.info for information services and
.nom for sites that contain personal names.

The move came after a consultation between several bodies, including the Internet Society, the Internet Architecture Board, the World Intellectual Property Organisation (WIPO), and International Trade mark Association (INTA).

The aim of the new structure is to make it easier for companies to register domain names and to try and prevent people from grabbing domain names, in the hope of reselling them to interested parties.
Netnames has released its first Global Domain Naming Report. Covering the current situation of domain naming in over 200 countries, the report contains details on registration, trade marks and fees.

The number of registered trade marks that consist of two or three letters has increased rapidly. The use of shortening is spreading more and more. Evidently it is in connection with the development of infotechnology. Some examples are given in table 4.

Table 2

The trade marks registered in Estonia that contain the first name

Trade mark Number	Trade mark word mark	Owner	Int. Cl.
6845	FELIX	AKTIEBOLAGET FELIX	29,30
6848	MARIUS	OY KARL LARK AB	3
7717	EVE	FABRIQUES DE TABAC REUNIES S.A.	34
7859	MARIANNE	OY KARL FAZER AB	30
9063	ARAMIS	ARAMIS Inc.	3
15004	HEINZ	H.J. HEINZ COMPANY	5,29,30,32
10561	AURORA	AURORA MECHATRONICS CORP.	5
10688	ELLE	HACHETTE FILIPACCHI PRESSE	16
11086	ASTA	ASTA MEDICA AKTIENGESELLSCHAFT	5
12259	IRIS	SILICON GRAPHICS, INC.	9
13801	ANNA	VERLAG AENNE BURDA GMB & Co	16
14207	EVA	BERNER OSAKEYHTIÖ	7
15158	MALLE	AS MALLE	39,42
15175	JUTA	AS JUTA	20,35
15250	LAURA	RAS EESTI KIVIÕLI	3
15680	ELINA	AS ELINA	16,24,25,35,42
16440	KATRIN	METSÄ-SERLA OY	16,21
16695	LEELO	AS KINGPOOL	39
17182	LINDA	AS KALEV	30
17361	ELLI	SUOMEN TRIKOO OY AB	25
17532	ANNA	AS Sootsi Restoranid	42
17546	ALVI	AS ALVI	11,16,20,35,37,42
17734	MAC	APPLE COMPUTER,INC.	9,16
17787	EVA	ANDRES AAS	41
17983	MART	KMART CORPORATION	42
18030	LEO	FIRST INTERNATIONAL COMPUTER INC.	9
18089	AADAM	OÜ AADAM	35,36

Table 3

The Estonian Domain Name that consists of the trade mark's word part

Domain	Owner	Operator	Trade mark	Int. Cl.
datel.ee	Datel Ltd.	Uninet	14256	9,38,42
estravel.ee	Estravel Ltd.	Data Telecom	6592	35,38,39,41,42
estiko.ee	Estiko Ltd.	Data Telecom	17080	36,42
estimpeks.ee	Estimpeks	Uninet	9444	35,42
kalev.ee	KALEV Ltd.	Data Telecom	10659	30
kinex.ee	KINEX Ltd.	Estpak Data	14483	9,35,42
klementi.ee	Klementi Ltd.	Meediamaa Ltd.	15687	16,25,26,35,40,42
kungla.ee	Kungla Dialoog C.P.	MicroLink Online	16943	35,37,42
mendelson.ee	Mendelson & Co	Uninet	14252	16,25,35,36,37,42
merge.ee	Merge Ltd.	MicroLink Online	6673	9,35,37,38,41,42
microlink.ee	MicroLink	MicroLink Online	16530	9,35,37,42

Table 4

The trade marks which consist of three letters only

Trade mark Number	Trade mark	Owner	Int. Cl.
21397	ESA	Oy Veljekset Kulmala AB	7
21505	KIN	The Coca-Cola Company	32
21639	ara	ara Schuhfabriken AG	25
21664	GAP	The Gap Inc.	18,25,42
21716	NIB	Nordiska Investeringsbanken	36
21749	WWF	WWF-World Wide Fund For Nature	9,16,21,25,28,41,42
21751	NBC	National Broadcasting Company	9,38,41
22011	GTS	SFMT Inc.	38
22035	AOL	America Online Inc.	9,16
22041	ISA	Institut De Selection Animale	31,42
22095	SOS	SOS Arana Alimentacion	30
22097	NCT	The Goodyear Tire & Rubber Company	12
22147	QIQ	NU SkinInternational Inc.	9,41
22196	VMA	AS V.M.A.	35,36,42
22204	PPO	General Electric Company	1
22295	YUZ	Companiu de productos Alimentory	32
22325	HMR	Hachst Antiengesellschaft	5

6. Court decisions in Trade marks and Domain Names matters

It is not surprising that most of the cases relating to personal jurisdiction arising from operation of a Web site are in the copyright and trade mark fields.

A California district court has relied upon the Federal Trade mark Dilution Act and the California dilution statute in holding that the registrant of the name of a famous corporation as an Internet domain name may be enjoined from maintaining the registration [4,17].

Dennis Toeppen, an individual residing in Illinois, registered without authorization the domain names "panavision.com" and "panaflex.com" despite Panavision's ownership of the federally registered marks PANAVISION and PANAFLEX, which it uses in connection with its motion picture and television camera and photographic equipment business (Table 5).

Table 5

Registration Number	Registration Date	Word Mark	U.S. Class
0627362	1956-05-22	PANAVISION	026
0834705	1967-09-05	PANAVISION	026
0845014	1968-02-27	PANAVISION	038
1160790	1881-07-14	PANAVISION	026
1489189	1988-05-24	SUPER PANAVISION	026
1972238	1996-05-07	PANAVISION	021,023,026,036,038
0976767	1974-01-15	PANAFLEX	026

The court concluded that Panavision had satisfied the three prongs of the Federal Trade mark Dilution Act, 15 U.S.C. S 1125(c):

1) Panavision's marks were "famous";

2) Toeppen's use of the marks was a "commercial use" in that he sought to extort from Panavision a fee for the transfer of the domain name registrations;

3) The court found that while Toeppen's conduct did not fit within either of the two standard dilution theories, tarnishment or blurring, Panavision's marks were diluted under the statute because Toeppen's conduct prevented Panavision from using its marks in a new and important business medium, the Internet.

The court therefore enjoined Dennis Toeppen from further use of Panavision's marks and

ordered Toeppen to take all actions necessary to transfer the disputed domain names to Panavision.

7. The trade marks that protect the Internet system

As there are more and more enterprises and private persons in Estonia who have joined Internet, we conducted a survey to see how the Internet system is protected with trade marks in the USA, Germany, Hungary, Tcheeze and Poland internationally registered trade marks.

As a result of this survey it can be seen that the Internet system in the USA is protected with 20 trade marks and 677 new applications have been filed (Fig.5 and 6).

8. Software piracy

Software manufacturing is a global business [22].
The Internet, in all it wondrous potential, also offers software pirates a labyrinth in which to hide and conduct their illicit businesses. The nature of the Internet is profoundly different from that of bulletin board services (Fig.3). The software industry loses more than $15.2 billion annually worldwide due to software piracy. Software piracy costs the industry (BSA'S 1995 global enforcement efforts):

$ 482	every second
$ 28.900	every minute
$ 1.7 million	every hour
$ 41.6 million	every day
$ 291.5 million	every week

The electronic transfer of illegally copied software does not require physical media, such as disks, CDs and tapes, to obtain the programs.

In my opinion, this situation is character to software piracy and trade mark piracy, because the first page on the program is illustrated by real owner's trade mark, and piracy costs have increased by the value of the trade mark.

The following is a sampling of how the Internet is being abused to allow the illegal copying of software.

One of the simplest ways to deploy Internet resources to distribute pirated software is E-mail. Programs are typically sent as attachments to messages.

Internet Relay Channels allow users to conduct real-time discussions on the Internet. Typically, an individual or organization will create a conference. Frequently, software pirates will conduct conversations on-line and distribute pirated software as a background transmission, making it difficult to determine when illegal transfers are occurring. The channel operator is not necessarily the system administrator.

In the Estonian market legal software has been available for 5 years. If we take the revenue for software products to be 40 million Estonian Crones in 1995 and take into account the estimated piracy level of about 90% one can easily find that the total size of the market could be ten times as much. This means quite a "small" sum of missing taxes and hundreds of jobs would have otherwise been generated.

9. Patents

The word "patent", at least in some of the European languages, is used in two senses. One of them is the document that is called a "patent" or "letters of patent". The other is the content of the protection that a patent confers.

When the new or improved products appear on the market, they will need protection against the competitors [15,16].

If a person or entity makes what he thinks is an invention, he asks - by filing an application with the Estonian Patent Office- to give him a document in which it is stated what the invention is and that he is the owner of the patent. This document is called a patent or patent for invention [1].

Not all inventions are patentable. Estonian Patent Law requires that an invention shall be considered patentable if it is novel, involves an inventive step and is industrially applicable [13].

The conditions of novelty and inventive step must exist on a certain date. That date, generally, is the date on which the application is filed (Fig. 8).

The Estonian Patent No. EE02955 B1, "A METHOD FOR APPLICATION CURATIVE MUD TO THE BODY OF A PATIENT" (inventor and patentee Ph.D. Jüri Pihl) belongs to the sphere of medical technology, more exactly to the field of physiotherapeutic technology and is used for carrying out procedures with mud. The purpose of this invention is to take into use a method that enables to carry out both general and local procedures at the minimum consumption of mud. Curative mud at the temperature of 40-50°C is spread on the patient's body from the distance of 20-30 cm with the aid of compressed air at the pressure of 2,0 - 3,5 at sprayed or as an aerosol. Mud, applied with the help of compressed air acts as a massaging agent on skin receptors, improving capillary blood supply, vegetative nervous system and myogenic tonus. The method enables to treat painful body areas more intensively.

Many Estonian inventors have registered their inventions in United States.

Professor Jack L. Feinberg and Ph.D.Alexander Rebane (graduated from Tartu University in 1981) registered the invention "METHOD OF IMAGING THROUGH A SCATTERING MEDIUM USING COHERENT LIGHT"(US patent No. 5,313,315) which relates to imaging, and, in particular, to a method of imaging an object obscured by a light-scattering medium, using coherent light.
For example, while X-rays may be employed to image bones, the high energy of X-rays limits their usefulness due to potential damage to tissue. Also, in the detection of breast cancer in women, present mammography requires exposure of breast tissue to X-rays. This procedure, repeated several times has its own risks of creating cancer.

As a general rule, light, though of a lower energy and thus not as damaging to tissue, cannot be used to image such objects.
Suppose one wanted to view a light-absorbing object embedded in or behind a light-scattering medium.

Fig.9 is a schematic diagram of an experimental arrangement used in demonstrating operation of the invention wherein light from two objects.

The electronic industry in Estonia has a relatively long history.
In the case of thyristor controlled modules as disclosed for example in European patent application 0015053 or U.S.Patent No. 4,313,128, since control areas are located on the cathode side, the thyristor element anode surfaces are directed to the plates.
K. Seleninov in one of the authors of U.S. Patent No. 5.468,976 "SEMI CONDUCTOR RECTIFYING MODULE" (Fig.10).
It is an object of the invention to provide a small-size semiconductor rectifying module suitable for operation with high currents and voltages and a method of producing the same. This solution makes it possible to locate the elements of anode and cathode groups on a common isolating base with contacts to common points of the anode and cathode groups made as metal strips. A

diode, thyristor, symistor, optothyristor and optosymistor can be used as a rectifying element.

Jaan Järvik and Kuno Janson are inventors of U.S. Patent No. 5,375,053, "CONTROLLED POWER SUPPLY" (Fig.11). The invention relates to electric-discharge heating systems and, more particularly, to controlled power supplies.

Mart Saarma, Merikke Kelve, Erkki Truve, and Teemu Teeri registered the invention "TRANSGENIC PLANTS DISPLAYING MULTIPLE VIRUS RESISTANCE AND A PROCESS FOR THEIR PRODUCTION" (U.S. Patent No. 5,589,625). This invention relates to transgenic plants that are genetically engineered to contain a DNA sequence encoding at least one polypeptide having a 2,5A synthetase activity thereby providing to said plants resistance against multiple taxonomic virus types. Moreover, this invention relates to a process for the production of said transgenic plants and to the use of said genetically engineered DNA sequence (Fig. 11).

10. The Court

A team of Pillsbury's intellectual property group won a judgement of more than $211 million for Haworth Inc. from rival Steelcase Inc. for its infringement of three Haworth patents [3].

The victory represents the second-largest award in patent litigation history. The December 23, 1996 decision of the U.S.District Court brought an end to an 11-year battle centered on Haworth's patent rights on electrified office panels used to form cubicle "workstations".
The patented Haworth electrified panels were introduced in 1976 and revolutionized the office furniture industry.

11. Conclusion

Industrial property is a motley collection of legal rights each of which affords its owner the power to occupy an area of commercial activity with a varying degree of exclusivity.

Existing copyright, trade mark, and patent practices must be adapted to meet the needs of the new technology required to implement electronic commerce.

Various incidents of intellectual property are regarded as an asset - for revenue, as well as contractual, purposes.

The best advice for companies who do not yet have a domain name is to sign on quickly. If your desired .com name is already taken, a number of alternatives short of litigation exist. If your company already has desirable .com domain name, it is urgent that, for defensive purposes, the name also be registered as a trade mark.. The rapid development of demand for communications services worldwide will bring about a serious shortage of spectrum availability in the near future.

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Figure 5: Some trade marks that protect the Internet system

Serial Number	Word Mark (may be truncated; see full display)
75-181137	INTERNET AUTO SECURITY
75-180723	INTERNET TRAVEL NETWORK
75-178062	WIRELESS INTERNET
75-177961	INTERNET.ICG MARKETING
75-177481	SAN DIEGO INTERNET CONNECT
75-176914	COMDISCO INTERNET LEASE ADMINISTRATION
75-176780	THE INTERNET MARKET REVIEW
75-176191	INTERNET CAPITAL EXCHANGE
75-175656	INTERNET HARD DRIVE
75-174842	PACIFICA INTERNET AUTHORING TOOLS
75-173907	SOUTHWIND INTERNET ACCESS, INC.
75-173893	INTERNET TOWN CENTER
75-173103	WALL STREET INTERNET TRANSCRIPT
75-172349	WEB TRACK INTERNET MONITORING & FILTERING SOFTWARE
75-172174	INTERNET SUPPORT SERVICES
75-171706	INTERNET ENGINEERING GROUP
75-171609	INTERNET LAW REPORTER
75-171454	STEALTH INTERNET SERVICES, INC.
75-171162	YOUR HOST ON THE INTERNET
75-170551	NAVIX INTERNET ACCESS SERVICES
75-170021	INTERNET PARADISE
75-169981	INFO TO GO NAVIGATING THE INTERNET
75-169909	INTERNET RESELLER NEWS
75-166580	THE INTERNET LAWYER PUBLICATIONS, L.L.C.
75-166373	INTERNET DESIGN GROUP
75-166300	INTERNET ILLINOIS
75-165145	INTERNET INTRANET READY
75-164103	VTTV VIDTEL INTERNET TV
75-163522	INTERNET GO SERVER
75-162704	INTERNET GUIDE
75-162389	INTERNET
75-162228	V VERIWEB INTERNET CORPORATION
75-162046	THE YUCKIEST SITE ON THE INTERNET!
75-161523	INTERNET 101
75-159823	TURBO INTERNET
75-159662	INTERNET TUNER
75-159505	HARLEY HAJIN'S INTERNET EXPLORATION STATION
75-159423	CBBN INTERNET TRAINING VIDEO
75-159297	THE INDISPENSABLE ORGANIZER FOR ALL YOUR WORLD WIDE WEB AN
75-159236	INTERNET ACADEMY
75-159120	INTERNET PROTOCOL
75-158716	INTERNET FOCUS
75-157467	INTERNET DRIVER'S LICENSE
75-156696	INTERNET ODYSSEY
75-155623	MAIN ST INTERNET
75-154955	GENERAL INTERNET
75-154829	INTERNET PAYPHONE
75-154269	PEACHTREE BUSINESS INTERNET SUITE
75-152999	BOTT-BUSINESS ON THE INTERNET AWARDS
75-151827	INTERACTIVE INTERNET
75-151757	THE NET ULTIMATE INTERNET GUIDE WHERE TO GO, HOW TO GET TH
75-149050	CYBER-STREET CAFE AN INTERNET COFFEE HOUSE
75-148744	THE INTERNET TRANSACTION COMPANY
75-148559	MY POST OPENS THE DOOR TO THE INTERNET
75-147848	INTERNET TRAVEL NETWORK
75-147847	INTERNET TRAVEL NETWORK
75-147785	INTERNET NEWS RADIO

Figure 6: U.S. trademark applications which consist of the word INTERNET

EE 02955 B1

(19) EESTI VABARIIK
RIIGI PATENDIAMET

(11) **EE 02955 B1**

(51) Int. Cl.[6]: A61H 33/04
A61H 9/00
A61J 3/00

(12) PATENDIKIRJELDUS

(21) Patenditaotluse number: P 9400107

(22) Patenditaotluse esitamise kuupäev: 01.11.1994

(24) Patendi kehtivuse alguse kuupäev: 01.11.1994

(41) Patenditaotluse avaldamise kuupäev: 17.06.1996

(45) Patendikirjelduse avaldamise kuupäev: 17.02.1997

(73) Patendiomanik: Jüri Pihl
Mai 24-140
EE3600 Pärnu, EE

(72) Leiutise autor: Jüri Pihl
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(74) Patendivolinik: Ott Moorlat
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pk 723
EE0029 Tallinn, EE

(54) **Ravimuda patsiendi kehale pealekandmise meetod**

(57) Leiutis kuulub meditsinitehnika, täpsemalt füsioterapeutilise tehnika valdkonda ja seda kasutatakse muda protseduuride tegemisel. Leiutise eesmärk on välja töötada meetod, mis võimaldab teha nii täielikke kui kohalikke muda protseduure väikese mudakuluga. Patsiendi kehale kantakse 40-50 °C muda 20-30 cm kauguselt surutõhu abil 2,0 kuni 3,5 at survel all pihustatuna ehk aerosoolina.

(57) The present invention belongs to the sphere of medical technology, more exactly to the field of physiotherapeutic technology and is used for carrying out procedures with mud. The purpose of the invention is to take into use a method that enables to carry out both general and local procedures at the minimal consumption of mud. Curative mud at the temperature of 40-50 °C is spread on the patient's body from the distance of 20-30 cm by the aid of compressed air at the pressure of 2,0-3,5 at sprayed or as an aerosol.

Figure 7: A method for application curative mud to the body of a patent, Estonian patent no. EE 02955 B1 Inventor and patentee Jüri Pihl

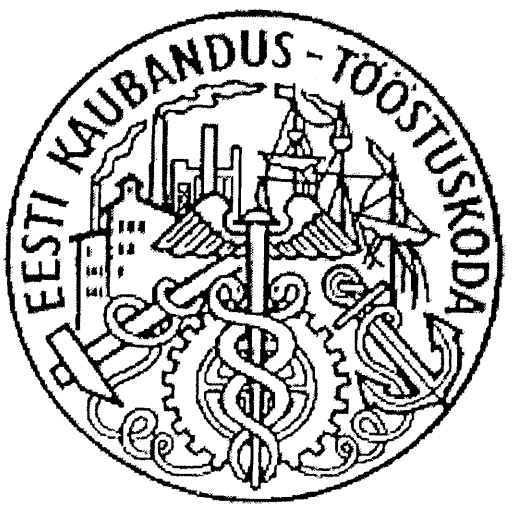

Figure 4: Estonian trade marks

United States Patent [19]

Feinberg et al.

[11] **Patent Number: 5,313,315**

[45] **Date of Patent: May 17, 1994**

[54] **METHOD OF IMAGING THROUGH A SCATTERING MEDIUM USING COHERENT LIGHT**

[75] Inventors: **Jack L. Feinberg**, Manhattan Beach, Calif.; **Alexander Rebane**, Zürich, Switzerland

[73] Assignee: **University of Southern California**, Los Angeles, Calif.

[21] Appl. No.: **880,170**

[22] Filed: **May 6, 1992**

[51] Int. Cl.[5] G03H 1/02; G03H 1/14; G03C 1/00

[52] U.S. Cl. 359/4; 359/3; 430/2

[58] Field of Search 365/119, 125; 358/95, 358/99; 359/1, 3, 4; 430/2

[56] **References Cited**

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Primary Examiner—Loha Ben
Assistant Examiner—John Juba, Jr.
Attorney, Agent, or Firm—Benman Collins & Sawyer

[57] **ABSTRACT**

In a conventional hologram, a photographic film records the interference pattern of monochromatic light, scattered from an object (20) to be imaged, with a reference beam of unscattered light. Illumination of the developed film with a replica of the reference beam then creates a virtual image of the original object. Molecular resonance may be used to record an interference pattern between light signals that arrive at different times, and with this technique create a hologram (10') with time resolution. Using a time reference pulse (16) as a "light shutter", holographic images may be recorded selectively, according to the time taken by light travelling from the object to the hologram. This method may be used to image an object obscured by a light-scattering medium.

22 Claims, 3 Drawing Sheets

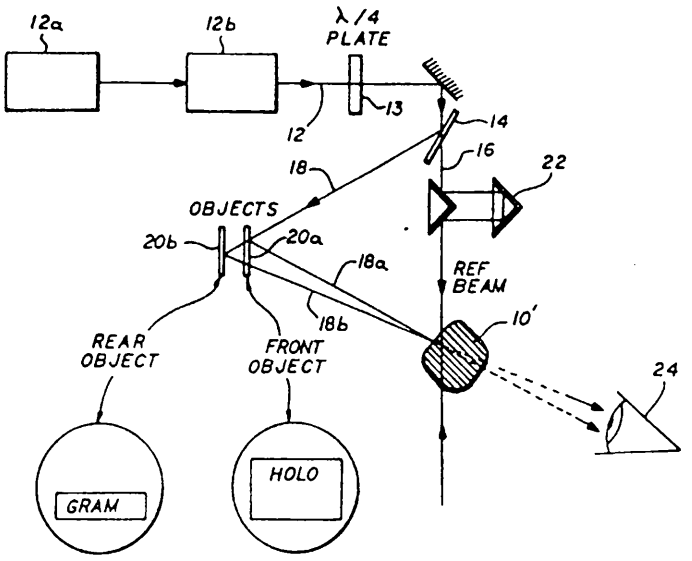

Figure 8: U.S. patent no. 5,313,315

United States Patent [19]

Evseev et al.

[11] **Patent Number: 5,468,976**

[45] **Date of Patent: Nov. 21, 1995**

[54] **SEMI CONDUCTOR RECTIFYING MODULE**

[76] Inventors: **Yury Evseev**, Ul.Bratskaya 19, k.1,kv,90, Moscow, Russian Federation; **Lubomir Rachinsky**, ul. Zvenigorodskaya 8 kv 104; **Natalia Tetervova**, Ul.Reliefnaya 4 kv 22, both of Zaporozhie, Ukraine; **Kazimir Seleninov**, ul Lianemere 37 kv 18, Tallinn, Estonia; **Evgeniy Dermenzhi**, ul.Sadovi Proezd 1 ky 49, Reytov, U.S.S.R.; **Olga Nasekan**, Ul.Rustavi 3 kv 42, Saporozhie, Ukraine; **Eva Druyanova**, ul Vintera 34 kv 2, Saporozhie, Ukraine; **Roman Ribak**, Pr. Lenina 190 kv 26, Saporozhie, Ukraine

[21] Appl. No.: **288,226**

[22] Filed: **Aug. 9, 1994**

[30] **Foreign Application Priority Data**

Aug. 27, 1993	[SU]	U.S.S.R.	93042893
Aug. 27, 1993	[SU]	U.S.S.R.	93042905
Aug. 27, 1993	[SU]	U.S.S.R.	93042907
Aug. 27, 1993	[SU]	U.S.S.R.	93042908

[51] **Int. Cl.**[6] **H01L 29/06**; H01L 23/16; H01L 39/02

[52] **U.S. Cl.** **257/177**; 257/104; 257/113; 257/116; 257/653; 257/725

[58] **Field of Search** 257/115, 116, 257/717, 113, 114, 510, 170, 177, 724, 725, 104, 653

[56] **References Cited**

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58-31571	2/1983	Japan	257/115

Primary Examiner—Jerome Jackson
Assistant Examiner—Donald L. Monin
Attorney, Agent, or Firm—Ilya Zborovsky

[57] **ABSTRACT**

A semiconductor rectifying module has a metal base, a dielectric heat conducting spacer arranged on the metal base and rectifying elements of anode and cathode groups arranged with their cathodes and anodes on the spacer, the rectifying elements being composed of a semiconductor with at least two layers having alternating conductivity types, each of the rectifying elements being surrounded by its side surface by a side layer of a first type conductivity semiconductor material while an original material is a second type conductivity semiconductor material, and being provided with an upper closed separating groove with an external part bordering at least the side layer.

40 Claims, 25 Drawing Sheets

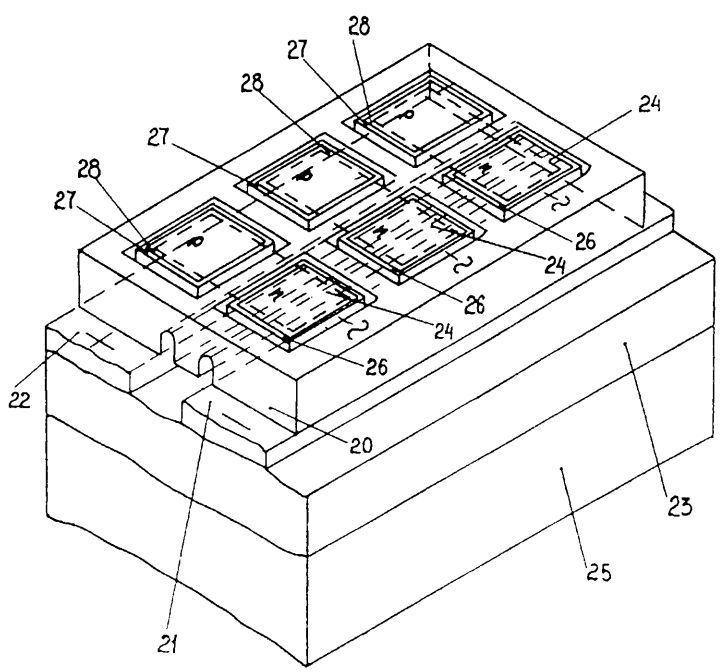

Figure 9: U.S. patent no. 5,468,976

United States Patent [19]

Järvik et al.

[11] **Patent Number: 5,375,053**

[45] **Date of Patent: Dec. 20, 1994**

[54] **CONTROLLED POWER SUPPLY**

[75] Inventors: **Jaan Järvik; Kuno Janson**, both of Tallinn, Estonia

[73] Assignee: **MAN Gutehoffnungshütte AG**, Oberhausen, Germany

[21] Appl. No.: **117,070**

[22] PCT Filed: **Jan. 8, 1993**

[86] PCT No.: **PCT/EP93/00023**

§ 371 Date: **Oct. 8, 1993**

§ 102(e) Date: **Oct. 8, 1993**

[87] PCT Pub. No.: **WO93/14557**

PCT Pub. Date: **Jul. 22, 1993**

[30] **Foreign Application Priority Data**

Jan. 9, 1992 [DE] Germany 4200329

[51] **Int. Cl.**[5] **H02M 7/06**

[52] **U.S. Cl.** **363/126**

[58] **Field of Search** 363/36, 37, 123, 125, 363/126; 323/215; 315/205, 206, 208

[56] **References Cited**

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1073619	1/1960	Germany	363/126

Primary Examiner—Steven L. Stephan
Assistant Examiner—Matthew Nguyen
Attorney, Agent, or Firm—Max Fogiel

[57] **ABSTRACT**

A controlled power supply in which an electric arc is used as a loading element. A single phase ac-to-dc invertor is provided with a matching transformer and a main rectifier and diodes which form the bridge and are connected to the matching transformer. The invertor has a controllable output. The bridge has a diagonal corresponding to an output of the rectifier and electrodes between which an electric arc can be initiated. a circuit for controlling the voltage across the electrodes includes a comparator to compare an actual rectified voltage with a reference value. The comparator provides for changing positions of the electrodes relative to each other. The single-phase ac-to-dc invertor is provided with two phase-shifting circuits that are connected in series and to the matching transformer. One of these phase-shifting circuits is a choke, whereas the other phase-shifting circuit is a capacitor. Each phase-shifting circuit is connected to a corresponding input of the main rectifier. The phase-shifting circuits are connected to an output of the main rectifier in the same polarity with diodes of the main rectifier connected to the electrodes.

16 Claims, 23 Drawing Sheets

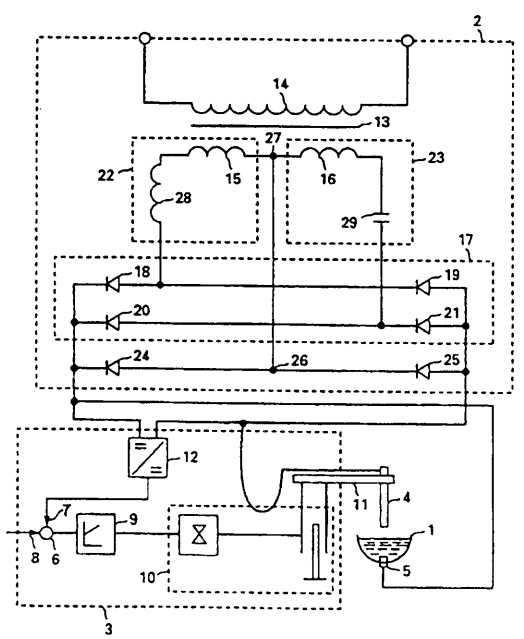

Figure 10: U.S.patent no. 5,375,053

United States Patent [19]

Saarma et al.

[11] **Patent Number: 5,589,625**

[45] **Date of Patent: Dec. 31, 1996**

[54] **TRANSGENIC PLANTS DISPLAYING MULTIPLE VIRUS RESISTANCE AND A PROCESS FOR THEIR PRODUCTION**

[75] Inventors: **Mart Saarma**, Helsinki, Finland; **Merikke Kelve**; **Erkki Truve**, both of Tallin, Estonia; **Teemu Teeri**, Espoo, Finland

[73] Assignee: **Kemira Oy, Biotech**, Helsinki, Finland

[21] Appl. No.: **374,229**

[22] Filed: **Jan. 18, 1995**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 965,343, Oct. 23, 1992, abandoned.

[30] **Foreign Application Priority Data**

Mar. 18, 1992 [EP] European Pat. Off. 92104676

[51] **Int. Cl.**[6] **A01H 5/00**; C12N 15/82

[52] **U.S. Cl.** **800/205**; 435/69.1; 435/172.3; 435/240.4

[58] **Field of Search** 800/205; 435/172.3, 435/69.1, 240.4, 240.49; 536/23.1

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Primary Examiner—Douglas W. Robinson
Assistant Examiner—Elizabeth F. McElwain
Attorney, Agent, or Firm—Fish & Richardson P.C.

[57] **ABSTRACT**

This invention discloses transgenic plants, such as transgenic tobacco and potato, having resistance to multiple viral taxonomic groups using parts of the 2,5A oligoadenylate pathway. In particular, said plants are genetically engineered to contain a DNA sequence encoding at least one polypeptide having a 2,5A synthetase activity. By this means a step in the 2,5A oligoadenylate pathway heretofore believed to be missing in all plants is provided so that viral infection in the transgenic plants is inhibited via a 2,5A dependent endonuclease. Moreover, this invention relates to a process for the production of said transgenic plants by transfection with a genetically engineered DNA sequence encoding at least one polypeptide having a 2,5A synthetase activity.

24 Claims, 9 Drawing Sheets

Figure 11: U.S. patent no. 5,589,625

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