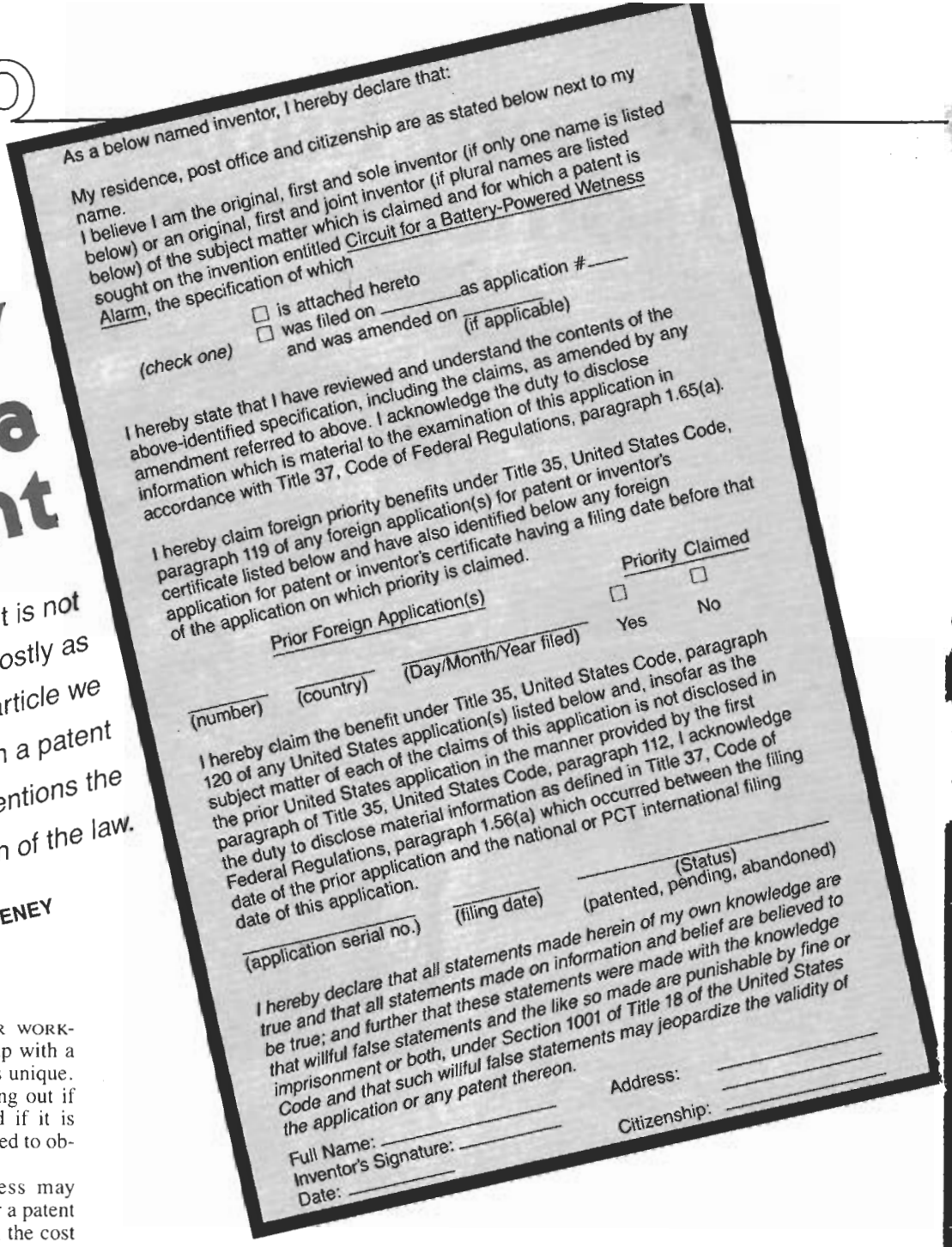
Apply for a Patent

Applying for a patent is not as difficult or as costly as it might seem. In this article we show you how to obtain a patent and give your inventions the full protection of the law.

DAVE SWEENEY



As a below named inventor, I hereby declare that:

My residence, post office and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled Circuit for a Battery-Powered Wetness Alarm, the specification of which

(check one) ☐ is attached hereto ☐ was filed on _____ as application # _____ and was amended on _____ (if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, paragraph 1.65(a).

I hereby claim foreign priority benefits under Title 35, United States Code, paragraph 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)			Priority Claimed	
(number)	(country)	(Day/Month/Year filed)	☐ Yes	☐ No

I hereby claim the benefit under Title 35, United States Code, paragraph 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, paragraph 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, paragraph 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

(application serial no.) (filing date) (status) (patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent thereon.

Full Name: _____ Address: _____

Inventor's Signature: _____ Citizenship: _____

Date: _____

IN TINKERING AROUND IN OUR WORKshops, many of us have come up with a circuit or design that we think is unique. But how do you go about finding out if your idea really is unique, and if it is worth the time and money required to obtain a patent?

Actually, though the process may sound intimidating, applying for a patent is a relatively simple task. True, the cost of hiring a good patent attorney is high; but if you are willing to do some of the work yourself, you can save quite a few dollars. In this article, we are going to dispel a few superstitions about the patent process and show you the best ways to protect your ideas.

There is a down side to the patent procedure. Patenting demands time for writing, requires attention to detail, and appears to the uninitiated as the complex domain of the legal profession. As a result, technically oriented people often shy away from patent applications and what seems like an overwhelming amount of paperwork. But thanks to some recent legislation, the situation for inventors has improved. Since the Patent and Copyright Act of 1982 was enacted, examiners in the *P*atent and *T*rademarks *O*ffice (PTO) have been helping those who need it with the paperwork. That makes it easier and more affordable for garage or table-top inventors to protect their ideas.

One way to save money in the patent process is to compose your own application. You should hire a professional to examine the document, but that will cost considerably less than paying for the time and effort to draft the original. That's not to say that patent attorneys are not necessary. Far from it. If your application encounters "interference" (that's when another applicant claims that he had the same idea) you will want a professional to ensure that your rights are adequately protected. Many patent attorneys have spent a great portion of their lives studying the patent laws and practices that have evolved over the 180 years that the PTO has been in existence.

Protecting creativity

A patent for an invention is a government grant to "...the right to exclude others from making, using, or selling..." the invention. The patent may be maintained for 17 years. A patent is not a copyright or trademark. Copyrights and trademarks confer other rights to creations, or "ideas." Since copyrights and trademarks protect creative works they appear similar to patents, but each is completely different and serves a different purpose. A copyright protects the writings of an author against copying, and in some

TABLE 1—
LIST OF DEPOSITORY LIBRARIES

Location	Library
Albany, NY	New York State Library
Atlanta, GA	Georgia Tech Library
Baton Rouge, LA	Troy H. Middleton Library
Birmingham, AL	Public Library
Boston, MA	Public Library
Buffalo, NY	Buffalo and Erie County Public Library
Charleston, SC	Medical University of South Carolina
Chicago, IL	Public Library
Cincinnati, OH	Public Library
Cleveland, OH	Public Library
Columbus, OH	Ohio State University Library
Dallas, TX	Public Library
Denver, CO	Public Library
Detroit, MI	Public Library
Durham, NH	University of New Hampshire
Houston, TX	Fondren Library
Kansas City, MO	Linda Hall Library
Lincoln, NB	University of Nebraska-Lincoln
Los Angeles, CA	Public Library
Madison, WI	Kurt F. Wendt Engineering Library
Memphis, TN	Memphis & Shelby County Public Library
Milwaukee, WI	Public Library
Minneapolis, MN	Minneapolis Public Library
Newark, DE	University of Delaware
Newark, NJ	Public Library
New York, NY	Public Library
Philadelphia, PA	Franklin Institute
Pittsburgh, PA	Carnegie Library
Providence, RI	Public Library
Raleigh, NC	D.H. Hill Library
Sacramento, CA	California State Library
Seattle, WA	University of Washington Engineering Lib.
St. Louis, MO	Public Library
Stillwater, OK	Oklahoma State University Library
Sunnyvale, CA	Patent Information Clearinghouse
Tempe, AZ	Science Library, Arizona State Library
Toledo, OH	Public Libary
Univ. Park, PA	Pattee Library, Penn State University

cases includes performing and recording rights. This magazine, for example, is copyrighted, and selling unauthorized photocopies of it is against the law. Copyrights are registered in the Copyright Office in the Library of Congress. (For more information, write to Register of Copyrights, Library of Congress, Washington, D.C. 20540.)

Trademarks relate to any word, name, symbol, or device that is used in trade to indicate the origin of goods, and to distinguish them from the goods of others. Information on registering trademarks can be found in a pamphlet, "General Information Concerning Trademarks," which may be obtained from the Patent and Trademark Office.

The PTO is located at Crystal Plaza, 2021 Jefferson Davis Highway, Arlington, VA 22202. It maintains the only complete collection of U.S. patent literature filed according to subject matter. The examiners use one set of search files while the public has access to another collection in the Public Search Room. Arranged by subject according to a classification system, the patent search files contain more than 300 classes, and more than 90,000 subclasses. Catalogs and a computer system cross-reference the 4 million US pat-

TABLE 2—COVER LETTER

Date

Commissioner of Patents and Trademarks
Washington, District of Columbia 20231

Request for Participation in
Disclosure Document Program:
Disclosure of (Your Name)
Entitled: (Name of Your Invention)

Sir:

Attached is a disclosure of my above-entitled invention consisting of one (1) sheet of written description and one (1) separate drawing, a $6 check, a stamped addressed return envelope, and a duplicate copy of this letter.

It is respectfully requested that this disclosure be accepted and retained for two years (or longer, if I later refer to it in a paper filed in a patent application) under the Disclosure Document Program.

Very Respectfully,

(Inventor's Name)

TABLE 3—THE DECLARATION

As a below named inventor, I hereby declare that:

My residence, post office and citizenship are as stated below next to my name.
I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled Circuit for a Battery-Powered Wetness Alarm, the specification of which

(check one) ☐ is attached hereto
☐ was filed on _____ as application # _____
and was amended on _____ (if applicable)

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, paragraph 1.65(a).

I hereby claim foreign priority benefits under Title 35, United States Code, paragraph 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)			Priority Claimed	
			☐	☐
(number)	(country)	(Day/Month/Year filed)	Yes	No

I hereby claim the benefit under Title 35, United States Code, paragraph 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, paragraph 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, paragraph 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent thereon.

Full Name: _____ Address: _____
Inventor's Signature: _____ _____
Date: _____ Citizenship: _____

ents into related subclasses. More than 10 million foreign patents and about 1 million copies of articles from professional journals are also filed according to the classification system. The weekly "Official Gazette" outlines the 1200 or so patents granted for that week.

Depository libraries, located throughout the U.S. (see Table 1), contain copies of some or all of the U.S. patents, but arranged in numerical order. If you want a copy of a patent and you know its number, you can locate a copy at one of those libraries, or you can order photocopies of the patent from the PTO for 50 cents each.

Types of patents

Let's briefly mention the types of patents that the government grants, then concentrate on the type that usually applies to electronics circuits and equipment.

First, a *design patent* protects the general appearance and visual arrangement of an invention. You may have created a control panel with an LED and knob arrangement that you think is special. The design patent consists of a professional drawing of your design, along with the proper identifying paperwork called the *declaration*.

Materials patents, usually used to protect chemical formulations, describe the mixture and use of materials.

Plant patents cover organic matter such as flowers and vegetables. Lately, those patents have been used to protect biochemical developments such as gene splicing.

A *structure patent* describes an object, such as a spoon, and explains how the object works.

Finally, *regular utility patents* are used to protect processes or systems and to describe the way a group of components or materials operate together. That type of patent usually includes schematic diagrams, flow charts, mechanical drawings, or combinations of those, together with descriptions of how the invention works. That type of patent is the one most likely to be obtained for an electronics-oriented invention.

The first steps

Before writing patent applications or raising the fees for lawyers, you must establish the date when you first conceived the invention. A *disclosure document* and your laboratory notebook together will satisfy that need to certify the idea's conception, as well as the building, testing, and development of the hardware.

A tale that occasionally surfaces suggests that you mail yourself a registered letter containing a description of the invention, and never open the letter until the patent court asks for it. That way, you would have a dated reference for your invention. While sending yourself the registered letter probably won't hurt, the correct method for establishing the date of your invention is to take advantage of the invention-disclosure process of the PTO. That process allows you to submit a short description of the invention and receive a time-stamped receipt of its entry into the PTO archives. The PTO assigns a reference number to the disclosure and mails the number to you for inclusion in your patent application, should you submit one. The PTO will maintain the document for two years after you submit the disclosure. That description of the invention need not contain the same level of detail as that in the patent application, but the information must describe the idea sufficiently to be judged the same idea.

That disclosure document contains specific sections that fully communicate the essence of your idea. To introduce your disclosure, a standard letter accompanies the document. A sample of the letter is shown in Table 2. As shown, the letter lists the contents of the submission, and states that you desire participation in the program. Note that you must include a check or money order for $6, and a stamped, self-addressed envelope for the PTO to return your registration card.

The rest of the disclosure is up to you, but should contain the following sections: Title (the name of the invention); inventor

(your name and address); function (a statement about what the invention does); use (a description of the invention's use); description (the physical/electrical description of the invention, with references to any accompanying drawings) and differences from existing devices (a statement of how your invention improves upon or differs from other devices). As indicated in the preceding, you should include a drawing or drawings of your invention. For that document, the drawings need not be complete (you may be still developing the invention), but it should embody the creative part of the idea.

Your notebook can become critical in establishing your rights. Experienced patent applicants use a standard log-book technique, the same as is used in scientific laboratories. Date everything, show diagrams, objects, tests, and results, and annotate every page with the following words: "I have read and understood." Have someone (but not a relative) who is knowledgeable enough to understand what they have read, sign each page. The notebook should be a sewn-together type, like a school copy book. Write everything in ink. Number the pages. To correct errors, cross out entries and initial them rather then erasing. Use the page numbers and dates for reference within the notebook. Keep in mind that the primary use of the book is to tell the complete and detailed story of how and when you came to produce the invention.

With your notebook up to date and your disclosure receipt on its way back from the PTO, you are ready to begin a search for other patents that relate to yours (prior art) and to prepare your application. If you would rather hire a professional for the search without incurring the full expense of a patent attorney, you may want to talk to a patent agent.

You can find a qualified patent agent listed in the Register of Patent Attorneys and Agents, which can be ordered from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. The price is $12. To be listed, patent agents must comply with regulations that require good moral character and good reputation, and must have the legal, scientific, and technical qualifications necessary to render a valuable service to applicants.

Patent agents maintain access to the PTO library, prepare patent applications, and deal with the examiners. While they are barred from practicing law and can not conduct patent litigation, they are usually as qualified as patent attorneys to perform patent searches and prepare patent applications. But for an interesting experience, and to acquire the knowledge necessary to file future patent applications, you can prepare the paperwork yourself.

TABLE 4—THE SPECIFICATION

TITLE: CIRCUIT FOR A BATTERY-POWERED WETNESS ALARM

CROSS REFERENCE TO RELATED APPLICATIONS:
Patent Disclosure (#), '(title)' submitted to the Commissioner of Patents and Trademarks on (date)

RIGHTS TO INVENTIONS MADE UNDER FEDERALLY-SPONSORED RESEARCH AND DEVLEOPMENT: None.

BACKGROUND OF THE INVENTION:
A quantity of electrical and mechanical water detection and water alarm mechanisms exists which sense the presence of water and cause either local or remotely located alarms to sound. Until semiconductor electronics were developed, an alarm capable of sensitivity to wetness has been costly to build because amplification is necessary and vacuum tubes require hazardous operating voltages. Semiconductor electronics devices have been used to provide the sensitivity to wetness by amplifying small changes resulting from electrical conduction on a wet floor. The power to operate these semiconductor electronics devices used in wetness alarms can be supplied from batteries.
Because batteries wear out, the monitor function provided by the alarm may cease without external indication provided by extra circuitry.

Summary:
This invention increases the battery life in a battery-powered alarm which monitors a surface for wetness. When water wets a surface which is touched by two electrodes, the wet surface becomes a high resistance circuit connecting a battery to a Silicon Controlled Rectifier (herein called an SCR). Battery voltage thus connected causes the SCR to conduct. Because the SCR is in series with a crystal noise generator, the battery power activates the noise generator thus sounding an alarm to wetness on the surface touched by the electrodes. In its monitor state, with no water on the surface, the SCR operates as a reverse-biased diode. In this state, no electric current is required to flow from the battery to the circuit to maintain the monitor function.

Brief Description of the Drawing:
Figure 1 is an electrical schematic diagram of the invention. The electrodes are any metal that conducts electricity. SCR1 is an SCR. BZ1 is a noise generator. B1 is a battery. R1 is a resistor.

Best Mode for Carrying Out the Invention:
The invention should be housed in a container having a water tight seal, and having the electrodes mounted externally to touch the monitored surface. The battery capacity should equal that necessary to operate the noise generator plus that necessary to overcome SCR resistance when the noise generator is turned on.

The patent application

To illustrate one possibility for a patent application, let's look at the circuit in Fig. 1. The circuit is designed to warn of water or moisture on a surface, such as a floor. Only slight dampness is required to set off the alarm, as any dampness will reduce the resistance between the electrodes and trigger SCR1. That in turn causes a piezoelectric sounder to issue an audible alarm. Once SCR1 is triggered it stays on even if the water evaporates.

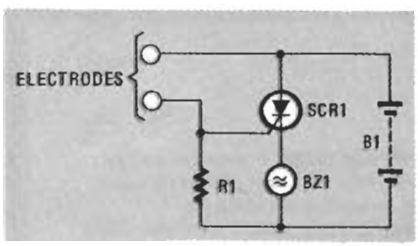

FIG. 1—A BATTERY-POWERED MOISTURE alarm. The circuit might be patentable based on the fact that, in the absence of water, the SCR remains off and negligible current flows, thereby conserving battery life.

What makes the circuit different, and hence patentable, is the fact that when no water is present, SCR1 remains off and no current flows through the circuit, except, of course, for leakage. That means that the battery could last for almost its entire shelf life. Now that we have a subject for a patent, let's see how a patent application would be prepared

The first part of the application is called a *declaration*. A sample declaration is shown in Table 3. It contains a standard oath and statement of your intent to file for patent protection. If you expect to submit future patent applications, then make a few photocopies with blanks as shown. In

our sample, the first of those blanks, the title of the invention, has been filled in with the name of the circuit.

The rest of the document consists of the *Specification*, shown in Table 4, the *Claims* shown in Table 5, and the *Abstract*, shown in Table 6. Let's look at those in more detail.

As you become familiar with the specification, you will realize that it begins with general information and becomes more detailed as it proceeds. Remember that the specification must describe the invention sufficiently to be understood by someone "skilled in the art." You need not explain the physics of electricity or electronics theory.

Let's consider the *title*. Placed at the top of the page, the title should contain two to seven words, convey the essence of the idea, and be limited to the matter discussed in the document. For our example water alarm, the title "Electric Water Alarm" would not be the best choice because the essence of the idea is not merely to sound an alarm to the presence of water. The alarm might merit a patent because the invention's battery will last a long time and thus allow the alarm to be self-contained and portable. A better title might be "Portable Battery-Powered Water-Alarm Circuit," or, better yet, "Circuit for a Portable, Battery-Powered Water Alarm."

In the paragraph *Cross References to Related Applications*, we mention the disclosure that was filed previously and include its title and the registration number supplied by the PTO.

Rights to Inventions made under Federally-sponsored Research and Development means what it says. For many applications, the rights must be shared by a laboratory or institution funding the development. For our illustration there is no sponsorship.

In *Background of the Invention* (which also could be called *Technical Field*), we begin to tell the examiner about the invention. The background should describe the general nature of the invention and may include a paraphrasing of the applicable U.S. patent classification. Following the general statement, a description of the prior art should be included. In addition, problems that the invention solves when compared with other inventions should be discussed.

The *Summary* contains a general statement of the invention. In the summary, we try to point out the advantages of the invention or describe how it solves the problems that exist in the prior art. If possible, the concept that makes the invention special should be discussed. Parts necessary to build the invention (for example, SCR's, resistors, etc.) should be mentioned only to the extent that they contribute to an understanding of the invention.

In the next section, *Brief Description of Drawing(s)*, we refer to the drawing and describe the function of the elements. All

continued on page 69

TABLE 5—THE CLAIMS

page 2

CLAIM:

What's claimed is:

1. An electric circuit for use in a wetness alarm, said circuit comprising:

   a Silicon Controlled Rectifier,
   an electric noise generator;
   two electrodes;
   a resistor; and
   a battery.

2. A circuit as defined in Claim 1 connected such that electric current is connected from said battery to said noise generator through said Silicon Controlled Rectifier.

3. A circuit as defined in Claim 1 connected such that said electric noise generator operates only when the electrical resistance between said electrodes decreases.

TABLE 6—THE ABSTRACT

page 3

ABSTRACT:

An electric circuit for use in a portable wetness alarm. The circuit senses the presence of water on a surface and sounds an alarm. When no water exists, the circuit requires no power from its source because the semiconductor switch, a Silicon Controlled Rectifier, remains off and offers a very high impedance to the power source. As a result, the circuit performs its monitor function for the battery shelf life without replacement.

A SHORT HISTORY OF THE PTO

While the first recorded patent grant occurred in the Republic of Venice in 1474 AD, our U.S. patent system evolved from the 17th century English system, when patents for inventions were granted during the reign of Queen Elizabeth. Across the Atlantic, the Americans disliked monopolies, but continued the patent process because they recognized the benefits to society and the just nature of rewarding innovation.

The earliest American patent was granted by the Massachusetts Bay colony, in 1641, to Samuel Winslow for a salt-manufacturing process. As the colonies prospered, the individual states granted patents, but the localized process became recognized as inconvenient and expensive. Proposals that the Federal government grant patents and secure copyrights were written into the Constitution. Article 1, Section 8 states: 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."

The patent office became a distinct bureau in 1802 when a separate official in the State Department was installed as the Superintendent of Patents. Patent-law revisions enacted in 1836 reorganized the office and designated the official in charge as the Commissioner of Patents. The Patent Office remained in the State Department until 1849, when it was transferred to the Department of the Interior. In 1925 control of the Patent Office was transferred to the Department of Commerce, where it is today. **R-E**

APPLY FOR A PATENT

continued from page 52

references must be to the labels shown in the drawing.

Best Mode of Carrying Out the Invention contains a short and specific description of the best way to get the invention to work correctly. Where elements or processes are generally widely known, they should not be described in detail; but if the invention requires something special, and the examiner might need background information, refer to another patent or to a publication for a description.

Claims

The claims comprise the core of the application because it's here that we distinctly point out the subject matter regarded as the invention.

Ten claims are allowed, each numbered and each separate and distinct from the others. Within each claim, only one distinct characteristic is allowed.

The more general the claim, the more likely that the examiner will reject it, because the chances of interfering with another patent increase as you expand the scope of your invention.

While we must make the claim specific, we must also take care not to make the claim *too* specific. If we were to list a part number for the SCR, or a value for the resistor, anyone could sidestep the patent's protection merely by substituting a different SCR or resistor value.

Spend the time required to compose your claims properly. Make sure that the claim explains the *concept* that you want to protect.

FURTHER READING

"Code of Federal Regulations #37, Patents, Trademarks, and Copyrights," Washington, D.C: Superintendent of Documents, U.S. Government Printing Office

"Information Concerning Patents," Washington, D.C.: U.S. Department of Commerce, 1983

"Attorneys and Agents Registered to Practice Before the U.S. Patent and Trademark Office," Washington, D.C: Superintendent of Documents, U.S. Government Printing Office

MacCracken, Calvin D., "A Handbook For Inventors," Scribner and Sons, 1983

Sanderson, William R. "Patent Your Invention and Make It Pay," Grosset and Dunlap, 1966

Pressman, David "Patent It Yourself," McGraw-Hill, 1979

Abstract

The abstract summarizes the invention and should be contained on a separate page, following the claims. Make sure that the text conveys enough information so that anyone can quickly get the gist of the idea. Edit ruthlessly and delete any unnecessary words. Financing might result from someone reviewing the abstract when your patent is published in the "Official Gazette."

Submitting the application

Once your application is ready, photocopy it. Keep the original and one copy in a safe place and mail a copy to the Office of the Commissioner, Patent and Trademarks Office, Washington, DC, 20231. Enclose a check or money order for $150. (Note that that is half the $300 fee that large corporations must pay.)

When the application is processed, the results of the examiner's analysis will be mailed to you. You will have six months to respond, after which the patent will be considered abandoned. If you do manage to secure a patent grant, there will be some additional fees to pay. The fee for issuance is $250. There is also a $50/year fee to keep the patent in force. Those fees are payable in $200 installments in the fourth, eighth, and twelfth years. But if your invention nets you the success you have been dreaming about, you won't mind the cost of patent protection. **R-E**

HARDWARE HACKER

Patents and patenting
The LAN of the eighties
Hacking the handicapped
A new pressure transducer
Pressure measurement basics

DON LANCASTER

Patents and patenting and more!

SEVERAL HELPLINE CALLERS HAVE ASKED just how you can go about accurately measuring the cryogenic temperatures involved with superconductor experiments. Ordinary thermometers won't work.

A plain old silicon diode can be used, provided that you can find one with a package that can handle those liquid-nitrogen temperatures without cracking. Since the forward drop of a silicon diode at a constant current is a measurable function of temperature, you can read the voltage across the diode with a digital voltmeter to get the temperature.

Some special silicon cryogenic temperature sensors are now also readily available. One source is *Omega*. Those folks also have an outstanding collection of free catalogs and data books on such things as sensors for temperature, pressure, humidity, pH, strain, and conductivity, as well as for tech books and software.

But note that most of Omega's products are premium ones that command premium prices.

Several of the other sources of low-temperature sensors advertise regularly in the *Measurements and Control* trade journal. That magazine is a great source for sensor and transducer information.

As per usual, this is your column and you can get tech help and off-the-wall networking per the "Need Help?" box. Please also note the *names and numbers* sidebar, that shows were you can go for more information on many of the sources mentioned.

Let's start off with a look-at....

Patents and patenting

I've received several calls and letters this week that drive home the expensive, energy-wasting, and time-consuming misconceptions that many hackers now have over patents and patenting. We'll start off with the one-word bottom line involving any patents for hardware hackers—**don't!** Don't even think about it.

Ever.

Three different helpline callers apparently are in the process of getting patents on three ideas that each have a century of totally obvious prior art involved with them. They are all also readily available as off-the-shelf products. One is a capacitance microphone, the second is an electrolytic level, and the third is a fluorescent lamp.

If a Las Vegas casino manager had the gross effrontery to offer the same odds that the patent office does, he would be run out of town on a rail. Your state lottery is probably a far better investment than a patent.

Fact: Not one single patent in one hundred will ever show any positive cash flow.

Fact: Not one single patent in one thousand is "solid" enough that it cannot be invalidated or severely reduced in value through a diligent enough search for prior art in obscure enough places.

Fact: A patent does not in any way prevent others from stealing your ideas. All it does is give you the right to sue someone. Once patented, anyone anywhere in the world can get a copy of your idea simply by reading the patent.

Fact: In patent litigation cases, the side with the most resources almost invariably wins. Even with a totally bulletproof patent, the legal process can be made so time-consuming and so costly that the winner loses, and vice versa.

The conventional wisdom goes something like this: First, get an idea. Second, patent it. Third, sell the idea to a large company. Well, each one of those three concepts is "patently" absurd.

I would like to be able to report to you that ideas are still worth a dime a dozen, but those glory days are long gone. Today, ideas are worth less than a dime a bale in ten-bale lots. It is only when an idea is both converted into a form that people can use and in fact are actually and aggressively using it, that the idea gains any value.

Many hackers seeking patents do not bother to search through the literature, especially all the trade journals, to find out ahead of time what the competition is, which of the products already exist, and what the demand is in their area. Some will even ignore all of the fundamental physical laws and the other fundamental constraints that lie behind their ideas.

NEED HELP?

Phone or write your **Hardware Hacker** questions directly to:

Don Lancaster
Synergetics
Box 809
Thatcher, AZ 85552
(602) 428-4073

Most larger companies are not in the least interested in new products and ideas. It is far simpler for them to "steal the plans" and go with an established product. They feel that the pioneers are the ones with all the arrows in their backs. As an obvious example, not one of the traditional dino computer firms even entered the personal-computer market until long after it was thoroughly proven.

And then they did so with some highly conservative and "me too" products. Even at that, many of them failed miserably.

Further, many larger companies will positively refuse to ever look at any submitted patent or idea, since it opens them up to all sorts of "You stole my idea!" litigation hassles, and might compromise in-house research that's already in progress.

So, by all means, continue all of your hacking, and do continue your experimenting and developing of ideas and products. But, for most hackers most of the time, I personally just cannot see any

of the new solid-state transducers start out as r

point whatsoever in seeking out the time, dollar, and psychic-energy sinks that the patent process represents today.