



HOW TO READ A PATENT

To Understand a Patent, It is Essential to be able to Read a Patent

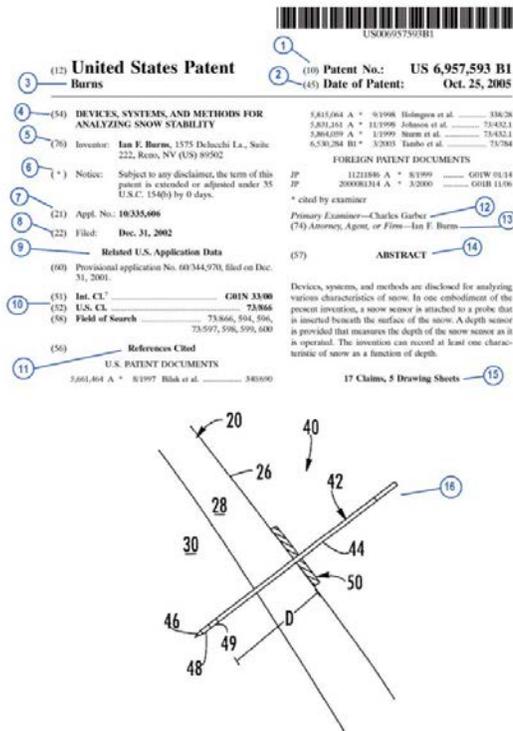
HOW TO READ A PATENT

Entrepreneurs, executives, engineers, venture capital investors and others are often faced with important decisions related to patents:

- file a patent application for a new invention
- commercialize or use a product that may infringe another party's patent
- invest in a business that has a patent
- enforce a patent against an infringer
- defend against a patent infringement suit
- sell, purchase or license a patent

Although these issues involve analysis that should be performed by a [patent attorney](#), a basic understanding of patents can help non-patent attorneys avoid problems, make better decisions, and communicate more effectively with their patent counsel. To understand a patent, it is essential to be able to read a patent.

How to Read Patents: Front Page



Front pages of patents are packed with useful information. But if you do not know how to read a patent, the front page can also be very confusing. This is what you need to know to get started:

Patent Number (1)

Each patent is assigned a unique sequentially generated number that is used to identify the patent (see “(1)” on the example patent). Patent attorneys often refer to a patent by the last three digits of the patent number. For instance, the example patent might be referred to as “the ‘593 patent.”

Inventor(s) (3) and (5)

Each patent has at least one inventor who is a person not a company. The last

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name of the first listed inventor is indicated at (3). Patent attorneys also refer to patents by the inventor name listed at (3). The example patent might be referred to as “the Burns patent.” All of the inventors in a patent are listed at (5) along with their city, state (if applicable), and country of residence.

In the case of multiple inventors, each inventor is free to commercialize the invention and license the patent without the approval of the other inventors, unless the inventor has executed an agreement to the contrary. If an applicant does not accurately provide all of the actual inventors, and the applicant does so with deceptive intent, the patent may be found to be invalid and unenforceable. It is also possible for an inventor who has been left off of a patent to sue and be added to the patent after the patent has issued.

Title (4)

The title indicates the subject matter of the patent. Although they are usually descriptive, titles of patents are sometimes misleading. For example, a title may be “AUTOMOBILE” and you may scratch your head and wonder how a patent could cover something as old and as broad as an automobile. But in fact the patent covers a much narrower concept, such as a self-driving car. Therefore, don’t judge a patent based only on the title.

Assignee

The assignment section (not shown on the example patent) is important because it provides an indication that someone other than the inventor(s) holds rights in the patent. Rights to a patent will often be assigned (transferred) by the inventors to another person or entity before the patent issues. Most employers require their employees to assign any inventions they make within the scope of their

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employment to the employer. However, assignee data on the face of the patent may be inaccurate for a number of reasons. Therefore, if ownership is an issue, it is important to perform an assignment search to help determine the status of ownership rights in the patent.

Application Number (7)

When a patent application is filed with the [Patent Office](#), the application is assigned a unique application number (7), which is sometimes called the application serial number. This number is used to identify the application while it is pending in the Patent Office. The application number is sometimes useful in searching for related patents and pending applications and for looking up the file history of the patent.

Filing Date (8)

The filing date (8) is one of the most important pieces of information on a patent. Either the filing date or the issue date of the patent will determine how long the patent will be enforceable. There are a number of rules that determine the term of a patent. Utility patents are the most common type of patent sought by inventors. New utility patents have a term of 20 years from filing. However, this period can be adjusted. If any adjustments to the patent term have been made, they will be indicated on the face of the patent (6).

The filing date of a patent may also be used to determine what references can be used in determining the patentability of the invention and, in some circumstances, it determines the date the patent is effective as a reference against other applications.

Related U.S. Application Data (9)

The related application data (9) lists other applications that are related to the patent. Sometimes an applicant may file a number of different applications for an invention. If certain conditions are met, the applicant may be able to use the filing date of the earlier application as the “priority date” in an application filed later. This earlier “priority date” may influence what prior art references can be used to determine the patentability of the invention.

International Classification, U.S. Classification and Field of Search (10)

The International Classification, U.S. Classification, and Field of Search (10) are used to group the patent with similar technologies. The field of search indicates the classifications in which the patent examiner searched to locate prior art. This information can be helpful when performing a patent search for related inventions.

References Cited (11)

The References Cited (11) section lists selected patents and/or other publications that are in the application’s file. U.S. patent law requires applicants and their attorneys to submit all material prior art of which they are aware. If material prior art is intentionally not disclosed to the Patent Office, the patent can be invalidated in litigation.

Primary Examiner (12)

Each patent application is examined by at least one patent examiner. The examiner is responsible for determining the patentability of the invention and approving the application for patenting. In some cases, the name of an assistant examiner may

also be listed.

Attorney, Agent or Firm (13)

This section lists the patent attorney, patent agent, or law firm that represented the applicant in the Patent Office during the prosecution of the application. Only a patent attorney, a patent agent or the actual inventor(s) can prosecute a patent application in the Patent Office.

Abstract (14)

The abstract (14) typically gives a brief overview of the invention. The abstract is used by patent searchers and examiners as a starting point when determining whether a prior patent is relevant to an application being considered. Just as the title can be misleading, so can the abstract. Do not rely solely on the abstract to determine the scope of a patent.

Claims and Drawings (15)

Section (15) indicates the number of claims and pages of drawings in the patent. As will be discussed further, while the number of claims may not be important, the claims substantially determine the patentee's rights.

Front Page Drawing (16)

Most patents have at least one drawing. Applicants typically include a variety of views of their invention to aid in understanding the invention. If drawings are included in the patent, one (16) is typically included on the first page of the patent. The drawings can be a very useful starting place to understanding an invention. In the '593 patent, five pages of drawings are included. The drawings

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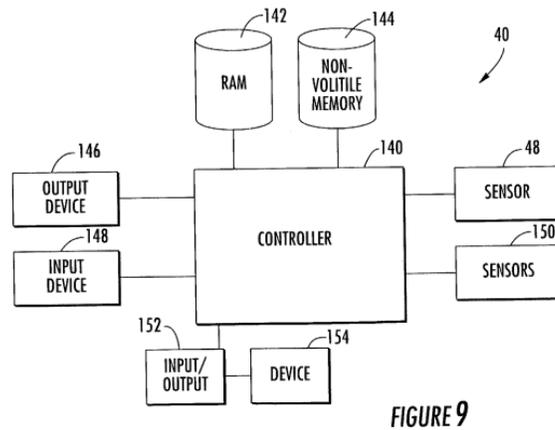
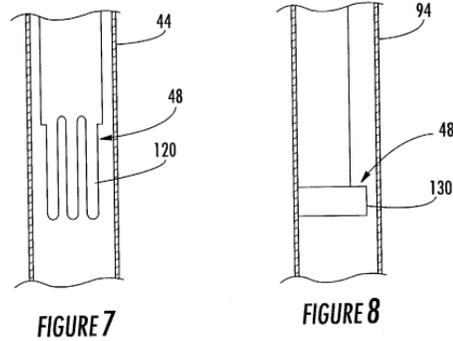
have numbers that are used to refer to particular features of the invention. The features of the invention are discussed in later sections of the patent, typically using the numbers on the drawings.

Drawings

Most utility patents include a number of drawings following the front page of the patent. These drawings are used to describe the invention. A small percentage of utility patents do not include drawings. These patents tend to be for inventions that do not lend themselves to drawings, such as chemical inventions.

Many different kinds of drawings can be used in patents. Patents related to mechanical inventions can have different types of mechanical drawing drawings, such as isometric, plan, exploded, and cross-sectional views. Patents related to software, processes and methods tend to have flow charts. Patents related to electrical inventions tend to have schematic circuit diagrams. Patents can also include graphs, charts and conceptual diagrams. Almost any kind of drawing that is useful to describe an invention can be used in a patent

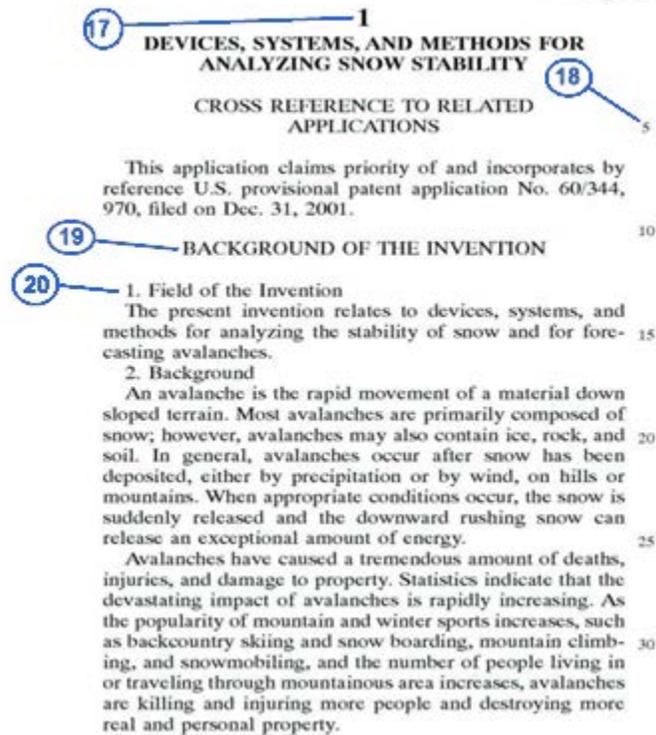
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Drawings usually have reference numbers that point to specific elements or parts of an invention. Each of these parts are described or referenced in the written description that follows. The reference numbers help make it clear what part is being discussed.

Design patents protect the appearance of an object. Therefore, almost all design patents have drawings that communicate the appearance of an invention. Plant patents also have drawings of the plants that are the subject of the patent.

Specifications



Navigating the Specification with Columns (17) and Line Numbers (18)

Patents are usually printed in columns (17) that contain line numbers (18) running down the side. These numbers are very useful for anyone who needs to work with a patent. Sections of a patent can be referred to easily and unambiguously by specifying a range of columns and line numbers.

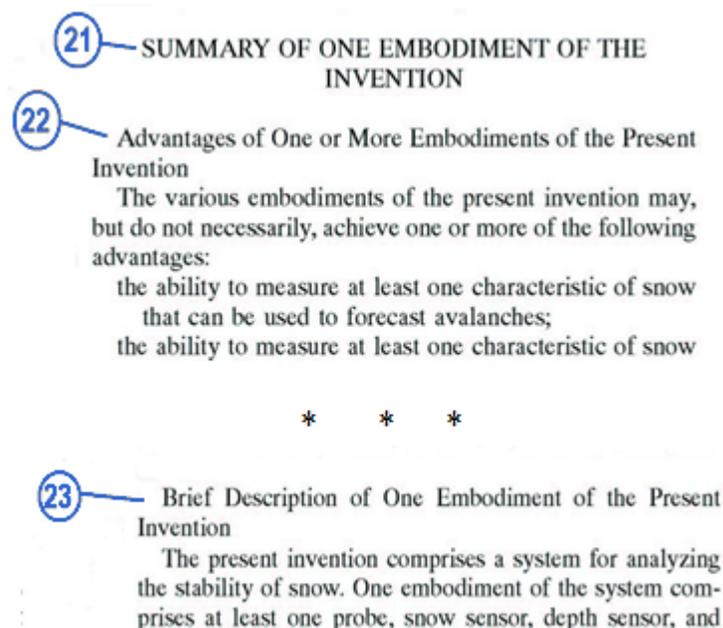
Background of the Invention (19)

The Background of the Invention (19) typically includes two sections. The first section describes the Field of Invention (20). The Field of Invention is the industry or technology to which the invention

relates.

The Background of the Invention (19) may also contain a description of the related art (not shown). This section describes what was known in the field of the invention at the time the inventor conceived of his invention. Often, this section is used to describe problems with existing technology or disadvantages encountered with prior products or processes. Generally, this section describes what was already known, rather than the new invention.

Summary of the Invention (21)



The Summary of the Invention (21) describes the specific nature of the claimed invention, as well as its method of operation and purpose. Typically, this section will also list advantages (22) the invention offers. The Summary also contains a Brief Description of the Invention (23), which provides an intermediate level of detail between the Summary of the Invention and the Detailed Description (25).

Brief Description of the Drawings (24)

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BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is substantially a cross sectional side view of a snow covered hillside with potential avalanche conditions.

FIG. 2 is substantially a side view of a probe of one embodiment of the present invention.

FIG. 3 is substantially a partial cross sectional side view of a wheel sensor of one embodiment of the present invention.

The Brief Description of the Drawings (24) provides a very general description of what is depicted in the drawings and the way it is depicted.

Detailed Description (25)

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DESCRIPTION OF AN EMBODIMENT OF THE PRESENT INVENTION

In the following detailed description of the preferred embodiments, reference is made to the accompanying drawings, which form a part of this application. The drawings show, by way of illustration, specific embodiments in which the invention may be practiced. It is to be understood that other embodiments may be utilized and structural changes may be made without departing from the scope of the present invention.

The detailed description (25) is an in-depth discussion of the invention that should enable a person of ordinary skill in the field of the invention to make and use the invention. This section generally contains a detailed discussion of the drawings and explains the invention with reference to the reference numbers included on the drawings.

Claims

Claims (26) always receive a great deal of attention during licensing and litigation. The scope of protection provided by a patent is mostly determined by

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the patent's claims. In a way, claims are similar to a metes and bounds description in a property deed.

Although applicants want to obtain broad claims for a potentially more valuable monopoly, it is important that the claims be specific enough to be valid. Occasionally, an applicant obtains a patent from the [Patent Office](#) only to have the patent invalidated by a court during litigation.

Patent law has evolved in such a way that claims are confusing to non-patent attorneys. For example, each claim is written as a single sentence and some claims have dozens of clauses and parts.

Non-patent attorneys sometimes make the mistake of interpreting the scope of a patent based only on part of the patent (e.g., the title or abstract). However, the scope of a patent is determined by the claims as they are interpreted using the entire patent as well as its prosecution history in the Patent Office. In addition, claims do not always mean what they say. There are a number of legal doctrines that could lead to a much narrower or broader interpretation than their apparent meaning.

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What is claimed is:

- I. A system for analyzing stability of snow, the snow having a plurality of layers, comprising:
 - (A) at least one acoustic sensor, the acoustic sensor being configured to:
 - (a) emit sound energy, the sound energy being adapted to be reflected differently by the plurality of layers of snow;
 - (b) receive sound energy reflected by the plurality of layers of snow; and
 - (c) produce an output signal;
 - (B) at least one output device, the output device being configured to communicate information to a user; and

Claims can be broken into two general groups: dependent claims and independent claims. Independent claims are those that stand by themselves; they do not incorporate other claims. For example, claim 1 of the '593 patent is an independent claim. Dependent claims are those that refer to and incorporate at least one other claim. A dependent claim contains all the elements of the dependent claim itself, and those of any other claim it depends upon, including at least one independent claim. Although it is not common in the U.S., some claims can depend on more than one claim.

You can think of independent and dependent claims as a tree. The independent claim is the trunk and the dependent claims are the branches and twigs. Since the independent claim includes the fewest elements, it is the broadest and provides the strongest protection. Each dependent claim branch adds at least one element to the invention and provides narrower protection.

Two Minute Patent Review

A patent can sometimes seem impenetrably dense and confusing. However, a brief review can reveal important information from even the most complex patents.

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If time or attention span is in short supply, follow these steps for a two minute patent review: 1) Read the filing date and the date of grant to determine the age of the patent. From this you can determine if the patent has expired. 2) Read the title and abstract of the patent to get an idea of the subject matter. But do not assume that this determines the scope of the patent. 3) Read the independent claims of the patent to get a feel for the scope of the patent. After this review, you should have a basic understanding of the patent. Care should of course be taken not to reach any important conclusions without consulting patent counsel.

Please call us if you need help with a patent issue.

About the Author



Ian Burns is a graduate engineer and registered patent attorney. He is admitted to practice law in California, Hawaii and Nevada. Mr. Burns is also admitted in the U.S. Patent & Trademark Office and before numerous courts. He is founder and president of [ATIP Law](#), a law firm based in Nevada. Mr.

Burns is also a speaker, inventor, entrepreneur and angel investor and he enjoys many outdoor adventures.

About ATIP Law

American Technology & Intellectual Property Law is a law firm based in Nevada that practices primarily in intellectual property and business law. We help companies develop, secure and maximize the value of their intellectual property. We take the time to get to know our clients and to understand their specific needs and business situations. We create and execute custom strategies that achieve our clients' goals.

Contact Us

We really enjoy talking with entrepreneurs, innovators and pioneers in all fields. Please contact us with any questions, comments or suggestions you may have.

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