Section 2

*Patents*
Next came the Patent laws. These began in England in 1624; and, in this country, with the adoption of our constitution. Before then, any man might instantly use what another had invented; so that the inventor had no special advantage from his own invention. The patent system changed this; secured to the inventor, for a limited time, the exclusive use of his invention; and thereby added the fuel of interest to the fire of genius, in the discovery and production of new and useful things.

—Abraham Lincoln, 1
16th President of the United States, inventor of U.S. Pat. No. 6,469 (1849) for a “manner of buoying vessels.”

I. HISTORY

Perhaps the most useful background information to keep in mind when analyzing patents, patent law, and the patent system is the purpose and motivation behind the patent system. While virtually all countries have a

patent system, the prevailing purposes and motivations of each system are varied.

At the heart of the U.S. patent system is the desire to promote progress and development in areas we today loosely refer to as science and technology. Encouragement of continued progress and development of science and technology is set forth in the United States Constitution in Article I, Section 8, Clause 8, and this single clause has served as the backbone for the U.S. Patent System for several hundred years. The drafting of Article I, Section 8, Clause 8 was not the initiation of the concept of a patent system, and one certainly cannot claim that the Founding Fathers invented a patent system in the broad sense.

The term patent originates from the Latin phrase *patere*, which means "to lie open." *Patere* is a shortened form of the phrase *lettre patere*, or "open letter or document for some authority." 2 While the origins of the concept of a patent system are claimed by a variety of nations, U.S. patent law arises from a multicultural heritage that may not be properly assigned to a single source. The Venetians are among the first to have patent laws. Their laws provided a dual right that included (1) the exclusionary right that later became the sole "right to exclude" of U.S. patent law, as well as (2) a privilege to operate the patented invention free from interference by the guild's monopoly in the particular area of technology. 3 The concepts that underlie our current U.S. patent system are also apparent in varying degree in early English and Continental systems that developed in the wake of the Venetian system. 4 While American patent law extends back at least to the Act of 1790, patent legislation in the individual states stretches back as far as 1641 to Massachusetts. 5 Early American patent laws in at least nine of the original thirteen colonies granted rewards to inventors, but not all of them were necessarily "patents" in the sense of providing rights to exclude others. 6

As patent law and its application attempt to keep up with the pace of innovation, the U.S. patent system is sometimes criticized. In particular, when patents are issued for inventions deemed by the public not

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4. *Id.* at pp. 10–11.
5. *Id.*
6. *Id.*
to be sufficiently innovative or to be overly broad in their coverage such that they appear to stifle further innovation, the patent system can get called into question. However, the historical purpose and motivation of most patent systems, including the U.S. patent system, are clearly the promotion of progress and innovation in the “useful arts” (science and technology).

A. **Purpose and Motivation**

The majority of patent practitioners prosecute, litigate, opine, and advise on the *application* of the patent laws and regulations in relation to *facts* of extreme interest to their clients. To effectively advocate or opine regarding scenarios of interests, it is beneficial to understand the purpose and motivation behind the laws, statutes, and regulations. Equity and justice may be a pivotal distinction between two scenarios and two distinct outcomes in similar or even related factual scenarios. Practitioners may effectively use an understanding of both the broad purpose(s) of the patent system and the more narrowly focused purpose(s) of individual laws and regulations to advocate on behalf of a client, to predict a likely outcome before a judicial or quasi-judicial official, and sometimes even to invoke a change in the application of a law or regulation itself through either the legislative process or judicial review.

While patent systems across the globe continue to become increasingly similar and related under the provisions of various intellectual property and trade treaties, individuality continues to exist among countries in relation to their individual patent systems. Regardless, the impetus behind intellectual property rights often can be understood as promoting an incentive theory.

Similar to the U.S. Constitution’s explicit authorization of Congress “to promote progress,”[7] patent systems (and intellectual property systems generally) are structured to encourage behavior or actions. Manifestation of an incentive theory in U.S. patent law is the *quid pro quo* of the patent system. In exchange for you, Mr./Ms. Inventor, publicly describing the fully developed version (best mode) of your invention in a manner sufficient to enable one skilled in the art (perhaps another engineer, computer scientist, chemist, or the like) to re-create your invention, the government will grant you a right to exclude others from making, using, selling, offering for sale, or importing your claimed invention for a limited

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7. U.S. Const. art. I, §8, cl. 8.
period of time. As such, inventors are encouraged or incentivized to publicly disclose their inventions through government publication (patents and patent applications) so that the invention can be further used by the public. Other inventors who learn of these developments theoretically will be able to build on the previous inventors’ work in a more expeditious manner than had discoveries been kept secret. Just as researchers and developers often work in teams to improve the efficiency, reliability, and success of the innovation, it may be argued that the patent system enlists all the patentees and applicants, and the public itself, as an enormous research and development team pushing innovation ever forward.

However, realists recognize that human and business self-interest most often drives the efforts of mankind; therefore, a sufficient carrot or reward must be dangled to entice innovators to publicly disclose their innovation and developments in a manner to benefit society. This carrot has taken the form of a right to exclude others from certain activity relating to the invention. This right to exclude, depending on its particulars, may be extremely worthwhile to people and business. Biotechnology and pharmaceutical sectors often are cited for some of the more extreme examples of the value of patent protection. It is not unheard of for a single day of patent protection (exclusivity) in these areas to be valued at or result in millions of dollars in further revenue for the owner of those rights. However, these figures may seem less extreme upon consideration that it may take the same owner months or years of research, significant capital expenditures, and several unsuccessful attempts at a new biotechnology product before a successful product is produced, much less makes it to the public marketplace. Additionally, significant amounts of money may be expended in obtaining a patent to protect the innovation.

Beyond the specific quid pro quo of the patent system, significant investments of time and money in research and development are encouraged with a view to the “pot of gold” if a successful innovation is the result. Of course, individuals and entities may choose not to utilize the patent system, thereby hoping to keep their innovations secret8 and avoid the time limitation of protection afforded by a patent or the costs of governmental and representative fees. While choosing not to pursue patent protection has proven successful for such products as the secret formula for Coca-Cola or the secret recipe for Kentucky Fried Chicken,9 the risk

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8. See *Trade Secret Section*.
9. These are well-known historical examples of successful and highly valued “trade secrets.”
of unforeseen disclosure, reverse engineering, and copycats make pursuit of patent protection an attractive option in many instances.

**B. Opposing Views—The Good, the Bad, and the Ugly**

The incentive theories behind the U.S. patent system in particular are clear as evidenced by explicit recitation in the U.S. Constitution. However, practical effects and implementation are often less clear and not agreed upon. As patents have moved from a niche topic to a mainstream item on the front page of newspapers and websites, varied opinions exist regarding the good, bad, and perhaps even ugly effects of the system.

The Good—As intended by the Framers, the patent system provides a strong incentive for the devotion of resources toward innovation with the prospect of future compensation, reward and accolade, and personal praise for successful innovation. From a business and economic perspective, the patent system provides business protection for those doing innovative work to develop new and useful products or services without being undercut in the marketplace by a copycat that can offer the same product or service at a cheaper price because it was able to spend comparatively little or no money in development. The United States Patent and Trademark Office (USPTO) is a neutral governmental agency, and the process of obtaining a patent from the USPTO is structured to be a fair and objective process regardless of who the applicant or inventor is and regardless of the type of technology. Further, patent prosecution is a non-adversarial process which entitles applicants to receive a patent unless certain circumstances exist that prevent the USPTO in its governmental role from issuing a patent. On the litigation side, some comfort can be drawn from the appeal process. Since 1982, the U.S. Court of Appeals for the Federal Circuit (Federal Circuit) has had exclusive jurisdiction for cases arising under the patent laws. Accordingly, the judges who sit on this court have acquired significant expertise in patent law and many of the technologies involved in patent cases.

The Bad—The devil is in the details. While implementation of a patent system in the United States primarily provides incentive for innovation, errors in implementation do happen and may undermine the very goals of the patent system with varying effect and magnitude. For example, patent applications may involve complex technologies, and pat-
entability may be a complex issue. However, the USPTO can allocate only limited man-hours and resources to examination of each patent application. Examiners have varied amounts of experience and, as in any profession, vary in their skills and abilities. As a result, some patent applications issue each year that should not have been allowed, while others are rejected that should have proceeded on to issuance. Likewise, patent litigations may be imperfect forums for justice. Juries with few or no technical skills are tasked with understanding cutting-edge technology and the terminology used to describe it, and come to decisions on abstract and nuanced issues such as infringement, obviousness, and the knowledge and understanding of “one skilled in the art.”

The Ugly—Obtaining a patent can be an expensive endeavor, especially if the applicant is represented by counsel.12 The USPTO governmental fee schedule does provide reduced “small entity fees” for small companies and individual inventors. Regardless, the requisite fees require a significant capital investment for any entity pursuing a patent application. Applicants also are extremely eager to obtain patent protection; however, there continues to be a backlog of applications awaiting even a first action by the USPTO (and in other international patent offices). On the litigation side, patent litigations are typically among the most costly types of litigations. Costs do vary depending on the particulars, including the number of patents and claims involved, complexity of the technology, amount of damages or size of market involved, importance of the technology covered by the patent(s), and the amount and type of discovery required. However, in most patent litigations, each side will be required to retain expensive technical expert witnesses, perform significant discovery relating to the patent(s) and products at issue, and hold claim construction hearings and other costly components of a patent litigation.13 Further, the business operations of litigants may be significantly burdened by their involvement in the discovery process. Patent litigation may be especially fierce between direct competitors that may have a long history of competition and sometimes even previous personal ties that have gone bad.

12. It is strongly recommended that anyone interested in pursuing a patent seek legal representation prior to pursuing one or more patent applications with the USPTO.

13. The “average” patent litigation is estimated to cost about $3 million—to $5 million with appeal—and these figures continue to rise. See U.S—Litigation: Cost and duration of patent litigation, MANAGING INTELLECTUAL PROPERTY (February 2009).
Winston Churchill once referred to democracy as “the worst form of government except all the others that have been tried.” Some might take a similar view of the U.S. patent system. As a practitioner, it is important to understand the strengths and weaknesses and, perhaps more importantly, the certainties and uncertainties to help clients “manage their risks” when utilizing the patent system.

II. UNITED STATES FRAMEWORK

The United States patent system can be characterized as an interwoven network of authorities and decision makers implementing the authority derived from the U.S. Constitution. The legislative, executive, and judicial branches each play a pivotal role in the U.S. patent system. In the U.S. patent system, the legislative branch passed U.S. patent laws. In order to execute or implement these laws on a daily basis, Congress delegated powers such as review of patent applications and issue of patents to an administrative body (USPTO) in the executive branch within the Department of Commerce. Lastly, when disputes arise under these federal patent laws, federal courts in the judiciary branch consider these matters.

A. Article I, Section 8, Clause 8, the Patent Act, and the Hierarchy of Authority

The U.S. Constitution is the highest authority of law in the land. As such, all patent laws must be consistent with the provisions of the Constitution. Further, no executive branch action or judicial decision regarding patents or patent laws may violate the Constitution. Article I, Section 8, Clause 8, is well known as the Constitutional source of the framework for U.S. patents laws, but also for U.S. copyright laws.

“The Congress shall have 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.”

U.S. Constitution, Article I, Section 8, Clause 8

While a quick read of Art. I, §8, cl.8 and our modern vernacular with regard to technologies, patents, and copyrights might suggest terms such as “Science” relate to patents and “Arts” relate to copyright, this, in

fact, is not the case. It is understood that when the Framers drafted this provision of the Constitution, the terms in bold below relate to what we now refer to as patents, and the words underlined below relate to what we now refer to as copyrights.

“... The Congress shall have 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.” U.S. Constitution, Article I, Section 8, clause 8 (Emphasis added).

Interestingly, trademark law does not find its constitutional basis in Art. I, §8, cl. 8, but instead is rooted in Congress’s broad powers under the Commerce Clause—Article I, Section 8, Clause 3. The Commerce Clause is described further in the Trademark & Trade Dress Sections.

Patents are exclusively federal subject matter. Using the authority granted to it by the Framers in the Constitution, Congress over time has passed a series of laws to establish the U.S. patent system. These laws were not passed at one time and can and will be added to, revised, or otherwise tweaked as Congress deems proper “to promote progress in the useful arts.” Today’s patent system draws its roots back to the Framers and notable figures from U.S. history, such as George Washington, John Quincy Adams, Thomas Jefferson, and Henry Clay laying pen to the early patents, as some of the highest ranking officers of the new U.S. government were tasked with review and issuance of early patents. The most recent large overhaul of the U.S patent system, prior to the recently enacted America Invents Act (AIA), occurred in 1952 as part of the U.S.

15. “[The Congress shall have Power] To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes.” U.S. Const. art. I, §8, cl. 3.

16. The first U.S. patent was granted on July 31, 1790, to Samuel Hopkins and was directed to improved “making of Pot ash and Pearl ash by a new Apparatus and Process.” Among the notable signatories were the Secretary of State (Thomas Jefferson), Secretary of War (Henry Knox), and Attorney General (Edmund Randolph). This group of officers given the duty of determining if an invention was sufficiently useful and important to merit the grant of a patent called themselves the “Commissioners for the Promotion of Useful Arts” or “Board of Arts,” while others referred to them as the Patent Commission or Patent Board. Frederico, P.J., Operation of the Patent Act of 1790, JPOS 18:237–51 (April 1936).
Patent Act of 1952. Practitioners today will recognize changes as a result of what is commonly referred to as the “Patent Laws” or Title 35 of the United States Code.

Consistent with the laws of Title 35, the USPTO issued 167,349 utility patents, 23,116 design patents, and 1,009 plant patents in 2009.

In order to carry out its delegated administrative authority of granting patents on behalf of the United States of America, the USPTO sets forth a series of “Patent Rules,” which are found in Chapter 37 of the Code of Federal Regulations. These Patent Rules govern the implementation of the Patent Laws by the USPTO and include provisions relating to submission of information disclosure statements, reissue applications, and payment of fees, to name a few illustrative examples. Some of the more common and more important Patent Rules for practitioners are discussed further in the Patent Prosecution Section.

With Congress and the USPTO issuing laws, rules, and regulations, there have been and may be again occasions in which provisions may be in conflict. As such, certain courts, including the U.S. Court of Appeals for the Federal Circuit and the U.S. Supreme Court may be asked to review certain provisions for their appropriateness and constitutionality in the framework set forth by the Framers in the Constitution and further specified by Congress in the Patent Laws. It may be helpful to remember the hierarchy of patent provisions should a conflict arise. First and foremost, the U.S. Constitution (e.g., Art. I, §8, cl. 8) sits atop the hierarchy and must be complied with in all instances. Any law, rule, or provision contrary to the Constitution will be stricken as unconstitutional. Below the Constitution sit federal statutes enacted by Congress and international treaties ratified by the Senate. Below these sit the administrative laws of the Code of Federal Regulations.

B. Patent Enforcement in the United States

If an owner believes his or her patent is being infringed, he or she may bring a suit in federal court to enforce the patent against one or more of

17. 35 U.S.C. §§1 et seq.
19. 37 C.F.R. §§1 et seq.
20. 37 C.F.R. §1.56.
21. Id.
22. Id.
23. 37 C.F.R.
the accused infringers. While the particulars of patent infringement are discussed in more detail herein, there are several case paths available to owners of patent rights for enforcing their rights.

The majority of patent infringement cases are initiated in one of the many federal districts in the United States. Not all federal districts are equal in size or case load, especially in regard to the number of patent cases. For example, the state of Illinois has three districts, the Northern (N.D. Ill.), Central (C.D. Ill.), and Southern Districts (S.D. Ill.). Among those districts, the N.D. Ill. (which includes Chicago) is among the more popular districts for patent litigation cases. In contrast, the entire state of Wyoming falls within a single district (D. Wyo.) and has few patent litigation cases.24 The district courts in which patent litigations are most often pursued include some of the larger and more tech-focused metropolitan areas, but also include perhaps some surprising venues to those not familiar with patent litigation, such as the Eastern District of Virginia (E.D. Va.) and the Eastern District of Texas (E.D. Tex.). Both of these district courts are historically attractive to patent owners since they are currently known to have very aggressive and expedited case schedules. As a result, trials, decisions, and final determinations regarding infringement are arrived at more quickly, typically much to the preference of the case filer—often the patentee.25

The International Trade Commission (ITC) is another venue or case path those alleging patent infringement may pursue according to 19 U.S.C. §1337.26 ITC litigation is described in more detail herein. However, its existence as a case path option should be noted. The ITC is an independent federal agency—not a traditional court—that determines import injuries to U.S. industries and can direct actions against unfair trade practices involving patent, trademark, and copyright infringement.27 The ITC also investigates unfair trade practices wholly unrelated to IP, however, it has become an increasingly popular venue for patent owners to bring cases. The ITC differs generally from federal district courts in that the ITC exercises “in rem jurisdiction” (jurisdiction over the alleged infringing article). Also, cases are heard before an administrative law judge and no

25. See id.
money damages can be awarded as a remedy, only as an exclusion order. Additionally, the ITC has an extremely fast case schedule once an investigation is initiated—often concluding in about 12 months time. This expedited adjudication of a claim of patent infringement is an attractive aspect to many patent rights owners, compared to many federal district courts before which the case may not reach trial for several years. An ITC action may be sought since the rights of a patent owner include the right to prevent others from importing the invention covered in the patent.

Just as patent right owners can bring suit in a federal district court to obtain an infringement ruling, in certain circumstances a party that believes it is going to be sued for infringement may initiate a suit requesting a ruling on the issues of non-infringement and/or invalidity and other issues typically raised in patent infringement litigations. One might logically wonder why a party that has yet to be sued for infringement would instigate a declaratory judgment action that might raise issues for which the party could be liable. In certain instances, the threat of suit, if allowed to linger for an extended period of time, may have detrimental consequences on continued business. Further, preemptively filing a declaratory judgment action may have strategic advantages, such as venue selection—especially when the probability of suit, whether or not a declaratory judgment action is filed, is high.

Regardless of which federal district court serves as the trial court for a patent case, appeals that “arise under” the U.S. patent laws are heard before the U.S. Court of Appeals for the Federal Circuit. The Federal Circuit, as it is commonly called, was created in 1982 and sits in Washington, D.C. This specialized appellate court has exclusive jurisdiction over cases that are based in whole or part on U.S. patent law issues. However, the Federal Circuit also has jurisdiction over a variety of other cases, including government contracts, money claims against the U.S. government and veterans benefits. The Federal Circuit also hears appeals of decisions by the Board of Patent Appeals and Interferences (BPAI) and the International Trade Commission (ITC).

28. See, e.g., SanDisk Corp. v. STMicroelectronics, Inc., 480 F.3d 1372 (Fed. Cir. 2007). Under the Declaratory Judgment Act, jurisdiction for a Declaratory Judgment Action may be found “where a patentee asserts rights under a patent based on certain identified ongoing or planned activity of another party, and where that party contends that it has the right to engage in the accused activity without license.”

29. See 28 U.S.C. §§1295(a) and 1338.

30. The Federal Circuit will hear appeals of the decisions of the Patent Trial and Appeal Board (PTAB) under the AIA.
The U.S. Supreme Court also *may* choose to hear patent cases from time to time at the Court's discretion. It is uncommon for the Supreme Court to grant certiorari and hear more than one or two patent cases a year and patent practitioners should consider decisions by the Federal Circuit to be dispositive unless the case raises a Constitutional issue regarding implementation of the patent laws or conflicting precedents by the Federal Circuit. Even so, successful appeal of a patent case to the Supreme Court is rare.

**Figure 1-1**

*Diagram of Illustrative Patent Litigation and Appeal Forums*

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**III. U.S. PATENT TYPES AND ANATOMY**

What is a patent? A patent is a grant by the government (e.g., U.S.) of a *right to exclude* others from practicing (i.e., making, using, selling, offering to sell, and importing) a particular invention for a set period of time. Patent rights, like other property rights—e.g., personal property—can be assigned, sold, given away, inherited, mortgaged, and licensed. Just as you can sell, trade, assign, or donate your car, so too can you do the same with intellectual property rights, including patent rights. Further, patent rights also can be licensed away in portions or subparts, in nonexclusive or exclusive licenses or in a specific market, because licenses are merely contracts in which the parties generally may structure in any way they desire.

One of the most common misconceptions regarding patentees (a party receiving a patent) is the belief that a patent gives you the right to prac-
tice the invention you claimed in your patent. This is unequivocally false. A patent only gives you the right to exclude others from practicing an invention, but it does not give you the right to practice your invention. A simple example that illustrates this concept involves support devices (a chair and a stool).

Assume for a moment that no support devices exist in the world. Inventor A comes along and creates a three-legged support device and receives a valid patent on “a support device comprising three (3) legs.” Inventor B creates a support device that has a back rest that makes your device much more comfortable than any device out there. Additionally, Inventor B adds another leg to provide for a more stable support device. Inventor B applies for and receives a patent on “a support device comprising four (4) legs wherein the support device includes a backrest.”

Can Inventor B legally make, use, sell, or offer for sale her new four-legged support device with a backrest? No! If Inventor B does, she will infringe Inventor A’s patent. Can Inventor B exclude others from making, using, selling, or offering for sale a four-legged support device with a backrest? Yes. In this instance, Inventor B will be able to exclude all others from practicing a four-legged support device with a backrest in light of the claim in the patent. What happens now, especially if the four-legged support device with a backrest is better functioning or more desirable? In theory, Inventor A could continue making his three-legged support device and could prevent Inventor B from making or selling her improved chair. However, Inventor A cannot make the four-legged chair
with a backrest. The logical next question is how then does technology progress since an early patent might be broad enough to cover patentably distinct improvements? In short, how does the four-legged chair with backrest make it to the public? Answer: Licensing. If the four-legged chair with a backrest will be a commercially viable product and it is of value as a product, Inventors A and B will enter into a license agreement. Inventor B may license or purchase Inventor A’s patent so she can sell the four-legged chair with backrest as well as a three-legged support device. Alternatively, Inventor A may be an excellent manufacturer of support devices and may license his patent to Inventor B if he is made the “sole manufacturer” of support devices that Inventor B sells. In another scenario, Inventor B may sell her patent rights to Inventor A for a lump sum without making a single four-legged support device with a backrest. Many scenarios can and do occur in these instances.

Knowing some of the rights associated with patents, a review of the different types of patents is warranted. In the United States, there are three types of patents—utility patents, design patents, and plant patents. Most countries also have similar patent types that cover similar types of subject matter. However, the patent types may be arranged differently or have varied degrees of review or examination.31

**A. Utility Patents**

Utility patents are the most common patent type and protect utilitarian inventions, both animate and inanimate, and have a term of life of 20 years32 from the date of filing with the USPTO.

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31. For example, in some countries a registration system is used in lieu of a design patent system. Design registration systems often differ from the U.S. design patent system in that designs are not reviewed for patentability—novelty and non-obviousness—as they are done in the United States. Instead, registrations are merely reviewed for compliance with the submission requirements, and issues of validity are left to be handled during enforcement.

In France there are two different types of protection for functional inventions: (1) the patent of invention and (2) the utility certificate. These protections vary in their term of life (20 years v. 6 years) and requirements for obtaining the protection, including the requirement or absence of a requirement for a search report.

32. For applications filed on or after June 8, 1995, the patent term is 20 years from the filing date of the earliest U.S. application to which priority is claimed (excluding provisional applications). For applications that were pending on and for patents that were still in force on June 8, 1995, the patent term
Utility patents include the following:

- **Cover page**—Provides the most often searched information at the front of the patent. Information included on the cover page includes the Patent Number, Issue Date, Filing Date, Inventor(s), Assignee(s) at time of issuance, Priority Data, Cited References, Abstract, and an Illustrative Figure.

- **Abstract**—A 150-word or less general description of the invention for future searching that ultimately appears on the cover page. In filing patent applications, the abstract is provided alone on its own page.

- **Drawings**—Drawings are used to further show or illustrate features described in the application. Typically “figure labels” or numbers are used to label the parts or aspects of that shown in the figures. Often, arrows or lines are used, along with the numbers to clearly convey the components, steps, and features of that shown in the figures. While a patent need not include a drawing(s), the USPTO can require applicants to include one or more drawings to facilitate understanding of the described invention. Applicants should typically consider including one or more figures when filing patent applications. While “rough sketches” can be submitted and later supplemented with “formal drawings,” care should be taken such that all features are included in the originally filed drawings or else they will be rejected later for including “new matter.”

- **Field of the invention**—The field of the invention briefly and broadly describes the general area of technology of the patent. Typically the field of the invention is only about two sentences long and very general. It often states that the present invention is either 17 years from the issue date or 20 years from the filing date of the earliest U.S. or international (PCT) application to which priority is claimed (excluding provisional applications), the longer term applying. See GATT Uruguay Round implementing legislation (P.L. 103-465), signed by then President Clinton on December 8, 1994. The term lengths identified assume all maintenance fees are paid. The term of a patent may also be adjusted in certain instances if there are delays during prosecution at the USPTO. Delays by the USPTO in acting on a patent application beyond proscribed time periods may result in these time periods being added onto the end of the life of the patent. Added time is reduced by applicant delays during prosecution. See 35 U.S.C. §154 (also known as the Patent Term Adjustment Act).
“relates” to a certain area of technology. This is not a requirement for an application.

- **Background**—The background may vary from patent to patent. In some instances, applicants provide a brief statement to provide general background information to facilitate an understanding of the invention disclosed in the application. Applicants may describe related art, such as some of the more relevant references that also may be identified in an information disclosure statement. Such a description of related art may be utilized in an instance where the technology for patenting is an improvement over the known art and the applicants wish to identify explicitly distinctions over the identified art. These distinctions also may be referenced generally and/or placed in the summary or detailed description to reduce the risk of a litigant asserting features the applicant intended to be attributable to the invention claimed in the patent are associated with the prior art. This is not a requirement for an application.

- **Summary**—This is a general description of the invention disclosed in the patent application. The summary section provides a brief description of various arrangements of the invention that is described in more detail in the detailed description. Patent practitioners may take care to ensure statements made in the summary cannot be used to unnecessarily limit the breadth of the invention.

- **Brief description of the drawings**—A brief listing of the drawings or “figures” is included in the patent application. A single sentence is typically provided for each figure and describes what is shown in the figure. For example, the brief description of the drawings might state language such as, “Figure 1 is an illustrative perspective view of an umbrella attachment device in an in use position in accordance with at least one aspect of the present invention.”

- **Detailed description**—The detailed description typically forms the largest portion of the body of a patent application and resulting patent. In the detailed description, the features of the invention are described in detail that includes the features shown in the figures, as well as various contemplated aspects, even if not explicitly shown in the figure. Practitioners typically prepare the detailed description to describe the configurations and ar-
rangements of the invention in an organized fashion to facilitate understanding of the invention, uses and related aspects.

- **Claims**—The claims of a patent define the scope of the invention covered in the patent. Similar to a deed for a plot of land, the claims of a patent set forth the “metes and bounds” of that which the patentee or patent owner is entitled to exclude others from practicing. Each claim is a single sentence that has a preamble, a transitional phrase, and a body. The preamble generally sets forth whether the invention is a process, machine, manufacture, or composition. Transitional phrases may be “open” language, such as “comprising” or “including,” closed language, such as “consisting of,” or partially closed language, such as “consisting essentially of.” Each claim is a single sentence and must be written with proper “antecedent basis.”³³ Each claim is also characterized as

³³ The indefinite articles “a” or “an” are used when first describing features in a patent claim. Once the features have been identified, they may be referenced using the definite articles “the” or “said.” A further description of proper antecedent basis and claim usage can be referenced in the MPEP. MPEP §2173.05(e) (“A claim is indefinite when it contains words or phrases whose meaning is unclear. The lack of clarity could arise where a claim refers to “said lever” or “the lever,” where the claim contains no earlier recitation or limitation of a lever and where it would be unclear as to what element the limitation was making reference. Similarly, if two different levers are recited earlier in the claim, the recitation of “said lever” in the same or subsequent claim would be unclear where it is uncertain which of the two levers was intended. A claim which refers to “said aluminum lever” but recites only “a lever” earlier in the claim is indefinite because it is uncertain as to the lever to which reference is made. Obviously, however, the failure to provide explicit antecedent basis for terms does not always render a claim indefinite. If the scope of a claim would be reasonably ascertainable by those skilled in the art, then the claim is not indefinite. Energizer Holdings Inc. v. Int’l Trade Comm’n, 435 F.3d 1366, 77 USPQ2d 1625 (Fed. Cir. 2006) (holding that “anode gel” provided by implication the antecedent basis for “zinc anode”); Ex parte Porter, 25 USPQ2d 1144, 1145 (Bd. Pat. App. & Inter. 1992) (“controlled stream of fluid” provided reasonable antecedent basis for “the controlled fluid”). Inherent components of elements recited have antecedent basis in the recitation of the components themselves. For example, the limitation “the outer surface of said sphere” would not require an antecedent recitation that the sphere has an outer surface. See Bose Corp. v. JBL, Inc., 274 F.3d 1354, 1359, 61 USPQ2d 1216, 1218–19 (Fed. Cir. 2001) (holding that recitation of “an ellipse” provided antecedent basis for “an ellipse having a major diameter” because “[t]here can be no dispute that mathematically an inherent characteristic of an ellipse is a major diameter”."
being independent (standing alone) or as being dependent (depends on a previous claim or claims). Dependent claims include all the features of the claims upon which they depend. For example, if a hypothetical independent claim 1 in a patent recites:

*A vehicle comprising: four wheels, an engine, intermittent windshield wipers and a pair of headlights.*

A dependent claim 2 may recite:

*The vehicle of claim 1, further comprising a pair of red taillights.*

As such claim 2 in effect actually is directed to:

*A vehicle comprising: four wheels, an engine, intermittent windshield wipers, a pair of headlights, and a pair of red taillights.*

A portion of illustrative utility patent, U.S. Pat. No. 6,302,230 (‘230 Patent), is shown in Figure 1-3. The ‘230 Patent is understood to be one of a number of patents that relate to Segway® Personal Transporters. Dean Kamen, a founder of Segway, is listed as the first named inventor on the patent.

*Figure 1-3*

*Illustrative utility patent (‘230 Patent)*
B. Design Patents

Design patents protect the ornamental features of new and original designs\(^{34}\) for articles of manufacture\(^{35}\) and have a term of life of 14 years from issuance.\(^{36}\) Design patents and design patent applications must have one or more drawings that depict the scope of protection for the design. For design patents, the “claim” of the patent is what is shown in the one or more drawings. Design patents also must have only a single claim\(^{37}\) and thus are directed to a single design. If more than one patentably distinct design is claimed (i.e. shown in the drawings) in a design application, the USPTO will issue a restriction requirement and the applicant must select one of the designs to pursue in the application unless the restriction requirement is traversed. As discussed herein, the claimed design is defined by that which is shown in the drawings. Applicants may claim only a portion of article of manufacture by depicting only a portion of the article in solid lines, while depicting any unclaimed portions by showing them in broken lines. While it is not surprising to most that consumer products—athletic shoes, cellular telephones, home appliances, and automobiles—are common subject matter for design patent protection, it may be somewhat surprising to learn that icons and graphical user interfaces for computer programs are also proper subject matter for design patent protection in the United States. As such, design patents can be utilized to provide protection for misappropriation of the ornamental appearance of most designs.

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34. 35 U.S.C. §171.
35. Design patents generally protect aesthetic features of manufactured goods. However, computer icons, font, graphical user interfaces, and other subject matter not immediately thought of as manufactured goods are also protectable subject matter of U.S. design patents.
37. 37 C.F.R. §1.154 (b)(6).
Figure 1-4 contain two illustrative design patents that may be familiar to fans of “Star Wars”—U.S. Des. Pat. Nos. D251,627 and D251,628, may be recognized as being similar in appearance to C-3PO and R2-D2 from the well-known Star Wars® movies.

Figure 1-4
Illustrative robot design patents

C. Plant Patents

Plant patents are typically the least common patent type encountered and are granted to “whoever invents or discovers and asexually reproduces any distinct and new variety of plant, including cultivated sports, mutants, hybrids, and newly found seedlings, other than a tuber propagated plant or a plant found in an uncultivated state.”38 The grant of a plant patent provides the inventor the “right to exclude others from asexually reproducing, using, offering for sale, or selling the plant so reproduced, or any of its parts, throughout the United States, or from importing the plant so reproduced, or any parts thereof, into the United States.”39

specification of a plant patent may describe typical traits and features and will include a picture of the plant. Interestingly, no plant patent shall be declared invalid for noncompliance with section 112 if the description is "as complete as is reasonably possible."\textsuperscript{40} Plant patents will often have a claim that reads similarly to the illustrative plant patent claim below:

"A new and distinct variety of the rose plant of the Hybrid Tea class, substantially as herein shown and described"—See, e.g., Plant Patent No. 11,062, shown in Figures 1-5, 1-5B, and 1-5C.\textsuperscript{41}

**Figure 1-5A**

**Plant Patent No. 11,062**

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\textsuperscript{40} 35 U.S.C. §162.

\textsuperscript{41} At least the highlighted sections will vary from plant patent to plant patent.
**Figure 1-5B**

**Plant Patent No. 11,062**

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**Plant 11,062**

3

(4) Filaments — Color — 137C.

(2) Anthers — Color — 157D.

(6) Pods — Color — 10C.

**B. Flora:**

(1) Stigma — Color 41B.

(2) Ovary — Shape — orbicular, average diameter 0.5 in.; average height 0.75 in.

**Hips:**

(1) Shape — Globular

(2) Size — Average one in.

(3) Color — 10B

(4) Seeds — Horse proruding.

**PLANT**

**A. Form:** Upright with uniform branching.

**B. Growth:** Moderate.

**Height:** 4 ft. at maturity.

**C. Stem:** Length about 8 inches under average conditions.

**D. Foliation:** Compound of 5 leaflets, medium size, abundant quantity

(1) Minor size — 3 leaflet leaf 1.5 to 2.5 in., measured from base of stipule to terminal leaflet tip.

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4

(2) Color — New foliage upper side 183C; underside 148C. Mature foliage upper side 147A; underside 147C.

(3) Shape — Elliptic.

(4) Texture — Smooth.

(5) Petiole — Color 155C.

(6) Stipules — Color near 181B.

(7) Edge — Strenuous with regular symmetry.

**Wood:**

New wood — Color 148B with smooth bark.

Old wood — Color 147B with rough bark.

**F. Thornes:**

Color — 165A. Gently thick with slight down curve and medium height, spaced at about 12 nodes.

**G. Fruits:**

Color near 165B.

**I. Claim:**

1. A new and distinct variety of the rose plant of the hybrid tea class, substantially as hereina described.
Figure 1-5C
Plant Patent No. 11,062