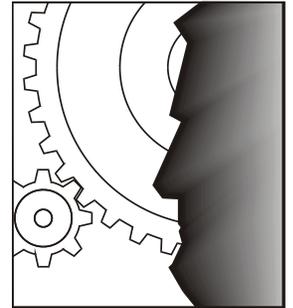


Fundamentals of Patents

A patent is a property right granted to an inventor or company for protection of its invention. Each patent represents not only the intangible assets of skill, training, and “brain power” of an inventor, but also the tangible investments a company makes in its research and development department, such as salaries, facilities, and equipment. These initial investment costs can be an especially critical barrier for new companies, and the ability to convert the investment into one or more commercial products is what distinguishes a viable company from one that fails. Properly done, early research investments produce products whose sales can fund ongoing support as well as new research – the past literally funds the future. Patent rights, including invention disclosures that might lead to an application, are thus valuable property for a company in that they help protect the worth of these investments and facilitate future research.

The Rights Granted by a Patent

The owner of a patent has *the right to exclude others* from making, using or selling the "patented invention" in the United States, its possessions and territories. This right is enforceable against those who reverse engineer or independently develop the patented invention as well as any who might infringe the design. However, a patent does not give the owner the right to sell the patented invention. Earlier patents with broader claims (“Dominant” patents) may preclude such sales without a license. There may also be one or more regulatory agencies that must approve the product before it can be sold, e.g., the EPA approves new pesticides, the FCC regulates new types of communication devices, etc. Still, owning the patent on a design stops competing sales on products that fall within the patent’s claims.



Types of Patents

There are two main types of patents that confer substantive rights:

Utility patents are granted for 20 years from the filing date and cover the underlying technology in a product by way of processes, machines, articles of manufacture, compositions of matter, and improvements thereof. Infringement of a utility patent is determined by finding each of the claimed invention elements somewhere within the product accused to be infringing.

Design patents last for 14 years from the issue date and are granted to cover the physical appearance of a product – think ornamental bottles, athletic shoes, and products where the attraction is the appearance. The standard for infringement is whether there is a reasonable likelihood that an ordinary observer would believe that the accused product looks enough like the patented design that the observer would think that the two came from the same manufacturer.

Requirements of Patent Status

Every patented invention has four requirements:

1. Novelty (never been done in exactly the same way);
2. Utility (useful for something);
3. Non-obviousness (more than was suggested by the prior art); and
4. Proper "disclosure" of the invention (discloses the best mode known now, enabling practice of the invention after expiration of the patent).

The patented invention is defined by the "claims", i.e., the numbered, one sentence paragraphs appearing at the end of the patent document. A claim identifies the essential elements required for the invention. Infringement of that claim occurs when an accused product meets all of the requirements identified in the claim.

Examination Considerations

In order to establish whether a patent is new and “non-obvious,” Patent Office examiners require prior art and any information known to anyone who has a material connection with the application. At least the following types of information should be disclosed to your patent attorney for evaluation:

- The pertinent details of any prior, commercially available product version upon which the invention was an improvement,
- Any non-confidential disclosure of the invention (including any commercial sales or release of the product) that may have occurred more than 1 year before the application was filed,
- Any controversy over who should be named among the inventors, and
- Any significant defects with a commercial version of the invention.
- Inconsistent representations of fact made to another regulatory agency (e.g. FDA, EPA, or FTC).



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A Variety of Factors Are Considered in Determining Whether to Pursue a Patent:

- Is the invention fundamental enough that it can be used in more than one short-lived product or would be highly important to a long-lived new product?
- Are there competitive alternatives in the public domain or patented by a competitor?
- Could the invention be a type that could be detected by examination of a competing product or its operation? If not, infringement is hard to detect and prove.
- Is the invention so important that other companies might be interested in taking a license under the patent? Is the invention likely to become an industry standard?

Current Costs and Procedures for Filing an Application

The application process starts with some indication that an invention has been made. Potential inventors are typically required to keep and maintain project record books that will be used to record the developments and progress of particular projects (one project per book or set of volumes is best). The information in these books can help your patent attorney understand the nature of the invention and can be used as an example in the patent application.

Speed to filing is now important. The United States has adopted the “first-to-file” standard in determining priority for an invention. This means that the person who files the application first wins the priority contest. This does not mean that audience members can rush out and file an application for an invention they heard from the lecturer. The US laws also provide that any public disclosure becomes prior art as against the audience but the lecturer has one year to get an application on file before that lecture becomes prior art against him, too.

A patentability search may be commissioned from the information in an Invention Disclosure to determine whether there is a reasonable chance that the invention can be patented. Typical costs for a patentability search and opinion on a software invention would be in the range of \$1,500-\$2,500.

If the invention looks like it can be protected, an application must be prepared and filed to start the process. This application is required to disclose sufficient details of the invention to enable one with an ordinary level of skill in the art to be able to make and use the invention after the patent expires. Because claims define the invention that is the subject of the patent grant, great care is taken to ensure that the claims are as broad as the prior art and originally filed disclosure will allow.

Typical costs for preparing a US patent on a software invention may cost \$6,000-\$12,000 or more (depending on the invention). The prosecution costs of examination through grant are generally another \$5,000 - \$10,000 and will take 2-4 years. Maintenance fees at 3.5, 7.5, and 11.5 years after issue are also required to keep the patent grant in force. Patents in countries outside the US take much longer (3-6 years) and generally involve higher fees.

The Patent Office publishes US patent applications 18 months after they are filed. While the application is pending, there is no right to file suit or stop a competitor from using the technology disclosed in the application. Still, wholesale theft of the technology is stayed by the realization that the patent owner can stop infringement on the day the patent issues. Potential infringers risk the loss of their entire investment by developing and starting to market a product that is “patent pending.” Because most new products take more than two years to develop into a commercial product, this risk is often sufficient to stop significant theft of the technology in a published patent application and may encourage early licensing negotiations on technology whose application is pending before the USPTO. If a patent application for the invention is to be filed in a foreign country, it must be filed within one year of its U.S. filing date in order to gain the advantage of the earlier date.

United States Patent [14]	(1) Patent Number: Des. 315,897
Faranda et al.	(5) Date of Patent: Apr. 2, 1991
[9] KEYBOARD	
[7] Inventors: Robert T. Faranda, Acton, Mass.; Steven D. Kim, New York, N.Y.	Epson America, Inc., Brochure for Ages Personal Computer (Copyright 1987).
[7] Assignee: Digital Equipment Corporation, Maynard, Mass.	Epson America, Inc., Brochure for Ages Plus Personal Computer (Copyright 1988).
[**] Term: 14 Years	Wang, Great Showing: View System 286 and 386 Computers.
[21] Appl. No.: 358,602	Apple, Inc., Advertisement for Apple computers.
[23] Filed: May 26, 1989	Chicoory America Inc., Brochure for KB-5181 Keyboard.
[52] Int. Cl. G06F 037/00	Chicoory America Inc., Brochure for KB-5181 Keyboard.
[54] Field of Search: D14/300, 301, 305-307, D14/113-115, D15/100, 102, 200(1), 211, 22, 23/143 A, 143 B, 200(1), 200(2), 200(3), 200(4), 200(5), 200(6), 211, 212, 24(1), 24(2), 24(3), 24(4), 24(5), 24(6), 24(7), 24(8), 24(9), 24(10), 24(11), 24(12), 24(13), 24(14), 24(15), 24(16), 24(17), 24(18), 24(19), 24(20), 24(21), 24(22), 24(23), 24(24), 24(25), 24(26), 24(27), 24(28), 24(29), 24(30), 24(31), 24(32), 24(33), 24(34), 24(35), 24(36), 24(37), 24(38), 24(39), 24(40), 24(41), 24(42), 24(43), 24(44), 24(45), 24(46), 24(47), 24(48), 24(49), 24(50), 24(51), 24(52), 24(53), 24(54), 24(55), 24(56), 24(57), 24(58), 24(59), 24(60), 24(61), 24(62), 24(63), 24(64), 24(65), 24(66), 24(67), 24(68), 24(69), 24(70), 24(71), 24(72), 24(73), 24(74), 24(75), 24(76), 24(77), 24(78), 24(79), 24(80), 24(81), 24(82), 24(83), 24(84), 24(85), 24(86), 24(87), 24(88), 24(89), 24(90), 24(91), 24(92), 24(93), 24(94), 24(95), 24(96), 24(97), 24(98), 24(99), 24(100), 24(101), 24(102), 24(103), 24(104), 24(105), 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