Patents, Novelty, and Trolls: Crash Course Intellectual Property #4

Crash Course: Intellectual Property
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Hi, I'm Stan Muller. This is Crash Course: Intellectual Property and today we're talking about patent law. That's why I'm wearing these fancy patent leather shoes. They're a little to small and uh, I had a hard time putting them on. If only somebody would invent a new useful and non-obvious tool for forcing feet into two small shoes. Mark, can I take these off now?

(Intro)

A patent is a grant by a government that allows an inventor to maintain a monopoly on the use and development of an invention for a limited time. Patents allow inventors to prevent or exclude other people or countries from manufacturing, selling, or using their patented inventions. Governments grant these exclusive rights in exchange for the clear and detailed public disclosure of inventions.

So here's the deal. You invent something awesome, explain how you did it in patently obvious terms, we'll let you be the sole owner for a couple of decades or so which should give you enough time to make some money off the thing.

Ideally, you'll get rich for your inventive efforts before the term expires or maybe you'll pour all that money into more research and develop new patents.

The notion of giving talented inventors and innovators a limited monopoly in exchange for their instructing the rest of their less talented fellow citizens is not new. It's generally accepted that the first systematic patent law was developed in Venice, a hotbed of Renaissance Industrial activity. The 1474 Venetian patent statute sums up the economic rationale of patent law pretty nicely.

"We have among us men of great genius, apt to invent and discover ingenious devices; and in view of the grandeur and virtue of our city, more such men come to us every day from diverse parts. Now, if provision were made for the works and devices discovered by such persons, so that others who may see them could not build them and take them could not build them and take the inventor's honor away, more men would then apply their genius would discover, and would build devices of great utility and benefit to our commonwealth."

Wow. These Venetians really thought a lot of themselves. Grandeur and virtue of our city. This idea of granting exclusive rights to inventors to encourage discovery, spread throughout Europe, into England and then to the United States, where it was incorporated into the U.S. Constitution.

In order for an innovation or invention to be patentable, the invention must satisfy five requirements. We'll look at all of these requirements generally, and we'll look at the patent for our trusty liquid-filled die agitator containing a die having raised indicia on the facets thereof. Magic 8 Ball's patent was issued in 1964 and did it meet all these requirements? Yes.

So this seems a little circular, but the first requirement is that the patent's subject matter be patentable. The categories for patentable subject matter are defined as broadly as any process, machine, manufacture, or composition of matter, or improvement thereof. The Supreme Court has interpreted this to mean that anything under the Sun that is made by human beings is patentable. However broad this definition might be, certain definitions like, the laws of nature, physical phenomenon, abstract ideas, have consistently been held not to be patentable. The distinction here is that the innovation has to be the product of human inventiveness, and not the product of nature.

The Supreme Court recently looked at this issue in the 2013 case involving a biotech firm that had isolated human DNA linked to ovarian and breast cancer. The company argued that it had developed an innovative process for looking for mutations that might lead to cancer and isolating.

They argued that the isolated genes were the product of human inventiveness and were therefore patentable. The court disagreed, finding that a naturally occurring DNA segment is a product of nature and not patent eligible merely because it has been isolated.

The Magic 8 Ball is certainly the product of human inventiveness, although it would be fantastic if these were formed by nature, like if they washed up on beaches or maybe there was a Magic 8 Ball tree. I use fantastic here in the sense that this is obviously a fantasy. But, uh, mmm, what a world that would be. So are you patentable subject matter or what? It is certain.

The second requirement for patentability is that the invention be useful, which means both that it has some identifiable benefit and is capable of being used. Patent law often refers to a person of ordinary skill in the art. What they're talking about here is an engineer or fellow inventor that can understand the technical information included in the patent. This differs from like tort law, where the law often refers to a reasonable person standard. Understanding patents requires a little more technical expertise. I mention this because the second requirement relies on a person skilled in the art to accept that the invention described in the patent is useful and that it works.

The Magic 8 Ball is very useful. It functions in the way that the patent claims it does. It displays answers to yes-or-no questions such as, "Should I join the Merchant Marines?" or "Will I die alone?" Are you useful? It is decidedly so.

The third requirement for patent protection is that the invention be new or novel. Basically, if somebody else already invented or patented a similar invention, you can't get a patent. Going back to the case of our Magic 8 Ball, despite the fact that its application notes that similar devices exist, the novelty of the 1964 version lies in the shape of the die, which allows for a better question-and-answer experience. Are you novel? Outlook good.

The innovation must also be non-obvious. The test for non-obviousness is whether the innovation and the prior art, by which I mean all that which has come before the innovation, are such that the innovation as a whole would not be obvious to a person having ordinary skill in the art at the time the invention was made. This is kind of a difficult theoretical task for a judge or patent examiner. Sometimes the most inventive leaps of logic yield solutions that are so elegant that they seem obvious once you've seen it. The Magic 8 ball was for an improvement to the original invention. The inventor added many more sides to the die and also added the all-important raised indicia: the raised lettering, so as to prevent bubbling between the viewing screen and the die. It doesn't seem obvious to me. Magic 8 ball, are you non-obvious? Without a doubt.

The final requirement is enablement. Technically, this means "the specification of the patent shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear , concise, and exact terms as to enable any person skilled in the art to which it pertains to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention." Whoever wrote this doesn't understand the terms clear and concise. What they're saying is that the plan submitted with the patent has to be clear and complete enough to be able to recreate the invention without too much trouble. Beyond this,, the applicant has to describe the best mode of making this thing happen. The inventor can't give people the runaround. If there's a best way to recreate the invention in question, the inventor is required to disclose it. This final step is essential to the underlying

rationale of patent law. Without a clear and accurate explanation to how to make and use the innovation, the public gets nothing in return for granting a limited monopoly. So, what's it gonna be, Magic 8 ball? Can we make or use you based on the patent's description? As I see it, yes.

There are 3 types of patents issued by the Patent Trademark office: utility patents, design patents, and plant patents. The 5 requirements we just talked about refer to utility patents. Design patents cover any new, original, and ornamental, rather than useful, article of manufacture. Apple is famous for their design patents and their utility patents. Plant patents are granted to persons that first noticed the distinctiveness of a plant, then reproduced it asexually, by grafting or cloning, rather than growing it from a seed. If you grow it from a seed, you can't patent it. The plant must be novel and distinctive to be granted a patent, which basically means that it has to have at least one significant distinguishing characteristic to establish it as a distinctive variety. So this is what a plant patent looks like. Not a lot of them get as huge relative to utility or design patents. On a related note, the human-made plant, or a plant that has been genetically engineered, can also be the subject of a utility patent. Provided it meets all the requirements we talked about. Often, these are plants that are resistant to certain herbicides or are better suited to shipping. There's even a man-made variety of cotton that's resistant to pests.

Patents don't last forever. The term of protection for utility patents is 20 years, measured from the date of filing. There are extensions for up to 5 years allowed for drugs, medical devices, and additives. The current term of protection for design patents is 14 years, and that's also from the date of filing. So patents are all about the money. Let's talk about that in the thought bubble.

In terms of economic impact, patent law is arguably the most important branch of intellectual property. There are legitimate questions about the role of patents and what types of research and development patent law encourages.Does the law encourage more research into highly lucrative erectile dysfunction medications than stuff like malarial drugs? Should developing nations be able to create public health exceptions for life-saving proprietary medications? If so, then how would companies be able to pay for the development of these medications for future life-saving medications without the insurance of patent protection.

And then there are non-practicing entities, often called patent trolls, that go around acquiring huge patent portfolios, and then threaten to sue pretty much everybody. Patent trolls bring these lawsuits despite the fact that they have no interest in developing or manufacturing the actual product. This is their business model. Because of the high cost of litigation, cost can range from about a $1,000,000 to $5,000,000 if this goes to trial and the threat of massive damage rewards. Most companies sued by patent trolls settle or agree to pay a licensing fee to the trolls. There's legislation pending in Congress designed to address this issue.

Thanks, Thought Bubble. So the policy issues around patents are incredibly complex and controversial, and this video is only a basic overview. The underlying purpose of patents, which is to reward inventors for their skill and effort, is often in direct opposition to the public's interest in accessing those innovations. there could be life-saving medication that costs thousands of dollars per pill or water treatment technologies that developing countries can't afford to license. The trick is to strike a balance between providing inventors with incentives and ensuring public access. How we maintain that balance is still very much an open question. Thanks for watching, we'll see you next week.