

# FUN WITH PATENTS

# The Irreverent Guide for the Investor, the Entrepreneur, and the Inventor

Patents don't have to be a dry and boring subject and inventors, investors and business people may (and should) enjoy using them to their advantage. Kfir Luzzatto, a seasoned patent attorney as well as a fiction writer, introduces important patent concepts in a humanly understandable fashion, with down-to-earth, practical advice.

VALLEY COTTAGE, New York – Working with patents may be intimidating to investors, entrepreneurs and inventors and, indeed, on the practical level requires extensive knowledge. Generally, the available patent literature is directed either to patent practitioners, or to those who (misguidedly) seek to "do-it-themselves".

The need remains for a book that introduces important patent concepts to regular people in a humanly understandable fashion, with down-to-earth, practical advice and, more importantly, which is not boring, as many patent books unavoidably are to readers who are not patent practitioners.

As the title of the book implies, patents don't have to be a dry and boring subject, and the reader may (and should) enjoy using them to his advantage. This book does not replace legal advice, but will introduce the reader to the world of patents. Readers will understand the basic principles that govern the patent system internationally and will be able to to get better-focused advice from their patent practitioners.

"I have dealt with inventors and entrepreneurs for longer than I care to admit", says Kfir Luzzatto, a seasoned patent attorney as well as a fiction writer, "and I have assisted both start-ups and multinational companies with their patent needs, literally all over the world. I now wish to use the vast experience that I have acquired working in the Start-Up Nation (Israel), to introduce the reader to important patent concepts, in a fresh and easily understandable manner, with down-to-earth practical advice that is invaluable for investors, entrepreneurs and inventors alike."

The book, published by Pine Ten LLC, is available in print and in all popular ebook formats, via all major resellers.

For more information on "Fun with Patents" visit the website at <u>https://kfirluzzatto.com/fun-with-patents</u>

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## What the experts say...

"I've worked with Kfir for many years and I'm always impressed by his insights. I'm excited he has turned his years of experience and gift for clear straight-forward prose (and a touch of irreverence) into this guide, so that the important world of patents can be better understood by inventors, investors and business people across the globe."

# Larry Granatelli, Chair of the Intellectual Property Practice Group Fenwick & West LLP, Mountain View, CA, USA

"In 'Fun with Patents', Israeli Patent Attorney Kfir Luzzatto shares many reflections from his career. As its introduction says, this book will not teach you everything about patent law or how to be a patent practitioner but, ranging from the critical difference between a patent and a patent application to the reasons not to rush to plough one's life savings into an invention, it offers much practical guidance on working with inventions. I hope you enjoy as much as I did this light-hearted treatment of some serious subject matter."

# Andrew Bentham, European and UK Patent Attorney, JA Kemp, London, UK

"Abraham Lincoln once said: 'The patent system added the fuel of interest to the fire of genius.'

From now on, no inventor, entrepreneur or investor shall be able to claim that protecting an invention is a far too complex maze, to justify that he did not bother patenting his creation and then cry over his wasted R&D. This long-waited guide on patents eventually sheds light on the most passionating and entertaining area of law, which purpose is precisely to enable those imaginative risk-takers to be rewarded for their work, time and investments."

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"I spent a whole day to read this book from beginning to end and it was well worth it! I will also recommend it to the students of the course where I teach: I am sure it will unburden my task."

Giorgio Long, Partner - European Patent Attorney Jacobacci & Partners Spa, Milano, Italy "In the bible it is stated, 'Many who are first will be last, and many who are last will be first', but in patent, Who files first is who will be served.

Kfir Luzzatto is among the first to use 'fun' in patent related books. You can read this book (Fun with Patents) with much pleasure. This book is easy to understand and consists of A to Z about patents. It is second to none I have seen to know and learn about patents during my thirty-plus years in the field."

# Bong Sig SONG, Managing Patent Attorney Y.S. CHANG & ASSOCIATES, Seoul, Korea

"A very well written, thorough and essential guide for inventors, entrepreneurs and for readers who are not patent practitioners. Easy to read and understand, the book summarizes the important concepts in the patenting process in a very appealing manner which keeps the reader bound to the book. And as the name suggests—a lot of fun for the readers involved."

# Chetan Chadha, Head: International Department CHADHA & CHADHA, New Delhi, India

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## About the Author

Kfir Luzzatto was born and raised in Italy and acquired his love for the English language from his father, a former US soldier and WWII veteran, a voracious reader, and a prolific writer. Kfir has a PhD in chemical engineering and manages the well-known Israeli patent law firm *Luzzatto & Luzzatto*. He is a recipient of the prestigious Landau Award for Research and has been granted several patents for his own inventions.

Over the years, Kfir has advised small start-ups and multinational companies alike. He considers himself lucky to have had the opportunity to defend patents to many important products, some of which—Voltaren, Prozac, and Viagra, to mention but a few—will ring a bell for the reader.

Kfir has published extensively in the professional and general press over the years, including a weekly "Patents" column that he wrote for *Globes* (Israel's financial newspaper). His nonfiction book, *The World of Patents*, was published in 2002 by Globes Press. He also writes fiction and is the author of numerous short stories and six novels.

Kfir's professional web site is www.luzzatto.com, and his literary one is <u>www.KfirLuzzatto.com</u>. Kfir is on Twitter: @KfirLuzzatto, on Facebook: <u>https://www.facebook.com/KfirLuzzattoAuthor</u> and on LikedIn: <u>https://www.linkedin.com/in/kfir-luzzatto-98165923</u>.

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# F U N

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Kfir Luzzatto, a seasoned patent attorney as well as a fiction writer, has dealt with inventors and entrepreneurs for longer than he cares to admit and has assisted both start-ups and multinational companies with their patent needs, literally all over the world. He now exploits the vast experience that he has acquired working in the Start-Up Nation (Israel), to introduce the reader to important patent concepts, in a fresh and easily understandable manner, with down-to-earth practical advice that is invaluable for investors, entrepreneurs and inventors alike.



**KFIR LUZZATTO** has a PhD in chemical engineering and manages the wellknown Israeli patent law firm, Luzzatto & Luzzatto. He is a recipient of the prestigious Landau Award for Research and has been granted several patents for his own inventions.

Kfir was a witness to the development of numerous important inventions and considers himself lucky to have had the opportunity to defend patents to many important products, some of which—Voltaren, Prozac, and Viagra, to mention but a few—will ring a bell for the reader.

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PINE 10



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## **Interview Questions**

1. Why did you decide to write this book?

2. The book discusses patenting throughout the world. What makes it relevant internationally?

3. Who should read this book?

4. Investors, entrepreneurs and inventors have different and sometimes diverging interests. What makes this book relevant to all of them?

5. After reading the book, will I be able to go and get a patent by myself?

6. What makes this book different from other books on patents?

7. The book discusses mistakes that can be made by patent owners. How critical or frequent are those mistakes?

8. Shouldn't I just rely on my patent attorney, instead of taking the time to read the book?

9. Should an independent inventor read the book differently from someone who works in industry?

10. Why should I care about patents in another country?

# **CHAPTER 1** The Inventor

The inventor is an almost mythological figure. Think of Albert Einstein, Alexander Graham Bell, Leonardo da Vinci, and many others. Besides the big names in science and technology, you will find in the "inventors club" many well-known people who advance and modernize our lives and, in doing so, improve its quality. The inventor is the one who will take us to the road that leads to the development of an invention and, as a result, to a patent that protects it. It is, therefore, appropriate to start our journey to the land of patents by allowing the inventor to introduce himself and his world to us.

Simplistically, we can define the inventor as "one who contributed to an invention that is the subject of a patent application." Inventions can be made by a sole inventor or by joint inventors. A joint inventor is an individual whose contribution to the invention is substantial and without which the invention would have looked different. A patent application may name a number of inventors, who may have contributed differently to it. It is possible, as an extreme example, to have a patent application with, say, 30 claims and two inventors, in which the first inventor invented the subject matter claimed in 29 claims, and the contribution of the second inventor was limited to the single remaining claim. Regardless, they will both be the inventors named in the patent application. For example, let's assume that the invention is a novel dispensing machine and the main inventor designed all the electronic elements and the mechanical parts that make it work smoothly. Those elements are claimed in claims 1

#### KFIR LUZZATTO

through 29. However, the second inventor discovered that since the machine is to be located outside, it is expedient to paint it white so it doesn't heat up too much during the day. This is important because heat may cause some of the mechanical elements to malfunction. Claim 30 will claim the dispensing machine of claims 1–29, which is white in color.

Being mentioned as an inventor does good to your ego (and, in some cases, also involves remuneration). Therefore, it is not uncommon to get requests to mention a person as an inventor in a patent application because "he worked hard on the project and it would be impolite not to include him." This is common practice with scientific articles in academia, but doing so in a patent application is courting trouble for a number of reasons that will become apparent as we proceed in peeling the many layers of the patent system.

As a rule, the rights to a patent application—and to the invention—are assigned to the patent applicant by the inventors, who are the original owners of what they have invented. If the applicant and the inventor are not the same person, the rights can be assigned to the applicant by the inventor, as a matter of law, if the inventor is an employee of the assignee (more on that later) or as a result of an agreement between the inventor and the assignee. However, in some cases, the development of an invention is done by a team that includes persons who are not employees of the applicant and who, as such, are under no obligation to assign their rights to him. In such cases, it is even more important to be precise in determining the identity of the inventors.

Please make a note of this: A corporation cannot be an inventor; only an actual person, with a brain, can make an invention. You wouldn't believe how often this simple truth has to be repeated to people who think they have found a clever way around the need to mention an inventor.

Then we have to deal with the inevitable paperwork. When filing patent applications in different countries, the inventors are often required to sign formal papers that include declarations as to their status as inventors and deeds of assignment transferring their rights to the applicant. If, after the filing of a patent application, it turns out that the list of inventors was wrong, this may cause substantial costs and undesirable administrative complications.

Moreover, a willful false statement on the part of the inventors, omitting the name of a rightful inventor or adding someone who is not an inventor to the list of inventors for a specific patent application, may have serious consequences and should be avoided at all costs.

How, then, should we determine who is and who isn't an inventor? The answer, at least on the first level, is not complicated: as explained, an inventor is someone who made a real contribution to the invention. This contribution is not measured "quantitative" but rather "qualitative": one inventor may have invested one hour to come up with an idea and to plan how to carry it into practice, while a technician who follows the inventor's instructions may have to work for months in a laboratory to turn that idea into a practical result. In this example, only the first person is the inventor; the technician is not an inventor, because he did not make any original contribution to the invention, in spite of the long hours that he worked at the project. However, if during his laboratory work, the technician comes up with an idea that changes or substantially improves the direction in which the invention is developing, it is possible that the technician has contributed to the inventive process and that his name will, therefore, have to appear in the list of inventors on the patent.

Since the question of whether a person who participated in a project made an inventive contribution is not always a simple one and is often influenced by emotional and personal considerations, the applicant would be well advised, whenever questions arise in this respect, to place the task of investigating the names of the inventors in the hands of a neutral person, who can make that determination on the basis of professional considerations that are not tinged by foreign influences. In any case, one should not be tempted to include in the list of inventors individuals who didn't make an inventive contribution, just to avoid confrontation or to make someone happy, because this mistake may come back to haunt him in the future.

# CHAPTER 2 The Inventor Who Knew Too Much

Every patent attorney is sick and tired of having his clients complain to him in these words: "I don't understand how they gave him a patent on that. It's trivial!" This sentence often punctuates the unpleasant discovery that we had an important invention in our hands some time ago, and while we were busy sitting on our fannies, contemplating the universe, a competitor got a patent on it. This always reminds me of John Lennon's clever saying: "Life is what happens to you while you're busy making other plans."

It's ironic that, in many cases, this should have happened because the speaker excels in his field. This problem, which I like to call "the experts syndrome," is a result of the lack of ability of an expert to detect the value of the intellectual property (IP) he has developed.

You don't need to be an expert in patent law to know that you cannot obtain a patent for a development (be it a product, a process, or a method) that is "obvious," because it will lack "inventive step," which is a basic requirement for patentability (more on inventive step in Chapter 4). What happens, then, is that when the expert feels that he got the result easily, or if he immediately saw the solution to a problem that was put to him, he may feel that whatever he developed is not worthy of a patent because he didn't work "hard enough" on the way to creating it. This is where the big mistake lies: the yardstick

by which the inventive step—in other words, the non-obviousness of the invention is measured is based on the difficulty encountered by "a man of ordinary skill in the art," and what is to be determined is whether such an "ordinary" man (not an expert) will view the invention as "obvious."

Defining a person of "ordinary skill in the art" is a problem in itself, because it is not a universal definition that is applicable across technologies and automatically in each case. A comparable problem would be defining the actions of a "reasonable person." For instance, would it be "reasonable" to jump off a bridge? Well, if you are a bungee-jumping instructor, it probably is, but not so much if you are a Wall Street operator who's had a bad day.

Without defining who is a person of ordinary skill in the art in respect of a specific invention-a person who is less than an expert and more than a clueless beginner-it is impossible to determine whether that invention possesses inventive step. Surprisingly, despite all the mountains of paper that were used to write about this issue by different patent authorities and courts all over the world, in most fields, there is a relatively uniform understanding of what constitutes inventive step. However, when coming to examine a specific invention, it is still necessary to apply a set of considerations and to look at the invention from different points of view. An expert, who is the inventor, cannot fairly be expected to be able to judge his own invention from a distance, at least because of three reasons: first of all, he is the inventor and, therefore, his point of view is too close to the invention. Second, he is, as said, an expert, and very few experts are able to take a step back and turn themselves, even only for a moment, into a man of "ordinary skill in the art." Third, the inventor usually lacks the experience and the broad techno-legal approach required to place the invention in the right light relative to other inventions in the same field.

Because of all these reasons, an expert in his field must abstain from judging his own invention and must place this task in the hands of someone who, from a distance, can take all the required considerations into account. In doing so, he can reduce the danger that valuable inventions will go wasted. This danger is very tangible today in many high-tech companies, be they small start-ups or established companies, that often wake up to the reality that they had the key to an important development but refrained from protecting it and, thus, allowed a competitor to reap its benefits.

From all the above, we now understand that an invention that at the time of filing a patent application would appear to be obvious to a person of ordinary skill in the art, lacks inventive step and, therefore, is not patentable. We don't want to waste resources on unpatentable inventions, so we need a way to screen them out. In theory, we have a simple solution: whenever we are in doubt as to whether our invention is patentable, we can go to a person of ordinary skill in the art and ask him. However, we will have a hard time finding such "ordinarily skilled person," who should be someone who understands the relevant field sufficiently without being an expert in it. He must be capable of functioning in the relevant technological field but must not be endowed, God forbid, with an inventive spark.

So what happens when the invention is interdisciplinary? Let's take, for instance, a computer-operated medical device that is to be used for a complex surgery. The developing team will most likely include a physician, a mechanical engineer, an electronic engineer, and a software engineer. The resulting contraption may superficially look pretty much like other existing devices, but the genius is in the integration between the internal subsystems that make the device special. In this situation, there is no single person who is able to judge the inventive step embodied in the device, because it is constructed of elements coming from different fields. Therefore, it has been ruled that the "person" of ordinary skill in the art can also be a team of skilled persons who collectively judge the obviousness (or not) of the invention.

To make this already complex equation even more complicated, beside the conclusion of our virtual ordinarily skilled person, to reach a determination, we need to also take into account legal tests based on various facts. A good example is the "long-felt need" test, according to which if it turns out that there was a need for the invention and it was not met for a long time, this is an indication of the existence of inventive step. Support for inventive step can also be found in the substantial commercial success of the invention. These are not the only tests, and each single test is not conclusive, but we need to look at the invention from different angles and weigh all factors carefully and then, perhaps, we can reach a conclusion.

In various places in the world, the question of inventive step is determined by different kinds of people, some of whom have legal but no technical education, who have learned to view the approach of the (virtual) person of ordinary skill in the art through the eyes of the technical experts. Others have a technical background and have learned with time to apply the legal tests properly. Taking into account how different the patent systems can be in different countries, it is sometimes amazing to find that in different jurisdictions with different patent cultures, in many cases, similar conclusions are reached in this complex question. It turns out that it is possible to practice and learn how to address this issue in many different cases and technical fields and, eventually, to reach an in-depth understanding of this important aspect of patent law. However, arriving at the correct conclusion requires substantial experience and a deep understanding of difficult and complex questions. This is why we must be very suspicious of opinions on obviousness and inventive steps that are expressed by hobbyists, no matter how bright and smart, because it is impossible to reach a deep level of understanding of what constitutes inventive step without dealing with it in detail for a long time.