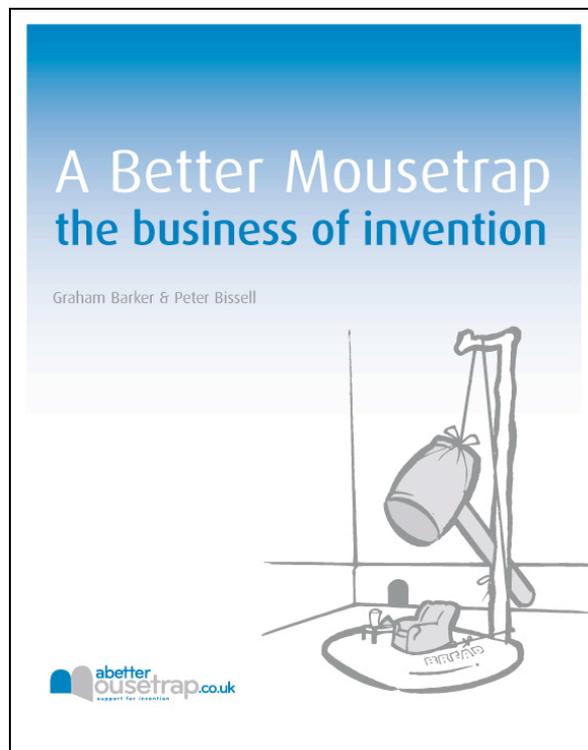


Patenting your invention: the ugly truth

Graham Barker

Second edition. Written and provided as a free
supplement to 'A Better Mousetrap'

<http://www.abettermousetrap.co.uk/invention-guide/>



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Why read the next 32 pages?

Despite all our words of caution in *A Better Mousetrap*

<http://www.abettermousetrap.co.uk/invention-guide/> about a patent being a double-edged sword, many inventors are still too easily persuaded to patent their inventions needlessly or prematurely.

Here, there and everywhere they're given the impression that no matter what their invention, they **must** patent it if they are to stand any chance of making money from it. Worse, it's often the first advice new inventors get, from professional advisers who in many cases don't actually know much about patents. The myth is reinforced on TV programmes like *Dragon's Den* where 'Have you patented it?' is a routine question, heavy with the implication that you're a loser if you haven't.

So as an antidote, *Patenting your invention: the ugly truth* lays it on with a trowel. And we make no apologies for it. We say: if you haven't weighed up all the complex pros and cons, **patenting your invention could be the most expensive mistake you ever make.**

Cash-strapped inventors and small businesses need to plan their intellectual property rights (IPR) strategies at least as carefully as big companies, who learn to be very sophisticated about IPR. The theme of devising an appropriate IPR strategy, rather than rushing headlong into patenting, is developed in *A Better Mousetrap*. Although this supplement may seem like one long venting of spleen, there is a bigger, more constructive picture to be found in the book proper. All we need say here is that there are other IP weapons beside patents for protecting an idea, but they rarely get the credit they deserve.

Patenting your invention: the ugly truth is a **free** download for anyone to use. All we ask is a copyright acknowledgement and a link to <http://www.abettermousetrap.co.uk/>. If you want to quote from it, that's fine as long as you (a) quote accurately and (b) acknowledge the source.

Finally: patent professionals please note. To avert misunderstandings, our intention is not to knock what you're doing. You're not responsible for a deficient legal system. The following pages may contain opinions you can't publicly

endorse, but we hope that privately you'll be on board with most of it. We know that many of you do give inventors good strategic advice, but for one reason or another it doesn't sink in. That isn't your fault but it often isn't the inventor's fault either. We want to plug an education gap, on the grounds that an informed inventor is a better client.

Introduction to second edition

It's clear that *Patenting your invention: the ugly truth* has struck a sizeable chord. Experienced inventors have been almost wholly positive. A few caveats have come from some whose businesses depend on licensing patents, but even they accept that the patent system is far from perfect. Perhaps unsurprisingly, little has been heard from patent attorneys or the UK Intellectual Property Office. And it evidently made no impact whatsoever on the recent and underwhelming Hargreaves Review of IP (aka *Digital opportunity* <http://www.ipo.gov.uk/ipreview/>), which concluded that 'the UK patent system is, on the whole, functioning reasonably well'. See our comments on that here:

<http://www.abettermousetrap.co.uk/2011/05/hargreaves-ip-review/>.

Thanks to a combination of feedback, new information and material left out first time round, we can now add a few extra pages and call it a second edition. There are minor changes all over the place but the main additions are:

- Advice from inventor/entrepreneurs Mark Sanders and John D Smith.
- China: the 800lb gorilla that will probably sink the patent system.
- A mini-essay on the Culture of Disregard.

So it's bigger! And better! And still free!

Graham Barker
abettermousetrap.co.uk
July 2011

If you're not rich, the patent system isn't for you

Q: Why do patents exist?

A: To disclose new technologies so that they can be put to commercial use.

And that's pretty much it. Sure, a patent indicates ownership of an idea, but be in no doubt: **the main intended beneficiary of the patent system is business and industry**. The theory is that if there is an abundant supply of openly disclosed new ideas, technologies will advance, markets expand, businesses grow and economies prosper.

Better still, the patent system operates worldwide, providing a global pool of ideas. Thus, a French company might make use of a US invention, or an Australian company make use of a German invention.

All this is fine for industry, which gets lots of new ideas to pick over. But two factors make the practice of the patent system very different from the theory.

One:

Many patents are not available for exploitation. They're owned by big companies who use the patent system to **prevent** others from using certain technologies, except under strict conditions that they dictate through licences. Now there is nothing wrong with licences; they're an excellent way of spreading the benefits of one idea across several companies or markets. Many inventors license out their IP (which doesn't just mean patents) in return for royalties. But large companies often don't want anyone else to innovate. They use their patents as an offensive weapon, to frustrate or threaten competitors both large and small. Or they patent ideas they have no intention of using, simply to prevent others from going there.

This behaviour acts as a deterrent to innovation. It's an exercise of power by companies more interested in maintaining their control of a market than in seeing technology advance to the betterment of mankind. In this endeavour the passivity of the patent system is a big help to them.

Then there are the so-called patent trolls – companies that buy unused patents cheaply, then hunt for companies they can pursue aggressively for ‘infringement’. Major companies have been hit by trolls (Apple was ordered to pay over \$20m to patent troll Opti) but small companies are just as likely to be targets. Many companies pay up on threat because it’s cheaper than a court case, the cost of which could destroy a small company. This kind of predatory activity is made easy by the patent system. The mere threat of always expensive legal action is enough to provide patent trolls with a good living in ‘compensation’.

(Some argue that trolls create a useful secondary market in patents, which can help inventors who otherwise can’t afford to enforce their IP. But if a troll buys an inventor’s patent cheaply and then gets rich off the back of it, only the troll really wins. And a troll will happily target a small inventor-led business if there’s a killing to be made. These are not Robin Hood operations.)

Thus, the high moral purpose of the patent system is to encourage invention and innovation. But all too often, the way the patent system is used has the opposite effect. Inventors and innovators are discouraged, threatened and punished.

Two:

The only ideas actually available for commercial exploitation at relatively bargain rates – ground-floor opportunities to innovate, in other words – tend to be owned by individuals or small companies. Commercially, there will be some real diamonds to be found here. Yet these are the patentees who, to be very blunt, run the biggest risk of getting screwed by the patent system.

Inventors and the patent system

What does the inventor of an idea get out of the patent system? If the inventor is a large company, the answer is: a lot of muscle. But if the inventor is an individual of modest financial means, or a typical very small company, the answer is: not much.

If you're an inventor who has been granted a patent, then in theory:

- You are officially recognised as the owner of the invention. Anyone else who wants to use it commercially has to get your agreement, which you are unlikely to give without some form of financial reward.
- Anyone who uses your idea without your permission is effectively stealing from you, and you can take legal action against them.
- Your patent or patent application has a burglar alarm effect; it deters potential infringers.

In practice, there is a lot wrong with this system.

1: The cost

For the average private inventor without pots of spare money, the cost of a patent can be massive and out of all proportion to any benefits. Broadly:

- You have to pay to be recognised as the owner of your own invention.
- Worse, you have to pay separately in each country in which you want to be recognised as its owner.
- Worse still, you have to pay – again to each separate country – annual renewal fees after Year 5 to keep your patent in force. As an added insult, the renewal fee **increases** over time.
- You have to pay any translation fees required by individual countries. These are not cheap, as we'll see in due course.

In other words, the patent system milks you every inch of the way. It has an interest in doing so, because most government patent offices have to recover their costs by charging fees. Renewal fees in particular are a major source of income. There is therefore little incentive within the patent system to reduce costs to patent owners.

(NB: we haven't mentioned patent attorney fees. These can add very substantially to the cost of patenting. However, patent attorneys don't own the system and are not responsible for its official fee structures. In the interests of good relations with your patent attorney, should you need to employ one, it's important to keep a firm grip on this distinction.)

Even large companies are starting to object to the cost of patenting, but for private inventors and small companies, the expense can be crippling. See **Patent costs** later.

2: The lack of real protection

Before they actually tangle with the patent system, many inventors believe that a patent acts broadly like an insurance policy. An infringer does the dirty on you, the patent system leaps to your defence, and it's all sorted out. Given the amount of money the system extracts from patent owners, it's a reasonable assumption. But a wrong one. Very, very wrong.

If someone copies your patented-protected idea or product, the patent system does nothing. Absolutely nothing. No matter how blatant and commercially catastrophic the theft, the patent system won't lift a finger to help you. (Though it will keep taking your money.)

If you want to take action against an infringer or challenger, you have to make all the moves and pay all the large legal costs yourself. And large means large.

Richard Margiano in *Managing Intellectual Property*

<http://www.managingip.com/Article/2089405/Cost-and-duration-of-patent-litigation.html> says:
'The average patent litigation lasts about two years and costs about \$3m. An appeal can add another \$2m and one year to that estimate.'

You'll also face the severe personal stress of a process that can drag on for years, with victory for the injured party never assured. It's not unknown for marriages and homes to be wrecked along the way.

For all these reasons, if the scenario is a large company infringing or challenging the patent of an inventor or small company, the odds are stacked heavily against the poorer party. David will occasionally beat Goliath, but that's rare.

For big companies, patent lawsuits are part of the cost of doing business. They take them in their stride. In fact, well-publicised IP disputes may have PR value if they keep a company's name in the media.

For example, the mobile phone industry seems like one massive IP battlefield as Apple, Research In Motion, Nokia – basically, all of them - try to kick holes in each other's patents because so many of the technologies they use overlap. It seems almost a ritual, like medieval jousting tournaments with lots of macho combat but nobody (usually) getting too badly hurt. Each lawsuit will run its course, cost many millions, make headlines, and resolve little. And almost equally certainly, there will be no lasting damage to any of the companies involved.

The same can't be said if you're an inventor or small company sucked into a patent dispute with a corporate. Even if the judgment goes in your favour, there may be an appeal and many of your costs during the dispute – for example, lost business opportunities and investor confidence - may be unrecoverable.

But in many cases it's unlikely that you will win. You may start out confident that you've got a strong patent, but there is no such thing as a strong patent if you can't afford to defend it. There may indeed be very little *point* in a patent if you can't afford to defend it. In the business jungle it isn't patents that protect ideas and products, but money.

Many large companies know this full well, and exploit the fear of financial consequences (including loss of support from investors and banks) to defeat a weak opponent without a fight. To them there is no moral issue. Any tactic, however dirty, is allowable if there is a valuable commercial advantage to be had.

And that's just the company. If your lawsuit has to be conducted outside your home country, you may also be up against a prejudiced legal system. For example, IP courts in the USA are notoriously hostile to non-US litigants and tend to view as anti-competitive any patent perceived as disadvantaging a US company. And consider the problems you might have fighting your corner in China. (See **Will China capsize the patent system?** on page 29.)

It's often claimed that a patent has a useful 'burglar alarm' effect. The theory is that rather like the alarm box visible on the outside of your house, infringers take one look at your patent and slink away to seek easier pickings elsewhere. But the typical burglar alarm beats a patent in at least three respects:

- It's inexpensive and its cost easy to justify.
- When a burglar attempts a break-in, it goes off.
- After the police attend, they don't send you a large bill for their services.

Patents and burglar alarms do however share one weakness: if someone is really determined to steal your property, no burglar alarm is going to stop them. Same with a patent. It may deter decent companies and a few small-time cowboys but it won't stop the big boys and it won't stop out-and-out pirates skilled at ignoring or evading the law.

3: Ownership is not guaranteed

A charming feature of the patent system is that this precious patent, bleeding you dry for years on end, may one day be judged not to be yours after all.

If you own a patent, anyone at any time can challenge your right to own it **as it stands** (a qualification we'll get to very shortly). This makes a patent a totally insecure but still expensive form of property. And of course, a challenge to your patent triggers yet another costly legal process that you have to fund yourself.

Why might a company challenge your patent? Several reasons include:

- If you've accused them of infringing your patent, it's a standard response. You challenge them, they challenge you back. It buys them time, makes

even scarier costs inevitable, and nicely muddies the pool so it's harder to see which of you is the good guy.

- They may want to start selling a product based on your patent but without having to pay you royalties, so this is their pre-emptive strike: knock down your patent, get you out of the picture.
- They may have a competing technology that your patent threatens, so they want to cut the ground from under you.
- They may genuinely have a case. Not all companies are predators. Many will be acting in good faith to protect their own products and IP.

Your challenger will try to show that earlier patents or products contain key elements of the technology for which you have been granted a patent. Their legal argument will be that those elements should never have been in your patent and must now be removed from it. If a court agrees with them, that's what happens.

The challenger's unspoken intention is to rip the guts out of your patent until there is nothing left worth owning. Often this tactic succeeds, and for good reason. Claims for technical novelty can be fuzzy at the best of times and official patent examiners are not infallible. (Particularly in the USA. We're grateful to Mike Quinlan of Thales UK for tracking down for us a 2003 US Federal Trade Commission report on innovation <http://www.ftc.gov/os/2003/10/innovationrpt.pdf>. This included findings that '45-46% of all patents litigated to final results are held invalid' and 'the USPTO's grant rate [...] reached 98% in 2000, considerably higher than in Europe (67%) and Japan (64%)'. This led one researcher to conclude that 'The comparative lack of rigor by the USPTO is apparent'.)

Therefore, the final judgment in a challenge may hang on who makes the more persuasive or (in very complex technology cases) intelligible argument. And that, as in other areas of law, can depend on whose side spends the most money and hires the most silver-tongued representatives.

If you're an inventor, that's unlikely to be you. So, you've spent a ton of money feeding the patent system, and now your patent has gone up in smoke. Does the patent system give you any money back? No. Can you sue the original patent examiner for getting it wrong? No.

4: The time factor

The patent system claims to be all about encouraging innovation, but few things are more harmful to innovation – certainly to invention – than the very inflexible timescale of patenting. Once an application is filed, actions have to be taken (and paid for) not to suit you and your project, but to meet deadlines dictated by the patent system.

Details of these timescales are available in *A Better Mousetrap* <http://www.abettermousetrap.co.uk/invention-guide/>, and from national patent offices, so we won't bother too much with them here.

The big point is that the moment you file a patent application, a clock starts ticking. It might as well be the timer of a bomb.

- After 18 months, your patent is published. Then the whole world knows about your idea. (Not necessarily a good thing. In fact, often a bad thing if your invention is still a long way from market.)
- After 30 months you start paying filing and translation fees to each country in which you want 'protection' (pause for hollow laughter).
- At 5 years, you start paying the dreaded and unfair annual renewal fees, again to each individual country.

The big bills don't come straight away. The initial costs are relatively low, making patenting a 'buy now, pay later' scheme. **This is how so many inventors get drawn into a system that ends up doing them more harm than good.**

At the start of your invention project, optimism may be running high and 30 months – let alone five years – seems plenty of time to turn your idea into a money-earning product or licence. Indeed, the patent system encourages exactly this thought process. It defers the main costs for a period so that they can be paid out of income from the sale of your product or the licensing of your patent.

But in practice, few inventions get to market in anything like 30 months. Many may be nowhere near their market after five years, when renewal fees start

biting. How does this happen? There's no mystery to it: it's life. Time flies. Funds dry up. Problems and delays become routine. Hopes are repeatedly raised, then dashed. The project starts spending more and more time on hold. Even when things are moving well, they never move fast enough. Invention projects lasting 5-10 years are the norm, not the exception.

You can deal with it, but you have to plan for it. And that must include planning the timing of any patent application, because **patenting your invention too early is a good way of reducing or even destroying any chance of success**. In their pre-patenting advice sections, national patent offices are unlikely to spell this out in the very big print it merits. Why should they? The patent system works for itself and for big businesses. It doesn't work for you.

(And when governments periodically review various aspects of IP, they never include inventors or start-up business managers on their investigating committees, which as a result don't mention inventors when they report. Officially, inventors might as well not exist. But their money's OK.)

Patenting costs

We've complained a lot about the cost of patenting, so what exactly is it? Unfortunately, it's impossible to be exact because there are so many variables – for example, the length and complexity of the patent, where and how you apply, and the particular combination of countries for which you want cover - but it is possible to indicate the sort of costs you could be looking at.

Some patent attorneys make a valiant effort to provide guidance on costs: for example, Urquhart-Dykes & Lord <http://www.udl.co.uk/output/Page1.asp> have some excellent factsheets which provide cost breakdown guidance for UK, European and IPC applications.

And in 2005 the European Patent Office <http://www.epo.org/> published two cost models for guidance. These indicated that:

- A 'Euro direct' patent application of 18 pages valid in six European states for ten years would cost around €32,000 including patent attorney costs and translation and renewal fees.
- A PCT application of 26 pages valid in eight European states for ten years would cost around €47,000, again including patent attorney costs, translations and renewal fees.

However, the notes to the calculations state that for both applications the total cost might vary considerably, in some cases by up to 100 per cent, depending on the technical field. Excluded too are all costs for patenting outside Europe, and for additional states and languages within Europe. And most costs will have gone up since 2005.

Thus, you might not be much further forward predicting your own patenting costs, but the direction of travel seems clear. It's safe to regard €32,000 for ten years as a bare minimum for an idea with international potential. For cover in more European and non-European countries, expect that cost to multiply two, three or maybe more times. (See the examples below.)

An early point to make is that if you're lucky enough (or unlucky enough, maybe)

to have an invention that will only sell in one country, patenting in that one country can be reasonably cheap. A bargain, in fact.

But not many patentable ideas or products would sell **only** in one country. Plenty of products might sell **mainly** in one country, and on that basis it might be worth patenting only in that country. But these days, many products have multinational sales potential, so if you're going to patent at all, you need to patent in several countries. And as you may have no idea which countries will be good markets, the temptation is to patent in more rather than fewer countries. That's when costs start going through the roof.

(NB: for simplicity we're talking here about the cost of **one** patent. Some inventors and small companies may have more than one idea that they need to protect. The costs then don't bear thinking about.)

Example 1:

A UK inventor has designed a radically new version of a familiar and essential bicycle accessory. After ten years of self-funded development he spent a further £40,000 of his own money on getting a trial batch of product to market. His company is now financially at its weakest. A lot is at stake, and every penny counts.

He has recently received a bill from his patent attorney for almost £20,000 including VAT. This is the total (and presumably typical) cost of translating his patent into ten European languages and filing it, using local patent attorneys, with 17 European patent offices. On average, the cost of translating his whole patent (required by some national patent offices) is about £1500+VAT, while the cost of translating only his claims (acceptable to other patent offices) is around £900+VAT.

The inventor can't currently afford anything remotely like £20,000, let alone any later costs of translation into non-European languages such as Japanese, Chinese and Korean. Unless other sources of funding can be found, he may have no choice but to reduce his patent protection drastically, leaving his product wide open to copying.

Example 2:

Another product with international potential – basically, an improved concrete breaker. Again, a self-financed company was formed by its inventor. Again, development took many years. Again, patent renewal fees in excess of £20,000 a year began rolling in before the product was ready to earn its keep. Eventually, a potentially multi-million pound turnover business had to be sold off cheaply to an overseas buyer because the company couldn't afford to carry the patent fee debt any longer.

Example 3:

US inventor John Smith – see page 28 – has written up his experience of spending \$25,000 on US patent applications, only to be repeatedly refused a patent. Read about it in detail in his book '*DON'T File A Patent*' <http://www.dontfileapatent.com/> .

Example 4:

A miscellany of US patent cost statistics – probably not significantly different from costs in the UK and Europe - can be found at *Invention Statistics* http://www.inventionstatistics.com/Patent_Cost.html. For example:

'The GAO [General Accountability Office] estimates that it costs a small business about \$10,000 to obtain and maintain a relatively simple patent in the United States. Extending this patent to nine other countries could cost \$160,000 to \$330,000.' ('GAO: Cost of foreign patents is too high for small businesses', *Sacramento Business Journal*, 30 August 2002)

'Getting even a simple patent approved [...] can cost up to \$10,000 domestically and \$100,000 or more for worldwide rights.' (University of California licensing director, quoted in *San Francisco Business Times*, 5 December 1997)

'Simply filing patents can be a costly and time-consuming process, making it imperative for small companies to be selective about what patents they file. [Filing] patents internationally can cost a company anywhere from \$10,000 to \$100,000.' ('Healing the Patent Process', *Wireless Week*, 15 August 2005)

And the unattributed but plausible: 'About 97 per cent of patents generate less revenue than the patent costs.'

Examples 1 to 3 are not isolated sob-stories or exceptions to the rule. They're typical of what is happening at the grassroots level of innovation, to brave small ventures run by intelligent, resourceful and dedicated people. In many respects the high cost of patenting is crippling innovation. At the very least, it's adding a thick extra layer of risk to projects that already have more than average levels of risk to contend with.

Renewal fees

The most unfair and arguably immoral element of patenting costs is the annual renewal fee charged from Year 5 by each national patent office. Each country's fee may 'only' be the equivalent of a few hundred pounds, but for a product needing multinational protection, the total annual renewal bill can soon climb into the thousands. Renewal fees of £15-20,000 **a year** to keep a **single** patent going are not untypical.

Officially, patents stay in force for up to 20 years. It would be more accurate to say instead that patents remain in force for five years, after which you have to pay annually if you want to keep your patent for up to 15 more years.

Renewal fees are legalised extortion. If you don't pay the renewal fee for a particular country, you lose your patent in that country. Which means, in effect, that you lose your invention too, because anyone in that country can then use your idea without paying you a penny. And they know exactly what it is, because details remain permanently on public patent databases such as Espacenet.

(One of the benefits of the internet is that everyone now has free access to patents. In pre-web days it was almost secret knowledge. You'd normally have to travel a good distance to your nearest patent library to consult documents manually – a whole day of a job just to look at a few patents. Now you can sift through hundreds of them very rapidly without having to go anywhere. A godsend for inventors, but also for those with less admirable motives.)

Thus, the renewal fee is an annual tax on owning an idea. An added twist of the knife is that renewal fees **increase** with time, supposedly to encourage commercial use. (Most inventors don't need encouragement, while rich companies are unlikely to be influenced by the increase.) If you don't pay, you effectively no longer own that idea. **Applying for a patent is, for many inventors, the first step towards losing their idea.** That is grossly unfair. Do novelists, playwrights, musicians and film-makers have to pay fees every year in many countries to retain ownership of their own creations? No. So why should inventors be treated differently? The patent system should not be in the business of holding inventors to ransom. That's a massive disincentive to innovation – the unacceptable face of a system supposed (remember?) to encourage innovation.

The official justification for renewal fees is that they encourage patentees to abandon patents that they are not exploiting or 'working'. In other words, they help clear out the dead wood. (Nothing to do with raising revenue for patent offices, of course.) But how does the patent system know that attempts are not being made to exploit a patent? It doesn't. It can't. And what business is it of the patent system anyway?

The bottom line is that the patent system is much more interested in getting money off you than in helping you to exploit your patent. Even large companies now complain about renewal fees, but they impact disproportionately on inventors and very small companies. As mentioned earlier, it's quite normal for an invention to take several years to get to market after a patent application has been filed. Those will not be years of inactivity and indifference. They will often be years of determined, dedicated, urgent, even frantic activity.

But the patent system doesn't see that. And it doesn't care. All it wants is your money. And it is likely to want it at a time when you can least afford it. By Year 5, other more productive costs – testing, marketing, manufacture, premises etc – will be bearing in. And competitors know this. Some will wait, like vultures, until you run out of funds to pay the renewal fees. Then they will pounce on your idea and take it for nothing, or force you into a deal that pays you a derisory amount.

That's our wonderful patent system at work.

The unpredictable cost of patenting

Some authorities seem almost in denial of patenting costs. For example, and without wishing to pick on him personally – he’s probably a very nice bloke – it’s worth looking at part of a letter written in 2009 by Dave Bradley, the then President of the Chartered Institute of Patent Attorneys, and published in *Growing Business*, an online magazine for entrepreneurs. He was responding to a complaint from an engineering company MD about the high cost of patenting. Dave’s letter contained this:

‘The typical cost of applying for and obtaining a UK patent, using the services of a qualified patent attorney, is £3,000 to £4,000 [...]. Renewal fees in the UK are also relatively modest. Costs can start to go up once you opt for wide-scale international patent protection, but such costs are generally only incurred once the product or invention has proved that it is worth protecting in international markets. [...] Intellectual property is very often a company's most valuable asset and no sensible director should neglect to protect the company's assets: insurance premiums for plant and premises are likely to cost a lot more than the cost of obtaining and renewing patents.’

Let’s unpack that extract. The first two sentences are fine. The second two, less so. ‘Costs can start to go up’ ought to read: ‘Costs climb steeply’. And the claim that ‘such costs are generally only incurred once the product or invention has proved that it is worth protecting in international markets’ glosses over a fact of IP life that is nowhere near as reassuring as Dave Bradley makes it sound.

This is that the patent system, and not the invention or product, dictates application timescales. Many inventors must decide whether to patent internationally before the invention or product has had time to prove anything. Many inventions will still be in their R&D phase, and destined to remain there for some time. Market research may **indicate** good commercial potential but cannot **prove** it. Crucially, the invention is unlikely to be providing a healthy income stream to pay for its own patent. At the points where key patenting decisions have first to be made, then (later) paid for, the typical invention or new product

is more likely to be consuming money than earning it. Thus, what the CIPA President says is well meant, but at the very least it needs heavy qualification.

In his last sentence, we would agree that IP (of all types, not just patents) may be among a company's most valuable assets. But as for the claim that 'insurance premiums for plant and premises are likely to cost a lot more than the cost of obtaining and renewing patents'... Not sure. All we can say is that you might need to be running a lot of plant and premises before their insurance premiums outstrip the cost of international patenting.

And to revisit a point made earlier: the cost of patenting isn't just the cost of the patent. It's the potentially destructive cost of having to defend it should anyone infringe or challenge it. It might never happen – you just don't know. But if you're a small company, your risk of being targeted is likely to be higher because you'll be seen as easy meat. And there are no guarantees whatsoever that if you are ever forced to defend your patent, you will win.

If you don't have the kind of money needed to defend your patent, you've lost before you start. In which case, you have to seriously question the point of having a patent at all.

Patent insurance

What about insuring your patent against infringement? Basically, forget it. Or at least forget it as things stand at present. IP insurance products exist, but most are aimed at established companies with a track record of managing IP. We invite anyone to prove us wrong, but we've never heard of a private inventor or small company benefiting from patent insurance. All insurance is about making money from risk, so a priority for insurers is to ensure that their own risk is low. First-time inventors are very high risk, so they either won't get cover at all, or premiums will be unaffordable, or exclusions will be so numerous that the policy has no teeth.

Typical US premiums are around \$25,000 per \$1m of cover, though many of the overall costs of patent litigation won't be covered. IP insurance schemes exist in the UK, and we found one firm offering cover from around £40 per month. But

there will a lot of exclusions for that price, so it may not cover the real risks inventors face. Insurers tend also to go for conciliation – reaching a compromise agreement - to avoid the expense of a lawsuit. This is sensible, but then all an infringer has to do is refuse to settle amicably and the insurer may back off.

In 2004 the UK Patent Office was 'considering proposals for the creation of a mutual insurance association for small or medium-sized patent holders to give them financial help to enforce their patent rights, with premiums fixed in proportion to risk.' Not much seems to have happened to the idea since then.

What can the patent system do to improve?

Probably not much, because the current system is too comfortable with itself. Fixing the elements that are most wrong would deprive national patent offices of much of their income; and in any case, getting the 180-plus member states of the World Intellectual Property Organization (WIPO) to agree on significant change is likely to be difficult.

Online databases and some procedural rationalisation notwithstanding, the patent system is basically too nineteenth century – almost too Alice in Wonderland - to be fit for purpose now. It hinders rather than helps grassroots innovation. What it aims to do is quite simple and virtuous, but it has become too complex and legalistic, too expensive, too self-serving rather than customer serving, too ineffectual as a means of protection, and too open to manipulation by big companies. (That's quite apart from the trolls, and the scammers who operate constantly on its fringes.)

Even if you're rich enough for the cost not to matter, it's probable that very few patents give value for money.

We can suggest some things the patent system might do to fix itself, though none of these remedies is likely to be adopted any time soon. In no particular order:

- Scrap renewal fees.
- Make patent application more expensive. This would reduce the number of patents, but that would be a good thing because there are far too many of them, especially now that the Chinese are filing at a breathtaking rate. Many patents are for ideas too slight to be considered new technology. They debase the currency.
- Adopt a more rigorous approach to what is and is not patentable. Patenting is moving into areas of bottomless dispute potential, such as gene technology and business methods. Let's get back to basics. A patent should be a clear, simple recipe for how something is physically made or done. If it

results in a battalion of legal experts fighting over its meaning and significance, there is something badly wrong with it.

- Given ever shorter product life-cycles, grant patents for less than 20 years. There is no magic in the number 20. Call it ten, and no renewal fees.
- Make patent offices reconsider what they're trying to achieve beyond raking in fees. If it's still the case - according to that 2003 FTC report <http://www.ftc.gov/os/2003/10/innovationrpt.pdf> - that far too many US patents are being granted, USPTO shouldn't be in business. (There are demands for it to be privatised.) Some might interpret such a high level of inappropriate patenting as fraud.
- Patenting in Europe should be much cheaper and simpler. A single patent should cover all EU countries. No translations beyond the three main procedural languages (English, French and German), no national validation fees and filings, no messing. One patent at one affordable price. This is by no means a new idea and the European Commission wants it to happen. The problem is that all EU states are required to agree and some don't want to play. The latest attempt came predictably to grief in November 2010 when Spain and Italy vetoed it. Until heads can be knocked together, EU patent cover continues to cost about ten times as much as a US patent.
- Why translate at all? If it's possible to assemble Ikea furniture solely from a set of wordless drawings, it should be possible to present much - perhaps most - patent information the same way. Drawings are already important, and much patent text (apart from the claims) is unnecessary. Even if text is needed, it could be structured in a more uniform and concise way. A strict word limit might work wonders. (EPO has recently struck a deal with Google <http://www.theengineer.co.uk/news/epo-signs-patent-translation-deal-with-google/1006328.article> to machine translate European patents to get costs down. It will be interesting to see how machine translation copes with the often incomprehensible technogarble used in patents.)
- Make patent offices accept more responsibility in return for the fees they charge. At the moment, it's money for old rope. Fees should include a service that helps the patentee fight infringement. And if a court decides at any time that an examiner has made a bad call in granting a patent, all fees taken for that patent should be repaid.

- Strip patents of their overblown, almost mythic status. Other forms of IP protection can be just as good, if not better. Scepticism about the value of patents is growing among businesses who have to pay for them, but a patent is still regarded as a must-have by others, ranging from bar-room know-alls to bank managers and investors. **The patent system is being propped up by ignorance.** And that brings us back to the reason for writing this entire diatribe: too much advice to inventors is based on a mistaken assumption that every invention must be patented.

What can you do to survive the patent system?

Okay, you're an inventor, or you're involved in a project to exploit an invention. What do you do?

You may need a patent.

If market research indicates that you've got a game-changing idea with good medium- to long-term prospects, a patent may be the only IP show in town, even though the tickets are overpriced and the performance underwhelming. We know some inventor/entrepreneurs with technologies that they exploit by licensing the IP worldwide. Their day-to-day work consists largely of dealing in licences and their businesses simply wouldn't exist without patents. We're happy to acknowledge that – though even they might admit that defending those patents is needlessly expensive and draining work.

But relatively few inventions make the Premier League of licenseable technologies. If your invention is a single product that owes more to clever design than new technology, its market success may be far less dependent on a patent than you think. So ruminate your way through this checklist before doing anything about your IP.

- Ignore anyone who says you **must** patent your idea. They're much more likely to be wrong than right. And ignore anyone who says you must patent your idea **straight away**. They're dangerously wrong. Read the warnings in *A Better Mousetrap* <http://www.abettermousetrap.co.uk/invention-guide/>.
- Study the pros and cons of **all** forms of intellectual property rights (IPR). For many inventions and products, a combination of (usually) much cheaper forms of IPR will give you more effective protection than a patent. More details in *A Better Mousetrap* – or talk to a patent attorney.
- Don't regard a patent as the best. Regard it as the worst. Think of it as a burden and distraction you don't want, except as a last resort.
- To judge value for money, calculate backwards from an estimate of what you might actually earn from your invention. As explained in *A Better*

Mousetrap, it may be pennies, even a fraction of a penny, per unit. If your predicted income won't healthily exceed the cost of patenting, including those wretched renewal fees, a patent may make no economic sense.

- How long will your invention sell before interest in it fades or the technology becomes outdated? Patents take years to be granted and many products have short life cycles, so if it's all going to be over by the time you finally get your patent, it may not be worth the bother and expense.
- Don't expect a company or licensee to pay the patent costs for you. Some may (in return for ownership of the patent) but most won't.
- Look at all patents for similar ideas. Is there what is known as a 'patent thicket' (many overlapping patents)? Is there really much hope for another one? If all you'll be doing is patenting a small difference that markets won't rate highly, you may be throwing money away.
- Will anyone actually want to steal your idea? Infringers are rarely interested in ideas; they want to leech off well-known products or brands. If your invention is never going to make the big league it may not be worth paying patenting-sized costs to (not) protect it. Look instead at other forms of IPR.
- Consider what other aspects of your invention you might spend your patenting money on. In many cases, having a product on the market and the support of distributors, retailers and even consumers may give you better (or no worse) protection than a patent. In effect, you're trading off one risk against another, and the greater risk may be leaving your project underfunded because you've diverted so much money into patenting.
- If you conclude that a patent isn't justified, or it's too early to apply, don't be persuaded to change your mind because some company or bank or investor wants to see a patent application. It will be safer to walk away. If your invention is good enough they won't be your only opportunity in the world. Bear this in mind too: companies that insist on seeing a patent application before they'll even look at an idea tend to be the ones least likely to want to deal with inventors. So you go to all that cost and trouble, just to make it easier for them to reject you!
- Alternatively, apply for a patent if that helps the project over a major hurdle, then abandon it before the big costs become due. For example: apply just prior to product launch, stick 'Patent pending' or 'Patent applied

for' on all marketing material for 18 months, then abandon the application. By then you may have established a market presence that can survive the lack of a patent. It might be cynical, but if it's effective business – why not?

- If a patent is genuinely justified – you've got a big invention with good sales, growth and licensing potential for at least several years – consider limiting your cover to a few key markets. Patent attorneys tell us that this is what big companies tend to do. However, experience may have taught big companies where their best markets for a new product are likely to be. Inventors may have to guess. Even so, we wonder why so many inventors, advised by patent attorneys, still file in more countries than necessary.
- If a patent is genuinely justified, other significant costs will probably be justified too. Therefore, bring more people on board to share the overall cost of the project. This may mean diluting ownership and control of the IP, but if the alternative is painfully slow progress on your own, go for it.
- If a patent is genuinely justified, consider **very carefully** the timing of an application. As we explain in *A Better Mousetrap*, applying prematurely for a patent can be a huge mistake. If all you want to do in the early stages of your project is protect against disclosure, there are simpler and cheaper ways to do it.
- Delaying filing also gives you time to think, and in that time other things may happen. You may conclude that you don't after all need a patent.
- If you use a patent attorney for **any** aspect of IP protection – and we recommend that you do – clue yourself up beforehand (read *A Better Mousetrap*) and insist that you want the **most appropriate** IP protection for **your** invention and **your** circumstances. Tell him or her that you don't want a patent unless it can be fully justified. And if you think it isn't, don't be easily persuaded otherwise. It's you who has to pay, not them.
- Bear in mind that a patent attorney can't do your business thinking for you. Though he or she is often the first clued-up professional an inventor meets, they're legal experts, not business or marketing experts. And they'll probably tell you that, so make sure you listen. Asking a patent attorney for advice about commercialising your invention is like asking a plumber for advice about selling your house. They may have a smart idea or two, but it's not their trade.

Succeeding with and without patents: two inventors' experiences

Mark Sanders <http://mas-design.com/> is a successful inventor, designer and entrepreneur whose products include the Strida folding bicycle and OneTouch™ can and jar openers. Though he patents almost everything he works on, he is very sceptical about the efficiency and value of patents and about the whole food chain that feeds off them. Read more from him at Tara Roskell's *Ideas Uploaded* <http://ideasuploaded.com/an-interview-with-mark-sanders-inventor-of-the-strida-folding-bike-plus-many-more-products/>. Here's an edited version of his thoughts on invention protection without wasting money on patenting:

- 1 The main use of a patent is as something to show the CFO/admin types at a company, who rarely put cash into just an idea, even if there's a prototype. Dragon's Den-type grabbers love patents: 'Let the poor sap waste money on expensive patents, then we'll snap up 80 per cent of the company for bugger all'. That said, not all CEOs are dragons and things tend to improve once a relationship is built up and everyone shares a common interest.
- 2 Ideas are rarely ripped off when shown at early stages, and especially not by big companies who have more to lose in potential bad PR, and may even want a reverse type NDA.
- 3 Fakers and copiers are only interested in the product, not the idea. They wait for all the hard work to be done and a market built. Only then do they copy - as they've done for example with my Strida bike and my OneTouch™ can openers.
- 4 Use design registration. It costs *much* less than a patent, and if extended to the USA (or done just there) has a huge advantage in that it's called a design *patent* in the USA. So you can say, 'I've got copyright, design right, a registered design and patent [application]', which sounds more impressive to would-be licensees, CFOs etc.
- 5 If you must have a patent, don't license it - assign it. In effect you sell it, but keep a conditional interest. For example, you might negotiate a deal whereby if sales are less than x, you get first option to buy it back. (Like any property or capital goods, an assignment can be re-assigned back or

ownership transferred.) Assignment has saved me many £££s over the years because – depending on the contract you negotiate - the costs for ongoing patent application(s), translations, reviews, and fighting (or scaring off) infringers are paid by the assignee, who is usually a company with a lot more money than you. And you can still take commission or royalties on sales, whichever is the more tax efficient.

- 6 If relevant, enter competitions. These independently and publicly fix your invention in time and link it to you.
- 7 Get sensible PR and publicity from *trade press only*, so as not to spoil a future launch into national media. This again independently fixes the invention in time and acknowledges you as the inventor and IP owner.
- 8 Chasing infringers in their own countries is *very* expensive, especially when you're the foreigner and especially when it's China. But even fakers have to promote their wares, and this gives you your best and lowest cost way to nab them. So, for example:
 - If they turn up a trade exhibitions or fairs, show evidence of your IP ownership to the organisers and have them kick off the infringing exhibitors. Ideally, invite the press to this confrontation, as it makes great PR. Asians especially hate to 'lose face' in such a public way. Milk as much PR from the results, to scare off others.
 - eBay are now much better at removing fakes, even though it's almost a full-time job reporting them.
 - Magazines and even blogs are keen to stay above board, so usually respond well if you point out that they're mentioning or promoting fakes. Again, milk it for positive PR. Praise them for doing the right thing - like saving consumers from dangerous fake bicycles, or fake kitchen gadgets that don't work.
 - This also sometimes works with Amazon, who are not as good as eBay at weeding out fakes from their third-party sellers. (eBay has learned from being sued. Maybe Amazon's turn will come!)

The thread running through Mark's tips is that you have to police your own IP **because no one else will**. This means finding infringers and **doing something about them**. It's time consuming but far cheaper and probably much quicker and more effective than an IP lawsuit. And in doing it yourself you get known, which

can be useful PR; and you get yourself respected, which may make other infringers think twice about copying your products.

John D Smith is a US inventor/entrepreneur who is even more dismissive of patents - so much so that he's written an eye-opening and very readable book (ebook or paperback) called '*DON'T File A Patent*' <http://www.dontfileapatent.com/>. He is the inventor of Storm Stoppers® hurricane window protection panels, with sales of almost \$10m since 2004 - without benefit of a patent. But it's not as though he started out not wanting one. He spent around \$25,000 on patent applications, only to be given the run-around for years by USPTO examiners who kept refusing him a patent despite ample evidence of novelty.

During the process he learned the hard way about the shortcomings of patents and the patent system. Out of this experience he wrote his book, which also contains many tips about what you should prioritise rather than a patent. John's position is unequivocal: '*Filing a patent is a game an inventor cannot win. You may be able to get a patent, but it will cost you tens of thousands of dollars and many years. And, in my experience, a patent is worthless!*'

Mark and John, like a growing number of other entrepreneurial inventors, have discovered that patents don't necessarily help products to succeed. In John's case, an irony is that a previous invention for which he **did** get a patent failed commercially. The one that wasn't allowed a patent was the winner.

John also argues that **it doesn't matter if others infringe your IP**. You can't stop it anyway, and with a patent to defend - or with a patent you **think** you should defend - you could be tied up for years in expensive, stressful, distracting, time-consuming and probably fruitless court cases. (Even if you win, being awarded damages doesn't necessarily mean you will actually get them.) Without a patent, you've got the liberty to concentrate on beating your infringers in other, more effective ways, out there in the market-place.

Mark and John are not mavericks or special cases. They simply take a normal entrepreneurial view of life: don't look for a set of rules and conventions to follow - do whatever gets the job done. If more inventors thought more entrepreneurially, they might not get so hung up on patents.

Will China capsize the patent system?

Emerging economies will have an enormous impact on the patent system, and none more so than China. In a TechCrunch article <http://techcrunch.com/2011/01/15/lets-compete-on-innovation/> Vivek Wadhwa reports that China's IP strategy includes filing **a million patents a year** by 2015, aided by a system of rewards to those filing the most applications.

To put this in perspective, the US Patent Office (USPTO) currently receives 450,000 patent applications per year from all sources (and rising http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm), while UK-IPO lags with 22,000 (and falling <http://www.ipo.gov.uk/about-facts0809.pdf>). The USPTO figure is split roughly 50-50 between US and non-US applications, so the Chinese aim is to file at **four times** the rate of US applicants.

Commentators predict millions of poor quality patents, in Chinese, that act as landmines for any company wanting to do business in China. (The searches we carry out at abettermousetrap.co.uk already bear out the predictions of poor quality, compounded by often sparse detail and very hit-and-miss translation.) But what about the effect on the global patent system?

The USPTO – an organisation widely regarded as in deep trouble - already has a backlog of over a million applications. A deluge of Chinese filings can only make things much worse. Even if they're mostly China-only applications for now, they'll still be prior art and it won't be long before Chinese companies routinely seek multinational cover. Translation problems alone could become horrendous. And inevitably, much more IP litigation will take place – is already taking place - in Chinese courts. That'll be fun.

And that's just China. Patent applications in India are starting to increase steeply too, and other rapidly developing countries will follow suit. Could USPTO, UK-IPO and other national patent offices cope without massive expansion? As the system currently operates, it seems unlikely.

China could be the catalyst that either kills or cures the patent system. Without fundamental change, an already bloated system could collapse under its own weight fairly soon. The era of domination by the USA and Europe, and the primacy of English, is coming to an end. It's merely a matter of time.

Given that patents last up to 20 years, anyone thinking of filing in 2011 ought to think hard about the possible state of the IP market post-2015 – by which time they might still be waiting for their patent to be granted.

And what will happen to patent costs? A question we've been asking for a while, without getting an answer, is how inventors and small companies in China, India etc will be able to afford multinational patent cover at present rates. US and European patentees already struggle to pay, so how will applicants fare in countries with much lower per capita incomes? One solution is state subsidy. Another is to farm out examination and translation to low-wage countries. Neither is likely to be acceptable to richer countries. So what will the answer be?

It seems logical to assume that the world patent system cannot survive for long in its current form. Unless there are drastic changes – and the patent system doesn't do drastic change - we think companies will increasingly throw up their hands in despair and start to ignore it. A kind of uncomfortable anarchy will reign, if it isn't reigning already.

A culture of disregard

This goes off at a bit of a tangent, but we think it's relevant.

At bottom, patents rely on the majority of people respecting them. It's then easier to deal with the minority who don't. But thanks to the internet and the opportunities it opens up for no-risk theft, we're now in an era characterised by disregard for other people's IP. People who wouldn't physically steal so much as a can of beans will without conscience steal the work of musicians, film makers, games creators, writers and other producers of digital content. And they'll scream blue murder about any attempt to thwart them with paywalls, copy protection, threats to disconnect or prosecute.

To a worryingly large proportion of the world, nothing that can be digitised is sacred. What's yours is now mine, whether the act of seizing it hurts you or not.

Once this culture of disregard becomes the norm, patents will be even weaker than they are now. They'll be just one more thing to take without paying the originator. To publish a patent will be to give an invention away, because the remedies are so few, so complex and so expensive as to be unavailable to all but wealthy companies. And it doesn't help that the patent system allows so many similar patents in so many fields. Confusion always helps thieves.

So far, the threat to patentees comes from a relatively small number of infringers or trolls, and they're already hard enough to deal with. But start getting very large numbers of infringers and it's a different ball game. The risk to an individual infringer will be minute, which will increase the temptation to infringe. Many won't even think they're doing wrong. The 'all information should be free' mantra will encourage them to believe they're only exercising their natural rights.

An illustration, of sorts. We recently read a news item about a man who had 'invented' and manufactured a kind of umbrella that struck us as commercially hopeless but also familiar. We did a patent search and in minutes found four patents for exactly that idea. (Note that: **four** patents for the **same** idea.) Our man was infringing. Maybe he knew it, maybe he didn't. Either way, he was

behaving as though it was his idea. And in the grand scheme of things, **did it matter**? Would he make a fortune? Probably not. He might be lucky to break even. Would the four infringed patentees miss out on a fortune? Probably not. In all likelihood there would be no big winners or losers here.

So let it go. Let sleeping inventors lie. In this example and many others, who is entitled to what IP is in practical terms irrelevant, because the cost of enforcing a patent will far outweigh any financial benefit to anyone except the lawyers.

The situation might change if the umbrella became a massive hit and a serious money-earner. But maybe only slightly. Our man would now in theory be worth pursuing for infringement. But his profits might give him the means and incentive to defend himself vigorously against a lawsuit, making it expensive and hazardous to sue him. That, or others would by now be infringing him...

That's the culture of disregard at work. It's doubtless happening all the time – thousands of patents being casually infringed, sometimes innocently, increasingly not. Often nobody loses on any major scale. But where do you draw the line? When can you not ignore infringement? As disregard for IP becomes endemic and enforcement costs climb, inventors and small companies will find they can't draw that line anywhere. Unless we see very radical changes to the patent system – no more tinkering politely round the edges - those without deep pockets will find it next to impossible to enforce their patents. It will become pointless to try.

In that event, there will either be much less innovation, or patents will be replaced by other, more practical forms of protection and deterrence. Innovation is an unquenchable characteristic of most economies, so that leaves only the second option.

Overall, there is far too much wrong with the current patent system – with worse to come - for it to be considered fit for purpose.

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