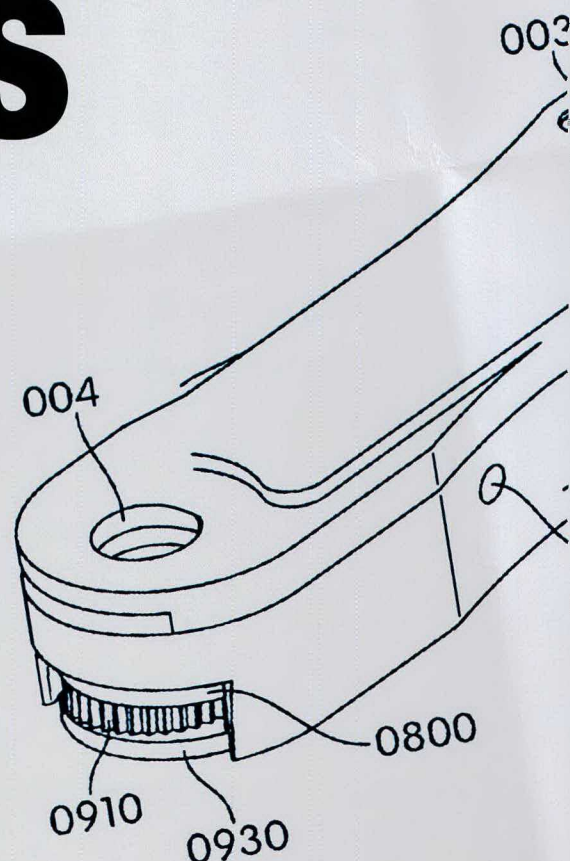


Mistakes Happen

A Patentability Case Study

By Thomas E. Wolff



This is a true story.

Mistakes were made.

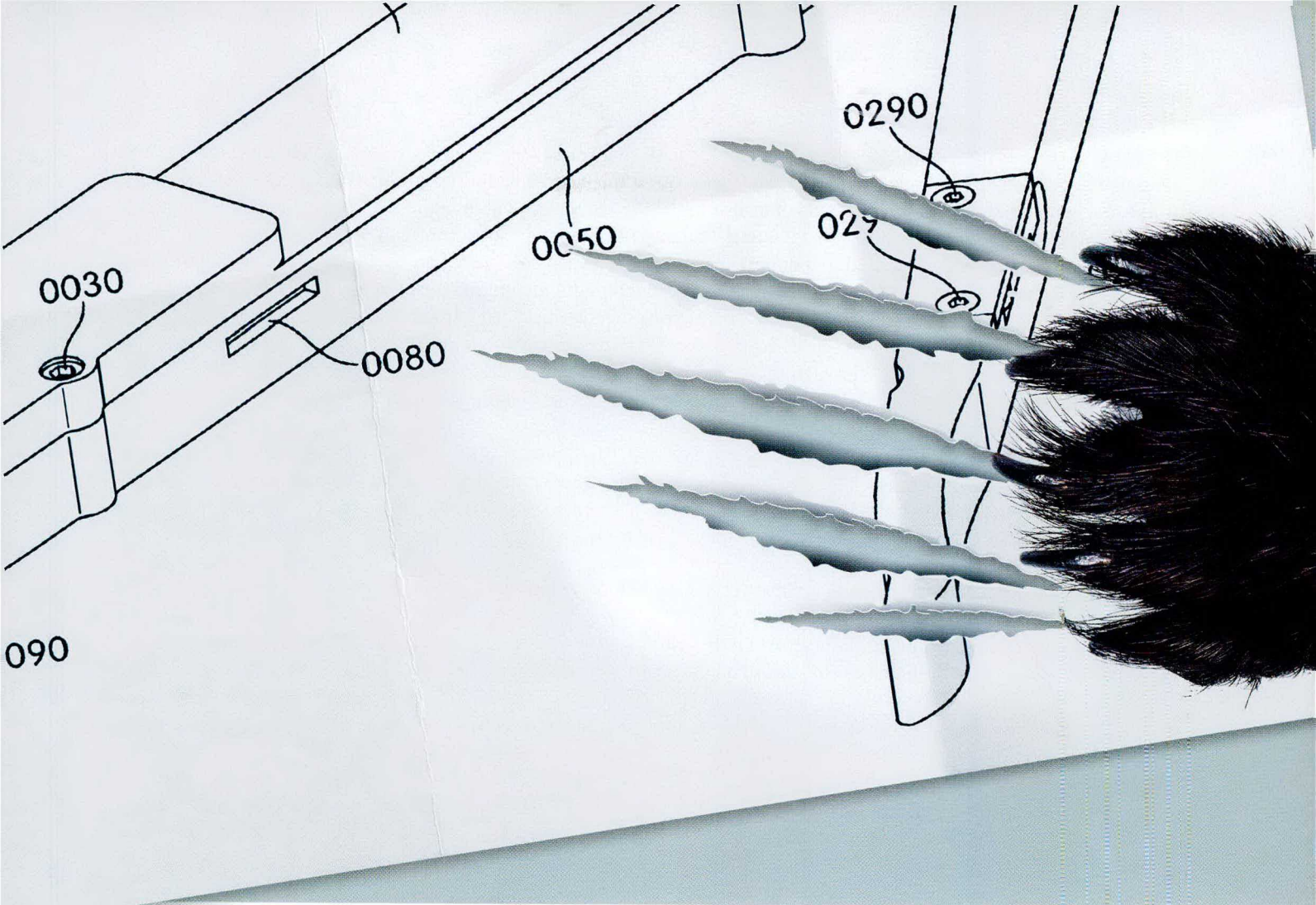
It could have happened to anyone—any inventor, any attorney, any patent searcher. The lessons to be learned are broadly applicable. Similar mistakes could be made by any service recipient or service provider. It is not just about patent searching.

In this patentability case study, I cover how to avoid missing obvious references, how to treat clients with respect, how to own up to mistakes, and how inventors, searchers, and attorneys must be diligent to protect themselves from making mistakes.

THE SITUATION

An independent inventor, Matthew, invented a trigger-activated animal nail clipper. He did a simple search in the USPTO Patent Full-Text (PatFT) database without finding any prior art of interest. Matthew hired an attorney to draft a patent application. Matthew agreed to the attorney's suggestion to have a patentability search done at an additional cost. The attorney engaged a search firm. The searcher reported four patent documents, but none of interest (wolffinfo.com/docs/Nail_Clipper_Search_Report_20160715_Michel.pdf). On that basis, the attorney recommended filing a patent application. The attorney drafted and filed a U.S. provisional patent application. Matthew proceeded with development of a working prototype (wolffinfo.com/docs/trigger_clipper_Michel.mp4).

Matthew learned about Espacenet 18 months later. He entered the invention title, Trigger Clipper, as a simple search que-



ry and readily found pre-grant publication US2014250692A (Pressure activated clipper) that predated his application. He said he was not even doing a real search; he was just testing the interface. Matthew decided that the missed reference and his own application were so similar, they could have been written by the same inventor. Matthew abandoned his provisional application. The inability to get intellectual property protection stopped his product development cold.

At this point, Matthew asked to see the search report because the attorney had never shared it with him. The attorney and searcher offered explanations and rationale for missing that prior art, but did not accept responsibility or apologize. Matthew hired me to give my expert opinion on the patentability search report. Matthew plans to take the matter to arbitration.

THE INVENTION

Matthew's attorney described the invention as "an animal nail clipper that essentially stores energy and releases the stored energy with the pull of a trigger, closing the nail clippers very quickly and cutting the animal's nail." He wrote that there are four basic elements of the clipper:

- Two arms, each arm having a gripping portion and a cutting portion.



Figure 1: Trigger Clipper prototype

- A spring for storing energy, wherein the spring is energized by moving the two arms to the closed position, which simultaneously moves the two cutting portions to the open position.
- A latch for retaining the arms in the closed position and the cutting portions in the open position.
- A trigger mechanism for releasing the cutting portions from the open position so that they move to the closed position rapidly, thereby cutting the animal's nail

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PATENTABILITY SEARCHES

I began my assignment by developing search strategies with the unusual benefit of hindsight and the goal of determining how readily US2014250692A should have been found. At this point, I did not know how my client found that document or the strategy of the search firm. I started my search in PatBase, my usual search system, which I subsequently learned had been the patent system used by the other search firm.

I tried simple semantic and Boolean search strategies. The search string `trigger clipper` resulted in 500 retrieved records (the system limit for semantic search). The longer search string `animal nail trigger clipper` retrieved 192 records. Each answer set included '692. The target U.S. application was the second hit in the search of Google Patents using `animal nail trigger clipper`. Similarly, Matthew's simple search for `trigger clipper` in titles or abstracts search fields in Espacenet retrieved two dozen patent records including '692.

Of course, searchers work much differently when they do not have specific target patents in mind. Therefore, I proceeded as if I were not aware of this key reference. I developed the following search strings in PatBase based on the invention description and likely synonyms and patent classes:

- `tac=((trigger* or activat* or actuat* or releas*) w5 (clipper* or trimmer* or cutter* or nipper*))`
- `tac=((nail* or claw*) w5 (clip* or trim* or cut* or nip*))`
- `sc=A45D29/02 CPC/IPC patent class on Nail clippers or cutters`
- `uc=30/28 US patent class on Manicure nippers`

The combination of the first string with any of the next three resulted in reasonable set of 100 candidate PatBase records, including US2014250692A. I did not analyze this answer set further. If I had, I would have taken full advantage of the Boolean-enabled hit term highlighting in PatBase, which would have made '692 and other references of possible interest stand out among the candidate records. I might also have continued with patent citation searching (patent examiner citations only) based on all patent families of possible interest that I could have identified by text term searching.

The searcher used a seemingly appropriate search strategy in PatBase as documented in its search report. The search was designed around the invention described above and included terminology and patent classes for nail clippers. A broader search for general cutting tools was considered to be an extension of the assignment that would have cost more. The search report noted "that springs/biasing members in the cutting implement arts typically use springs to either assist in closing/opening the cutter, as opposed to a handle being squeezed to increase the potential energy of a spring that is then released via a latch." Accordingly, almost every search statement included `spring* or bias*` in proximity to

many other search terms related to actuating, latching, locking, pressing, or releasing. The word "trigger" was not used as a search term or mentioned in the search report other than in the recitation of the invention description.

The search report listed two patent documents on animal nail clippers and one each on hedge clippers and kitchen shears: US3838507, US3602989, GB1226240, and DE9101488 U1. I used the first three as the basis of backward and forward patent citation searching in PatBase. None would have been helpful for finding US2014250692A.

The searcher also reported that he looked for non-patent literature references in "Google/Google Scholar" using these alternate search strings: `animal nail clipper`, `nail clipper spring release`, `nail clipper spring latch`. There was no mention of searching Google Patents.

ANALYSIS OF THE SEARCH FIRM'S SEARCH

The searcher's PatBase strategy found US2014250692A despite the omission of `trigger*` as a search term. The patent document was in one of 61 patent families in search statement 36 (out of 43 answer sets):

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CPC=A45D29/02 and FT=((spring* or bias*) w40 (latch* or lock* or retain* or retention*))
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There is no way to know from the search report if this answer set was actually reviewed, and if it was, whether US2014250692A was properly considered. The search report did not indicate which answer sets were reviewed. Nonetheless, it seems that the searcher would have reviewed the records of answer set 36 because they were removed by NOT logic from subsequent search set 38. There would have been little point in removing the records of answer set 36 from the subsequent answer set if the first set was not actually reviewed.

I wondered how difficult it would have been for the searcher to pick out US2014250692A using hit term highlighting. The searcher should definitely have noticed that this patent document would be of possible interest because the title, abstract, and claims contained many mentions of "trigger," "clipper," "spring," "nails," and "claws." These could have been added to a custom set of highlighted terms. It might have been harder to recognize the importance of '692 using only the limited set of highlighted search terms from the exact search statement 36. Only "spring" and "latch" are prevalent in '692 and only in paragraphs [0132] on the Clipper Handle Latch Assembly and [0133] on the Handle Return Assembly and in claims 4 and 10.

RESPONSES FROM THE ATTORNEY AND SEARCHER

Matthew asked the searcher why US2014250692A was not reported. According to Matthew, the searcher denied making any mistake. The searcher insisted that '692 was outside the range of the search and that Matthew would have had to pay for additional searching that would cover '692. The searcher

gave this rationalization: “This reference didn’t appear in the search [report] primarily because the search was focused on the trigger mechanism being triggered by the user. In this reference, the blades snap shut due to pressure from the nail against the blade.”

This answer is ironic because it includes the word “trigger” even though “trigger” had been left out of the search strategy and report. The searcher may have realized in hindsight that “trigger” was a key concept that should have been included in the search strategy. Matthew pointed out that the response did not make any sense because the trigger in ’692 is activated by user-applied pressure so it is essentially manual. In any case, all trigger and cocking mechanisms use the same terminology; automatic triggers are still called “triggers.”

The searcher remained evasive about whether US201425069 2A was actually retrieved or reviewed. He admitted in a later communication with Matthew that ’692 was more relevant than any of the other references in the report. No rationale was offered on why patents claiming hedge clippers or kitchen shears would have been reported and a critical one on a trigger-activated animal nail clipper was not.

Matthew got no satisfaction from the attorney either. The attorney insisted that the matter was closed: The search was properly directed to manual triggering to the exclusion of automatic triggering. He tried to rationalize missing the reference by saying that “searches are of limited scope; a search that tracks down every lead would cost in the 6 figures.” In fact, it is rare that an invalidity search would be that expensive, even with higher budgets and greater potential rewards than patentability searches.

The attorney also tried to avoid responsibility for the search error by invoking the “Notice Regarding Limitations” to patentability searches that he provides to clients. The notice explains that patentability searches have limitations that preclude guaranteeing that a patent will issue on any proposed invention. The limitations relate to the patent authorities searched, to the difference between patentability and right-to-use searches, and to his opinions being based on the current state of patent law. Clearly, there was no inclination by the attorney to accept responsibility for making sure that the searcher did a complete and professional job.

LESSONS LEARNED

Many lessons can be learned by searchers, inventors, and attorneys, as well as clients, from this case study.

For Searchers

- **Don’t miss the obvious reference:** This important rule for freedom-to-operate searching, as I described in my 2008 *Searcher* article (wolffinfo.com/docs/FTO_Patent_Searching_Wolff_in_Searcher_Magazine.pdf), applies equally well to patentability searches. A mentor once said to me that if a client would search in Google Patents, so should the searcher. You should always consider carrying out a quick initial search with the closest

acceptable search terms in any subscription or free database.

- **Use the client’s terminology:** The search strategy did not include the key term “trigger,” which appears in the title, preamble, and the last bullet point in the description provided by the attorney. The searcher should start with the client’s terminology and then expand to other terms of art. This increases the likelihood that a good answer will come early in the process in relatively small answer sets. Using alternative search terms, multiple databases, or patent citation searching may overcome a poor choice of search terms. However, these alternative strategies often result in large sets and come about late in the search process when attention focus and expectations may be low.
- **Understand the invention (or the research question) fully:** Verify and re-verify the scope with the customer and question why you are rejecting each reference. I understand that it is common practice for searchers to rely on the written description of the invention rather than to talk directly to the clients, particularly searchers working in search firms. The searcher in this case appears to have misinterpreted the invention as having a solely “manual” trigger. His misunderstanding may explain the omission of “trigger” as a search term and his reliance on many alternative search terms. The searcher should have asked for clarification rather than trying to make the distinction between manual and automatic triggering.

A telephone conversation or email exchange could have clarified the matter. I was surprised that Matthew’s drawing and the first figure of ’692 seemed so different. The latter did not even show a conventional trigger, although the claims relied on the word “trigger” and specification described the trigger assembly. Matthew explained to me that it would be obvious to a person having ordinary skill in the art (known as PHOSITA) that the button or pressure plate trigger would have functioned just as a crooked classic trigger. He wrote: “To be precise the Trigger’s activating point of contact is 0900 hidden inside of the hole 40 [which opens into 0800 (Trigger main body), enclosed by 0930 (Trigger bottom plate)]. The nail is put into the hole by the human user, holding the dog’s paw, and when the nail presses the pressure plate/button/trigger surface, the blade fires.”

- **Write a useful search report:** The search report should be sufficiently detailed to give the client full confidence that the searcher proceeded as agreed upon and as required. The report should draw connections between the search topic and the search strategy. You may need to explain the rationale behind the selection of search terms and search logic, the process behind the acceptance and rejection of candidate references, and examples of

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references that were considered out of scope. If you include the raw search history, make clear which answer sets were reviewed.

- Understand your supporting role in the patenting process:** The primary job of the patent searcher is to find prior art to knock out the patentability of the invention as described in the "Paradox of Patentability Searching" by Edlyn S. Simmons (*Journal for Chemical Information and Computer Scientists*, 1985, 25(4):379–386). The paradox is that the paying customer usually wants the searcher not to find any invalidating art. Patent searchers are called upon to use their best judgment about what to present in their search reports. They are the first to interpret prior art references. Searchers ought to be conservative and err on the side of providing too much information within the bounds set by the client. Any references about which the searcher is uncertain should be retained for detailed consideration by their clients and their attorneys. Searchers should also be looking to provide the inventors and patent attorneys or agents with

prior art that would be helpful for drafting the patent application. This may include counter-examples that could support existence of unfilled needs or refute obviousness. In this case, the searcher should have reported US2014250692A as being of possible interest. If it had actually been considered, he should not have decided that it would have no relationship to either novelty or obviousness.

For Inventors and Attorneys

- Be well-informed:** This case study makes clear the value of inventors doing their own basic patent searching. I am not the only one to think of this. Stephen Key, writing in *Forbes* on Dec. 18, 2018 (tinyurl.com/y24mqeej) agrees, as do David Pressman and David E. Blau in *Patent It Yourself: Your Step-by-Step Guide to Filing at the U.S. Patent Office*, 19th Edition (NOLO Press, 2018; see pages 131 and following). Most searchers and attorneys recognize that well-informed inventors are their best clients.

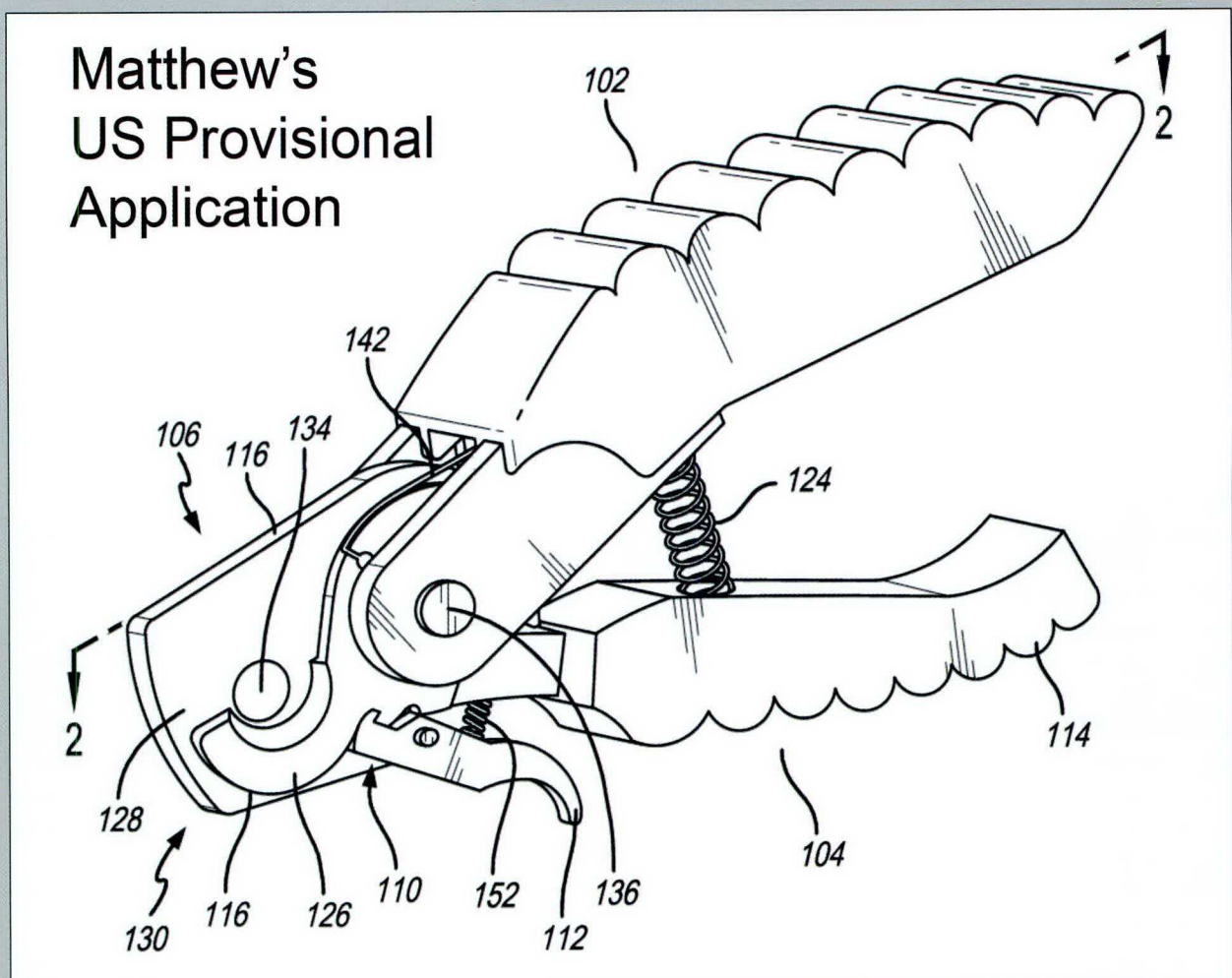


Figure 2A: Trigger Clipper from Matthew's U.S. provisional application

Matthew had searched the USPTO patent full-text PatFT database before hiring the patent attorney. However, he did not appreciate the need to search the separate USPTO published Application Full-Text (AppFT) database. He believed that he only needed to search for “old technology” and was not aware that the AppFT database was separate and critical to an effective search. Matthew might also have considered the Seven Step Strategy (tinyurl.com/y3bmg7hp) that is offered by the USPTO to overcome the inadequacy of the USPTO databases, particularly compared to other free sources such as Espacenet, FreePatentsOnline.com, and Google Patents. Matthew might have gained valuable insights if the attorney had offered to discuss with him the bounds of the initial search.

- **Be a proactive customer:** Matthew should have gotten the search report right away, and he and his attorney should have been more diligent in reviewing it. They missed the opportunity to question the search strategy and the search report before spending more time and money. No client ought to accept a search report with so

little explanation of what the searcher actually did. Listings of search statements without annotations do not clarify what candidate records the searcher actually looked at and how they were evaluated.

- **Getting enforceable patents is hard:** Matthew was impressed that the clipper in US2014250692A was well-engineered and appeared ready to be manufactured. Nonetheless, '692 was abandoned by its applicants after an examiner search and first office action (wolffinfo.com/docs/US2014250692A_Examiner_Actions.pdf). The examiner cited six patent documents, none of which were found by the search firm or by Matthew. The first claim of '692 was rejected as anticipated by US4321764 (Hammer actuator for use in a gun). The eight dependent claims and other independent claim were allowed in light of the other cited patent documents. A simple response to the office action could have resulted in a granted patent.

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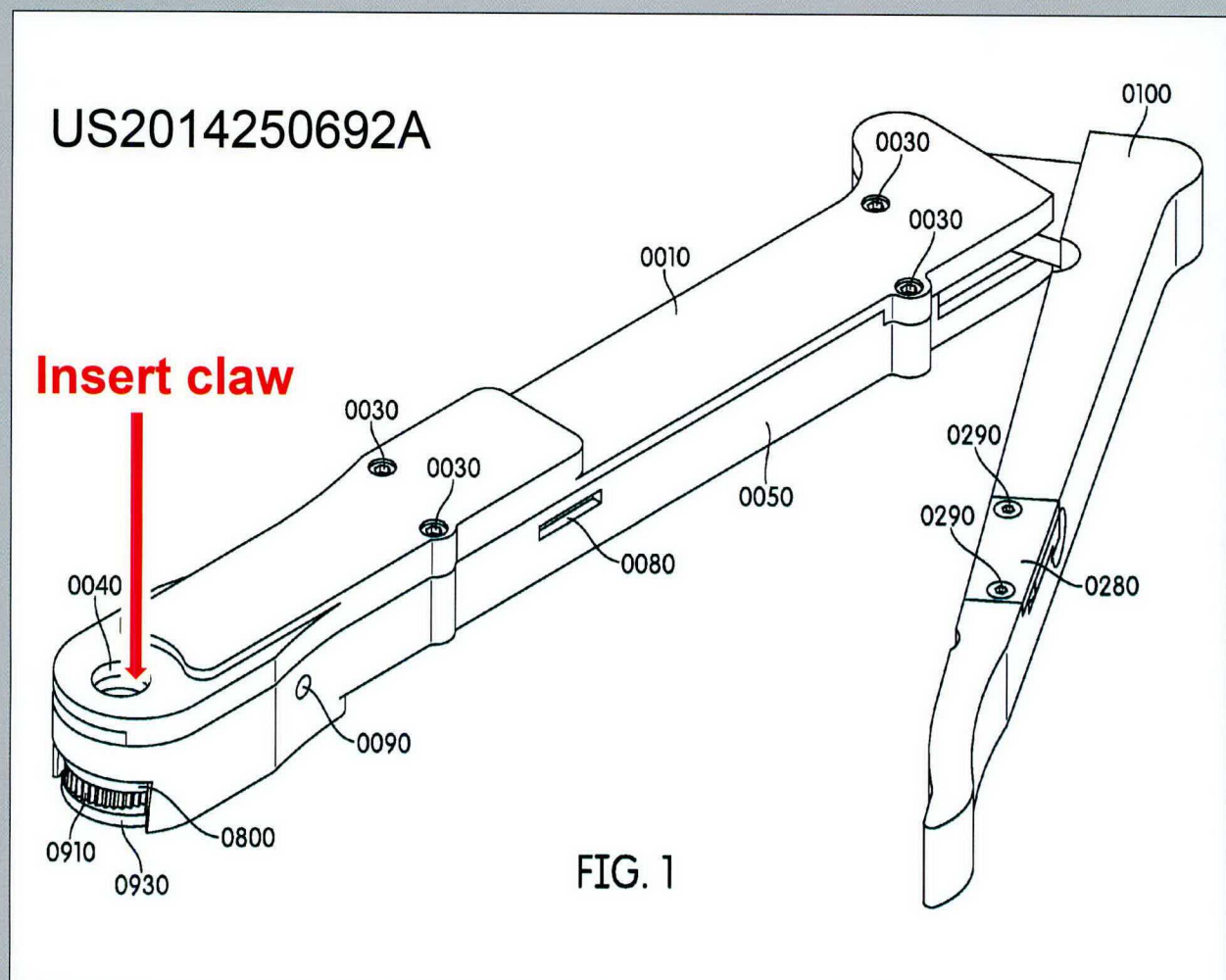


Figure 2B: Nail Clippers from US2014250692

We cannot know why the application was abandoned. The inventors might have had financial issues that precluded further legal work or supported a granted patent. They might have thought that the claims of the resulting patent would be too restricted or hard to enforce. Their prototype might not have worked as expected or showed that the commercial product would not be profitable. Getting enforceable patents can be very difficult. The first and least expensive step should always be a good patentability search. Searches are all different, and none can be expected to find all prior art that could be cited against an application.

For Searchers and Attorneys

- **Patentability searches are invalidity searches:**

I did not fully appreciate this equivalence until this case study. A patentability search is only useful if it is done well enough to be effective in warding off later efforts to invalidate an invention. In my invalidity search article, published in *ONLINE* in 2012 (wolffinfo.com/docs/Invalidity_Searching_Wolff_in_ONLINE_Magazine_Jul-Aug-2012.pdf), I focused on differences between patentability and invalidity searches. Invalidity searches generally happen later in the product development cycle, usually cover shorter time spans, and involve higher client expectations and budgets compared to patentability searches. Yet both types of searches have significant value in supporting potential commercial opportunities.

Searchers working on patentability may be constrained by a lower budget, but still need to deliver quality appropriate to an invalidity search. If necessary, searchers should advise clients about the downside of being less comprehensive than later invalidity searches might be on the same subject. In this case, the searcher wrote in his report that “nail clipper arts were examined, and to a certain degree, general cutting tools. Cutting tool arts is a very dense field of art, therefore additional search time may yield further art.” It is understandable that with these restrictions he would not have found the gun patent US4321764 found by the patent examiner. However, the searcher said later that broader coverage and budget would have been needed retrieve '692. No explanation could get around the mistake of missing this critical nail clipper patent.

- **Treat inventors with respect:** Inventors should be treated as the subject matter experts even though they are not experts in legal matters or searching. This gives the searcher and attorney opportunities to work with inventors to understand fully the novelty and obviousness of the subject invention. It provides a mutual learning opportunity. Each participant may provide helpful insights based on their expertise. In this case, the searcher proceeded independently and interpreted the novelty without

inventor input; the searcher and attorney gave lame rationalizations about why the key reference was missed; the inventor was left in the dark about the results and the details of the search process and was given bad advice about proceeding with an expensive patent application.

- **Act with integrity and own up to mistakes:** As a matter of integrity and professionalism, the searcher should have admitted and apologized for the mistake rather than trying to rationalize the omission of US2014250692A from the search report. Additional searching would not have solved the problem. The issue was not the scope of the search. Rather, it was the improper focus on manual triggers based on misinterpretation by the searcher, possibly with inadequate guidance by the attorney. An offer to return some of the search fees or to do better on another search would have been more appropriate. The attorney denied any responsibility, even though he hired the search firm and had the opportunity to review the search report critically. He also shut down all future communication with Matthew. In the absence of further consideration by the attorney, Matthew anticipates going to arbitration for recovery of costs.

WHAT SHOULD HAPPEN WHEN MISTAKES HAPPEN

The report and communications with Matthew suggest that US2014250692A was not actually reviewed and was not affirmatively rejected after due consideration. Its omission was almost certainly unintentional. Mistakes happen despite the best of intentions, skills, and communications. The best clients and service providers take extra steps to minimize the risk of making mistakes and to maximize client satisfaction and successful outcomes. Matthew could have learned more about finding prior art. His service providers owed him better explanations, apologies, and some financial consideration. In the end, Matthew resented the service providers for their lack of client care and unwillingness to accept responsibility for mistakes. Matthew's experience gives us the opportunity to learn from mistakes and prepare for them when they happen.

Acknowledgments

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