

Validity

Subject Matter:

Under §101, patentable subject matter includes any new or useful process, machine, manufacture, composition of matter, or a new and useful improvement thereof. The invention must be a product of human ingenuity (*Chakrabarty*). Additionally, laws of nature (*Prometheus*), physical phenomena (*Parke-Davis*), and abstract ideas (*Alice*) are excluded. There is, however, no categorical test (*Bilski*). *Alice* applied a two-step analysis, first formulated in *Mayo*, to assess the applicability of each of these exclusions: first asking whether a patent claims a patent-ineligible law of nature, natural phenomena, or abstract idea; and, if so, whether it contains a transformational inventive concept.

Here, a challenger may argue that Holder's patent is merely a drafting attempt to monopolize the laws of nature, in this case, the principles of magnetism – specifically their variable strength. Holder would respond, however, that at some level of abstraction, every innovation incorporates laws of nature. In this instance, Pat's invention is not "directed toward" magnetic principles, as the Federal Circuit asks, but simply uses them for an invention directed toward window cleaning. Even if the court finds step 1 of *Alice* satisfied, Holder can say his implementation – to harness variable strength to clean windows of varying thicknesses – was an unconventional inventive step. Overall, because Holder's invention is physical, a subject matter challenge would likely fail.

Utility

Under §§101&112, for an invention to be patentable, it must exhibit beneficial (moral), operable, and practical utility at the time the application is filed. Under the beneficial prong, while *Lowell* teaches frivolous or injurious inventions are unpatentable, the Federal Circuit has indicated only

Congress can deny patentability on moral grounds (*Juicy Whip*). Operable utility is presumed as long as an invention is not inherently unbelievable (Branan). To show practical utility, an invention must demonstrate both specific and substantial benefits to the public (Brenner). Specific utility is a well-defined and particular benefit to the public (*Fisher*). With substantial utility, there must be a significant and presently available benefit (*Brenner*).

Here, there is no indication beneficial utility would be in question. It is neither frivolous nor injurious; instead, it benefits the public's window-cleaning. Holder's invention would likewise survive an operable utility challenge because a PHOSITA would not find it inherently unbelievable. Magnetic attraction is well-understood and, as the '444 patent demonstrates, it has been implemented in window-cleaning contexts since at least the 1940s. While a challenger might call into question the practicality of such uses by arguing the same sentiments of the WindowGenie review, operable utility is not a measure of practicality. Holder can also demonstrate practical utility. The invention's specific utility is that it can apply magnetic window cleaning to windows of varying thickness – including both single- and double-pane. It also exhibits substantial utility because it is cost-effective and readily marketable. A challenger may argue that the invention has no substantial utility, because there is no indication Holder has produced a finished version readily available to the public. Holder would be able to successfully argue, however, that utility is judged from the time of filing and does not require immediate public availability. Moreover, the immediacy requirement is not rigorously enforced and is meant to target research intermediaries, not consumer devices such as Holder's.

Disclosure

Under §112, a patent's specification must contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable a PHOSITA to make and use it. Moreover, the claim(s) concluding the spec. must particularly point out and

distinctly claim the subject matter of the invention. This provision has birthed three discrete inquiries: enablement, written description, and definiteness.

Enablement

Enablement, an objective standard (*Wands*), requires that at the time of filing, a specification provides sufficient teaching of the invention such that a PHOSITA could make and use the full scope of the claimed invention without undue experimentation (Warner-Lambert). Some experimentation is permissible, as a PHOSITA is able to fill gaps. *Wands* taught several illustrative factors courts may use to assess undue experimentation, including the quantity of experimentation necessary, amount and direction of guidance presented, whether there are working examples, the nature of the invention, the state of the prior art, the relevant skill for those in the art, the level of predictability of the art, and the breadth of the claims. Broader claims are less likely to be enabled. On the other hand, the more advanced the state of the art and, thus, the more knowledgeable the PHOSITA, the more there can be gap filling.

A challenger would argue that Holder's claim 1 is not enabled because it specifies it is "variable strength" however, it does not specify a means of varying the magnetic strength, which would thus require undue experimentation to achieve. Holder would first respond that a preamble is not limiting, but even if it were, the specification enables the varying strength component for a PHOSITA. First, the specification details that modulating the distance between the magnetically attracted components allows them to be brought closer and further apart. A PHOSITA is able to understand the adjustment mechanism exemplified in the illustration. For these same reasons, an objection to claim 2 on the grounds that the adjustment mechanism is not enabled would likely fail. Additionally, Holder would argue that modulating the magnetic strength by way of an electromagnet is likewise enabled because that is a well-understood technology, around in some form since the 1800s. A PHOSITA would know

more electrical input amounts to more magnetic force. A challenger may also argue that in claim 1, “close proximity” is too vague and would thus require undue experimentation. Holder would have a strong response argument that a PHOSITA would understand, based on the nature of the invention (a window cleaner) and state of the prior art (such as the ‘444 patent), that the distance includes a reasonable range of window thicknesses. Because mechanical subject matter such as Holder’s claims are highly predictable, it is likely that Holder’s claims would be sufficiently enabled.

Written Description

The written description inquiry assesses whether the disclosure reasonably conveys to a PHOSITA that the inventor had possession of the invention at the time of filing (*Ariad*). *Ariad* clarified it is a distinct requirement from enablement. Written description issues tend to crop up when an applicant amends or adds claims or claims so broadly that possession cannot be established. Neither examples nor reduction to practice is required to adequately describe an invention; constructive reduction via the application is sufficient. The detail required depends on the nature and scope of the claims (*Ariad/Gentry*). While more pioneering inventions tend to receive more latitude (*O’Reilly v. Morse*), courts have recently scrutinized the requirement more rigorously (see *Gentry Gallery, Eli Lilly*).

Here, a challenger’s strongest argument against written description would be that the claim scope is too broad: while the language of claim 1 would encompass cleaners that use electromagnets, Holder did not possess such a claim. The challenger would argue in each instance Holder referred to the magnets as rare earth magnets, and thus failed to describe an invention containing electromagnets. Furthermore, the repeated use of “rare earth” metals in the description is evidence that Holder did not have electromagnets in mind (*Gentry*). In fact, the use of electromagnetism was disclaimed, as the specification calls for “at least” one rare earth metal in each unit. Because such an embodiment is

enabled but not described, *Gentry* teaches it is dedicated to the public. Holder would respond that he was not obliged to provide an example of electromagnet usage or reduce it to practice; instead a PHOSITA would know that his invention included such a form based on the language of the claims. A PHOSITA would understand the distinct use of a “magnet” in one unit, and only a “magnetically attractable material” in the other as indicative that Holder had electromagnets in mind. Moreover, it is disfavored to read in limitations from the specification into the claims. This would ultimately be a very close issue, however, the specification would likely render the claim scope not described.

Definiteness

As stated above, the claims of a patent must particularly point out and distinctly claim the subject matter of the invention. To satisfy the definiteness requirement, the claims, when read in light of the specification and prosecution history, must inform a PHOSITA with reasonable certainty about the scope of the invention (*Nautilus*). While, owing to the constraints of language, absolute precision is not required, there must be clear notice of the scope of a patentee’s rights (see *Permutit*).

Here, a challenger might argue that the replaceable cleaning surface element of claim 1 is a means-plus-function limitation that lacks a corresponding structure in the specification, rendering the claim indefinite (*Amtel*). A limitation can be MPF without the use of “means of” (*Williamson*). However, Holder would respond that the phrase “disposable wipe moistened with cleaning solution” would be understood as a sufficiently definite structure by a PHOSITA. In the alternative, Holder would argue “a disposable wipe premoistened with cleaning solution” is a sufficiently definite corresponding structure; however, with an eye toward infringement, this more limited interpretation would not be preferable for Holder.

A challenger would also argue claim 2 is MPF without a sufficiently definite corresponding structure for “adjustment mechanism,” as the facts state the manner of operation is not available in the spec. Holder would point to the drawings and assert a PHOSITA would know a definite adjustment mechanism structure to use, and absolute precision is not required.

Novelty

Under §102, an invention is novel unless it was anticipated by the prior art. Analyzing novelty requires three steps: determine 1) what could be prior art under §102(a), 2) what should be excluded from consideration under § 102(b), and 3) whether any of the remaining prior art anticipates the claimed invention. Under the AIA’s first-to-file system, the critical date is the date of filing. In this case, the critical date is October 1, 2017.

1. Section 102(a)

Under §102(a)(1), things patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of a claimed invention may be prior art. Under §102(a)(2), subject matter described in a US patent or patent application before the effective filing date of the claimed invention may also count as prior art. While section 102(a)(2) only applies to US patents or applications, it nonetheless uses a foreign patent’s global effective filing date, as long as the invention is submitted for patenting in the US within one year.

a. Electromagnets

Standard electromagnet technology would be prior art under §102(a)(1) as it was publicly known (presumably through printed publications or public uses, though the facts do not say, and it would be otherwise available) in the 1800s.

b. Chinese Eyeglass Cleaner

The Chinese Eyeglass cleaner was on sale in China in June of 2016. Under the AIA, international sales count for §102(a)(1), so this would potentially be prior art.

c. '444 Patent

The '444 patent would be prior art both as patented art or a printed publication under §102(a)(1) and as art described in a patent issued to another (§102(a)(2)). It was both effectively filed and published prior to Holder's filing.

d. '750 Patent

The '750 patent is prior art as a published application for patenting under §102(a)(2). Under the AIA international patent applications are back-dated to their foreign filing date as long as they are filed in the US within 1-year of the foreign filing and eventually publish. Here, the '750 patent satisfies both requirements and will thus be prior art to Holder as of January 2, 2017.

e. Student Project PDF

The PDF could count as prior art because it was published or otherwise available to the public in late-September 2017. The standard for publication is it must be "sufficiently accessible to the public interested in the art" (*Klopfenstein*). This is demonstrated by dissemination and public accessibility. Holder would argue that the PDF was not indexed in a meaningful way, as evinced by the website's categorization thread: "all items > item". A challenger would respond by pointing to the downloads – 10 since its posting – to prove the document was publicly accessible and had in fact been disseminated. It would further argue that indexing case law has tended to focus on physical libraries, not an internet context (see *Cronyn*; but see *Lister*). Ultimately, the 10 downloads by members of the public will likely be dispositive of publication (see *Norian*).

f. Remainder of Student Project

The remainder of the project will likely not be deemed published or otherwise publicly accessible. There is no indication it is accessible upon request (as in *Sietus*), or else it would reside on the same download page as the PDF. It was instead kept restricted, as was the case in *Northern Telecom*.

g. Holder's own creation

While one copy in public use is sufficient to show public use (Egbert), here, Holder's actions will likely not amount to a public use. There is no indication Holder's creative process occurred elsewhere than his own home and, furthermore, he did not have a working prototype prior to filing. Therefore, any of his actions would likely fall under the experimental use exception (*City of Elizabeth*).

h. The Review

The Review would fall under a written publication but it was published after Holder's effective filing date, so is thus, not prior art.

i. Windowba

While Windowba's development process began in 2016, prior to Holder's filing date, there is no indication that it publicly used it, sold it, published content about it, or otherwise made it available to the public prior to 2019. If discovery reveals otherwise, Windowba's device may be incorporated into Holder's prior art.

2. Section 102(b)

Section 102(b) provides a one-year grace period to exclude from prior art disclosures made by the inventor, a joint-inventor, or by another who obtained the subject matter disclosed directly or indirectly from the inventor or joint inventor, (§§102(b)(1)(A)&(b)(2)(A)) as well as disclosures that otherwise happened after the inventor disclosed the invention's subject matter (§§102(b)(1)(B)&(b)(2)(B)).

Of the listed prior art under the facts give, only Holder's own actions are attributable to him. As such, if Holder engaged in any activity that rose to the level of a public use, public sale, printed publication, or otherwise made his device available to the public, that activity would be excluded if it took place after October 1, 2016.

3. Anticipation

All prior art not excluded under § 102(b) is incorporated into the anticipation analysis. A piece of prior art does not anticipate an invention unless it either expressly or inherently discloses every element of the claimed invention (*Robertson*). Additionally, anticipatory prior art must be enabling (*Hafner*). Anticipation is analyzed by comparing the patentee's claims with the entirety of the prior art source. Here, the sources to consider are the electromagnets, Chinese eyeglass cleaner, 444 patent, 750 patent, and student pdf. The elements of claim 1 include 1) a primary unit with one+ operably affixed magnet, 2) a second unit with one+ magnetically attractable material, 3) the units attract, 4) a disposable wipe replaceable cleaning surface on each unit, 5) attachment members on each unit that allow for replacement. Claim 2 is a dependent claim which adds 1) modulating distance 2) via an adjustment mechanism.

Electromagnets – clearly do not disclose all the elements, as there is no cleaning feature.

Chinese eyeglass cleaner – do not contain two units with magnets or magnetically attractable material. Additionally, the cleaning apparatus is non-replaceable. This prior art does demonstrate element 1 of claim 2 because, as seen from the photo, a user can apply pressure to clasp the cleaning pads via an adjustment mechanism

444 Patent – While this patent contains units 1 & 2 (and thus satisfies 3), the cleaning apparatus is “essentially permanently attached,” and are thus not replaceable. As such 4 & 5 are not satisfied. Nor is there an adjustment mechanism to anticipate claim 2.

750 Patent – This patent is an improvement on the ‘444 patent, containing 1, 2, and 3. It claims a replaceable cleaning surface and is the biggest anticipatory threat to Holder. Holder would argue two key differences separate the ‘123 patent: first, the cleaning material does not specify it comprises a disposable wipe, and second, the patent disclaims the use of attachment members. One embodiment does specifically disclaim their use, however, the remainder of the specification should be assessed to determine whether the application contemplated their use, and if this description is enabling (*Hafner*). Under §102(a)(2), the invention need only have been described, not specifically claimed, so Holder will not be able to rely upon the limits of the claims if his elements were otherwise disclosed in the specification. If claim 1 is in fact anticipated by the 750 patent, Holder will still be able to maintain claim 2, as 750 does not contemplate an adjustable mechanism.

Student PDF - For prior art to anticipate, it must enable a PHOSITA to make the invention (*Hafner*). In this case, it is unlikely that the PDF, which only includes a table of contents and a brief introduction, would be enabling of Holder’s claims. While it mentions the use of pre-moistened wipes, it does not specify a method of affixation. A challenger, however, would argue a PHOSITA would know to affix the wipes with attachment members. Like 750, an adjustment mechanism is not contemplated so, at the very least, claim 2 would survive the novelty challenge.

Obviousness

Under §103, a patent will not be granted if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious to a PHOSITA before the effective filing date. The obviousness inquiry is generally hardest to satisfy.

Graham taught a four-step structure to the analysis. First, the court determines the scope of the prior art. A PHOSITA is assumed to know all the pertinent prior art (*Winslow*). However, art deemed non-

analogous is removed from consideration (*Clay*). A piece of art is non-analogous if it is not from the same field as the invention and is not otherwise reasonably pertinent to the problem the inventor sought to solve (*Demanski*).

Here, Holder's only argument for exclusion of art for non-pertinence would be the Chinese glass cleaner, however even this is weak. Holden would argue they would not be pertinent to his problem of cleaning windows of varying thicknesses, a challenger would have a strong case that solutions aimed at effectively cleaning two sides of a pane of glass at once would all be reasonably pertinent. The others all either explicitly deal with window cleaning, or, in the case of electromagnets, would clearly be pertinent to window cleaning via magnetic means.

The second Graham prong requires ascertaining the differences between the prior art and the claims at issue.

In this case, claim 1, if it survived novelty, would differ in its use of disposable wipes and attachment members. Claim 2 would differ in its inclusion of an operably affixed adjustment mechanism.

Third, the court ascertains the ordinary level of skill in the pertinent art, considering factors such as the education level of the inventor, the types of problems encountered in the art, prior art solutions to the problems, rapidity of innovation, the sophistication of the technology, and the education of active workers in the field.

Here, Holder would argue in favor of a garage tinkerer, while a challenger would wish for an average engineer. As Holder himself is the former, the prior art demonstrates relatively infrequent advancements and the technology is not sophisticated, Holder may have the edge here.

In the last prong of the Graham obviousness analysis, the court in light of the foregoing considerations, determines the obviousness or non-obviousness of the subject matter. Unlike in novelty

analysis, sources of prior art can be combined to assess non-obviousness. Secondary considerations that exhibit a nexus to obviousness also inform this analysis (*Hybritech*), such as commercial success, or the disbelief of experts, amongst others.

Holder would have difficulty asserting the non-obviousness of claim 1. A PHOSITA would likely find the use of disposable wipes and attachment members obvious. The Student PDF used disposable wipes, so they would be obvious to combine. A PHOSITA would view attachment members as an obvious means to hold them. There are only a few ways to affix wipes, either through friction, as in the 750 patent, or by some form of fastener, also contemplated by 750, so this is unlike *Kubin*.

Claim 2 has a better chance of withstanding an obviousness inquiry, as there is no affixed adjustment mechanism in the prior art with which to combine. Moreover, Holder can appeal to the long-felt but unresolved need to modulate distance between the cleaners, as demonstrated by The Review, posted before Windowba hit the market, which decried the inconvenience of too-strong an attachment.

Infringement

Under §271(a), whoever without authority makes, uses, offers to sell, or sells a patented invention infringes the patent. A plaintiff may demonstrate infringement literally or through the doctrine of equivalents.

Literal Infringement

Literal infringement requires every element of a claim to be practiced by the alleged infringer (*Larami*). Infringement analysis begins by constructing the claims (*Markman*). Claim construction is a question of law to determine the metes and bounds of the invention (*Merrill v. Yeomans*). *Philips*

dictated a methodology for claim interpretation. First, the court looks to the claims – their ordinary meaning to a PHOSITA – then, if unclear, considers the context of the rest of the patent, followed by intrinsic evidence. Then, if the claim meaning remains ambiguous, the court may look to extrinsic evidence as a last resort.

Here, the parties will fight over the meaning of a few terms, most notably “magnet,” “disposable wipe,” “moistened,” “attachment member,” and “adjustment mechanism.” Windowba will seek to argue that Holder disclaimed a magnet including an electromagnet in his description, while Holder will respond that limitations in the specification should not be read into the claims. While a PHOSITA in isolation would likely consider both rare earth magnets and electromagnets to be “magnets” by its plain meaning, the courts assessment will likely turn on whether it finds Holder expressly limited his claim (*Phillips*). Windowba will argue its use of a “cloth” does not amount to a “disposable wipe,” however this will be a weak argument, as Windowba’s cloths are disposable, and a PHOSITA will likely consider them the same. It will be able to claim that its inside cloth is not pre-moistened, so should not be considered moistened. Holder will argue that pre-moistened ones may be used, and if not, Windowba is contributorily liable for direct infringement of its users. Windowba may argue the sticky-friendly surface does not amount to an attachment member, an argument it will likely succeed in, as the plain meaning of a “member” is likely distinct from merely the surface the cloth rests against. If claim 1’s preamble is considered limiting, that will not present an obstacle as Windowba does practice variable strength.

For claim 2, Windowba will argue its electromagnet, modulated by a knob is not an adjustment mechanism. Holder would respond claim 2 is MPF, therefore equivalents of the adjustment mechanism specified in his description also literally infringe. While this would be question to subject to the Philips methodology, because claim 2 is dependent on claim 1, and claim 1 not literally infringed, neither is claim 2.

Doctrine of Equivalents

The doctrine of equivalence serves as an equitable measure to impose liability when no literal infringement is found. The doctrine follows an element-by-element comparison standard (*Warner-Jenkinson*). A plaintiff must demonstrate that the accused product has a “substantial equivalent” of every element, which requires showing an alleged equivalent does the same work in substantially the same way and accomplishes substantially the same result (known as the “triple identity test”) (*Graver Tank*). Equivalence is viewed from the perspective of a PHOSITA (*Id.*).

Here, Holder has an argument that 1&2 are infringed by DoE. He will not be subject to PHE, as his claims were not amended. Under the triple identity test, he can assert that Windowba’s use of an adhesive/adhesive surface does the same work of securing the cloth, in substantially the same way by physically affixing it, and achieves the same result. He can also argue a dry cloth that is moistened satisfies 3x identity. As such, his claim 1 infringement is likely to be successful. It will be more difficult to assert the electromagnetic implementation falls under DoE, because directing more power is a significant departure from mechanically manipulating distance. Additionally, Windowba will claim its use of electronics is a significant improvement over Holder’s for the sake of longevity and control (*Larami*).

6453

Pre-AIA

Critical date would be DoI: August 2017.

'750 was not in English so cannot get priority back to filing date under § 102(e). Big impact on obviousness. Would make replaceability/disposability itself potentially non-obvious.

Eyeglass cleaner would not be PA unless known or used in US(102(a)). Any printed pub would be though(102(a)).

102(g)(1) interference: Windowba may claim it invented first. Will first depend on who reduced Pat's claims to practice first (Pat-10/1/2017). If Pat loses but conceived(Aug.17) first, may show unbroken dilligence (between conception + 10/1/17) to beat.

102(f) derivation unlikely