

Question 1: Validity

Patentable Subject Matter:

Section 101 of the Patent Act expansively provides that “any new and useful process, machine, manufacture, or composition of matter” are patentable. However, Courts have placed judicial limits on subject matter eligibility with the qualification that “laws of nature, physical phenomena, and abstract ideas” are not patentable. Specifically, SCOTUS has set forth the *Alice/Mayo* framework in which it must be determined (1) whether the claims are directed to a patent-ineligible concepts, and if so, (2) whether the additional elements transform the nature of the claim into a patent-eligible application. If (1) and (2) are met, the subject matter is patent ineligible.

A challenger to the ‘123 patent will likely assert that the claims are directed to the patent-ineligible “natural law” of varying attraction strength with distance and magnetism, and that implementation on a window cleaning device does not transform. Specifically, a challenger will likely state the claims are directed at using magnetism and magnets at a distance to hold an object. Subsequently, a challenger may argue that this is like *Morse*’s invalid claims directed at using electric current as motive power resulting in marking or printing intelligible characters at a distance. Furthermore, attempting to limit the use of magnetism to cleaning windows (i.e., a particular environment) with the addition of a disposable wipe is not a way to circumvent patent ineligibility. *Bliski*. Lastly, using this law of nature, combined with a disposable wipe, is like *Mayo*’s non-transformative steps that were well-understood and conventional.

Pat has a strong counter that his claims are closer to *CellzDirect* than *Morse/Mayo* and thus directed to patent eligible subject matter (or is at least transformative). Like how the claims in *CellzDirect* were held to be not directed to a cell’s ability to survive thawing but rather a

laboratory technique for preserving cells, Pat can analogize that his claims are similarly directed to an apparatus to implement a cleaning technique and not magnetism itself. Furthermore, Pat's argument is even stronger as the claims in *CellzDirect* were method claims, and his are apparatus claims. As such, I think Pat has a strong argument that his claims are not directed to a natural law, or at the very least, include physicality that amounts to significantly more.

Utility:

The utility requirement is rooted in two sections of the Patent Act. To receive patent protection, Section 101 requires that an invention be "useful" and Section 112 requires a disclosure of "the manner and process of making and *using*." To meet the utility requirement, courts have required that the invention demonstrate operable, practical, and beneficial utility.

Operable Utility:

Operable utility requires that an invention achieve some intended result, and the threshold inquiry of operable utility is whether the claimed invention is inherently unbelievable, from the perspective of a PHOSITA, at the time of filing. Here, Pat's claims are very likely to meet the operable utility requirement. Specifically, he claims an improved magnetic window cleaning device, which is not inherently unbelievable in light of the well-understood field of magnetism (e.g, not like claims to violations of physics in *Newton*) and prior patents directed at similar results (e.g., '444 patent).

Beneficial Utility:

Beneficial utility requires that the invention should not be frivolous or injurious to the well-being, good policy, or sound morals of society. *Lowell*. Pat's claims are very likely to meet the beneficial utility requirement. Here, there is no consumer deception but rather consumer benefit of window washing, and beneficial utility does not require the device to be better than

alternatives. *Lowell*. This is particularly true in light of the modern trend to reject “harmful technologies” through legislation (e.g., statutory bars on atomic weapons/cloning), of which this device is not directed.

Practical Utility:

Practical utility requires a claimed invention to have specific (“a well-defined and particular benefit to the public”) and substantial (“a significant and presently available benefit to the public”) utility. *Brana/Fisher*. Pat can likely demonstrate the “specific” utility of window cleaning on “both single pane and double pane windows” because that is a well-defined and particular benefit. Additionally, “substantial” utility is likely met because the benefit of said device is immediately available to the public. It is irrelevant that Pat has not commercialized it himself because a PHOSITA could use the patent to immediately provide the benefit. *Nelson*.

Disclosure:

Section 112 of the Patent Act has three requirements: enablement, written description, definiteness.

Enablement:

In order for the specification to be enabling, it must provide sufficient teaching such that a PHOSITA could make and use the full scope of the claimed invention without undue experimentation. *Warner-Lambert*. Undue experimentation may be shown with the *Wands* factors, although not mandatory. Enablement is assessed at the time of filing and extends to the starting materials if they are not readily available (*Wands*). If a patent claim fails to meet utility, then it also fails the enablement requirement. *Process Control Corp.*

The first step is to define the broadest scope of the claim. Here, the patent covers two units that include “at least one *magnetically attractable material*.” Theoretically, the

“magnetically attractable material” could encompass both permanent and electromagnetic magnets. The second step of the claim is to assess the scope of enablement, meaning what is disclosed in the specification plus the scope of what would be known to a PHOSITA. *Invitrogen Corp.* Here, the specification does not explicitly teach how to implement an electromagnet into a unit of the device, let alone operate an electromagnet such that it can “magnetically attract.” Thus, in order for this claim to be enabled, a PHOSITA must be able to fill those gaps. Here, the *Wands* factors (specifically the state of the prior art and predictability of the art) seem to weigh in favor of enablement because electromagnet technology has been known since the 1800s and magnetism is well understood. However, a challenger will argue the claims are similar to those in *Incandescent Lamp* where the claimants only enabled *one material* but claimed a *genus of materials*, to which there was no general quality. Namely, they will assert that Pat’s claim involving two units that “magnetically attract” is analogous to a genus claim in which there is no common principle among all magnetic material. Overall, I think Pat’s claims are likely enabled and distinguished from *Incandescent* because in *Incandescent*, the properties of conductor *material* (not speaking to lamps in general) were not well known at the time (and the *material* is what was claimed for use in the lamps), whereas here the use and implementation of electromagnetism is well known (@ time of Pat’s filing).

In the second claim, a challenger will also likely argue that adjusting the distance between the magnet plates and the cleaning surfaces, by an “adjustment mechanism,” is not enabled because the way the mechanism works is not described. However, a PHOSITA could decipher the drawings that the adjustment mechanism by handle and threads. The use of a rotating handle and threads for adjustments is well-known, and for the same reasons above, is likely enabled.

Written Description:

To satisfy the written description (WD) requirement, the disclosure of the application relied upon must reasonably convey to a PHOSITA that the inventor had possession of the claimed subject matter as of the filing date. *Ariad*. This requirement is separate from enablement (*Ariad*) and a description that merely renders the invention obvious is not sufficient for WD. *Eli Lilly Co.* WD is a question of fact. *Vas-Cath Inc.*

A challenger will assert that Pat did not possess the invention at the time of filing. In looking to the four corners of the specification, there is no mention of an electromagnet. Furthermore, the specification only refers to using rare earth magnets. The best arguments for Pat are that (1) an applicant is allowed claims which cover more than a specific embodiment described (*Gentry*) and (2) that he did have possession of the subject matter because electromagnets are encompassed within his *original claim* (i.e., was present at the time of filing) and that such a well-known technology did not need to be explicitly stated elsewhere. However, the Federal Circuit stated the WD requirement applies to original claims (*Ariad*). A challenger may argue this is like *Gentry* because Pat *only* describes permanent magnets in the units and in *Gentry* the disclosure identified the console as the *only* possible location for the controls. Pat could counter that this is unlike *Gentry* because there a PHOSITA would understand that the controls location was an essential element, whereas his description is just a preferred embodiment of magnets. Pat may also testify (in litigation) his knowledge of electromagnets at the time, but this would not be dispositive of the issue (*Gentry*).

Definiteness:

The courts have held the purpose of the second paragraph of Section 112 is to inform the public of the limits of the patent. *Permutit*. A patent is invalid for indefiniteness if it claims, read

in light of the specification delineating the patent, and the prosecution history, fails to inform, with reasonable certainty, a PHOSITA about the scope of the invention. *Nautilus*.

A challenger is likely to argue that “close proximity” in the phrase “a primary unit and a complementary unit *magnetically attracted into close proximity*” is indefinite. Specifically, they would argue that a PHOSITA could not know, with reasonable certainty, at what distance they would be infringing the patent when they bring two magnets together (assuming the other elements are also present). However, Pat can point out that it is well known that the attractiveness of rare earth magnets is a function of distance. Thus, a PHOSITA could read his specification regarding the use of rare earth magnets in the apparatus and understand, with reasonable certainty, when two units with magnets are being “magnetically attracted into close proximity.” I think that Pat has the stronger argument and that this is sufficiently similar to *Nautilus* on remand in which the Federal Circuit concluded (again) that “spaced relationship” did not create a zone of uncertainty and informed a PHOSITA of the scope.

Furthermore, a challenger may argue that the “one or more attachment members *configured to...*” are means-plus-function elements and are indefinite. For a functional claim element to meet the definiteness standard, the functional element must have a corresponding structure that actually appears in the specification. *Atmel Corp.* However, later discussed, the “attachment members” likely has sufficient correspondence to the clips 22 such that they are not indefinite.

Novelty:

Section 102 of the patent act sets out the novelty conditions for patentability. Under the AIA, the critical date is the date of filing. Section 102(a) determines whether any particular item can *qualify*, under one or more of the relevant prior art categories, as a piece of prior art. This

qualifying art is then applied to Section 102(b) to determine if it can be excluded as prior art.

With the remaining items from section 102(a), a determination is made whether any single prior art reference is sufficient to anticipate the relevant invention.

Prior art under 102(a):

The effective date of the '123 Patent is its filing date on October 1, 2017.

The eyeglass cleaner is prior art under 102(a)(1)(iv) as “on sale” and it has a critical date starting in June of 2016. Under the AIA, the five categories of 102(a)(1) apply universally (i.e., foreign sales may count). The on-sale category is triggered if the invention is both (1) the subject of a commercial offer for sale (not for experimental purposes) and (2) is ready for patenting.

Pfaff. There are two ways of proving “ready for patenting,” namely (a) reduction to practice, or (b) that prior to the critical date, the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a PHOSITA to practice the invention. From the facts, it seems that (1) is met because these tools were the subject of multiple commercial offers, not just experiments (“the Chinese *developed* and *sold*”). It also seems that (2) is met because “selling the tool” implies that they had successfully built the invention.

The '444 Patent is prior art under 102(a)(2) as “patented in the U.S.” and it has a critical date of sometime in 1947 (also under 102(a)(1)(ii) as “patented,” although not useful here as the critical date is the later issue date). This was (1) a U.S. patent application that (2) eventually published and thus has an effective filing date backdated to its original filing date.

The '750 Patent is prior art under 102(a)(2) as “patented in the U.S.” and it has a critical date of Jan 2, 2017. This patent was filed in Japan less than one year before the U.S. filing date (December 30, 2017) and may thus claim the Japan filing date as its effective filing date. Additionally, it was (1) a U.S. patent application that (2) eventually published and thus, it may

claim its effective filing date. Alternatively, it was published 18 months after its Japanese filing, thus it is also a printed publication under 102(a)(1)(i) as of July 2, 2018.

The student project is likely prior art under 102(a)(1)(i) as a printed publication as of the time the PDF was placed online (late September, 2017). The “printed publication” means the reference must have been sufficiently accessible to the public interested in the art, in which dissemination and public accessibility are the keys. *In re Cronyn*. Initially, when the students turned their project in to the university, it was likely not yet a printed publication. Such is similar to *Cronyn*, where the presentation was made to a committee (assuming the project was turned in to teachers) and there was no meaningful indexing. Additionally, the project information in the hands of teachers is similar to “housing [the project information] in a private corporate library.” *Northern Telecom, Inc.* However, posting the project online makes this more like *Hall* where the university indexed and made the thesis available to the general public with indexing by subject matter. Furthermore, the meaningful indexing and multiple-month duration of the post make this situation distinguishable from *SRI Int'l*. There is no need to that someone actually received the information, however, the actual website visits and downloads confirm accessibility. *Constant*. Furthermore, if the “Limited Access Collection Room” is accessible to the public, the rest of the document is likely also considered a printed publication because internet PDF references a table of contents that further “indexes” the relevant information and directs those interested to where they can access it.

The Window Genie blog post is not prior art as it has a publication date in 2018(later than the critical date).

The Wondowba window cleaner is likely *not prior art* because its first sale was in 2019, after the critical date of the patent. The closest category that it could fall under would be “in

public use” at some point (up to three years prior). However, this does not seem to be commercial exploitation (*Metalizing*) because they were “developing.”

Pat can argue that his experiments in August of 2017 were “public use” under 102(a)(2)(iii). Pat’s testing of the magnets could be considered a “public use” because he was testing them on his home windows (in public). A counterpoint is that such use would be likely be acceptable with a good faith effort to bring his invention to perfection. *Elizabeth*. However, it seems that he had finished his work at the end of testing, and even private use may be considered “public use” with no expectation of confidentiality; nor was it necessary for him to use it more than one time. *Egbert*. Nor was this use commercial. *Metalizing*.

Prior Art Excluded Under 102(b):

Pat’s public use in August 2017 will be exempted under 102(b)(1)(A) because they were disclosures attributable to himself and occurred less than one year from the inventor’s filing date.

If Pat’s August 2017 experiments are considered public use, then they will also remove the student project from the world of prior art under 102(b)(2)(A). This is because their disclosure date, sometime in late September 2017, is between Pat’s public use and his filing date.

Anticipation Analysis:

Anticipation analysis requires a comparison between the claimed invention and the information contained in each prior art reference. Anticipation requires that “each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *In re Robinson*.

Generally, the ‘123 patent claims the elements of (1) two units, comprising magnets, that are magnetically attracted in close proximity; (2) with a replaceable cleaning surface (moistened with cleaning solution); and (3) attachment members for the cleaning surface.

The eyeglass cleaner does not anticipate. It describes two units and cleaning pads that are sprayed (“moistened”). However, it is lacking magnets and a *replaceable* soft portion. A challenger would likely argue that “replaceable” is inherent in the design. To establish inherency, the extrinsic evidence “must make clear that the missing descriptive matter is necessarily present in the thing described in that reference, and that it would be so recognized by persons of ordinary skill. *In re Robinson*. However, the ability to rip-off and re-glue pads on to the tool is likely to not be a “natural result flowing from the explicit disclosure.” *Schering Corp*. Furthermore, the “replaceable” limitation in the claim infers that this product would not infringe, even if it had magnet elements.

The '444 Patent does not anticipate. It describes inner and outer cleaning members with magnets and a cleaning material. However, it does not disclose a “replaceable” cleaning surface (says “permanently attached”), nor does it disclose an attachment mechanism for a cleaning surface.

The '750 Patent does not anticipate. While it discloses improvements on the '444 patent, namely a replaceable cleaning material, it does not disclose “more or more attachment members configured to receive [and] secure.” A challenger may argue that such feature is inherent in the use of rubber to create friction. However, it is clear in the '123 patent that the attachment members are a separate element, not just “friction” between elements (e.g., like the diaper case).

The student project does not anticipate because it was removed under 102(b). However, assuming Pat's August actions were not prior art, the student project is still unlikely to anticipate. It describes an electromagnet and pre-moistened window cleaning wipes. There is no reference to how the wipes are secured. In addition to including all elements, the reference must be enabling to make but not use. Thus, the fact that the description does not teach how to use is not

an issue in this analysis, but the fact that it does not describe any mechanism for securing the wipes means that it does not anticipate.

Since none of the above claims anticipated claim 1, claim 2, which adds another limitation, is also not anticipated.

Obviousness: Application of Section 103 in light of the *Graham* factors.

(1) Determining the scope and content of the prior art.

The scope of the prior art was surveyed in the last section. However, 103 requires the art be analogous, meaning (1) the art is from the same field of endeavor, regardless of the problem addressed or (2) the reference is reasonably pertinent to the particular problem with which the inventor is involved. *Clay*. A reference is “reasonably pertinent” if, even though it may be in a different field from that of the inventor’s endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor’s attention in considering his problem.

Here, the field of endeavor is likely to be found as “cleaning windows.” As such, all of the viable prior art listed above is available, with the exception of the eyeglass cleaner. Pat may argue that this is in the field of *eye glass* cleaning. However, even if this is true, solutions to the goal of dual-sided glass cleaning are likely to be reasonably pertinent and of the type that an inventor would have logically commended attention to.

(2) Differences between the claimed invention and the prior art.

These differences have been laid out in the “anticipation” section.

(3) The level of ordinary skill in the pertinent art.

Look to the type of problem, the level of sophistication, and educational levels of those actively working in the field, it seems likely that a PHOSITA is an engineer with a bachelor's degree in science and familiar with electromagnetism.

(4) Determining the "obviousness" or "nonobviousness" of the subject matter.

A challenger will argue the '123 patent is an obvious modification of the '750 patent. As noted above, the '750 patent discloses two magnetic units and a disposable cleaning material. However, it is missing "attachment members" (the rubber is used to hold the cleaning material in place) and the cleaning material *moistened with cleaning solution*.

To the missing attachment members, a challenger would argue that a PHOSITA knows how to "connect the dots" and secure the cleaning material with an attachment member. Additionally, the eyeglass cleaner teaches an element of moistening the cleaning material. Such a modifications would have been "obvious to try" because there are only so many ways (finite) to secure such material, and such modification would have reasonable success in the field of mechanics. *KSR*. Furthermore, the '444 patent described wrapping the cleaning fabric, and combining these two references would have been "common sense" use of known technique to improve similar devices in the same way, or a simple substitution with predictable results. *KSR*. I think these arguments are sufficient to render the first claim obvious.

Pat's second claim is likely non-obvious. In light of the combinations above, a challenger may seek to use the electromagnet from the student project reference to satisfy the "adjustment mechanism" element. However, Pat has a strong argument that combining that reference with the '750 patent (based on the '444 patent) teaches away from the '444 patent's "primary object" (intended purpose) of requiring no electricity. *KSR*. Thus, such a combination is improper and nonobvious.

(5) *Secondary considerations:*

Although secondary considerations not dispositive, they can be Pat will argue that the community's "long felt" and "unsolved needs" weigh in his favor. Although "the review" came well after his filing, it demonstrates the continued desire for better attraction (both weaker and stronger, depending on the window). This is also an indication of others continued failure in the field, which weighs in his favor. A challenger would argue that these lack a "causal relationship" and that Pat has not met such burden. *Hybritech*.

Question 2:

Direct Infringement:

Claim Construction and Literal Infringement:

Claim construction begins with looking at the intrinsic evidence (claims, specification, prosecution) and then extrinsic evidence. *Phillips*. Words of a claim are generally given their ordinary meaning (i.e., that the term would have to a PHOSITA). *Phillips*. Most of the claim construction will fall on the term "at least one magnetically attractable material" and whether that includes an electromagnet (arguments discussed in Q1, assuming it does). Also discussed above, "attachment members" is assumed to be means-claiming (although Pat will argue otherwise) and has a corresponding structure of a clip, which Windowba does not literally have. Although no presumption applies (*Williamson*), this is reciting a function without reciting sufficient structure for performing that function. Claim construction is required on "adjustment mechanism." Pat will argue that this includes any mechanism for adjusting. Windowba will argue that this is means-plus-function and the corresponding structure is limited to a mechanically operated knob. As such, their electronic knob (to modify electric power). As such, Windowba does not literally infringe.

Infringement under the Doctrine of Equivalents:

Pat will argue that the “sticky surface” used to attach the cloth is an equivalent to an attachment member, and the “knobs” are equivalents. To be successful, Pat will need to show it performs substantially the same function in substantially the same way to obtain the same “result.” Equivalent function and result are strong points for Pat because both are attachment mechanisms and secure the cleaning surfaces. “Same way” is a stronger point for Windoba because a clip, compared to stick, is more than an insubstantial difference.

As to the knob, Pat will argue that it functions the same (turning) and achieves the same result (adjusting the magnetic force). Windoba will say electric is a different way from mechanical threads. If an electromagnet is not included in the claim construction above, Pat will struggle to prove equivalent function and way because of significant difference between electrical and mechanical principles.

Question 3:

If Windowba is able to show that they conceived first (possible since they started in 2016), there could have been a priority fight. They will need to prove that, although they were the second to reduce, they were the first to think up (conceive) the invention, and if they exercised diligence from a time prior to the other inventor’s conception through their own reduction to practice.

‘750 would not be prior art because the “backdate” would only go back to the U.S. filing date (not foreign filing date).

The Chinese sales would not have been prior art until they were available to buy (i.e., there was a commercial offer or sale) in the U.S.

wRobot could use “best mode” as an invalidity ground, (but facts do not prove that Pat withheld such information.