

Q1: Motion to Dismiss for Indefiniteness [§112(b)]

A patent is held invalid for indefiniteness if its claims, read in light of the specification delineating the patent and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art the scope of the invention (*Nautilus*). Here, Rip's would argue that claim 1 is indefinite because – (a) bananas come in different shapes and sizes, (b) the slice width is not defined, and (c) the cutting rib width is not defined. Rip's argument is meritorious since it refers to the relatively vague terms “typical banana,” “substantially evenly spaced,” and “sufficiently thin” used in claim 1. However, claim 1 is indefinite only if in light of the specification, it fails to inform with reasonable certainty, a PHOSITA to the scope of the claim.

Here, the '123 patent's specification indicates that the shape of the device conforms to the length of a “typical or ordinary banana” and “even a large banana,” which likely suggests to a PHOSITA with reasonable certainty that the claim covers bananas ordinarily found in a grocery store, large and small. Further, the specification indicates the device is used for slicing bananas for fruit salads, cereals and other culinary items. This suggests to a PHOSITA that the claimed device slices bananas fruit salad and cereal sizes with reasonable certainty since the term “slice” connotes small pieces in the context. Lastly, the specification indicates that the preferred blade width is approximately 1mm but could vary so long as the width does not compromise the structural integrity or manufacturability of the cutting ribs – which is certainly reasonably certain to a PHOSITA versed in cutting tools.

Q2: Challenges & Responses to Validity**A. Patentable Subject Matter – §101**

Under *Chakrabarty*, the broad general rule is that “anything under the sun that is made by man” is patent-eligible subject matter. However, exceptions are made for laws of nature, natural phenomena, and abstract ideas. (*Alice; Mayo*).

Here, Pat claims a physical object used to slice bananas, so invalidity based on subject matter is unlikely. However, a challenger might argue that claim 1 is a means plus function claim because it claims “a utensil for slicing bananas comprising ...” which directs the claim to the abstract idea of slicing bananas, similar to the abstract idea of hedging financial risk (*Bilski*) or converting binary to decimal (*Benson*). Further, because the claim is directed towards an abstract idea it must add an inventive step or unconventional activity and that merely suggesting a new way of cutting a banana is not enough of an inventive step over the prior art to make the claim not abstract. (*Alice; Mayo*). Pat would counter that claim 1 does not claim a means for slicing bananas but a specific banana-slicing device. Further, he would argue that even if it were an abstract idea – which it is not – claims 1 and 2 add the sufficiently inventive step of a banana shaped apparatus with cutting ribs for slicing a banana. Overall, a validity challenge based on subject matter is unlikely to succeed since Pat clearly claims a physical device.

B. Utility – §101 & §112

Section 101 and Section requires that an inventor show, at the time of the invention, practical, beneficial, and operable utility. Practical utility exists where the claimed invention provides a significant, presently available, well-defined, and particular benefit to the public (*Fisher*). Operable utility exists where a PHOSITA would not find the invention inherently

unbelievable. Beneficial utility exists where an invention has a no social harm or deleterious purpose (*Juicy Whip*).

First, Pat's banana slicer has practical utility because it provides the particular benefit of people saving time and energy while slicing bananas. The benefit exists presently as evident from the Amazon reviews. Further, the banana slicer provides a slicing tool to individuals, like convicted criminals, who are unable to use knife to cut bananas. Therefore, the banana slicer has practical utility.

Second, the banana slicer has operable utility because in light of the prior art, claims 1 and 2, are not inherently unbelievable since slicing utensils including knives, hand slicers, and egg-slicers have existed since the 1930s. Further, a PHOSITA would not think that the device created by claims 1 and 2 would not work to slice bananas since bananas are a soft fruit which can be easily sliced with various other tools. However, there is an argument that a PHOSITA would think that the device in claims 1 and 2 could not slice all sizes of bananas. Nonetheless, it is unlikely that a PHOSITA would find the claimed invention's use for different sized bananas inherently unbelievable. Thus, it has operable utility.

Lastly, the banana slicer has beneficial utility because it does not provide a social harm or deleterious purpose. However, a challenger could argue that, based on the Amazon review, the slicer's use in "lovmaking" is a deleterious purpose for its "promotion of debauchery" (*Lowell*). However, Pat would argue that the opposite is true and that in fact the banana slicer provides the social benefit of brining an argumentative couple closer together – stabilizing their marriage and increasing the well-being of their child. Thus, beneficial utility is not an issue if not for the reasons stated above, then because courts are reluctant to invalidate based on beneficial utility

and its requirement is called into question post-*Juicy Whip*, Therefore, a challenge to validity for utility is unlikely to be successful.

C. Adequate Disclosure – §112

Section 112(a) requires the specification to contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, and concise, and exact terms as to enable a PHOSITA to make and use the invention. Disclosure includes the sub-challenges of enablement, written description, and definiteness (discussed in Q1).

i. Enablement

Enablement requires a claim-by-claim analysis, at the time of filing, relative to the technology available, into whether a PHOSITA would be required to engage in undue experimentation to make and use the invention (*Incandescent Lamp*). Whether experimentation is undue depends on (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of a working example, (4) the nature of the invention, (5) the state of prior art at the time of filing, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims (*Wands*). Here, we must analyze claims 1 and 2 to determine whether at the time of filing (1/15/15) a PHOSITA must have engaged in undue experimentation to make and use the banana slicer.

To begin, when Pat files on 1/15/15, the banana slicer has been selling on Amazon for 6 months. Thus, not only was there a working example, but others could purchase and use it on their own. This suggests that a PHOSITA could purchase a banana slicer (BS) to assist them in making and using their own. Further, knives existed at the time of filing, as well as hand slicers and egg slicers, both of which are tools used to cut food items. It is not unreasonable to think that

a PHOSITA could read claims 1 and 2 and understand that to make the BS requires combining the ability to slice like a knife with the ability to cut multiple slices at one time like an egg slicer or hand slicer. However, there is a strong argument that claim 1 is not enabled because a PHOSITA would require undue experimentation to create a BS that fits a “typical banana,” and has “substantially evenly spaced, substantially parallel disposed cutting ribs ... [that are] sufficiently thin” because the claim does not provide any guidance or direction into how to size the device or space the ribs for cutting. Further, claim 1 is broad because it provides no detail on the measurement of the device or how many cutting ribs it should have. Overall, claim 1 is likely not enabled because it lacks sufficient direction and guidance to a PHOSITA on how to make or use the invention.

Claim 2 is likely enabled because it is narrower than claim 1 and provides an approximate rib thickness and distance between ribs. By providing the approximate values, claim 2 does not require undue experimentation from a PHOSITA because based on the nature of a banana slicing device being straightforward, a PHOSITA would know from claim 2 that the device is made with ribs that are around 1mm thin and 4mm apart. Thus, the PHOSITA can make and use the device without any work by following those spacing requirements.

ii. Written Description

The written description requirement depends on whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date (*Ariad*). Further, patent claims may be no broader than the supporting disclosure and a narrow disclosure will limit the claim’s breadth. (*Gentry Gallery*).

Here, while at the time of filing, Pat actually possessed the BS, his possession of it is not enough because the specification itself must demonstrate possession. (*Ariad*). Thus, when Pat filed on 1/1/15, the specification must reasonably convey to a PHOSITA that he possessed the BS. Here, claim 1 contains “an elongated plastic frame conforming to the shape of a typical banana.” The specification contains the phrase “sufficiently large to contain a typical banana” and “elongated, and the frame is curvilinear” but does not mention a plastic frame as the claim does but does mention a “plastic” in reference to the blades. Thus, it is not unreasonable for a PHOSITA to believe that Pat possessed a BS with a plastic frame since the specification indicates the use of plastic for the blades and it is not unreasonable to think he possessed a plastic frame as well. Further, the other elements of claim 1, “substantially parallel disposed cutting ribs,” “interconnecting the curvilinear longitudinal frame,” and “ribs being sufficiently thin” are all present in the specification and do not pose a written description issue.

Further, claim 1 is the use of “substantially evenly spaced” in claim 1 and “a plurality of space” in the specification. It is likely that a PHOSITA would not reasonably believe that Pat possessed a BS with “multiple substantially evenly spaced” cutting ribs since the specification only discloses “a plurality of spaced” cutting ribs. However, the drawing provided in the specification shows the BS with spacing drawn in a way that a PHOSITA could reasonably believe conveys possession of the “multiple substantially evenly spaced” ribs.

Lastly, claim 2 contains ribs “approximately 1mm thick” which is also contained in the specification. However, claim 2 also states the distance between the ribs is 4mm, but that does not appear anywhere in the specification. Further, the figure provided, and language used does

not convey to a PHOSITA with reasonable certainty that Pat possessed a BS with 4mm spaced. Thus, claim 2 likely does not meet the written description requirement.

D. Novelty (Anticipation) – §102

Novelty analysis under the AIA requires three steps: (1) determine whether any particular item counts as prior art; (2) determine whether a reference qualifying under §102(a) can be excluded under §102(b); and (3) analyze whether any single reference is sufficient to anticipate the invention at issue.

i. Step 1: Prior Art References

Under §102(a) a reference counts as prior art if before the claimed invention's critical date (filing date), anywhere in the world, it was patented, described in a printed publication, in public use, or otherwise available to the public, or if it was described in a patent issued to another, or in another's patent application. Here, the BS's critical date is the date the BS was filed on 1/1/15. The potential prior art references at issue here include, the knife, hand slicer, egg slicer, Flexible Slicer Patent Application (FS), and Pat's own Banana Slicer (BS).

Knife. The knife is clearly prior art to the BS because people have needed knives "to slice fruits and vegetables... beginning with the iron age." Therefore, knives clearly fall into at least one (although likely all) of the §102(a) categories; knives have been on sale, in use, likely patented, or otherwise available to the public since the iron age.

Hand Slicer. The hand slicer is also clearly prior art because the facts state in 1930 a British company sold 10,000 units of it. Therefore, it clearly falls within the §102(a)(1) "on sale" category.

Egg Slicer. The Egg Slicer is clearly prior art under §102(a)(1)'s "printed publication" category because the facts clearly state the egg slicer was the subject of an entry in the "EggCyclopedia." A reference is a printed publication where it is sufficiently accessible to the public interested in the art (*Cronyn*). Clearly, a person interested in cooking utensils or cutting tools can access the EggCyclopedia and see the description of the device.

Flexible Slicer Patent Application (FS). The FS is clearly prior art under §102(a)(2) and poses the biggest validity issue. On 9/1/14, Rip files the RS patent. Under §102(a)(2), an application for patent published or deemed published is a prior art reference. However, only if the patent is ultimately published or issued. Here, the RS patent issues on 3/1/16, so it is considered prior art for all subsequent filings after its filing date on 9/1/14. Thus, it is clearly prior art to Pat's patent filed on 1/1/15. However, the RS patent does not qualify as prior art under §102(a)(1)'s "patented" or "printed publication" category because it would count as prior art at the date it's issued (3/1/16) which is after Pat filed the BS patent. Lastly, there is no indication in the facts that the RS was on sale, used in public, or otherwise available to the public before Pat's filing date (only on sale on 8/1/17). Thus, it is likely only prior art as a published US patent under §102(a)(2).

Pat's Banana Slicer (BS). Pat's banana slicer is prior art under §102(a) because it was "printed in a publication," "on sale," "used by the public," and "otherwise available to the public" prior to the filing date. A printed publication means the reference was sufficiently accessible to the public (*Cronyn*). Here, the Amazon reviews of the BS arguably are printed publications because Amazon reviews are accessible to anyone with internet access. In public use requires an inventor give or sell his invention to another to be used and the invention is so

used, even if by only one person (*Egbert*). Here, as evident by the Amazon reviews, the BS was used by at least three people who purchased the device from Amazon.com. A reference is on sale if the product is the subject of a commercial offer for sale and the invention is ready for patenting (*Pfaff*). Here, both conditions are clearly met since Pat controlled the timing and offer of the BS sale on Amazon and because he reduced the BS to practice and by preparing enabling drawings (*Pfaff*). Lastly, the otherwise available to the public catch-all provision's application is uncertain and its scope is not yet determined, but it likely is met here based on the looser threshold than public use, which is already met here (*Helsinn*). Therefore, Pat's BS is prior art for his later filed application.

ii. Step 2: Prior Art Reference Exclusions

Under § 102(b), inventors are permitted to disclose and even exploit their inventions commercially for one full year before they must file for patent rights. If they wait longer than a year, they lose their rights to seek patent protection. To maintain the grace period policy, some of the references initially included in the prior art by § 102(a) are excluded under § 102(b).

Knife, Hand Slicer, & Egg Slicer. As § 102(a) references, these can only be excluded from the prior art as attributable work and belated art. However, neither of the exceptions applies because the references came before his 1/1/15 filing date.

FS. As § 102(a)(1) prior art, the FS can only be excluded as an attributable US Patent Disclosure under § 102(b)(2)(A). Therefore, Pat would need to argue that Rip pirated the RS from Pat's BS and wrongly sought patent claims. Further, he could argue that since § 102(a)(2) includes all disclosure in the prior art in patent applications filed by others, that a description of his work is found in Rip's patent even though Rip is honestly and legitimately seeking a different

invention. In either case, Pat would need to show attribution – that the subject matter disclosed in Rip’s application was obtained from him. It is difficult for Pat to argue attribution here, at least based on the facts given, since the RS specification does not appear to disclose Pat’s BS. Overall, it is unlikely that the RS is excluded from the prior art.

BS. As § 102(a)(1) prior art, Pat can exclude his own BS as attributable work or belated art. The BS is attributable work because Pat sold the BS on Amazon (establishing attribution), which put it into use, and printed publications, within one year or less from his filing date. Further, it is belated art since belated art need not show attribution and disclosure must happen before the inventor’s filing date, as it did here. Therefore, Pat’s BS can be excluded from the prior art.

iii. Step 3: Anticipation

Anticipation under §102 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.” (*Robertson*). To establish inherency, the reference must predictably and regularly disclose/produce the claimed invention, but “recognition in the art” is not required. (*Schering*).

Knife, Hand Slicer, Egg Slicer. Neither one of these references anticipates the BS because they do not have each and every element of the BS – the knife is missing several elements, like a banana shaped frame and multiple cutting ribs; the hand slicer, while having multiple ribs, does not have the banana shaped frame; and the egg slicer does not appear to have ribs or an elongated banana shaped frame. Therefore, none of these references sufficiently anticipate the BS.

RS. The RS likely does not anticipate the BS because of the BS's "interconnected frame" in claim 1, which does not exist in the RS. Therefore, in at least one aspect, the RS does not expressly describe every element of the BS. However, there is an argument that it inherently describes every element since the RS predictably and regularly discloses/produces the BS under *Hafner* since a RS could enable a PHOSITA to make the invention by simply leaving on an interconnecting side. However, this is unlikely to hold because Pat would argue that a PHOSITA would not think to leave the other side connected because it reduces the flexibility of the device's frame. Therefore, because no single reference anticipates the BS, it is not invalid and is thus novel.

E. Obviousness – § 103

Obviousness assesses the technical, not economic, triviality of the patented invention and asks whether a PHOSITA, faced with the same problem, would select the patented elements to combine and is conducted under the *Graham* test: (1) determine the scope and content of the prior art, (2) ascertain the differences between the prior art and the claims at issue, (3) find the level of ordinary skill, (4) determine the obviousness of the subject matter, (5) consider secondary factors.

The scope and content of the prior art is that described above for novelty because it is pertinent/analogous art – food cutting. (*Clay*). The differences include the inclusion or not of cutting ribs, banana shaped frames, flexibility, use in eggs, etc. The level of skill is that a PHOSITA knows all the pertinent art and has it hanging in the shop, but is not an automaton, and has ordinary creativity (*Winslow; KSR*). For obviousness, we look at all of the pertinent art and determine if the claimed invention would have been obvious to a PHOSITA faced with the same

problem. Here, a PHOSITA with knowledge of knives, hand slicers, egg slicers, and the FS would find the BS to be an obvious combination of all of the prior art. Faced with the problem of cutting bananas, a PHOSITA would easily combine the slicing ability of a knife, hand slicer and egg slicer and adapt it only for bananas. Further, faced with the RS it is very obvious to PHOSITA that the RS's open side and flexibility is for purposes of cutting other items besides bananas, so if solely faced with the problem of cutting bananas, a PHOSITA would obviously leave the RS closed on both sides to facilitate cutting of only bananas. Lastly, no secondary considerations outweigh the obviousness since the BS was not a great commercial success nor was there a huge need for banana-only slicers. Therefore, the BS is likely invalid for obviousness.

Question 3: Direct Infringement

Under § 271(a), whoever without authority makes, uses, offers to sell, or sells any patented invention ... infringes the patent. The first step is to construe the claims (*Yeomans*). Claim language is given its ordinary meaning to one skilled in the art, in the context of the patent, and intrinsic evidence is considered first. (*Phillips*). If ambiguity still exists, then extrinsic evidence may be consulted, like dictionaries, experts, and inventors. (*Phillips*). Second, we test for literal infringement under the all elements rule. To literally infringe, a product must include every element set forth in the claims (*Larami*). As discussed in anticipation above, the RS does not contain every element of the BS because the RS does not have a completely closed frame like claim 1 of the BS. Further, claim 1 of the BS requires the cutting ribs to be “substantially parallel,” but the RS cutting ribs – based on the diagram – are set at intersecting angles and are not parallel. Lastly, Rip would argue that claim 2 is not infringed because the RS’s ribs are not 1.2mm wide and the space between the ribs is 4.3mm. Therefore, the RS does not literally infringe on the BS.

Third, we test for direct infringement under the doctrine of equivalents (DOE). Under the DOE, infringement occurs where the accused product performs substantially the same function in substantially the same way with substantially the same result (*Graver*). Here, Pat would argue claim 1 is infringed under DOE because the open side of the RS performs substantially the same function of cutting bananas in substantially the same way with substantially the same result as his BS since removal of one side of the frame is an unimportant change for purposes of cutting bananas (*Winans*). Further, Pat would argue that the RS cutting rib angles perform substantially the same function in substantially the same way producing substantially the same banana slices

as his “substantially parallel cutting ribs” do. Also, Pat would argue claim 2 is infringed under the DOE since the RS rib width is near 1.2mm it is infringing on his “approximately 1mm” and that even though the claim says 4mm the widths spaces the RS’s 4.3mm rib spaces is such an insignificant difference as to be well within the substantial test of the DOE. However, Rip could argue Pat’s DOE analysis must be rejected since accepting it would mean that Pat’s claims 1 and 2 plus equivalents would cover the prior art – specifically that his RS application would anticipate Pat’s BS patent (*Festo*). Lastly, if there is infringement, Rip could argue the inequitable conduct since Pat did not disclose the RS patent to the PTO.

Question 4: Pre-AIA Changes

Under the 1952 Act, the Novelty and Obviousness analysis in Question 2 would change. Pre-AIA novelty analysis changes the critical date from the filing date to the inventor's date of invention – which is when he reduces it to practice. Here, Pat reduces the BS to practice on 4/1/14 when he makes a prototype. However, Rip could claim an earlier reduction to practice (RTP) date based on his conception date on 8/1/13 and diligence before his constructive RTP when he files on 9/1/14.

Therefore, unlike the novelty analysis above, Rip's RS patent would not be prior art. Further, Pat must file his application within one year of his RTP, which would be 4/1/15 instead of looking back over the grace period under the AIA to 1/1/14 (which he does do here). Also, the British sales of the hand slicer would no longer be prior art since they occurred outside the US. Further, the novelty analysis under pre-AIA would require distinct consideration of novelty/statutory bars under §§ 102(a), (b), (c), (d), (e), (f), and (g). Lastly, under pre-AIA Question 2 would require a priority analysis which considers whether Pat did actually RTP before Rip or whether Rip's earlier conception on 8/1/13 is the priority date in combination with diligence. This analysis is not done under the AIA.

Also, under pre-AIA, the obviousness analysis changes since it is likely that Rip's RS is no longer prior art. Therefore, because under the AIA, Pat's BS was likely obvious in light of the prior art, under pre-AIA is likely nonobvious because the hand slicer and RS are no longer prior art. Thus, Pat's BS would be nonobvious under the 1952 Act.