You have tasked me with researching Ms. Jangler’s likelihood of success in an infringement suit against Instruments for Music Corp. (IMC). Specifically, you have asked me to research Ms. Jangler’s prospects for findings of infringement, as well as her prospects for findings of no invalidity on the grounds of lack of novelty, the § 102(b) statutory bar, and obviousness.

I. Prospects Regarding Infringement

Our argument in an infringement case against IMC would be that they directly infringed Ms. Jangler’s patent under the doctrine of equivalents. Infringement is direct when one “makes, uses, offers to sell, or sells” a patented device, as well as when one “imports” such a device. § 271(a). Here, IMC is currently manufacturing the rival cowbell in question, which fits into the category of “mak[ing]” an invention that is patented. ICM is also likely “import[ing]” the device into the United States; if they are not, then Ms. Jangler does not have an infringement claim, as there is a presumption against extraterritoriality. Microsoft. The doctrine of equivalents teaches that infringement does not have to be literal, with every limitation “appear[ing] in the accused device.” DeMarini Sports. Instead, it can be equivalent, where the device features each “limitation of the claim.” Id. The rationale behind this doctrine is that it promotes fairness and utility by preventing copies with only slight differences. Graver Tank. Our strongest argument is to compare our case to Winans. In Winans, the inventor’s product was a cone-shaped train car for carrying coal, and the defendant’s product a multi-sided car for the same purpose. Although the two train cars were not identical, the court found that the defendant’s multi-sided car was close enough to the inventor’s conical car as to achieve the same result. Id. An inventor does not need to explicitly extend coverage to other embodiments that do same thing – copying the mode of operation that is described is infringement. Id. An objective test for equivalence dictates that the question be whether the elements align, rather than that the language aligns. Warner-Jenkinson.

The case would likely come down to claim construction, as “the name of the game is the claim.” Arlington Industries, Inc. It is a “bedrock principle” that claims determine the scope of a patent. Phillips. Claim interpretation may begin with intrinsic evidence, such as the claims themselves, the prosecution history, the specification, and the patentee’s own interpretation of terms. Interactive Gift. Interpretation may then move to dictionaries, and then conclude with any other extrinsic evidence. Id. In this case, the prosecution history is inapplicable, as Ms. Jangler’s application received no rejections. Both the specification (“always highly relevant”) and a dictionary, however, yield insights into the definitions of the words “frustrum” and “piece.” IMC’s cowbell, like Ms. Jangler’s, has a “frustrum-like shape” – one that is essentially conical. Both have just a single welded seam connecting the main body to itself. Ms. Jangler’s claims and specification specify, however, that there are two pieces of metal – one forming the main body and one forming the cap. In contrast, the IMC cowbell is made of just one single piece of metal. A “piece” is used in Ms. Jangler’s specification and defined in the dictionary in a way that implicates multiple units. As the IMC cowbell uses only one contiguous piece, IMC will argue that each element of Ms. Jangler’s invention has not been met, and there is no infringement. We will argue, however, that the meaningful element here was the single-seam design on a frustrum-like shape, which corresponds with ICM’s design. Ultimately, claim construction will be left to the judges for the sake of competence and uniformity, Markman, but the question of infringement itself will be a question of fact for the jury to decide.

II. Prospects Regarding Invalidity

a. Novelty

Ms. Jangler’s patent will likely be challenged for lack of novelty in light of IMC’s metal flute patent application. Ms. Jangler’s patent will be evaluated under pre-America Invents Act (AIA) law, as
it was filed on March 11th, 2013. IMC’s flute patent application will qualify as prior art to Ms. Jangler’s patent under pre-AIA § 102(e). This category includes art disclosed in patent applications (later published or issued as patents) which are filed in the United States prior to the applicant’s date of invention. IMC’s flute patent application was filed in 2010 and published by the USPTO in 2012. Accordingly, the appropriate inquiry revolves around Ms. Jangler’s date of invention.

For questions under § 102(e), the date of invention is either the effective filing date, by default, or the date of actual reduction to practice. Conception is the “formation” of the idea, Townsend, which in this case occurred when Ms. Jangler realized on Jan. 8th, 2011 that by creating the body from one piece of metal she could increasing the distance between the “striking edge” and the nearest seam. Reduction to practice, in contrast, is when the device has been created with all its claim limitations and the knowledge that it will “work for its intended purpose. Cooper. This occurred on Jan. 12th, 2013, when after two years of testing, Ms. Jangler evaluated her invention and determined that it had held up. Finally, Ms. Jangle’s application was filed on March 11th, 2013. As Ms. Jangle’s actual reduction to practice predates her effective filing date, that is her date of invention. IMC’s flute patent application was filed in 2010, before Ms. Jangler reduced to practice in 2013, rendering the patent application prior art under § 102(e).

Regarding actual anticipation, Ms. Jangler has a strong argument that IMC’s flute patent application did not anticipate her invention. Anticipation requires that every element is set forth in a single piece of prior art. Verdegaal Bros. As in In re Robertson, however, there is not a perfect match here. Although the flute uses a piece of metal welded together with a single seam, as in Ms. Jangler’s patent, the flute has an altogether different shape. Rather than being in the form of a frustum-shaped bell, a shape specifically chosen for its ability to withstand repeated, forceful striking, the flute is cylindrical with a width constant along its length. Accordingly, it is unlikely that IMC’s patent application would be held to anticipate Ms. Jangler’s invention.

b. § 102(b) Statutory Bar

Ms. Jangler’s patent will also likely be challenged for invalidity under § 102(b). This statutory bar prevents an applicant from securing a patent if their invention was “in public use” in the United States for more than one year prior to the date of their application. § 102(b). Although this would appear to apply to Ms. Jangler’s invention given her open use of her invention between 2011 and 2013, her use falls clearly into an exception to the statutory bar. As in the case with the experimentation on a new type of road, Ms. Jangler’s experimentation was open, but conducted in good faith. When she attended rehearsals and performances, she was careful to keep the bell in her exclusive possession. Unlike in Metallizing Engineering, she was not exploiting her discovery competitively, as she was not paid for the two performances in which she participated. Unlike in In re Lister, her invention could not reasonably have been considered in the public domain. As in Pfaff, she did not yet have a complete concept as she publicly experimented with her invention. Although IMC may argue that her bell was perfected earlier, perhaps at a year, it was in her estimation as a musician and engineer not perfected until she had observed it to perform correctly for the length of time in which another bell would have failed. Accordingly, through the two years she was using the bell, it was not yet deemed ready for patenting. See Pfaff. Ultimately, statutory bars are questions of law. Here, it is likely that Ms. Jangler will survive a challenge under the § 102(b) statutory bar.

c. Obviousness

Finally, Ms. Jangler’s patent will likely be challenged for invalidity as being obvious in light of the prior art. Obviousness is a question of law, considered in light of significant underlying facts and
determined by evaluating the invention as a whole. It is evaluated from the perspective of a “person having ordinary skill in the art.” § 103.

Early tests for obviousness included those of the “ordinary mechanic,” Hotchkiss, the “flash… of genius,” Cuno Engineering, and the “synergy” test of Great A&P Tea Co. After those were rejected, the Graham factors arose. Under Graham, a court considers a series of three factors, plus a later added fourth. The first and second factors inquire about the “scope and content of the prior art” and the “differences between the prior art and the claims.” Here, the invention applies the single-seam design of IMC’s flute patent application to a cowbell. Although the content overlaps, the single-seam design serves a very different function for the cowbell than for the flute. The existence of a single seam allows the cowbell to withstand repeated blows on the opposite side from the seam; a flute, however, does not withstand blows. As in In re Clay, the prior art here appears analogous, but the improvement was used with the cowbell for a very different purpose and therefore shouldn’t prove the Ms. Jangler’s invention obvious. The third factor asks about the perspective of one with a level of ordinary skill in the pertinent art. Although IMC is likely to argue that one with such skill would immediately have seen the answer to the problem at hand, Ms. Dillinger – with more specific and extensive experience in the industry than Ms. Jangler, who was simply a musician and an engineer – did not solve the problem until after Ms. Jangler. Finally, the fourth factor inquires after secondary considerations. In this case, there was arguably a need that was long felt but unsolved, see Calmar, although IMC will argue that that has not been proven, see Perfect Web Technologies. The Graham factors are questions of fact, rather than law.

After the Graham test, more tests arose – first the “motivation-to-combine” test of In re Dembiczak, then the “reason-to-combine” test of KSR. The “motivation-to-combine” test was introduced in an effort to prevent findings of obviousness based in hindsight. The “reason-to-combine” test, however, was designed to be more flexible and objective. The reason, in this instance, was the distinct need that Ms. Jangler had for a cowbell that would not weaken with repeated use. It does not appear that the single-seam design was an upgrade being made across a range of musical instruments, which would have indicated obviousness. It is arguable, however, that a musical instrument designer of ordinary skill would have thought to create the single-seam design. As under the Graham factors, we will argue that if it were obvious, IMC would have designed such a cowbell sooner. Ms. Jangler’s invention seems no more obvious than the combination of salt and plastisol lures in Arkie Lures. Although it will be presumed under § 103 that Ms. Jangler made her inventions with prior art in mind, as In re Winslow teaches, the flute’s single-seamed design is once again not obvious because it was not used to solve the same problem. As in Hazeltine, it is irrelevant that IMC’s patent application for the flute was not actually available when Ms. Jangler created her prototype, as it did not publish until 2012. Although there is a risk in this case that Ms. Jangler’s invention will seem obvious in light of the prior art under Graham or KSR, we should emphasize the difference in function between the single-seamed design in IMC’s flute patent application and the single-seamed design in Ms. Jangler’s patent. Ms. Jangler has a substantial likelihood of overcoming a § 103 obviousness challenge.

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