December 5, 2012 Blog

Antitrust Monopolization Considerations in Licensing Cutting-Edge Food Technology Patents

"Earth & Table" Law Reporter

The term *pioneer patent* [1] is often misapplied with hyperbole and exaggeration. When it comes to the shrimp peeling machine invented by Fernand and James Lapeyre, however, that blockbuster label is spot-on. [2] Their automated way of processing shrimp rocked the seafood processing industry in the 1950s by driving manual labor costs virtually out of existence. In today's vernacular, it was a real game-changer.

Patents (and intellectual property rights in general) do not necessarily confer natural monopoly rights as economists would understand the concept. This is because excluding "others from using a particular name, word, image, product or process does not imply any substantial market power when substitutes are plentiful." [3] When a groundbreaking patent is issued, however, the governmental grant can take on monopolistic tendencies—paradoxically even if unused and seemingly unexploited.

A monopoly is commonly defined as the "exclusive control by one group of the means of producing or selling a commodity or service."[4] A pioneer patent—and even more importantly nowadays, a conglomeration of related patents owned by a single entity—can sometimes create new product and service markets and legal barriers to entry capable of commanding what economists call "monopoly rents." As rational actors,

Related People

Related Practices & Industries

Food, Beverage & Hospitality

it is also an economics truism that "monopolists invariably act like monopolists" as they strive to maximize profits.

Even though the United States Patent and Trademark Office is empowered to issue broad exclusionary rights to worthy inventors, another broad federal statute—the Sherman Act—exists to prevent abuses to the competitive process. Section Two of the Sherman Act provides that every "person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony …." 15 U.S.C. 2. The right to exclude others from co-opting inventions (in the absence of a license from the patent owner) is accurately described as a "time-limited government" conveyance of "*potential* monopoly power, which can be put to 'good' or 'bad' uses from a societal standpoint."[5]

Where is the line drawn between lawfully exploiting patent rights and running afoul of antitrust law prohibitions regarding monopolization? The answer is murky and perhaps unsatisfying to those seeking bright line licensing and competition rules. The boundary line often only becomes clear in retrospect. The demarcation between a patent owner lawfully exploiting exclusionary rights vs. an illegal monopolist abusing those same rights is highly fact-dependent.

The Lapeyre family's very creative leasing scheme for its patented shrimp peeling machines offers a vital case in point. With the invention of a single processing machine, the company irrevocably altered the cost dynamics of an entire shrimp processing industry. Licensing disputes—collectively known as the "shrimp peeler" cases[6]—arose soon after the commercialization of the Lapeyre's invention and were finally resolved in the mid-1960s. These case holdings help demonstrate how the Lapeyre's crossed the line between "good" and "bad" exercises of a patent's potential market power.

The shrimp peeler cases predate wholesale policy changes in antitrust analysis that emerged out of the "Chicago School" of economic theory—especially the demand for the more rigorous determinations of market power championed by Judge Richard Posner. However, despite paradigmatic changes in antitrust jurisprudence, the outcome of the shrimp peeler cases would likely be no different today.

The Industry-Transforming Shrimp Peeling Patents

As anyone who cleans shrimp knows, it is slow, tedious, slimy work. Intense labor costs ensured shrimp's status as a

luxury good. The shrimp cocktail platter graced well-appointed tables in an Edwardian Age household as an appetizing sign of wealth and class.[7]

Before the Lapeyre's invention, peeling shrimp had to be done by hand. The variability of shrimp sizes impacted worker pay, morale and productivity:

"Workers were paid on a piecework basis, per bucket of shells. When shrimp were small, workers produced fewer buckets, and therefore, earned less money. The smaller shrimp took more time to peel and it took longer to fill a bucket with the smaller shells. The workforce was often inclined to walk out the door when confronted by a batch of smaller shrimp."[8]

A labor force of 30 to 150 people could peel about 1000 pounds of shrimp per hour, depending on the size of the shrimp. An automatic shrimp peeling machine could duplicate that same work product in one hour.[9]

The invention of the automatic shrimp peeling machine is a classic story of inventive genius. When he was still a teenager in Houma, Louisiana, James Lapeyre's father encouraged him to invent a shrimp peeling machine. J.M., as he was known, first experimented with stepping on shrimp with a rubber boot. It worked to squeeze out the shrimp meat. He then deduced that rubber rollers might duplicate this effect. He "convinced his mother that her wringer washing machine would be a perfect testing apparatus!"[10]

J.M. realized that the "key to the peeling process is that the rubber rollers grip the shrimp shell, not the meat." In other words, the coefficient of friction between the rubber and the shell had to be higher than the coefficient of friction between the rubber and the meat.[11] J.M.'s uncle, an experienced mechanical engineer, helped J.M. build his first peeling machine. It took years of secret experimentation to learn how to size and orient the rollers to prevent the mashing or mutilation of the shrimp meat being processed. Once the machines were introduced to the public, they became an instant commercial success.

Creative Licensing of the Shrimp Peeling Machines

The processor market for the inventive shrimp machines was relatively small in the late 1940s. To maximize their monetary returns, the Lapeyre's (first through the Peelers Company, and subsequently, through the Laitram Corporation) leased their shrimp peeling machines rather than sell them. They did not enter into fixed price leases. Instead, the lease rate was tied directly to the volume of shrimp being processed. Lessees were billed by the number of revolutions of the machine's main drive

motor. The Lapeyre's charged Gulf Coast canners a lease rate of fifty-five (55¢) cents for each 100 cycles of the machine's rollers.

The "installation of the machines so dramatically lowered the peeling cost that to Gulf Coast canners it became necessary to have their use in order to stay in the shrimp canning business."[12] Although they had been deemed a luxury good, shrimp were now available at a lower price. This in turn spurred more shrimp consumption, and consequently, even more demand for the Lapeyre's automated shrimp peeling machines.

As the shrimp processing industry entered a boom phase along the Gulf Coast, another market for "cold water" shrimp had begun to emerge in the Pacific Northwest. The smaller size of these shrimp made "them more difficult and expensive to hand peel" than their Gulf Coast counterparts.[13]

Even though it cost the same to peel small or large shrimp, the Lapeyre's doubled the lease rate they charged to Pacific Northwest canners. This meant that they had to pay $1.10 for each 100 cycles of the roller.

The Shrimp Peeler Antitrust Cases

The Lapeyre's discriminatory lease rates attracted judicial and regulatory scrutiny. Their seemingly legal exploitation of a powerful exclusionary patent right ran headlong into Sherman Act and Federal Trade Commission Act roadblocks.

The Lapeyre's tried defend their geographically discriminatory lease rates, but to no avail and presumably at considerable legal expense. Their economic justification argument rang hollow, as multiple courts held that the higher lease rates charged to Pacific Northwest shrimp processors were really just calculated to thwart upstart competition.

Under these circumstances, Alaska and Washington federal courts had little difficulty in determining that the patent owner's lease rates for Pacific Northwest shrimp processers violated the Sherman Act. *See The Peelers Co. v. Wendt,* 260 F. Supp. 193, 198 (W.D. Wash. 1966)(the court held that "defendants unlawfully exceeded the limits of their patent monopoly rights by unreasonably and substantially suppressing competition, thereby causing monopolization in violation of Section 2 of the Sherman Act."); *Laitram Corp. v. King Crab, Inc.*, 244 F. Supp. 9, 16 (D. Alaska 1965)(the court determined that the "double rate" charged by the patent owner was arbitrary and not supported by any rational basis; that higher rate meant that Pacific Northwest canners could not economically compete with shrimp processors along the Gulf Coast).

The two Pacific Northwest cases differed significantly in their procedural posture. In the consolidated *Peelers* cases, affirmative Sherman Act

monopolization claims were pursued. The jury could not find any specific intent necessary for a Section 2 attempted monopolization claim or the plurality of actors necessary for a combination or conspiracy monopolization claim, but did find that patentee had engaged in unlawful single firm monopolization.

In contrast, in the *Laitram* case, the defendant contended, through an affirmative defense, that the shrimp peeler patents were unenforceable because the plaintiff's conduct violated the Sherman Act. The *Laitram* court ruled that only the discriminatory lease rates violated 2 of the Sherman Act and no damages could be awarded as a result. The valid and infringed claims of the subject patents were otherwise enforceable.

In the FTC case, federal regulators readily found a violation of 5 of the Federal Trade Commission Act. That provision states that "[u]nfair methods of competition in or affecting commerce, and unfair or deceptive acts or practices in or affecting commerce, are hereby declared unlawful." 15 U.S.C. 45(a)(1). In affirming the FTC's rulings, the federal appellate court held that:

"The words "unfair practices" and "unfair methods of competition" are not limited to precise practices that can readily be catalogued. They take their meaning from each case and the impact of particular practices on competition and monopoly. Without further belaboring the issue, it suffices to say that there is abundant evidence in the record to support the Commission's conclusion that Peelers' leasing procedure is innately discriminatory and anti-competitive in its effect, and that in the circumstances of the instant case, the refusal to treat the Northwest and the Gulf Coast shrimp canners on equal terms has substantially and unjustifiably injured competition in the shrimp canning industry. It is therefore an unfair method of competition forbidden by Section 5." *Lapeyre v. F.T.C.*, 366 F.2d 117, 120-21 (5th Cir. 1966)(further holding that it is "the duty of a lawful monopolist to conduct its business in such a way as to avoid inflicting competitive injury on a class of consumers.").

Would the Shrimp Peeler Cases Be Decided Any Differently Today?

How could the Lapeyre's lose their antitrust and FTC cases? After all, the Supreme Court once stated that a "patent owner is not in the position of a quasi-trustee for the public" and thus "has no obligation to either use [a patent] or to grant its use to others."[14]

The economic analysis associated with antitrust case is more rigorous today than in the 1960s when the shrimp peeler cases were decided. Market power cannot be assumed; it must be demonstrated. Would a more modern antitrust analysis change the end

results in the shrimp peeler cases? The answer is most likely: *no*. An analysis of the shrimp peeler case facts demonstrates why.

As in the *Peelers* case, attempted monopolization and combination or conspiracy monopolization claims would likely fail. A jury in 1965 could not find the specific monopolization intent nor a combination or conspiracy of separate actors necessary to support such 2 claims. Given the more rigorous legal environment for pursuing these two forms of 2 monopolization claims today, they would probably fare no better now based on identical evidence.

A 2 single firm monopolization claim, however, would still have legal traction. In *United States v. Grinnell Corp.*, 384 U.S. 563 (1966), the Supreme Court defined monopolization under 2 of the Sherman Act as (1) the possession of monopoly power in the relevant market, and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident. *Id,* at 570-71.

To demonstrate market power in the Ninth Circuit (whose law would have controlled the Alaska and Washington cases), a plaintiff must (1) define the relevant market, (2) show that the defendant owns a dominant share of that market, and (3) show that there are significant barriers to entry and show that existing competitors lack the capacity to increase their output in the short run. *See Image Tech. Serv., Inc. v. Eastman Kodak, Inc.*, 125 F.3d 1195, 1202 (9th Cir. 1997).

As applied to the shrimp peeler cases, the relevant market can be defined as shrimp processing. The tremendous labor and processing savings associated with the shrimp peeling machine patents gave the Lapeyre company complete dominance over this market. The pioneering patent formed a clear barrier to entry of the market. Competitors could not increase their output in the short run, because they had to rely on more expensive manual labor to process shrimp.

With respect to the second broad element of a 2 monopolization claim, the analysis is more nuanced. This "conduct" element involves the use of monopoly power "to foreclose competition, to gain a competitive advantage, or to destroy a competitor."[15] "Section 2 of the Sherman Act prohibits a monopolist's unilateral action … if that conduct harms the competitive process in the absence of a legitimate business justification."[16]

Federal regulators, judges and jury members found no credible economic justification for the Lapeyre's discriminatory lease rates in the 1960s. Nothing in the passage of time would likely alter that basic factual

finding, which in turn supports and satisfies the "foreclosing competition" conduct element of a 2 monopolization claim.

A More Refined Profit-Maximizing Equation for Pioneer Patent Holders

A pioneering patent gives its owner tremendous power to engage in exclusionary conduct and to charge monopoly prices. Those are lawful incentives for inventing something new and useful and dedicating it to the public after a patent term expires. When mining the elusive pot of gold at the end of the patent rainbow, it may be tempting for patent owners to reach for the limit of what the relevant market will bear. After all, isn't that their *quid pro quo* right? Given dominant market power, patent owners indeed may unable or unwilling to curb their monopolistic desire to foreclose nascent competition, to gain further competitive advantages or to destroy competitors economically.

In actuality, the profit-maximizing equation for a pioneer patent owner needs to assess more factors than simply what is the highest price the relevant market would pay for access to groundbreaking technology. The equation needs to take into account the risks of prospective licensee litigation and adverse regulatory scrutiny.

In simplistic mathematical terms, the profit maximizing equation for a pioneer patent licensing returns might described as follows: PM = f(x)-f(y)-f(z). In other words, profit maximization (PM) is a combined function of (1) the market power and corollary licensing income generated by the pioneer patent, f(x); (2) minus the costs of licensing and patent development, f(y); and (3) minus the costs of regulatory and judicial scrutiny, f(z). Hence, a rational pioneer patent owner seeking to maximize its "monopoly rents" will want to establish its royalty or licensing rates at a price point that the relevant market will bear and accept, but which will be below that amount which would also engender likely significant, but ancillary regulatory and judicial scrutiny costs.

The object lesson flowing from this brief patent/antitrust law case study is perhaps this: "pigs get fat and hogs get slaughtered." Savvy patent owners understand this maxim and calibrate their legitimate profit-maximizing conduct accordingly to avoid the risk of litigating substantial Sherman Act monopolization and FTC unfair competition allegations.

The photo (top left) of a shrimp picking line in Biloxi, Mississippi was taken in February 1911 by the famous photographer Lewis Hine.

_____

[1] "Pioneer" patents are entitled to a broader claim construction and range of equivalents than improvement patents or those patents that arise in a crowded field of technology. The concept is explained in an

early Supreme Court case as follows: "Morley, having been the first person who succeeded in producing an automatic machine for sewing buttons of the kind in question upon fabrics, is entitled to a liberal construction of the claims in his patent. He was not a mere improver upon a prior machine which was capable of accomplishing the same general result; in which case, his claims would properly receive a narrower interpretation. This principle is well settled in the patent law, both in this country and in England." *Morley Sewing Machine Co. v. Lancaster,* 129 U.S. 263, 273 (1889); *see also, Brothers v. United States,* 250 U.S. 88, 89 (1919) ("plaintiff's invention was broadly new, a pioneer in its line, and the patent [was] entitled to a broad construction and the claims to a liberal application of the doctrine of equivalents").

[2] *See* U.S. Patent No. 2,429,828 entitled "Shrimp Peeler" (issued on Oct. 28, 1947), and U.S. Patent No. 2,574,044 entitled "Shrimp Peeling Machine" (issued on November 6, 1951).

[3] P. Areeda and H. Hovencamp, 2B Antitrust Law ¶ 518a (3d ed. 2007), p. 163.

[4] *American Heritage College Dictionary* (3rd ed. 1997), p. 883.

[5] M. Muller, An Introduction to Patent Law (2003), at 18 (*citing* Giles S. Rich, *Are Letters Patent Grants of Monopoly?,* 15 W. New Eng. L. Rev. 239, 251 (1993)).

[6] *LaPeyre v. F.T.C.*, 366 F.2d 117 (5th Cir. 1966); *Peelers Co. v. Wendt*, 260 F. Supp. 193 (W.D. Wash. 1966); *Laitram Corp. v. King Crab Inc.*, 244 F. Supp. 9 (D. Alaska 1965) and *In re Grand Caillou Packing Co.*, 65 FTC 799 (June 4, 1964).

[7] "The oldest reference to shrimp cocktail in the *New York Times* is this advertisement: "Pride of the Farm Tomato Catsup. Cocktail Sauce for Christmas Dinner. Start your dinner with an appetizer. An oyster, clam or shrimp cocktail gives tone as well as relish…For shrimp cocktail, mix the shrimp and catsup together and serve in small glass dish at each place."—*New York Times*, December 15, 1926 (p. 30)." From this website (accessed on November 27, 2012).

[8] *Id.*, at 2.

[9] These facts are drawn from an excellent article entitled "The Lapeyre Automatic Shrimp Pelling Machine Model 'A', No. 572, 1979, prepared by ASME and available for review as a brochure at http://www.asme.org/about-asme/history/landmarks/topics-a-l/food-processing/-230-the-lapeyre-automatic-shrimp-peeling-machine-

[10] *Id,* at 6.

[11] *Id.*

[12] *LaPeyre v. F.T.C.,* 366 F.2d 117, 119 (5th Cir. 1966).

[13] *Id.,* at 20.

[14] *Hartford-Empire Co. v. United States,* 323 U.S. 386, 432-33 (1945); *see generally* P. Areeda and H. Hovencamp, 3 Antitrust Law ¶ 708 (2nd ed. 2002), p. 214.

[15] *Eastman Kodak Co. v. Image Tech. Servs., Inc.* 504 U.S. 451, 482-83 (1992) (*quoting United States v. Griffith,* 334 U.S. 100, 107 (1948)).

[16] *Image Tech. Servs., Inc. v. Eastman Kodak, Inc.*, 125 F.3d 1195, 1209 (9th Cir. 1997).