

August 28, 2018 Blog

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# The Scientific-Sounding Bar to Patenting Food Compositions and Marketing Around Innate Rejection of Novel Foods

"Earth & Table" Law Reporter



Whoever invents or discovers any new and useful composition of matter may potentially obtain a United States patent. When it comes to food compositions, however, this seemingly broad

scope of patentability is judicially tempered.

Novel foods are *not* patentable unless they demonstrate a "coaction or cooperative relationship between the selected ingredients which produces a new, unexpected and useful function." In reality, patent applicants find it difficult to satisfy this scientific-sounding rule.

Even if an inventor could hurdle this patenting bar, who would want to eat food whose ingredients coact or cooperate unexpectedly? Food neophobia—a reluctance to ingest novel foods—is characteristic of omnivores, including humans.<sup>[1]</sup> To ward against automatic rejection of novel food tastes or flavors, successful patentees must marshal abundant marketing prowess.

This post examines why the patent court formulated this food composition rule, how it is being employed by patent examiners and judges, and how savvy brand managers design subliminal retail strategies to counter innate consumer fear of ingesting novel foods. Patentable vegan burgers illustrate how this marketing process works in action.

### *The Prior Art of Ancient Gastronomy*

To resolve food composition patenting issues, the former patent appeals court (the Court of Customs and Patent Appeals) focused on what makes a food composition *inventive*—in contrast to normal, everyday culinary innovations of home or professional cooks. The appellate court framed the patentability inquiry with a chemistry term, *coaction*.

Patent judges applied their *common sense* in the art of cookery by holding that the addition or subtraction of ingredients in a recipe—while perhaps leading to novel food flavor results—would not be patentable unless some unexpected relationship occurred among selected ingredients. Failing that, there is nothing inventive; and *ergo*, nothing patentable.

This common sense approach to evaluating food composition patents can be measured against how gastronomy developed in ancient cultures, a field of study that advanced significantly in the latter 20th century. The late Professor Phyllis Pray Bober's treatise, *Art, Culture, and Cuisine: Ancient and Medieval Gastronomy* (1999), will be our guide.<sup>[2]</sup>

Ancient Egyptian Foodstuffs. The unification of the "Two Lands" of lower and upper Egypt produced a remarkably vital and stable food society for millennia. From frescoes and reliefs gracing tombs, "[p]aradoxically, we know everything there is to know about the foodstuffs of ancient Egypt, the processes that made them ready for the kitchen, but almost nothing about cooking or gastronomy."<sup>[3]</sup>

The array of Egyptian food available to more wealthy classes was astounding. An actual funerary meal excavated at Saqqara included a porridge of ground barley, an entire grilled quail, two cooked kidneys, a headless cooked fish, beef ribs, small triangular loaves of bread, some circular cakes, stewed fruit (probably figs), fresh *naqb* (Christ's thorn) berries, stewed pigeon, some jars of wine, and some form of cheese.

As Professor Bober aptly summarizes the ancient Egyptian palate: one cannot help being struck, "by the perfected menu in a hot climate for a people whose thought processes appear to have worked in terms of balanced antitheses—a harmony of opposites similar to the Chinese principles of *yin* and *yang*. There are the various breads, the beer and wine, with choice cuts of meat for roasting or grilling contrasted to heaps of cool, juice-laden vegetables and fruits."

Culinary Arts in Mesopotamia. Unlike ancient Egypt where cooking methods remain mysterious, we have actual recipes from ancient Mesopotamia preserved in cuneiform tablets—our earliest *printed publication* for prior art purposes. "Written on several sides of sometimes damaged lumps of clay, these precious documents, like all cookery instructions from the distant past, give no quantities. They were clearly made as part of repertory standards for professional cooks."

The foodstuffs characterizing Mesopotamian cuisine largely track those of ancient Egypt. Goats, sheep and swine were exploited for food to a greater degree than in Egypt, while the foundation vegetables are the same trio as those beloved in Egypt: garlic, onion and leeks. A large variety of legumes and greens were also available on the table.

Greek Gastronomic Poetry. In reconstructing Greek cuisine, we are no longer forced to rely on funerary meal depictions or cuneiform lists to decipher what that culture loved to eat. Greek culture invented *gastronomic poetry* and included cooks as comic characters on the theater stage. A translated verse (from the 4th century B.C.) is reminiscent of modern California cuisine, with its emphasis on seasonal foods, simply but stylishly presented:

The *amia* [bonito fish] serve in the autumn, when the Pleids are setting,  
prepared in any fashion you wish. No song and dance need I make here.  
This fish you could not ruin, even were you to wish to.

But my dear Moschus, if you must know how to best prepare it, I tell you, wrap it in fig-leaves, adding just a pinch of marjoram—no cheese or nonsense like that! Just place it in the leaves, fasten them round it securely, and stick all in hot embers.

From ancient Greek culture, we begin to "gain clues to the *taste* of dishes from notes of cooking method and alternative ingredients. The possibilities of evaluating the flavor of a given preparation from authors of this type of gastronomic poetry are also immensely enhanced by passages from writers of comedy. Beginning with Aristophanes and culminating in the *New Comedy* . . . in the third century B.C., cooks are comic characters *par excellence* on the Greek stage."

Venerable Roman Cuisine. Ancient modes of Roman cookery endure to present times. "Today's paella of the Iberian peninsula, the cassoulet of southern France and Perigord, the bouillabaisse or cioppino of the Mediterranean littoral, or the tian of Provence stand out among regional relics of Roman kitchen-craft."

Critics of ancient Roman cuisine tend to focus on its penchant for falsification and disguise of ingredients, such as an anchovy casserole without any anchovies or turnips manipulated to look and taste like fish. These same disguising impulses underlie our new wave of veggie burgers with their complicated compositions meant to replicate meat texture and flavor.

Food critics also poked fun at the Roman cook's "welter of ingredients with contrasting, self-defeating tastes." One meat sauce, for example, specifies a pinch each of "pepper, lovage, parsley, celery-seed, dill, asafoetida root, hazelwort, galingale, caraway, cumin, ginger, together with [one cup] of *garam* [a fish sauce], ½ gill of oil, and a 'modicum' of pyrethrum [an Old World plant now classified as *Chrysanthemum* or *Tanacetum*]."

A typical Roman elegant meal, as revealed by frescoes, comes closer to our own modern day ideals. Loaves of bread are on hand. A first course may consist of eggs served in eggcups with an accompanying sauce, pickled pig's feet and artichokes. The entrées may include fish, ham and fowl. A dessert course may follow with fruit and cakes.

\* \* \* \*

Three gastronomic themes emerge from this brief foray into ancient cuisine. They inform a *common sense* approach to examining food composition patent applications:

- The foodstuffs available (to at least the wealthy or privileged) were fantastically diverse before *Anno Domini*.
- A professional cooking class skilled in the culinary arts came into being; professional cooks had already become quite adept at the art of disguising and creating *faux* foodstuffs.
- Redolent of Seattle's Sir Mix-a-Lot, ancient cultures were constantly adding, combining and mixing food composition ingredients with abandon.

### *Common Sense Cookery, USPTO-Style*

Patent examiners, judges and patent lawyers may all be out of their comfort zone when evaluating novel food compositions intended for human ingestion. Probably few, if any, went to culinary school, even as a pastime hobby. Yet, lack of culinary experience did not prevent patent professionals from opining about the *inventiveness* or *obviousness* of novel food compositions.

During the CCPA era of patent appeals (before 1982), food composition patent claims became subject to a special rule of decision still operative today. A recent [USPTO office action](#) from March 2018—rejecting food composition claims for methods and systems for preparing processed food sized and shaped to facilitate independent dining—summarizes the rule:

[A]pplicant claims a formula for making a nutritional composition that uses or eliminates common ingredients, which does not amount to invention in the constantly developing art of preparing food because there is no specific showing that establishes a coaction or cooperative relationship between the selected ingredients which produces a new, unexpected and useful scientific function. It is long and commonly known that the object of for people of skill for cooking (e.g. cooks, chefs, and bakers) is to use or eliminate common ingredients to formulate food that is palatable [to] the consumer.

Such an act, the formulation or creation of a food recipe, is not patentable because it does not make a scientific advancement in the field unless a new/novel reaction, coaction or cooperative relationship is made evident by such creation. In other words, the act of making food or food recipes that taste good, even if the combination of ingredients is not known or has not been done before, is not patentable subject [matter] just because it was done.

This 2018 USPTO office action rejection is based on *In re Levin*, 178 F.2d 945 (Cust. & Pat. App. 1949) and its progeny. The *Levin* court stated that "[i]nvention may reside in a composition of matter formed by the intermixture of two or more ingredients which results in a product possessing characteristics of utility that are new, additional and materially different from the property or properties which the several ingredients individually do not possess in common."

How did the *Levin* patent court come to this conclusion? The case facts are instructive. The applicant claimed a method of making a butter-substitute, spreadable food product which was capable of being preserved in closed containers without refrigeration for six months. While the inventor described his claimed composition as having butter-like consistency, the patent examiner thought that the proffered samples were no different in consistency from that of conventional mayonnaise or salad dressing.

The *Levin* court rejected the applicant's argument that the product's "keeping qualities" result from a coaction of the products ingredients (acid, egg yolk, and gum or starch, which are combinable with cream without coagulation) which had produced a new, unexpected and useful function. No specific cooperation between the ingredients had been shown or demonstrated during patent prosecution. "[I]n the absence of invention, novelty is not sufficient to support allowance of claims for a patent." See also *In re Mason*, 156 F.2d 189 (Cust. & Pat. App. 1946) (where the claimed process involved a cream substitute which will not sour or putrefy like natural cream, "we are in agreement with the board that that what appellant has done does not rise to the dignity of invention."); and *In re White*, 39 F.2d 974 (Cust. & Pat. App. 1930) ("To hold [new food recipes] patentable would unsettle the arts of cooking and of preparing food products. It surely was not contemplated that they should come within

the purview of patent laws, unless more appears than we can find in the instant case.").

### *Is the Levin Rule Still Viable Law?*

The patent law landscape changed considerably after these CCPA decisions. The Patent Act of 1952 codified conditions for patentability; and in 1982, a newly formed Court of Appeals for the Federal Circuit supplanted the CCPA's patent jurisdiction. With their emphasis on whether a food composition rises to the *dignity* of invention, are *Levin* and its progeny still good law?

A review of recent Patent Trial and Appeal Board decisions reveals a grab bag of *Levin* citations. More recent PTAB panels cite the *Levin* case with approval; while earlier panels appear wary of relying on it:

- *Ex Parte Teodora Rivera* (2018)<sup>[4]</sup> involves rejected patent claims directed to a calcium fortified, not-from-concentrate orange juice beverage. The panel cites *Levin* approvingly for the proposition that the applicants "have proffered no objective evidence that the calcium supplements and topnote flavors co-acts with juice in an unexpected way."
- *Ex Parte Jeffery M. Meyer* (2018) generally relates to a dry spice/herb composition that lends a creamy taste and good mouth feel to food products.<sup>[5]</sup> The PTAB panel cites *Levin* with approval, noting that the applicant has not "directed us to any evidence that the claimed ingredients combined to form a product having unexpected properties. Nor has [the applicant] argued that the claim ingredients in the recited amounts achieve an unexpected result with respect to the method of preparation."
- *Ex Parte Kristin N. Dodd* (2017) relates to a double-crust pizza and a method of forming it.<sup>[6]</sup> The PTAB panel distinguishes *Levin* as not applicable to the novel pizza product because it is a "structural product" and not a recipe or food formulation, and that the applicant had disclosed a cooperative relationship between the sauce layers, at least one ingredient and the two pizza crust layers.
- *Ex Parte Keswara R. Vadlamani, et al.* (2017) involves methods and compositions for reducing sodium content of processed food.<sup>[7]</sup> The applicants argued that the examiner had erred as a matter of law in relying on *Levin* because it predates the 1952 Patent Act and is

inconsistent with subsequent Supreme Court decisions of *Graham v. John Deere Co.*, 383 U.S. 1, (1966), and *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007). The PTAB panel concluded that the examiner's gratuitous citation of *Levin* did not amount to reversible error because his opinion otherwise conformed to the requirements of *Graham* and *KSR*.

- *Ex Parte Jeanne Paulus, et al.* (2015) is directed to claims for a gluten-free bakery product composition that includes at least one heat-moisture treated flour.<sup>[8]</sup> The applicants argued that the examiner had applied *Levin* as a per se rule to reject their patent claims. The PTAB concluded that the examiner's reliance on *Levin* did not constitute harmful error because the examiner set forth a prima facie case of obviousness that did not rely solely upon *Levin*.

Are anti-*Levin* cases correct in kicking the rule to the curb of patent law? A close reading of *Graham* and *KSR* demonstrates that both Supreme Court cases—at least impliedly—support the *Levin* rule. They cannot be cited as overruling the *Levin* test *sub silentio*. A patent examiner's *Levin* citation cannot be dismissed as either a gratuitous citation or harmless error.

*Graham* holds that 103 non-obviousness conditions codified in 1952 express the same principles for non-obviousness that had already been firmly established in Supreme Court precedent for over a hundred years, namely *Hotchkiss v. Greenwood*, 11 How. 248, 13 L.Ed. 683 (1851):

*Hotchkiss*, by positing that the condition that a patentable invention evidence more ingenuity and skill than that possessed by an ordinary mechanic acquainted with the business, merely distinguished between new and useful innovations that were capable of sustaining a patent and those that were not.

The *Graham* court further held that the 1952 Patent Act "was *not* intended by Congress to change the general level of patentable invention."

*KSR* also did not transform *Levin* into suspect law. Instead, it notes that "as progress beginning from higher levels of achievement is expected in the normal course, the results of ordinary innovation are not the subject of exclusive rights under the patent laws." "These premises led to the bar on patents claiming obvious subject matter established in *Hotchkiss* and codified in 103."

*KSR* counsels patent examiners to use their "common sense" in making these patentability determinations. See also *Ex Parte John H. Owoc* (PTAB, 2013) ("Indeed, *Levin* is not inconsistent with *KSR* . . .").<sup>[9]</sup>

### *How Do Food Ingredients Coact Unexpectedly?*

Since *Levin* remains viable law—ignored at a patent applicant's peril—how does one demonstrate coaction/cooperative among food composition ingredients leading to an unexpected result? The patent application filed by Impossible Foods to protect its *Impossible Burger* invention provides clues to patenting success.

Impossible Foods' patent application is entitled *Ground Meat Replicas*. The abstract explains that the patent claims are directed to "plant-based products that mimic ground meat, including the fibrousness, heterogeneity in texture, beefy flavor, and red-to-brown color transition during the cooking of ground meat." The patent application specification describes the object of the invention:

Common limitations of plant-based meat substitute products include a texture and mouth-feel more homogenous than that of equivalent meat products. Furthermore, as these products must largely be sold pre-cooked, with artificial flavors and aromas pre-incorporated, they fail to replicate the aromas, flavors, and other key features, such as texture and mouth-feel, associated with cooking or cooked meat, and they also may have added off flavors. As a result, these products mainly appeal to a limited consumer base that is already committed to vegetarianism, but have failed to appeal to the larger consumer segment accustomed to eating meat. It would be useful to have improved plant-based meat substitutes, which better replicate the fibrousness, texture, aromas and flavors of meat during and/or after cooking.

In their quest for meat verisimilitude, the Impossible Foods inventors are following a direct, historical line from ancient Roman cooks who could make turnips look and taste like fish; or could concoct an anchovy salad without any anchovies.

In her initial USPTO office action, the examiner rejected some proposed claims based on *Levin*:

Claims 127-130 require the use of a particular extract which is from Cucumis (Cucumber family). However, as in *In re Levin*, it would have been obvious to use various ingredients absent any unexpected results in using a particular flavor. Hai et al. disclosed the use of flavorants (col. 5, lines 5-15). Therefore, it would have been obvious to use particular flavorants for their known function, absent anything unexpected.

Impossible Foods pushed back against this *Levin* basis for rejection. For appellate purposes, the company rotely argued that *Levin* predates the 1952 Patent Act and that 35 U.S.C. 103 and that the examiner had applied it as a *per se* rule. These legal arguments ring hollow, as they are based on a cursory reading of Supreme Court jurisprudence. Labeling *Levin* as a *per se* rule is a pejorative contention; however described, it is a rule of specific application.

Impossible Foods fared better by demonstrating that invention's ingredients, in fact, did coact in unexpected ways. "The Examiner has not provided *any* evidence for the assertion that the addition of *Cucumis* juice, puree, or extract in a meat replica composition of the claims amounts to using '*particular* flavorants for their *known* function' (emphasis added). To the contrary, it is only Applicant's disclosure that teaches the use of such a juice, puree, or extract to increase, e.g., the perceived meat flavor of a product."

In providing her reasons for patent allowance, the examiner stated that "no reference was found for a meat replica containing the claimed ingredients with a Cucumis juice, puree or extract or cucumber or melon ingredients. The Cucumis juice is important to the flavor of the meat replica because, as the specification states, the cucumber and melon's juice, puree or extracts provide added tallow fatty notes that are enhanced with cooking."

Having successfully traversed the *Levin* rule rejection, an *Impossible Burger* patent should issue formally in the near future.

### ***Will Food Neophobes Eat Patented, Meatless Burgers?***

In addition to the *Impossible Burger*, another ground meat replica patty is being trademarked and sold in the United States as the *Beyond Burger*. Beyond Meat is producing and marketing that ersatz meat patty. (Beyond

Meat applied for, but recently abandoned its U.S. patent application for its *Beyond Burger* product.)[\[10\]](#)

These two companies must now persuade a naturally suspicious customer base to ingest their new product offerings. This is a gargantuan marketing task, since food neophobia acts as our guardian and filter against the negative consequences of eating an unknown food. Scientific research shows that only after a limited exposure to a novel food does an animal learn that a specific food is safe and can be ingested in significant quantities. This is called *learned safety*.

Individuals anticipate that novel foods will have unpleasant tastes and therefore avoid them. Conversely, foods that are accepted are usually those that (are expected to) taste good and those that are seen as beneficial. In neuropsychological terms, *evaluative conditioning* influences our food choices. Flavor-flavor learning takes place by pairing one flavor we like with another.

Food neophobia correlates to a more general reluctance to approach novel stimuli, such as unfamiliar people, places and activities. Creating a positive experience with novel tastes appears to generalize into a willingness to try other novel foods. Interestingly enough, food neophobia declines with age and rural inhabitants are more food neophobic than their urban counterparts.[\[11\]](#)

When assessed against these innate food habits, the marketing paths of the *Impossible Burger* and the *Beyond Burger* reflect considerable marketing expertise. But even clever marketing and branding cannot ensure ingestion of novel food products whose taste and aromas exude unpleasant off-notes.

- Verbal and Visual Priming. Both meatless patties entice a person who already eats meat into accepting a plant-based substitute. Much of the patenting effort involves mimicking beef appearance and texture. Making sure the brand name includes the word *burger* operates as an initial priming mechanism setting taste/flavor expectations. *Beyond Burger* packaging highlights the words *Plant-Based Burger Patties* in green print, an eco-branding flourish. Its product labeling offers politically-charged, feel-good messages: no soy, gluten free, no GMOs;

and "Together, we can truly bring exciting change to the plate."

- Nailing Beef Texture. When it comes to sinuous, beef-like texture, the *Impossible Burger* and the *Beyond Burger* both nail it as product advancements. However, those already accustomed to the different mouth feel/texture of veggie burgers dislike the return to this simulacrum of hamburger texture. They prefer older style grain, bean or tofu-based veggie burger compositions. Their mouth appeal preferences represent flavor-flavor conditioning, but *in reverse*. But as the Impossible Foods' patent application indicates, they are not targeting a vegetarian consumer base already pleased with the texture and mouth appeal of available veggie burgers.
- Restaurant Aura Priming. The *Impossible Burger* is not available in retail grocery stores. It can only be purchased at a restaurant. By confining consumer market acceptance to restaurants, Impossible Foods ensures that only professional cooks will be in charge of preparing their burgers and presenting them as a finished dish. In turn, the consumer is conditioned to eat the replica meat patty with its typical burger accompaniments, such as a bun, lettuce, tomato and selected condiments. The *Impossible Burger* benefits subliminally by its pairing with a restaurant aura within which you anticipate well-prepared and tasty foods.
- Refrigerated Meat Case Access. The *Beyond Burger* is available in retail grocery stores. To gain consumer access, it is displayed prominently in the refrigerated meat case, next to *real* hamburger meat, an obvious form of product priming and flavor-flavor conditioning. This more direct access to meat consumers represents a major breakthrough for plant-based, replica meat producers. In a curious twist, consumer rejection of surrogate meats could eventually extend to *real* meat counterparts in a form of backlash, flavor-flavor conditioning because of their physical proximity in refrigerated meat cases.
- The Dangers of Home Cooking for Gaining Market Acceptance. Ironically, the ability of the consumer to purchase and cook the *Beyond Burger* creates a more tenuous path for its market acceptance. Anecdotal taste tests suggest that the *Beyond Burger* releases an unappealing, hard-to-define chemical odor during cooking.

Since olfactory glands are our first defense against ingesting putrid food, the strange cooking smell is off-putting. Olfactory cues trump visual stimuli, however appealing the latter may be. If cooking the *Impossible Burger* also emits unappetizing cooking odors, presumably they would be vented through commercial kitchen exhaust fans, so restaurant patrons are not subjected to them. Also, the red color of the *Beyond Burger's* inside patty after cooking (due to beet juice extract?) raises a subliminal concern as to whether the replica meat patty is rare—even though fully cooked.

Although I tend to be a *sensation seeker* in testing out novel foods and flavors, food neophobia kicked in while ingesting the *Beyond Burger* and the *Impossible Burger* in their respective home cooking and restaurant settings. Chewing remarkably beefy texture—without accompanying, persuasive beef flavor notes—confused and roiled taste expectations, quashing my appetite entirely.

The feel-good advertising and branding, the traditional hamburger pairings (tomato, lettuce, mayonnaise), and the upscale restaurant setting: none of these innovative marketing and flavor-flavor pairing techniques could override an olfactory distaste formed in smelling and chewing on these new vegan burgers. Following a pattern of *learned safety*, I could not eat more than a small portion size of these high tech vegan burgers in my first consumption setting.

Since the *Beyond Burger's* FDA nutrition facts label shows that the product is largely composed of *pea protein isolate*, future inventors would be well-served by taking flavor and digestibility lessons from a tasty, analogous vegetarian recipe for *split pea cutlets* set forth in Julie Sahni's *Classic Indian Vegetarian and Grain Cooking* (1985). The herbs and spices included in her *masala vada* recipe—green chilies, dry red chili pods, fresh ginger and coriander, and chopped onions—all aid in digesting pea legumes as they pass through your gastrointestinal system—without GI track distress. Including *masala vada* ingredients in a split pea cutlet recipe reflects ancient cooking knowledge perfected through matrilineal succession in southern India, an epicenter of vegetarian cuisine.

### *Novel Foods Takeaway*

Intrepid inventors seek to transform consumer demand for meat into a daily desire to consume plant-based meat replicas. Like Roman cooks of

old, they are adept in the culinary arts of mimicking and disguising food textures and flavors. Yet, hyper-simulating meat textures and flavors is only one-half of the gastronomic puzzle. Convincing people to ingest novel food products is an epic marketing battle unto itself.

Perfecting an ersatz, plant-based hamburger remains an elusive patenting goal. Sinewy texture is now almost tantalizingly duplicated; but *faux* beef flavor notes are still hard to swallow.

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[1] See generally P. Pliner and S. Salvy, "Food Neophobia in Humans," from *The Psychology of Food Choice* (2006).

[2] Ms. Bober is a pioneering scholar in culinary history. At the time of her book's publication in 1999, she was a professor emerita of History of Art and of Classical and Near Eastern Archeology at Bryn Mawr College. She passed away in 2002 at age 81. See <https://www.nytimes.com/2002/06/15/arts/phyllis-bober-81-scholar-specialized-in-renaissance-art.html>.

[3] All quoted material in this section is from Professor Bober's book. To aid readability, footnote citations are used minimally in this article.

[4] *Ex Parte Teodora Rivera, et al.*, 2018 WL 2131710 (April 30, 2018).

[5] *Ex Parte Jeffery M. Meyer*, 2018 WL 1225959 (February 27, 2018).

[6] *Ex Parte Kristin N. Dodd, et al.*, 2017 WL 1757262 (April 25, 2017).

[7] *Ex Parte Keswara R. Vadlamani, et al.*, 2017 WL 1292575 (March 31, 2017).

[8] *Ex Parte Jeanne Paulus, et al.*, 2015 WL 5921703 (September 22, 2015).

[9] *Ex Parte John H. Owoc*, 2013 WL 1310615 (March 27, 2013).

[10] Beyond Meat's patent application rejection was not based on the *Levin* rule. Rather, the USPTO patent examiner ruled that Beyond Meat's

invention was obvious in light of specific prior art, and never raised a *Levin* bar to patentability. Beyond Meat abandoned its patent application thereafter.

[\[11\]](#) See n. 1, pp. 77-84.