
Intellectual Property Law Bulletin

1999-04-01

Supreme Court Broadens Patent Act's "On-Sale" Bar

It has long been clear that the phrase "on sale" includes not only sales, but also offers to sell, but what has not been clear is how developed an invention must be before it can be "on sale". Section 102(b) of the Patent Act bars the grant of a patent if the invention was "on sale" more than one year before a patent application was filed. The Federal Circuit Court of Appeals had rejected the views that a physical embodiment of the invention was required or that a reduction to practice was a prerequisite; but it had not provided any clear substitute test. According to the Federal Circuit, whether an invention was "on sale" depended on the "totality of the circumstances". "[A]ll of the circumstances surrounding the sale or offer to sell, including the stage of development of the invention and the nature of the invention must be considered and weighted against the policies underlying section 102(b)." In *Pfaff v. Wells Electronics, Inc.*, the Court held that, in the case of a mechanical invention, "the invention was substantially complete... such that there was 'reason to expect that it would work for its intended purpose upon completion'" even though no prototype had been made or tested; "completed engineering drawings accurately depicting the patented invention" were enough to meet the test. On appeal in *Pfaff*, the U.S. Supreme Court agreed that "the product must be the subject of a commercial offer for sale". However, the Court rejected the "substantially complete" test. Focusing more on the conceptual invention than on any physical embodiment, the Supreme Court held that "the invention must be ready for patenting". That condition may be satisfied in

at least two ways: by proof of reduction to practice before the critical date; or by proof that prior to the critical date the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention.

In its decision, the Supreme Court counseled against the Federal Circuit's prior practice of balancing various policies according to a totality of the circumstances, and sought to provide "inventors with a definite standard for determining when a patent application must be filed". It remains to be seen whether the Supreme Court has done so. In a subsequent decision in *Weatherchem Corp. v. J.L. Clark, Inc.*, the Federal Circuit relied on *Pfaff* and held that the "on sale" bar applied when, at the time an offer to sell some 275,000 plastic caps was made, a "drawing showed a cap having all the structural limitations of the claims," even though sample caps produced after the drawing had problems that required later modifications to the mold to correct.

The *Pfaff* and *Weatherchem* decisions mean that companies must be even more careful than they may have been in the past if they try to commercialize a potentially patentable, but still far-from-ready-to-deliver, invention. The safest course is to file a patent application before there has been any arguably commercial activity or public disclosure. This not only avoids the "on-sale" bar but also permits a company to seek patent protection in countries outside the U.S. where the one-year grace period of section 102(b) is not available.

Even if patent protection is sought only in the United States, *Pfaff* means that a company, even if it has not yet begun to build or test a product, cannot assume that the one-year period has not started to run. If, for example, the inventor has prepared a detailed "invention disclosure," or has described the invention in detail in a laboratory notebook, a court may later find that the invention was "ready for patenting," and that the "one-year" clock was ready to start.

The New Importance of the Four Corners of a Patent

Over the past year and a half, a number of decisions by the Court of Appeals for the Federal Circuit, which hears the appeals of all patent cases, have reflected an increased emphasis on

the content of the "four corners" of a patent and a decreased emphasis on surrounding context in determining the scope of a patentee's rights. As a result, patent applicants may want to expend more energy in developing their patent specifications to include more suggestions and descriptions of alternative embodiments of their inventions and to more concisely claim their inventions' core aspects. The Court's trend toward increased reliance on the four corners of a patent should give companies facing a possible patent infringement action increased comfort, though probably not complete ease, in certain contexts. For example, "design around" efforts are more likely to withstand charges of patent infringement if the design around product or process substitutes a claim element with non-literally-infringing technology that does not perform certain functions of the claimed element, or that existed when the patentee filed its patent application but was not discussed in the patent.

The origins of the Federal Circuit's trend can be seen in its 1996 decision, in *Vitronics Corporation v. Conceptronic, Inc.*, which held that a patent claim must be interpreted in view of the "intrinsic evidence" of the claim's language, the patent specification, and the file history. It further stated that the interpretation should not involve the use of expert testimony or other "extrinsic evidence" unless the intrinsic evidence is insufficient to eliminate ambiguities. In more recent cases, the Federal Circuit has relied on the four corners of a patent specification and de-emphasized surrounding context:

1. to restrict the breadth of the doctrine of equivalents,
2. to revitalize doctrines under which patent claims may be deemed invalid in view of the originally-filed disclosure, and
3. to limit the scope of "means-plus-function" claim limitations.

In doing so, the Federal Circuit has highlighted the "notice function" served by patent claims - to inform the public of what is and is not infringing - and extended this notice function to the entire patent specification. The Court has made clear that the public has a right to rely on this notice by stating that it is the patentee who must bear the cost of its failure expressly to seek protection for foreseeable alterations of its claimed structure. It specifically recognized that its reasoning "places a premium on forethought in patent drafting" and that "this premium may

lead to higher costs of patent prosecution".

Sage Products, Inc. v. Devon Industries, Inc., decided in late 1997, sets the Court's recent tone. In Sage Products, the accused product did not literally infringe because it did not include the required elongated slot at the top of the claimed container. In the trial court, Sage presented four theories of infringement under the "doctrine of equivalents," each of which was found defective.

In affirming the lower court's decision of non-infringement, the Federal Circuit stated that Sage's theories of infringement effectively attempted to remove explicit claim limitations, which the doctrine of equivalents does not permit, even if the patentee might have been able to write the claim more broadly.

The Court emphasized that the claim defined a relatively simple structural device and that a skilled patent drafter would foresee the limiting potential of the claim language that was used.

The Court explained that the case did not involve subtlety of language, complexity of technology, or later-developed technology that might otherwise cloud the significance of the terminology at the time it was incorporated into the claim. The Court effectively stated that, regardless of surrounding circumstances, if Sage desired broad protection it should have sought broader claims with fewer structural limitations.

The tone set with Sage Products continued with The Gentry Gallery, Inc. v. The Berkline Corporation, decided early in 1998. Gentry involved a patent directed to a sectional sofa having a pair of reclining seats, a fixed console, and a pair of controls. In analyzing the claims and the description, the Court stated that the original disclosure and claims identified the console as the only possible location for the controls. The inventor admitted at trial that he did not consider placing the controls elsewhere until he became aware of his competitor's activities (after which he amended the claims to remove limitations regarding the location of the controls).

The Court ruled that the claims were invalid for failing to satisfy the "written description" requirement. The written description requirement requires a patent specification to clearly allow persons of ordinary skill in the art to recognize that the inventor possessed the claimed

invention at the time of filing the patent application. Gentry signalled that a narrow disclosure without suggestions of alternative embodiments coupled with narrow initial claims could lead to the conclusion that the inventor did not possess the broadly claimed invention at the time of filing. As a result, the broad claims would be invalid.

Several months later, the Federal Circuit again emphasized the four corners of the patent in *Vehicular Technologies Corporation v. Titan Wheel International, Inc.* That case involved a claim that required a "spring assembly consisting of two concentric springs". The accused device did not literally infringe because it used an outer spring and an inner "plug" instead of the two concentric springs, i.e., an inner spring and an outer spring.

Based on just a few statements in the patent regarding advantages of the invention over the prior art, the Federal Circuit ruled that the inner spring's function was as a back-up spring to the outer spring in case it failed. The Court held that, because the plug could not serve as a backup, the differences were substantial and the accused product did not infringe.

On the same day, the Federal Circuit further emphasized the importance of the patent specification in *Chiuminatta Concrete Concepts v. Cardinal Industries, Inc.* Chiuminatta involved a patent for a saw for cutting concrete before the concrete hardens. The only issue in dispute was the interpretation of the claim language "means . . . for supporting the surface of the concrete adjacent the leading edge of the cutting blade". This type of claim element is known as a "means-plus-function" limitation, which can be met literally only by a product that performs the same function, using a structure that is the same as or equivalent to the structure disclosed in the patent for carrying out that function. The patent disclosed a "skid plate" for supporting the surface of the concrete, and wheels for supporting the saw. The accused device used wheels to support the surface of the concrete.

The Court ruled that the wheels were not an equivalent structure and therefore the accused device did not infringe literally or under the doctrine of equivalents. In considering equivalent structures, the Court focused on the specific structure disclosed in the patent for providing the claimed function (that is, supporting the concrete), and not other structures (such as the wheels) disclosed in the patent for carrying out other functions. The Court added that, given

the prior knowledge of the technology asserted to be equivalent (presumably a reference to the use of wheels in a concrete saw), the use of that technology for the claimed function could readily have been disclosed in the patent.

The Court went on to state that the doctrine of equivalents is necessary because one cannot predict the future. The doctrine is needed because it is impossible for patentees to draft claims to cover future insubstantial variants of the invention. However, in cases not involving later-developed technologies, a finding of non-equivalence for means-plus-function limitations for purposes of literal infringement should preclude a contrary finding under the doctrine of equivalents, which involves a similar analysis. Otherwise, a patentee would get "two bites at the apple".

Federal Circuit Broadens Scope for Software Patents

In what may be the final move toward dismantling decades of "tangled" case law, the U.S. Court of Appeals for the Federal Circuit in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* effectively held that nearly any software-related invention is patentable subject matter. Specifically, the Court held that an invention for calculating data representative of dollar amounts is directed to patentable subject matter essentially because "it produces a 'useful, concrete and tangible result'". The Court also retired the so-called "business method" exception, stating that it was "ill conceived," and should not be utilized for holding an invention unpatentable.

This opinion has obvious ramifications for the financial industry, since patenting "business methods" (in conjunction with a computer) is now explicitly sanctioned. However, the broad holding in this decision goes far beyond any particular industry, possibly allowing protection for virtually any software-related subject matter that uses numbers representing something even remotely tangible.

The patent in *State Street Bank* was directed to a "Hub and Spoke" data processing system allowing mutual funds ("Spokes") to pool their assets into an investment portfolio ("Hub") organized as a partnership. The system calculates a number of factors on a daily basis, including each Spoke's (mutual fund's) percentage share of the Hub's (portfolio's) assets and

expenses. This arrangement permits the individual mutual funds to realize various administrative and tax advantages.

When negotiations broke down between State Street and Signature over licensing Signature's patent, State Street filed a Declaratory Judgment action, asserting that Signature's patent was invalid for not being directed to patentable subject matter under section 101 of the federal patent statute.

The trial court provided a relatively detailed analysis of the precedential history of court decisions concerning patentable subject matter of software-related inventions. The trial court determined that Signature's patent was invalid, because "the invention does nothing other than present and solve a mathematical algorithm" and because the subject matter of the patent was directed to a method of doing business, the latter being a type of subject matter the court believed was excluded from patentability by judicial doctrine.

On appeal, however, the Federal Circuit disagreed with the trial court's analysis. In particular, the Federal Circuit emphasized that the test for whether certain types of subject matter were patentable was whether the invention produced a "useful, concrete and tangible result". In the case of Signature's patent, the Court believed that the patent passed this test. Specifically, the Court asserted that "the transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces 'a useful, concrete and tangible result' - a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades". In effect, the Court asserted that the calculation of numbers representing dollar amounts (i.e., converting one set of specified data into another set of data) was an event that rendered the subject matter patentable.

In the course of its analysis, the Federal Circuit also explicitly did away with a more restrictive test for determining patentable subject matter that had been used for many years.

With regard to whether methods of doing business are patentable, the Federal Circuit asserted that business methods should be subject to the same legal requirements for patentability as

are applied to any other process or method. Consequently, the Court found that the fact that Signature's patented invention relates to a method of doing business is not fatal to its patent. In short, State Street suggests that just about any software-related invention could be the subject of a valid patent, as long as it generates a number representative of something "useful, concrete and tangible". Based on the facts of this decision, this may occur when the data used in conjunction with any mathematical algorithms of the invention themselves represent something arguably "useful, concrete and tangible" (e.g., money). Many commercial software products will fall into this category.

Even before the State Street decision, a large number of patents relating to methods of doing business had been granted by the Patent and Trademark Office. The State Street decision will serve to help confirm their validity.

James B. Lampert, Chair

james.lampert@haledorr.com

Hollie L. Baker, Vice Chair

hollie.baker@haledorr.com

William F. Lee, Vice Chair

william.lee@haledorr.com

Steven D. Singer, Vice Chair

steven.singer@haledorr.com

This publication is not intended as legal advice.

Readers should not act upon information contained in this publication without professional legal counseling.

For more information, contact Hale and Dorr LLP's Intellectual Property Department. This Newsletter may be considered advertising under the rules of the Supreme Judicial Court of Massachusetts.

Authors

James B. Lampert

RETIRED PARTNER

✉ james.lampert@comcast.net

☎ +1 617 526 6000



William F. Lee

PARTNER

✉ william.lee@wilmerhale.com

☎ +1 617 526 6556