COMMENTS

{BLR 1872} Patents - Plant Patent Act - PTO - PVPA - UPOV.

UNITED STATES PATENT AND TRADEMARK OFFICE REQUESTS COMMENTS ON PROTECTION AFFORDED BY PLANT PATENTS

By Richard C. Peet

The United States Patent and Trademark Office on September 1, 1994, announced hearings and requested comments on patent protection for biotechnological inventions (59 *Fed. Reg.* 45267). The PTO stated in its notice that "a plant patent affords its holder only the right to exclude others from sexually reproducing the plant or using the plant so reproduced. As such, protection afforded by a plant patent does not extend to parts of the protected plant, such as harvested material (e.g. table fruit, cut flowers, etc.)" (*Id.* at 45271). This statement contains a factual error, and the legal conclusion is unsupported.

The PPA grant is "the right to exclude others from asexually reproducing the plant or selling or using the plant so reproduced" (35 U.S.C. §163). In addition, it is for a court of competent jurisdiction, not the PTO, to determine what constitutes infringement under the Plant Protection Act. For example, no court has rendered a decision as to whether unauthorized import of plant parts is infringing, but, for the reasons outlined herein, it is likely that a court would find such unauthorized imports infringing under current United States law.

Plant patent infringement has an adverse impact on research and development and the general economic health of the U.S. plant biotechnology industry. Particularly serious is the unauthorized import into United States of plant parts, produced by asexually propagating outside of this country plant varieties protected by a U.S. plant patent. Even though a court would likely find that the unauthorized import of plant parts constitutes infringement under current law, the PPA should be amended to provide explicitly that the plant patent grant includes the right to exclude others from unauthorized sale or use of any part of the asexually reproduced plant variety. The proposed amendment to the PPA would reduce the need for unnecessary and costly litigation. In addition, the proposed amendment to the PPA would provide clear uniformity in the laws related to the scope of protection available under the PPA for asexually propagated plant varieties, under the Plant Variety Protection Act for sexually propagated plant varieties and under the utility patent statute for both asexually and sexually propagated plants.

Introduction

Purpose of the Plant Patent Act

Since 1930, American plant breeders, American agriculture, and the American public have benefited from the stimulus to innovation in the plant sciences provided by the PPA. Reports of the House and Senate Committees that accompanied legislation enacting the PPA state that the purpose of the Act was to stimulate invention in the agricultural sector by providing plant breeders

with patent protection equivalent to that available to inventors in industry.[1] The Report of the House Committee contains the statement by Thomas A. Edison that "[n]othing that Congress could do to help farming would be of greater value and permanence than to give to the plant breeder the same status as the mechanical and chemical inventors now have through the patent law."[2]

Mr. Edison's prediction that patent protection for the inventions of the plant breeder would stimulate and foster innovation and investment in agriculture was accurate. For example, the Economic Research Service of the United States Department of Agriculture estimated that cash receipts in this country in 1993 for nursery and greenhouse crops alone equaled $9 billion, nearly 11% of all farm crop cash receipts in this country.[3] As a result, this agricultural sector is the sixth largest among all commodity groups. It is even larger than such crops as wheat, cotton, and tobacco in terms of farm crop cash receipts.[4]

The plant patent system is utilized not only by plant breeders for the protection of new varieties created for the ornamental plant industry but also to protect new varieties of trees and plants producing fruits, nuts, berries, and other important crops. The vitality of the plant patent system is evidenced by the large number of applications issued by the PTO each year. For example, more than 400 plant patents issued in 1993.[5]

The drafters of the PPA recognized the difficulties related to compliance with the patent statutes with respect to written description and enablement of claims for plant varieties and provided that a plant patent shall not be declared invalid "if the description is as complete as is reasonably possible."[6] However, the plant patent is limited "in formal terms" to a single claim drawn to "the plant shown and described."[7]

The Plant Patent Grant

The plant patent grant is "the right to exclude others from asexually reproducing the plant or selling or using the plant so reproduced."[8] The plant may be invented or discovered (so long as it is found in a cultivated state), and must be asexually reproduced by the inventor, in order to secure plant patent protection.[9] In addition, the plant must be distinct from other plants of the same species. New varieties include "cultivated spores, mutants, hybrids and newly found seedlings . . . "[10]

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1 "The purpose of the bill is to afford agriculture, so far as practicable, the same opportunity to participate in the benefits of the patent system as has been given industry, and thus assist in placing agriculture on a basis of economic equality with industry. The bill will remove the existing discrimination between plant developers and industrial inventors. To these ends the bill provides that any person who invents or discovers a new and distinct variety of plant shall be given by patent an exclusive right to propagate the plant by asexual reproduction; that is by grafting, budding, cuttings, layering, division, and the like, **but not by seeds**" (emphasis in original). (S. Rep. No. 315, 71st Cong., 2d Sess.,1930).

2 H.R. Rep. No. 1129, 71st Cong., 2d Sess. (1930).

3 Mr. Craig J. Regelbrugge, Director of Regulatory Affairs and Grower Services, American Association of Nurserymen, kindly provided these data.

4 *Id.*

5 *Id.*

6 35 U.S.C. §162.

7 *Id.*

8 35 U.S.C. §163.

9 35 U.S.C. §161.

10 *Id.*

The meaning of "plant" in the PPA can be gleaned from its legislative history and court decisions. In reviewing the legislative history of the Act, a court stated that the word "plant" should be interpreted in the "common language of the people" and went on to cite with approval the definition of a plant in Webster's New International Dictionary as "1. A young tree, shrub, or herb, planted or ready to plant; slip, cutting, or sapling ...."[1] The legislative history of the PPA evidences that Congress intended to encourage agricultural development and, in doing so, include plant parts within the purview of the PPA.

The court held that sale of cuttings would be considered an infringement.[2] The court stated in *Yoder Bros.* that

> it was not necessary to prove that the cuttings actually matured into flowered plants to show infringement. . . we think section 163 is plain in its statement that a patentee may exclude others from asexually reproducing, selling or using the plant. The negative inference to be drawn from this is that commission of one of those acts would constitute infringement.[3]

Accordingly, the court in *Yoder Bros.* found that asexual reproduction, or selling, or using, the plant or plant part, irrespective of whether the plant part had matured into a plant, constitutes infringement.

Plant Patent Infringement Has an Adverse Impact on Research and Development and the Economic Health of Plant Biotechnology

The PTO has noted that "growers reproduce and use, outside the United States, plants subject to a U.S. plant patent, and subsequently import products harvested from such plants, to the detriment of the U.S. plant patent owner."[4] When competing in the market against lawfully produced plants, these imported products have a decided competitive advantage because the importer has not invested in the research necessary to develop the plant variety. In contrast, the breeder must sell the product at a price that recoups those research costs. Furthermore, the importer benefits from the breeder's promotional and advertising efforts. The income lost by American plant breeders because of patent infringement inhibits investment in plant research and development programs, which are the foundation of a strong horticultural industry.

The adverse consequences of patent infringement are particularly apparent in the cut flower industry. Since 1971, there has been a dramatic decrease in the number of United States growers engaged in the production of carnations, mums (standard), pompons, and roses (hybrid tea) and a corresponding increase in the percentage of the U.S. market for these same plant products controlled by importers.[5] A significant percentage of market share loss is attributable to the adverse impact of patent infringement on the domestic industry. For example, a single domestic rose breeder estimated lost royalty receipts in 1993 in excess of $1.5 million as a result of unauthorized import of patented products produced in five Latin American countries.[6]

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1 *In re Arzberger*, 112 F.2d 834, 837 (Ct. Cust. and Pat. App. 1940). In this case, the court addressed the question of whether bacteria were plants within the meaning of the PPA and concluded that they were not.

2 *Yoder Bros., Inc. v. California-Florida Plant Corp.*, 537 F.2d 1347 (5th Cir. 1970).

3 *Id.* at 295.

4 59 Fed. Reg. 45271.

5 Mr. William Carlson of the Floral Trade Council kindly provided these data.

6 Mr. Craig J. Regelbrugge, Director of Regulatory Affairs and Grower Services, American Association of Nurserymen, kindly provided these data.

Unauthorized Import into the United States of Plant Parts Produced Outside This Country by Asexually Propagating Plants Protected by a U.S. Plant Patent Likely Constitutes Infringement under Current Law

The PPA enables a plant breeder to obtain a patent allowing the breeder to prohibit asexual reproduction of plant varieties, as well as the sale or use of those plant varieties so reproduced. Without the patent owner's authorization, no one may asexually reproduce patented plant varieties in the United States. The unauthorized multiplication of a patented plant variety, even when the plant is lawfully acquired, is an infringement. Moreover, the sale of the plant variety obtained by such multiplication also is an infringement. To enforce patent rights, the patent owner may sue an unauthorized propagator. If the seller of the plants multiplied without authority of the patent owner is someone other than the propagator, the seller may also be sued for infringement.

Although a court has never decided the issue, it is likely to hold that unauthorized importation of plant parts that have been derived from a plant variety protected by U.S. plant patent, directly infringes the patent. The legislative history of the PPA indicates that Congress intended to include plant parts within the purview of the Act. The court has held that "patentee may exclude others from asexually reproducing, selling or using the plant" and that it is "not necessary to prove that the cuttings actually matured into flowered plants to show infringement."[1] Accordingly, a court is likely to find that use in this country of plant parts derived from a plant variety protected by a U.S. plant patent, but asexually propagated outside the United States, infringes the plant patent.

This result is particularly reasonable in light of advances in plant biotechnology that frequently make it possible to regenerate a plant by means of tissue culture from very small amounts of tissue taken from different parts of the whole plant. For example, stem tissue of certain cut flowers can be placed in tissue culture and used as a source of germplasm from which the whole plant can be regenerated. In this case, the cut flower is equivalent to the cutting found to be infringing in *Yoder Bros.*[2]

There is no actionable infringement of a patent for a machine based simply on the use or sale of the product made by the machine.[3] For infringement to occur under these circumstances, the product must be separately patentable. Plant parts, however, are not equivalent to the products of machines. Frequently, the patentability and economic value of the plant variety depends on the distinctive characteristics of the plant part. The plant part should not be viewed as a product of the plant because the vegetative cells of the plant part contain genetic material that is identical to the vegetative cells of the whole plant. In addition, the plant part frequently can be either rooted or cultured to obtain a whole plant that is identical to the original plant from which the plant part was derived. Sale or use of the part taken from a plant protected by plant patent is therefore infringing.

The plant patent claim is fundamentally a process claim because, absent asexual propagation of the protected variety, there can be no infringement. A court has noted that:

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1 *Yoder Bros., Inc. v. California-Florida Plant Corp.*, 537 F.2d 1347 (5th Cir. 1970).

2 *Id.*

3 *Amgen Inc. v. U.S. Int'l Trade Comm'n*, 902 F.2d 1532, 14 USPQ2d 1734 (Fed. Cir. 1990).

> asexual reproduction is the heart of the present plant patent system: the whole key to the "invention" of a new plant is the discovery of new traits plus the foresight and appreciation to take the step of asexual reproduction.[1]

In 1988, Congress passed the Process Patent Amendments Act (PPAA) that imposes liability for infringement on anyone who imports into the United States, or sells or uses within the United States, "a product which is made by a process patented in the United States."[2] Products that are "materially changed by subsequent processes" or products that become "a trivial and nonessential component of another product" are exempted by the statute.[3] As summarized by Senator Grassley of the Senate Judiciary Subcommittee on Patents, Copyrights and Trademarks, the new infringement provisions were intended to remedy the following:

> There, of course, is something very inherently unfair about U.S. research-based industries pouring resources into a product or a process patent and then having that product or process pirated abroad and shipped back into this country for sale. The inventor, of course, is required to disclose his or her process patent, and it is available in the Patent Office just like some recipe in a cookbook for all to see.[4]

The PPAA was intended to remedy the type of unfair trade practices currently encountered under the PPA. Foreign competitors rely on the research investment and ingenuity of U.S. companies and plant breeders for the creation of new varieties. These foreign competitors then practice the patented process, asexually propagating the protected variety outside of this country, and then import plant parts produced by this process into the United States. It is therefore likely that a court would find this activity to infringe a plant patent under the PPAA.

The Plant Patent Act Should be Amended to Provide Explicitly that the Plant Patent Grant Includes the Right to Exclude Others from Selling and Using Any Part of the Asexually Reproduced Plant

Although a court would likely find that unauthorized import into the United States of plant parts, produced outside this country by asexually propagating plant varieties protected by a U.S. plant patent, constitutes infringement under current law, the PPA should be amended to provide explicitly that the plant patent grant includes the right to exclude others from unauthorized sale or use of any part of the asexually reproduced plant variety. The amendment could be achieved by revising 35 U.S.C. §163 of the PPA to read:

> In the case of a plant patent, the grant shall be of the right to exclude others from reproducing the plant or selling or using the plant so reproduced, or any part thereof.

This amendment would make explicit the Congressional intent in enacting the PPA, as well as reduce the need for companies in the United States to engage in costly litigation to combat patent infringement by foreign competitors.

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1 *Yoder Bros., Inc. v. California-Florida Plant Corp.*, 537 F.2d 1347 (5th Cir. 1970).

2 35 U.S.C. §271(g).

3 *Id.*

4 *Process Patent Legislation: Hearing on S. 568, S. 573, and S. 635 Before Subcomm. on Patents, Copyrights and Trademarks of the Senate Comm. on the Judiciary*, 100th Cong., 1st Sess. 4 (1987).

The proposed amendment to the PPA would also provide clear uniformity in the laws related to the scope of protection available under the PPA for asexually propagated plant varieties, under the PVPA for sexually propagated plant varieties and under the utility patent statute for both asexually and sexually propagated plants.[1] In a utility patent, claims can be directed to plant parts. The International Convention for the Protection of New Varieties of Plants (UPOV), as revised March 19, 1991, and signed by the United States in October of 1991, requires member countries to accord rights to breeders of new varieties and member countries are required to protect the products of protected varieties. Specifically, the UPOV Convention provides the plant breeder with the right to prohibit others from selling, importing, or exporting harvested material, including cut flowers and ornamental plant parts, obtained from protected plant varieties without the breeder's authorization.

President Clinton signed into law on October 6, 1994, amendments to the PVPA that provide, in part, that unauthorized use of harvested material obtained from propagating material of a variety protected by PVPA certificate constitutes infringement (see below in this issue at <BLR 1878>). The PPA need not be amended for the United States to ratify and be bound by the 1991 Convention. Accordingly, a separate legislative initiative is necessary to provide domestic plant breeders of asexually reproduced varieties with the same explicit protections under the PPA as will be afforded plant breeders of sexually reproduced varieties under the PVPA.

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LEGISLATIVE AND EXECUTIVE ACTIONS

{BLR 1873} Anne K. Bingaman - Copyright - DoJ - Intellectual Property - Patents.

NEW GUIDELINES ON ANTITRUST CONCERNS IN INTELLECTUAL PROPERTY
— Critics Say Intellectual Property Rights Being Eroded by DoJ

WASHINGTON, D.C. 8/8/94 — The U.S. Department of Justice has issued guidelines on the licensing and acquisition of intellectual property that are intended to replace the intellectual property section of the 1988 Antitrust Enforcement Guidelines for International Operations. Given the actions to date of the Antitrust Division of the DoJ under Assistant U.S. Attorney General Anne K. Bingaman, some significant changes may be in store.

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[1] The PTO Board of Patent Appeals and Interferences made the administrative decision that plants produced by either sexual or asexual reproduction and plant parts (including seeds and tissue cultures) are protectable under 35 U.S.C. §101 (*Ex parte Hibberd* 227 USPQ 443 [PTO Bd. Pat. & Int'f. 1985]). Even in view of the *Hibberd* decision, however, the PPA continues to be critically important for the protection of new asexually reproduced plant varieties for which satisfaction of the more stringent written description and enablement requirements under 35 U.S.C. §101 would be impossible.