Plant Patents — Biological Necessities in Infringement Suits

By Peter Forbes Langbock *

The United States patent statutes now read in part:

> Whoever invents or discovers and asexually reproduces any distinct or new variety of plant, including cultivated sports, mutants, hybrids, and newly found seedlings, other than a tuber-propagated plant or a plant found in an uncultivated state, may obtain a patent therefor subject to the conditions and requirements of this title.[1]

Asexual reproduction is, without question, a pre-requisite for a plant patent.[2] But it is more than that; it is not only a prerequisite but of the very essence of the patent itself. The grant to a patentee of a plant patent is only the exclusive right to asexually reproduce the patented variety.[3] Any use that is made of a patented plant that does not involve asexual reproduction cannot constitute an infringement.

What constitutes asexual reproduction, this semi-sacred word in the field of plant patents? There are several specific methods. Each one of these methods consists of the isolation of a group or mass of vegetative cells from the parent plant that are capable of reproducing a plant that is genetically an exact duplication of its parent plant. Identical chromosomes exist in each cell of a plant, and it is these chromosomes that are responsible for defining the exact characteristics of the plant. In asexual reproduction, as the cells are separated from the parent plant without any internal change, they will reproduce an exact replica of the parent. The same chromosomes will define the same characteristics in the new plant. These chromosomes come in pairs. In sexual reproduction these pairs are split. A single cell is affected

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1 35 U. S. C. A. 161.

2 Allyn, Patentable Yardsticks, 25 J. P. O. S. 791, 816 (1943); cf. Senate Report of Committee on Patents 1930, The Prerequisite of Asexual Reproduction.

3 35 U. S. C. A. 163.

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internally and the result is two gametes, both of which may be different, each containing only half the number of chromosomes of the parent. These gametes must then join with another gamete and form a zygote before reproduction can take place. This very joining of the gametes is what brings foreign characteristics into the newly produced plant.

The original purpose of the plant patent statutes was, in so far as possible, to put agriculture on an even footing with industry in the benefits of the patent system.[4] However, plants are considerably different from machines, they are a direct product of little-understood mother nature, and are not merely a creation of man's mind. They do not lend themselves to the patent system with any where nearly the degree of facility as do mechanical, or even chemical, inventions. Thus in looking towards the goal sought, one must also keep in mind the goal that can be attained—this was the process that evolved the present plant patent statute. It would be impossible, even if desirable, to protect plants which are to be sexually reproduced, as their individual characteristics merge and are lost in each generation. Thus asexual reproduction only, as a means of reproducing plants, can be protected realistically under our patent system. There is even the further exception "other than a tuber-propagated plant." This exception is undoubtedly based on the impossibility of enforcing an exclusive right to asexually reproduce a plant where the very part of the plant that is used in the reproductive process is sold for food.

What test is to be used in infringement proceedings to show an invasion of the patentee's exclusive right to reproduce asexually his patented plant? It is necessary that there be some sort of a physical appropriation from one of the patent plants. It is only when there is such a physical appropriation that the rights of the patentee are invaded. Another person can develop a similar or even

[4] cf. Senate Report of Committee on Patents (1930).

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identical [5] plant on his own and not only would he be free from a charge of infringement but might be entitled to a patent of his own. The test set out by Magnuson [6] calling for only a showing of an asexual reproduction of "substantially the same plant" misses the narrow confinement of the protection afforded to plant patents. It is not substantially the same plant that is patented but one particular plant that has one particular chromosome structure and when reproduced asexually will produce plants that have an absolute genetic identity with the parent plant. There are environment factors that may result in a plant that is genetically identical having characteristics that vary from the parent plant, much as identical twins will develop more and more individual characteristics as the minor variations in their environments take their toll. Thus there can be an infringement even where there is a diversity in the superficial characteristics between the parent and the infringing plants, where these differences are the result of environmental factors. As it is possible for a non-infringing plant to be identical with a patented plant and also for an infringing plant to vary considerably in its superficial characteristics from the patented parent plant, what then is the law to do? It is often difficult or even impossible to show the actual appropriation where the burden of proof is on the patentee charging infringement.[7] As it is necessary to show a physical appropriation for there to be an infringement, while this burden is on the plaintiff enforcement of plant patents will be ineffective. It is therefore time for the law to create a presumption that an infringement has occurred upon the showing by the patentee that the defendant's allegedly infringing plants are substantially

[5] It is theoretically possible for two plants to have identical genetic structures and yet come from different sources. Such a possibility however is almost as remote as two human beings, not twins, having identical genetic structures.

[6] A Short Discussion On The Various Aspects Of Plant Patents, 30 J. P. O. S. 493 (1948).

[7] Cole Nursery v. Youdath Perennial Gardens 17 F. Supp. 159, (D. C. Ohio, 1936); Bourne v. Jones 114 F. Supp. 413 (D. C. Fla. 1951); Kim Bros. v. Hagler 167 F. Supp. 665 (D. C. Calif. 1958).

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