



General Information About 35 U.S.C. 161 Plant Patents

This publication provides a basic overview of plant patents, and is intended to:

- Help prospective plant patent applicants identify what types of plants are patentable under the provisions of 35 U.S.C. 161.
- Present the legal requirements for attaining a plant patent in terms which can be understood by not only attorneys/agents, but also plant breeders, growers and gardeners.
- Present the formal requirements of an application for a plant patent.
- Assist in gathering and organizing sufficient information for preparation of a plant patent application.
- Summarize the typical steps which are performed by the United States Patent and Trademark Office (USPTO).
- Indicate where further information can be attained.

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What is a plant patent?

A plant patent is granted by the United States government to an inventor (or the inventor's heirs or assigns) who has invented or discovered and asexually reproduced a distinct and new variety of plant, other than a tuber propagated plant or a plant found in an uncultivated state. The grant, which lasts for 20 years from the date of filing the application, protects the patent owner's right to exclude others from asexually reproducing the plant, and from using, offering for sale, or selling the plant so reproduced, or any of its parts, throughout the United States, or from importing the plant so reproduced, or any part thereof, into the United States. This protection is limited to a plant in its ordinary meaning:

- A living plant organism which expresses a set of characteristics determined by its single, genetic makeup or genotype, which can be duplicated through asexual reproduction, but cannot otherwise be "made" or "manufactured."
- Cultivated sports, mutants, hybrids, or transformed plants, where sports or mutants may be spontaneous or induced, and hybrids may be natural, from a planned breeding program, or somatic in source. While natural plant mutants might have naturally occurred, they must have been discovered in a cultivated area.
- Algae and macro-fungi are regarded as plants, but bacteria are not.

The information presented in this publication is tailored to apply to, and is limited to patents on asexually reproduced plants. While the USPTO does accept utility applications having claims to plants, seed, genes, etc., such practice is beyond the scope of this publication. General information regarding utility patent practice can be obtained by calling the USPTO Inventors Assistance Center at 1-800-786-9199, or from a registered patent attorney or agent. Intellectual property protection for seed-reproduced plant varieties other than a utility patent is available through the USDA's Plant Variety Protection Office, Washington, D.C., which should be contacted for information regarding non-patent intellectual property protection for such varieties.

Provisions and Limitations

Patents to plants, which are stable and reproduced by asexual reproduction, and not a potato or other edible tuber reproduced plant, are provided for by Title 35 United States Code, Section 161 which states:

"Whoever invents or discovers and asexually reproduces any distinct and 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.

The provisions of this title relating to patents for inventions shall apply to patents for plants, except as otherwise provided."

As noted in the last paragraph of the statute, the plant patent must also satisfy the general requirements of patentability. The subject matter of the application would be a plant which is developed or discovered by the inventor, and which has been found stable by asexual reproduction. To be patentable, it is also required:

- That the plant was invented or discovered in a cultivated state, and asexually reproduced.
- That the plant is not a plant which is excluded by statute, where the part of the plant used for asexual

reproduction is not a tuber food part, as with potato or Jerusalem artichoke;

- That the inventor named for a plant patent application must be the person who actually invented the claimed plant, i.e., discovered or developed and identified or isolated, and asexually reproduced the plant;
- That the plant has not been patented, in public use, on sale, or otherwise available to the public prior to the effective filing date of the patent application with certain exceptions;
- That the plant has not been described in a U.S. patent or published patent application with certain exceptions;
- That the plant be shown to differ from known, related plants by at least one distinguishing characteristic, which is more than a difference caused by growing conditions or fertility levels, etc.; and
- That the invention would not have been obvious to one having ordinary skill in the art as of the effective filing date of the claimed plant invention.

Where doubt exists as to the patentability of a specific plant, a qualified patent practitioner should be consulted prior to filing an application for a plant patent.

Inventorship

The term "inventor" means the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention. Because there may be multiple steps in developing a plant invention, it is possible to have more than one inventor of a plant invention. For example, if one person discovered a new and distinct plant and asexually reproduced the plant, such person would be a sole inventor. If one person discovered or selected a new and distinct plant, and a second person asexually reproduced the plant and ascertained that the clone(s) of the plant were identical to the original plant in every distinguishing characteristic, the second person would properly be considered a co-inventor. If a group of staff or collaborators contributed to the final plant invention, everyone would be considered co-inventors. However, an inventor may direct that the step of asexual reproduction be performed by a custom propagation service or tissue culture enterprise. Those performing the service would not be considered co-inventors.

Asexual Reproduction

Asexual reproduction is the propagation of a plant without the use of fertilized seeds to assure an exact genetic copy of the plant being reproduced. Any known method of asexual reproduction which renders a true genetic copy of the plant may be employed. Acceptable modes of asexual reproduction would include but may not be limited to:

Rooting Cuttings	Grafting and Budding
Apomictic Seeds	Bulbs
Division	Slips

Layering	Rhizomes
Runners	Corms
Tissue Culture	Nucellar Embryos

The purpose of asexual reproduction is to establish the uniformity and stability of the plant. This second step of the invention must be performed with sufficient time prior to application for patent rights to allow thorough evaluation of propagules or clones of the claimed plant for stability, thus assuring that such specimens retain the identical distinguishing characteristics of the original plant.

Rights Conveyed by a Plant Patent

Grant of a plant patent precludes others from asexually reproducing, selling, offering for sale, or using the patented plant or any of its parts in the United States or importing them into the United States. A plant patent is regarded as limited to one plant, or genome. A plant derived from a sport or a mutant is unlikely of the same genotype as the original plant, and thus would not be covered by the plant patent to the original plant. Such plant derived from a sport or such mutant may itself be protected under a separate plant patent, subject to meeting the requirements of patentability. A plant patent expires 20 years from the filing date of the patent application. As with utility patents, when the plant patent expires, the subject matter of the patent is in the public domain.

The Application

While the formal requirements of an application for plant patent will be outlined below, anyone seeking a patent should consult with the USPTO Web site just before filing of an application to ensure that new requirements have not been made, and that the fees filed with the application reflect the current amount due, as such are subject to change. Filing an application which is not complete may result in the application not being accepted by the USPTO, and thus may result in the loss of intellectual property rights. Applications which are not formal when filed may also result in loss of rights. Current filing, search, and examination fees for Plant Patent Applications may be found at: <http://www.uspto.gov/web/offices/ac/qs/ope/fees.htm> (<http://www.uspto.gov/web/offices/ac/qs/ope/fees.htm>). (Fees are subject to change.) Prospective applicants are reminded that currently plant patent applications under 35 U.S.C. 161 are not allowed to be filed electronically, for example, using the USPTO's EFS-Web system available at the USPTO's Web site.

Legal Representation

Those seeking a plant patent should be aware that they may prosecute their applications through the services of a registered patent attorney or agent. If the applicant is the assignee (juristic entity), then it is required that a patent practitioner be used. While the USPTO will not help in the selection of an attorney/agent, one seeking a plant patent should select an attorney/agent who is registered to practice before the USPTO.

The USPTO maintains a directory of registered patent attorneys and agents that can be downloaded at <https://oedci.uspto.gov/OEDCI/practitionerRoster.jsp> (<https://oedci.uspto.gov/OEDCI/practitionerRoster.jsp>)

Content and Arrangement

With some exceptions, a plant patent application is subject to the same requirements as a utility application. Title 37 of the Code of Federal Regulations, Section 1.163(a), requires that the specification must contain as full and complete a botanical description as reasonably possible of the plant and the characteristics which distinguish that plant over known, related plants. The components of a plant application are similar to those of a utility application and are covered by the following guidelines which illustrate the preferred layout and content for patent applications. These guidelines are suggested for use by one filing a plant patent application:

Arrangement of the Specification

The following arrangement is preferred in framing the specification and, except for the title of the invention, each of the lettered items should be preceded by the headings indicated below as tailored for application for a plant patent filed under 35 U.S.C. 161:

(a) Title of the Invention. The title of the invention may include an introductory portion stating the name, citizenship, and residence of the inventor(s).

(b) Cross Reference to Related Applications (if any, unless included in an application data sheet). Related applications may include:

- A utility application from which the claimed plant is the subject of a divisional application.
- A continuation (co-pending, newly filed application) to the same plant filed when a parent application has not been allowed to a sibling cultivar.
- An application not co-pending with an original application which was not allowed.
- Copending applications to siblings or similar plants developed by the same breeding program, etc.

(c) Statement regarding Federally-sponsored research and development (if any).

(d) Latin name of the genus and species of the plant claimed.

(e) Variety denomination.

(f) Background of the invention.

1. **Field of the Invention.** The field of the invention is intended to identify the botanical and market class of the invention, and to reflect how the plant will be used. This section should indicate the botanical name of the plant by genus and species, and should state the market class of the plant.
2. **Description of relevant prior art including information disclosed under 37 CFR 1.97 and 1.98.** Here, the parents of the claimed plant, or known plants to which the claimed plant is related are discussed. Frequently the parent plant or plants are identified in this section and are described as to their most important or distinguishing characteristics. The claimed plant may be compared to the parent plant or plants. If the parent plants are not known, the probable parent plants may be indicated. It is appropriate in this section to indicate how the plant was attained and to detail the necessary averments to how and where the plant has been

asexually reproduced. This section should also include a positive statement that the clones or propagules of the claimed plant are identical to the original plant in all distinguishing characteristics so as to establish that the claimed plant is stable.

(g) Summary of the Invention. In the Summary section, the major characteristics of the plant are set forth, and they may be presented as a list of novel characteristics, or by a narrative description of the trait or traits of the plant which set the plant apart from all other plants of the botanical class and the market class of plant.

(h) Brief Description of the Drawing. Under this heading, a separate brief description should be presented to describe the contents of each view or figure of the drawing. The drawing in a plant patent must show the plant with the most distinguishing characteristics of the plant in sufficient scale to be identifiable when reduced by as much as 50%. Drawings should be photographic, and must be in color where coloration is a distinguishing characteristic. Where characteristics of foliage, bark, flowers and/or fruit are distinguishing, such plant parts should be clearly depicted in one or more figures of drawing.

(i) Detailed Botanical Description of the Plant. This section should be a complete botanical description of the claimed plant. Specification of the genus, species and market class may begin this section, and the parents of the claimed plant may be specified in the initial part of this section. The growth habit of the plant should be described as to the shape of the plant at maturity, and branching habit. The characteristics of the plant in winter dormancy should be completely described, if appropriate. A complete botanical description of bark, buds, blossoms, leaves, and fruit should be a part of the disclosure. Plant characteristics which are not capable of definitive written description or which cannot be clearly shown must be given substantive attention in this portion of the application. These would include, but not limited to, fragrance, taste, disease resistance, productivity, precocity, and vigor. Even if the characteristics are well depicted, the botanical characteristics must be substantively described. The descriptions in this section should be botanical in nature and should be in terms of the art of the plant. The detail of this section should be sufficient to prevent others from attempting to patent the same plant at a later date by simply describing the plant in more detail and with the allegation that the original patent did not state the characteristics being further described.

(j) Claim. A plant patent is limited to one claim. The claim shall be in formal terms to the plant as shown and described, as the claim is statutorily drawn to the plant as a whole. The claim may also make reference to one or more of the unusual characteristics of the plant, but may not claim parts or products of the plant. The claim must be in single sentence form and on a separate sheet.

(k) Abstract of the Disclosure. The abstract is a brief description of the plant and of the most notable or novel and important characteristics of the claimed plant. Preferably, the description of the plant will be a condensed review or presentation of the most distinguishing characteristics of the plant.

Preparation of the Application

While background information for specific classes of plants may be readily available, one seeking to file a plant patent application should be thoroughly familiar with the characteristics of the plant, and must assure that the plant is stable. Invention for purposes of a plant patent is a two-step process:

- The first step is the discovery step which involves the identification of a novel plant. This step could be

performed in any cultivated area. It could involve the identification or recognition of an off-type plant in a monoculture of a known variety or the identification of a desirable mutant which was either spontaneous or induced. Or, it could result from the identification or recognition of an outstanding individual within the progeny of a cross made in a planned breeding program.

- The second step, which consists of asexual reproduction, tests the stability of the claimed plant to assure that the plant's unique characteristics are not due to disease, infection, or exposure to agents which cause a change in the plant's appearance which is transitory and not due to a change in the genotype of the plant.

It is important that each of the above steps is satisfied before an application is filed. The inventor of a plant must have discovered or identified the novel plant, and must have asexually reproduced the plant and observed the clones so produced for a sufficient amount of time to have concluded that the clones are identical to the parent plant in all characteristics. It would be inappropriate to file an application before the second step of invention had been completed. Filing of an application before the second step of invention has been completed will result in rejection of the claim as being premature and nonstatutory.

Oath or Declaration

The inventor named for a plant patent application must be the person (or persons) who has (or have) invented or discovered and asexually reproduced the new and distinct variety of plant for which the patent is sought. In addition to the averments required for a utility application's oath or declaration, those applying for a plant patent must also state that applicant(s) has or have asexually reproduced the plant. If the plant is a newly found plant, the oath or declaration must also state that the plant was found in a cultivated area.

A Plant Patent Application Declaration, Form PTO/AIA/09, may be used to submit a declaration in a plant patent application filed on or after September 16, 2012. Such Oath or Declaration may be filed at any time on or after filing of the application, but no later than the date on which the issue fee is paid.

The Drawing

Plant drawings are normally photographic, but may be presented in other mediums, such as in permanent water color renderings, which faithfully present the appearance of the plant. Such drawings are not mechanical drawings and should be artistic and competent in their execution. Figure numbers and reference characters need not be used unless specifically required by the examiner. The drawing must disclose all of the distinctive characteristics of the plant which are capable of visual representation. Detailed standards for drawings are set forth under 37 C.F.R. 1.84 (<http://www.uspto.gov/web/offices/pac/mpep/mpep-9020-appx-r.html> (<http://www.uspto.gov/web/offices/pac/mpep/mpep-9020-appx-r.html>)).

Drawings may be in color. Where color is a distinguishing characteristic of the new plant, the drawing must be in color. The colors depicted must correspond with their respective color designations set forth in the specifications defined in a recognized color dictionary which is specifically identified in the specification. Two copies of color drawings must be submitted.

Final Preparation and Assembly

Before an application is filed, the (clones of the) plant must have been carefully observed during the testing process. Because **the botanical description of the plant must be reasonably complete**, it would not suffice to describe just the fruit, or flower, or bark, or leaves of any specific plant, even if these plant parts were the valuable substance of the plant in commerce or the only parts seem to be distinctive or different. It would be inappropriate to describe just the bark, roots and juvenile growth of a rootstock, even if only these parts would normally be seen by or important to the consumer who was to purchase the plant.

In preparation of a plant patent disclosure, all parts of the plant should be carefully observed through at least one growth cycle and such observations should be recorded in detail. Because many plants (like pine trees of the same species, asparagus plants, bluegrass plants, etc.) may look very similar, it may take the collective differences in a number of traits to distinguish a new cultivar. Failure to record characteristics and differences at their time of availability in the growing season could result in applicant not being able to adequately botanically describe the claimed plant when the specification is drafted. Incomplete records of a claimed plant may render it impossible to overcome defects identified in an examiner's rejection or at the very least prolong prosecution of the application.

Among the factors which must be ascertained for a reasonably complete botanical description for the claimed plant are:

- Genus and species
- Habit of growth
- Cultivar name
- Precocity (if applicable)
- Botanical characteristics of plant structures (i.e. buds, bark, foliage, flowers, fruit, etc.)
- Fertility (Fecundity)
- Other characteristics which distinguish the plant such as resistance(s) to disease, drought, cold, dampness, etc., fragrance, coloration, regularity and time of bearing, quantity or quality of extracts, rooting ability, timing or duration of flowering season, etc.

The amount of detail required in a plant patent application is determined on a case-by-case basis, and is determined by the similarity of the prior art plants to the plant being claimed. The examiner will evaluate the completeness of the application. The examiner's judgment may be tempered by the level of activity in a specific market class. The botanical description of a plant in a market class with a high level of commercial activity may require greater detail, substance and specificity than that for a plant in a market class of little activity.

The Examination

Upon filing, the application is reviewed for formalities in the USPTO's Office of Patent Application Processing where it is assigned an application number, and if all formal requirements are found in compliance, the application is assigned to a patent examiner for examination based on the current patent rules and laws, the

detailed procedure of which for plant applications can be found in Chapter 1600 of the Manual of Patent Examining Procedure (the MPEP) available from the USPTO's Web site (<http://www.uspto.gov/web/offices/pac/mpep/mpep-1600.html> (<http://www.uspto.gov/web/offices/pac/mpep/mpep-1600.html>)).

Helpful Hints

- Make every attempt not to present a name for the plant which has already been used or is confusingly similar to a plant of the same market or botanical class. Search old catalogs, Plant Variety Database of the International Union for the Protection of New Varieties of Plants (UPOV) at www.upov.int (<http://www.upov.int>), and other available international register listings before assigning a name to a plant.
- File all drawings in duplicate. Be sure that two formally mounted sets of drawings accompany the application when filed, and that these are of reasonable fidelity to the specified colors of the plant. Be sure that the scale and clarity of the drawings are appropriate to allow for adequate reproduction even if reduced in scale upon publishing. Include a transmittal sheet which itemizes the contents of the application as filed.
- File each individual application in a separate envelope, and be sure to include all of the parts of each application in the same envelope. Include a self-addressed postcard itemizing all of the components of the application (see MPEP § 503) for return to applicant with a preliminary indication of the application number of the application.
- Model the application after a patent of acceptable format and content which describes a plant which is related to or in the same market class as the claimed plant, if one is available.
- Check that the oath or declaration is that required for a plant patent application. Ensure that the oath or declaration has been signed and permanent ink or its equivalent, and is signed no earlier than three months prior to the filing of the application. Check that the mailing address of the inventor(s) is/are correct and complete.
- Where color is a distinguishing characteristic of the plant, specify the color of the plant as defined by reference to an established color dictionary which is recognized in this country.
- Be sure that drawings filed are complete, correctly mounted, and reasonably correspond with the colors of the plant which are specified and to the true and characteristic plant coloration.
- Include the appropriate filing fee, search fee, and examination fee with the application to avoid processing delays.
- Direct pre-examination questions concerning the application to the Examiner, by telephone to expedite prosecution. Include a current telephone number with all correspondence with the USPTO.

Correspondence

New patent applications should be mailed to:

Commissioner for Patents**P.O. Box 1450****Alexandria, VA 22313-1450****Telephone Inquiry Contacts**

Any inquiry concerning this publication may be extended to

Supervisory Patent Examiner: Shubo (Joe) Zhou at (571) 272-0724 or

Supervisory Patent Examiner: Amjad Abraham at (571) 270-7058

Additional Links

- Download forms at <http://www.uspto.gov/patent/patents-forms> (<http://www.uspto.gov/patent/patents-forms>)
- Fees <http://www.uspto.gov/learning-and-resources/fees-and-payment> (<http://www.uspto.gov/learning-and-resources/fees-and-payment>)
- The MPEP: <http://www.uspto.gov/web/offices/pac/mpep/index.html> (<http://www.uspto.gov/web/offices/pac/mpep/index.html>)

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