EXHIBIT 1

PART 3 OF 5

601.02 Power of Attorney or Authorization of Agent

The attorney's or agent's full post office address (including ZIP code number) must be given in every power of attorney or authority of agent. The telephone number of the attorney or agent should also be included in the power. The prompt delivery of communications will thereby be facilitated.

Usually a power of attorney or authorization of agent is incorporated in the oath or declaration form. (See MPEP § 402.)

601.03 Change of Correspondence Address [R–1]

Where an attorney or agent of record (or applicant, if he or she is prosecuting the application *pro se*) changes his or her correspondence address, he or she is responsible for promptly notifying the Patent and Trademark Office of the new correspondence address (including ZIP Code number).The notification should also include his or her telephone number.

A separate notification must be filed in each application for which a person is intended to receive communications from the Office. In those instances where a change in the correspondence address of a registered attorney or agent is necessary in a plurality of applications, the notification filed in each application may be a reproduction of a properly executed, original notification. The original notice * >may< either be sent to the Office of Enrollment and Discipline as notification to the Attorney's Roster of the change of address, or * >may< be filed in one of the applications affected, provided that the notice includes an authorization for the public to inspect and copy the original notice in the event one of the applications containing a copy matures into a patent and the application containing the original paper is either pending or has become abandoned. >Alternatively, the paper containing the original signature may be retained by applicant. See MPEP § 502.02.< The copies submitted in each affected application must identify where the original paper is located.

See MPEP § 711.03(c) for treatment of petitions to revive applications abandoned as a consequence of failure to timely receive an Office action addressed to the old correspondence address.

The required notification of change of correspondence address need take no particular form. However, it should be provided in a manner calling attention to the fact that a change of address is being made. Thus, the mere inclusion, in a paper being filed for another purpose, of an address which is different from the previously provided correspondence address, without mention of the fact that an address change is being made would not ordinarily be recognized or deemed as instructions to change the correspondence address on the file record.

The obligation (see 37 CFR 10.11) of a registered attorney or agent to notify the Attorney's Roster by letter of any change of his or her address for entry on the register is separate from the obligation to file a notice of change of address filed in individual applications. See MPEP § 402.

601.04 National Stage Requirements of the United States as a Designated Office [R–1]

See MPEP Chapter 1800, especially MPEP § ** >1893.01< for requirements for entry into the national stage before the Designated Office or Elected Office under the Patent Cooperation Treaty (PCT).

602 Original Oath or Declaration [R–1]

35 U.S.C. 25. Declaration in lieu of oath.

(a) The Commissioner may by rule prescribe that any document to be filed in the Patent and Trademark Office and which is required by any law, rule, or other regulation to be under oath may be subscribed to by a written declaration in such form as the Commissioner may prescribe, such declaration to be in lieu of the oath otherwise required.

(b) Whenever such written declaration is used, the document must warn the declarant that willful false statements and the like are punishable by fine or imprisonment, or both (18 U.S.C. 1001).

35 U.S.C. 26. Effect of defective execution.

Any document to be filed in the Patent and Trademark Office and which is required by any law, rule, or other regulation to be executed in a specified manner may be provisionally accepted by the Commissioner despite a defective execution, provided a properly executed document is submitted within such time as may be prescribed.

35 U.S.C. 115. Oath of the applicant.

The applicant shall make oath that he believes himself to be the original and first inventor of the process, machine, manufacture, or composition of matter, or improvement thereof, for which he solicits a patent; and shall state of what country he is a citizen. Such oath may be made before any person within the United States authorized by law to administer oaths, or, when made in a foreign country, before any diplomatic or consular officer of the United States authorized to admin-

After a requirement for restriction, nonelected claims will be included in determining the fees due in connection with a subsequent amendment unless such claims are cancelled.

An amendment canceling claims accompanying the papers constituting the application will be effective to diminish the number of claims to be considered in calculating the filing fees to be paid.

The additional fees, if any, due with an amendment are required prior to any consideration of the amendment by the examiner.

Money paid in connection with the filing of a proposed amendment will not be refunded by reason of the nonentry of the amendment. However, unentered claims will not be counted when calculating the fee due in subsequent amendments.

Amendments affecting the claims cannot serve as the basis for granting any refund.

See MPEP § 1415 for reissue application fees.

607.02 Returnability of Fees [R–1]

>37 CFR 1.26. Refunds.

(a) Money paid by actual mistake or in excess will be refunded, but a mere change of purpose after the payment of money, as when a party desires to withdraw an application, an appeal, or a request for oral hearing, will not entitle a party to demand such a return. Amounts of twenty–five dollars or less will not be returned unless specifically requested within a reasonable time, nor will the payer be notified of such amount; amounts over twenty–five dollars may be returned by check or, if requested, by credit to a deposit account.

(b) [Reserved]

(c) If the Commissioner decides not to institute a reexamination proceeding, a refund of $1,690 will be made to the requester of the proceeding. Reexamination requesters should indicate whether any refund should be made by check or by credit to a deposit account.

Since 37 CFR 1.26(a) precludes refund of an application filing fee when applicant desires to withdraw an application, any request by applicant not to process or charge an application filing fee because the application was not intended to be filed must be in the form of a petition under 37 CFR 1.183 requesting suspension of the rules to the extent that the filing fee not be processed or charged. Any such petition must include the fee set forth in 37 CFR 1.17(h) and must be accompanied by an express abandonment of the application in accordance with 37 CFR 1.138. In order for such a petition to be granted, it must ordinarily be filed and acted upon prior to the date on which the application filing fee is processed or charged by the Office with regard to the application.<

All questions pertaining to the return of fees are referred to the Refund Section of the Accounting Division of the Office of Finance. No opinions should be expressed to attorneys or applicants as to whether or not fees are returnable in particular cases. Such questions may also be treated, to the extent appropriate, in decisions on petition decided by various Patent and Trademark Office officials.

608 Disclosure

In return for a patent, the inventor gives as consideration a complete revelation or disclosure of the invention for which protection is sought. All amendments or claims must find basis in the original disclosure, or they involve new matter. Applicant may rely for disclosure upon the specification with original claims and drawings, as filed. See 37 CFR 1.118 and MPEP § 608.04.

If during the course of examination of a patent application, an examiner notes the use of language that could be deemed offensive to any race, religion, sex, ethnic group, or nationality, he or she should object to the use of the language as failing to comply with the Rules of Practice. 37 CFR 1.3 proscribes the presentation of papers which are lacking in decorum and courtesy. There is a further basis for objection in that the inclusion of such proscribed language in a Federal Government publication would not be in the public interest. Also, the inclusion in application drawings of any depictions or caricatures that might reasonably be considered offensive to any group should be similarly objected to, on like authority.

The examiner should not pass the application to issue until such language or drawings have been deleted, or questions relating to the propriety thereof fully resolved.

For design application practice, see MPEP § 1504.

608.01 Specification [R–2]

35 U.S.C. 22. Printing of papers filed.

The Commissioner may require papers filed in the Patent and Trademark Office to be printed or typewritten.

37 CFR 1.71. Detailed description and specification of the invention.

(a) The specification must include a written description of the invention or discovery and of the manner and process of making and using the same, and is required to be in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which the invention or discovery appertains, or with which it is most nearly connected, to make and use the same.

(b) The specification must set forth the precise invention for which a patent is solicited, in such manner as to distinguish it from other inventions and from what is old. It must describe completely a specific embodiment of the process, machine, manufacture, composition of matter or improvement invented, and must explain the mode of operation or principle whenever applicable. The best mode contemplated by the inventor of carrying out his invention must be set forth.

(c) In the case of an improvement, the specification must particularly point out the part or parts of the process, machine, manufacture, or composition of matter to which the improvement relates, and the description should be confined to the specific improvement and to such parts as necessarily cooperate with it or as may be necessary to a complete understanding or description of it.

(d) A copyright or mask work notice may be placed in a design or utility patent application adjacent to copyright and mask work material contained therein. The notice may appear at any appropriate portion of the patent application disclosure. For notices in drawings, see § 1.84(o). The content of the notice must be limited to only those elements required by law. For example, "© 1983 John Doe" (17 U.S.C. 401) and "M John Doe" (17 U.S.C. 909) would be properly limited and, under current statutes, legally sufficient notices of copyright and mask work, respectively. Inclusion of a copyright or mask work notice will be permitted only if the authorization language set forth in paragraph (e) of this section is included at the beginning (preferably as the first paragraph) of the specification.

(e) The authorization shall read as follows:

A portion of the disclosure of this patent document contains material which is subject to {copyright or mask work} protection. The {copyright or mask work} owner has no objection to the facsimile reproduction by anyone of the patent document or the patent disclosure, as it appears in the Patent and Trademark Office patent file or records, but otherwise reserves all {copyright or mask work} rights whatsoever.

Certain cross notes to other related applications may be made. References to foreign applications or to applications identified only by the attorney's docket number should be required to be cancelled. See 37 CFR 1.78 and MPEP § 202.01.

37 CFR 1.52. Language, paper, writing, margins.

(a) The application, any amendments or corrections thereto, and the oath or declaration must be in the English language except as provided for in § 1.69 and paragraph (d) of this section, or be accompanied by a verified translation of the application and a translation of any corrections or amendments into the English language. All papers which are to become apart of the permanent records of the Patent and Trademark Office must be legibly written, typed, or printed in permanent ink or its equivalent in quality. All of the application papers must be presented in a form having sufficient clarity and contrast between the paper and the writing, typing, or printing thereon to permit the direct production of readily legible copies in any number by use of photographic, electrostatic, photo-offset, and microfilming processes. If the papers are not of the required quality, substitute typewritten or printed papers of suitable quality may be required.

(b) The application papers (specification, including claims, abstract, oath or declaration, and papers as provided for in §§ 1.42, 1.43, 1.47, etc.) and also papers subsequently filed, must be plainly written on but one side of the paper. The size of all sheets of paper should be 8 to 8 1/2 by 10 1/2 to 13 inches (20.3 to 21.6 cm. by 26.6 to 33.0 cm.) A margin of at least approximately 1 inch (2.5 cm.) must be reserved on the left-hand of each page. The top of each page of the application, including claims must have a margin of at least approximately 3/4 inch (2 cm.). The lines must not be crowded too closely together; typewritten lines should be 1 1/2 or double spaced. The pages of the application including claims and abstract should be numbered consecutively, starting with 1, the numbers being centrally located above or preferably, below, the text.

(c) Any interlineation, erasure, cancellation or other alteration of the application papers filed should be made before the signing of any accompanying oath or declaration pursuant to § 1.63 referring to those application papers and should be dated and initialed or signed by the applicant on the same sheet of paper. Application papers containing alterations made after the signing of an oath or declaration referring to those application papers must be supported by a supplemental oath or declaration under § 1.67(c). After the signing of the oath or declaration referring to the application papers, amendments may only be made in the manner provided by §§ 1.121 and 1.123 through 1.125.

(d) An application may be filed in a language other tha English. A verified English translation of the non-English language application and the fee set forth in § 1.17(k) are required to be filed with the application or within such time as may be set by the Office.

37 CFR 1.58. Chemical and mathematical formulas and tables.

(a) The specification, including the claims, may contain chemical and mathematical formulas, but shall not contain drawings or flow diagrams. The description portion of the specification may contain tables; claims may contain tables only if necessary to conform to 35 U.S.C. 112 or if otherwise found to be desirable.

(b) All tables and chemical and mathematical formulas in the specification, including claims, and amendments thereto, must be on paper which is flexible, strong, white, smooth, nonshiny, and durable, in order to permit use as camera copy when printing any patent which may issue. A good grade of bond paper is acceptable; watermarks should not be prominent. India ink or its equivalent, or solid black typewriter should be used to secure perfectly black solid lines.

(c) To facilitate camera copying when printing, the width of formulas and tables as presented should be limited normally to 5 inches (12.7 cm.) so that it may appear as a single column in the printed patent. If it is not possible to limit the width of a formula or table to 5 inches (12.7 cm.), it is permissible to present the formula or table with a maximum width of 10 3/4 inches (27.3 cm.) and to place it sideways on the sheet. Typewritten characters used in such formulas and tables must be from a block (nonscript) type font or lettering style having capital letters which are at least 0.08 inch (2.1 mm.) high (elite type). Hand lettering must be neat, clean, and have a minimum character height of 0.08 inch (2.1 mm.). A space at least 1/4 inch (6.4 mm.) high should be provided between complex formulas and tables and the text. Tables should have the lines and columns of data closely spaced to conserve space, consistent with high degree of legibility.

In order that specifications may be expeditiously handled by the Office, page numbers should be placed at

the center of the top or bottom of each page. It is a common practice and a commendable one, to consecutively number all the lines or every fifth line of each page. A top margin of at least 3/4 inch should be reserved on each page to prevent possible mutilation of text when the papers are punched for insertion in a file wrapper.

Applicants should make every effort to file patent applications in a form that is clear and reproducible. The Office may accept for filing date purposes papers of reduced quality but will require that acceptable copies be supplied for further processing. Typed, mimeographed, xeroprinted, multigraphed or non-smearing carbon copy forms of reproduction are acceptable.

Legibility includes ability to be photocopied and photomicrographed so that suitable reprints can be made. This requires a high contrast, with black lines and a white background. Gray lines and/or a gray background sharply reduce photo reproduction quality. Legibility of some application papers may become impaired due to abrasion or aging of the printed material during examination and ordinary handling of the file. It may be necessary to require that legible and permanent copies be furnished at later stages after filing, particularly when preparing for issue.

Some of the patent application papers received by the Patent and Trademark Office are copies of the original, ribbon copy. These are acceptable if, in the opinion of the Office, they are legible and permanent.

The paper used must have a surface such that amendments may be written thereon in ink. So-called "Easily Erasable" paper having a special coating so that erasures can be made more easily may not provide a "permanent" copy 37 CFR 1.52(a). If a light pressure of an ordinary (pencil) eraser removes the imprint, the examiner should, as soon as this becomes evident, notify applicant by use of Form Paragraph 6.32 that it will be necessary for applicant to order a copy of the specification and claims to be made by the Patent and Trademark Office at the applicant's expense for incorporation in the file. It is not necessary to return this copy to applicant for signature.

¶ *6.32 Application on Easily Erasable Paper*

The application papers are objected to because they are not a permanent copy as required by 37 CFR 1.52(a). Reference is made to [1].

Applicant is required either (1) to submit permanent copies of the identified parts or (2) to order a photocopy of the above identified parts to be made by the Patent and Trademark Office at applicant's expense for incorporation in the file. See MPEP § 608.01.

Examiner Note:

In the "bracket" identify, 1) all of the specification; 2) pages of the specification; 3) claims; 4) oath, declaration; 5) etc.

See *In re Benson*, 1959 C.D. 5; 744 O.G. 353. Reproductions prepared by heat-sensitive, hectographic, or spirit duplication processes are also not satisfactory.

The specification is sometimes in such faulty English that a new specification is necessary, but new specifications encumber the record and require additional reading, and hence should not be required or accepted unless it is clear to the examiner that acceptance of a substitute specification would facilitate processing of the application. See 37 CFR 1.125.

Form Paragraph 7.29 may be used where the disclosure contains informalities.

¶ *7.29 Disclosure Objected to, Minor Informalities*

The disclosure is objected to because of the following informalities: [1] Appropriate correction is required.

Examiner Note:

Use this paragraph to point out minor informalities such as spelling errors, inconsistent terminology, numbering of elements, etc., which should be corrected. See form paragraphs 6.28 to 6.32 for specific informalities.

The specification does not require a date.

If a newly filed application obviously fails to disclose an invention with the clarity required by 35 U.S.C. 112, revision of the application should be required. See MPEP § 702.01.

As the specification is never returned to applicant under any circumstances, the applicant should retain a line for line copy thereof, each line, preferably, having been consecutively numbered on each page. In amending, the attorney or the applicant requests insertions, cancellations, or alterations, giving the page and the line.

37 CFR 1.52(c) relating to interlineations and other alterations is strictly enforced. See *In re Swanberg*, 129 USPQ 364.

Form Paragraphs 6.29-6.31 should be used where appropriate.

¶ *6.29 Specification, Spacing of Lines*

The spacing of the lines of the specification is such as to make reading and entry of amendments difficult. New application papers with lines double spaced on good quality paper are required.

¶ *6.30 Numerous Grammatical Errors*

The specification is replete with grammatical and idiomatic errors too numerous to mention specifically. The specification should be revised carefully. Examples of such errors are: [1].

¶ *6.31 Lengthy Specification, Jumbo Case*

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Examiner Note:

This paragraph is applicable in so-called "Jumbo cases."

USE OF METRIC SYSTEM OF MEASUREMENTS IN PATENT APPLICATIONS

In order to minimize the necessity in the future for converting dimensions given in the English system of measurements to the metric system of measurements when using printed patents as research and prior art search documents, all patent applicants should use the metric (S.I.) units followed by the equivalent English units when describing their inventions in the specifications of patent applications.

The initials S.I. stand for "Systeme International d' Unites," the French name for the International System of Units, a modernized metric system adopted in 1960 by the International General Conference of Weights and Measures based on precise unit measurements made possible by modern technology.

FILING OF NON-ENGLISH LANGUAGE APPLICATIONS

37 CFR 1.52. Language, Paper, Writing, Margins.

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(d) An application may be filed in a language other than English. A verified English translation of the non-English language application and the fee set forth in § 1.17(k) are required to be filed with the application or within such time as may be set by the Office.

The Patent and Trademark Office will accord a filing date to an application meeting the requirements of 35 U.S.C. 111(a), or a provisional application in accordance with 35 U.S.C. 111(b), even though some or all of the application papers, including the written description and the claims, is in a language other than English and hence does not comply with 37 CFR 1.52.

A verified English translation of the non-English language papers, the filing fee, the oath or declaration (if necessary) and fee set forth in 37 CFR 1.17(k) should either accompany the application papers or be filed in the Office within the time set by the Office.

A subsequently filed verified English translation must contain the complete identifying data for the application in order to permit prompt association with the papers initially filed. Accordingly, it is strongly recommended that the original application papers be accompanied by a cover letter and a self-addressed return postcard, each containing the following identifying data in English: (a) applicant's name(s); (b) title of invention; (c) number of pages of specification, claims, and sheets of drawings; (d) whether oath or declaration was filed and (e) amount and manner of paying the filing fee.

The translation must be a literal translation verified as such by the translator and must be accompanied by a signed request from the applicant, his or her attorney or agent, asking that the verified English translation be used as the copy for examination purposes in the Office. If the verified English translation does not conform to idiomatic English and United States practice, it should be accompanied by a preliminary amendment making the necessary changes without the introduction of new matter prohibited by 35 U.S.C. 132. In the event the verified literal translation is not timely filed in the Office, the application will be regarded as abandoned.

It should be recognized that this practice is intended for emergency situations to prevent loss of valuable rights and should not be routinely used for filing applications. There are at least two reasons why this should not be used on a routine basis. First, there are obvious dangers to applicant and the public if he or she fails to obtain a correct literal translation. Second, the filing of a large number of applications under the procedure will create significant administrative burdens on the Office.

ILLUSTRATIONS IN THE SPECIFICATION

Graphical illustrations, diagrammatic views, flowcharts, and diagrams in the descriptive portion of the specification do not come within the purview of 37 CFR 1.58(a), which permits tables and chemical formulas in the specification in lieu of formal drawings. The examiner should object to such descriptive illustrations in the specification and request formal drawings in accordance with 37 CFR 1.81 when an application contains graphs in the specification.

Since the December 7, 1976, issue of patents, all tables and mathematical equations and chemical formulas, or portions thereof, have been reproduced for printing by a computer process developed by the Data Base

Contractor. Those portions of chemical formulas which cannot be reproduced by the process, such as dotted, curved, broken and wedge-shaped lines, must be drawn by hand on the photocomposed page. There are, however, some chemical structures which cannot be reproduced because they are either too complex or involve too many lines which cannot be generated by the computer process. The camera copy process, which is used to insert these types of structures onto the printed patent page, is both time consuming and costly to the Office. Because of the reduction factor and failure to comply with the guidelines set forth in 37 CFR 1.58 (a) and (b), the reproduction of these structures is often poor.

Therefore, the specification, including any claims, may contain chemical formulas and mathematical equations, but should not contain drawings or flow diagrams or diagrammatic views of chemical structures. The description portion of the specification may contain tables; claims may contain tables only if necessary to conform to 35 U.S.C. 112.

** >See MPEP § 601.01(d) for treatment of applications filed without all pages of the specification.<

608.01(a) Arrangement of Application [R-1]

37 CFR 1.77. Arrangement of application elements.

The elements of the application should appear in the following order:

(a) Title of the invention; or an introductory portion stating the name, citizenship, and residence of the applicant, and the title of the invention may be used.

(b) (Reserved).

(c)(1) Cross-reference to related applications, if any.

(2) Reference to a "microfiche appendix" if any. (See § 1.96(b)). The total number of microfiche and total number of frames should be specified.

(d) Brief summary of the invention.

(e) Brief description of the several views of the drawing, if there are drawings.

(f) Detailed description.

(g) Claim or claims.

(h) Abstract of the disclosure.

(i) Signed oath or declaration.

(j) Drawings.

NOTE

Design patent specification, MPEP § 1503.01.

Plant patent specification, MPEP § 1605.

Reissue patent specification, MPEP § 1411.

The following order of arrangement is preferable in framing the >nonprovisional< specification and, except for the title of the invention, each of the lettered items should be preceded by the headings indicated. >It is recommended that provisional applications follow the same general format, although claims are not required.<

(a) Title of the Invention.

(b) Cross-References to Related Applications (if any).

(c) Background of the Invention.

1. Field of the Invention.

2. Description of the related art including information disclosed under 37 CFR 1.97and 1.98.

(d) Summary of the Invention.

(e) Brief Description of the Drawings.

(f) Description of the Preferred Embodiment(s).

(g) Claim(s).

(h) Abstract of the Disclosure.

Applicant (typically a *pro se*) may be advised of the proper arrangement by using Form Paragraph 6.01 or 6.02.

¶ *6.01 Arrangement of Specification*

The following guidelines illustrate the preferred layout and content for patent applications. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

The following order or 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:

(a) Title of the Invention.

(b) Cross-References to Related Applications (if any).

(c) Statement as to rights to inventions made under Federally-sponsored research and development (if any).

(d) Background of the Invention.

1. Field of the Invention.

2. Description of Related Art including information disclosed under 37 CFR ** 1.97 and 1.98.

(e) Summary of the Invention.

(f) Brief Description of the Drawing>(s)<.

(g) Description of the Preferred Embodiment(s).

(h) Claim(s).

(i) Abstract of the Disclosure.

Examiner Note:

In this paragraph an introductory sentence will be necessary. This paragraph intended primarily for use in Pro Se applications.

¶ *6.02 Content of Specification*

Content of Specification

(a) Title of the Invention. (See 37 CFR * 1.72(a)). The title of the invention should be placed at the top of the first page of the specification. It should be brief but technically accurate and descriptive, preferably from two to seven words.

(b) Cross-References to Related Applications: See 37 CFR 1.78 and >MPEP< § 201.11 *.

(c) Statement as to rights to inventions made under Federally sponsored research and development (if any): See >MPEP< § 310 *.

(d) Background of the Invention: The specification should set forth the Background of the Invention in two parts:

(1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions or the subject matter of the claimed invention. This item may also be titled "Technical Field."

(2) Description of the Related Art: A description of the related art known to the applicant and including, if applicable, references to specific >related< art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art".

(e) Summary>of the Invention<:A brief summary or general statement of the invention as set forth in 37 CFR * 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

(f) Brief Description of the Drawing(s): A reference to and brief description of the drawings(s) as set forth in 37 CFR * 1.74.

(g) Description of the Preferred Embodiment(s): A description of the preferred embodiment(s) of the invention as required in 37 CFR * 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. This item may also be titled "Best Mode for Carrying Out the Invention." Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the *>specification< should refer to another patent or readily available publication which adequately describes the subject matter.

(h) Claim(s): (See 37 CFR 1.75) A claim may be typed with the various elements subdivided in paragraph form. There may be plural indentations to further segregate subcombinations or related steps.

(i) Abstract>of the Disclosure<: A brief narrative of the disclosure as a whole in a single paragraph of 250 words or less.

Examiner Note:

In this paragraph an introductory sentence will be necessary.

This paragraph is intended primarily for use in Pro Se applications. See also "pro se" form paragraphs in Chapter 1700 of the Manual of Patent Examining Form Paragraphs.

608.01(b) Abstract of the Disclosure [R-2]

37 CFR 1.72 Title and abstract.

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(b) A brief abstract of the technical disclosure in the specification must be set forth on a separate sheet, preferably following the claims under the heading Abstract of the Disclosure . The purpose of the abstract is to enable the Patent and Trademark Office and the public generally to determine quickly from a cursory inspection the nature and gist of the technical disclosure. The abstract shall not be used for interpreting the scope of the claims.

In all cases which lack an abstract, the examiner in the first Office action should require the submission of an abstract directed to the technical disclosure in the specification. See Form Paragraph 6.12 (below). Applicants may use either "Abstract" or "Abstract of the Disclosure" as a heading.

If the abstract contained in the application does not comply with the guidelines, the examiner should point out the defect to the applicant in the first Office action, or at the earliest point in the prosecution that the defect is noted, and require compliance with the guidelines. Since the abstract of the disclosure has been interpreted to be a part of the specification for the purpose of compliance with paragraph 1 of 35 U.S.C. 112 (*In re Armbruster*, 512 F2d 676, 185 USPQ 152 (CCPA, 1975)), it would ordinarily be preferable that the applicant make the necessary changes to the abstract to bring it into compliance with the guidelines. See Form Paragraphs 6.13-6.16 (below).

Responses to such actions requiring either a new abstract or amendment to bring the abstract into compliance with the guidelines should be treated under 37 CFR 1.111(b) practice like any other formal matter. Any submission of a new abstract or amendment to an existing abstract should be carefully reviewed for introduction of new matter, 35 U.S.C. 132, MPEP § 608.04.

Upon passing the case to issue, the examiner should see that the abstract is an adequate and clear statement of the contents of the disclosure and generally in line with the guidelines. The abstract shall be changed by the examiner's amendment in those instances where deemed necessary. This authority and responsibility of the examiner shall not be abridged by the desirability of having the applicant make the necessary corrections. For example, if the application is otherwise in condition for allowance except that the abstract does not comply

with the guidelines, the examiner generally should make any necessary revisions by examiner's amendment rather than issuing an *Ex parte Quayle* action requiring applicant to make the necessary revisions.

Under current practice, in all instances where the application contains an abstract when sent to issue, the abstract will be printed on the patent.

GUIDELINES FOR THE PREPARATION OF PATENT ABSTRACTS

Background

The Rules of Practice in Patent Cases require that each application for patent include an abstract of the disclosure, 37 CFR 1.72(b).

The content of a patent abstract should be such as to enable the reader thereof, regardless of his or her degree of familiarity with patent documents, to ascertain quickly the character of the subject matter covered by the technical disclosure and should include that which is new in the art to which the invention pertains.

The abstract is not intended nor designated for use in interpreting the scope or meaning of the claims, 37 CFR 1.72(b).

Content

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains.

If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be *>directed to the entire disclosure.

If the patent< is in the nature of an improvement in old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement.

In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or a use thereof.

If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following: (1) if a machine or apparatus, its organization and operation; (2) if an article, its method of making; (3) if a chemical compound, its identity and use; (4) if a mixture, its ingredients; (5) if a process, the steps. Extensive mechanical and design details of apparatus should not be given.

With regard particularly to chemical patents, for compounds or compositions, the general nature of the compound or composition should be given as well as the use thereof; e.g., "The compounds are of the class of alkyl benzene sulfonyl ureas, useful as oral anti-diabetics." Exemplification of a species could be illustrative of members of the class. For processes, the type reaction, reagents and process conditions should be stated, generally illustrated by a single example unless variations are necessary.

Language and Format

The abstract should be in narrative form and generally limited to a single paragraph within the range of 50 to 250 words. The abstract should not exceed 25 lines of text. Abstracts exceeding 25 lines of text should be checked to see that it does not exceed 250 words in length since the space provided for the abstract on the computer tape by the printer is limited. If the abstract cannot be placed on the computer tape because of its excessive length, the application will be returned to the examiner for preparation of a shorter abstract. The form and legal phraseology often used in patent claims, such as "means" and "said", should be avoided. The abstract should sufficiently describe the disclosure to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "This disclosure concerns," "The disclosure defined by this invention," "This disclosure describes," etc.

Responsibility

Preparation of the abstract is the responsibility of the applicant. Background knowledge of the art and an appreciation of the applicant's contribution to the art are most important in the preparation of the abstract. The review of the abstract, for compliance with these guidelines, with any necessary editing and revision on allowance of the application is the responsibility of the examiner.

Sample Abstracts

(1) A heart valve which has an annular valve body defining an orifice and a plurality of struts forming a pair of cages on opposite sides of the orifice. A spherical closure member is captively held within the cages and is moved by blood flow between open and closed positions in check valve fashion. A slight leak or backflow is provided in the closed position by making the orifice slightly larger than the closure member. Blood flow is maximized in the open position of the valve by providing an inwardly convex contour on the orifice-defining surfaces of the body. An annular rib is formed in a channel around the periphery of the valve body to anchor a suture ring used to secure the valve within a heart.

(2) A method for sealing whereby heat is applied to seal, overlapping closure panels of a folding box made from paperboard having an extremely thin coating of moisture-proofing thermoplastic material on opposite surfaces. Heated air is directed at the surfaces to be bonded, the temperature of the air at the point of impact on the surfaces being above the char point of the board. The duration of application of heat is made so brief, by a corresponding high rate of advance of the boxes through the air stream, that the coating on the reverse side of the panels remains substantially non-tacky. The bond is formed immediately after heating within a period of time for any one surface point less than the total time of exposure to heated air of that point. Under such conditions the heat applied to soften the thermoplastic coating is dissipated after completion of the bond by absorption into the board acting as a heat sink without the need for cooling devices.

(3) Amides are produced by reacting an ester of a carboxylic acid with an amine, using as catalyst an alkoxide of an alkali metal. The ester is first heated to at least 75°C. under a pressure of no more than 500 mm. of mercury to remove moisture and acid gases which would prevent the reaction, and then converted to an amide without heating to initiate the reaction.

¶ *6.12 Abstract Missing (Background)*

This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Examiner Note:

For pro se applicant consider form paragraphs 6.14 – 6.16.

¶ *6.13 Abstract Objected to: Minor Informalities*

The abstract of the disclosure is objected to because [1]. Correction is required. See MPEP 608.01(b).

Examiner Note:

In bracket 1, indicate the informalities that should be corrected. Use this paragraph for minor informalities such as the inclusion of legal phraseology, undue length, etc.

¶ *6.14 Abstract of the Disclosure: Content*

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following: (1) if a machine or apparatus, its organization and operation; (2) if an article, its method of making; (3) if a chemical compound, its identity and use; (4) if a mixture, its ingredients; (5) if a process, the steps. Extensive mechanical and design details of apparatus should not be given.

Examiner Note:

See paragraph 6.16.

¶ *6.15 Abstract of the Disclosure, Chemical Cases*

Applicant is reminded of the proper content of an abstract of the disclosure.

In chemical patent abstracts, compounds or compositions, the general nature of the compound or composition should be given as well as its use, e.g., "The compounds are of the class of alkyl benzene sulfonyl ureas, useful as oral anti-diabetics." Exemplification of a species could be illustrative of members of the class. For processes, the type reaction, reagents and process conditions should be stated, generally illustrated by a single example unless variations are necessary. Complete revision of the content of the abstract is required on a separate sheet.

¶ *6.16 Abstract of the Disclosure, Language*

Applicant is reminded of the proper language and format of an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said", should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Examiner Note:

See also paragraph 6.14.

608.01(c) Background of the Invention

The Background of the Invention ordinarily comprises two parts:

(1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent

classification definitions. The statement should be directed to the subject matter of the claimed invention.

(2) Description of the related art including information disclosed under 37 CFR 1.97 and 1.98: A paragraph(s) describing to the extent practical the state of the prior art or other information disclosed known to the applicant, including references to specific prior art or other information where appropriate. Where applicable, the problems involved in the prior art or other information disclosed which are solved by the applicant's invention should be indicated. See also MPEP § 608.01(a), § 608.01(p) and § 707.05(b).

608.01(d) Brief Summary of Invention [R-1]

37 CFR 1.73. Summary of the invention.

A brief summary of the invention indicating its nature and substance, which may include a statement of the object of the invention, should precede the detailed description. Such summary should, when set forth, be commensurate with the invention as claimed and any object recited should be that of the invention as claimed.

Since the purpose of the brief summary of invention is to apprise the public, and more especially those interested in the particular art to which the invention relates, of the nature of the invention, the summary should be directed to the specific invention being claimed, in contradistinction to mere generalities which would be equally applicable to numerous preceding patents. That is, the subject matter of the invention should be described in one or more clear, concise sentences or paragraphs. Stereotyped general statements that would fit one case as well as another serve no useful purpose and may well be required to be cancelled as surplusage, and, in the absence of any illuminating statement, replaced by statements that are directly in point as applicable exclusively to the case in hand.

The brief summary, if properly written to set out the exact nature, operation, and purpose of the invention, will be of material assistance in aiding ready understanding of the patent in future searches. ** The brief summary should be more than a mere statement of the objects of the invention, which statement is also permissible under 37 CFR 1.73.

The brief summary of invention should be consistent with the subject matter of the claims. Note final review of application and preparation for issue, MPEP § 1302.

608.01(e) Reservation Clauses Not Permitted

37 CFR 1.79. Reservation clauses not permitted.

A reservation for a future application of subject matter disclosed but not claimed in a pending application will not be permitted in the pending application, but an application disclosing unclaimed subject matter may contain a reference to a later filed application of the same applicant or owned by a common assignee disclosing and claiming that subject matter.

608.01(f) Brief Description of Drawings [R-2]

37 CFR 1.74. Reference to drawings.

When there are drawings, there shall be a brief description of the several views of the drawings and the detailed description of the invention shall refer to the different views by specifying the numbers of the figures, and to the different parts by use of reference letters or numerals (preferably the latter).

** >The Initial Application Examination Division will review the specification, including the brief description, to determine whether all of the figures of drawings described in the specification are present. If the specification describes a figure which is not present in the drawings, the application will be treated as an application filed without all figures of drawings in accordance with MPEP § 601.01(g), unless the application lacks any drawings, in which case the application will be treated as an application filed without drawings in accordance with MPEP § 601.01(f).<

The examiner should see to it that the figures are correctly described in the brief description of the drawing, that all section lines used are referred to, and that all needed section lines are used.

The specification must contain or be amended to contain proper reference to the existence of drawings executed in color as required by 37 CFR 1.84.

37 CFR 1.84. Standards for drawings.

(a) Drawings. There are two acceptable categories for presenting drawings in utility patent applications:

(1) Black ink. Black and white drawings are normally required India ink, or its equivalent that secures solid black lines, must be used for drawings, or

(2) Color. On rare occasions, color drawing may be necessary as the only practical medium by which to disclose the subject matter sought to be patented in a utility patent application or the subject matter of a statutory invention registration. The Patent and Trademark Office will accept color drawings in utility patent applications and statutory invention registrations only after granting a petition filed under this paragraph explaining why the color drawings are necessary. Any such petition must include the following:

(i) The appropriate fee set forth in § 1.17(h);

(ii) Three (3) sets of color drawings; and

(iii) The specification must contain the following language as the first paragraph in that portion of the specification relating to the brief description of the drawing:

"The file of this patent contains at least one drawing executed in color: Copies of this patent with color drawing(s) will be provided by the Patent and Trademark Office upon request and payment of the necessary fee."

If the language is not in the specification, a proposed amendment to insert the language must accompany the petition.

608.01(g) Detailed Description of Invention

A detailed description of the invention and drawings follows the general statement of invention and brief description of the drawings. This detailed description, required by 37 CFR 1.71, MPEP § 608.01, must be in such particularity as to enable any person skilled in the pertinent art or science to make and use the invention without involving extensive experimentation. An applicant is ordinarily permitted to use his or her own terminology, as long as it can be understood. Necessary grammatical corrections, however, should be required by the examiner, but it must be remembered that an examination is not made for the purpose of securing grammatical perfection.

The reference characters must be properly applied, no single reference character being used for two different parts or for a given part and a modification of such part. In the latter case, the reference character, applied to the given part, with a prime affixed may advantageously be applied to the modification. Every feature specified in the claims must be illustrated, but there should be no superfluous illustrations.

The description is a dictionary for the claims and should provide clear support or antecedent basis for all terms used in the claims. See 37 CFR 1.75, MPEP § 608.01(i), § 608.01(o), and § 1302.01.

NOTE. — Completeness, MPEP § 608.01(p).

USE OF SYMBOL "Phi" IN PATENT APPLICATION

The Greek letter "Phi" has long been used as a symbol in equations in all technical disciplines. It further has special uses which include the indication of an electrical phase or clocking signal as well as an angular measurement. The recognized symbols for the upper and lower case Greek Phi characters, however, do not appear on most typewriters. This apparently has led to the use of a symbol composed by first striking a zero key and then backspacing and striking the "cancel" or "slash" key to result in an approximation of accepted symbols for the Greek character Phi. In other instances, the symbol is composed using the upper or lower case letter "O" with the "cancel" or "slash" superimposed thereon by backspacing, or it is simply handwritten in a variety of styles. These expedients result in confusion because of the variety of type sizes and styles available on modern typewriters.

In recent years, the growth of data processing has seen the increasing use of this symbol ("O") as the standard representation of zero. The "slashed" or cancelled" zero is used to indicate zero and avoid confusion with the upper case letter "O" in both text and drawings.

Thus, when the symbol "Ø" in one of its many variations, as discussed above, appears in patent applications being prepared for printing, confusion as to the intended meaning of the symbol arises. Those (such as examiners, attorneys, and applicants) working in the art can usually determine the intended meaning of this symbol because of their knowledge of the subject matter involved, but editors preparing these applications for printing have no such specialized knowledge and confusion arises as to which symbol to print. The result, at the very least, is delay until the intended meaning of the symbol can be ascertained.

Since the Office does not have the resources to conduct a technical editorial review of each application before printing, and in order to eliminate the problem of printing delays associated with the usage of these symbols, any question about the intended symbol will be resolved by the editorial staff of the Office of Publications by printing the symbol Ø whenever that symbol is used by the applicant. Any Certificate of Correction necessitated by the above practice will be at the patentee's expense (37 CFR 1.323) because the intended symbol was not accurately presented by the Greek upper or lower case Phi letters (ø,ø) in the patent application.

608.01(h) Mode of Operation of Invention [R–1]

The best mode contemplated by the inventor of carrying out his or her invention must be set forth in the description. see 35 U.S.C. 112. There is no statutory requirement for the disclosure of a specific example. A patent specification is not intended nor required to be a production specification, *In re Gay*, 309 F2d 768,

135 USPQ 311 (CCPA 1962). The absence of a specific working example is not necessarily evidence that the best mode has not been disclosed, nor is the presence of one evidence that it has, *In re Honn*, 364 F2d 454, 150 USPQ, 652 (CCPA 1966). In determining the adequacy of a best mode disclosure, only evidence of concealment (accidental or intentional) is to be considered. That evidence must tend to show that the quality of an applicant's best mode disclosure is so poor as to effectively result in concealment; *In re Sherwood*, 204 USPQ 537 (CCPA 1980).

The question of whether an inventor has or has not disclosed what he or she feels is his or her best mode is a question separate and distinct from the question of sufficiency of the disclosure, *In re Gay*, 135 USPQ 311 (CCPA 1962); *In re Glass*, 181 USPQ 31 (CCPA 1974). See 35 U.S.C. 112 and 37 CFR 1.71(b). *Sylgab Steel & Wire Corp.* v. *Imoco–Gateway Corp.*, 357 F. Supp. 657, 178 USPQ 22 (N.D. Ill. 1973); *H. K. Porter Co., Inc.* v. *Gates Rubber Co.*, 187 USPQ 692, 708, (D. Colo. 1975).

If the best mode contemplated by the inventor at the time of filing the application is not disclosed, such defect cannot be cured by submitting an amendment seeking to put into the specification something required to be there when the application was originally filed, *In re Hay*, 534 F2d 917, 189 USPQ 790 (CCPA 1976). Any proposed amendment of this type should be treated as new matter.

Patents have been held invalid in cases where the patentee did not disclose the best mode known to him. See *Flick–Reedy Corp.* v. *Hydro–Line Manufacturing Co.*, 351 F2d 546, 146 USPQ 694 (CA 7 1965), *cert. denied*, 383 U.S. 958, 148 USPQ 771 (1966); *Indiana General Corp.* v. *Krystinel Corp.*, 297 F. Supp. 427 161 USPQ 82 (S.D. N.Y. 1969), affirmed, 421 F2d 1033, 164 USPQ 321 (CA 2 1970); *Dale Electronics, Inc.* v. *R.C.L. Electronics, Inc.*, 488 F2d 382, 180 USPQ 235 (CA 1 1973); *Union Carbide Corp.* v. *Borg–Warner Corp.*, 550 F2d 355, 193 USPQ 1 (CA 6 1977); *Reynolds Metals Co.* v. *Acorn Building Components Inc.*, 548 F2d 155, 163, 192 USPQ 737 (CA 6 1977).

NOTE. — Completeness, >see< MPEP § 608.01(p) >and § 2165 to § 2165.04<.

608.01(i) Claims [R–1]

>37 CFR 1.75. Claims<

(a) The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

(b) More than one claim may be presented provided they differ substantially from each other and are not unduly multiplied.

(c) One or more claims may be presented in dependent form, referring back to and further limiting another claim or claims in the same application. Any dependent claim which refers to more than one other claim ("multiple dependent claim") shall refer to such other claims in the alternative only. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim. For fee calculation purposes under § 1.16, a multiple dependent claim will be considered to be that number of claims to which direct reference is made therein. For fee calculation purposes, also, any claim depending from a multiple dependent claim will be considered to be that number of claims to which direct reference is made in that multiple dependent claim. In addition to the other filing fees, any original application which is filed with, or is amended to include, multiple dependent claims must have paid therein the fee set forth in § 1.16(d). Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim. A multiple dependent claim shall be construed to incorporate by reference all the limitations of each of the particular claims in relation to which it is being considered.

(d)(1) The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description (See § 1.58(a).)

(2) See §§ 1.141 to 1.146 as to claiming different inventions in one application.

(e) Where the nature of the case admits, as in the case of an improvement, any independent claim should contain in the following order, (1) a preamble comprising a general description of all the elements or steps of the claimed combination which are conventional or known, (2) a phrase such as "wherein the improvement comprises," and (3) those elements, steps and/or relationships which constitute that portion of the claimed combination which the applicant considers as the new or improved portion.

(f) If there are several claims, they shall be numbered consecutively in Arabic numerals.

(g) All dependent claims should be grouped together with

NOTE

Numbering of Claims, MPEP § 608.01(j).
Form of Claims, MPEP § 608.01(m).
Dependent claims, MPEP § 608.01(n).
Examination of claims, MPEP § 706.
Claims in excess of fee, MPEP § 714.10.

608.01(j) Numbering of Claims [R–1]

37 CFR 1.126 Numbering of claims.

The original numbering of the claims must be preserved throughout the prosecution. When claims are canceled the remaining claims must not be renumbered. When claims are added, except when presented in accordance with § 1.121(b), they must be numbered by the applicant consecutively beginning with the number next following the highest numbered claim previously presented (whether entered or not). When the application is ready for allow-

ance, the examiner, if necessary, will renumber the claims consecutively in the order in which they appear or in such order as may have been requested by applicant.

In a single claim case, the claim is not numbered.

Form Paragraph 6.17 may be used to notify applicant.

¶ *6.17 Numbering of Claims, 37 CFR 1.126*

The numbering of claims is not in accordance with 37 CFR 1.126. The original numbering of the claims must be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When claims are added, except when presented in accordance with 37 CFR * 1.121(b), they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims [1] have been renumbered [2], respectively.

608.01(k) Statutory Requirement of Claims

35 U.S.C. 112 requires that the applicant shall particularly point out and distinctly claim the subject matter which he or she regards as his or her invention. The portion of the application in which he or she does this forms the claim or claims. This is an important part of the application, as it is the definition of that for which protection is granted.

608.01(l) Original Claims

In establishing a disclosure, applicant may rely not only on the description and drawing as filed but also on the original claims if their content justifies it.

Where subject matter not shown in the drawing or described in the description is claimed in the case as filed, and such original claim itself constitutes a clear disclosure of this subject matter, then the claim should be treated on its merits, and requirement made to amend the drawing and description to show this subject matter. The claim should not be attacked either by objection or rejection because this subject matter is lacking in the drawing and description. It is the drawing and description that are defective; not the claim.

It is, of course, to be understood that this disclosure in the claim must be sufficiently specific and detailed to support the necessary amendment of the drawing and description.

608.01(m) Form of Claims [R-1]

While there is no set statutory form for claims, the present Office practice is to insist that each claim must be the object of a sentence starting with "I (or we) claim", "The invention claimed is" (or the equivalent). If, at the time of allowance, the quoted terminology is not present, it is inserted by the clerk. Each claim begins with a capital letter and ends with a period. Periods may not be used elsewhere in the claims except for abbreviations. >See *Fressola* v. *Manbeck*, (D.D.C. 1995).< A claim may be typed with the various elements subdivided in paragraph form.

There may be plural indentations to further segregate subcombinations or related steps. In general, the printed patent copies will follow the format used but printing difficulties or expense may prevent the duplication of unduly complex claim formats.

Reference characters corresponding to elements recited in the detailed description and the drawings may be used in conjunction with the recitation of the same element or group of elements in the claims. The reference characters, however, should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. The use of reference characters is to be considered as having no effect on the scope of the claims.

Many of the difficulties encountered in the prosecution of patent applications after final rejection may be alleviated if each applicant includes, at the time of filing or no later than the first response, claims varying from the broadest to which he or she believes he or she is entitled to the most detailed that he or she is willing to accept.

Claims should preferably be arranged in order of scope so that the first claim presented is the broadest. Where separate species are claimed, the claims of like species should be grouped together where possible and physically separated by drawing a line between claims or groups of claims. (Both of these provisions may not be practical or possible where several species claims depend from the same generic claim.) Similarly, product and process claims should be separately grouped. Such arrangements are for the purpose of facilitating classification and examination.

The form of claim required in 37 CFR 1.75(e) is particularly adapted for the description of improvement-type inventions. It is to be considered a combination claim. The preamble of this form of claim is considered to positively and clearly include all the elements or steps recited therein as a part of the claimed combination.

For rejections not based on prior art, see MPEP § 706.03.

>Amendments to the claims must be in compliance with 37 CFR 1.121. Form paragraphs 6.33 and 6.34 may be used to inform applicant of non-entry of amendments to the claims.

¶ *6.33 Amendment to the Claims, 37 CFR 1.121*

The amendment to the claims has not been entered because it requests the addition of more than 5 words in any one claim. See 37 CFR 1.121(c) below:

> (c) A particular claim may be amended in the manner indicated for the application in paragraph (a) of this section to the extent of corrections in spelling, punctuation, and typographical errors. Additional amendments in this manner will be admitted provided the changes are limited to (1) deletions and/or (2) the addition of no more than five words in any one claim. Any amendments submitted with instructions to amend particular claims but failing to conform to the provisions of paragraphs (b) and (c) of this section may be considered nonresponsive and treated accordingly.

The amendment to the claims should be made in accordance with 37 CFR 1.121(b) which states:

> (b) Except as otherwise provided herein, a particular claim may be amended only by directions to cancel or by rewriting such claim with underlining below the word or words added and brackets around the word or words deleted. The rewriting of a claim in this form will be construed as directing the cancellation of the original claim; however, the original claim number followed by the parenthetical word "amended" must be used for the rewritten claim. If a previously rewritten claim is rewritten, underlining and bracketing will be applied in reference to the previously rewritten claim with the parenthetical expression "twice amended", "three times amended", etc., following the original claim number.

Applicant is given a ONE MONTH TIME LIMIT from the date of this letter, or until the expiration of the period for response set in the last office action, whichever is longer, to complete the response. NO EXTENSION OF THIS TIME LIMIT MAY BE GRANTED UNDER EITHER 37 CFR 1.136(a) OR (b), but the period for response set in the last Office action may be extended up to a maximum of SIX MONTHS.

¶ *6.34 Amendment to the Claims, Brackets or Underlining Cannot be Used*

The claims of this application contain underlining or brackets that are intended to appear in the printed patent or are properly part of the claimed material. The brackets or underlining are not intended to indicate amendments or changes in the claims. Under these conditions, proposed amendments to the claims may not be made by underlining words added or by bracketing words that are to be deleted. Accordingly, the proposed amendments to the claims have not been entered. See 37 CFR 1.121(d).

Applicant is given a ONE MONTH TIME LIMIT from the date of this letter, or until the expiration of the period for response set in the last office action, whichever is longer, to complete the response. NO EXTENSION OF THIS TIME LIMIT MAY BE GRANTED UNDER EITHER 37 CFR 1.136(a) OR (b), but the period for response set in the last Office action may be extended up to a maximum of SIX MONTHS.<

608.01(n) Dependent Claims [R-1]

37 CFR 1.75(c) reads as follows for applications filed prior to January 24, 1978:

> (c) When more than one claim is presented, they may be placed in dependent form in which a claim may refer back to and further restrict a single preceding claim. Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim.

MULTIPLE DEPENDENT CLAIMS

37 CFR 1.75(c) reads as follows for applications filed on and after January 24, 1978.

37 CFR 1.75. Claim(s).

*****

> (c) one or more claims may be presented in dependent form, referring back to and further limiting another claim or claims in the same application. Any dependent claim which refers to more than one other claim (multiple dependent claim) shall refer to such other claims in the alternative only. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim. For fee calculation purposes under § 1.16, a multiple dependent claim will be considered to be that number of claims to which direct reference is made therein. For fee calculation purposes, also, any claim depending from a multiple dependent claim will be considered to be that number of claims to which direct reference is made in that multiple dependent claim. In addition to the other filing fees, any original application which is filed with, or is amended to include, multiple dependent claims must have paid therein the fee set forth in § 1.16(d). Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim. A multiple dependent claim shall be construed to incorporate by reference all the limitations of each of the particular claims in relation to which it is being considered.

*****

Generally, a multiple dependent claim is a dependent claim which refers back in the alternative to more than one preceding independent or dependent claim.

The second paragraph of 35 U.S.C. 112 has been revised in view of the multiple dependent claim practice introduced by the Patent Cooperation Treaty. Thus, 35 U.S.C. 112 authorizes multiple dependent claims in applications filed on and after January 24, 1978, as long as they are in the alternative form (e.g., "A machine according to claims 3 or 4, further comprising ––– "). Cumulative claiming (e.g.,"A machine according to claims 3 and 4, further comprising –––") is not per-

mitted. A multiple dependent claim may refer in the alternative to only one set of claims. A claim such as "A device as in claims 1, 2, 3, or 4, made by a process of claims 5, 6, 7, or 8" is improper. Section 112 allows reference to only a particular claim. Furthermore, a multiple dependent claim may not serve as a basis for any other multiple dependent claim, either directly or indirectly. These limitations help to avoid undue confusion in determining how many prior claims are actually referred to in a multiple dependent claim.

A multiple dependent claim which depends from another multiple dependent claim should be objected to by using Form Paragraph 7.45.

¶ *7.45 Improper Multiple Dependent Claims*

Claim [1] objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim [2]. See MPEP >§< 608.01(n). Accordingly, [3] has not been further treated on the merits.

Examiner's Note:

1. In bracket 2, insert "should refer to other claims in the alternative only" and/or, "cannot depend from any other multiple dependent claim 4."
2. Use this paragraph rather than 35 U.S.C. 112, fifth paragraph.
3. In bracket 3, insert "the claim has or these claims have."

Assume each claim example given below is from a different application.

ACCEPTABLE MULTIPLE DEPENDENT CLAIM WORDING

Claim 5. A gadget according to claims 3 or 4, further comprising – – –

Claim 5. A gadget as in any one of the preceding claims, in which – – –

Claim 3. A gadget as in either claim 1 or claim 2, further comprising – – –

Claim 4. A gadget as in claim 2 or 3, further comprising –

Claim 16. A gadget as in claims 1, 7, 12, or 15, further comprising – – –

Claim 5. A gadget as in any of the preceding claims, in which – – –

Claim 8. A gadget as in one of claims 4–7, in which – – –

Claim 5. A gadget as in any preceding claim, in which – – –

Claim 10. A gadget as in any of claims 1–3 or 7–9, in which – – –

Claim 11. A gadget as in any one of claims 1, 2, or 7–10 inclusive, in which – – –

UNACCEPTABLE MULTIPLE DEPENDENT CLAIM WORDING

A. Claim does not refer back in the alternative only

Claim 5. A gadget according to claim 3 and 4, further comprising – – –

Claim 9. A gadget according to claims 1–3, in which – – –

Claim 9. A gadge as in claims 1 or 2 and 7 or 8, which – – –

Claim 6. A gadget as in the preceding claims in which – – –

Claim 6. A gadget as in claims 1, 2, 3, 4 and/or 5, in which – – –

Claim 10. A gadget as in claims 1–3 or 7–9, in which – – –

B. Claim does not refer to a preceding claim

Claim 3. A gadget as in any of the following claims, in which – – –

Claim 5. A gadget as in either claim 6 or claim 8, in which – – –

C. Reference to two sets of claims to different features

Claim 9. A gadget as in claim 1 or 4 made by the process of claims 5, 6, 7, or 8, in which – – –

D. (Reference back to another multiple dependent claim)

Claim 8. A gadget as in claim 5 (claim 5 is a multiple dependent claim) or claim 7, in which – – –

35 U.S.C. 112 indicates that the limitations or elements of each claim incorporated by reference into a multiple dependent claim must be considered separately. Thus, a multiple dependent claim, as such, does not contain all the limitations of all the alternative claims to which it refers, but rather contains in any one embodiment only those limitations of the particular claim referred to for the embodiment under consideration. Hence, a multiple dependent claim must be considered in the same manner as a plurality of single dependent claims.

Restriction Practice

For restriction purposes, each embodiment of a multiple dependent claim is considered in the same manner as a single dependent claim. Therefore, restriction may

be required between the embodiments of a multiple dependent claim. Also, some embodiments of a multiple dependent claim may be held withdrawn while other embodiments are considered on their merits.

Handling of Multiple Dependent Claims by the Application Branch

The Application Division is responsible for verifying whether multiple dependent claims filed with the application are in proper alternative form, that they depend only upon prior independent or single dependent claims and also for calculating the amount of the filing fee. A new form, PTO–1360, has been designed to be used in conjunction with the current fee calculation form PTO–875.

Handling of Multiple Dependent Claims by the Examining Group Clerical Staff

The examining group clerical staff is responsible for verifying compliance with the statute and rules of multiple dependent claims added by amendment and for calculating the amount of any additional fees required. This calculation should be performed on form PTO–1360.

There is no need for a group clerk to check the accuracy of the initial filing fee since this has already been verified by the Application Branch when granting the filing date.

If a multiple dependent claim (or claims) is added in an amendment without the proper fee, either by adding references to prior claims or by adding a new multiple dependent claim, the amendment should not be entered until the fee has been received. In view of the requirements for multiple dependent claims, no amendment containing new claims or changing the dependency of claims should be entered before checking whether the paid fees cover the costs of the amended claims. The applicant, or his or her attorney or agent, should be contacted to pay the additional fee. Where a letter is written in an insufficient fee situation, a copy of the multiple dependent claim fee calculation, form PTO–1360, should be included for applicant's information.

If an application filed prior to October 1, 1982, is amended on or after October 1, 1982, to include a proper multiple dependent claim for the first time, the fee set forth in § 1.16(d) must be paid.

If such an application contained a proper multiple dependent claim prior to October 1, 1982, the fee set forth in § 1.16(d) does not apply.

Where the group clerk notes that the reference to the prior claims is improper in an added or amended multiple dependent claim, a notation should be made in the left margin next to the claim itself and the number 1, which is inserted in the "Dep. Claim" column of that amendment on form PTO–1360, should be circled in order to call this matter to the examiner's attention.

Handling of Multiple Dependent Claims by the Examiner

Should any multiple dependent claim be in an application filed prior to January 24, 1978 or include a claim association or claim structure that violates any of the prohibitions, the claim should be objected to as not being in proper form as required by 37 CFR 1.75 in the next Office action. Such an improper claim need not be further treated on the merits.

Public Law 94–131, the implementing legislation for the Patent Cooperation Treaty amended 35 U.S.C. 112 to state that "a claim in dependent form shall contain a reference to a claim *previously set forth*." The requirement to refer to a previous claim had existed only in 37 CFR 1.75(c) before.

The following procedures are to be followed by examiners when faced with claims which refer to numerically succeeding claims:

If any series of dependent claims contains a claim with an improper reference to a numerically following claim which cannot be understood, the claim referring to a following claim should normally be objected to and not treated on the merits.

However, in situations where a claim refers to a numerically following claim and the dependency is clear, both as presented and as it will be renumbered at issue, all claims should be examined on the merits and no objection as to form need be made. In such cases, the examiner will renumber the claims into proper order at the time the application is allowed. (See example B, below.)

Any unusual problems should be brought to the supervisor's attention.

Example A

(Claims 4 and 6 should be objected to as not being understood and should not be treated on the merits.)

1. Independent
2. Dependent on claim 5
3. Dependent on claim 2
4. "... as in any preceding claim"
5. Independent
6. Dependent on claim 4

Example B

NOTE: Parenthetical numerals represent the claim numbering for issue should all claims be allowed.

(All claims should be examined.)

1. (1) Independent
2. (5) Dependent on claim 5 (4)
3. (2) Dependent on claim 1 (1)
4. (3) Dependent on claim 3 (2)
5. (4) Dependent on either claim 1 (1) or claim 3 (2)

The following practice is followed by patent examiners when making reference to a dependent claim — either singular or multiple:

1. When identifying a singular dependent claim which does not include a reference to a multiple dependent claim, either directly or indirectly, reference should be made only to the number of the dependent claim.

2. When identifying the embodiments included within a multiple dependent claim, or a singular dependent claim which includes a reference to a multiple dependent claim, either directly or indirectly, each embodiment should be identified by using the number of the claims involved, starting with the highest, *to the extent necessary* to specifically identify each embodiment

3. When all embodiments included within a multiple dependent claim or a singular dependent claim which includes a reference to a multiple dependent claim, either directly or indirectly, are subject to a common rejection, objection, or requirement, reference may be made only to the number of the dependent claim.

The following table illustrates the current practice where each embodiment of each claim must be treated on an individual basis:

Claim No.	Claim dependency	Identification	
		All claims	Approved practice
1	Independent	1	1
2	Depends from 1	2/1	2
3	Depends from 2	3/2/1	3
4	Depends from 2 or 3	4/2/1	4/2
		4/3/2/1	4/3
5	Depends from 3	5/3/2/1	5
6	Depends from 2, 3, or 5	6/2/1	6/2
		6/3/2/1	6/3
		6/5/3/2/1	6/5
7	Depends from 6	7/6/2/1	7/6/2
		7/6/3/2/1	7/6/3
		7/6/5/3/2/1	7/6/5

When all embodiments in a multiple dependent claim situation (claims 4, 6, and 7 above) are subject to a common rejection, objection, or requirements, reference may be made to the number of the individual dependent claim only. For example, if 4/2 and 4/3 were subject to a common ground of rejection, reference should be made only to claim 4 in the statement of that rejection.

The provisions of 35 U.S.C.132 require that each office action make it explicitly clear what rejection, objection and/or requirement is applied to each claim embodiment.

Calculation of Fees When Multiple Dependent Claims Are Presented, Use of Form PTO−1360

To assist in the computation of the fees for multiple dependent claims, a separate "Multiple Dependent Claim Fee Calculation Sheet," form PTO−1360, has been designed for use with the current "Patent Application Fee Determination Record", form PTO−875. Form PTO−1360 will be placed in the file wrapper by the Application Branch where multiple dependent claims are in the application as filed. If multiple dependent claims are not included upon filing, but are later added by amendment, the examining group clerical staff will place the form in the file wrapper. If there are multiple dependent claims in the application, the total number of independent and dependent claims for fee purposes will be calculated on form PTO−1360 and the total number of claims and number of independent claims is then placed on form PTO−875 for final fee calculation purposes.

Calculating Fees for Multiple Dependent Claims

Proper Multiple Dependent Claim

35 U.S.C. 41(a), provides that claims in proper multiple dependent form may not be considered as single dependent claims for the purpose of calculating fees. Thus, a multiple dependent claim is considered to be that number of dependent claims to which it refers. Any proper

claim depending directly or indirectly from a multiple dependent claim is also considered as the number of dependent claims as referred to in the multiple dependent claim from which it depends.

Improper Multiple Dependent Claim

If any multiple dependent claim is improper, Application Branch may indicate that fact by placing an encircled numeral "1" in the "Dep. Claims" column of form PTO–1360. The fee for any improper multiple dependent claim, whether it is defective for either not being in the alternative form or for being directly or indirectly dependent on a prior multiple dependent claim, will only be one, since only an objection to the form of such a claim will normally be made. This procedure also greatly simplifies the calculation of fees. Any claim depending from an improper multiple dependent claim will also be considered to be improper and be counted as one dependent claim.

Fee calculation example

Claim No.		*Ind.*	*Dep.*
1.	Independent	1	
2.	Dependent on claim 1		1
3.	Dependent on claim 2		1
4.	Dependent on claim 2 or 3		2
5.	Dependent on claim 4		2
6.	Dependent on claim 5		2
7.	Dependent on claim 4, 5 or 6		(1)
8.	Dependent on claim 7		(1)
9.	Independent	1	
10.	Dependent on claim 1 or 9		2
11.	Dependent on claims 1 and 9		(1)
	Total	2	13

Comments on Fee Calculation Example

Claim 1 — This is an independent claim; therefore, a numeral "1" is placed opposite claim number 1 in the "Ind." column.

Claim 2 — Since this is a claim dependent on a single independent claim, a numeral "1" is placed opposite claim number 2 of the "Dep." column.

Claim 3 — Claim 3 is also a single dependent claim, so a numeral "1" is placed in the "Dep." column.

Claim 4 — Claim 4 is a proper multiple dependent claim. It refers directly to two claims in the alternative, namely, claim 2 *or* 3. Therefore, a numeral "2" to indicate direct reference to two claims is placed in the "Dep." column opposite claim number 4.

Claim 5 — This claim is a singularly dependent claim depending from a multiple dependent claim. For fee calculation purposes, such a claim is counted as being that number of claims to which direct reference is made in the multiple dependent claim from which it depends. In this case, the multiple dependent claim number 4 it depends from counts as 2 claims; therefore, claim 5 also counts as 2 claims. Accordingly, a numeral "2" is placed opposite claim number 5 in the "Dep." column.

Claim 6 — Claim 6 depends indirectly from a multiple dependent claim 4. Since claim 4 counts as 2 claims, claim 6 also counts as 2 dependent claims. Consequently, a numeral "2" is placed in the "Dep." column after claim 6.

Claim 7 — This claim is a multiple dependent claim since it refers to claims 4, 5, or 6. However, as can be seen by looking at the "2' in the "Dep.' column opposite claim 4, claim 7 depends from a multiple dependent claim. This practice is improper under 35 U.S.C. 112 and 37 CFR 1.75(c). Following the procedure for calculating fees for improper multiple dependent claims, a numeral "1" is placed in the "Dep." column with a circle drawn around it to alert the examiner that the claim is improper.

Claim 8 — Claim 8 is improper since it depends from an improper claim. If the base claim is in error, this error cannot be corrected by adding additional claims depending therefrom. Therefore, a numeral "1" with a circle around it is placed in the "Dep." column.

Claim 9 — Here again we have an independent claim which is always indicated with a numeral "1" in the "Ind." column opposite the claim number.

Claim 10 — This claim refers to two independent claims in the alternative. A numeral "2" is, therefore, placed in the "Dep." column opposite claim 10.

Claim 11 — Claim 11 is a dependent claim which refers to two claims in the conjunctive ("1" *and* "9") rather than in the alternative ("1" *or* "9"). This form is improper under 35 U.S.C. 112 and 37 CFR 1.75(c). Accordingly, since claim 11 is improper, an encircled number "1" is placed in the "Dep." column opposite Claim 11.

Calculation of Filing Fee Involving Dependent Claims

After the number of "Ind." and "Dep." claims are noted on form PTO–1360, each column is added. In this example, there are 2 independent claims and 13 depen-

dent claims or a total of 15 claims. The number of independent and total claims can then be placed on form PTO–875 and the fee calculated.

TREATMENT OF IMPROPER DEPENDENT CLAIMS

The initial determination, for fee purposes, as to whether a claim is dependent must be made by persons other than examiners; it is necessary, at that time, to accept as dependent virtually every claim which refers to another claim, without determining whether there is actually a true dependent relationship. The initial acceptance of a claim as a dependent claim does not, however, preclude a subsequent holding by the examiner that a claim is not a proper dependent claim. Any claim which is in dependent form but which is so worded that it, in fact is not, as, for example, it does not include every limitation of the claim on which it depends, will be required to be *cancelled* as not being a proper dependent claim; and cancelation of any further claim depending on such a dependent claim will be similarly required. The applicant may thereupon amend the claims to place them in proper dependent form, or may redraft them as independent claims, upon payment of any *necessary* additional fee.

INFRINGEMENT TEST

The test as to whether a claim is a proper dependent claim is that it shall include every limitation of the claim from which it depends (35 U.S.C. 112, fourth paragraph) or in other words that it shall not conceivably be infringed by anything which would not also infringe the basic claim.

A dependent claim does not lack compliance with 35 U.S.C. 112, fourth paragraph, simply because there is a question as to (1) the significance of the further limitation added by the dependent claim, or (2) whether the further limitation in fact changes the scope of the dependent claim from that of the claim from which it depends. The test for a proper dependent claim under the fourth paragraph of 35 U.S.C. 112 is whether the dependent claim includes every limitation of the claim from which it depends. The test is not one of whether the claims differ in scope.

Thus, for example, if claim 1 recites the combination of elements A, B, C, and D, a claim reciting the structure of claim 1 in which D was omitted or replaced by E would not be a proper dependent claim, even though it placed further limitations on the remaining elements or added still other elements.

Examiners are reminded that a dependent claim is directed to a combination including everything recited in the base claim and what is recited in the dependent claim. It is this combination that must be compared with the prior art, exactly as if it were presented as one independent claim.

The fact that a dependent claim which is otherwise proper might relate to a separate invention which would require a separate search or be separately classified from the claim on which it depends would not render it an improper dependent claim, although it might result in a requirement for restriction.

The fact that the independent and dependent claims are in different statutory classes does not, in itself, render the latter improper. Thus, if claim 1 recites a specific product, a claim for the method of making the product of claim 1 in a particular manner would be a proper dependent claim since it could not be infringed without infringing claim 1. Similarly, if claim 1 recites a method of making a product, a claim for a product made by the method of claim 1 could be a proper dependent claim. On the other hand, if claim 1 recites a method of making a specified product, a claim to the product set forth in claim 1 would not be a proper dependent claim if the product might be made in other ways. Note, that since 37 CFR 1.75(c) requires the dependent claim to further limit a preceding claim, this rule does not apply to product–by–process claims.

CLAIM FORM AND ARRANGEMENT

A singular dependent claim 2 could read as follows:

2. The product of claim 1 in which . . .

A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim.

A claim which depends from a *dependent* claim should not be separated therefrom by any claim which does not also depend from said "dependent claim." It should be kept in mind that a dependent claim may refer back to any preceding independent claim. These are are the only restrictions with respect to the sequence of claims and, in general, applicant's sequence should not be changed. See MPEP § 608.01(j). Applicant may be so advised by using Form Paragraph 6.18.

¶ *6.18 Series of Singular Dependent Claims*

A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim.

A claim which depends from a dependent claim should not be separated by any claim which does not also depend from said dependent claim. It should be kept in mind that a dependent claim may refer to any preceding independent claim. In general, applicant's sequence will not be changed. See § 608.01(n) MPEP.

During prosecution, the order of claims may change and be in conflict with the requirement that dependent claims refer to a preceding claim. Accordingly, the numbering of dependent claims and the numbers of preceding claims referred to in dependent claims should be carefully checked when claims are renumbered upon allowance.

REJECTION AND OBJECTION

If the base claim has been cancelled, a claim which is directly or indirectly dependent thereon should be rejected as incomplete. If the base claim is rejected, the dependent claim should be objected to rather than rejected, if it is otherwise allowable.

Form Paragraph 7.43 can be used to state the objection.

¶ *7.43 Objection to Claims, Allowable Subject Matter*

Claim [1] objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

608.01(o) Basis for Claim Terminology in Description

The meaning of every term used in any of the claims should be apparent from the descriptive portion of the specification with clear disclosure as to its import; and in mechanical cases, it should be identified in the descriptive portion of the specification by reference to the drawing, designating the part or parts therein to which the term applies. A term used in the claims may be given a special meaning in the description. No term may be given a meaning repugnant to the usual meaning of the term.

Usually the terminology of the original claims follows the nomenclature of the specification, but sometimes in amending the claims or in adding new claims, new terms are introduced that do not appear in the specification. The use of a confusing variety of terms for the same thing should not be permitted.

New claims and amendments to the claims already in the case should be scrutinized not only for new matter but also for new terminology. While an applicant is not limited to the nomenclature used in the application as filed, yet, whenever by amendment of his claims, he or she departs therefrom, he or she should make appropriate amendment of the specification so as to have therein clear support or antecedent basis for the new terms appearing in the claims. This is necessary in order to insure certainty in construing the claims in the light of the specification, *Ex parte Kotler* 1901 C.D. 62; 95 O.G. 2684. See 37 CFR 1.75, MPEP § 608.01(i) and § 1302.01.

The specification should be objected to if it does not provide proper antecedent basis for the claims by using Form Paragraph 7.44.

¶ *7.44 Claimed Subject Matter Not in Specification*

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: [1].

608.01(p) Completeness [R–2]

Newly filed applications obviously failing to disclose an invention with the clarity required are discussed in MPEP § 702.01.

A disclosure in an application, to be complete, must contain such description and details as to enable any person skilled in the art or science to which the invention pertains to make and use the invention as of its filing date, *In re Glass*, 492 F.2d 1228; 181 USPQ 31 (CCPA 1974).

While the prior art setting may be mentioned in general terms, the essential novelty, the essence of the invention, must be described in such details, including proportions and techniques, where necessary, as to enable those persons skilled in the art to make and utilize the invention.

Specific operative embodiments or examples of the invention must be set forth. Examples and description should be of sufficient scope as to justify the scope of the claims. *Markush* claims must be provided with support in the disclosure for each member of the *Markush* group. Where the constitution and formula of a chemical compound is stated only as a probability or speculation, the disclosure is not sufficient to support claims identifying the compound by such composition or formula.

A complete disclosure should include a statement of utility. This usually presents no problem in mechanical

cases. In chemical cases, varying degrees of specificity are required.

A disclosure involving a new chemical compound or composition must teach persons skilled in the art how to make the compound or composition. Incomplete teachings may not be completed by reference to subsequently filed applications.

For "GUIDELINES FOR EXAMINATION OF APPLICATIONS FOR COMPLIANCE WITH THE UTILITY REQUIREMENT OF 35 U.S.C. 101", see MPEP § 706.03(a)(1).

For *"Overview of Legal Precedent Governing Utility Requirement"*, see MPEP § 2107.

For a discussion of the utility requirement under 35 U.S.C. 112, first paragraph, in drug cases, see MPEP § 2164.07(a)(4).

For "Procedural Considerations Related to Utility Rejections", see MPEP § 2107.01.

For "Special Considerations for Asserted Therapeutic or Pharmacological Utilities", see MPEP § 2107.02.

INCORPORATION BY REFERENCE

The Commissioner has considerable discretion in determining what may or may not be incorporated by reference in a patent application. *General Electric Co.* v. *Brenner*, 407 F.2d 1258, 159 USPQ 335 (D.C. Cir. 1968). The following is the manner in which the Commissioner has elected to exercise that discretion. Section 1 provides the guidance for incorporation by reference in applications which are to issue as U.S. patents. Section 2 provides guidance for incorporation by reference in benefit applications; i.e., those domestic (35 U.S.C. 120) or foreign (35 U.S.C. 119) applications relied on to establish an earlier effective filing date.

1. Review of Applications Which Are To Issue As Patents.

An application as filed must be complete in itself in order to comply with 35 U.S.C. 112. Material nevertheless may be incorporated by reference, *Ex parte Schwarze*, 151 USPQ 426 (Bd. App. 1966). An application for a patent when filed may incorporate "essential material" by reference to (1) a U.S. patent or (2) ** >a pending< U.S. application **, subject to the conditions set forth below. "Essential material" is defined as that which is necessary to (1) describe the claimed invention, (2) provide an enabling disclosure of the claimed invention, or (3) describe the best mode (35 U.S.C. 112). In any application which is to issue as a U.S. patent, essential material may not be incorporated by reference to (1) patents or applications published by foreign countries or a regional patent office, (2) non-patent publications, (3) a U.S. patent or application which itself incorporates "essential material" by reference, or (4) a foreign application. See *In re Fouche*, 439 F.2d 1237, 169 USPQ 429 (CCPA 1971).

Nonessential subject matter may be incorporated by reference to (1) patents or applications published by the United States or foreign countries or regional patent offices, (2) prior filed, commonly owned U.S. applications, or (3) non-patent publications. Nonessential subject matter is subject matter referred to for purposes of indicating the background of the invention or illustrating the state of the art.

Mere reference to another application, patent, or publication is not an incorporation of anything therein into the application containing such reference for the purpose of the disclosure required by 35 U.S.C. 112, first paragraph. *In re de Seversky*, 474 F.2d 671, 177 USPQ 144, (CCPA 1973). In addition to other requirements for an application, the referencing application should include an identification of the referenced patent, application, or publication. Particular attention should be directed to specific portions of the referenced document where the subject matter being incorporated may be found. Guidelines for situations where applicant is permitted to fill in a number for Serial No. _____ left blank in the application as filed can be found in *In re Fouche*, 439 F.2d 1237, 169 USPQ 429 (CCPA 1971) (Abandoned applications less than 20 years old can be incorporated by reference to same extent as copending applications; both types are open to public upon referencing application issuing as a patent).

Complete Disclosure Filed

If an application is filed with a complete disclosure, essential material may be canceled by amendment and may be substituted by reference to a U.S. patent or >an earlier filed< pending >U.S.< application **. The amendment must be accompanied by an affidavit or declaration signed by the applicant, or a practitioner representing the applicant, stating that the material cancelled from the application is the same material that has been incorporated by reference.

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