SPECIFICATION

AUTHORITY: Secs. 1.71 to 1.79 also issued under 35 U.S.C. 112.

§ 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 pat-

ent application disclosure. For notices in drawings, see §1.84(s). The content of the notice must be limited to only those elements provided for by law. For example, "e1983 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.

[24 FR 10332, Dec. 22, 1959, as amended at 53 FR 47808, Nov. 28, 1988; 58 FR 38723, July 20, 1993]

§ 1.72 Title and abstract.

- (a) The title of the invention, which should be as short and specific as possible, should appear as a heading on the first page of the specification, if it does not otherwise appear at the beginning of the application.
- (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.

(Pub. L. 94-131, 89 Stat. 685)

[31 FR 12922, Oct. 4, 1966, as amended at 43 FR 20464, May 11, 1978]

§ 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.

§ 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).

§ 1.75 Claim(s).

- (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 muitiple 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 flied 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 par-

ticular 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 the claim or claims to which they refer to the extent possible.

(35 U.S.C. 6; 15 U.S.C. 1113, 1126)

[31 FR 12922, Oct. 4, 1966, as amended at 36 FR 12690, July 3, 1971; 37 FR 21995, Oct. 18, 1972; 43 FR 4015, Jan. 31, 1978; 47 FR 41276, Sept. 17, 1962)

§ 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.

(Pub. L. 94-131, 89 Stat. 685; 35 U.S.C. 6 and 41; Pub. L. 97-247)

[43 FR 20464, May 11, 1978, as amended at 46 FR 2612, Jan. 12, 1981; 48 FR 2712, Jan. 20, 1983]