

Extracts from

United States Patent and
Trademark Office

A Guide to Filing a
Design Patent Application

In addition, the filing fee set forth in 37 CFR §1.16(f) is also required. If applicant is a small entity, (an independent inventor, a small business concern, or a non-profit organization), the filing fee is reduced by half.

The Preamble

The Preamble, if included, should state the name of the applicant, the title of the design, and a brief description of the nature and intended use of the article in which the design is embodied. All information contained in the preamble will be printed on the patent, should the claimed design be deemed patentable.

The Title

The Title of the design must identify the article in which the design is embodied by the name generally known and used by the public. Marketing designations are improper as titles and should not be used. A title descriptive of the actual article aids the examiner in developing a complete field of search of the prior art. It further aids in the proper assignment of new applications to the appropriate class, subclass, and patent examiner, as well as the proper classification of the patent upon allowance of the application. It also helps the public in understanding the nature and use of the article embodying the design after the patent has been published. Thus, applicants are encouraged to provide a specific and descriptive title.

The Figure Descriptions

The Figure Descriptions indicate what each view of the drawings represents, i.e., front elevation, top plan, perspective view, etc.

Any description of the design in the specification, other than a brief description of the drawing, is generally not necessary since, as a general rule, the drawing is the design's best description. However, while not required, a special description is not prohibited.

In addition to the figure descriptions, the following types of statements are permissible in the specification:

1. A description of the appearance of portions of the claimed design which are not illustrated in the drawing disclosure (i.e., “the right side elevational view is a mirror image of the left side”).
2. Description disclaiming portions of the article not shown, that form no part of the claimed design.
3. Statement indicating that any broken line illustration of environmental structure in the drawing is not part of the design sought to be patented.
4. Description denoting the nature and environmental use of the claimed design, if not included in the preamble.

A Single Claim

A design patent application may only include a single claim. The claim defines the design which applicant wishes to patent, in terms of the article in which it is embodied or applied. The claim must be in formal terms to “The ornamental design for (the article which embodies the design or to which it is applied) as shown.” The description of the article in the claim should be consistent in terminology with the title of the invention.

When there is a properly included special description of the design in the specification, or a proper showing of modified forms of the design, or other descriptive matter has been included in the specification, the words “and described” should be added to the claim following the term “shown.” The claim should then read “The ornamental design for (the article which embodies the design or to which it is applied) as shown and described.”

Drawings or Black and White Photographs

The drawing disclosure is the most important element of the application. Every design patent application must include either a drawing or a black and white photograph of the claimed design. As the

drawing or photograph constitutes the entire visual disclosure of the claim, it is of utmost importance that the drawing or photograph be clear and complete, that nothing regarding the design sought to be patented is left to conjecture. The design drawing or photograph must comply with the disclosure requirements of 35 U.S.C. 112, first paragraph. To meet the requirements of 35 U.S.C. 112, the drawings or photographs must include a sufficient number of views to constitute a complete disclosure of the appearance of the design claimed.

Drawings are normally required to be in black ink on white paper. Black and white photographs, in lieu of drawings, are permitted subject to the requirements of 37 CFR §1.84(b)(1) and §1.152. Applicant should refer to these rules, included at the end of this guide. These rules set forth in detail the requirements for proper drawings in a design patent application.

Black and white photographs submitted on double weight photographic paper must have the drawing figure number entered on the face of the photograph. Photographs mounted on Bristol board may have the figure number shown in black ink on the Bristol board, proximate the corresponding photograph.

Black and white photographs and ink drawings must not be combined in a formal submission of the visual disclosure of the claimed design in one application. The introduction of both photographs and ink drawings in a design application would result in a high probability of inconsistencies between corresponding elements on the ink drawings as compared with the photographs. Photographs submitted in lieu of ink drawings must not disclose environmental structure but must be limited to the claimed design itself.

Color Drawings or Color Photographs

The Office will accept color drawings or photographs in design patent applications only after the granting of a petition filed under 37 CFR §1.84(a)(2), explaining why the color drawings or photographs are necessary. Any such petition must include the fee set forth in 37 CFR § 1.17(h), three sets of color drawings or photographs, a black and white photocopy that

accurately depicts the subject matter shown in the color drawings or photographs, and the specification must contain the following language before the description of the drawings:

The file of this patent contains a least one drawing executed in color. Copies of this patent with color drawings will be provided by the United States Patent and Trademark Office upon request and payment of the necessary fee.

If color photographs are submitted as informal drawings and the applicant does not consider the color to be part of the claimed design, a disclaimer should be added to the specification as follows: "The color shown on the claimed design forms no part thereof." Color will be considered an integral part of the disclosed and claimed design in the absence of a disclaimer filed with the original application. A disclaimer may only be used when filing color photographs as informal drawings, as 37 CFR §1.152 requires that the disclosure in formal photographs be limited to the design for the article claimed.

The Views

The drawings or photographs should contain a sufficient number of views to completely disclose the appearance of the claimed design, i.e., front, rear, right and left sides, top and bottom. While not required, it is suggested that perspective views be submitted to clearly show the appearance and shape of three-dimensional designs. If a perspective view is submitted, the surfaces shown would normally not be required to be illustrated in other views if these surfaces are clearly understood and fully disclosed in the perspective.

Views that are merely duplicates of other views of the design or that are merely flat and include no ornamentality may be omitted from the drawing if the specification makes this explicitly clear. For example, if the left and right sides of a design are identical or a mirror image, a view should be provided of one side and a statement made in the drawing description that the other side is identical or a mirror image. If the bottom of the design is flat, a view of the bottom may be omitted if the figure descriptions include a statement that the bottom is flat and unornamented. The term "unornamented" should not be used to describe visible surfaces that

include structure that is clearly not flat. In some cases, the claim may be directed to an entire article, but because all sides of the article may not be visible during normal use, it is not necessary to disclose them. A sectional view which more clearly brings out elements of the design is permissible, however a sectional view presented to show functional features, or interior structure not forming part of the claimed design, is neither required nor permitted.

Surface Shading

The drawing should be provided with appropriate surface shading which shows clearly the character and contour of all surfaces of any three-dimensional aspects of the design. Surface shading is also necessary to distinguish between any open and solid areas of the design. Solid black surface shading is not permitted except when used to represent the color black as well as color contrast. Lack of appropriate surface shading in the drawing as filed may render the shape and contour of the design nonenabling under 35 U.S.C. 112, first paragraph. Additionally, if the shape of the design is not evident from the disclosure as filed, addition of surface shading after filing may be viewed as new matter. New matter is anything that is added to, or from, the claim, drawings or specification, that was neither shown nor suggested in the original application (see 35 U.S.C. 132 and 37 CFR § 1.121, at the end of this guide).

Broken Lines

A broken line disclosure is understood to be for illustrative purposes only and forms no part of the

claimed design. Structure that is not part of the claimed design, but is considered necessary to show the environment in which the design is used, may be represented in the drawing by broken lines. This includes any portion of an article in which the design is embodied or applied to that is not considered part of the claimed design. When the claim is directed to just surface ornamentation for an article, the article in which it is embodied must be shown in broken lines.

In general, when broken lines are used, they should not intrude upon or cross the showing of the claimed design and should not be of heavier weight than the lines used in depicting the claimed design. Where a broken line showing of environmental structure must necessarily cross or intrude upon the representation of the claimed design and obscures a clear understanding of the design, such an illustration should be included as a separate figure in addition to the other figures which fully disclose the subject matter of the design.

The Oath or Declaration

The oath or declaration required of the applicant must comply with the requirements set forth in 37 CFR §1.63.

Disclosure Examples

So that the applicant will better understand what constitutes a complete disclosure, examples of drawing disclosures and their accompanying specifications are provided on the following pages.

Disclosure Examples

Example 1-Disclosure Of The Entire Article

I, John Doe, have invented a new design for a jewelry cabinet, as set forth in the following specification. The claimed jewelry cabinet is used to store jewelry and could sit on a bureau.

Fig. 1 is a front elevational view of a jewelry cabinet showing my new design;

Fig. 2 is a rear elevational view thereof;

Fig. 3 is a left side elevational view thereof;

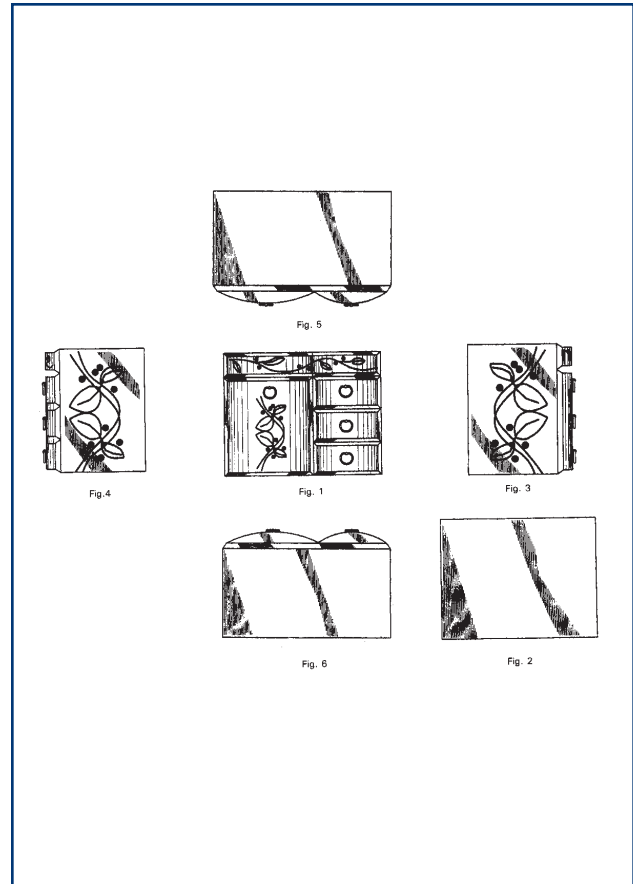
Fig. 4 is a right side elevational view thereof;

Fig. 5 is a top plan view thereof; and

Fig. 6 is a bottom plan view thereof.

I claim: the ornamental design for a jewelry cabinet as shown.

Specification



Drawing Disclosure

Disclosure Examples

Example 2-Disclosure of only the surfaces of an article that are visible during use (no bottom view or description necessary)

I, John Doe, have invented a new design for a jewelry cabinet, as set forth in the following specification. The claimed jewelry cabinet is used for storing jewelry and could sit on a bureau.

Fig. 1 is a front elevational view of a jewelry cabinet showing my new design;

Fig. 2 is a rear elevational view thereof;

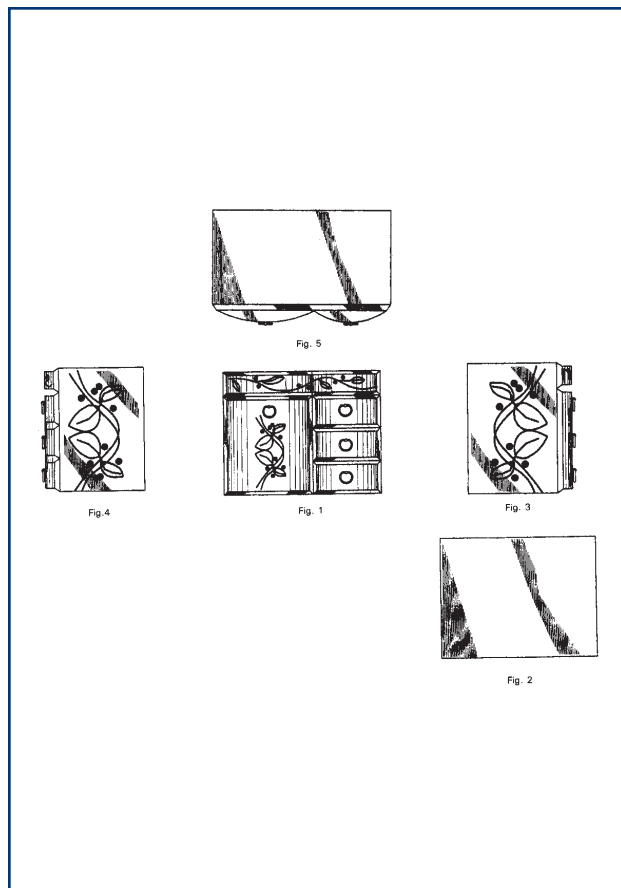
Fig. 3 is a left side elevational view thereof;

Fig. 4 is a right side elevational view thereof;

Fig. 5 is a top plan view thereof.

I claim: the ornamental design for a jewelry cabinet as shown.

Specification



Drawing Disclosure

Disclosure Examples

Example 3-Disclosure of only the surfaces of an article that are visible during use - The rear view disclosed by description

I, John Doe, have invented a new design for a jewelry cabinet, as set forth in the following specification. The claimed jewelry cabinet is used for storing jewelry and could sit on a bureau.

Fig. 1 is a front elevational view of a jewelry cabinet showing my new design;

Fig. 2 is a left side elevational view thereof;

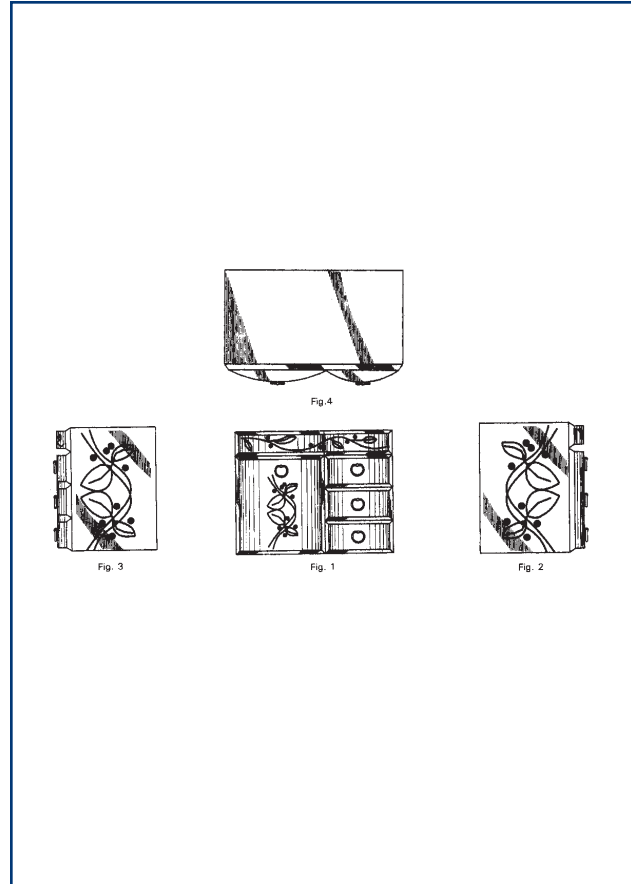
Fig. 3 is a right side elevational view thereof; and

Fig. 4 is a top plan view thereof.

The rear of the jewelry cabinet is flat and unornamented.

I claim: the ornamental design for a jewelry cabinet as shown and described.

Specification



Drawing Disclosure

Disclosure Examples

Example 4-Disclosure of a surface pattern as claimed design, applied to an article

I, John Doe, have invented a new design for a surface pattern applied to a jewelry cabinet, as set forth in the following specification.

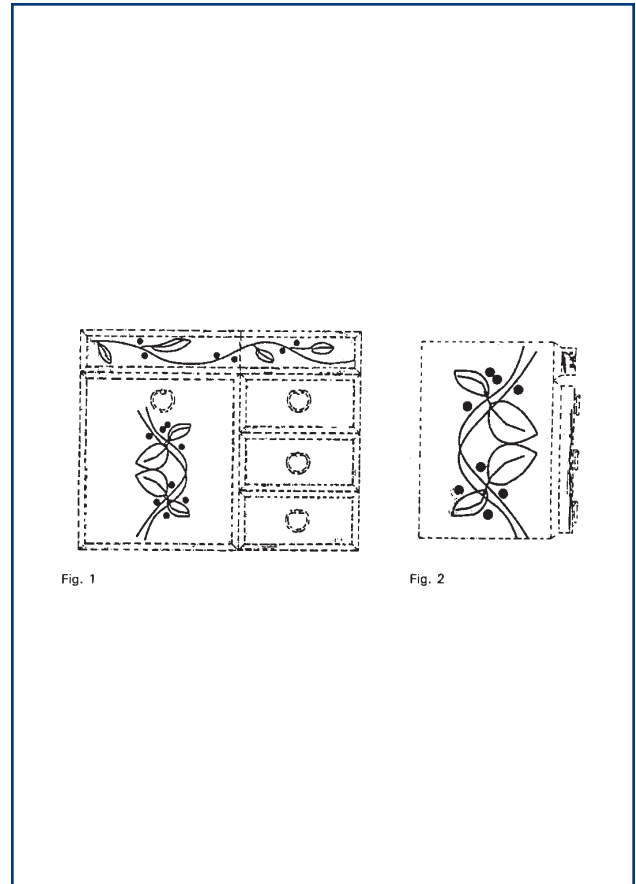
Fig. 1 is a front elevational view of a surface pattern applied to a jewelry cabinet showing my new design;

Fig. 2 is a left side elevational view thereof, the right side being a mirror image.

The jewelry cabinet is shown in broken lines for illustrative purposes only and forms no part of the claimed design.

I claim: the ornamental design for a surface pattern applied to a jewelry cabinet as shown and described.

Specification



Drawing Disclosure

will then either withdraw the rejection and allow the application or, if not persuaded by the remarks and/or amendments submitted, repeat the rejection and make it Final. Applicant may file an appeal with the Board of Patent Appeals and Interferences after

given a final rejection or after the claim has been rejected twice. Applicant may also file a new application prior to the abandonment of the original application, claiming benefit of the earlier filing date. This will allow continued prosecution of the claim.

Drawing Examples

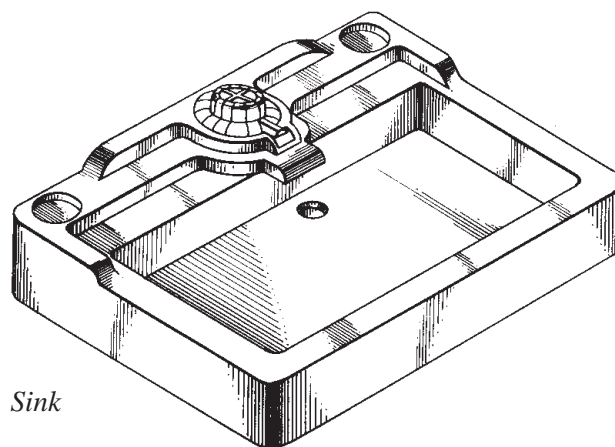
The two types of shading commonly employed in design patent application drawings are straight-line surface shading and stippling. Individually or in

combination, they can effectively represent the character and contour of most surfaces.

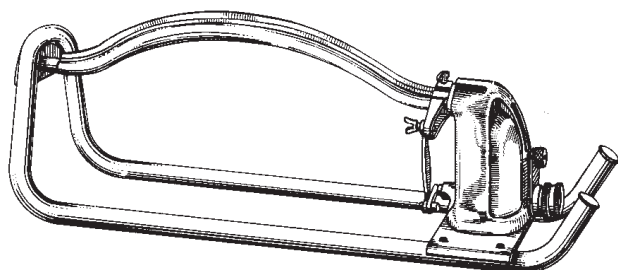
Straight-line Surface Shading



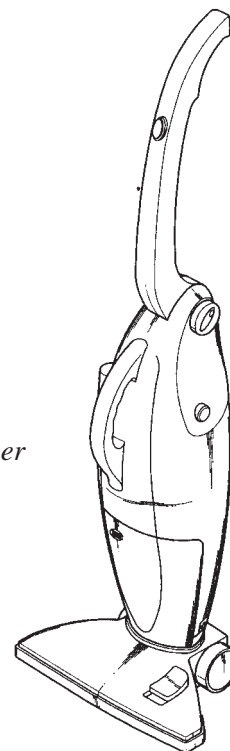
Wrist Watch



Sink



Lawn Sprinkler

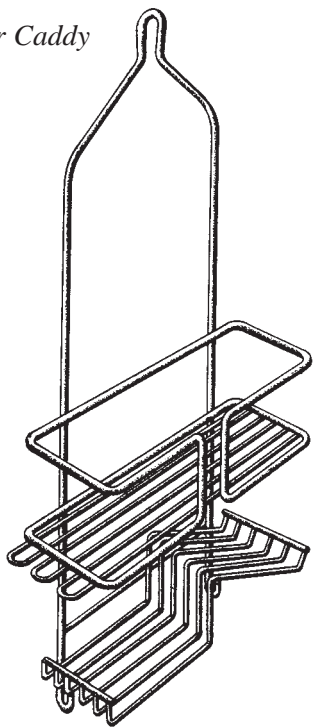


Vacuum Cleaner

Drawing Examples

Stippling

Shower Caddy



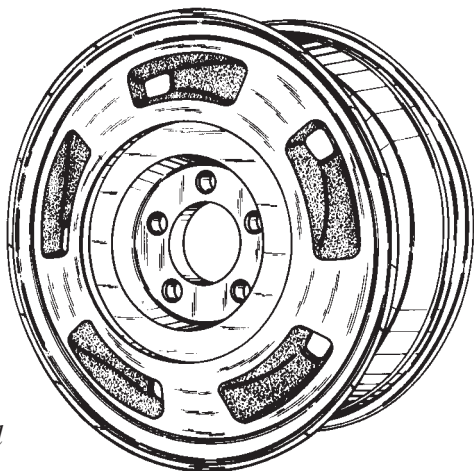
Puppet



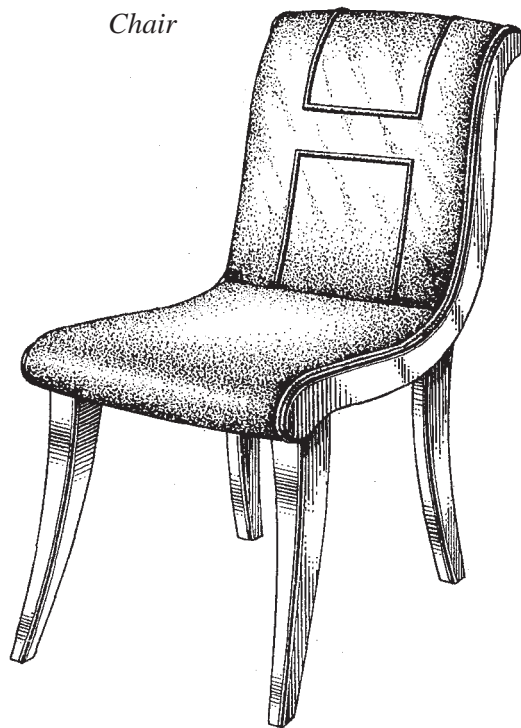
Combination of Straight Line Shading and Stippling

Note that both stippling and straight-line surface shading, while permissible on the same object to show surface contrast, should not be used together on the same surface.

Wheel



Chair

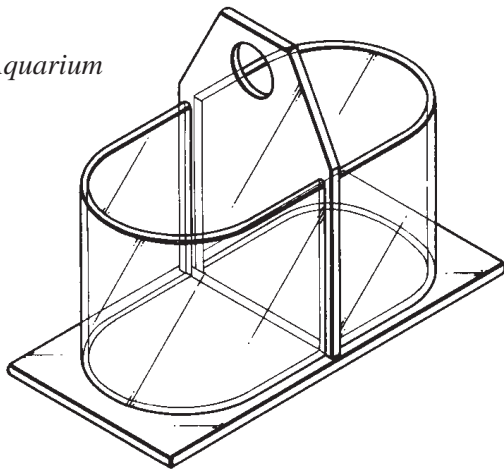


Drawing Examples

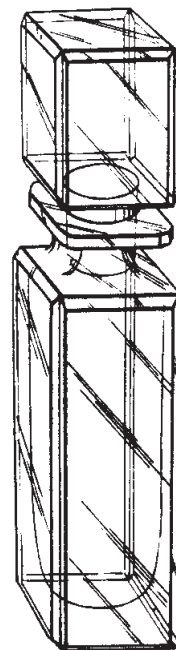
Transparent Materials

Note that elements visible behind transparent surfaces should be shown in light, full lines, not broken lines.

Aquarium



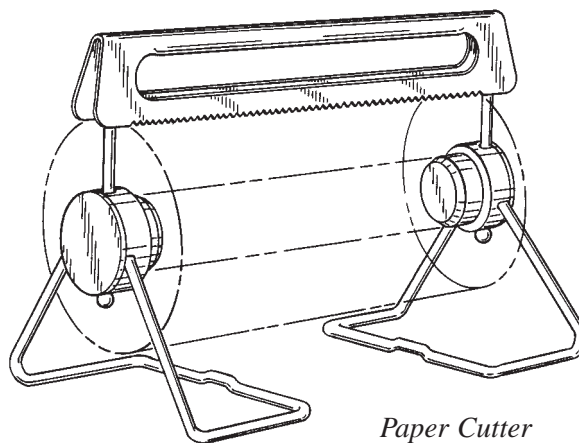
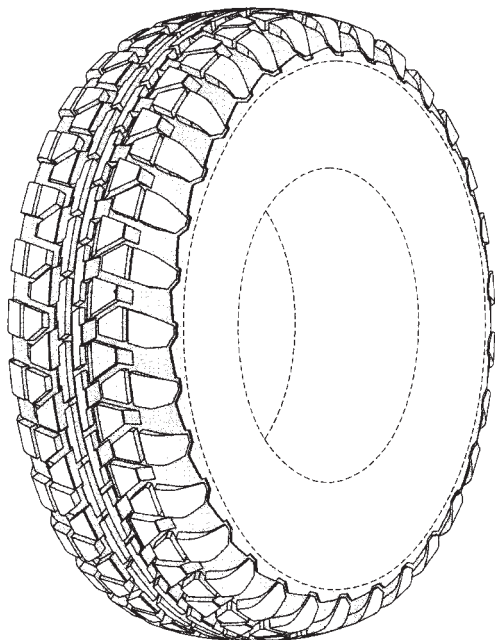
Perfume Bottle



Broken Line Disclosure

Broken lines may be used to show environment and boundaries that form no part of the claimed design.

Tire



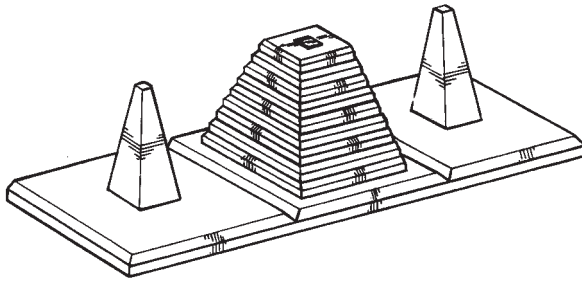
Paper Cutter

Drawing Examples

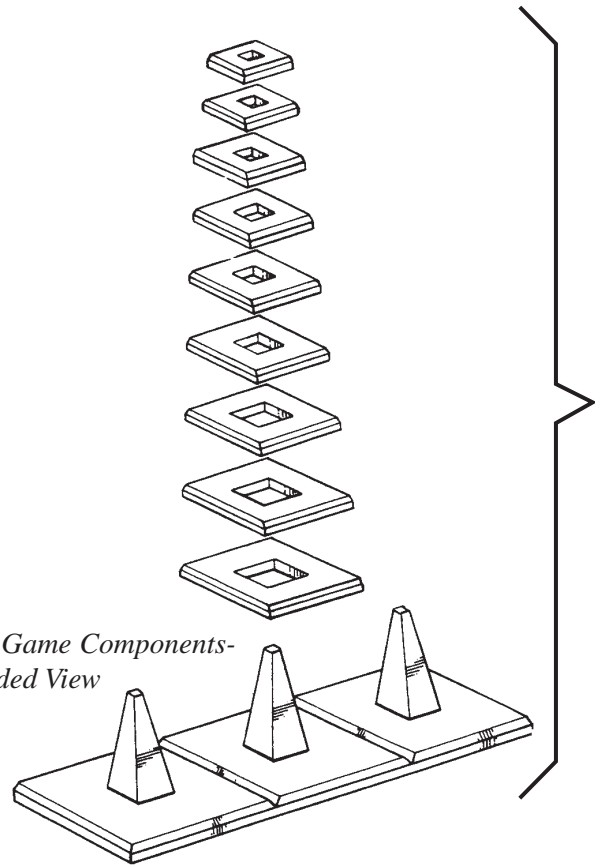
Exploded View

An exploded view is only supplementary to a fully assembled view. A bracket must be employed to show the association of elements.

Set of Game Components- Fully Assembled View

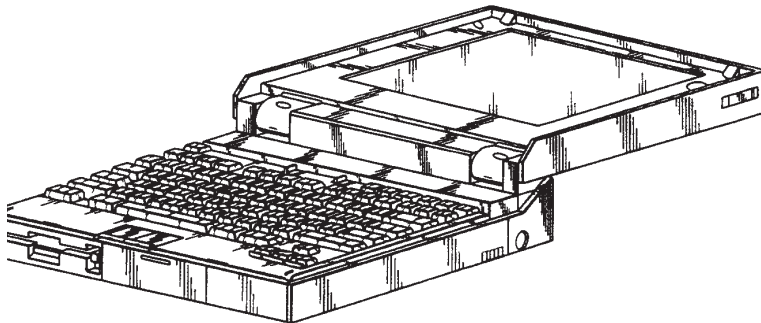


Set of Game Components- Exploded View

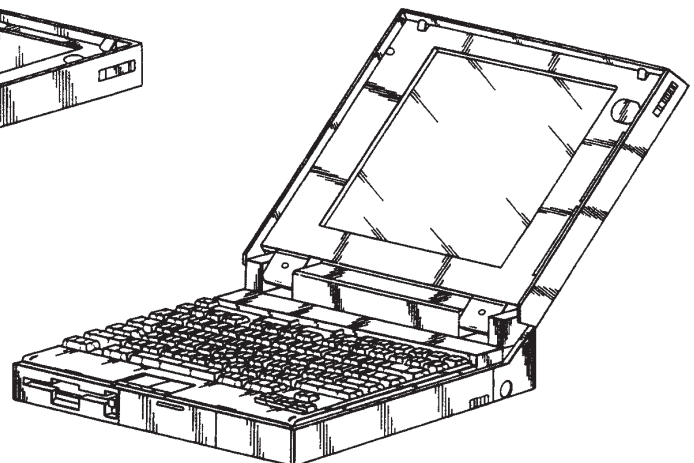


Alternate Positions

The alternate positions of a design, or an element of the design, must be shown in separate views.



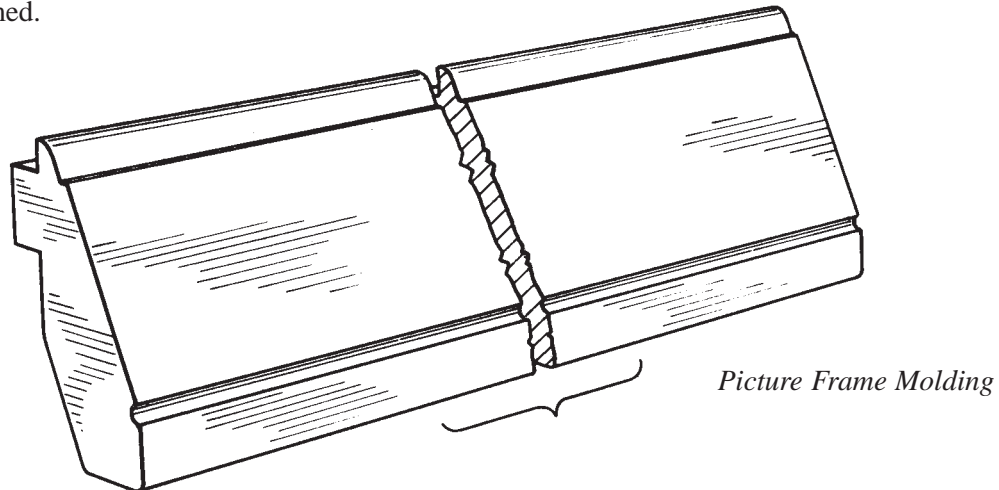
Personal Computer



Drawing Examples

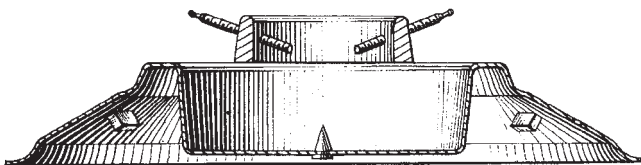
Indeterminate Length

Note the use of a separation and a bracket to indicate that, for ease of illustration, the precise length of the molding is not claimed.



Cross-sectional View

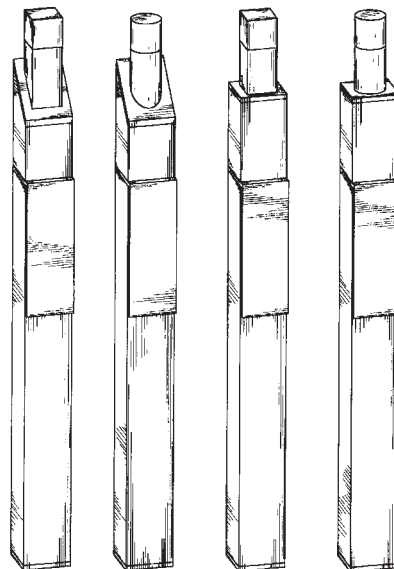
Cross-sections may be employed to clarify the disclosure and to minimize the number of views.



Christmas Tree Stand

Multiple Embodiments

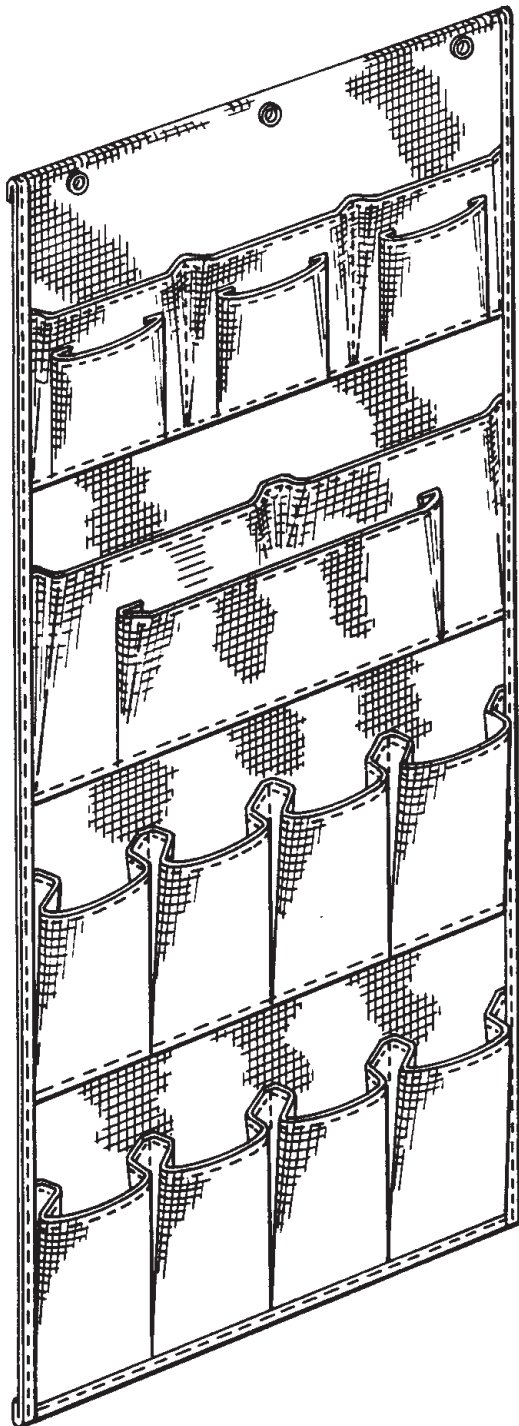
Multiple embodiments of a single concept may be filed in one design application, so long as their appearance and shape are similar, as shown below.



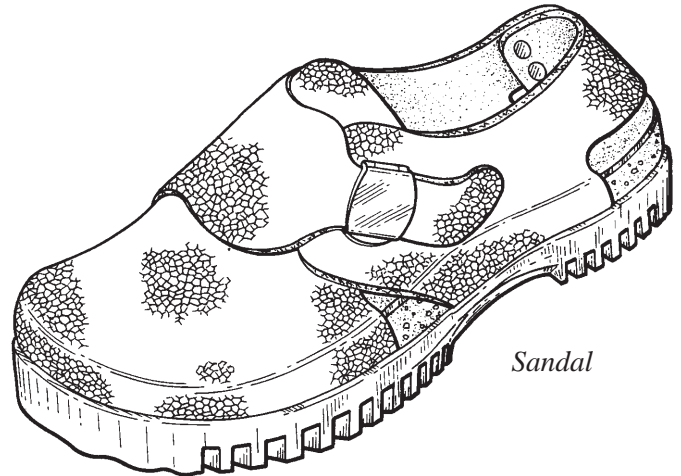
*Combined Writing Instrument And
Pocket Holder Therefor*

Drawing Examples

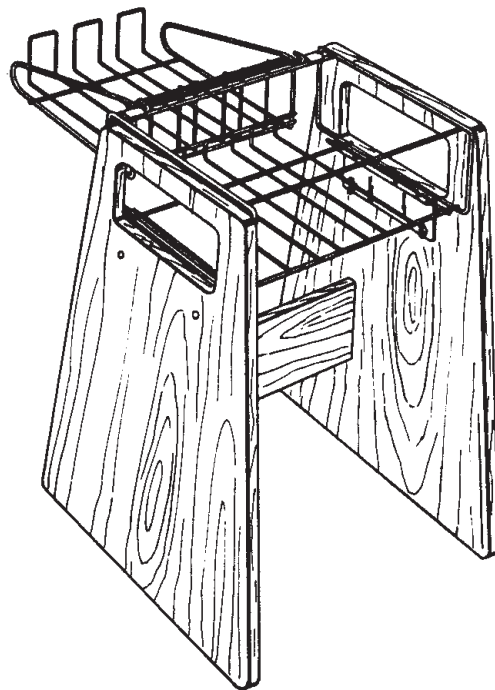
Specific Materials



Multi-Pocketed Storage Bag



Sandal

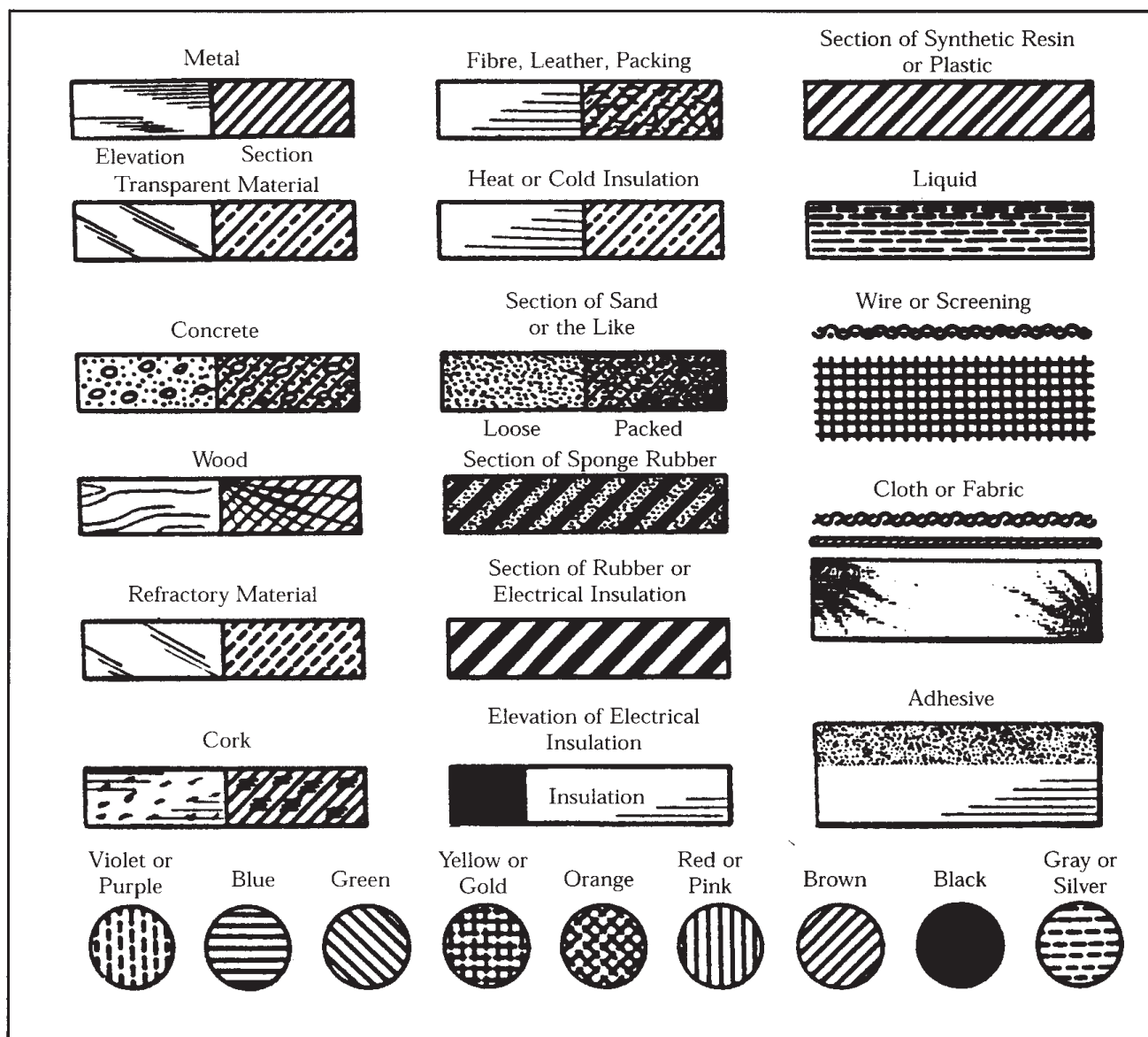


Computer Printer Stand

Symbols for Draftsmen

Graphical symbols for conventional elements may be used on the drawing when appropriate, subject to approval by the Office. The symbols that follow have been approved for such use. This collection does not purport to be exhaustive; other standard and commonly used symbols will also be acceptable provided they are clearly understood, are adequately identified in the specification as filed, and do not create confusion with other symbols used in patent drawings.

NOTES: In general, in lieu of a symbol, a conventional element, combination or circuit may be shown by an appropriately labeled rectangle, square or circle; abbreviations should not be used unless their meaning is evident and not confusing with the abbreviations used in the suggested symbols.



submission of a supplemental application data sheet, an oath or declaration under § 1.63 or § 1.67, or a letter pursuant to § 1.33(b).

37 CFR 1.84 Standards for drawings

(a) *Drawings.* There are two acceptable categories for presenting drawings in utility and design 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 drawings may be necessary as the only practical medium by which to disclose the subject matter sought to be patented in a utility or design patent application or the subject matter of a statutory invention registration. The color drawings must be of sufficient quality such that all details in the drawings are reproducible in black and white in the printed patent. Color drawings are not permitted in international applications (see PCT Rule 11.13), or in an application, or copy thereof, submitted under the Office electronic filing system. The Office will accept color drawings in utility or design 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 fee set forth in § 1.17(h);
 - (ii) Three (3) sets of color drawings;
 - (iii) A black and white photocopy that accurately depicts, to the extent possible, the subject matter shown in the color drawing;
- and
- (iv) An amendment to the specification to insert (unless the specification contains or has been previously amended to contain) the following language as the first paragraph of the brief description of the drawings:

The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the

Office upon request and payment of the necessary fee.

(b) Photographs.

(1) *Black and white.* Photographs, including photocopies of photographs, are not ordinarily permitted in utility and design patent applications. The Office will accept photographs in utility and design patent applications, however, if photographs are the only practicable medium for illustrating the claimed invention. For example, photographs or photomicrographs of: electrophoresis gels, blots (e.g., immunological, western, Southern, and northern), autoradiographs, cell cultures (stained and unstained), histological tissue cross sections (stained and unstained), animals, plants, in vivo imaging, thin layer chromatography plates, crystalline structures, and, in a design patent application, ornamental effects, are acceptable. If the subject matter of the application admits of illustration by a drawing, the examiner may require a drawing in place of the photograph. The photographs must be of sufficient quality so that all details in the photographs are reproducible in the printed patent.

(2) *Color photographs.* Color photographs will be accepted in utility and design patent applications if the conditions for accepting color drawings and black and white photographs have been satisfied. See paragraphs (a)(2) and (b)(1) of this section.

(c) *Identification of drawings.* Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin.

(d) *Graphic forms in drawings.* Chemical or mathematical formulae, tables, and waveforms may be submitted as drawings and are subject to the same requirements as drawings. Each chemical or mathematical formula must be labeled as a separate figure, using brackets when necessary, to show that information is properly integrated. Each group of waveforms must be presented as a single figure, using a common vertical axis with time extending along the horizontal axis. Each individual waveform discussed in the specification must be identified with a separate letter designation adjacent to the vertical axis.

(e) *Type of paper.* Drawings submitted to the Office must be made on paper, which is flexible, strong, white, smooth, non-shiny, and durable. All sheets must be reasonably free from cracks, creases, and folds. Only one side of the sheet may be used for the drawing. Each sheet must be reasonably free from erasures and must be free from alterations, overwritings, and interlineations. Photographs must be developed on paper meeting the sheet-size requirements of paragraph (f) of this section and the margin requirements of paragraph (g) of this section. See paragraph (b) of this section for other requirements for photographs.

(f) *Size of paper.* All drawing sheets in an application must be the same size. One of the shorter sides of the sheet is regarded as its top. The size of the sheets on which drawings are made must be:

(1) 21.0 cm. by 29.7 cm. (DIN size A4), or

(2) 21.6 cm. by 27.9 cm. (8 1/2 by 11 inches).

(g) *Margins.* The sheets must not contain frames around the sight (i.e., the usable surface), but should have scan target points (i.e., cross hairs) printed on two cater-corner margin corners. Each sheet must include a top margin of at least 2.5 cm. (1 inch), a left side margin of at least 2.5 cm. (1 inch), a right side margin of at least 1.5 cm. (5/8 inch), and a bottom margin of at least 1.0 cm. (3/8 inch), thereby leaving a sight no greater than 17.0 cm. by 26.2 cm. on 21.0 cm. by 29.7 cm. (DIN size A4) drawing sheets, and a sight no greater than 17.6 cm. by 24.4 cm. (6 15/16 by 9 5/8 inches) on 21.6 cm. by 27.9 cm. (8 1/2 by 11 inch) drawing sheets.

(h) *Views.* The drawing must contain as many views as necessary to show the invention. The views may be plan, elevation, section, or perspective views. Detail views of portions of elements, on a larger scale if necessary, may also be used. All views of the drawing must be grouped together and arranged on the sheet(s) without wasting space, preferably in an upright position, clearly separated from one another, and must not be included in the sheets containing the specifications, claims, or abstract. Views must not be connected by projection lines and must not contain centerlines. Waveforms of electrical signals may be connected by dashed lines to show the relative timing of the waveforms.

(1) *Exploded views.* Exploded views, with the separated parts embraced by a bracket, to show the relationship or order of assembly of various

parts are permissible. When an exploded view is shown in a figure, which is on the same sheet as another figure, the exploded view should be placed in brackets.

(2) *Partial views.* When necessary, a view of a large machine or device in its entirety may be broken into partial views on a single sheet, or extended over several sheets if there is no loss in facility of understanding the view. Partial views drawn on separate sheets must always be capable of being linked edge to edge so that no partial view contains parts of another partial view. A smaller scale view should be included showing the whole formed by the partial views and indicating the positions of the parts shown. When a portion of a view is enlarged for magnification purposes, the view and the enlarged view must each be labeled as separate views.

(i) Where views on two or more sheets form, in effect, a single complete view, the views on the several sheets must be so arranged that the complete figure can be assembled without concealing any part of any of the views appearing on the various sheets.

(ii) A very long view may be divided into several parts placed one above the other on a single sheet. However, the relationship between the different parts must be clear and unambiguous.

(3) *Sectional views.* The plane upon which a sectional view is taken should be indicated on the view from which the section is cut by a broken line. The ends of the broken line should be designated by Arabic or Roman numerals corresponding to the view number of the sectional view, and should have arrows to indicate the direction of sight. Hatching must be used to indicate section portions of an object, and must be made by regularly spaced oblique parallel lines spaced sufficiently apart to enable the lines to be distinguished without difficulty. Hatching should not impede the clear reading of the reference characters and lead lines. If it is not possible to place reference characters outside the hatched area, the hatching may be broken off wherever reference characters are inserted. Hatching must be at a substantial angle to the surrounding axes or principal lines, preferably 45°. A cross section must be set out and drawn to show all of the materials as they are shown in the view from

which the cross section was taken. The parts in cross section must show proper material(s) by hatching with regularly spaced parallel oblique strokes, the space between strokes being chosen on the basis of the total area to be hatched. The various parts of a cross section of the same item should be hatched in the same manner and should accurately and graphically indicate the nature of the material(s) that is illustrated in cross section. The hatching of juxtaposed different elements must be angled in a different way. In the case of large areas, hatching may be confined to an edging drawn around the entire inside of the outline of the area to be hatched. Different types of hatching should have different conventional meanings as regards the nature of a material seen in cross section.

(4) *Alternate position.* A moved position may be shown by a broken line superimposed upon a suitable view if this can be done without crowding; otherwise, a separate view must be used for this purpose.

(5) *Modified forms.* Modified forms of construction must be shown in separate views.

(i) *Arrangement of views.* One view must not be placed upon another or within the outline of another. All views on the same sheet should stand in the same direction and, if possible, stand so that they can be read with the sheet held in an upright position. If views wider than the width of the sheet are necessary for the clearest illustration of the invention, the sheet may be turned on its side so that the top of the sheet, with the appropriate top margin to be used as the heading space, is on the right-hand side. Words must appear in a horizontal, left-to-right fashion when the page is either upright or turned so that the top becomes the right side, except for graphs utilizing standard scientific convention to denote the axis of abscissas (of X) and the axis of ordinates (of Y).

(j) *Front page view.* The drawing must contain as many views as necessary to show the invention. One of the views should be suitable for inclusion on the front page of the patent application publication and patent as the illustration of the invention. Views must not be connected by projection lines and must not contain centerlines. Applicant may suggest a single view (by figure number) for inclusion on the front page of the patent application publication and patent.

(k) *Scale.* The scale to which a drawing is made must be large enough to show the mechanism without crowding when the drawing is reduced in size to two-thirds in reproduction. Indications such as “actual size” or “scale 1/2” on the drawings are not permitted since these lose their meaning with reproduction in a different format.

(l) *Character of lines, numbers, and letters.* All drawings must be made by a process, which will give them satisfactory reproduction characteristics. Every line, number, and letter must be durable, clean, black (except for color drawings), sufficiently dense and dark, and uniformly thick and well defined. The weight of all lines and letters must be heavy enough to permit adequate reproduction. This requirement applies to all lines however fine, to shading, and to lines representing cut surfaces in sectional views. Lines and strokes of different thickness may be used in the same drawing where different thicknesses have a different meaning.

(m) *Shading.* The use of shading in views is encouraged if it aids in understanding the invention and if it does not reduce legibility. Shading is used to indicate the surface or shape of spherical, cylindrical, and conical elements of an object. Flat parts may also be lightly shaded. Such shading is preferred in the case of parts shown in perspective, but not for cross sections. See paragraph (h)(3) of this section. Spaced lines for shading are preferred. These lines must be thin, as few in number as practicable, and they must contrast with the rest of the drawings. As a substitute for shading, heavy lines on the shade side of objects can be used except where they superimpose on each other or obscure reference characters. Light should come from the upper left corner at an angle of 45°. Surface delineations should preferably be shown by proper shading. Solid black shading areas are not permitted, except when used to represent bar graphs or color.

(n) *Symbols.* Graphical drawing symbols may be used for conventional elements when appropriate. The elements for which such symbols and labeled representations are used must be adequately identified in the specification. Known devices should be illustrated by symbols, which have a universally recognized conventional meaning and are generally accepted in the art. Other symbols, which are not universally recognized, may be used, subject to approval by the Office, if they are not likely to be

confused with existing conventional symbols, and if they are readily identifiable.

(o) *Legends.* Suitable descriptive legends may be used subject to approval by the Office, or may be required by the examiner where necessary for understanding of the drawing. They should contain as few words as possible.

(p) *Numbers, letters, and reference characters.*

(1) Reference characters (numerals are preferred), sheet numbers, and view numbers must be plain and legible, and must not be used in association with brackets or inverted commas, or enclosed within outlines, e.g., encircled. They must be oriented in the same direction as the view so as to avoid having to rotate the sheet. Reference characters should be arranged to follow the profile of the object depicted.

(2) The English alphabet must be used for letters, except where another alphabet is customarily used, such as the Greek alphabet to indicate angles, wavelengths, and mathematical formulas.

(3) Numbers, letters, and reference characters must measure at least .32 cm. (1/8 inch) in height. They should not be placed in the drawing so as to interfere with its comprehension. Therefore, they should not cross or mingle with the lines. They should not be placed upon hatched or shaded surfaces. When necessary, such as indicating a surface or cross section, a reference character may be underlined and a blank space may be left in the hatching or shading where the character occurs so that it appears distinct.

(4) The same part of an invention appearing in more than one view of the drawing must always be designated by the same reference character, and the same reference character must never be used to designate different parts.

(5) Reference characters not mentioned in the description shall not appear in the drawings. Reference characters mentioned in the description must appear in the drawings.

(q) *Lead lines.* Lead lines are those lines between the reference characters and the details referred to. Such lines may be straight or curved and should be as short as possible. They must originate in the immediate proximity of the reference character and extend to the feature indicated. Lead lines must not cross each other. Lead lines are required for each reference character except for those, which indicate the surface

or cross section on which they are placed. Such a reference character must be underlined to make it clear that a lead line has not been left out by mistake. Lead lines must be executed in the same way as lines in the drawing. See paragraph (l) of this section.

(r) *Arrows.* Arrows may be used at the ends of lines, provided that their meaning is clear, as follows:

(1) On a lead line, a freestanding arrow to indicate the entire section towards which it points;

(2) On a lead line, an arrow touching a line to indicate the surface shown by the line looking along the direction of the arrow;

or

(3) To show the direction of movement.

(s) *Copyright or Mask Work Notice.* A copyright or mask work notice may appear in the drawing, but must be placed within the sight of the drawing immediately below the figure representing the copyright or mask work material and be limited to letters having a print size of .32 cm. to .64 cm. (1/8 to 1/4 inches) high. The content of the notice must be limited to only those elements provided for 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 § 1.71(e) is included at the beginning (preferably as the first paragraph) of the specification.

(t) *Numbering of sheets of drawings.* The sheets of drawings should be numbered in consecutive Arabic numerals, starting with 1, within the sight as defined in paragraph (g) of this section. These numbers, if present, must be placed in the middle of the top of the sheet, but not in the margin. The numbers can be placed on the right-hand side if the drawing extends too close to the middle of the top edge of the usable surface. The drawing sheet numbering must be clear and larger than the numbers used as reference characters to avoid confusion. The number of each sheet should be shown by two Arabic numerals placed on either side of an oblique line, with the first being the sheet number and the second being the total number of sheets of drawings, with no other marking.

(u) *Numbering of views.*

(1) The different views must be numbered in consecutive Arabic numerals, starting with 1, independent of the numbering of the sheets and, if possible, in the order in which they appear on the drawing sheet(s). Partial views intended to form one complete view, on one or several sheets, must be identified by the same number followed by a capital letter. View numbers must be preceded by the abbreviation "FIG." Where only a single view is used in an application to illustrate the claimed invention, it must not be numbered and the abbreviation "FIG." must not appear.

(2) Numbers and letters identifying the views must be simple and clear and must not be used in association with brackets, circles, or inverted commas. The view numbers must be larger than the numbers used for reference characters.

(v) *Security markings.* Authorized security markings may be placed on the drawings provided they are outside the sight, preferably centered in the top margin.

(w) *Corrections.* Any corrections on drawings submitted to the Office must be durable and permanent.

(x) *Holes.* No holes should be made by applicant in the drawing sheets.

(y) *Types of drawings.* See § 1.152 for design drawings, § 1.165 for plant drawings, and § 1.174 for reissue drawings.

37 CFR 1.121 *Manner of making amendments in application.*

(a) *Amendments in applications, other than reissue applications.* Amendments in applications, other than reissue applications, are made by filing a paper, in compliance with § 1.52, directing that specified amendments be made.

(b) *Specification other than the claims and listings provided for elsewhere (§§ 1.96 and 1.825).*

(1) *Amendment by instruction to delete, replace, or add a paragraph.* Amendments to the specification, other than the claims and listings provided for elsewhere (§§ 1.96 and 1.825), may be made by submitting:

(i) An instruction, which unambiguously identifies the location, to delete one or more paragraphs of the specification, replace a deleted paragraph with one or more replacement paragraphs, or add one or more paragraphs;

(ii) Any replacement or added paragraph(s) in clean form, that is, without markings to indicate the changes that have been made;

and

(iii) Another version of any replacement paragraph(s), on one or more pages separate from the amendment, marked up to show all the changes relative to the previous version of the paragraph(s). The changes may be shown by brackets (for deleted matter) or underlining (for added matter), or by any equivalent marking system. A marked up version does not have to be supplied for an added paragraph or a deleted paragraph as it is sufficient to state that a particular paragraph has been added, or deleted.

(2) *Amendment by replacement section.* If the sections of the specification contain section headings as provided in §§ 1.77(b), 1.154(b), or § 1.163(c), amendments to the specification, other than the claims, may be made by submitting:

(i) A reference to the section heading along with an instruction to delete that section of the specification and to replace such deleted section with a replacement section;

(ii) A replacement section in clean form, that is, without markings to indicate the changes that have been made;

and

(iii) Another version of the replacement section, on one or more pages separate from the amendment, marked up to show all changes relative to the previous version of the section. The changes may be shown by brackets (for deleted matter) or underlining (for added matter), or by any equivalent marking system.

(3) *Amendment by substitute specification.* The specification, other than the claims, may also be amended by submitting:

(i) An instruction to replace the specification;

(ii) A substitute specification in compliance with § 1.125(b);

and

(iii) Another version of the substitute specification, separate from the substitute specification, marked up to show all changes relative to the previous version of the specification. The changes may be shown by brackets (for deleted matter), or underlining (for added matter), or by any equivalent marking system.

(4) *Reinstatement*: Deleted matter may be reinstated only by a subsequent amendment presenting the previously deleted matter.

(c) *Claims*.

(1) *Amendment by rewriting, directions to cancel or add*: Amendments to a claim must be made by rewriting such claim with all changes (e.g., additions, deletions, modifications) included. The rewriting of a claim (with the same number) will be construed as directing the cancellation of the previous version of that claim. A claim may also be canceled by an instruction.

(i) A rewritten or newly added claim must be in clean form, that is, without markings to indicate the changes that have been made. A parenthetical expression should follow the claim number indicating the status of the claim as amended or newly added (e.g., “amended”, “twice amended,” or “new”).

(ii) If a claim is amended by rewriting such claim with the same number, the amendment must be accompanied by another version of the rewritten claim, on one or more pages separate from the amendment, marked up to show all the changes relative to the previous version of that claim. A parenthetical expression should follow the claim number indicating the status of the claim, e.g., “amended”, “twice amended”, etc. The parenthetical expression “amended”, “twice amended”, etc. should be the same for both the clean version of the claim under paragraph (c)(1)(i) of this section and the marked up version under this paragraph. The changes may be shown by brackets (for deleted matter) or underlining (for added matter), or by any equivalent marking system. A marked up version does not have to be supplied for an added claim or a canceled claim as it is sufficient to state that a particular claim has been added, or canceled.

(2) A claim canceled by amendment (deleted in its entirety) may be reinstated only by a subsequent amendment presenting the claim as a new claim with a new claim number.

(3) A clean version of the entire set of pending claims may be submitted in a single amendment paper. Such a submission shall be construed as directing the cancellation of all previous versions of any pending claims. A marked up version is required only for claims being changed by the current amendment (see paragraph (c)(1)(ii) of this section). Any claim not accompanied by a marked up version will constitute an assertion that it has not been changed relative to the immediate prior version.

(d) *Drawings*. Application drawings are amended in the following manner: Any change to the application drawings must be submitted on a separate paper showing the proposed changes in red for approval by the examiner. Upon approval by the examiner, new drawings in compliance with § 1.84 including the changes must be filed.

(e) *Disclosure consistency*. The disclosure must be amended, when required by the Office, to correct inaccuracies of description and definition, and to secure substantial correspondence between the claims, the remainder of the specification, and the drawings.

(f) *No new matter*. No amendment may introduce new matter into the disclosure of an application.

(g) *Exception for examiner's amendments*: Changes to the specification, including the claims, of an application made by the Office in an examiner's amendment may be made by specific instructions to insert or delete subject matter set forth in the examiner's amendment by identifying the precise point in the specification or the claim(s) where the insertion or deletion is to be made. Compliance with paragraphs (b)(1), (b)(2) or (c)(1) of this section is not required.

(h) *Amendments in reissue applications*. Any amendment to the description and claims in reissue applications must be made in accordance with § 1.173.

(i) *Amendments in reexamination proceedings*: Any proposed amendment to the description and claims in patents involved in reexamination proceedings in both ex parte reexaminations filed under § 1.510 and inter partes reexaminations

filed under § 1.913 must be made in accordance with § 1.530(d)-(j).

(j) *Amendments in provisional applications:* Amendments in provisional applications are not normally made. If an amendment is made to a provisional application, however, it must comply with the provisions of this section. Any amendments to a provisional application shall be placed in the provisional application file but may not be entered.

37 CFR 1.152 Design drawings

The design must be represented by a drawing that complies with the requirements of § 1.84 and must contain a sufficient number of views to constitute a complete disclosure of the appearance of the design. Appropriate and adequate surface shading should be used to show the character or contour of the surfaces represented. Solid black surface shading is not permitted except when used to represent the color black as well as color contrast. Broken lines may be used to show visible environmental structure, but may not be used to show hidden planes and surfaces that cannot be seen through opaque materials. Alternate positions of a design component, illustrated by full and broken lines in the same view are not permitted in a design drawing. Photographs and ink drawings are not permitted to be combined as formal drawings in one application. Photographs submitted in lieu of ink drawings in design patent applications must not disclose environmental structure but must be limited to the design claimed for the article.

37 CFR 1.153 Title, description and claim, oath or declaration

(a) The title of the design must designate the particular article. No description, other than a reference to the drawing, is ordinarily required. The claim shall be in formal terms to the ornamental design for the article (specifying name) as shown, or as shown and described. More than one claim is neither required nor permitted.

(b) The oath or declaration required of the applicant must comply with § 1.63.

37 CFR 1.154 Arrangement of application elements in a design application

(a) The elements of the design application, if applicable, should appear in the following order:

- (1) Design application transmittal form.
- (2) Fee transmittal form.
- (3) Application data sheet (see § 1.76).
- (4) Specification.
- (5) Drawings or photographs.
- (6) Executed oath or declaration (see § 1.153(b)).

(b) The specification should include the following sections in order:

- (1) Preamble, stating the name of the applicant, title of the design, and a brief description of the nature and intended use of the article in which the design is embodied.
- (2) Cross-reference to related applications (unless included in the application data sheet).
- (3) Statement regarding federally sponsored research or development.
- (4) Description of the figure or figures of the drawing.
- (5) Feature description.
- (6) A single claim.

(c) The text of the specification sections defined in paragraph (b) of this section, if applicable, should be preceded by a section heading in uppercase letters without underlining or bold type.

37 CFR 1.155 Expedited examination of design applications

(a) The applicant may request that the Office expedite the examination of a design application. To qualify for expedited examination:

- (1) The application must include drawings in compliance with § 1.84;
- (2) The applicant must have conducted a pre-examination search; and
- (3) The applicant must file a request for expedited examination including:
 - (i) The fee set forth in § 1.17(k);