

# Why Patent Drawings Get Rejected

## Part 2

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Last time we discussed why drawings might get rejected. The following are real rejection/objection examples compiled from multiple notices. Each includes our suggested solution.

Informal utility drawings; these may include hand drawn sketches, pencil drawings, photographs, photocopies of photographs and drawings with hand written text & numerals.

-Notice from USPTO;

“All sheets must be reasonably free from cracks, creases, and folds. Each sheet must be reasonably free from erasures and must be free from alterations, overwritings, and interlineations”<sup>4</sup>.

-*remedy*, formalize the drawings. This usually involves tracing the informal drawings using a CAD program ensuring compliance with all USPTO drawing rules. A draftsman can improve the drawings without changing them enough to be of concern.

Utility drawings with poor line quality;

-Notice from USPTO;

The line quality is objected to as it is rough, uneven, and poorly defined.

-*remedy*, prepare formal drawings with correct line weight.

“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”<sup>5</sup>.

Incorrect or lack of hatching in a sectional view;

-Notice from USPTO;

Hatching must be used to indicate section portions of an object.

-*remedy*, Make sure that the hatching is at a 45 degree angle. The cross-section must show all of the materials as they are shown in the view from which the cross section was taken. Different types of hatching should be used to indicate different materials seen in the cross section.

Design Drawings do not fully disclose the design and the invention is not clear to the examiner;

-Notice from USPTO;

“The claim is rejected under 35 U.S.C. 112, first and second paragraphs, as the claimed invention is not described in such full, clear, concise and exact terms as to enable any person skilled in the art to make and use the same, and fails to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim is indefinite and nonenabling”<sup>6</sup>

-*remedy*, it may be impossible to correct without adding new matter, however you may be able to convert problematic areas to broken line making those portions unclaimed. This may help to overcome an objection but you sacrifice coverage. To avoid this situation make sure the drawings fully reveal all features of your invention and include the following views for full disclosure: perspective, front, right side, left side, rear, top and bottom views.

Design Drawings with improper or poor shading;

-Notice from USPTO;

“It may be necessary to shade the figures to show clearly the character and contour of all surfaces of any 3-dimensional aspects of the design. Surface shading is also necessary to distinguish between any open and solid areas of the article. Lack of appropriate surface shading in the drawing as filed may render the design nonenabling and indefinite under 35 U.S.C. 112, first and second paragraphs”<sup>7</sup>

-*remedy*, it may be impossible to correct without adding new matter, however you may be able to convert problem areas to broken line, disclaiming those portions.

To avoid this type of rejection apply proper shading “The drawing should be provided with appropriate surface shading which shows clearly the character and contour of all surfaces of any three-dimensional aspect of the design”. Surface shading is also necessary to distinguish between any open and solid areas of the design”<sup>8</sup>

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### Design Drawings with improper use of broken lines:

-Notice from USPTO;

“broken lines are not permitted for the purpose of indicating that a portion of an article is of less importance in the design. *In re Blum*, 374 F.2d 904, 153 USPQ 177 (CCPA 1967). Broken lines may not be used to show hidden planes and surfaces which cannot be seen through opaque materials<sup>9</sup>.”

-*remedy*, Use broken lines only to disclose the environment related to the claimed design and to define the bounds of the claim.

### Photographs and drawings filed together in a Design application:

-Notice from USPTO;

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<sup>10</sup>”

-*remedy*, convert the photographs to line art if you can do so without adding new matter. The best solution is to have consistent professional design drawings prepared to start with.

Although we cannot list all the reasons for possible objections/rejections, here are common ones:

*Numerals are too small* - numbers, letters, and reference characters must measure at least .32 cm. (1/8 inch) in height.

*Incorrect lead lines* - Lead lines must point to the object or area to which their number refers.

*Improper margins* – A4 or 8 ½ by 11 inch sheets must include margins of at least:  
Top=2.5cm (1 inch), Left=2.5cm (1 inch), Right=1.5cm (5/8 inch), Bottom=1.0cm (3/8 inch)

*Incorrect use of broken lines in design drawings* – broken lines may not be used to show hidden planes and surfaces that cannot be seen through opaque materials.

*Improper positioning of the page count* - Page count must be placed in the middle of the top of the sheet, but not in the margin and should be larger than the reference numerals.

*Screen captures wrongly named* – the figures must be described as screen captures, not drawings.

*Figure or view numbers that have incorrect orientation* – Reference characters, sheet numbers, and views numbers must be oriented in the same direction as the view. See 37 CFR 1.84(p)(1).

*Photographs were filed* – Photographs are not permitted unless they are the only practicable medium for illustrating the claimed invention.

*Partial views do not connect* – When partial views are on separate pages, they must be capable of being linked edge to edge.

*Absence of labeling* – If a part of a view is enlarged for magnification, the view and the enlargement must be labeled as separate views.

*Scale does not allow adequate reduction* – A drawing must be large enough to enable it to reduce by two-thirds without loss of detail.

### Conclusion:

In the worst case, poorly prepared drawings may result in a fatally defective disclosure, which cannot become a patent. In cases where objections can be remedied, you lose valuable time re-filing and cost to redraw or correct defective drawings. File your application with good drawings to avoid all these potential problems.

### ENDNOTES

4. Appendix R Patent Rules, Title 37-Code of Federal Regulations Patents, Trademarks, and Copyrights, §1.84 (e) type of paper

5. Appendix R Patent Rules, Title 37-Code of Federal Regulations Patents, Trademarks, and Copyrights, §1.84 (L) Character of lines, numbers and letters.

6. Manual of Patent Examining Procedure -Chapter 1500, Design Patents§15.21 Rejection, 35 U.S.C.112 First and Second Paragraphs

7. Manual of Patent Examining Procedure -Chapter 1500, Design Patents §II

8. USPTO A Guide to Filing a Design Patent Application, § Surface Shading (5)

9. Manual of Patent Examining Procedure -Chapter 1500, Design Patents§ III Broken Lines

10. Manual of Patent Examining Procedure -Chapter 1500, Design Patents§ Photographs and color Drawings