DESIGN PATENT DRAWINGS - SHADING RULES AND REGULATIONS AS PER USPTO & PCT SPECIFICATIONS

Bernadette Marshall
Design Patents protect the ornamental design for a new original article of manufacture, in other words the look, styling and visual appeal of new products. They protect an item’s shape as well as surface decoration. Anything from a typeface, coffee cup, or computer screen shot can be covered by a design patent at a relatively low cost. Utility patents on the other hand, cover the way an item works or is used, without taking into account how the item looks.

According to The United States Patent and Trademark Office (USPTO) guidelines for Design Patents, “the drawing disclosure is the most important element of the application”, and the drawings “constitute the entire visual disclosure of the claim”. In well-executed drawings nothing regarding the design sought to be patented ought to be left to conjecture.

The USPTO requires all surfaces of an object shown in the drawings to be appropriately and adequately shaded: “Shading which shows clearly the character and contour of all surfaces of any three-dimensional aspect of the design”. This requirement makes USPTO design drawings appear more artistic than those of most other countries. Drawings without shading or broken lines resemble engineering or technical drawings (but without dimensions).
In a design patent application, surface shading directly relates to clarity. A common example is the understanding of complex curvature in a shape. This can be greatly improved with proper shading and contour lines. Without shading the drawings will often be completely unclear and nearly impossible to understand.

Proper application of various shading techniques available will fulfill two goals. First, they will make the examiner more likely to understand and approve your patent. Second, they will make your invention clear and unambiguous, should your patent be challenged or infringed upon.

Let’s discuss some specific areas where shading can make all the difference. A common area is tangencies. This is a line, curve or surface that touches another curve or surface but does not cross or intersect it.

Visually tangential edges are where two surfaces flow into each other. To put it another way it’s when the surface of an object changes its character. Visually they do not appear to have definite edges and in line drawings they are a part of surface shading. Showing tangential edges may be the only way an examiner can understand the shape of an item.
Bold lines are a part of surface shading and are used to emphasize openings, indentations, raised areas and the shadow side of an outline of an object. Without shading you cannot tell if a surface is raised, indented or hollow.

Shading is not always an available tool. In some countries, like China, patent drawings with shading are not permitted, however contour lines are required. Design drawings with surface shading and broken lines are acceptable in international applications in Patent Cooperation Treaty (PCT) contracting states but not required.

Having your patent rejected for poor or unclear drawings is time consuming and expensive. Design patents can only be corrected if no new matter is introduced. Applicants who submit informal drawings with inconsistencies or no surface shading and contour lines may find themselves caught in an impossible situation: either the drawings will be rejected for being inconsistent or because new matter has been added.

After the patent is approved the drawings are still important. With design patents, infringement is typically based on the design patented and generally does not require proof of unfair competition. Once again, clear and unambiguous drawings will make it easier to show your patent has been infringed.

There are also a few other requirements for the drawings to be aware of. The USPTO & international (PCT) requirements for paper size are different. The USPTO allows letter size paper or A4, while (PCT) must be submitted on A4 size. Margins remain the same whether filings are done on A4 or letter size pages, however the sight or area where drawings are allowed is different so pages need to be formatted for either A4 or letter size to make sure that the drawings fit. Knowing these and other rules help you patent application get the attention it needs for approval.

Conclusion:
Surface shading is not required in all design patent applications, but including it when permitted will help to clarify the shape of an item. Regardless of where a patent is filled, good drawings make for good applications and for good defenses.

ENDNOTES