Design Protection

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Abstract and Keywords

This chapter surveys the legal protection of industrial designs, understood as the protection of the appearance of articles of manufacture. It discusses the definition of "design" according to both the European Union (EU) and the United States (US). It examines the international instruments that form the foundation of industrial design law, including the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), the Paris Convention, and the Berne Convention, among others. It then focuses on the various areas of intellectual property (IP) law that make up design law, including sui generis design protection law, patent law, copyright law, and trademark law among others, with particular attention on these aspects of design law as they feature in the US and the EU.

Keywords: Design, patent, copyright, trademark, TRIPS, functionality

1. Introduction

[*]The protection of industrial design, understood as the protection of the appearance of articles of manufacture, is emerging as an increasingly important area of intellectual property (IP) protection. The European Union Intellectual Property Office (EUIPO)[1] and the US Patent and Trademark Office (PTO) have both seen considerable growth in recent years in applications for registration of industrial designs. More and more, courts around the world are adjudicating important, high-stakes disputes over design infringement, most notably the multi-jurisdictional dispute between Apple and Samsung over the designs of certain of their respective mobile phones. These trends are not surprising. Product design has emerged in recent decades as a significant source of value-added and means of product differentiation. Particularly in Europe, design-intensive industries are now seen to provide substantial competitive-advantage over less design-oriented industries and trading partners.

Industrial design protection is also becoming an increasingly complex area of IP law. This is largely due to the hybrid nature of industrial design, which implicates both aesthetic and functional concerns, and which can be protected under a number of different areas of IP law, including *sui generis* design protection law, patent law, copyright law, and trademark law, among others. Thus, design law consists of all the many ways in which exclusive rights may be obtained in the visual appearance of an article of manufacture across these various areas of IP law.

This chapter first discusses the general boundaries of design law and surveys the international instruments that form the foundation of the law. It then focuses on design law in the two leading jurisdictions for design protection, the United States (US) and the European Union (EU).

(p. 573) 2. Defining "Design"

"Design" is a notoriously broad concept and "design law" certainly does not cover all the possible subject matter that might fall within the more comprehensive notion of design. Instead, design law is concerned primarily, if not exclusively, with the external appear*ance* of articles of manufacture. The EU Design Directive makes this emphasis clear. It defines design as "the appearance of the whole or a part of a product resulting from the features of, in particular, the lines, contours, colors, shapes, texture and/or materials of the product itself and/or its ornamentation."[2] The Directive defines "product" in turn as "any industrially produced or handcrafted item, including, among other things, parts intended to be assembled into a complex product, as well as packaging, get-up, graphic symbols and typefaces, but excluding computer programs."[3] Included in the Directive's definition of design are both three-dimensional and two-dimensional designs. US law similarly emphasizes appearance. US PTO regulations establish that "[t]he design for an article consists of the visual characteristics embodied in or applied to an article."[4] As in European law, so in the US, these visual characteristics may take the form of the three-dimensional configuration of an article, the two-dimensional surface ornamentation applied to an article, or any combination of configuration and surface ornamentation.[5]

Present-day design law will typically protect the appearance of an article regardless of whether that appearance is aesthetically appealing or was even intended to be.[6] Previous requirements that the design at issue have "eye appeal" have largely been abandoned. Design law thus seeks to move beyond any kind of dichotomy between the aesthetic and functional characteristics of products. It was likely influenced to do so by the rise of what has been termed "functionalism" in design, in which good design consists of a close union of form and function.[7]

Though design law may protect the visual characteristics of functional products, it typically refuses to protect the functional characteristics of such products. To the extent that visual characteristics cannot be protected without also resulting in the protection of functional characteristics, design law will typically refuse protection. It does so in order to ensure that designers cannot use the different schemes of design protection in copyright, trademark, patent, and *sui generis* design protection law, which often impose relatively low requirements for protectability and offer lengthy, if not unlimited, terms of protection, as an indirect means of establishing exclusive rights in functional product features.

Traditionally the protection of functional product features is the domain of utility patent law with its significantly higher requirements for protectability and shorter terms of protection. As discussed later, the many different modes of design protection across IP law employ many differing tests (p. 574) for the functionality bar to protection. Some deny protection if the visual appearance of a product was constrained in any way by functional concerns. Others are far more lenient, and grant design protection in the appearance of highly functional products and highly minimal designs if that appearance involves in any way aesthetic concerns.

Though design law is careful not to trench upon areas better reserved to utility patent law, it otherwise typically embraces the "cumulation" of rights in the appearance of products under the various other areas of IP protection that can be used to protect the visual appearance of articles of manufacture.[8] Thus, the visual appearance of, for example, the front grill of an automobile may simultaneously be protected by design patent law in the US (or *sui generis* design protection law in the EU), trademark law, copyright law, and certain veins of unfair competition law. Once the term of protection under design patent has expired, the owner of the design may continue to assert exclusive rights under copyright, and once the copyright term has expired, the owner may still assert such rights under trademark law, and do so in perpetuity. As discussed later, however, each mode of protection of the design at issue protects only against certain conduct. For example, US design patent and EU-registered design protection will protect against independent

creation by another designer of the same design; the later designer is liable for infringement even if she did not copy from the protected design and had no knowledge of it. Copyright law, by contrast, insists on copying if liability is to be found.

The general purpose of design law is to incentivize innovation in design by enabling designers to recoup the costs of their investment in new and original designs. Design law has also been justified as protecting the designer's investment of her personality in her designs. In this sense, the unauthorized reproduction of a design may represent not simply a financial loss to the designer, but also an affront to his moral right to control his own creation at least for some period of time. Recent commentary has questioned the degree to which design protection actually encourages progress in design when in certain industries—particularly apparel fashion—the widespread copying of a design may actually incentivize designers to move on to new designs.[9] In essence, copying quickens the fashion process and in doing so prompts designers more rapidly to create new designs. Nevertheless, the prevailing view remains that, at least in most industries, design protection is necessary most efficiently to promote the progress of industrial design.

3. International Sources of Design Protection

Various international agreements form the foundation of design law at the national and, in Europe, the community level.[10] The most important of these agreements is the Agreement (p. 575) on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which was concluded in 1994 as part of the formation of the World Trade Organization. Other agreements discussed below also play an important role in ensuring that the large majority of nations around the world offer minimum levels of protection to design, be it under patent or trademark law, copyright law, or *sui generis* design law.

The Paris Convention for the Protection of Industrial Property, concluded in 1883 and since amended several times, most recently in 1979, covers the protection of patents, trademarks, and what it calls "industrial designs."[11] With 176 contracting nations, the convention requires that all signatories follow the principle of "national treatment," by which each nation agrees to provide to foreign nationals of Paris Union countries industrial property rights no less favorable than those rights it provides to its own nationals. The convention does not provide any definition of "industrial design," nor does it specify the scope of rights that members must afford to such designs. The convention does, however, establish a six-month "right of priority" for applicants for the registration of an industrial design in a Paris Union country.[12] By this mechanism, from the date of the applicant's first application to register a particular industrial design in any Paris Union country, the applicant enjoys a six-month period during which it may file to register its design in any other Paris Union country and avail itself of the priority date established by its first application.[13]

The Berne Convention for the Protection of Literary and Artistic Works,[14] concluded in 1886 and since amended as recently as 1979, is an international copyright treaty. Like the Paris Convention, the Berne Convention provides for national treatment. It further requires that the 171 current contracting parties of the Berne Union provide some form of protection for "works of applied art,"[15] though the convention leaves it largely to the discretion of the members to define the category of "works of applied art" and the nature and extent of that protection.[16] If a Berne Union member's laws fail to specify a particular form of protection for works of applied art, then the convention stipulates that such works must be treated as "artistic works" under the member's national copyright law.[17] Such works must receive a minimum of 25 years of protection from the date of their creation.[18] Importantly, Berne insists that copyright rights, including those in works of applied art, "shall not be subject to any formality."[19] This means, among other things, that registration is not necessary to claim copyright rights in designs.

The TRIPS Agreement covers nearly all areas of IP protection. The 162 members of the WTO are, by virtue of their membership, subject to the provisions of TRIPS. TRIPS incorporates by reference most of the articles of the Paris and Berne Conventions, including those that apply to "industrial designs" and "works of applied arts" respectively.[20] Like (p. 576) Paris and Berne, TRIPS also sets out the principle of national treatment. It further calls for "most-favored-nation treatment," by which any TRIPS-related advantage granted by a WTO member to nationals of any other WTO member will be accorded immediately to all nationals of all WTO members.[21]

Articles 25 and 26 of TRIPS directly address the protection of, in TRIPS' term, "industrial designs," though TRIPS nowhere offers a definition of the term. Article 25 requires that WTO members protect "independently created industrial designs that are new or original" and allows, but does not require, members to find that designs are not "new or original" if they do not "significantly differ" from known designs.[22] TRIPS' reference to "new or original" designs reflects its acceptance of both patent-like approaches to the protection of "new," that is, novel, designs and copyright-like approaches to the protection of "original" designs, which may simply require that designs be original to their author, that is, not copied from another author, but not necessarily novel as compared to all existing designs. The article further allows members to deny protection to designs that are "dictated essentially by technical or functional considerations."[23] Finally, the article specifies that members may provide for the protection of "textile designs" either through industrial design law or copyright law.[24]

Article 26 of TRIPS sets forth the minimum rights that WTO members must provide to owners of protected industrial designs. Specifically, owners must be able to prevent the "making, selling or importing" of a design for commercial purposes that is "a copy, or substantially a copy" of a protected design.[25] The article further sets forth a three-step test for limitations and exceptions to these minimum rights. Such limitations must be limited in nature, must not "unreasonably conflict with the normal exploitation" of the design right, and must not "unreasonably prejudice the legitimate interests" of the right owner in light of the "legitimate interests of the third parties."[26] Finally, the article specifies that members must provide industrial design protection for a term of at least ten years.[27]

The Hague Agreement Concerning the International Deposit of Industrial Designs is the basis of an international application system for the registration of design rights. First established in 1925, the Hague system is governed by a number of somewhat inconsistent sets of procedural rules established, for example, in the London Act of 1934, the Hague Act of 1960, and the Geneva Act of 1999. The Hague system remains a work in progress. The US and Japan joined as recently as 2015. Like the Madrid Protocol for trademarks and the Patent Cooperation Treaty for patents, the Hague system provides a procedural mechanism by which an applicant can file a single application in a member nation or at the International Bureau at the World Intellectual Property Organization and extend that application to one or more members of the Hague system. Each member to which the application has been extended reviews the application under its own laws and any rights granted are limited to that member. Notably, members must notify the International Bureau of a refusal to register within six months (or for members, such as the US, that engage in substantive examination, within 12 months)[28] of receipt of the application.

(p. 577) 4. Design Protection in the United States

The US offers a variety of means to protect the visual appearance of articles of manufacture, many of which may overlap with each other. The relative merits and demerits of each of these means of protection is discussed later in the chapter. In general, design patent protection offers the strongest form of protection because it protects even against independent creation. However, design patent protection is also the most difficult form of protection to obtain and the shortest in term. Copyright protection is probably easier to obtain, particularly because it does not require registration, but it does not protect against independent creation. Trademark protection also has no registration

requirement and offers an unlimited term of protection, but proving trademark infringement of a design is arguably more difficult than proving design patent or copyright infringement of a design.

4.1 Design Patent Protection

In order to qualify for design patent protection in the US, a design must be (i) new, (ii) original, (iii) ornamental, (iv) non-obvious, and (v) applied to an article of manufacture.[29] The design must be "new" in the sense that it must meet the same standards for novelty under Section 102 of the US Patent Act[30] that utility patents must meet. The most important of these is that the design must not have been patented, described in a printed publication, or otherwise available to the public before the filing date of the design patent application.[31] However, if the inventor of the design is him/herself responsible for a disclosure of the design no more than one year before the filing of the application, then this disclosure will not destroy the novelty of the design.[32] Prior art that is not identical to the claimed design may nevertheless "anticipate" and thus defeat the design's novelty if "in the eye of an ordinary observer, giving such attention as a purchaser usually gives," the prior art is "substantially the same" as the claimed design.[33]

The design must be "original" in that it must not have been copied from another designer not named in the patent.[34]

The requirement that the design be "ornamental" sharply distinguishes American design patent protection, which "protects the way an article looks," from American utility patent protection, which "protects the way an article is used and works."[35] To meet the ornamentality requirement, a design must be visible in its normal use, though American courts have arguably applied this requirement loosely.[36] Past courts have occasionally found the aesthetic merit of a design to be insufficient to justify protection,[37] but the usual approach (p. 578) is not to judge a design's aesthetic appeal. Instead, the main problem faced by some designs under the ornamentality requirement is that they are not ornamental but rather functional, and thus protectable, if at all, under utility patent law rather than design patent law. To determine functionality, courts ask, in essence, whether the claimed design was dictated by functional or mechanical requirements.[38] To aid in the analysis of this question, courts will consider the availability of alternative designs for the article of manufacture.[39] Courts may also consider a variety of other factors, such as whether the claimed design constitutes the best design, whether alternative designs would adversely affect the utility of the article of manufacture, whether there are any related utility patents, and whether advertising touts the utilitarian advantages of any elements of the claimed design.[40]

Even if the claimed design is new or novel as compared to the prior art, it must also consist of a non-obvious innovation over the prior art. More precisely, courts assess whether "a designer of ordinary capability who designs articles of the type involved"[41] would have "combined teachings of the prior art to create the same overall visual appearance as the claimed design."[42] To make this assessment, courts engage in a two-step process. First, courts must identify a single, primary reference in the prior art that is "basically the same"[43] as the claimed design. Second, courts may use other references in the prior art to modify the primary reference to create a design that has the "same overall visual appearance"[44] of the claimed design, but courts may do so only when the secondary references are sufficiently related to the primary reference to suggest the application of the secondary references' features to the primary reference.[45] Courts arguably assess similarity in this context narrowly.[46]

As to the final requirement, that the design be applied to an article of manufacture, US law construes this requirement liberally. In a well-known case, it was found to be satisfied by the three-dimensional configuration of water produced by a water fountain.[47]

In contrast to the registration process in Europe under the Community Design Regulation, the USPTO engages in substantive examination of the design patent application to ensure that it meets all of the above substantive requirements. As a result, the design patent application process can be relatively lengthy, typically taking 12 to 18 months. This represents a significant disadvantage of design patent protection for industries in fast-moving, trend-dependent sectors because design patent protection begins only from the date of the grant of the patent. By the time the applicant can claim patent protection, the value of its design may have declined significantly. The design patent application process can also be relatively expensive, with overall costs including legal fees typically ranging from $2,000 to $5,000.[48]

The term of protection for design patents filed on or after 13 May 2015 is 15 years from the date of the patent grant. For applications filed before that date, the term of protection is 14 years.

(p. 579) Infringement of a design patent is assessed from the perspective of an ordinary observer familiar with the prior art.[49] For the three-decade period from the 1984 case of *Litton Systems, Inc v Whirlpool Corp*.[50] to the 2008 case of *Egyptian Goddess, Inc v Swisa, Inc*, courts additionally considered whether the accused design appropriated the particular "points of novelty" over the prior art contained in the patented design. In its first *en banc* hearing of a design patent case, the Federal Circuit in *Egyptian Goddess* eliminated the points of novelty test.[51] Now courts will find infringement if, "in the eye of an ordinary observer, giving such attention as a purchaser usually gives,"[52] and in light of the prior art,[53] "two designs are substantially the same,"[54] that is, "the resemblance is such as to deceive such an observer, inducing him to purchase one supposing it to be the other."[55] In assessing infringement, courts are instructed to consider similarities in the overall appearances of the accused and claimed designs; minor differences in particular ornamental features will not prevent a finding of infringement.[56]

US patent law provides a variety of remedies for the infringement of patents, be they utility or design patents, including injunctive relief[57] and the plaintiff's damages in the form of lost profits or a reasonable royalty rate.[58] US law also contains a special damages provision applying only to the infringement of design patents.[59] This provision specifies that the infringer will be liable to the design patent owner "to the extent of [the infringer's] total profit"[60] in the sale of the infringing articles. In *Apple, Inc v Samsung Electronics Co*, the Federal Circuit applied this provision to hold that the defendant was liable for all profits from the sale of mobile phones containing the infringing designs, even if these designs were responsible for only a fraction of the value of the phones.[61] The US Supreme Court is currently reviewing this controversial holding.[62]

4.2 Trademark Protection

US trademark law provides exclusive rights in a wide variety of trademarks, including "trade dress" in the form of product packaging (for example, the particular packaging for an iPhone) and product configuration (the shape of the iPhone itself). Federal trademark law offers essentially the same level of protection to registered and unregistered trade dress—though registered trade dress enjoys nationwide priority as of the date of application[63] and owners of registered trade dress do not bear the burden of showing the non- functionality of their trade dress. Because it does not require registration, trademark protection of industrial design can be a highly expedient form of industrial design protection. A further advantage is that trademark protection is unlimited in time provided that the trademark continues (p. 580) to be used in commerce. Trademark protection does, however, impose certain additional requirements not found, for example, in design patent law. To gain trademark protection of an industrial design, the owner must show that the trade dress is distinctive, and to prove infringement, the owner must show a likelihood of consumer confusion or trademark dilution.

To qualify for US trademark protection, industrial design must be (i) perceived by consumers as distinctive of source, (ii) used in commerce, and (iii) not barred from protection by various statutory bars, the most significant of which in this context is the functionality bar. Trademarks may be inherently distinctive of source in that they are immediately perceived by consumers as source-designations. An example of an inherently distinctive trademark is the profile of a bitten apple that appears on Apple products—consumers do not see this as mere decoration, but know immediately, without being told, that it is a designation of source. Trademarks can also possess acquired distinctiveness of source, which a trademark may build up over time through use in the marketplace and advertising. US law holds that product configuration trade dress cannot be inherently distinctive.[64] The Supreme Court reasoned that in the case of product design, consumers are not predisposed to equate a product feature with the source of the product; instead, consumers perceive "even the most unusual of product designs" to be intended to render the product itself "more useful or more appealing," not to identify source.[65] Thus, producers of product designs must show that the designs have acquired distinctiveness of source over time. US courts consider a number of factors in assessing acquired distinctiveness (also known as "secondary meaning"), such as the extent of the use of the product design, how the design has been advertised, and survey evidence showing that consumers perceive the design not simply as a feature of the product, but as an indication that the product comes from one particular source.[66]

US trademark law requires that a trademark (including a source-distinctive product design) be "used in commerce" in order to receive protection. This use requirement distinguishes US trademark law from most other trademark systems around the world, which allow registration and protection without use, at least for a certain period of time. The American "use in commerce" requirement is not burdensome. It simply requires that the mark be used in interstate commerce or in commerce between the US and foreign nations.

A significant barrier to the protection of product designs under US trademark law is the requirement that the design not be functional.[67] In TrafFix Devices, Inc. v Marketing Dis*plays, Inc*., the Supreme Court held that a design is functional in a utilitarian sense if it "affects the cost or quality of the article" or if it is "essential to the use or purpose of the article."[68] This language has proven to be open to a variety of interpretations by lower courts. Most courts apply the language aggressively to deny protection to product designs that perform any significant function in enabling the product to do what it is intended to do,[69] (p. 581) or even that serve any purpose other than source designation.[70] These courts follow the Supreme Court's prescription in *TrafFix* that they need not consider whether competitive alternatives to the design exist. Other courts, such as the Federal Circuit, apply the *TrafFix* language less restrictively. In fact, notwithstanding *TrafFix*'s apparent rejection of the Federal Circuit's four-factor test for utilitarian functionality, the Circuit continues to use this test, which considers whether the design feature at issue has been patented, whether its utilitarian advantages have been touted in advertising, whether there are competitive alternatives to the design, and whether the design affords significant manufacturing advantages.[71]

The design must also not be "aesthetically functional." For example, even if the shape of a heart-shaped box of Valentine's Day chocolates serves no utilitarian purpose, the shape may nevertheless be aesthetically functional in the sense that the granting of exclusive rights in it would put competitors at a "significant non-reputation related disadvantage"[72] —because the heart-shaped box is an important traditional box shape for such chocolates. Even if the producer of the box could show that it had developed secondary meaning as a designation of source, it would still be denied protection on functionality grounds. In contrast to the test for utilitarian functionality, with respect to aesthetic functionality courts consider whether there are competitive alternatives to the claimed design.[73]

To prove infringement, the owner of a product design that merits protection as a trademark must show either a likelihood of consumer confusion as to source or, if the design is sufficiently famous, a likelihood that the defendant's design will dilute the distinctiveness of the plaintiff's design. With respect to consumer confusion in particular, the

owner must show that the allegedly infringing design is sufficiently similar to the protected design that consumers will likely believe the former originates from the producer of the latter.

Courts apply a multifactor test to assess the likelihood of consumer confusion.[74] The most important factors are the similarity of the parties' designs, the relatedness of their goods, any evidence of actual confusion by consumers including survey evidence, and the sophistication of the relevant consumer population.

To prove infringement under federal antidilution law, the owner of a product design must first show that the design is "widely recognized by the general consuming public of the United States."[75] Courts apply a demanding fame standard and routinely deny antidilution protection to marks that fail to meet it.[76] If the product configuration at issue is sufficiently famous, courts then consider whether the defendant's design gives rise to an association between the defendant's and plaintiff's design that "impairs the distinctiveness"[77] of the latter or "harms the reputation"[78] of the latter.

(p. 582) 4.3 Copyright Protection

Among the many ways that the US has tried to establish a *sui generis* regime of protection for industrial designs, Title II of the draft Copyright Act of 1976 contained extensive design protection provisions.[79] This title was deleted in the final stages of congressional consideration of the bill.[80] Current copyright law will nevertheless protect industrial designs as sculptural, graphic, or pictorial works under Section 102(a)(5) of the Copyright Act. The design need only be fixed in a tangible medium of expression and original, that is, independently created by its author rather than copied from another author and containing some "minimal degree of creativity."[81] The creativity standard is extremely low, so that nearly any design beyond the most simple or banal will qualify. Like US trademark law, US copyright law does not require registration for exclusive rights to attach to the design, though registration confers various benefits on the registrant.[82] A significant advantage of copyright protection of industrial designs over design patent protection is that the term of copyright protection is substantially longer than the 15 year term of design patent protection—not so long as the unlimited term of trademark protection, but at 95 years from first publication for corporate works (ie, "works made for hire") still of considerable length. A disadvantage of copyright protection as against design patent protection is that independent creation is an absolute defense against liability for copyright infringement. In other words, if the defendant can show that it did not copy from the plaintiff's design, even an identical design by the defendant will not be found infringing. Design patent protection, by contrast, prohibits even independent creation. Meanwhile, a significant advantage in the US of copyright protection for industrial designs over trademark protection is that to gain copyright protection, the owner need not show that the design has secondary meaning as a designation of source, and to show copyright infringement, it need not show that consumers are confused as to source by the defendant's design or that the defendant's design causes trademark dilution.

The primary impediment to copyright protection for industrial designs in the US is the "useful articles doctrine." The Copyright Act defines a useful article as "an article having an intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information."[83] Most industrial designs easily qualify as useful articles. The Copyright Act further provides that "the design of a useful article … shall be considered a pictorial, graphic or sculptural work only if, and only to the extent that, such design incorporates pictorial, graphic, or sculptural features that can be identified separately from, and are capable of existing independently of, the utilitarian aspects of the article."[84] This statutory language is the basis for the separability requirement in US copyright law, which requires that design features of useful articles be either physically or conceptually separable from the utilitarian aspects of the article to receive copyright protection.

(p. 583) The concept of physical separability is relatively straightforward. Courts assess whether the design feature at issue can be physically removed from the article while leaving the utilitarian function of the article intact. But for many modern industrial designs, which are characterized by the close integration of form and function, the physical separability test is not easily satisfied. Indeed, courts now rarely assess separability in terms of physical separability.

As for the conceptual separability test, American courts have developed a wide variety of approaches to determining if a design feature is theoretically separable from the underlying utilitarian purpose of the article.[85] Arguably, the leading test is that set forth by the Second Circuit Court of Appeals in *Brandir International, Inc v Cascade Pacific Lumber Co*.[86] The design at issue was a bicycle rack consisting simply of a single, continuous heavy-gauge tube of galvanized steel bent in successive, equally-proportioned u-like shapes and rooted into the ground at each end. The court stated that conceptual separability will be found "where design elements can be identified as reflecting the designer's artistic judgment exercised independently of functional influences."[87] The bicycle rack failed this test because the record showed that the designer took into consideration the height and width of bicycles in proportioning the undulations of his rack. The *Brandir* test is highly demanding but it is not impassable. In another leading case that applied the *Brandir* test, *Pivot Point International, Inc v Charlene Products, Inc*,[88] involving the design of a mannequin head used in teaching hair-styling, the court found the design to be copyrightable on the basis that the designer's artistic choices were "unfettered by functional concerns."[89]

US copyright law considers clothing to be a "useful article" because it functions to cover the body. (Patterns on textiles, by contrast, are not useful articles because they function, in the language of the Copyright Act, "merely to portray th[eir own] appearance"). Clothing designs must thus pass the separability test, which is thought to be exceedingly difficult for most such designs to do. For this reason, copyright litigation in the fashion sector for the copying of clothing designs is relatively rare in the US. Nevertheless, the US Supreme Court has accepted certiorari review of the Sixth Circuit Court of Appeals decision in *Varsity Brands, Inc v Star Athletica, LLC*,[90] in which the Sixth Circuit found that the graphic elements of cheerleading uniforms were protectable under copyright law. It is possible that the Supreme Court's opinion in the case will reconfigure separability doctrine in American copyright law.

4.4 Other US Design Protection Schemes

US law provides for *sui generis* protection of boat hulls for a term of ten years if registration is made within two years of the design being made public.[91] It has done so since 1998, with the Vessel Hull Design Protection Act (VHDPA),[92] which added Chapter 13 to the Copyright (p. 584) Act in the form of Sections 1301 through 1332.[93] The Copyright Act is undoubtedly a strange place to put provisions protecting the design of vessel hulls. Some understanding of the larger significance of the VHDPA may be gained by considering the terms of its first provision, Section 1301(a)(1), which establishes that "[t]he designer or other owner of an original design of a useful article which makes the article attractive or distinctive in appearance to the purchasing or using public may secure the protection provided by this chapter."[94] This provision has every appearance of offering general design protection of the type Congress originally considered adding to the Copyright Act when the Act was first being drafted in the 1970s. However, Section 1301(b)(2) then defines a "useful article" for purposes of Chapter 13 of the Copyright Act as a "vessel hull or deck."[95] This provision quite severely limits the subject matter of the chapter.

Recent efforts to establish a general scheme of design protection under US copyright law or a more limited scheme of protection for apparel fashion designs have sought, in essence, to amend Section 1301(b)(2) to remove the limitation to vessel hulls or at least to include apparel fashion designs (and a term of protection of three years). These repeated efforts have so far failed, mainly owing to opposition from the insurance industry, the spare-parts industry, and some elements of the fashion design industry.

US law also provides for special protection of semiconductor chip topographies in Chapter 9 of the Copyright Act.[96]

5. Design Protection in the European Union

Like the US, the EU offers multiple means of protection of design, many of them overlapping. The twin bases of design protection in the EU are the EU Design Directive, which governs the substantive provisions of the national registered design law of the Member States, and the Community Design Regulation, which establishes a community-wide design protection regime.[97]

5.1 EU Design Protection

The Design Regulation provides EU-wide protection for registered and unregistered designs and applies essentially the same requirements for eligibility to both. A fundamental difference between the two regimes of protection, however, is that registered designs enjoy a strict liability form of protection, while unregistered designs are only protected against copying.[98] In other words, an owner of a registered design need not show that an alleged infringer copied from the design; even independent creation triggers liability.[99]

By contrast, an owner of an unregistered design must show that the alleged infringer did not independently (p. 585) create, but rather copied from the claimed design.[100] In assessing evidence of copying, courts will consider the degree of similarity between the claimed and accused designs in light of industry practice, so that a court will likely find copying even in the absence of direct evidence of copying if an accused design is identical or nearly-identical to the claimed design and that degree of similarity would not be plausible except as the result of copying.[101] Another significant difference between the regimes of protection applied to registered and unregistered designs is the terms of protection these regimes provide. Registered designs are protected for a term of five years from the date of the application for registration, and this term is renewable for additional five year terms up to a total of 25 years.[102] Unregistered designs are protected for a non-renewable term of three years from the date when the design is first made available to the public within the EU.[103] For registered designs, the registration process at the European Union Intellectual Property Office (EUIPO) is relatively fast. The EUIPO examines the application only to determine if it complies with various administrative formalities and if the design constitutes a protectable design under the Regulation and is not against public morality.[104] In 2014, nearly one in three applications were examined on a fast-track basis within two working days.[105]

To qualify for protection as a registered or unregistered design under the Regulation, a design must meet a set of basic requirements: (i) it must be new (ie, novel); (ii) it must have individual character; and (iii) it must not be functional. Certain designs must also be visible when in normal use.

A design will qualify as new if no design that is "identical"[106] (or different only in "immaterial details")[107] has been made available to the public, in the case of unregistered designs, before the designer's first public use of the design, or in the case of registered designs, before the filing date of the application for registration (or before the priority date if the designer is claiming a priority date based on an application filed in another Paris Convention or WTO country).[108] Importantly, the Design Regulation establishes that, for registered designs, the designer's own use of its design during the 12-month period preceding its date of application (or its priority date) will not destroy the novelty of the design.[109] The applicant for registration thus has a 12-month grace period (during which it will enjoy unregistered design protection). Furthermore, at least in principle, not all disclosures to the public will destroy novelty. Specifically, the Design Regulation establishes that novelty will not be extinguished by uses that "could not reasonably have become known in the normal course of business to the circles specialized in the sector concerned, within the Community."[110] Thus, geographically or historically remote uses within the EU will not affect novelty. However, recent case law has

persuasively challenged the logic of this provision at least with respect to uses in (p. 586) other sectors. In Green Lane Prod*ucts v PMS International Group*, which involved the design of small plastic spiky balls, the Court of Appeal of England and Wales reasoned that because exclusive rights in a community design extend to all goods, even those outside of the sector in which the design is used or in connection with which it is registered, "prior art available for attacking novelty should also extend to all kinds of goods."[111] Meanwhile, courts have held that disclosures occurring outside of the EU may destroy novelty if they would be known in the normal course of business to the relevant specialized firms in the sector within the EU.[112]

A design will qualify as having "individual character" if the "overall impression it produces on the informed user" differs from the overall impression produced on that user by any other design made available to the public before the same dates used to assess the novelty of the design, that is, in the case of unregistered designs, before the designer's first public use of the design, or in the case of unregistered designs, before the filing date of the application for registration or before the priority date.[113] The "informed *user*" (not *designer*) is less sophisticated than the "designer of ordinary capability" in US design patent law, but more sophisticated than an occasional consumer of the products of the type to which the designs at issue are applied.[114] The informed user is cognizant of the existing corpus of designs in the relevant sector or sectors and "shows a relatively high degree of attention when he uses them."[115] The Design Regulation further provides that in assessing individual character, courts must take into consideration the "degree of freedom of the designer"[116] in light of such constraints as the functional requirements of the product or a crowded prior art. The informed user is understood to recognize that where such constraints significantly limit the designer's freedom, minor differences between the design and the prior art may enhance the difference of the overall impression of the design as against the prior art.[117]

As to the non-functionality requirement, the Regulation establishes that community design rights will not subsist in "features of appearance of a product which are solely dictated by its technical function."[118] Courts have tended to interpret this provision in one of two ways.[119] The current leading approach was established in 2009 by the EUIPO's Third Board of Appeal (p. 587) in *Lindner Recyclingtech GmbH v Franssons Verkstäder AB,*[120] which involved the design of a rotating shredding element in a shredding machine used in the recycling industry. The *Lindner* approach assesses, from the standpoint of the reasonable observer (rather than from the subjective standpoint of the particular designer responsible for the design), whether only purely functional considerations could have been relevant when the design was chosen and aesthetic considerations were "completely irrelevant,"[121] in which case the design was "solely dictated by its technical function." If, by contrast, aesthetic considerations would also have been taken into account, then the design will not be excluded from protection on functionality grounds.[122] The alternative approach is the so-called "multiplicity of forms" approach, which asks whether the particular design is the only design by which the product at issue can perform its function. If there are alternative designs that will also allow the product to fulfill its function, the claimed design is not functional.[123] *Lindner* rejected this approach on the ground that it will find functionality only in "highly exceptional circumstances" and, in any case, one firm could itself individually register each alternative design and thereby establish an indirect monopoly over the technical function at issue.[124] The *Lindner* approach to the functionality question is strikingly different from the leading approach to conceptual separability in US copyright law in *Brandir*. For *Lindner*, even in a design process that might have focused largely on functional considerations, if any aesthetic considerations were taken into account, then the design is not functional. For *Brandir*, if the design process was largely concerned with aesthetics, but was constrained in any way by functional considerations, then the design is functional.

The Design Regulation imposes a visibility requirement only on designs that constitute "a component part of a complex product,"[125] with a "complex product" being "a product which is composed of multiple components which can be replaced permitting disassembly and re-assembly."[126] To qualify for protection, such designs must remain visible

during the normal use of the product and their visible features must themselves be novel and possess individual character.[127] The design need not be visible at every moment the product is used, but it must be seen "some of the time in such a way that all its essential features can be comprehended."[128]

The test for infringement of both registered and unregistered designs mirrors the individual character test, and the case law developed under either test is largely applicable to the other. The Design Regulation provides that the protected design will be infringed by "any design which does not produce on the informed user a different overall impression."[129] As with the individual character analysis, courts must take into consideration the designer's degree of freedom to determine the scope of protection.[130] But in direct contrast to the role of the designer's degree of freedom in the individual character analysis, if the claimed design is significantly constrained by technical considerations or a crowded field of similar designs, minor variations in the accused design may be sufficient to produce a different overall impression on the informed user.[131] While a limited degree of freedom may thus help the designer to gain (p. 588) rights, it may also restrict the scope of those rights. Meanwhile, the scope of protection of a protected design is not limited to the particular category of products with which the protected design is used.[132] Thus, for example, a design registered for an automobile may be infringed by the use of that design in connection with "a brooch or a cake or a toy."[133]

Unlike US design patent law, the Regulation contains explicit exclusions from liability for "acts done privately and for non-commercial purposes," "acts done for experimental purposes," and reproductions for purposes of teaching and citation.[134] It is not clear, though doubtful, if a company's unauthorized use of another's design could ever qualify as "private" and "non-commercial."[135] Nor is it clear if a company's unauthorized use of another's design in consumer surveys (perhaps to determine what aspects of the design are most appealing) would be excused as undertaken in pursuit of "experimental purposes."

In its so-called "must-fit" provision, the Regulation further excludes from protection design features that "must necessarily be reproduced in their exact form and dimensions" in order to allow interoperability among products or parts.[136] Similarly, in its "must-match" provision, the Regulation excludes from protection "a design which constitutes a component part of a complex product used … for the purpose of the repair of that complex product so as to restore its original appearance."[137] This latter provision is explicitly stated to be transitional in nature, although there has been no significant movement on amending its terms since the Regulation was first adopted in 2001.

5.2 National Design Protection

The EU Design Directive requires all Member States of the EU to provide registered design protection at the national level and to align the substantive provisions of their relevant national laws that govern the subject matter and scope of registered design protection with the terms of the Design Directive. The Design Regulation and Design Directive have very similar, often identical, substantive provisions, so the basic requirements for national registered design protection and the basic tests for infringement within each of the EU Member States closely match the requirements and tests discussed previously for community registered design protection. However, while the Design Directive follows the Regulation provisions in excluding from protection "must-fit" designs,[138] the Directive does not follow the Regulation's provisions with respect to "must-match" designs. Instead, because agreement could not be reached on the matter, the Directive merely requires Member States to maintain their current national law's provisions on "must-match" parts, and to modify these provisions only "if the purpose is to liberalise the market for such parts."[139] (p. 589) The Design Directive does not attempt to harmonize the procedural rules of the Member States covering application, examination, opposition, and invalidity procedures. Nor does the Design Directive make any effort to harmonize how (or even if) EU Member States protect unregistered designs. Registered national design protection, rather than

community registered design protection, may make sense for companies that plan to operate only within a particular member nation.

The United Kingdom is the one European jurisdiction that offers unregistered design protection at the national level.[140] In the UK, unregistered design protection attaches automatically to a three-dimensional design from the moment the design is recorded in the form of either the article for which the design is made or a design document, provided that (i) the design was not copied from another design, (ii) the design is not "commonplace in the design field in question,"[141] and (iii) the development of the design involved more than a trivial degree of skill, labor, and judgment. Explicitly excluded from protection are "must-fit" and "must-match" design features necessary to make a design (particularly for a spare part) mechanically or aesthetically compatible with a preexisting design.[142] Like the community unregistered design, the UK unregistered design is only protected against copying; independent creation by another designer will defeat liability. The term of protection offered to unregistered designs in the UK is complex. It extends 15 years from the end of the calendar year in which the design was first recorded in a design document, or in which an article was made according to the design, whichever comes first.[143] However, if articles embodying the design are publicly sold within the first five years of the 15 year period just described, then the term will extend only ten years from the end of the calendar year in which the sale first occurred.[144] In the last five years of the term of protection, anyone is entitled "as of right" to a license to make any use of the design, the terms of which license, in the absence of agreement, will be set by the Comptroller General of the UK Intellectual Property Office.[145] As with the Community Registered Design, explicitly excluded from liability are private uses for non-commercial purposes and uses for experimental, teaching, and citation purposes.[146]

5.3 Trademark Protection

An industrial design may be registered as a trademark under European trademark law. At the community level, a design may be registered as an EU Trade Mark (EUTM) under the terms of the Trade Mark Regulation,[147] and at the national level, as a national trademark under the respective national laws of the Member States. The substantive provisions of these (p. 590) national laws must align with the terms of the Trade Mark Directive, whose substantive provisions themselves run parallel to those of the Trade Mark Regulation. As with US trademark protection, the great advantage of registered trademark protection of industrial design in Europe is that the ten-year term of protection may be renewed indefinitely. Furthermore, the design owner need not show novelty and individual character. However, as in the US, European trademark law imposes certain requirements not imposed by European *sui generis* design law, specifically, that the design be distinctive and that a likelihood of confusion or dilution be proven for infringement to be found.

EUIPO not only examines an EUTM application to ensure that it complies with various formalities, but also to ensure that it does not trigger various so-called "absolute grounds" for refusal, including that the mark lacks distinctiveness or is functional. EUIPO does not engage in review of "relative grounds" for refusal, such as that the mark is confusingly similar to an already-registered mark. In the case of product design, the EUTM regime does not hold, as US law does, that product design is per se incapable of inherent distinctiveness.[148] However, like the US Supreme Court, the EU Court of Justice has recognized that average consumers are less prone to identify product shapes as designations of source, and thus it may be more difficult to establish that a three-dimensional shape is perceived by consumers as distinctive of source.[149] If the design lacks inherent distinctiveness, it may still be registered if it is shown to possess acquired distinctiveness. The factors supporting a finding of acquired distinctiveness are closely similar to those used in US law, discussed earlier.[150]

As with US trademark law, a design must not be functional to qualify for trademark protection. The Trade Mark Regulation and Trade Mark Directive contain parallel language denying protection to "signs which consist exclusively of: (i) the shape, or another characteristic, which results from the nature of the goods themselves; (ii) the shape, or another characteristic, of good which is necessary to obtain a technical result, (iii) the shape, or another characteristic, which gives substantial value to the goods."[151] Each of these grounds for refusal is independent, so violation of any one will trigger a denial of protection. The Court of Justice recently considered the meaning of the first exclusion in *Hauck GmbH & Co KG v Stokke A/S*,[152] which involved the celebrated design of a children's chair that could adjust to the child's height. The court ruled that to qualify as a shape which "results from the nature of the goods themselves," the shape need not be "indispensable" to the function of the goods, but need merely be a shape whose "essential characteristics … are inherent to the generic function or functions of such goods."[153] As to the second exclusion, in a case involving Lego plastic bricks, the Court of Justice ruled that a design could be found "necessary to obtain a technical result" even if alternative designs exist that are capable of achieving the same result.[154] The court reasoned that competition could be significantly impaired if multiple alternative designs were simultaneously registered, perhaps even by the same company.[155] (p. 591) Going farther, recent case law arguably urges the refusal of trademark rights to any product feature that is merely "aimed at obtaining a technical result."[156] The third ground for exclusion mainly targets shapes that possess substantial aesthetic appeal. In *Bang & Olufsen v OHIM*,[157] the General Court affirmed the refusal to register the minimalist shape of an electronic speaker. The court took notice of Bang & Olufsen's advertising that emphasized the aesthetic merit of the speaker design "as a kind of pure, slender, timeless sculpture for music reproduction."[158] Unlike US trademark law, which in the context of aesthetic functionality would consider the availability to competitors of alternative designs, the General Court instead simply pointed to the importance to consumers of the aesthetic appeal of the design.[159] The court emphasized that this was enough to give substantial value to the good at issue and thus trigger a refusal of trademark protection even if other, technical features also gave substantial value to the good. Overall, European case law has expansively interpreted the functionality bar to protection in European trademark law, which has resulted in greater difficultly in gaining trademark protection for a three-dimensional design in Europe than in the American system.

Trademark protection is also available at the national level in Europe, and a company doing business only within the borders of a single European Member State may find national registration more practical than community-level registration. This is particularly the case if the three-dimensional design it seeks to register as a trademark is being used as a trademark in a limited area elsewhere in Europe, which may defeat registration of the design as an EU trademark. Because they must comply with the Trade Mark Directive, the substantive provisions of European national trademark law are very closely similar, and often identical, to those of the Trade Mark Regulation. Thus, much of the earlier discussion of the requirements for trademark registration also applies at the European national level. Three-dimensional designs may also be protected as unregistered marks at the national level in Europe, but the many different regimes of unregistered trademark protection established by the various Member States are highly diverse.

5.4 Copyright Protection

Despite a large number of Directives on the issue, harmonization of copyright law in the EU significantly lags behind harmonization of other areas of IP protection. Harmonization of the specific issue of how copyright law bears on design is even more inchoate. The result is a kaleidoscope of differing national approaches in Europe to basic questions of whether and how national copyright law protects designs, particularly if a design has not been registered for protection under community or national *sui generis* design law, and what the term of copyright protection for design might be.

UK copyright law provides a good example of the complexity of the copyright-design interface.[160] The UK Copyright Designs and Patents Act (CDPA) makes copyright protection (p. 592) available to "artistic works," and an industrial design may so qualify perhaps as "a work of artistic craftsmanship"[161] or perhaps as "sculpture"[162] under the terms of the CDPA. However, two important sections of the CDPA severely limit, if not eliminate altogether, this protection. Section 51 establishes that "[i]t is not an infringement of copyright in any design document or model recording or embodying a design for anything other than an artistic work or a typeface to make an article to that design or to copy an article made to the design."[163] As Lionel Bently has noted, "[a]lthough section 51 is not without its niceties, on the whole it has operated to exclude the operation of copyright from the field of functional industrial designs."[164] Meanwhile, Section 52 limits the term of protection available to artistic works made "by an industrial process," and that are commercially marketed, to 25 years. With some exceptions, artistic works qualify as made by an industrial process if they have been manufactured in a quantity greater than 50 copies.[165] In Europe, only Estonia and Romania establish similar limits on the term of copyright protection for industrially made works of artistic craftsmanship.

Further complicating matters in the UK, a recent Court of Justice ruling has apparently made it necessary to repeal Section 52. In *Flos SpA v Semararo Casa e Famiglia SpA*,[166] the Court of Justice interpreted Article 17 of the Design Directive to require that Member States recognize the eligibility for copyright protection of any design registered for design protection in or in respect of a Member State. The court further held that the Copyright Term Directive requires that such protection be provided for the full extent of the standard copyright term. *Flos* has thus been understood in the UK to require, at the very least, the repeal of Section 52, which, after various delays, has now been scheduled to become effective in 2020.[167]

German protection of design under copyright law has also recently been undergoing significant transition. In the so-called "Birthday Train" (or "Geburtstagszug") decision,[168] the German Bundesgerichtshof (Federal Supreme Court) established that in light of reforms to German registered design protection law under the Design Directive, works of applied art need no longer meet a higher standard of creativity (specifically, that they "clearly surpass the average design") than that required of non-utilitarian works of fine art or literature. For all such works, it is now "sufficient that they achieve a level of creativity that allows a public that is open to art and relatively familiar with views on art justifiably to speak of 'artistic' creativity."[169] Importantly, the court also noted that copyright law will only protect those aspects of a design that are based on artistic creativity rather than functionality, and where the design shows only a minimal degree of artistic creativity, perhaps because of functional constraints, the scope of copyright protection for that design will be correspondingly narrow.[170]

(p. 593) 5.5 Other Design Protection Schemes

Several European countries offer protection against the copying of product designs under various theories of unfair competition, including "slavish imitation" and "parasitism." In Italy, for example, the Intellectual Property Court of Milan recently found that a defendant had engaged in parasitic unfair competition in violation of Article 2598(1)(1) and (3) of the Italian Civil Code when it slavishly imitated the interior design of the plaintiff's cosmetics stores.[171] (The court also found copyright infringement.)[172] However, in *Mega Bloks Inc v Lego System A/S*, the Italian Supreme Court declined to find any unfair competition in the defendant's production of plastic interlocking blocks that were compatible with the plaintiff's, particularly since patent protection for the plaintiff's block designs had long since expired.[173] Lego has similarly failed under unfair competition law in the Netherlands.[174] French law in particular has a well-developed body of law prohibiting "concurrence parasitaire" (parasitic competition) under the very broadly worded terms of Article 1382 of the French Civil Code.

6. Conclusion

With the advent of 3D printing and increasingly flexible and faster modes of production, represented by the spread of "fast fashion" techniques to other sectors of the economy, design law will no doubt gain even greater importance in the future. Though the EU Design Directive and Regulation represent great advances in the rationalization of design law at least within Europe, significant work still remains to be done to clarify and harmonize how the various areas of design law, which consist of parts of patent, copyright, trademark, and *sui generis* design law, interact within particular jurisdictions and across jurisdictions.

Notes:

(*) Barton Beebe has asserted his moral right to be identified as the author of this contribution. All websites were last accessed in February 2018, unless otherwise specified.

(1) The EUIPO was formerly called the Office for Harmonization of the Internal Market and used the acronym OHIM.

(2) Directive 98/71/EC of the European Parliament and of the Council of 13 October 1998 on the Legal Protection of Designs [1998] OJ L 298/28 (hereafter Design Directive) art 1.

(3) Design Directive.

(4) US Patent and Trademark Office Manual of Patent Examining Procedure (hereafter MPEP) § 1502 (9th edn 2013, revised November 2015).

(5) MPEP.

(6) See GB Dinwoodie, "Federalized Functionalism: The Future of Design Protection in the European Union" (1996) 24 AIPLA Quarterly Journal 611, 646–665.

(7) See Dinwoodie (n 6).

(8) See the discussion by Estelle Derclaye in Chapter 22.

(9) K Raustiala and C Sprigman, *The Knockoff Economy: How Imitation Sparks Innovation* (OUP 2012). But see C Scott Hemphill and J Suk, "The Law, Culture, and Economics of Fashion" (2009) 61 Stanford L Rev 1147.

(10) On these agreements see further the discussion by Sam Ricketson in Chapter 8.

(11) Paris Convention for the Protection of Industrial Property (opened for signature 20 March 1883, revised 14 July 1967) 828 UNTS 305 (hereafter Paris Convention) arts 1(2) and 5*quinquies*.

(12) Paris Convention, art 4(C)(1).

(13) See (n 12).

(14) Berne Convention for the Protection of Literary and Artistic Works (adopted 9 September 1886, revised 24 July 1971) 828 UNTS 221 (hereafter Berne Convention).

(15) Berne Convention, art 2(1).

(16) Berne Convention, arts 2(7) and 7(4).

(17) Berne Convention, art 2(7).

(18) Berne Convention, art 7(4).

(19) Berne Convention, art 5(2).

(20) See Agreement on Trade-Related Aspects of Intellectual Property Rights (opened for signature 15 December 1993, entered into force 1 January 1995) 1869 UNTS 299 (hereafter TRIPS); Paris Convention, art 2(1); Berne Convention, art 9(1).

(21) TRIPS, art 4.

(22) TRIPS, art 25(1).

(23) TRIPS, art 25(1).

(24) TRIPS, art 25(2).

(25) TRIPS, art 26(1).
(26) TRIPS, art 26(2).
(27) TRIPS, art 26(3).
(28) Common Regulations Under the 1999 Act and the 1960 Act of the Hague Agreement, rule 18.
(29) 35 USC §§ 171, 102 and 103.
(30) 35 USC § 102.
(31) 35 USC § 102(a)(1).
(32) 35 USC § 102(b)(1).
(33) International Seaway Trading Corp v Walgreens Corp 589 F3d 1233, 1239 (Federal Circuit 2009) (quoting Gorham Manufacturing Co v White 81 US 511 (1871) 528).
(34) *Hoop v Hoop* 279 F3d 1004, 1007 (Federal Circuit 2002).
(35) MPEP § 1502.01.
(36) See, eg, *In re Webb* 916 F2d 1553 (Federal Circuit 1990) (finding design of hip stem prostheses to be ornamental).
(37) See, eg, Blisscraft of Hollywood v United Plastics Co 294 F2d 694 (2nd Circuit 1961).
(38) See, eg, *Best Lock v Ilco Unican* 94 F3d 1563, 1566 (Federal Circuit 1996).
(39) See (n 38).
(40) See *PGH Technologies, LLC v St John Companies, Inc* 469 F3d 1361, 1366 (Federal Circuit 2006).
(41) *Durling v Spectrum Furniture Co* 101 F3d 100 (Federal Circuit 1996) (hereafter Durl*ing*) 103.
(42) *Titan Tire Corp v Case New Holland, Inc* 566 F3d 1372 (Federal Circuit 2009) 1381.
(43) Durling 103.
(44) Durling.
(45) Durling.
(46) See, eg, *Apple, Inc v Samsung Electronics Co, Ltd* 678 F3d 1314 (Federal Circuit 2012) (finding that primary reference from the prior art did not create the same visual impression as the claimed design).
(47) *In re Hruby* 373 F2d 997 (Court of Customs and Patent Appeals 1967).
(48) See generally S Burstein, "Costly Designs" (2016) 77 Ohio State LJ (forthcoming).
(49) See *Egyptian Goddess, Inc v Swisa, Inc* 543 F3d 665 (Federal Circuit 2008) (hereafter *Egyptian Goddess*). See also *Gorham Co v White* 81 US 511 (1871) (hereafter *Gorham*).
(50) 728 F2d 1423 (Federal Circuit 1984).
(51) Egyptian Goddess, 678.
(52) *Gorham*, 528.
(53) Egyptian Goddess, 678.
(54) *Gorham*, 528.
(55) *Gorham*, 528.
(56) See *Crocs, Inc v International Trade Commission* 598 F3d 1294 (Federal Circuit 2010) 1303–1304.
(57) 35 USC § 283.
(58) 35 USC § 284.
(59) See 35 USC § 289.
(60) See (n 59).
(61) *Apple, Inc v Samsung Electronics Co, Ltd* 786 F3d 983 (Federal Circuit 2015) 1001– 1002.
(62) *Apple, Inc v Samsung Electronics Co, Ltd* 2016 WL 1078934 (Mem) (21 March 2016) (granting certiorari).
(63) See 15 USC § 1057(c).

(64) By contrast, product packaging trade dress may be found to be inherently distinctive of source. Different courts in the United States apply different tests to assess the inherent distinctiveness of product packaging. See *Amazing Spaces, Inc v Metro Mini Storage* 608 F3d 225 (5th Circuit 2010).

(65) Wal-Mart Stores, Inc v Samara Brothers, Inc 529 US 205 (2000) 213.

(66) See, eg, *Art Attacks Ink, LLC v MGA Entertainment, Inc* 581 F3d 1138 (9th Circuit 2009) 1145.

(67) 15 USC § 1052(e)(5).

(68) TrafFix Devices, Inc v Marketing Displays, Inc 532 US 23 (2001) (hereafter TrafFix Devices) 32.

(69) See, eg, Eppendorf-Netheler-Hinz GMBH v Ritter GMBH 289 F3d 351 (5th Circuit 2002).

(70) *Jay Franco & Sons, Inc v Franek* 615 F3d 855 (7th Circuit 2010) 857 ("[A] design that produces a benefit other than source identification is functional").

(71) See, eg, *Valu Engineering, Inc v Rexnord Corp* 278 F3d 1268 (Federal Circuit 2002).

(72) TrafFix Devices, 33.

(73) TrafFix Devices, 33.

(74) See, eg, *Virgin Enterprises Ltd v Nawab* 335 F3d 141 (2nd Circuit 2003).

(75) 15 USC § 1125(c)(2)(A).

(76) See, eg, Maker's Mark Distillery, Inc v Diageo North America, Inc 703 F Supp 2d 671

(District Court (Western District of Kentucky) 2010)

(77) 15 USC § 1125(c)(2)(B).

(78) See (n 77).

(79) See Design Protection Act of 1975, S Rep No 473, 94th Cong, 1st Sess 1 (1975) 47.

(80) See JH Reichman, "Design Protection in Domestic and Foreign Copyright Law: From the Berne Revision of 1948 to the Copyright Act of 1976" (1983) Duke LJ 1143; JH Reichman, "Design Protection and the New Technologies: the United States Experience in a Transnational Perspective" (1989) 29 Baltimore L Rev 6.

(81) Feist Publications, Inc v Rural Telephone Service Co 499 US 340 (1991) 345.

(82) See 17 USC §§ 410, 411, 412 and 504(c).

(83) 17 USC § 101.

(84) See (n 83).

(85) See *Pivot Point v Charlene Products, Inc* 372 F3d 913 (7th Circuit 2004) 923 (reviewing various approaches).

(86) 834 F2d 1142 (2nd Circuit 1987).

(87) 834 F2d 1145 (2nd Circuit 1987).

(88) 372 F3d 913 (7th Circuit 2004).

(89) 372 F3d 932 (7th Circuit 2004).

(90) 799 F3d 468 (6th Circuit 2015).

(91) 17 USC § 1302(5).

(92) Pub L No 105-304, 112 Stat 2860 (1998).

(93) 17 USC §§ 1301–32.

(94) 17 USC § 1301(a)(1).

(95) 17 USC § 1301(b)(2).

(96) See 17 USC §§ 901–14.

(97) European Council Regulation No 6/2002 of 12 December 2011 on Community De-signs [2002] OJ L 3/5 (hereafter Design Regulation).

(98) Design Regulation, art 19.

(99) Design Regulation, art 19(1).

(100) Design Regulation, art 19(2).

(101) See U Suthersanen, "Design Law: European Union and United States of America" (2nd edn, Sweet & Maxwell 2010) § 7.3.3.

(102) Design Regulation, art 12.

(103) Design Regulation, art 11.

(104) See Design Regulation, arts 3 and 9.

(105) Office for Harmonization in the Internal Market, *Annual Report 2014* (OHIM 2015) 17.

(106) Design Regulation, art 5(2).

(107) Design Regulation, art 5(2). See D Stone, *European Union Design Law: A* Practitioner's Guide (2nd edn, OUP 2016) para 11.07.

(108) Design Regulation, arts 5 and 41.

(109) Design Regulation, art 7(2). ([110]) Design Regulation, art 7(1).

(111) *Green Lane Products v PMS International Group* [2008] EWCA Civ 358 [79]. See also Stone (n 106) para 10.47.

(112) See *Holey Soles Holdings Ltd* [2008] 8 ECDR 100 (OHIM Invalidity Decision); *Kirschenhofer GmbH v WS Teleshop International Handels GmbH* (OHIM Third Board of Appeal, 11 July 2007). See also Stone (n 106) para 10.11.

(113) Design Regulation, art 6(1).

(114) See PepsiCo Inc v Grupo Promer Mon Graphic SA [2012] FSR 5 (ECJ) (hereafter PepsiCo); Proctor & Gamble Co v Reckitt Benckiser (UK) Ltd [2007] EWCA Civ 936 (hereafter Proctor & Gamble).

(115) PepsiCo.

(116) Design Regulation, art 6(2).

(117) See Proctor & Gamble [31]; PepsiCo and OHIM v Grupo Promer Mon Graphic SA [2011] ECDR 12, para 29 (ECJ Advocate General).

(118) Design Regulation, art 8(1). The Design Regulation also contains a "must-fit" provi-sion denying protection to "features of appearance of a product which must necessarily be reproduced in their exact form and dimensions in order to permit the product in which the design is incorporated or to which it is applied to be mechanically connected to or placed in, around or against another product so that either product may perform its function" (art 8(2)). This provision does not apply, however, to modular systems consisting of "mutually interchangeable products" such as Lego bricks or stacking chairs (art 8(3)).

(119) See generally J Du Mont and M Janis, "Functionality in Design Protection Systems" (2012) 19 Journal of Intellectual Property Law 261.

(120) [2010] ECDR 1 (OHIM 3rd Board of Appeal 2009).

(121) [2010] ECDR 1, para 35.

(122) [2010] ECDR 1, para 36.

(123) See Stone (n 106) para 6.11.

(124) Lindner (n 120) para 30.

(125) Design Regulation, art 4(2).

(126) Design Regulation, art 3(c).

(127) Design Regulation, art 4(2).

(128) Lindner (n 120) para 21.

(129) Design Regulation, art 10(1).

(130) Design Regulation, art 10(2).

(131) See Du Mont and Janis (n 118) 296.

(132) See Design Regulation, art 36(6).

(133) Green Lane Products v PMS International Group [2008] EWCA Civ 358 [27].

(134) Design Regulation, art 20(1).

(135) See D Ohlgart, "Ohlgart Commentary" in European Design Protection: Commentary to Directive and Regulation Proposals (Wolters Kluwer 1996) 143.

(136) Design Regulation, art 8(2).

(137) Design Regulation, art 111(1). In a recent decision, the English High Court interpret-ed this provision not to allow the unauthorized reproduction of registered designs consisting of alloy wheels for automobiles. See *Bayerische Motoren Werke AG v Round & Metal Ltd* [2012] EWHC 2099 (Pat).

(138) Design Directive, art 7(2).

(139) Design Directive, art 14.

(140) See E Derclaye, "A Decade of Registered and Unregistered Design Rights Decisions in the UK: What Conclusions Can We Draw for the Future of Both Types of Rights?" (2014) 3 Intellectual Property Theory 144.

(141) Copyright, Designs and Patents Act 1988 (UK) (hereafter CDPA) s 213(4).

(142) CDPA, s 213(3)(b).

(143) CDPA, s 216(1)(a).

(144) CDPA, s 216(1)(a).

(145) CDPA, s 237.

(146) CDPA, s 244A. See also s 244B (excluding from liability conduct relating to the use and repair of equipment for overseas ships and aircraft).

(147) Council Regulation 207/2009 of 26 February 2009 on the Community Trade Mark [2009] OJ L 78/1 (hereafter Trade Mark Directive).

(148) Case C-238/06 P Develey Holding GMbH & Co Beteiligungs KG v OHIM [2007] ECR I-09375, para 80.

(149) See (n 148).

(150) See Case C-25/05 *August Storck KG v OHIM* [2006] ECR I-05719.

(151) Trade Mark Directive, art 4(1)(e); Trade Mark Regulation, art 7(1)(e).

(152) Case C-205/13 *Hauck GmbH & Co KG/Stokke A/S* EU:C:2014:2233.

(153) *Hauck GmbH*, [23] and [27].

(154) Case C-48/09 P *Lego Juris v OHIM* [2010] ECR I-08403, para 53.

(155) *Lego Juris*, paras 55–57.

(156) Case T-331/10 Yoshida Metal Industry Co Ltd v OHIM EU:T:2012:220 [61].

(157) Case T-508/08 *Bang & Olufsen A/S v OHIM* [2011] ECR II-06975, paras 69–77.

(158) Bang & Olufsen, para 75.

(159) Bang & Olufsen, para 73.

(160) See L Bently, "The Return of Industrial Copyright?" (2012) 10 European Intellectual Property Review 654.

(161) But see George Hensher Ltd v Resawhile Upholstery (Lancs) Ltd [1976] AC 64 (HL). See also Lambretta Clothing Co Ltd v Teddy Smith (UK) Ltd [2005] RPC 88 (CA).

(162) But see Lucasfilm Ltd v Ainsworth [2011] UKSC 39.

(163) CDPA, s 51(1).

(164) Bently (n 159) 657.

(165) The Copyright (Industrial Processes and Excluded Articles) (No 2) Order 1989.

(166) Case C-168/09 Flos SpA v Semeraro Casa e Famiglia SpA [2011] ECR I-00181.

(167) See UK Intellectual Property Office, Transitional provisions for the repeal of section 52 of the Copyright, Designs and Patents Act of 1988 (2015) 3.

(168) Case I ZR 143/12 (13 November 2013 BGH).

(169) See (n 168). ([170]) See (n 168).

(171) Sentence No 11416/15 (IP Court of Milan (Business Chamber "A") 13 October 2015). See also *Ghidini Cipriano SpA* [2006] 28 EIPR N173-174 (Court of Milan).

(172) See (n 171).

(173) *Mega Bloks Inc v Lego System A/S* [2008] ETMR 73 (Supreme Court of Italy).

(174) See *Lego Nederland BV v Mega Brands Inc* (Case LJN BJ6999) (20 November 2009 Supreme Court of The Netherlands).