

94 F.3d 1563 (1996)

**BEST LOCK CORPORATION, Plaintiff-Appellant,**  
v.  
**ILCO UNICAN CORPORATION, Defendant-Appellee.**

No. 95-1528.

United States Court of Appeals, Federal Circuit.

August 29, 1996.

Rehearing Denied; Suggestion for Rehearing Declined October 29, 1996.<sup>[1]</sup>

Donald E. Knebel, Barnes &amp; Thornburg, Indianapolis, Indiana, argued, for plaintiff-appellant. With him on the brief was Dwight D. Lueck.

Dennis A. Gross, Hill, Steadman &amp; Simpson, Chicago, Illinois, argued, for defendant-appellee. With him on the brief was Robert M. Ward.

Barry Roberts, Roberts &amp; Hundertmark, Chevy Chase, Maryland, for amicus curiae.

Before ARCHER, Chief Judge, NEWMAN and LOURIE, Circuit Judges.

Rehearing Denied; Suggestion for Rehearing In Banc Declined October 29, 1996.<sup>[1]</sup>

1564 \*1564 LOURIE, Circuit Judge.

Best Lock Corporation appeals from the final decision of the United States District Court for the Southern District of Indiana in which the court held that Best Lock's U.S. Design Patent 327,636 was invalid. *Best Lock Corp. v. Ilco Unican Corp.*, 896 F.Supp. 836, 36 USPQ2d 1527 (S.D.Ind.1995). Because the court did not clearly err in finding that the claimed design was functional and hence not ornamental, we affirm.

## BACKGROUND

This case involves a design patent for a key "blade." A typical key consists of a bow, which allows the user to turn the key in a corresponding lock, and a blade, which is the portion of the key inserted into the lock's keyway. When a key is manufactured, the key blade is "blank," *i.e.*, the blade has not been cut or "bitted" with the combination required to operate the corresponding lock. Although a blank key blade will not operate the lock, the profile of the key blade is manufactured to fit into the corresponding lock's keyway. Subsequently, the blank key blade is cut to match the corresponding lock's combination.

In the replacement key market, a locksmith or a retail store with a key duplicating facility stocks blank key blades with various key profiles. The locksmith or retailer makes a replacement key by first selecting the appropriate blank key blade. This is done by matching the key blade profile with the corresponding lock keyway. Then, the locksmith or retailer cuts the blade of the key blank with the combination required to operate the lock.

Best Lock manufactures and sells locks and keys used to maintain security at industrial, commercial, and institutional facilities. At these facilities, it is often feared that the keys used in their locks may readily be duplicated. Consequently, key and lock manufacturers, including Best Lock, have attempted to restrict unauthorized access to duplicate key blanks by obtaining utility or design patent protection on the keys. By obtaining patent protection, a company hopes to control the market for duplicate key blanks during the life of the patent.<sup>[1]</sup>

Best Lock is the assignee of the two patents that were at issue before the district court, U.S. Patent 5,136,869 and U.S. Design Patent 327,636. The '869 patent, entitled "High Security Key and Cylinder Lock Assembly," claims an improved key blade and cylinder lock assembly that provides a wider key profile than standard keys and includes other features to deter lock picking. The '636 patent, entitled "Portion of a Key Blade Blank," claims the ornamental design for the operative portion of a key blade blank. In addition to the '636 design patent, Best Lock is the assignee of 33 other design patents on key blade designs. It also is the assignee of 34 design patents directed to keyways designed to mate with the key blades claimed in Best Lock's 34 key blade design patents. The '636 patent is the only design patent at issue on appeal.

Figures 1-5 of the '636 design patent are shown below:

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Ilco manufactures duplicate and replacement key blanks for existing locks. It sells its replacement key blanks to locksmiths and replacement key retailers. In 1993, Ilco copied the design of a Best Lock key, which had a key blade shaped like the design shown in the '636 patent. It subsequently distributed key blanks with that key blade shape at the annual convention of the Associated Locksmiths of America. In response, Best sued Ilco, alleging, *inter alia*, infringement of the '636 design patent and the '869 utility patent. Ilco counterclaimed, seeking a declaratory judgment of invalidity and noninfringement of both patents.

After a ten-day bench trial, the district court held that the '869 patent claims were invalid under 35 U.S.C. § 102 because the claims were anticipated by the prior art. *Best Lock Corp. v. Ilco Unican Corp.*, 896 F.Supp. 836, 837, 36 USPQ2d 1527, 1528 (S.D.Ind.1995). Best Lock has not appealed that holding. The court also held that the '636 design patent was invalid. In particular, the court found that Best Lock's key blades were not "a matter of ornamental concern to the purchaser or the user." *Id.* at 843, 36 USPQ2d at 1534. The court further found that the design patent was invalid because the shape of the blank key blade was dictated by its function. *Id.* Best Lock appeals,

1566 \*1566 challenging the district court's decision regarding the '636 patent.

## DISCUSSION

Under 35 U.S.C. § 171, a design patent may be granted for a "new, original and ornamental design for an article of manufacture." However, if the design claimed in a design patent is dictated solely by the function of the article of manufacture, the patent is invalid because the design is not ornamental. See *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 148, 109 S.Ct. 971, 976, 103 L.Ed.2d 118, 9 USPQ2d 1847, 1851 (1989) ("To qualify for protection, a design must present an aesthetically pleasing appearance that is not dictated by function alone, and must satisfy the other criteria of patentability."); see also *In re Carletti*, 51 C.C.P.A. 1094, 328 F.2d 1020, 1022, 140 USPQ 653, 654 (1964) ("[I]t has long been settled that when a configuration is the result of functional considerations only, the resulting design is not patentable as an ornamental design for the simple reason that it is not 'ornamental' — was not created for the purpose of ornamenting."). A design is not dictated solely by its

function when alternative designs for the article of manufacture are available. See L.A. Gear, Inc. v. Thom McAn Shoe Co., 988 F.2d 1117, 1123, 25 USPQ2d 1913, 1917 (Fed.Cir.), cert. denied, 510 U.S. 908, 114 S.Ct. 291, 126 L.Ed.2d 240 (1993). We review for clear error the district court's determination that the design claimed in the '636 patent is functional. See *id.* at 1124, 25 USPQ2d at 1917.

On appeal, Best Lock argues that the court erred in holding the '636 design patent invalid as being directed solely to a functional design. As support, it asserts that although a particular key and its corresponding lock must mate to operate the lock, an unlimited number of key blade and corresponding keyway designs are available. Choice of any particular design is arbitrary. Thus, Best Lock maintains that the key blade blank may have any number of different shapes and is therefore not dictated solely by functional concerns.

We disagree. The design shown in the claim of the '636 patent is limited to a blank key blade as shown in Figures 1-5 of the patent. Best Lock did not claim a design for the entire key.<sup>[2]</sup> See 37 C.F.R. § 1.153 (1995) (The claim of a design patent "shall be in formal terms to the ornamental design for the article ... as shown, or as shown and described.") (emphasis added). The parties do not dispute that the key blade must be designed as shown in order to perform its intended function — to fit into its corresponding lock's keyway. An attempt to create a key blade with a different design would necessarily fail because no alternative blank key blade would fit the corresponding lock. In fact, Best Lock admitted that no other shaped key blade would fit into the corresponding keyway, and it presented no evidence to the contrary. Therefore, we find no clear error in the court's finding that the claimed key blade design was dictated solely by the key blade's function. Any aesthetic appeal of the key blade design shown in the '636 patent is the inevitable result of having a shape that is dictated solely by functional concerns.

Further, Best Lock's assertion that a variety of possible shapes of interfaces between keys and locks exists does not compel a different result. Clearly, different interfaces between key blades and corresponding lock keyways can be designed to permit the combination to function as a lock and key set. However, Best Lock's patent does not claim the combination of a lock and corresponding key. Instead, the claim in the '636 design patent is limited to a key blade, which must be designed as shown in the '636 patent in order to perform its intended function.

Moreover, the fact that Best Lock also has a design patent on the keyway that mates with the key blade shown in the '636 patent does not alter our analysis. The existence of a separate patent on the keyway is irrelevant to the construction of the '636 patent claim and to the ultimate determination that the claimed design is dictated solely by function. See Elmer v. ICC Fabricating, Inc., 67 F.3d 1571, 1577, 36 USPQ2d 1417, 1567, 1421 (Fed.Cir.1995) (construing design patent as limited to the article of manufacture "as shown and described" in the patent). The validity of a patent must be evaluated based on what it claims rather than on the totality of the claims of multiple patents.

For the foregoing reasons, the district court's finding that the claimed design is solely governed by functional concerns is not clearly erroneous. Consequently, we affirm its resulting conclusion that the '636 patent is invalid under 35 U.S.C. § 171 for failure to satisfy the statute's ornamentality requirement.

*AFFIRMED.*

PAULINE NEWMAN, Circuit Judge, dissenting.

I respectfully dissent. The design of this key blade profile meets the statutory criteria of design patent subject matter. The design statute defines this subject matter as follows:

35 U.S.C. § 171 Patents for designs

Whoever invents any new, original and ornamental design for an article of manufacture may obtain a patent therefor, subject to the conditions and requirements of this title.

The provisions of this title relating to patents for inventions shall apply to patents for designs, except as otherwise provided.

Whether the design of the D'636 patent is otherwise patentable, for example on the criteria of originality or non-obviousness, was not reached by the district court and is not before us. However, the panel majority has misapplied 35 U.S.C. § 171 in holding that the arbitrary design of the key profile is "functional" because it mates with its matching keyway.

The design of the key profile is not removed from access to the design statute because the key fits a matching keyway. That two articles are designed in harmony does not deprive the design of access to the design patent law. The design of the key profile is not determined by the function of the key to fit the lock. In the case at bar there are said to be "thousands" of alternative key blade profiles.

The district court concluded that the design of the D'636 patent was not "a matter of ornamental concern to the purchaser or the user," and thus held that the design was functional. The statute requires that the subject of a design patent be an ornamental design of a useful object. However, "ornamental" does not always mean artistic or pleasing to the eye. The Court of Customs and Patent Appeals early recognized that "the beauty and ornamentation requisite in design patents is not confined to such as may be found in the 'aesthetic or fine arts.'" In re Koehring, 17 C.C.P.A. 774, 37 F.2d 421, 422 (1930).

Recognizing that ornamentation is in the eye of the beholder, the courts have sought a more objective standard in the general rule that a design is "ornamental" for purposes of 35 U.S.C. § 171 when it is not primarily functional. See In re Carletti, 51 C.C.P.A. 1094, 328 F.2d 1020, 140 USPQ 653 (1964) ("To qualify for protection, a design must present an aesthetically pleasing appearance that is not dictated by function alone."). However, the article itself must have a utility in order for its design features to be patentable under 35 U.S.C. § 171. See L.A. Gear, Inc. v. Thom McAn Shoe Co., 988 F.2d 1117, 1123, 25 USPQ2d 1913, 1917 (Fed.Cir.) ("A design patent is directed to the appearance of an article of manufacture. An article of manufacture necessarily serves a utilitarian purpose, and the design of a useful article is deemed to be functional when the appearance of the claimed design is 'dictated by' the use or purpose of the article."), cert. denied, 510 U.S. 908, 114 S.Ct. 291, 126 L.Ed.2d 240 (1993).

If the design is dictated by the function performed by the article of manufacture, the design is not patentable. Power Controls Corp. v. Hybrinetics, Inc., 806 F.2d 234, 238, 231 USPQ 774, 777 (Fed.Cir.1986). See Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 148, 109 S.Ct. 971, 976, 103 L.Ed.2d 118, 9 USPQ2d 1847, 1851 (1989) ("To qualify for protection, a design must present an aesthetically pleasing appearance that is not dictated by function alone, and must satisfy the other criteria of patentability."). A design is "not dictated by function" alone when there are alternative designs or configurations available for the article of manufacture, as in the case before us.

The legal principles governing design patents have their foundation in the important decision of Gorham Mfg. Co. v. White, 81 U.S. (14 Wall.) 511, 20 L.Ed. 731 (1871), wherein the Supreme Court explained:

The appearance may be the result of peculiarity of configuration, or of ornament alone, or of both conjointly, but, in whatever way produced, it is the new thing, or product, which the patent law regards.

81 U.S. at 525. Courts have measured the term "ornamental" by the non-functionality that distinguishes the subject of a design patent from a utility patent, while recognizing that the design of a useful article is not insulated from the utility of the article. A review of patentable designs in general illustrates the mixture of functional and non-functional features embraced in the patented design. See, e.g., *Winner Int'l Corp. v. Wolo Mfg. Corp.*, 905 F.2d 375, 15 USPQ2d 1076 (Fed.Cir.1990) (design of steering wheel lock); *Lee v. Dayton-Hudson Corp.*, 838 F.2d 1186, 5 USPQ2d 1625 (Fed.Cir.1988) (design patent for massage device); *FMC Corp. v. Hennessy Indus., Inc.*, 836 F.2d 521, 5 USPQ2d 1272 (Fed.Cir.1987) (design patent for changer for tubeless tires); *Unette Corp. v. Unit Pack Co.*, 785 F.2d 1026, 228 USPQ 933 (Fed.Cir.1986) (container for dispensing liquids); *In re Igarashi*, 228 USPQ 463 (Bd. Pat.App. & Interf. 1985) (tire tread design); *Trans-World Mfg. Corp. v. Al Nyman & Sons, Inc.*, 750 F.2d 1552, 224 USPQ 259 (Fed.Cir.1984) (design for eyeglass display rack).

An effective design patent law must recognize the distinction between functionality of the article and of the particular design of the article or features thereof. See *L.A. Gear, supra* (the sneaker tongue, moustache, delta wing, and side mesh, were useful parts of the sneaker, but the overall design of these features and the shoe was not dictated by function alone). This interaction of form and function does not remove the design from the statutory scope of the design patent law, or defeat the statutory patentability of a primarily non-functional design — although it is not always easy to draw a bright line between the functionality of an article and its design, as discussed by J.H. Reichman, *Design Protection and the New Technologies: The United States Experience in a Transnational Perspective*, 19 Balt. L.Rev. 6 (1989), for design patents often appear on quite mundane articles of manufacture. See, e.g., *Tone Bros., Inc. v. Sysco Corp.*, 28 F.3d 1192, 31 USPQ2d 1321 (Fed.Cir.1994) (bottle for spices); *In re Klein*, 987 F.2d 1569, 26 USPQ2d 1133 (Fed.Cir.1993) (roof or siding shingle); *KeyStone Retaining Wall Sys., Inc. v. Westrock, Inc.*, 997 F.2d 1444, 27 USPQ2d 1297 (Fed.Cir.1993) (concrete block for retaining wall); *In re Webb*, 916 F.2d 1553, 16 USPQ2d 1433 (Fed.Cir.1990) (femoral hip stem prosthesis); *In re Cho*, 813 F.2d 378, 1 USPQ2d 1662 (Fed.Cir.1987) (bottle cap); *Pacific Furniture Mfg. Co. v. Preview Furniture Corp.*, 800 F.2d 1111, 231 USPQ 67 (Fed.Cir.1986) (upholstered armchair); *Litton Sys., Inc. v. Whirlpool Corp.*, 728 F.2d 1423, 221 USPQ 97 (Fed.Cir.1984) (microwave oven); *In re Koehring*, 17 C.C.P.A. 774, 37 F.2d 421 (1930) (concrete mixing truck).

The design of the key blade profile is primarily non-functional, as the Patent and Trademark Office recognized in granting the patent in suit. The Manual of Patent Examining Procedure defines "design" as follows for purposes of § 171:

The design of an object consists of the visual characteristics or aspects displayed by the object. It is the appearance presented by the object which creates a visual impact upon the mind of the observer.

Since a design is manifested in appearance, the subject matter of a design patent application may relate to the configuration or shape of an object, to the surface ornamentation on an object, or both.

Design is inseparable from the object to which it is applied and cannot exist alone merely as a scheme of surface ornamentation. It must be a definite, preconceived thing, capable of reproduction and not merely the chance result of a method.

MPEP § 1502 (6th ed.1995). See also 1 D. Chisum, *Patents* § 1.04[2][a] (1996) ("[A] design rests on appearance created by the configuration of the article, surface ornamentation, \*1569 or a combination of configuration and ornamentation.") (footnote omitted).

The parties to this litigation agree that there are myriad possible designs of key profiles. All keys require, of course, mating keyways. In holding that because the key must fit a keyway, the abstract design of the key profile is converted to one solely of function, the court creates an exception to design patent subject matter. An arbitrary design of a useful article is not statutorily excluded from § 171 simply because in use it interacts with an article of complementary design. Although precedent is sparse, it is contrary to this holding. In *Motorola Inc. v. Alexander Mfg. Co.*, 786 F.Supp. 808, 21 USPQ2d 1573 (N.D.Iowa 1991), the only United States case on this point of which we are aware, the court considered a design patent for a battery housing intended for use in a portable phone. Since the battery housing had to fit into the phone and a battery charger, the accused infringer argued that this function dictated the design. The court disagreed:

The design of the battery housing was not dictated by the design of the battery charger because the charger did not exist when the housing was designed.

The design of the phone was done concurrently with the battery housing. Therefore, the design of the battery housing cannot fairly be said to have been "dictated" by the design of the phone.

*Id.* at 812, 21 USPQ2d at 1577. This reasoning is equally apt in this case. The design of the key profile was not dictated by the design of the keyway, and indeed the two share the same arbitrary design.

In sum, the fact that the key blade is the mate of a keyway does not convert the arbitrary key profile into a primarily functional design. It is not the design of the key profile that is functional, but the key itself. Thus I must, respectfully, dissent from the ruling of the panel majority that the design of the key blade profile is not patentable because the key blade requires a mating keyway.

[\*] Circuit Judge Newman would rehear the appeal.

[1] Key and lock manufacturers also use other methods to restrict access to duplicate key blanks. For example, some manufacturers limit the sale of a particular type of lock and key to a single customer or particular geographic region, thereby making consumer demand for replacement keys for that particular lock design so small that replacement key manufacturers have no incentive to manufacture duplicate key blanks.

[2] As our predecessor court previously held, "a design for an article of manufacture may be embodied in less than all of an article of manufacture...." *In re Zahn*, 617 F.2d 261, 267, 204 USPQ 988, 994 (CCPA 1980).

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