ICONIC DESIGNS PROTECTED AS THREE-DIMENSIONAL MARKS: THE INTERSECTION OF DESIGN HISTORY AND INTELLECTUAL PROPERTY PROTECTION HISTORY

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ABSTRACT

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Three-dimensional marks are mainly described as the borderline between trademark and design. The three-pointed star emblem of Mercedes-Benz vehicles, the triangular prism shape of Toblerone chocolate bar, the rounded body shape of Clipper lighter, and the 'hobble-skirt' contour design of Coca-Cola bottle are among the well-known examples of three-dimensional marks with iconic designs coupled with economic success stories. The aim of this study is to examine three-dimensional marks in relation to other types of intellectual property protection through a historical perspective, and to identify and diversify IP protection strategies for three dimensional shapes. Based on an extensive literature review and a detailed search of intellectual property databases, the study classifies three dimensional shapes which are protected as three-dimensional trademarks or service marks into three main categories. In the first category, there are *iconic product designs* which are protected as three-dimensional marks as exemplified by Coca-Cola contour bottle and Crocs shoes. In the second category, there are *iconic buildings* which are protected as three-dimensional marks as exemplified by Transamerica Pyramid Building in San Francisco and Chrysler Building in New York. In the third category, there are *iconic technological designs* which are protected as three-dimensional marks as exemplified by iPod MP3 player and iPhone smartphone. The study is at the intersection of design history and intellectual property protection history, and presents an integrated approach to identify and diversify IP protection strategies for three dimensional shapes through a series of case studies in the categories identified.

Keywords: Three-dimensional marks, intellectual property protection history, design history, iconic product designs, iconic buildings, iconic technological designs.

ÖZ

ÜÇ BOYUTLU MARKA OLARAK KORUNAN İKONİK TASARIMLAR: TASARIM TARİHİ VE FİKRİ MÜLKİYET KORUMA TARİHİNİN KESİŞİMİ

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Üç boyutlu markalar, marka ve tasarım arasındaki sınır hattında yer alırlar. Mercedes-Benz marka araçların üç köşeli yıldız amblemi, Toblerone çikolatasının üçgen prizma şekli, Clipper çakmağının yuvarlatılmış gövde şekli ve Coca-Cola şişesinin kapanan etek şeklindeki hatları, ticari başarıya ulaşmış ikonik tasarımlarıyla üç boyutlu markaların ilk akla gelen örnekleri arasındadır. Bu çalışmanın amacı, üç boyutlu markaların diğer fikri mülkiyet koruma türleri ile ilişkisini tarihsel bir perspektiften incelemek ve üç boyutlu şekiller için fikri mülkiyet koruma stratejilerini belirlemek ve çeşitlendirmektir. Kapsamlı bir alanyazın araştırmasına ve fikri mülkiyet veri tabanlarının ayrıntılı bir şekilde taranmasına dayanan bu çalışma, üç boyutlu marka olarak korunan üç boyutlu şekilleri üç ana grup altında sınıflandırır. Birinci grupta, üç boyutlu marka olarak korunan *ikonik tasarımlar* yer almaktadır; bu gruba örnek olarak Coca-Cola kontur şişesi ve Crocs terliği verilebilir. İkinci grupta, üç boyutlu marka olarak korunan *ikonik yapılar* yer alır; bu gruba örnek olarak San Francisco'daki Transamerica Pyramid binası ve New York'taki Chrysler binası verilebilir. Üçüncü grupta, üç boyutlu marka olarak korunan *ikonik teknolojik tasarımlar* yer alır; bu gruba örnek olarak iPod taşınabilir medya çalar ve iPhone akıllı telefon verilebilir. Bu çalışma, tasarım tarihinin fikri mülkiyet tarihi ile kesiştiği alanda yer alır; belirlenen sınıflandırmaya uygun olarak bir dizi vaka çalışması yoluyla üç boyutlu şekillerin fikri mülkiyet koruma stratejilerinin belirlenmesi ve çeşitlenmesi için bütüncül bir yaklaşım sunar.

Anahtar Kelimeler: Üç boyutlu markalar, fikri mülkiyet koruması tarihi, tasarım tarihi, ikonik tasarımlar, ikonik yapılar, ikonik teknolojik tasarımlar.

to my beloved mom

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LIST OF ABBREVIATIONS

EUIPO	European Union Intellectual Property Office
EUTMR	European Union Trade Mark Regulation
EUTMIR	European Union Trade Mark Implementing Regulation
IP	Intellectual Property
IPHCJ	Intellectual Property High Court of Japan
IPR	Intellectual Property Right
TMEP	Trademark Manual of Examining Procedure
USPTO	United States Patent and Trademark Office
VW	Volkswagen
WIPO	World Industrial Property Organization

AR	Argentina
AU	Australia
BX	Benelux
CA	Canada
CH	Switzerland
CO	Colombia
DE	Germany
DN	Denmark
UK	United Kingdom
IN	India
JA	Japan
MX	Mexico
PH	Philippines
TR	Turkey
US	The United States
EU	European Union Countries

CHAPTER 1

INTRODUCTION

1.1 Background and Motivation

Three dimensional shapes can be eligible for protection by copyright law, trademark law, patent law, design law and unfair competition law. Three-dimensional marks are described as the borderline between trademark and design. Three-dimensional mark has a crucial role in managing intellectual property protection strategies for three dimensional shapes because it offers indefinite protection.

I received a Master of Laws (LL.M.) degree in intellectual property with specialization in patent and design law in 2017; this has allowed me to observe the intersections between design and intellectual property law from a broad perspective. I have been interested in three-dimensional mark protection for three dimensional shapes as an industrial designer. Although three-dimensional mark protection for three-dimensional shapes attracted my attention, and it is an extraordinary topic, the problem is that three-dimensional marks are relatively less explored and poorly conceptualized in both design literature and intellectual property literature.

This study aims to present a new perspective which integrates design history with intellectual property protection history by bringing design biographies and intellectual property protection biographies of three dimensional shapes together.

1.2 Aim and Scope of the Thesis

The aim of this study is to examine three-dimensional marks in relation to other types of intellectual property protection through a historical perspective, and to identify and diversify IP protection strategies for three dimensional shapes. In order to achieve this, visual case studies supported by design history and intellectual property protection history are conducted based on reviewing literature, legal sources and databases.

The key questions of this research are as follows:

- What is the current state of three-dimensional marks from an international legal perspective?
    - How are three-dimensional marks defined and categorized?
    - What are the well-known examples of three-dimensional marks from various sectors?
- What is the strategical and chronological relationship between three-dimensional mark protection and other types of intellectual property protection for various three dimensional shapes from various sectors?
- What are the key considerations for identifying and diversifying intellectual property protection strategies for three dimensional shapes?

1.3 Structure of the Thesis

The first chapter of the thesis introduces the research topic, background and motivation, aim of the study and research questions.

Chapter 2 presents literature review which explores three-dimensional marks from an international legal perspective by explaining definition of three-dimensional marks and related terms as described in legal texts and guidelines. Other intellectual property protection methods; design, copyright and patent protection are also reviewed in this chapter. Intellectual property protection strategies are also explained.

Chapter 3 presents the research methodology of the study. It begins with introducing case study as a method. Presenting the method of data collection from legal sources and design history literature, data analyses method which includes visual case studies is explained. Visual case studies which are defined at three main categories; iconic product designs, iconic buildings and iconic technological designs, are presented by design history and intellectual property protection history perspective. The discussions of visual case studies are presented at the end of each category

Presenting findings and conclusions of the study, Chapter 4 presents the key considerations for identifying and diversifying intellectual property protection strategies for three dimensional shapes. Limitations of the study and suggestions for further research are also explained.

CHAPTER 2

LITERATURE REVIEW

2.1 Intellectual Property Rights and Trademarks

Intellectual property was first recognized in the Paris Convention for the Protection of Industrial Property (1883) and the Berne Convention for the Protection of Literary and Artistic Works (1886). There are two branches of intellectual property; industrial property and copyright. Copyright protects literary and artistic creations, such as books, music, films, painting, and technology-based works. Industrial property includes patents, trademarks, designs and geographical indications (WIPO, 2016). Intellectual property is protected for two main reasons: to give exclusive rights to the owner of creations and innovations, and to promote creativity and innovation (WIPO, 2016).

The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) defines subject matter eligible for trademark protection as ‘Any sign, or any combination of signs, capable of distinguishing the goods or services of one undertaking from those of other undertakings’ (TRIPS, 1994; Sec. 2 Art. 15). The USPTO describes trademark eligible material as ‘A trademark is generally a word, phrase, symbol, design, or a combination thereof, that identifies and distinguishes the source of the goods of one party from those of others.’ (USPTO, n.d.a). The Directive 2008/95/Ec of the European Parliament and of The Council also describes ‘any signs capable of being represented graphically, particularly words, including personal

names, designs, letters, numerals, the shape of goods or of their packaging, provided that such signs are capable of distinguishing the goods or services of one undertaking from those of other undertakings' (EUIPO, 2008; art. 2). CIPO describes 'a word, sound and design to distinguish the goods or service of one person or company from others'. There are three types of trademarks: certification mark, a distinguishing guise and ordinary mark (proposed trademark) (CIPO, n.d.).

Trademarks can be protected by national, regional and international registrations. Each country which is party to TRIPS has a national trademark registration system. In the United States, trademarks are protected under the Trademark Act of 1946 (Lanham Act). In the United Kingdom, trademarks are governed by the Trade Marks Act of 1994, the passage of which was a milestone in trademark law. In the European Union, European Union regulations govern trademarks.

While European Community Trademark Registration provides a right throughout the territory of the European Union, the international registration can be obtained under the Madrid Agreement (Dutfield & Suthersanen, 2015). According to the Madrid Protocol, an international trademark can be protected in the territory of the Contracting Parties via registration under the aegis of the International Bureau of the World Intellectual Property Organization (Protocol Relating to the Madrid Agreement Concerning the International Registration of Marks, 1989).

TRIPS defined the scope of trademark protection as follows: 'the owner have exclusive right to prevent all third parties not having the owner's consent from using in the course of trade identical or similar signs for goods or services which are identical or similar to those in respect of which the trademark is registered where such use would result in a likelihood of confusion.' In other words, there are two main functions of a trademark; to protect a business's reputation and goodwill, and to protect consumers from deception (Bainbridge, 2007). Trademark owner also has some important advantages as well as exclusive rights. Trademark registration creates the trade mark as an identifiable intangible property. Moreover, a registered trade mark can be licensed or transferred. In addition, trademark protection lasts indefinitely as long as periodic renewal is done.

In order to be protected as a trademark, a sign must be distinctive. According to Article 7(1) EUTMR, if the trademark has following features, it is ineligible for protection;

- Trademarks which are devoid of any distinctive character;
- Signs which consist exclusively of
    - the shape which results from the nature of the goods themselves
    - the shape of goods which is necessary to obtain a technical result
    - the shape which gives substantial value to the goods
- Trademarks which are contrary to public policy and morality (EUIPO, 2017e).

In trademark law, it shall be assessed under different conditions if trademark is well-known. Well-known trademark is defined as a trademark that is widely known to the pertinent general public and enjoys a relatively high reputation. Well-known marks are protected through implementation of the Paris Convention for the Protection of Industrial Property and Article 16 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs). The owner of a well-known registered trademark may prevent others from registering trademarks that are the same as, or similar to, the well-known trademark in all categories of goods or services (WIPO, 2000). During determining a trademark is well-known or not, the followings criteria shall be used:

- the degree of knowledge or recognition of the mark in the relevant sector of the public;
- the duration, extent and geographical area of any use of the mark;
- the duration, extent and geographical area of any promotion of the mark, including advertising or publicity and the presentation, at fairs or exhibitions, of the goods and/or services to which the mark applies;
- the duration and geographical area of any registrations, and/or any applications for registration, of the mark, to the extent that they reflect use or recognition of the mark
- the record of successful enforcement of rights in the mark, in particular, the extent to which the mark was recognized as well known by competent authorities
- the value associated with the mark (WIPO, 2000).

2.2 Non-traditional Trademarks

Trademarks traditionally consist of words, logos, symbols and graphic design. However, other elements used to distinguish the source of good or service over time; therefore, according to the Lanham Act, non-traditional trademarks are also eligible for trademark protection.

According to EUIPO, elements of non-traditional trademarks include shape, position, pattern, colour, sound, motion, multimedia, hologram mark and other marks including layout of a retail store, smell, taste and tactile marks (EUIPO, 2017a; sec 4 chap 2) Similarly, the USPTO states that configuration, colour, hologram, slogan, motion, position, scent, sound, touch and taste mark are defined as non-traditional trademarks, eligible for protection (USPTO, 2006). The Louboutin red-sole, the purple colour on Milka chocolate, the smell of Play-Doh, the layout of Apple's retail store, and Nokia's famous ringtone are well-known examples of non-traditional trademarks.

Many countries accept at least some types of non-traditional trademarks as shown in figure (Carapeto, n.d.) (Figure 2.1).

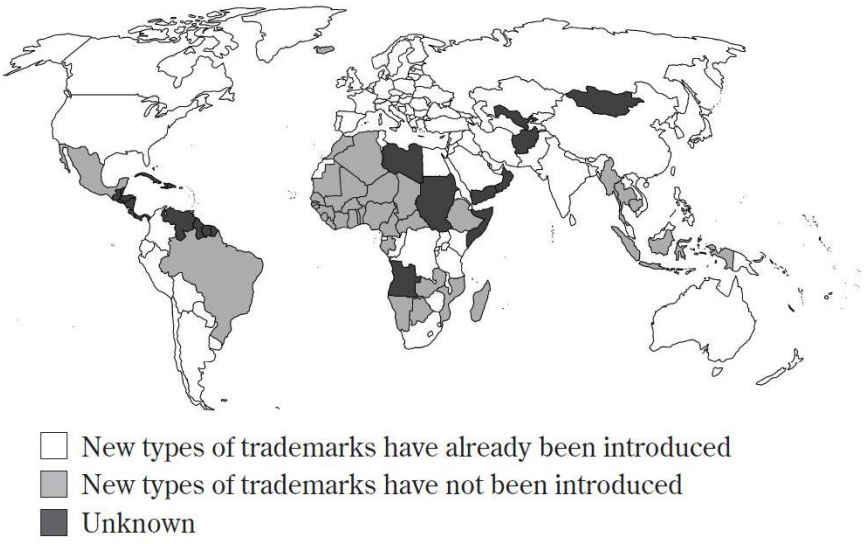


Figure 2.1 Status of new types of trademarks all over the world (Carapeto, n.d.)

2.3 Three-dimensional Marks in Legal Sources

According to the USPTO, a three-dimensional mark is defined as follows: 'the mark is 'three-dimensional' and constitutes 'product design' or 'configuration' of the goods themselves or product 'packaging' or a 'container' in which the goods are sold, or that the trade dress is for services offered (e.g., interior of a restaurant, exterior of a retail establishment, or point-of-sale-display such as a costume used in connection with the services)' (USPTO, 2017a; TMEP § 1202.02(c)(ii)).

EUIPO defines a shape mark as 'a trade mark consisting of, or extending to, a three dimensional shape, including containers, packaging, the product itself or their appearance' (EUIPO, 2017b; sec 4 chap 3). The term 'extending to' means that these marks cover not only the shapes per se, but also shapes that contain word or figurative elements or labels (EUIPO, 2017b; sec 4 chap 3). Shape marks can be grouped into three categories:

- shapes unrelated to the goods and services themselves
- shapes that consist of the shape of the goods themselves or part of the goods
- the shape of packaging or containers (EUIPO, 2017b; sec 4 chap 3).

Shapes that are unrelated to the goods or services themselves, such as the Michelin man and three-pointed star emblem of Mercedes-Benz vehicles, are always distinctive. The case-law developed for three-dimensional marks that consist of the representation of the shape of the product itself is also relevant for figurative marks consisting of two dimensional representations of the product or elements of it. In this circumstance, the examination for shape that consists of the shape of the goods themselves or part of the goods should be conducted in the three steps as follows: The first step is to determine whether one of the grounds for refusal under Article 7(1)(e) EUTMR applies; the second step is to assess whether the representation of the shape mark extends to other elements, such as words or labels that make the mark distinctive; the last step is to assess the distinctiveness of the shape. The same criteria should be applied when examining the shape of packaging or containers (EUIPO, 2017b; sec 4 chap 3).

The Turkish Patent and Trademark Office also permits three dimensional shapes to be trademarked, and groups them into the three categories similar to the EUIPO (Turkish Patent and Trademark Office, n.d.; p.13).

According to the United States Trademark Manual of Examining Procedure, 'the three dimensional configuration of a building is registrable as a service mark only if it is used in such a way that it is or could be perceived as a mark.' (USPTO, 2017a; TMEP §1301.02(c)).

A single rendition of the mark or a drawing featuring multiple views of the mark that show that the mark is three-dimensional is acceptable in the United States (USPTO, 2017a; TMEP § 1011.04). A shape mark can be represented by a graphic reproduction of the shape, including computer-generated imaging, or a photographic reproduction including different views (EUIPO, 2018). If the applicant does not mark type, does not state that the mark is three dimensional, and provides only one view, the examining office treats the representation as a figurative mark (EUIPO, 2017d; sec. 2). Similarly, in Turkey, a graphic or photographic reproduction of a three-dimensional mark presented by up to six perspective views, is acceptable (Turkish Patent and Trademark Office, n.d.).

According to the Article 3(1)(e) EUTMIR, signs which consist exclusively of the following shall not be registered:

- the shape which results from the nature of the goods themselves
- the shape of goods which is necessary to obtain a technical result
- the shape which gives substantial value to the goods (EUIPO, 2017b; sec 4 chap 3).

In the *Henkel* case (Henkel KgaA v. Detsches Patent- und Markenamt, 2004), the Court of Justice ruled that an application for a three-dimensional mark on the shape of a plastic bottle used for liquid detergent was ineligible for protection because the packaging was linked to the very nature of the goods (Bainbridge, 2007) (Figure 2.2). In the *Red Lego Brick* case (Lego Juris A/S v. OHIM and Mega Brands, Inc., 2010), the three dimensional shape of a brick was declared as ineligible for protection because the various features of the brick performed particular technical functions

(EUIPO, 2017c; sec 4 chap 6) (Figure 2.2). In addition, a shape mark for triple-headed Philips electric razor was similarly rejected because 'the essential functional features of that shape are attributable only to the technical result' (EUIPO, 2017c; sec 4 chap 6) (Figure 2.2). In the Bang Olufsen loudspeaker case, the three dimensional shape of the loudspeaker was declared as ineligible for protection because 'the aesthetic characteristics of the shape were emphasized when the product was offered for sale, making the shape an important selling point.' (EUIPO, 2017c; sec 4 chap 6) (Figure 2.2).

Figure 2.2 From left to right: Examples of shapes which shall not be registered (URL 1)

CIPO allows the shapes of goods or their containers, or modes of wrapping or packaging goods to be registered as *distinguishing guise* (CIPO, n.d.; sec 2).

In the past, shape marks were not eligible for trademark protection in Australia, because a trademark was considered to be separate from the goods and their containers. However, the Trademark Act of 1995 changed the definition of 'sign' to include shapes so three-dimensional shapes can now be registered as trademarks in Australia (IP Australia, 2015; part 21(3)).

2.4 Trade Dress

Trade dress is the term most closely related to a three-dimensional mark. Trade dress includes the three dimensional design or configuration of the product itself and three dimensional packaging or wrapping in the product (USPTO, 2017a; TMEP § 1202.02(f)). Trade dress is defined as 'the total image and overall appearance of a product, or the totality of the elements, and may include features such as size, shape, colour or colour combinations, texture, graphics.' (USPTO, 2017a; TMEP § 1202.02). Well-known examples of trade dress are Wal-Mart's design of children's outfits, the interior of the Two Pesos restaurants and Qualitex's special shade of green-gold colour (USPTO, 2017a; TMEP § 1202.02) (Figure 2.3).

Figure 2.3 From left to right: Wal-Mart's design of children's outfits, the interior of the Two Pesos restaurant and Qualitex's special shade of green-gold colour (URL 2)

Trade dress should be depicted in three dimensional drawing which can be an illustrated rendering of the product design or product packaging and a photograph of the product design or product packaging (USPTO, 2017a; TMEP § 1202.02). Solid lines for claiming parts of the mark and broken or dotted lines for disclaiming part of the mark should be used.

2.5 Three-dimensional Marks and Distinctiveness

The sign must be distinctive in order to be protected as a trademark. Trademarks are grouped on the 'spectrum of distinctiveness' in examination process. The spectrum ranges from fanciful which is the most distinctive to generic which is not eligible for trademark protection (Finkelstein & Sims, 2005) (Figure 2.4). The strength of a

trademark defines the scope of its protection against infringing trademarks (Finkelstein & Sims, 2005).

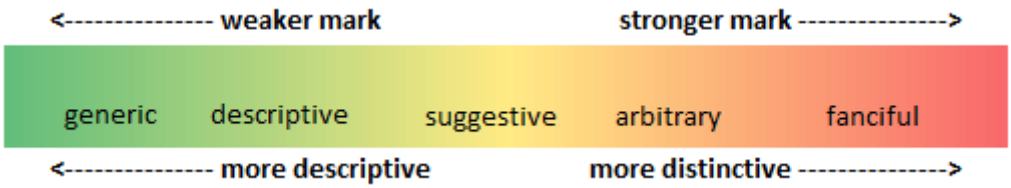


Figure 2.4 Spectrum of distinctiveness (Finkelstein & Sims, 2005)

The shape should be significantly distinguished from the norm of the sector in order to be granted trademark protection. For example, the Henkel trademark application sought to protect the shape of washing and dishwashing preparations in tablet form with red and white colour combinations. The application was rejected because the shape and colours were unlikely to be distinguished by the consumer in the relevant sector (EUIPO, 2017b; sec 4 chap 3) (Figure 2.5). Similarly, in Lindt bunny-shaped chocolate example, the features of the shape of a rabbit, the gold foil in which the chocolate rabbit was wrapped, and the pleated red ribbon to which a small bell was attached are common features in the relevant sector; therefore, the trademark was not considered distinctive (EUIPO, 2017b; sec 4 chap 3) (Figure 2.5). An application for the shape of a Maglite flashlight which was rejected on the ground that it lacked distinctiveness since its shape was common in the relevant sector (EUIPO, 2017b; sec 4 chap 3) (Figure 2.5).

Figure 2.5 From left to right: Henkel's red-white washing tablet, Lindt bunny-shaped chocolate, Maglite flashlight (URL 3)

If a trademark is not inherently distinctive, it is necessary to prove that the mark is distinctive through use or secondary meaning. Five years' use or other evidence can

be used to claim acquired distinctiveness (USPTO, 2017a; TMEP § 1212). Secondary meaning is acquired when the public views the primary significance of the product packaging as identifying the source of the product rather than the product itself (USPTO, 2017a; TMEP § 1212). For example, the bottle of Haig Pinch Scotch Whiskey (the first container to be trademarked by the USPTO in 1955) is distinctive and peculiar among whiskey bottles. It is known and recognized by the public that the whiskey can be identified with 'pinched decanter' in public minds (USPTO, 2017a; TMEP § 1212 (02)) (Figure 2.6).

Figure 2.6 The bottle of Haig Pinch Scotch Whiskey (URL 4)

2.6 Three-dimensional Marks Protection and Other Types of Intellectual Property Protection

Three dimensional shapes can be protected by copyright law, design law, patent law, and trademark law.

2.6.1 Copyright Protection

Copyright protects original expressions in a tangible form. It gives the owner the exclusive right to reproduce, adapt, distribute, publicly perform, and publicly display the work. Copyright covers the following categories:

- literary works such as novels, poems, plays, reference works, newspaper articles
- computer programs, databases
- films, musical compositions, and choreography
- artistic works such as paintings, drawings, photographs, and sculpture
- architecture
- advertisements, maps, and technical drawings (WIPO, n.d.a)

Copyright protection is territorial, but there are several international copyright treaties. The most important treaties are the Berne Convention, and the WIPO Copyright Treaty and the Universal Copyright Convention. According to the Berne Convention (1886), copyright protection is obtained automatically. It begins with the creation of a work and lasts for 70 years after the author's death. Unlike the many countries without copyright registration systems, copyrights can be registered with the U.S. Copyright Office under the 1976 Copyright Act in the United States. Although copyright registration is not necessary, it is recommended for filing an infringement suit in the U.S courts and establishing a public record (USPTO, n.d.b).

Industrial designs can be regarded as a form of artistic expression (WIPO, 2002). Therefore, industrial designs in tangible form can be protected by copyright. However, the copyright protection is reserved exclusively for works of art in the United States and Italy. In these countries, the overall shape or configuration of a product may not be eligible for copyright protection. On the other hand, the shape or configuration of a product may be eligible for copyright protection in condition that the shape or configuration must be separate from the functional aspects of the product (WIPO, 2002). Copyright protection is preferred in the furniture industry. The Arne Jacobsen Egg Chair and the PH Artichoke Lamp (Figure 2.7) are both protected by copyright.

Figure 2.7 From left to right: Arne Jacobsen Egg Chair and PH Artichoke Lamp (URL 5)

Copyright law also protects functional and aesthetic elements of architecture. Architectural work is defined under the U.S. Copyright Act as 'the design of a building as embodied in any tangible medium of expression, including a building, architectural plans, or drawings' (USPTO, 2016).

2.6.2 Design Protection

Industrial designs are also recognised in international law such as the Paris Convention, the Berne Convention and TRIPS. The Copyright, Designs and Patents Act of 1988 significantly changed the design law established by Registered Design Act 1949.

Design is defined in Article 3(a) of the Community Design Regulation as 'the appearance of the whole or a part of a product resulting from the features of, in particular, the lines, contours, colours, shapes, texture and/or materials of the product and/or its ornamentation' (EUIPO, 2001). This regulation also defines a product as 'any industrial or handicraft item, including inter alia parts intended to be assembled into a complex product, packaging, get-up, graphic symbols and typographic typefaces, but excluding computer programs' (EUIPO, 2001).

A design can be protected as a registered or unregistered Community Design if it is new and has individual character. 'New' means that there is no identical design; the design has individual character that creates a different overall impression on the informed user (EUIPO, 2001). However, the features of a product's appearance that are dictated by its technical function are not protected as Community Design (EUIPO, 2001). A Community Design registration is valid in all European Union countries and renewable every five years, up to a term of 25 years. Registration gives the owner the exclusive right to use the design and to prevent third parties from using without consent (EUIPO, 2001). A design shall be protected by unregistered Community Design for a period of three years after it was first made available to the public in the EU (EUIPO, 2001).

A design can be protected by a 'design patent' in the United States. The subject matter of a design patent application may relate to 'the configuration or shape of an article, to the surface ornamentation applied to an article, or to the combination of configuration and surface ornamentation' (USPTO, 2018; MPEP § 1502) (Figure 2.8).[1] The design must be ornamental, novel, nonobvious and definite to be protected by a design patent (USPTO, 2018; MPEP § 1504).

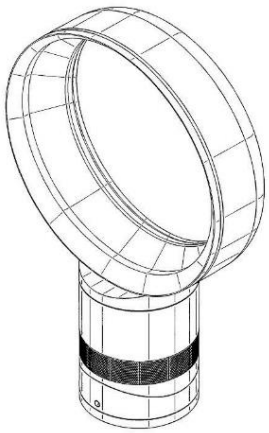


Figure 2.8 Design patent for Dyson air purifier in 2015

Industrial designs are protected through *sui generis protection* in most countries in the world. The Hague Agreement, administered by WIPO, offers an international design application that is valid in multiple designated countries by a single registration. The

[1] U.S. Design Patent No. D729,375

initial term of international design protection is five years, and it may be renewed once and extended to ten years; but, the specifics vary from designated office to designated office (USPTO, n.d.c).

Design law sometimes overlaps with copyright law. The shape of a product may be issued protection as both industrial design and as a three-dimensional mark. There are, however, some significant differences in the scope and term of protection as described in Table 2.1 (WIPO, 2002).

Table 2. 1 The main differences between industrial designs and three-dimensional marks (WIPO, 2002)

Industrial Designs	Three-dimensional Marks
1. Purpose: Encourage creativity in new product designs and investment to produce innovative consumer goods	1. Purpose: Promote transparency and facilitate competition in the marketplace
2. Function: Make goods aesthetically pleasant and functional	2. Function: Allow consumers to distinguish goods bearing the mark from other products
3. Overlap: Cumulative protection possible as marks, only in respect of non-functional features	3. Overlap: Cumulative protection possible as works of art and as industrial designs, only in respect of non-functional features
4. Scope: The holder of design rights can prevent manufacture and distribution of any product embodying the design	4. Scope: The holder of rights in a mark can only prevent unauthorized use of the mark in connection with the specified goods
5. Duration: Exclusive rights in a design are limited in time, usually between 10 and 25 years	5. Duration: Exclusive rights in a mark may be unlimited in time if the registration is renewed periodically

2.6.3 Patent Protection

Patent law has a long history. It began in late medieval times with the Venetian Statute of 1474 (Landes & Posner, 2003). Inventions are usually new solutions to technical problems. Any new process, manufacture, or composition of matter or improvement may obtain a patent (USPTO, 2017b; 35 U.S.C. MPEP § 101) (Figure 2.9).[2]

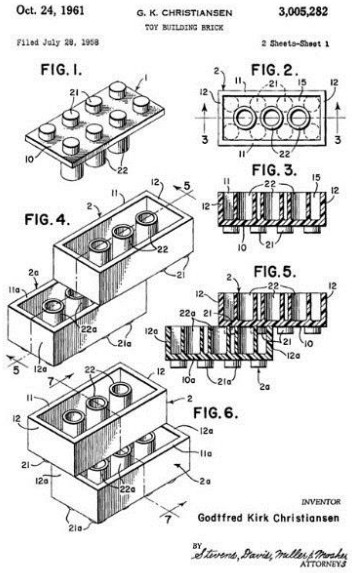


Figure 2.9 The patent for Lego toy building brick

A patent gives the owner the exclusive right to exclude others from making, using, selling and importing the invention. The function of patent is to protect inventions, and encourage and promote commercialization of inventions (Purvis, n.d.).

Article 52(1) of European Patent Convention states that a 'European Patent shall be granted for any new inventions which are susceptible of industrial application, which are new and which involve an inventive step' (European Patent Convention (EPC), 2016). An invention is considered to be new or novel if it is not related to the state of the art and involving inventive step if it is not obvious to a person skilled in the art. European Patents give the same right to all members of the EPC. An invention is protected for a limited period of 20 years; it falls into the public domain after the expiry of the patent.

[2] U.S. Patent No. 3,005,282

The Patents Act of 1977 states almost the same conditions for granting a patent. Patent rights are territorial. However, the Patent Cooperation Treaty (PCT) allows applicants to file a single international patent application to seek protection in all 154 member countries (WIPO, 2017).

'Utility model' registration protects technical inventions which might not be granted a patent. It uses a system similar to the patent system (WIPO, n.d.b). The 'inventive step' requirement does not apply to utility model registrations. In some countries 'utility patent' refers to 'petty patents' and 'innovation patents'. The term of protection for a utility model is between seven and ten years.

2.7 Intellectual Property Protection Strategies

IP strategy is defined as 'the collective set of decisions an organization makes regarding the actions, the positioning, and capabilities it seeks to achieve with its intellectual property in order to support its long-term business objectives' (Sullivan & Raley, 2010).

A step-by-step approach including the following considerations is suggested as a business strategy guiding the development of an IP strategy:

- Arenas: What is the role of IP to support the business?
- Vehicles: Which IP instruments should be used?
- Differentiators: What type of IP firm will the firm pursue?
- Staging: What are the IP activities to be pursued to complement the business?
- Economic logic: How will IP be used to measure the results? (Hambrick & Fredrickson, 2005) (Figure 2.10).

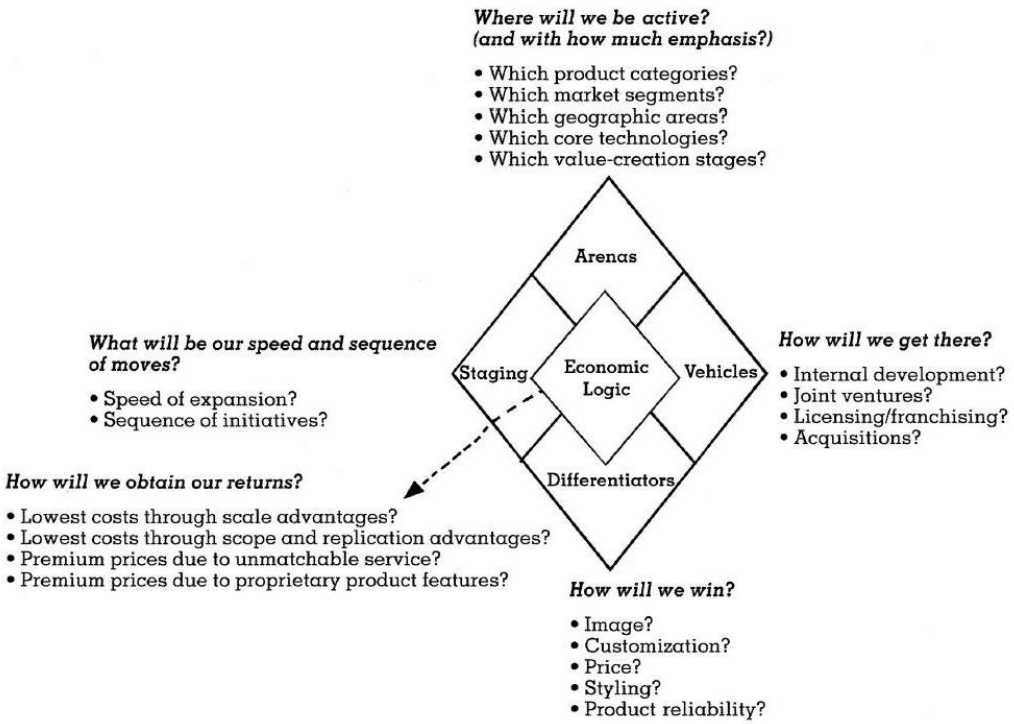


Figure 2.10 The Five major elements of strategy (Hambrick & Fredrickson, 2005)

Reitzig (2004) claims that the fundamentals of an IP strategy are defined by six questions about the use of IPRs as a strategic weapon:

- How do IPRs help companies gain and sustain competitive advantage?
- How do IPRs affect the structure of an industry?
- Which options do IPRs offer in the competition with other industry players
- How do IPRs relate to incumbency advantage and entry barriers?
- How can IPRs help companies gain vertical power along the value chain?
- Which organizational design is necessary to accommodate an IP strategy? (Reitzig, 2004).

CHAPTER 3

RESEARCH METHODOLOGY

This chapter presents the research methodology of the study. It begins with introducing the case study method. Presenting the method of data collection from literature, intellectual property databases and cases, data analyses method which includes visual case studies is explained. Visual case studies which are defined at three main categories; iconic product designs, iconic buildings and iconic technological designs, are presented by design history and intellectual property protection history perspective. The discussions of visual case studies are presented at the end of each category.

3.1 Methodology

Case study as a method is selected as a research method. ‘A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident’ (Yin, 1994). Case studies can be exploratory, descriptive and explanatory (Yin, 1981). Exploratory case studies which focus mainly on ‘what’ questions are adopted for this research. Since there are many examples from various sectors which are protected as three-dimensional marks in various countries, this research method is adopted to reach the goal of this study.

Analysing case study evidence, pattern-matching, explanation-building, time-series analysis and program logic models are dominantly used (Yin, 1994). In this research, the case study is analysed by building an explanation supported by visual case study. This study is conducted at three main stages (Figure 3.1). The first stage is *preliminary study* which includes literature review and intellectual property database search for three-dimensional marks. The second stage is *extended literature review* which aims to examine three dimensional shapes which are mostly discussed at both design history and intellectual property protection history and *detailed intellectual property database search* which aims to investigate deeply intellectual property protection history of three dimensional shapes. The final stage is *analysis and diagrams* which aims to categorize three dimensional shapes which are protected as three-dimensional marks and to investigate design history and intellectual property protection history of three dimensional shapes by building an explanation supported by visual case study

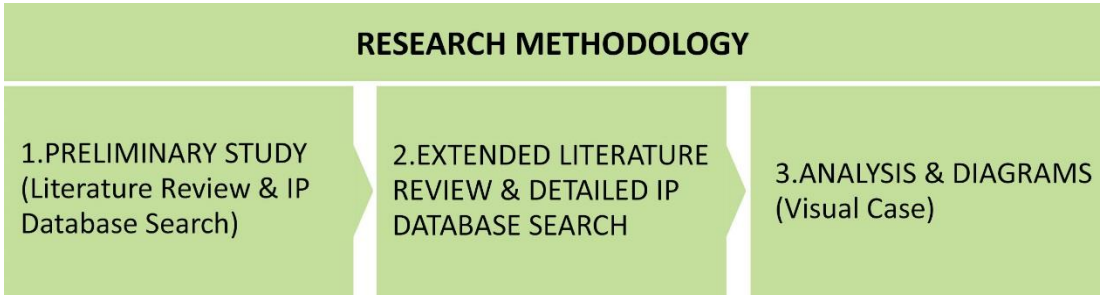
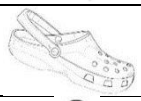


Figure 3.1 Research methodology of this study

3.2 Data Collection from Legal Sources and Design History Literature

The preliminary research in the first stage aims to determine examples of three-dimensional marks by searching on Global Brand Database, TMview, Trademark Electronic Search System (TESS) by the USPTO, eSearch Plus by EUIPO and Turkish Patent and Trademark Office database. In the preliminary research, the search on intellectual property databases is conducted by using 'three-dimensional mark', 'figurative trademark' and 'combined trademark' options as trademark type without any other restrictions such as registration date, trademark name and applicant name. As a result of the preliminary research, a list including 18 products and architectural buildings is presented. This list also includes significantly important examples in terms of design history such as London Taxi, Honeywell thermostat and Barcelona chair (Table 3.1).

Table 3.1 The outcome of the preliminary research: A list including 18 products and architectural buildings

	London Taxi
	Honeywell thermostat
	Barcelona chair
	Eames lounge chair and ottoman
	Crocs shoe
	Clipper lighter
	Ferrero praline chocolate
	Hershey’s teardrop chocolate
	iPhone smartphone
	iPod MP3 player
	Macintosh computer
	Guggenheim Museum Building
	Transamerica Pyramid Building
	Apple retail store
	Coca-Cola contour bottle
	Channel No:5 perfume bottle
	Perrier bottle
	Absolut bottle

Findings on the preliminary research shows that three dimensional shapes which are protected as three-dimensional marks are significantly important examples in terms of design history and intellectual property protection history. Therefore, the literature review and research through databases in second stage aims to investigate deeply three dimensional shapes which are protected by three-dimensional marks in terms of design history, brand history and intellectual property history.

In the literature review, iconic product designs from various sectors are widely explored by searching on design, design history, intellectual property protection history literature. They are also searched on intellectual property databases in detail. When one example is examined in detail, other examples are identified. Therefore, the list including three-dimensional marks which were both accepted and refused, has been expanding to 53 products and architectural buildings (Appendix A). The list contains the knowledge about the name of the designer, patent number with the date of patent and the country where protection is granted, design number with the date of design and the country where protection is granted, copyright status with the date of it, three-dimensional mark number with its status, the date of registration and expiration, and the country where protection is granted, trade secret and licensing agreement (Table 3.2).

Table 3.2 A view from the Excel sheet used to document IP protection history of three dimensional shapes

	Designer	Patent Registration Number	Patent Registration Date	Patent Registration Country	Design Registration Number	Design Registration Date	Design Registration Country	Copyright Protection	Copyright Protection Date	3D Trademark Status	3D Trademark Registration Number	3D Trademark Registration Date	3D Trademark Expiration Date	3D Trademark Registration Country	Trade secret	License aggrement
Toblerone Chocolate Bar	Theodor Tobler and Emil Baumann	46708	1909	Switzerland						Registered Registered Registered Registered Registered Registered Registered Registered Registered Registered Registered Registered	55224 2078468 TMA164635 53591 206278 313780 2P-408763 TN/E/2006/2531 321965 615994 UK00000981938 EU000031203	1969 1997 1969 1999 1997 1996 1994 1986 1966 1994 1971 1998	0 0 0 0 0 0 0 0 0 0 0 0	Finland-f United States-f Canada Cyprus-f Ireland Sweden Switzerland Tunisia WIPO WIPO United Kingdom-f United Kingdom		
Zippo Lighter	George Grant Blaisdell	2032695 2517191 6247920	1936 1950 2001	United States United States United States	000827472-0001	2007	European Union			Registered Registered Registered Registered Registered Registered Refused Registered Registered Registered	2924851 821120662 TMA488296 233545 000137117 214453 000133173-2001 2P-415064 UK00002006491 2606241	2018 2002 1998 2000 1996 1996 0 1995 1997 2002	0 0 0 0 0 0 2001 0 0 0	Argentina-f Brazil Canada-f Columbia-f European Union Ireland Peru Switzerland United Kingdom United States		
Transamerica Pyramid Building	William Pereira & Associates							Yes	1972-2055	Registered Registered Registered	1635681 1857878 000715524 (app. no)	1991 1994 2000	0 0 0	United States United States European Union		
Empire State Building	William F. Lamb							Yes	1931-2022	Registered Registered Registered Registered Registered Registered	2411972 (word) 2430828 2429297 3610613 (word) 4775666 (figure) 015817075 (app. no)	2000 2001 2001 2009 2015 2017	0 0 0 0 0 0	United States United States United States United States United States European Union		
Ipod MP3 Player	Apple Design Team	7166791 7345671 8368643	2007 2008 2010	United States United States United States	D469109 D472245 000269576-0001 000465109-0003 D516576 D598424 D606967 D626530 137684/1 D681056	2003 2003 2004-2019 2006-2021 2006 2009 2009 2010 2011-2021 2012	United States United States European Union European Union United States United States United States United States European Union United States			Registered Registered Registered Registered	982659 3786590 3855964 421414	2008 2010 2010 2011	0 0 0 0	WIPO United States-f United States-f Colombia		
Ipad Tablet Computer	Apple Design Team				D504889 D593087 D627777 D637596 D681632 201130212771.4 201330040070.6	2005-2019 2009 2010-2014 2011-2015 2012 2012 2013	United States United States United States United States United States European Union European Union			Registered Registered	1193760 2550595	2010 2012	0 0	Mexico-f Argentina-f		

3.3 Data Analysis

The final stage aims to categorize three dimensional shapes and to investigate design history and intellectual property protection history of three dimensional shapes. Increasing the number of three dimensional shape, the categorization of three dimensional shapes at three main categories; iconic product designs, iconic buildings and iconic technological designs, is proposed. Due to the time limitation, 18 of 53 products and architectural buildings at three different categories are chosen for case studies and analysed by building an explanation method supported by visual case studies (Table 3.3). Judgmental sampling technique is used in selecting case studies for further analysis. Diverse examples from various sectors which substantially represent its own category are chosen in the first category. In the second category, examples from different countries are taken into consideration and examples which substantially represent its own category are chosen in the third category.

The first category includes *iconic product designs* which are protected as three-dimensional marks. This group includes examples of diffused products in everyday life such as packaging, furniture and automobile. The triangular prism shape of Toblerone chocolate bar, the 'hobble-skirt' contour design of Coca-Cola bottle, the scissor shaped metal frame and leather cushions of Barcelona chair, the rounded rectangular body shape of Zippo lighter, overall shape of Volkswagen Beetle automobile, the integrated body shape of Honda Super Cub motorcycle, adjustable 'L' contour shape of Tripp Trapp chair and the overall shape of Crocs shoe are given as examples in this group. The second group includes *iconic buildings* which are protected as three-dimensional marks. The examples of this group are symbolic, landmark of the city, unique and pioneers of their period. Taj Mahal Palace Hotel Building, Chrysler Building, Empire State Building, Transamerica Pyramid Building, Sydney Opera House Building, Rock and Roll Hall of Fame Building and Apple's Glass Cube Building are given as examples in this group. The third category includes *iconic technological designs* which are protected as three-dimensional marks. This group includes globally diffused electronic devices. iPod MP3 player, iPhone smartphone and iPad tablet computer are given as examples in this category.

Table 3.3 Proposed categorization of three dimensional shapes and examples chosen for further analysis

ICONIC PRODUCT DESIGN	ICONIC BUILDINGS	ICONIC TECHNOLOGICAL DESIGNS
1. Toblerone chocolate bar	9.Taj Mahal Palace Hotel Building	16.iPod MP3 player
2.Coca-Cola contour bottle	10.Chrysler Building	17.iPhone smartphone
3.Barcelona chair	11.Empire State Building	18.iPad tablet computer
4.Zippo lighter	12.Transamerica Pyramid Building	
5.Volkswagen Beetle automobile	13.Sydney Opera House Building	
6.Honda Super Cub motorcycle	14.Rock and Roll Hall of Fame Building	
7.Stokke Tripp Trapp chair	15.Apple's Glass Cube Building	
8.Crocs shoe		

Each case study is analysed by building an explanation supported by visual case study. Visual case study is adopted as an analysis method because representation of design biography and intellectual property biography together in a historical perspective is crucial for this study. Design biography of each case is respectively investigated by the company history, the design process of the iconic design, its manufacturing process, its market positioning and its publicity. Intellectual property biography of each case is respectively investigated by each way of intellectual property protection and important cases related to it.

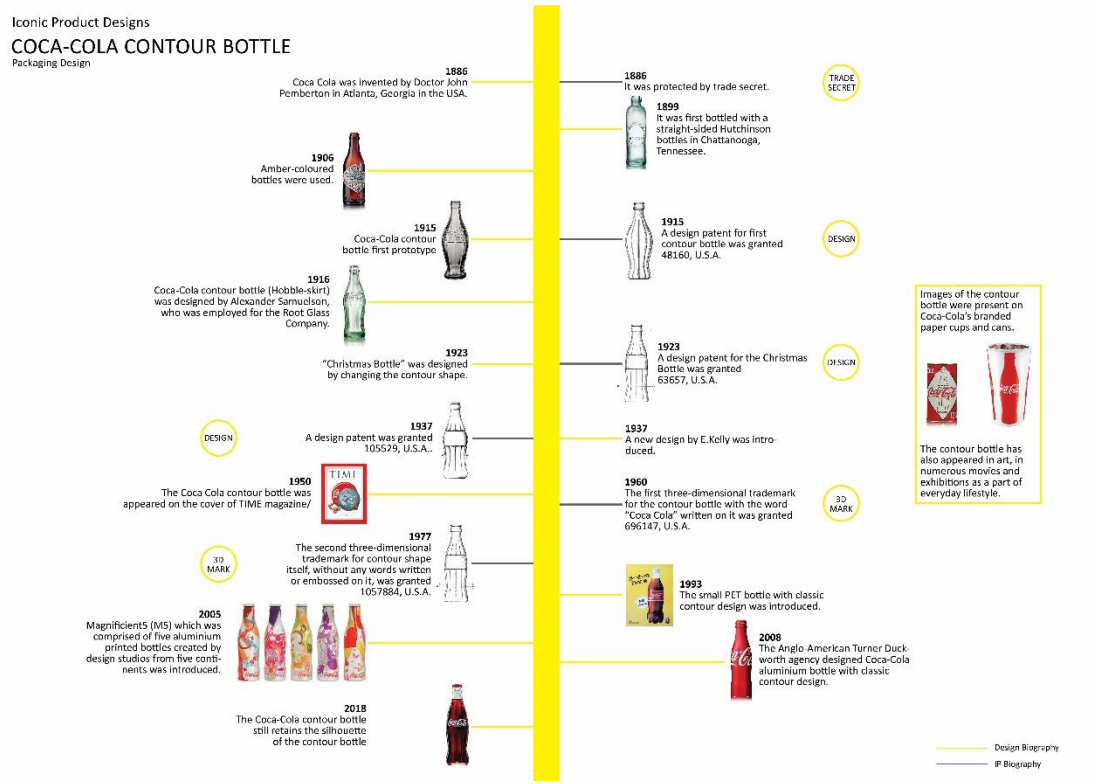


Figure 3.2 Design biography and intellectual property biography of Coca-Cola contour bottle

3.3.1 Iconic Product Designs

3.3.1.1.1 Toblerone Chocolate Bar

Design Biography of the Toblerone Chocolate Bar

Born in Appenzell, Switzerland, Jean Tobler (1830-1905) learned his craft in Paris and opened a 'special confectionery' shop in Bern in 1868. He sold his own specialties and chocolate supplied by other manufacturers, including Rodolphe Lindt. By 1899 the demand for his chocolate products was so high that, in association with his son Theodor (1876-1941), he founded his own factory, Fabrique de Chocolat Berne, Tobler & Cie (Toblerone, n.d.b). A year later, Theodor Tobler took over the business from his father, and in 1908, along with his cousin and production manager Emil Baumann, developed a chocolate bar with a distinctive taste and shape: Toblerone, the milk chocolate combined with honey and almond nougat shaped into ready-to-snap-off peaks (Toblerone, n.d.c) (Figure 3.3). The Tobler company remained independent until it emerged with the Swiss chocolatier Suchard, the maker of Milka chocolate

bars, in 1970; currently it is owned by a U.S. confectionery company Mondelez International, formerly Kraft Foods (n.d., 2016a).

Figure 3.3 Toblerone's original creamy coloured packaging with its red printing and the image of an eagle carrying the Swiss flag and the coat of arms of Bern, 1910 (URL 6)

The name *Toblerone* is a portmanteau, combining the family name *Tobler* with the Italian word *torrone* (honey and almond nougat). Toblerone's instantly recognizable triangular shape was allegedly inspired by the pyramidal shape of the Matterhorn, the most famous mountain peak in the Swiss Alps. The corporate history refers to a different source of inspiration and mentions a young Tobler impressed by the dancers performing a human pyramid at the Folies Bergère, a cabaret music hall in Paris (Toblerone, n.d.c) (Figure 3.4). Toblerone's creamy coloured packaging with its red printing was also considered a match with the Folies Bergère dancers dressed in red and creamy costumes (Australian Postal History and Social Philately, n.d.). Toblerone's original packaging featured an eagle; the eagle was replaced by the bear, the symbol of the city of Bern, in 1920, and by the image of the Matterhorn in 1970. The packaging featuring the Matterhorn with the 'hidden' bear figure was introduced in 2000 (Toblerone, n.d.a) (Figure 3.5).

Figure 3.4 Dancers performing a human pyramid at the Parisian cabaret music hall Folies Bergère, which presumably inspired the triangular peaks of Toblerone chocolate bar (URL 7)

Figure 3.5 Triangular Toblerone chocolate bar and the packaging featuring the Matterhorn with the 'hidden' bear figure (URL 8)

Other milestones in Toblerone's product history is the launch of Toblerone Dark Chocolate in 1969, Toblerone White Chocolate in 1973, Toblerone Minis in 1995, and Toblerone Fruit and Nut in 2007 (Toblerone, n.d.b) (Figure 3.6). In its long history, Toblerone chocolate bar has also been dressed in various limited-edition sleeve designs for special days and celebrations such as Christmas, Valentine's Day, and Father's Day (Figure 3.6).

Figure 3.6 Top row, from left to right: Toblerone Dark Chocolate, Toblerone White Chocolate, and Toblerone Fruit and Nut. Bottom row: Toblerone chocolate bars for special days and celebrations (URL 9)

In 2016 the Toblerone chocolate bar went through its most controversial design alteration when Mondelez International chose to increase the gap between the peaks in two of its bars in the UK to reduce the weight of the bars in an effort to keep the product affordable (Figure 3.7); the strategy was not found to be convincing by the customers and described as 'a weird knock-off of itself' (Gayle, 2016; n.d., 2016d).

Figure 3.7 The classic Toblerone chocolate bar and the latest version with the increased gap between the peaks (URL 10)

After Nestle's Kit Kat and Hershey's Milk Chocolate, TIME magazine listed Toblerone as the third among the most influential chocolate bars of all time (Begley, 2014). Toblerone is no longer a Swiss company, but all Toblerone bars are still produced in Bern-Brunnen. A 25 percent of all Toblerone chocolate bars is sold in duty free shops (Shock, 2008). It is claimed that, after tobacco and alcohol, Toblerone is the third-best seller in duty free shops (n.d., 2012a), which is indicative of its global

diffusion and acceptance. Toblerone company aims to different consumer groups through its remarkable advertising campaign (Figure 3.8).

Figure 3.8 Advertisements of the Toblerone chocolate (URL 11)

The iconic shape of Toblerone has given inspiration to other designers. There is Whitworth Park Halls of Residence which is Toblerone shaped accommodation at the University of Manchester designed by Building Design Partnership in the mid-1970s (University of Manchester, n.d.) (Figure 3.9). In addition, there is the Toblerone Building designed by architect Rista Sekerinski in 1963, in Belgrade, Serbia (n.d., 2010b) (Figure 3.9).

Figure 3.9 From left to right: Toblerone shaped building at the University of Manchester and Toblerone Building in Serbia (URL 12)

The original Toblerone factory in Bern has become a part of the Bern's university; but every Toblerone bar is still produced in Bern and distributed to all over the world (Phaidon Design Classic, 2006a). It is known as icons of Swiss chocolate-making which remains unchanged from its origin in mid-nineteenth century (Phaidon Design Classics, 2006a).

Intellectual Property Biography of the Toblerone Chocolate Bar

Toblerone's intellectual property biography has also a rich history. It became the first chocolate product granted a patent for its manufacturing process in 1909 (Figure 3.10)[3].


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Figure 3.10 The patent granted for Toblerone's manufacturing process

Unlike the four-fingered chocolate bar of Nestlé's Kit Kat, Toblerone's iconic chocolate bar shape and packaging shape have been registered as three-dimensional

[3] Swiss Patent No. 46,708

mark in many countries including European Union[4], United Kingdom[5], United States[6], Finland[7], Canada[8] and Sweden[9] (Figure 3.11).

Figure 3.11 From left to right: The shape of Toblerone chocolate bar and its packaging have been registered as three-dimensional mark in many countries (URL 13).

The most challenging intellectual property dispute in Toblerone's history was the one with the British discount chain Poundland in 2017. Poundland's Twin Peaks chocolate bar had a similar shape with the Toblerone's, however, instead of a single peak, it had two humps in a segment (Figure 3.12). Mondelez International sued Poundland both for passing off and trademark infringement. Poundland, on the other hand, claimed that since the Toblerone bar was introduced in a modified shape in the UK in 2016, its shape was no longer distinctive enough. After a three-month legal wrangle the parties reached a deal; though in modified packaging, Poundland would be able to sell its 500.000 Twin Peaks which were in production at the time, and alter its bar shape inspired by the Wrekin and Ercall hills in Shropshire (Butler, 2017).

[4] EU Trademark Reg. No. 615,994
[5] UK Trademark Reg. No. UK00000981938
[6] U.S. Trademark Reg. No. 2,078,468
[7] Finland Trademark Reg. No 55,224
[8] Canadian Trademark Reg. No. TMA164635
[9] Sweden Trademark Reg. No. 313,780

Figure 3.12 Twin Peaks chocolate bar by Poundland together with the new Toblerone chocolate bar in the back (URL 14)

3.3.1.1.2 Coca-Cola Contour Bottle

Design Biography of the Coca-Cola Contour Bottle

Coca Cola was invented in 1886 by Doctor John Pemberton in Atlanta, Georgia in the United States (Schlereth, 1999). In this time, Coca-Cola syrup sold for five cents and only in small quantities at pharmacies, like a medicine (Figure 3.13). Around the same time, the company made licence agreements with bottling companies to sell the drink. The Coca-Cola Company first bottled Coca-Cola in 1899, in Chattanooga, Tennessee. The bottles used in those days were simple straight-sided Hutchinson bottles, which were a common glass bottle with a metal stopper (Figure 3.14). Amber-coloured and clear straight-sided bottles were used in 1906 (Coca-Cola Company, n.d.). Bottlers claimed that the straight-sided bottle was not distinctive enough to distinguish itself from competitors. Coca-Cola organized a design competition to develop a distinctive bottle. The design brief asked for a bottle design so distinctive that you would recognize it by feel in the dark or lying broken on the ground. Ultimately, the Root Glass Company won the competition (Ryan, 2015).

Figure 3.13 Earlier examples of Coca-Cola bottles (URL 15)

Figure 3.14 From left to right: The Hutchinson bottle and amber-coloured bottle (URL 16)

The Coca-Cola contour bottle was designed in 1916 by Alexander Samuelson, who was employed for the Root Glass Company in Terre Haute, Indiana. The design was also called the 'hobble-skirt', after a 1910s fashion trend featuring very tapered skirts. The bottle's distinctive design was inspired by the curves, elongated shape, and distinct ribs of a cocoa pod (Lockhart & Porter, 2010) (Figure 3.15). The Root Team enhanced not only the form but also the function of the bottle by creating an easily gripped shape

that also met the design requirements of being recognizable by touch and visually even when shattered (Cohen & Donnelly, 2015) (Figure 3.16). A 1923 ‘Christmas Bottle’ changed the contour shape. Another new design by E.Kelly was introduced in 1937. Beginning in 1957, the trademark ‘Coca-Cola’ was printed on the bottle in white. In the previous designs the trademark had been blown into the glass of the bottle itself. Images of the iconic contour bottle appeared on Coca-Cola’s branded paper cups and cans (Cohen & Donnelly, 2015) (Figure 3.17).

Figure 3.15 Cocoa pods which gave the inspiration for the contour bottle and the first prototype of the contour bottle (URL 17)

Figure 3.16 The Coca-Cola contour bottles in 1916 (URL 18)

Figure 3.17 Coca-Cola can and paper cup with the image of contour bottle (URL 19)

Coca-Cola put plastic bottles on the market in 1975. The small PET bottle shaped according to Samuelson's classic contour design was introduced in 1993 (Lockhart, 2010) (Figure 3.18). Coca-Cola launched a new bottle collection called Magnificient5 (M5) which was comprised of five aluminium printed bottles created by design studios from five continents in 2005 (Figure 3.19). The Anglo-American Turner Duckworth agency designed an aluminium Coca-Cola bottle by using the same shape in a very contemporary new material in 2008 (Evrard & Jacques, 2010) (Figure 3.18). The bottle

shape remains the same but in a very contemporary new material. The Coca-Cola brand's refreshed visual identity and the new aluminium bottle won the Design Grand Prix Award in 2008 (Coca-Cola Company, n.d.).

Figure 3.18 From left to right: Coca-Cola PET bottle and Coca-Cola aluminium contour bottle (URL 20)

Figure 3.19 Coca-Cola Magnificient5 collection (URL 21)

The contour bottle has also appeared in art, numerous movies, and exhibitions as a part of everyday lifestyle. The famous designer Raymond Loewy described it as 'the perfect liquid wrapper'. In 1950, the Coca-Cola contour bottle was the first commercial product to appear on the cover of TIME magazine; it depicts Coca-Cola as a truly international brand (Coca-Cola Company, 2015b) (Figure 3.20). The Coca-

Cola bottle has become a cult object that attracts collectors (Phaidon Design Classics, 2006a).

Figure 3.20 TIME magazine cover with the Coca-Cola contour bottle (URL 22)

The Coca-Cola contour bottle has evolved from 1915s to today, but it still retains its iconic status. Even without any label or words, people recognize the brand by the bottle's shape.

Intellectual Property Biography of the Coca-Cola Contour Bottle

The strategy of the Coca-Cola Company in creating, protecting, and promoting its bottle design reflects on Coca-Cola's achievements as a brand (Cohen & Donnelly, 2015). In other words, the Coca-Cola Company has devoted significant resources to protecting the contour bottle as a valuable intellectual property asset.

Coca-Cola's recipe is protected by trade secret. The Coca-Cola contour bottle was granted a design patent by the U.S. Patent and Trademark Office in 1915 and first used in commerce in 1916 (Figure 3.21).[10] The original 1915 design patent is currently on display at the National Archives Museum in Washington, D.C. (Coca-Cola Company,

[10] U.S. Design Patent Reg. No. 48,160

2015a). In 1923, the Christmas Bottle was granted a new patent (Figure 3.21).[11] In 1937, the new bottle merited another design patent (Figure 3.21).[12] By 1951, all the design patents had expired. However, the company wanted to sustain the competitive advantage that the unique contour bottle design confers. The company approached that it could be granted as trademark because of its distinctively shaped contour.

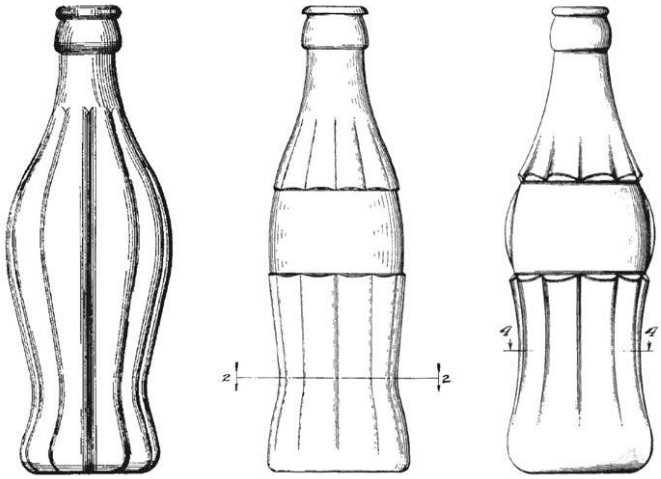


Figure 3.21 From left to right: Design patents of Coca-Cola bottle in 1915, 1923 and 1937

The USPTO granted the first three-dimensional mark for the contour bottle with the word 'Coca-Cola' written on it in 1960.[13] In 1977, the contour shape itself, without any words written or embossed on it, was granted a second three-dimensional mark.[14] The company also filed a three-dimensional mark application in Japan. The Japan Patent Office first refused the application for lack of distinctiveness. Coca-Cola attempted to appeal by supplying evidence of a secondary meaning. The Japanese Board denied the appeal, saying that the three-dimensional mark in the application was not similar to that shown in the submitted evidence of secondary meaning. Coca-Cola appealed the Board's decision to the Intellectual Property High Court of Japan. The IPHCJ accepted Coca-Cola's secondary meaning evidence and ruled that the contour bottle without the logo was distinctive (A.Tessensohn & Yamamoto, 2008).

[11] U.S. Design Patent Reg. No. 63,657
[12] U.S. Design Patent Reg. No. 105,529
[13] U.S. Trademark Reg. No. 696,147
[14] U.S. Trademark Reg. No. 1,057,884

3.3.1.1.3 Barcelona Chair

Design Biography of the Barcelona Chair

The Barcelona chair was designed for the German Pavilion at the Barcelona International Exhibition in 1929. The chair developed out of the collaboration between Mies van der Rohe, a German architect and a pioneer of modern furniture, and Lilly Reich, an architect and designer (Zellmer, 2013) (Figure 3.22). Mies's style is called as 'skin and bone' architecture, because he used clean lines and modern materials with 'Less is More' and 'God is in the Details' mottos (n.d., 2014). Mies van der Rohe said that 'The chair is a very difficult object. It is almost easier to build a skyscraper than a chair' (Price, 2017).

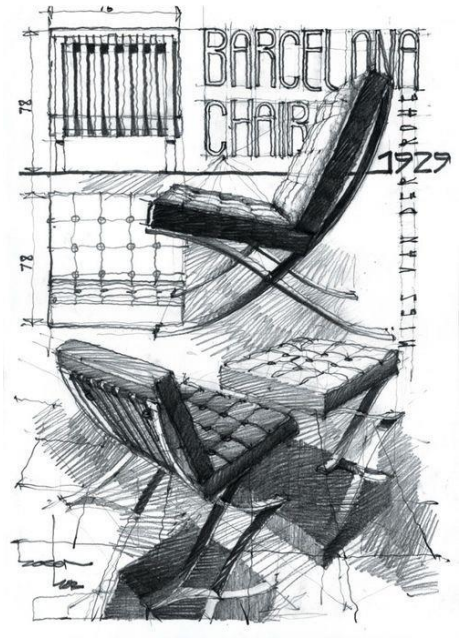


Figure 3.22 The Barcelona chair sketches (URL 23)

The chair was created to offer the Spanish king and queen a place to rest during the exhibition (Figure 3.23). The design was inspired by folding chairs once used by Roman aristocrats. The Barcelona chair, which is also called as Pavilion chairs and Exposition chairs, is iconic and representative of modernism.

Figure 3.23 The Barcelona Pavilion and first Barcelona chair for Pavilion (URL 24)

The Barcelona chair is composed of a structure of horizontal and vertical planes. It is 760 mm high, 750 mm wide, and 754 mm long, with a seat height of 345 mm, (Glaeser & Rohe, 1977). A scissor-shaped frame with chrome plated steel legs was joined by a cross-bar with bolts, and the entire frame was welded. Leather straps over the frame concealed the bolts. Metal studs made the pigskin-covered seat and back cushions detachable (Zellmer, 2013) (Figure 3.24). In 1950, the Barcelona chair was refined to use modern manufacturing techniques. The frame is now made of stainless steel and can be made of one solid piece of metal. Additionally, cow leather has replaced pigskin on the cushions (Watson-Smyth, 2011). The frame is now available in chrome and stainless steel and cushions are available in different colours and leather types.

Figure 3.24 The details of Barcelona chair (URL 25)

The Barcelona chair was first manufactured by Berliner Metallgewerde Joseph Müller in Berlin between 1929 and 1930, taken over by Bamberg Metallwerkstatten in 1931, and has been manufactured by Knoll International since 1948 (Glaeser & Rohe, 1977). Knoll produces the chair on a singular-welded frame (Phaidon Design Classics, 2006a). Although the Barcelona chair looks modern, it was never intended to mass production and required hand labour (Ferebee & Byles, 2011).

The chair was declared ‘the Rolls Royce of furniture’ by long time architecture critic Ada Louise Huxtable. Tom Wolfe criticized it as an absurdly lofty, overpriced object of fetish: ‘The Platonic ideal of chair it was’ in his book ‘From Bauhaus to Our House’ (n.d., 2014). Arthur Drexler, the director of department of architecture and design at the Museum of Modern Art, said that ‘it is almost a cult object for connoisseurs and yet, so well known to millions that it may safely be used in all kinds of advertisements as the unmistakable sign of quality’ (Moma, 1977).

Knoll produced a replica of the original Barcelona chair and presented it as a gift to the the Museum of Modern Art in New York, 1953. It was honoured with the Museum of Modern Art Award in 1977. The Barcelona chair is now on permanent exhibit at the Museum of Modern Art (Knoll, 2011).

The Barcelona chair was called a cult object (Phaidon Design Classics, 2006a). Today, Barcelona chair most often appears in lobbies of office buildings (Zellmer, 2013). It remains one of the most iconic seats, universally used and recognized.

Intellectual Property Biography of the Barcelona Chair

Barcelona chair was first granted a German patent for a chair made of metal rails linked crosswise as supporting elements in 1929 (Figure 3.25).[15] In 1953, Mies gave an exclusive manufacture and sale licence to Knoll for the Barcelona chair and stool in United States, Canada, France, Germany, and Belgium without any mention of the rights Lilly Reich held in the design (Alphaville Design, Inc. v. Knoll, Inc., 2009). Knoll’s vice president of marketing stated that ‘the design of the Barcelona chair is in public domain at this time, but we have the exclusive rights to produce his design and use his name’ (Alphaville Design, Inc. v. Knoll, Inc., 2009) Since Mies van der Rohe died in 1969, his copyright will expire in 2039 (Smithers, 2016).

[15] German Patent No. 486,722

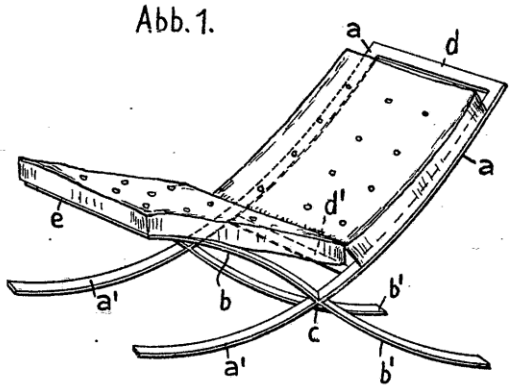


Figure 3.25 German patent for Barcelona chair

Knoll was also granted a three-dimensional mark for a chair with a metal frame and leather cushions in 2004 by the USPTO (Figure 3.26).[16] Knoll filed another three-dimensional mark registration in Germany in 2005 but cancelled in 2011.[17]

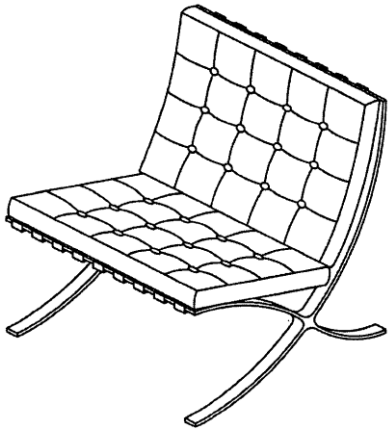


Figure 3.26 Three-dimensional mark of the Barcelona chair by the USPTO

There are many knock-off versions of the Barcelona chair manufactured by small companies all over the world. The retail price of official version manufactured by Knoll is nearly $6,000, whereas replicas can be purchased for $635 (Aouf, 2016). Unlike replicas, an official Barcelona chair has Mies van der Rohe's signature stamped on the leg. There were many court cases related to the trademarked Barcelona chair. One example is the Regency Shop, which sells a knock-off called as Ibiza chair.

[16] U.S. Trademark Reg. No. 2,893,025
[17] German Trademark App. No. 30504503

Regency Shop alleges that Knoll received its trademarks by fraud in 2004 and that the Ibiza chair is an interpretation of the Barcelona chair, which is in the public domain (Knoll, Inc.v. Moderno, Inc., 2012) (Figure 3.27). There is another important lawsuit challenging the Barcelona chair's trademark by Alphaville design in 2007. Alphaville claimed that 'Knoll cannot keep others from using these 1920s designs that have been made by a myriad of manufacturers for over 40 years' and sought a cancellation of Knoll's U.S. trademark registrations. Despite the lengthy trademark disputes related to its three-dimensional mark, the Barcelona chair is still a registered trademark in the United States.

Figure 3.27 Ibiza chair design which is a knock off of Barcelona chair (URL 26)

3.3.1.1.4 Zippo Lighter

Design Biography of the Zippo Lighter

The Zippo Manufacturing Company was founded in 1932 by George Grant Blaisdell at the Bradford Country Club, Pennsylvania (Zippo Manufacturing Company, 2005). Blaisdell created the Zippo lighter after he saw a friend struggling to light a cigarette with an Austrian lighter which required two hands. Blaisdell began manufacturing the Zippo lighter in Bradford, Pennsylvania in 1933 (Zippo Manufacturing Company, 2005) (Figure 3.28)

Figure 3.28 First Zippo lighter (URL 27)

Blaisdell described the lighter as Zippo came from the word ‘zipper’ (n.d., 2016). It is reusable, windproof, and easy to operate. It has the chrome-plated brass case and a smooth, rectangular shape fits ergonomically in the hand. A spring-loaded hinge that enables the user to flick open the top (Zellmer, 2013). The first Zippo, made in 1933, was 0,63 cm (¼ inch) taller than Zippo produced today (Meabon, 2003). Despite its simple design and function, it is comprised of 22 parts and takes 108 processes to manufacture process (n.d., 2016b). The first Zippo was sold for $1,95 each (Zippo, n.d.a).

The Zippo’s reputation and popularity are based on its lifetime guarantee: ‘it works, or we fix it for free’ motto (Zippo, n.d.a). Blaisdell declared, ‘Build your product with integrity, stand behind it 100 percent, and success will follow’ (Meabon, 2003).
World War II played a key role in the history of the Zippo, since the company dedicated its manufacturing to the U.S. military instead of consumer products during the war. The Zippo became vital to soldiers. It stopped bullets, cooked soup, and illuminated control panels, establishing itself as an American icon throughout the world (Zippo, n.d.b) (Figure 3.29) After war, Blaisdell created a car looked like a Zippo lighter in 1947 (Zippo, n.d.b) (Figure 3.30).

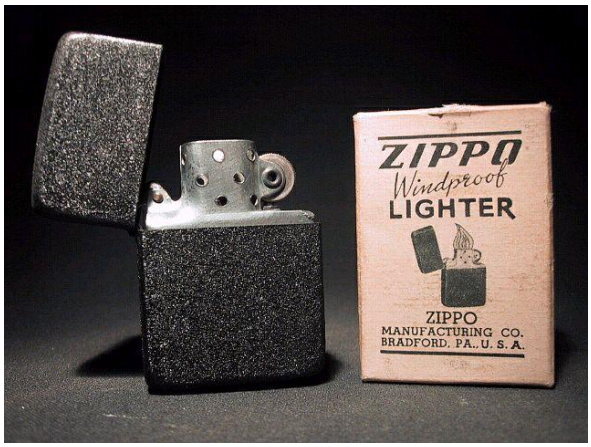


Figure 3.29 The Zippo lighter used in World War II (URL 28)

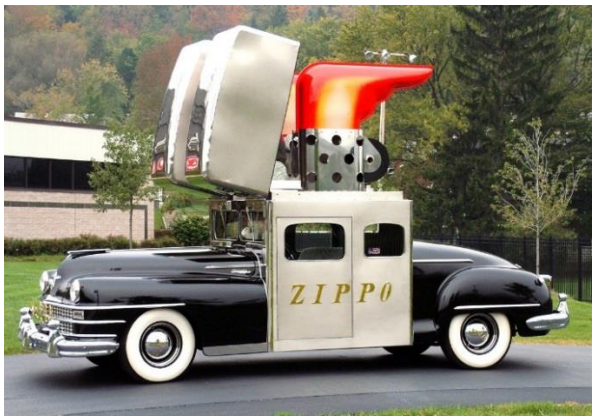


Figure 3.30 The Zippo car (URL 29)

Zippo continued to develop new models; 'Town and Country' designs appeared in 1947 and leather-covered and sterling silver lighters went on sale in 1950 (Zippo Manufacturing Company, 2005). Zippo introduced the milestone Slim model, designed especially for women, in 1956 (Zippo Manufacturing Company, 2005) (Figure 3.31). In contrast to traditional cigarette lighters, the company launched a new product category with the MPL (Multi-Purpose Lighter) to light candles, grills, and fireplaces in 2002 (Zippo Manufacturing Company, 2005).

Figure 3.31 The Slim model of Zippo in 1956 (URL 30)

James Baldo, head of sales and marketing at Zippo, revealed that a 30 percent of Zippo's customers is collectors and most buyers purchase Zippo products as gifts (Zippo Manufacturing Company, 2005). There are estimated to be four million collectors in the United States and one million more around the world (Zippo, n.d.b). The company now targets collectors by offering limited editions.

Zippo sold 18 million lighters during the mid-1990s, but only 12 million in 2011 due to the decline in tobacco consumption in the 21st century. Therefore, Zippo Manufacturing added new products such as pocket knives, pocket tape measures, pen sets, and pocket flashlights (Zippo, n.d.b). Today, Zippo's product line includes lighter accessories, watches, men's and women's fragrance, and heat and flame products for outdoor enthusiasts (Zippo, n.d.b).

Zippo is ingrained in the American and global culture. It has been seen on 1,500 movies, stage plays and TV shows such as 'Casablanca', 'I Love Lucy', 'The X-Men', 'Constantine' and 'Hairspray-the Musical' (Figure 3.32). Since the 1960s, a gesture named the 'Zippo Movement' have been raised (Zippo, n.d.b).

Figure 3.32 The zippo lighter in Constantine movie (URL 31)

After Blaisdell died in 1978, Blaisdell daughters Harriet Wick and Sarah Dorn inherited the company. Zippo Company acquired W.R. Case & Sons Cutlery Company, a hand knives company, in 1993. The company also acquired another company producing Zippo brand leather goods and renamed as Zippo Fashion Italia S.r.l (Zippo Manufacturing Company, 2005). Zippo also owns the Ronson brand of lighters and fuel in 2010 (Zippo, n.d.a).

The Zippo/Case Museum which includes a museum in which the first Zippo produced in 1933 is on exhibit, store, and the Zippo Repair Clinic opened in Bradford, Pennsylvania, 1997 (Zippo, n.d.a) (Figure 3.33).

Figure 3.33 The Zippo/Case Museum in Bradford, Pennsylvania (URL 32)

The Zippo lighter features in Time's 'Top 100 Gadgets of All Time' (Smith, 2016). The design of the Zippo lighter has been remained basically the same for more than 80 years (n.d., 2016b). It is now sold in more than 160 countries, an icon around the world (Zippo, n.d.b).

Intellectual Property Biography of the Zippo Lighter

The Zippo lighter was issued many patents. It was first issued a U.S. patent in 1936, in which it was described as 'a pocket lighter having utilitarian features arranged in such a way that the lighter has no external latch mechanism' (Figure 3.34).[18] The second U.S. patent, granted in 1950, claimed that 'a flint-receiving tube component'.[19]

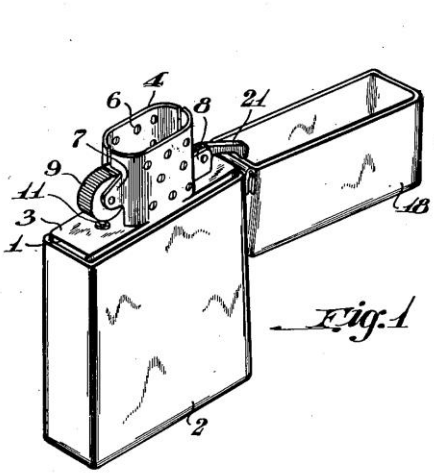


Figure 3.34 The first patent of the Zippo lighter

Cheap knockoffs of the Zippo were produced in China on the market in the 2000s. The Zippo company assumed that it was losing as much as a third of its potential sales to counterfeiters, particularly in China (Zippo Manufacturing Company, 2005). Therefore, taking advantage of its distinctive shape, the company filed trademark registrations in many countries including Argentina, Brazil, Canada, Columbia, Ireland, Peru, Switzerland, the United Kingdom and the United States. This enables Zippo to protect the brand from counterfeiters (Cohen & Donnelly, 2015)

U.S. trademark registration in 2002 for the shape of the lighter described it as 'having slightly rounded edges and corners, and a curvature in the shape of a slight arc in the top of the lighter' (Figure 3.35).[20] The USPTO originally refused to register the Zippo's shape because it was merely functional. When Zippo appealed the denial, the USPTO claimed that its rounded edges make the lighter easier to hold. Finally, the

[18] U.S. Patent No. 2,032,695
[19] U.S. Patent No. 2,517,191
[20] U.S. Trademark Reg. No. 2,606,241

Board reversed the refusal of registration, stating that the shape is more than merely functional and it has acquired distinctiveness. However, the trademark registration in Peru was completely refused in 2011.[21] In addition to a three-dimensional mark, the company obtained a European Community Design for the appearance of the lighter in 2007.[22]

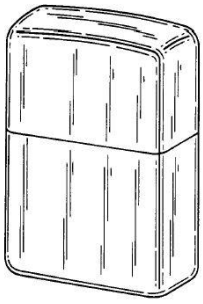


Figure 3.35 The three-dimensional mark in United States

3.3.1.1.5 The Volkswagen Beetle

Design Biography of the Volkswagen Beetle

Adolf Hitler commissioned Ferdinand Porsche to develop a car able to seat two adults and two children with a luggage room in 1933 (Price, 2003). The Austrian designer Erwin Komenda designed a vehicle first known as the Kraft-durch-Freude (Kdf-Wagen, Strength Through Joy Car). It later became the Volkswagen (People's Car), Beetle, and Bug (Price, 2003).

The Volkswagen Beetle has a cutting-edge design with elegant curved shapes which give it strength (Trotta, n.d.). Its body attaches to its chassis with 18 bolts. It has two doors, a storage under the front hood, and a rear engine, and it can accommodate four passengers (Trotta, n.d.). It has an air-cooled engine which is less powerful than a water-cooled type but simple, economical, and easy to repair (Trotta, n.d.). Unlike Japanese cars such as Hondas and Toyotas, Volkswagens offered individualistic driving experience (Lal, 2005).

[21] Peru Trademark Reg. No. 000133173-2001
[22] Community Design No. 000827472-0001

The first Beetle prototype ‘Type 32 Model’ was completed in 1935 (Figure 3.36) and two more prototypes, which are a two-door sedan and convertible, were exhibited at the 1936 Berlin Auto Show (Seume, 1997) (Figure 3.37). The VW38 Saloon model and VW38 Cabriolet models were introduced in 1938 (Seume, 1997) (Figure 3.38). During the World War II, vehicle production was switched from civilian to military. Mass production of the Beetle started in 1946 (VW Heritage, n.d). There were two main vehicles during the war, the Type 82 Kubelwagen and the Type 166 Schwimmewagen (VW Heritage, n.d.) (Figure 3.39). A new model named ‘export model’ was released to foreign markets in 1949 (VW Heritage, n.d.). In the new model ‘Type I Saloon’ introduced in 1953, the rear window design changed from two split windows to larger one to increase rearward visibility. The windscreen was also enlarged in the 1957 model (Seume, 1997) (Figure 3.40). The new model ‘Karmann Ghia’ which is a two-seat coupe and convertible, was released in 1959 (Seume, 1997). The convertible Beetle was introduced in 1953 and produced until 1979 (Trotta, n.d.). The most obvious changes occurred on the 1302 model in 1971 and the 1303 model in 1973. The 1302 and 1303 were called ‘Super Beetles’ during their long model lives (Price, 2003) (Figure 3.41). The 1303 model had a large panoramic windscreen which provided more interior space and improved the car’s aerodynamics (Seume, 1997).

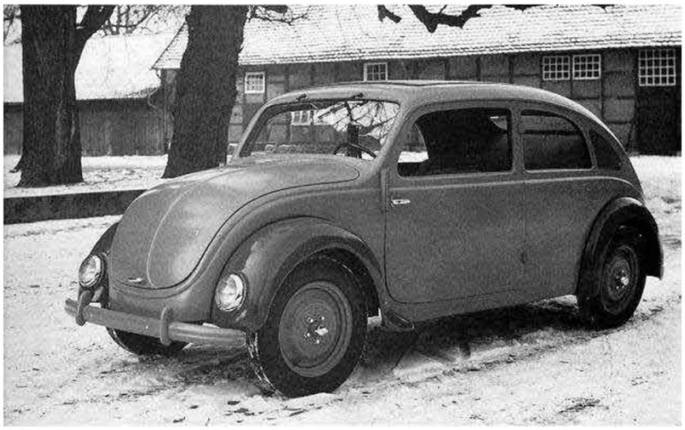


Figure 3.36 The first Volkswagen Beetle prototype ‘Type 32 model’ (URL 33)

Figure 3.37 The Volkswagen Beetles at the 1936 Berlin Auto Show (URL 34)

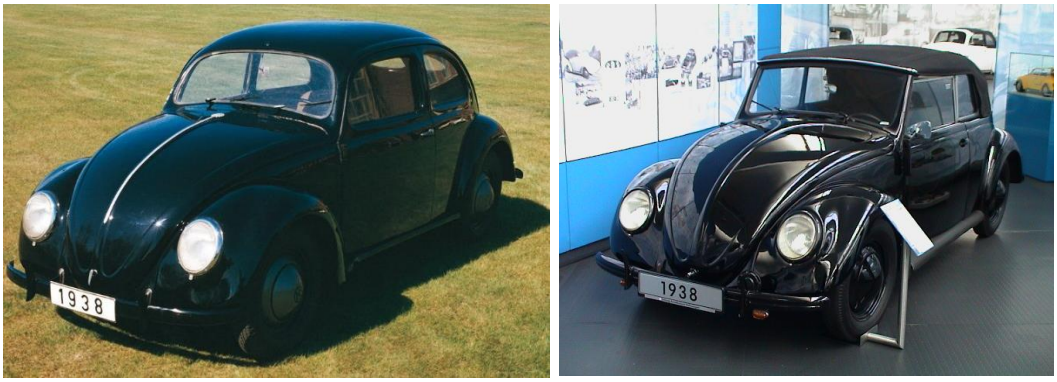


Figure 3.38 From left to right: VW38 Saloon model and VW38 Cabriolet model (URL 35)

Figure 3.39 From left to right: The Type 82 Kubelwagen and the Type 166 Schwimmewagen model (URL 36)

Figure 3.40 The change from two split windows to one window (URL 37)

Figure 3.41 The 1302 model and the 1303 model known as ‘Super Beetles’ (URL 38)

Some car companies have a tendency to return to iconic car models such as the Mini, The Beetle and Fiat 500. Volkswagen launched a new Beetle concept known as ‘Concept I’ at the Detroit Motor Show in 1994 (Seume, 1997) (Figure 3.42). The philosophy behind the Concept I was ‘Simple, reliable, honest and original’ and it is more than a 1990’s reincarnation of the Beetle (Seume, 1997). Following Concept I, cabriolet prototype was exhibited at the Geneva Motor Show in 1995 (Figure 3.43). The first generation of the new Beetle was produced and sold between 1998 and 2005 (Hogan Lovells, 2011). One of the important changes was that the engine moved to the front and luggage room to the back (Cheney, 2012). The new model launched in

2012 had greater interior volume and a flattened roofline as the original Beetle (Cheney, 2012). The ‘droptop’ Beetle was launched with the new body style in 2013, and the ‘Beetle Dune’ coupe and convertible was launched in 2016 (Stoklosa, 2015).

Figure 3.42 The new Beetle ‘Concept I’ in 1994 (URL 39)

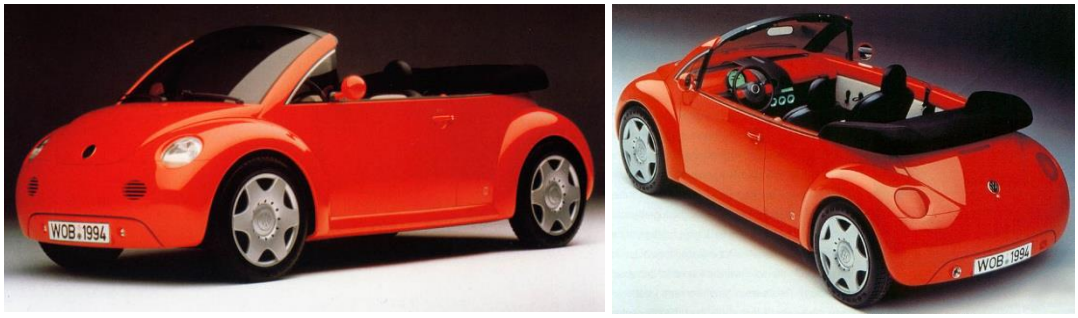


Figure 3.43 The new Beetle cabriolet model in1995 (URL 40)

The first million units of the Volkswagen Beetle were produced in 1955 (Trotta, n.d.) (Figure 3.44). Beetles were selling in West Germany to middle class buyers in the1950s (Grose, 2013). The car gained international success as well as domestic success. The United States was the most successful market during the 1950s; U.S. customers bought 887 Beetles in 1953, 32,000 in 1955 and 120,422 in 1959 (Rieger, 2009). It was introduced as the white Beetle taxi in Mexico in 1971, and became a typically Mexican automobile and popular among the middle class in Mexico (Grose, 2013). It also appeared as a police car in Scottsboro, Alabama (Rowsome, 1970). The sales of the Beetle surpassed the Ford Model T, which until then had been the most manufactured car in history, in 1972 (Trotta, n.d.). Beetle sales peaked in the United

States by 1970, then started to decrease because of the American and Japanese competition (Trotta, n.d.). Sales of the Beetle ceased in the United States in the late 1979 (Lal, 2005) and in Europe in 1974 when the company introduced the Golf, but production in Brazil continued until 1986 and then in Mexico until 2003 (Phaidon Design Classics, 2006a). Over 21 million Beetles had produced by the time Mexican production ceased (Trotta, n.d.).

Figure 3.44 The Volkswagen Beetle Production line in 1955 (URL 41)

The most significant factor in the popularity of the Volkswagen Beetle was its advertising. Volkswagen advertisements were based on its practical, economical and honest concept (Rowsome, 1970). Early ads for the Beetle showed 'scenes of family and friends relaxing in forest clearings or next to their tent by the lake shore, enjoying the countryside.' (Grose, 2013). The advertisement for Volkswagen cars began to differ from conventional car ads after 1959 (Rowsome, 1970). The Doyle Dane Bernbach agency in New York designed the 'Think Small' advertising campaign which involved the use of primitive, minimalist black and white Beetles to emphasize the 'honesty' of the car (Trotta, n.d.) (Figure 3.45). The advertisements said 'Some shapes are hard to improve on.' and 'Two shapes known the world over', highlighting the iconic Beetle shape (Figure 3.45). One 1967 Volkswagen advertisement asked, 'Why is that thousands of people learn to drive in a VW each year' and provided the answer 'Because it is so easy to drive. Ask your driving instructor. His example has caught on.' (Volkswagen, n.d.b). Through advertising, the Beetle acquired cult status

and became a popular phenomenon (Copping, 2014). The ‘Think Small’ advertising campaign is still regarded as the greatest print campaign of all time (Misquitta, 2015).

Figure 3.45 The past advertisements for the Beetle (URL 42)

The Volkswagen Beetle also turned into a symbol of the German Republic (Malaj, n.d.). It became not only an icon of normality after World War II but also icon of export success (Malaj, n.d.). Americans characterized the Beetle as unusual and peculiar car and Germans defined it as a much-loved, multi-layered, and uncontroversial icon of the Federal republic (Rieger, 2009). Arthur Railton said that ‘It is a part of the folklore and it has own mythology. There is no other automobile which has such social effect’ (Volkswagen, n.d.b). The Volkswagen Company explains that ‘The iconic VW Beetle combines retro style with modern comfort and convenience.’ (Volkswagen, n.d.a). Volkswagen Chairman Ferdinand Piech said that ‘It is different, and it makes you feel different. It’s like a magnet.’ (Corbin, 1999).

As the best-selling car of all time, the Volkswagen Beetle revolutionised the automotive sector and invaded pop culture. It became closely associated with the hippie movement through the 1960s and 1970s (Bold, 2007). It has also appeared and even starred in movies, including 'The Love Bug', which was the third most successful film of 1968, and Disney's first 'Herbie' movie in 2005 (Volkswagen, n.d.b) (Figure 3.46). Moreover, a white Volkswagen Beetle was pictured on the cover of the Beatle's 'Abbey Road' album (The Guardian, n.d.) (Figure 3.47).

Figure 3.46 The poster of 'Herbie' and 'The Love Bug' film (URL 43)

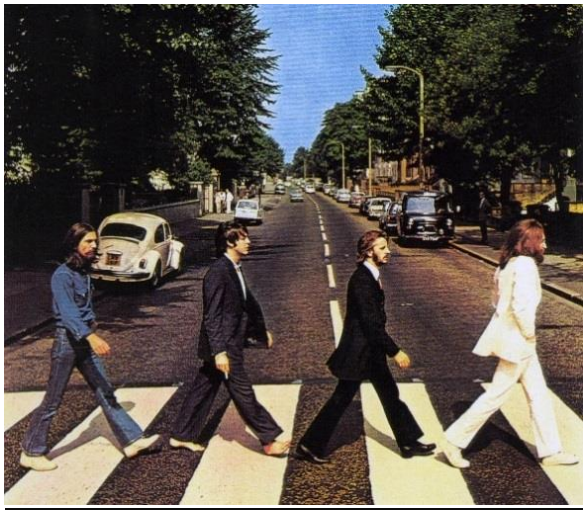


Figure 3.47 The album cover of the Beatle's Abbey Road (URL 44)

Intellectual Property Biography of the Volkswagen Beetle

The Volkswagen Beetle was granted a U.S. patent for a vehicle body formed of artificial material in the United States in 1944.[23] The Czech company, Tatra which had a similar design, sued for patent infringement. However, the case was ended when Germany invaded Czechoslovakia and took control of the Tatra company (Misquitta, 2015).

The 1991 Beetle 'Concept I' design was registered in some of the European Union countries in 1994 (Figure 3.48).[24] The first generation of Beetles based on the 'Concept I' was registered in some European Union countries in 1996 (Figure 3.48).[25] The design of the new Beetle was protected by two design patents in the United States, ones in 1996 and the other in 1997.[26] It was also registered as Community Design in 2003 (Figure 3.49).[27] The convertible Beetle was granted a design patent in the United States in 1997 (Figure 3.50).[28]

Figure 3.48 From left to right: The design registration for the Concept I and the first generation of the new Beetle

[23] U.S. Patent. No. 2,344,092
[24] EU Design Reg. No. DM/030041
[25] EU Design Reg. No. DM/037400
[26] U.S. Design Patent No. D367,440, D385,828
[27] Community Design No. 000111596-0001
[28] U.S. Design Patent No. D385,828

Figure 3.49 The Community Design registration of the new Beetle

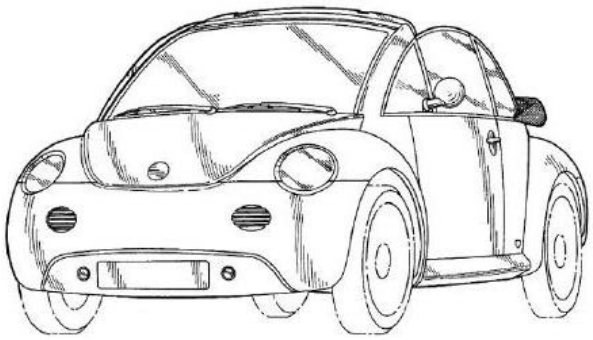


Figure 3.50 The design registration of the new convertible Beetle

AUTEC AG, a maker of toy car models, challenged Volkswagen's European Community Design registration (000111596-0001), arguing that it was invalid because the new Beetle was exhibited at the Geneva Motor Show in March 1996 and the Detroit Motor Show in 1998, which negated its claim to novelty and individuality (Figure 3.48). Volkswagen claimed that the Community Design (000111596-0001) involved in the second generation model of the new Beetle which was different than the first generation model and Concept I exhibited at the Geneva Motor Show and the Detroit Motor Show. Volkswagen added that second generation model was first exhibited at the Motor Show in Frankfurt in 2005 and subsequently sold on the market (Hogan Lovells, 2011). However, OHIM's Invalidity Division ruled that although there were sufficient different features between the two models, which prevented them being considered identical, the Community Design registration (000111596-0001) was

invalid because the models produced the same overall impression (Hogan Lovells, 2011).

The word VW, Volkswagen and Beetle are protected trademarks in many jurisdictions. The word 'Bug' which is a well-known nickname for the Volkswagen Beetle, has acquired secondary meaning in the automotive field (Broody, 2005) Volkswagen uses the car's nicknames in promotional materials and as trade names. The company has brought a series of cases for trademark infringement. The first of these cases involved a third-party use of the name 'The Bug Shop' for an auto repair shop that specialized in Volkswagens. The court held that the use of the name 'The Bug Shop' infringed trademark rights and caused unfair competition (Volkswagenwerk Aktiengesellschaft v. Rickard, 1974). In a second case, a third party used the trade name 'Bug and Beetle Clinic' for an auto repair shop. The court found that there was also trademark infringement and concentrated on the 'Public Use Rule', stating that 'A nickname for a product is protectable as a trademark if the owner of the product adopts it or allows the public to use it without protest.' (Volkswagenwerk Aktiengesellschaft v. Smith, 1979). In a third case, a third party used the name 'The Bug Hospital' for a car repair shop and 'The Bug House' for a used-car shop. The court concluded that the use of 'The Bug House' infringed Volkswagen's trademark rights (Volkswagenwerk Ag v. Hoffman, 1980).

The Volkswagen Beetle was registered as a three-dimensional mark in countries including Germany, Japan, Mexico, Switzerland, and Brazil. It was registered as an community trademark in 2002.[29] The new Beetle's iconic configuration was registered as a three-dimensional mark in the United States in 2000, five years later the date of filing (Figure 3.51).[30] It was also registered as a three-dimensional mark in European Union countries in 1998, but this registration expired in 2008.[31] Volkswagen argues that its mark is strong because it is federally registered and has been marketed extensively through the use of advertising (Volkswagen Ag v. Dorling Kindersley Publishing, Inc., 2009).

[29] Community Trademark No. 002069342
[30] U.S. Trademark Reg. No. 2,409,675
[31] EU Trademark Reg. No. 699,241

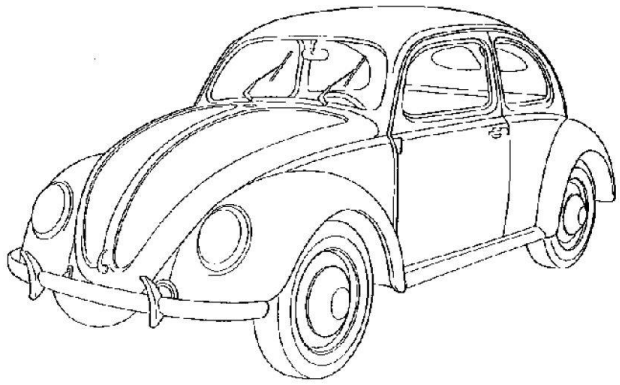


Figure 3.51 Three-dimensional trademark for the Volkswagen Beetle in the United States

The design of the VW Beetle is also protectable under trade dress laws, because it was acquired distinctiveness through advertising and promotional efforts (Prosser & Smith, 2002). Dorling Kindersley Publishing, Inc., a publisher of children's books, infringed and diluted VW's registered trademarks and trade dress (2409675) with a book titled 'Fun Cars' which was designed to function as a toy New Beetle (Volkswagen Ag v. Dorling Kindersley Publishing, Inc., 2009).

There are some products which are licenced by Volkswagen Company: a toy New Beetle for Barbie; a toy Hot Wheels New Beetle; and children's book, 'Wash Me', which is packaged with a toy Matchbox New Beetle (Volkswagen Ag v. Dorling Kindersley Publishing, Inc., 2009). However, there is no contractual agreement between parties for the 'Herbie' and 'The Love Bug' movies because the name and logo were removed from the cars featured in the 'Herbie' and 'The Love Bug' movies (Figure 3.46).

3.3.1.1.6 The Honda Super Cub

Design Biography of the Honda Super Cub

The Honda Motor Car Company was launched by Soichiro Honda in Japan in 1948 (Duckworth & Hunt, 2012). When Soichiro Honda and Takeo Fujisawa, the former a motorcycle enthusiast, the latter a businessman, travelled to Europe in search of

inspiration for their next major product, they arrived home with the design of the Super Cub. The Super Cub 50 was first launched in Japan in 1958 (Nemeth, 1997) (Figure 3.52). Honda established the American Honda Motor Company in Los Angeles in 1959 and the Suzuka Factory in Japan in 1960 and began mass production in 1961 (Woodham, 1997).

Figure 3.52 The first Super Cub 50 in 1958 (URL 45)

The Super Cub was described as a brilliant piece of engineering (Phaidon Design Classics, 2006b). It had a three-speed transmission, an automatic clutch, five horsepower, an electric starter, and a step through frame. The leg shield and front mudguards were plastic and pressed steel was used for backbone frame and forks (Phaidon Design Classics, 2006b). It was the first motorcycle to use a plastic (polyethylene) fairing (Cheatham, 2014).

It was friendly to all riders, including women wearing skirts through a step through frame which was inspired from Vespa (Phaidon Design Classics, 2006b). Therefore, Fujisawa described the Super Cub as 'something much more like a bicycle than a motorcycle.' (Mintzberg, Pascale, Goold & Rumelt, 1996). It was lightweight, affordable for ordinary people, highly durable and had strong horsepower. It sold for under $250 when American or British competitors cost $1,000 - $1,500 (Mintzberg et al.,1996).

An electric starter was added to the C102 model in 1960. The Super Cub name was dropped and the new models were named the CA100 and CA102 in 1962 (Frank and Hackett, 2003). Safety was enhanced with larger lights on the Super Cub C50 in 1966. The CT110, known as 'Hunter Cub', was designed for a wide range of riding such as

touring and suburban riding in 1981 (Honda, n.d.) (Figure 3.53). The Super Cub 50 Super Custom was designed around a new engine in 1983. Storage capacity was increased on the C100 BIZ model in 1998. The Wave125 which was released in 2003 was widely popular, especially in Thailand. The iconic Super Cub concept was reproduced and exhibited at the Tokyo Motor Show in 2015. The headlights of the Super Cup 50 in 2017 were the first to featured LED lights (Honda, n.d.a) (Figure 3.54).

Figure 3.53 The Hunter Cub 50 in 1981 (URL 46)

Figure 3.54 The Super Cub 50 in 2017 (URL 47)

One of Honda's most significant recent design is the EV-Cubs electric motor. It was first conceptualized in 2009, and introduced at the Tokyo Motor Show in 2018 (Tsantilas, 2017) (Figure 3.55). It will be marketed firstly in Japan, then in some Asian markets (Tsantilas, 2017).

Figure 3.55 The EV-Cubs electric motor in 2018 (URL48)

According to Pascale, Honda is a firm dedicated to the low-price producer (Rumelt, 1996). After Honda had a dominant market position in Japan, the Super Cub was introduced to the United States which is a car dominated country in 1959 and the Super Cub redefined the U.S. motorcycle industry (Karwatka, 2017). Sales rose dramatically, and Honda soon claimed more than a 50 percent of the U.S. motorcycle market (Runde & Rond, 2010). The success of the Honda in the U.S. rested on the company's strategy of redefining a leisure class of 'Nicest People' and exploiting its comparative advantage via aggressive pricing and advertising (Mintzberg et al., 1996). In that period, Honda began to work with Grey Advertising Inc., using the slogan 'You meet the nicest people on a Honda' in 1963 (Woodham, 1997) (Figure 3.56).

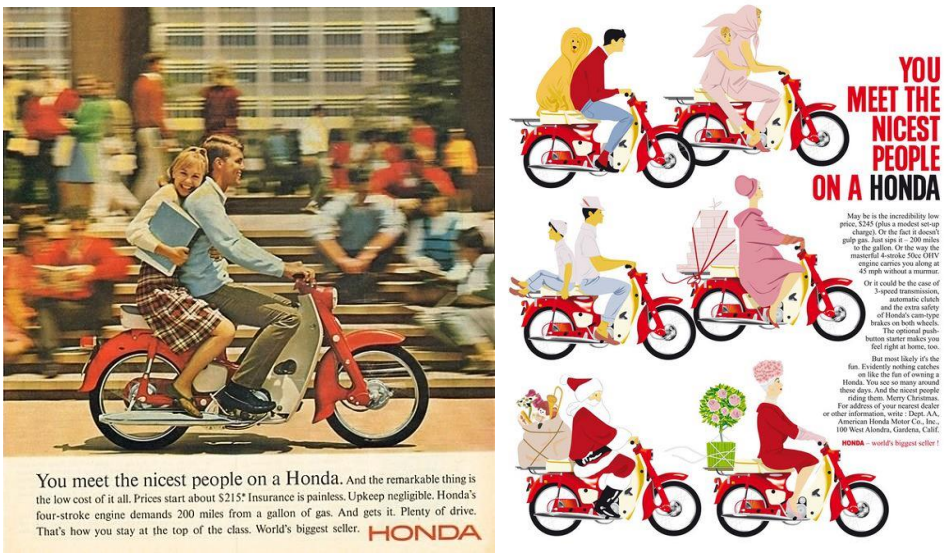


Figure 3.56 The Nicest People advertising campaign by Honda (URL 49)

The Super Cub was also released in Vietnam during the Vietnam War, and it continues to be a national institution as a ‘do-everything’ vehicle (Kim, 2014) (Figure 3.57). The sales of the Super Cup spread to Germany and Belgium in 1961, the UK in 1962 and France in 1964.

Figure 3.57 The Honda Super Cub in Vietnam during the 1960s (URL 50)

The Super Cub models and their variants became the most successful motorcycles all over the world (Karwatka, 2017). By the end of 1959, Honda had taken first place among Japanese motorcycle manufacturers. Of its total sales that year of 285,000 units, 168,000 were the Super Cubs (Mintzberg et al., 1996). Ford built 15 million Model Ts between 1908 and 1927. Volkswagen built 21 million Beetles between 1938 and 2003 (Kim, 2014). 50 million Super Cubs were produced in 2006, and production reached 100 million in 2018 (Tsantilas, 2017) (Figure 3.58). The Super Cup has been in continuous production since 1958; it is the most produced motor vehicle in history (Kim, 2014).

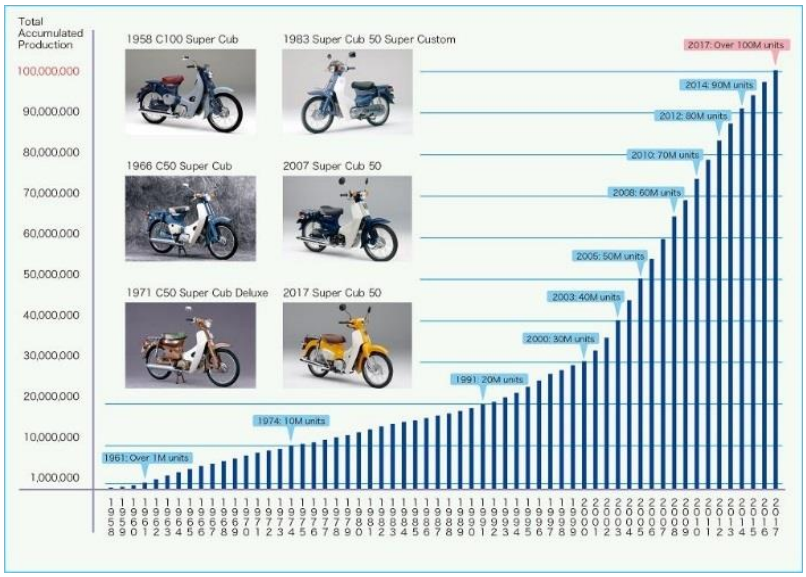


Figure 3.58 The graph showing the production of the Super Cub (URL 51)

To celebrate the Super Cub's 60th anniversary and its production reaching 100 million units in cumulative and 60th anniversary, Kuriki, designer in Honda Motor Company, designed a heart motif emblem similar to the 50th anniversary emblem (Honda, n.d.c) (Figure 3.59).

Figure 3.59 The 50th and 60th anniversary emblem (URL 52)

The Super Cub has become a large part of everyday life and culture in Japan and risen to cult status in other Asian countries. It is also a global commercial success. It is one of the most iconic vehicles of the 20th century (Kem, 2015). It has become as timeless as another classic scooter, the Vespa (Frank & Hackett, 2003).

Honda and the Super Cub have been lauded by many scholars and consultants. In one case study, Mintzberg and Quinn claimed that it is one of the most important start-ups of the modern era (Mair, 1996).

Super Cub fans began the 'Love Cub 50 Project' including Super Cubs which became an art work and they are exhibited at the Mori Arts Center Gallery in 2009 (Honda, n.d.b) (Figure 3.60). The C100 Super Cub was featured in the Guggenheim Museum's Art of the Motorcycle exhibit (Kim, 2014) (Figure 3.60)

Figure 3.60 The Love Cub 50 Project and The Guggenheim Museum's Art of the Motorcycle (URL 53)

The basic concept of the Super Cub has remained the same since its introduction. It is now dominant all over the world. Today, Super Cubs are produced in 16 Honda factories in 15 countries around the world and marketed in more than 160 countries. Thailand, Indonesia, Vietnam, Brazil, China, and Nigeria are among the spotlight markets of the Super Cub.

Intellectual Property Biography of the Honda Super Cub

The versions of the Super Cub were granted by design registrations in Japan (Figure 3.61).[32] Some of the Super Cub variant designs was also registered in the European Union.[33]

[32] Japan Design Reg. No. JP,1425547,S and JP,1377892,S
[33] EU Design Reg. No. 001580762-0001

Figure 3.61 The design registration of the Super Cub in Japan

A number of small manufacturers in motorcycle industry produced knock-offs of the Super Cub (Sonobe & .tsuka , 2006). In response, the company registered the shape of the iconic Super Cub as a three-dimensional trademark in Japan in 2014 because it gained acquired distinctiveness (Figure 3.62). According to a customer survey, the design of the Super Cub is recognized as a Honda product because its overall design has remained largely the same and it is a long-selling and popular product (Honda, 2014).[34] It is the first vehicle to be granted a three-dimensional trademark in Japan.

Figure 3.62 The three-dimensional trademark for the Super Cub

[34] Japan Trademark No. 5,674,666

3.3.1.1.7 Stokke Tripp Trapp Chair

Design Biography of the Stokke Tripp Trapp Chair

The Tripp Trapp chair was invented by Norwegian designer Peter Opsvik in 1972 and commercialized by the Norwegian furniture company Stokke AS. Stokke was found to produce furniture for adults in 1932. The company's first product for children was the iconic Tripp Trapp chair (Stokke, n.d.).

Norwegian designer Peter Opsvik observed that his son grew fast and his child-sized chairs prevented him from being close to the table. Therefore, the family used ordinary adult-sized chairs for the child. Opsvik believed that one chair should seat children from the age of approximately 8 months to adults, at the same table with the rest of the family. The idea behind the design of Tripp Trapp chair is 'the chair that grows with the child' (Opsvik, 2009) (Figure 3.63).

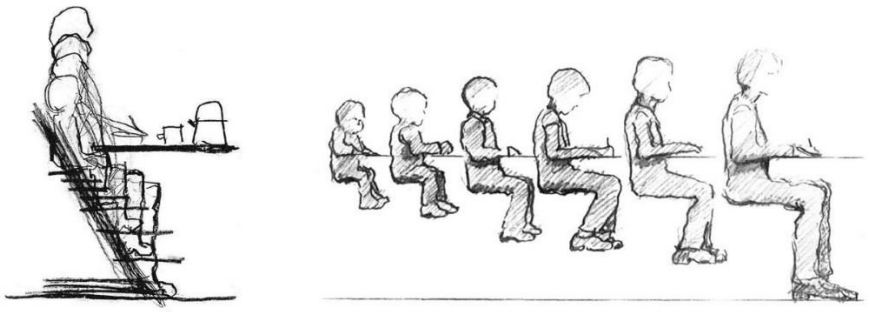


Figure 3.63 Tripp Trapp chair sketches by Peter Opsvik (URL 54)

The chair's design allows freedom of movement with both depth- and height-adjustable seat and footplates. Thanks to the design, it can easily be used from infancy to adulthood (Stokke, n.d.) (Figure 3.64).

Figure 3.64 Tripp Trapp chairs using at any age (URL 55)

Many Norwegians have grown up with the Tripp Trapp chair (Ryan, 2000). Tripp Trapp chairs have been on the Scandinavian market since 1972 and on the Dutch market since 1995 (Balice, 2015). With a 90 percent market share in Norway, Stokke has sold more than three million Tripp Trapp chairs worldwide (Salvador, 2014).

The design has remained largely unchanged, but it can be customized using a variety of cushions and colours (Figure 3.65). The Tripp Trapp chair is considered as an iconic design with adjustable L shape (Bryson & Grete, 2015). The designer and manager of the company described Tripp Trapp chair as honest, real, original, independent, and reliable and defined its personality dimensions as sincerity, competence, excitement, sophistication and ruggedness (Hestad, 2008) (Figure 3.66).

Figure 3.65 Tripp Trapp chairs with various colours and cushions (URL 56)

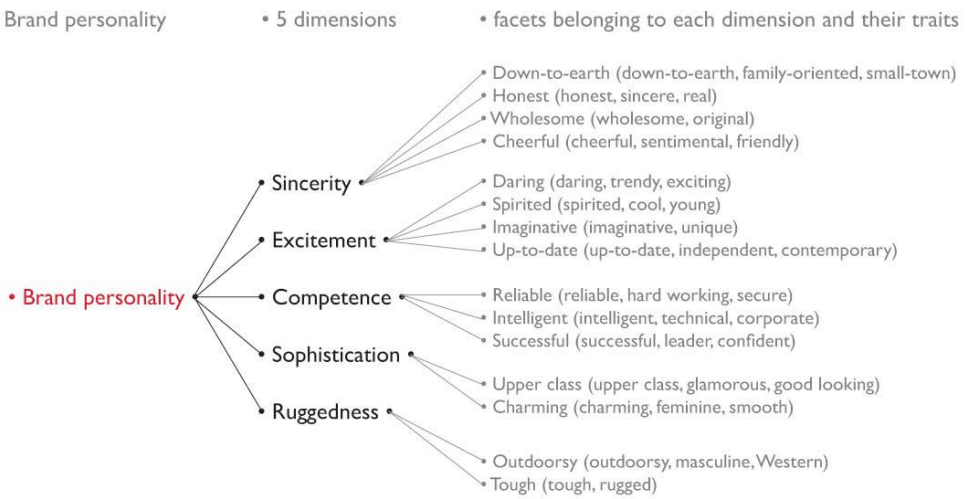


Figure 3.66 Personality dimensions of the Tripp Trapp chair (Hestad, 2008)

It has been displayed in museums and was granted 'Best Norwegian Design from the last 100 years' by Aftenposten and the Norwegian Design and Architecture Center in 2017 (Stokke, n.d.).

Intellectual Property Biography of the Stokke Tripp Trapp Chair

Stokke has obtained protection under copyright, patent, trademark, design, and unfair competition laws for its Tripp Trapp chair, and fought more than 500 known cases of copying by third parties (Midttun & Ørjasæter, n.d.).

The feature of being useful from infancy to adulthood by re-positioning the plates was granted patents in many countries and it was licenced to Stokke by Peter Opsvik (Figure 3.67).[35] Since all patents lapsed in 1992, competitors have widely copied not just its function but also its good looks. Consequently, Stokke must rely on other strategies to protect its exclusive rights to the design of the Tripp Trapp chair.

[35] U.S. Patent No. 4,109,961

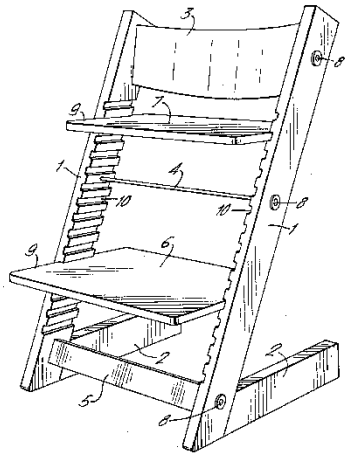


Figure 3.67 The patent of Tripp Trapp chair in the U.S.

The three-dimensional shape of the Tripp Trapp chair was registered as a Benelux trademark in 1998. However, in the long-awaited decision of Hauck GmbH & Co. KG v. Stokke AS case (2014), Hauck GmbH & Co claimed that the trademark was invalid on the grounds that the shape of the chair resulted from the nature of the product and that its original appearance gives rise to substantial value. The Dutch Supreme Court observed that the shape of the Tripp Trapp chair gives it significant aesthetic value and essential functional value at the same time (Balice, 2015). The Dutch Supreme Court concluded that the trademark registration of the shape of the Tripp Trapp chair must be considered invalid (Aplin & Davis, 2017). On the other hand, the Tripp Trapp chair's design is registered as a three-dimensional trademark in Denmark.[36]

For the time being, Stokke may continue to rely on copyright protection for the Tripp Trapp chair. However, the copyrighted design of the Tripp Trapp chair has been infringed by many competitors from all over the world (Figure 3.68). One of them includes two models of high chairs for children named 'Alpha' and 'Beta' manufactured by Hauck GmbH & Co KG (Figure 3.69). Stokke took action in the Netherlands and Germany, claiming that the Alpha and Beta chairs infringed the copyright of the Tripp Trapp chair (Balice, 2015)

[36] Benelux Trademark Reg. No. 0639972 and Danish Trademark Reg. No. 767,786

Figure 3.68 Chairs produced by competitors infringe the Tripp Trapp chair (URL 57)

Figure 3.69 Alpha and Beta chairs manufactured by Hauck (URL 58)

3.3.1.1.8 Crocs Shoes

Design Biography of the Crocs Shoes

Crocs Inc. was founded in Niwot, Colorado, United States in 1999 and started to market and distribute footwear products in 2002 (Bennard, Sayles, Schullhof, Thaler, & Wolff, 2010). The first Crocs shoe was introduced at the Fort Lauderdale Boat Show, U.S. in 2002 by Crocs, Inc. (Figure 3.70). Crocs are shoes specifically designed for boating with waterproof, odor-resistant, and comfortable qualities at the beginning. Crocs were named after the crocodile which is durable and comfortable on both land and water. 1000 pairs were purchased at the first boat show, at a cost of $30 per pair.

Figure 3.70 Classic clog model by Crocs (URL 59)

After initial success, the company expanded rapidly. They introduced the 'Beach' model which is today called 'Crocs Classic'; the 'Highland', and the 'Nile' model by the middle of the 2003 (Bennard et al., 2010). After a short time, the company decided to transform the clog-style shoe from a widely recognized product to 'global icon of fun'; they came up with 'Find Your Fun' platform – a marketing tool which encourages everyone to celebrate fun in the everyday (Crocs, 2015). The company grew and reached $847 million revenue in 2007. Then, sales started to decrease, and the company was in trouble in 2009. However, the company recovered and returned to profitability by opening new stores and developing new products such as boots, heels, wedges and sneakers, becoming a four-season brand in early 2010. Revenues reached $1.12 billion in 2012 (DePilles, 2013).

Most distinctive characteristics of Crocs shoe are large ventilation holes, Croslite material, and bold colours. The holes are designed to drain water and promote air circulation. The holes and surface textures also strengthen the brand name visually. The strap with the Crocs logo is hinged to the shoe with pins. The heel strap enables the wearer to put the shoe on and take it off easily by rotating and stretching the strap (Lidwell & Manacsa, 2011). The principal innovation of Crocs shoe is the Croslite material which is a closed cell resin material. It is lightweight, odor-resistant, comfortable, shock absorbing, antimicrobial, and non-marking qualities (n.d., 2010a). Leather, canvas or other materials were added to the product line alongside the Croslite in late 2006 (n.d., 2010a) (Figure 3.71). Crocs Inc. also started to sell other accessory products like caps, shirts, shorts, hats, socks, and backpacks.

Figure 3.71 Crocs' models with other materials which added to product line (URL 60)

The Crocs shoe is simple, straightforward, and universal. It is said that Crocs are a piece of global pop culture and an iconic symbol for having fun. Therefore, the company are treating like an icon to express the iconic image of their clog and they used silhouette of the clog on TV, digital and social media (Figure 3.72). Crocs silhouettes were on the Time Out London magazine (Crocs, 2015).

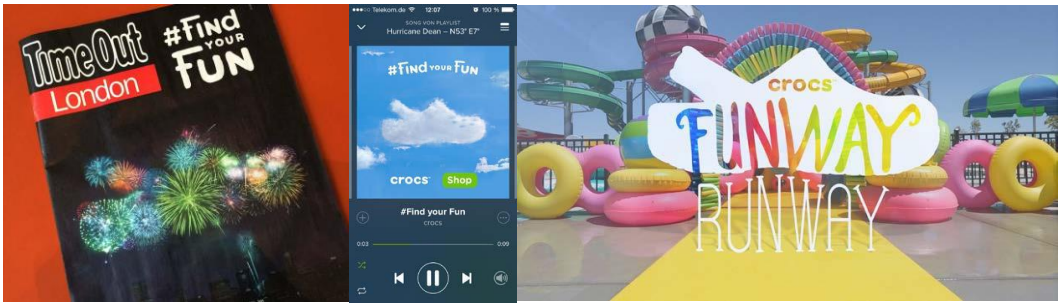


Figure 3.72 Advertisements in which Crocs' silhouette has been used (Crocs, 2015)

The Crocs shoe has attracted a great deal of attention from the fashion design industry. Christopher Kane designed marble-print, jewel studded Crocs in 2016 (Figure 3.73). While classic Crocs sell for $37, the Kane design sell for $545. Balenciaga sent models down the runway wearing a platform version of Croc shoes at Paris Fashion Week in 2017. Creative director Demna Gvasalia designed platform Croc shoes with a 10 cm (4 inch) wedge and covered the tops with little coloured embellishments-the Balenciaga logo, small molded rose and a tiny face of a dog (Figure 3.74). Crocs' Senior Vice President of Global Product and Marketing Michael Poole claimed that 'Working with Balenciaga demonstrates the relevance of our iconic clog in today's fashion and design world, as well as allowing us to tap into the excitement and energy that comes from unexpected relationships.' (Breslin, 2017)

Figure 3.73 Croc shoes designed by Christopher Kane (URL 61)

Figure 3.74 Platform Croc shoes designed by Demna Gvasalia (URL 62)

Since its inception in 2002, the main shape of Crocs shoe has remained almost the same, and more than 300 million pairs of shoes have been sold in more than 90 countries around the world (Crocs, n.d.).

Intellectual Property Biography of the Crocs Shoes

Crocs Inc. holds over 60 design patents for footwear (Fuierer, 2015). The Croslite material which is a close cell resin is protected as trade secret. The first design patent and patent for manufacturing process of breathable footwear pieces was granted in the United States in 2006.[37] The design patent (D517,789) was challenged in two important lawsuits in the U.S. and European Union countries (Figure 3.75). After a five-year legal battle between Crocs and competitor USA Dawgs, the USPTO found

[37] U.S. Design Reg. No. D517,789; U.S. Patent Reg. No. 6,993,858

that USA Dawgs published a design similar to the Crocs design more than one year before Crocs applied for its patent and therefore cancelled Crocs' design patent (D517,789) (Butler -Young, 2017). Similarly, EUIPO declared Community Design registration for the Crocs shoe invalid because the design was disclosed at a boat show more than one year before filling the application for a Community Design registration. (Hogan Lovells, 2010).

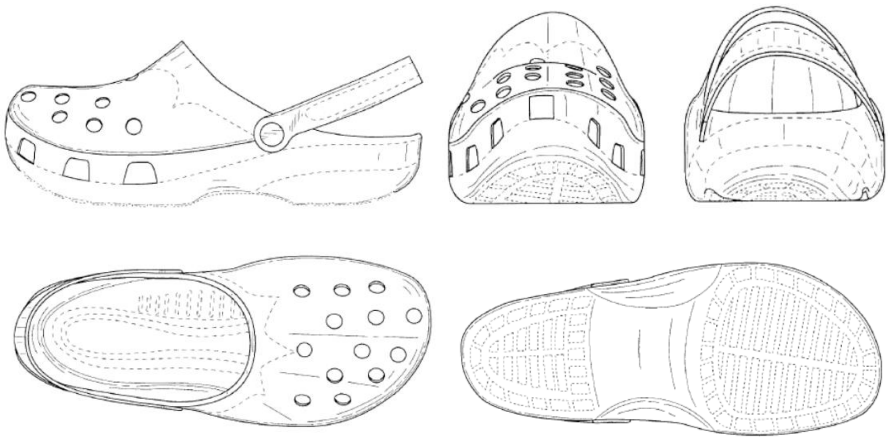


Figure 3.75 One of the first Crocs' design patent

There were knock-offs produced and imported into the United States and elsewhere. When cheap knock-offs flooded the market to benefit from the fame of the Crocs shoe, Crocs sued many companies which had manufactured or imported knock-offs for design patent and trade dress infringement (Jiménez, Kolsun & Jiménez, 2014). International Trade Commission found no infringement, and Crocs appealed to the United States Federal Circuit. In the Crocs v. International Trade Commission (2010), the court concluded that the accused products were the same as Crocs' patented design in terms of overall impression, although there were differences in detail such as hole shapes, hole arrangements, and toe shape (Dinwoodie & Janis, 2010) (Figure 3.76).

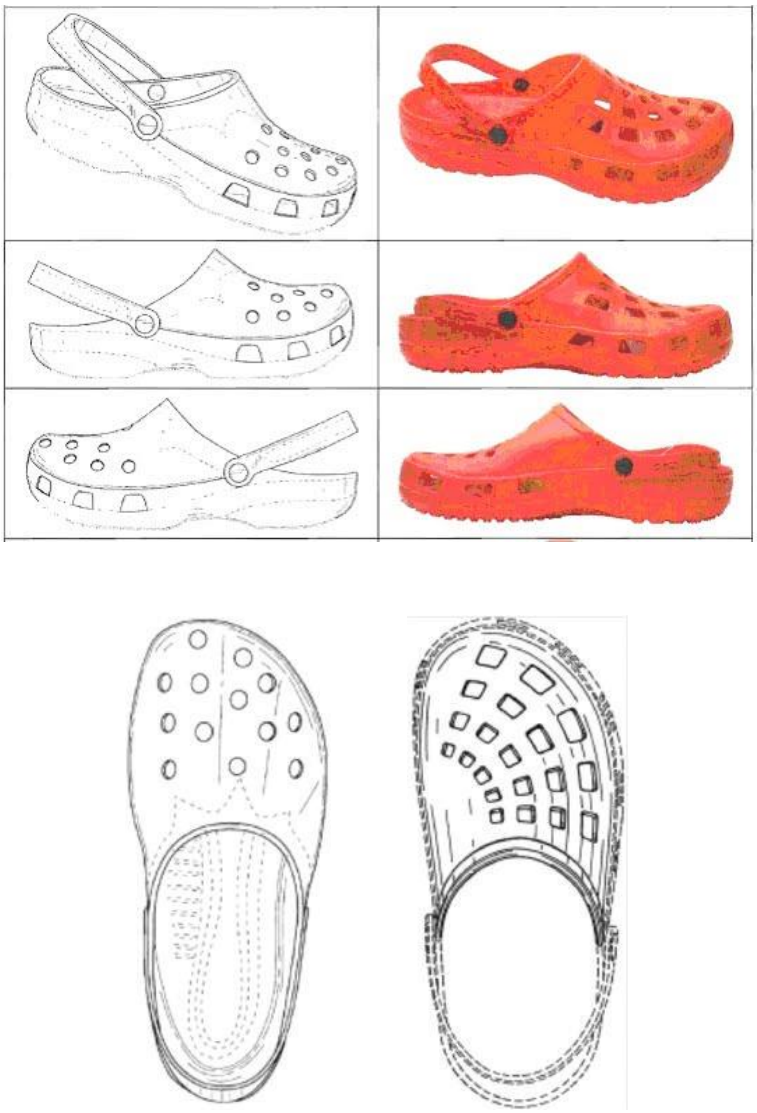


Figure 3.76 From left to right: Crocs' patented design and infringing design (URL 63)

After the cancellation of its design registration, Crocs obtained a three-dimensional trademark for the shape of Crocs shoe in the U.S. (Figure 3.77).[38]

[38] U.S. Trademark Reg. No. 5,149,328

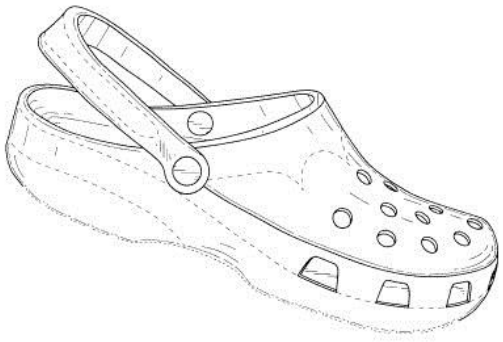


Figure 3.77 Three-dimensional trademark for Crocs shoe

3.3.1.1.9 Discussion

Iconic product designs in this category date back a long time. The three dimensional shape of iconic designs the Toblerone chocolate bar, Coca-Cola contour bottle, Barcelona chair, Zippo lighter, Volkswagen Beetle automobile, Honda Super Cub motorcycle, Stokke Tripp Trapp chair, and Crocs shoe have almost never changed. They are globally diffused products.

The Toblerone chocolate bar has a distinctive taste and shape. It is a globally diffused chocolate since it is the third-best seller in duty free shops. As an IP strategy, the company chose patents, which made the Toblerone chocolate bar the first chocolate product granted a patent (Figure 3.78). The company then filed applications for three-dimensional trademark for the chocolate bar's shape and packaging in many countries (Figure 3.79).

The Coca-Cola contour bottle is enough distinctive to be recognized in the dark or lying broken on the ground. The bottle has also appeared in art, numerous movies, and magazines, and it is widely discussed among designers (Figure 3.80). When its design patents expired, it was not protected at all for a short period; therefore, it began to be imitated. As an IP strategy, the company chose three-dimensional marks to sustain its competitive advantage of uniqueness of the contour bottle design (Figure 3.81).

The Barcelona chair is the most iconic chair which is globally recognized. It is a representative of modernism. It is on permanent exhibit at the Museum of Modern Art (Figure 3.82). After its patent expired, it was protected only by copyright, which was not sufficient to prevent third parties from infringing. As an IP strategy, Knoll sought to protect the chair as a three-dimensional trademark (Figure 3.83). Although it was registered in some countries, the application in Germany was refused. The most challenging disputes are with Alphaville and Regency Shop, which sought the cancellation of the three-dimensional trademark of Barcelona chair on the grounds that it has fallen into a public domain.

The Zippo lighter is an iconic and globally diffused product which is sold in more than 160 countries all over the world. The most significant characteristic is providing lifetime guarantee. After the company manufactured for U.S. military during World War II, it gained special meaning for Americans (Figure 3.84). Collectors are significant customers of Zippo's. It has been seen in famous movies and newspapers. After it became iconic product, knock-offs of it spread on all over the world but especially Chinese market. All patents were expired, the lighter had not been protected by any type of IP for a long period (Figure 3.85). Therefore; as an IP strategy, the company sought new patent, design and especially three-dimensional trademark protections. However, the application in Peru was refused because of functionality.

The Volkswagen Beetle became an iconic automobile after World War II (Figure 3.89). It became one of the best-selling cars all over the world through its advertisement campaign. It revolutionised automotive sector. It invaded into the pop culture through being seen in many movies (Figure 3.86). After all patents were expired, it had not been protected by any type of IP for a long period (Figure 3.87). As an IP strategy, the company approached design protection for the new Beetle in some countries. However, competitors sought to cancel Community Design registration by claiming that it was published more than one year before the application; therefore, it was lack of novelty and individuality. Finally, Community Design registration became invalid. The company had to seek another type of IP protection and chose that the iconic configuration for the new Beetle was registered as a three-dimensional mark in

some countries. However, it was troublesome and a running period. In addition, the trademark registration in some European Union countries was expired after a while. As well as approaching three-dimensional mark, the company have some licensing agreements between various companies.

The Honda Super Cub motorcycle is the most iconic vehicles of 20th century and a part of the everyday life and culture. It was the first motorcycle to use a plastic (polyethylene) fairing. The Super Cub competes against automotive company all over the world. The company succeeded to use the advertisement effectively. It became a national object which do everything in Vietnam after the Vietnam War. It is exhibited at the Mori Arts Center Gallery and the Guggenheim Museum (Figure 3.88). The IP history of the Super Cub began lately. After releasing the knock-offs of it, the company approached to protect by design registration in first Japan than in other countries and continued with three-dimensional mark for the shape of the iconic Super Cub in Japan (Figure 3.89). It became the first vehicle to be granted as three-dimensional mark in Japan.

The Stokke Tripp Trapp chair is an iconic design with adjustable L shape design. It has been granted 'Best Norwegian Design from the last 100 years' and displayed in some museums. It has a strong market place both nationally with a 90 percent market share in Norway and internationally with three million sales of the Stokke Tripp Trapp chairs (Figure 3.90). The chair began to be protected by a patent. Meanwhile, it was protected by copyright similar to the Barcelona chair. However, when all patents lapsed, competitors had widely infringed the copyright of the iconic design. As an IP strategy, Stokke approached to protect three dimensional shape of the Stokke Tripp Trapp chair by a three-dimensional mark to secure its exclusive right (Figure 3.91). However, three-dimensional mark in Benelux countries became invalid on the grounds that its shape gives the substantial value. On the other hand, it is still registered as a three-dimensional mark in Denmark.

The Crocs shoe is an iconic product with large ventilation holes, Croslite material and bold colors. It is a part of pop culture globally and a part of everyday life. It has been

seen on TV, digital and social media. It has sold more than 300 million pairs of shoes since 2002. It has given inspiration to many fashion designers recently (Figure 3.92). After 4 years of its inception, the company began to be protected the Crocs shoe by design in many countries. However, the design registrations in the European Union countries and the United States was declared as invalid because it was not new (Figure 3.93). Afterwards, knock-offs started to infringe design patent and trade dress of the Crocs shoe. In order to prevent this, the company approached to protect its iconic design by other type of IP protection; three-dimensional mark. As an IP strategy, the company applied for three-dimensional mark protection for three dimensional shape of the Crocs shoe when its design protection became invalid.

Except the Honda Super Cub, other iconic product designs in this category were protected by at least one type of IP protection when they were introduced. The first IP protection type is usually a patent or a design. Especially in the furniture industry, copyright protection is often accompanied with design or patent protection from the beginning. When patent and design protections lapse, companies like Coca-Cola, Zippo, Volkswagen and Honda faced a period without any IP protection of their three dimensional shapes. Copyright protection could be obtained, but copyright is not adequate to protect three dimensional shape, which allows infringements by third parties. Therefore, owners of these iconic product designs seek three-dimensional marks to sustain their exclusive rights. Although, most of the applications for three-dimensional marks were accepted in most countries, some of them were absolutely rejected.

TOBLERONE CHOCOLATE BAR

Iconic Product Designs

TOBLERONE CHOCOLATE BAR

Packaging Design

1908
Theodor Tobler and Emil Baumann developed Toblerone chocolate bar with a distinctive taste.

PATENT

1909
A patent for its manufacturing process was granted 46708, Switzerland.

3D MARK

1971
A three-dimensional trademark for triangular shape was granted UK00000981938, UK.

1995
Toblerone minis were launched.

2007
Toblerone Fruit and Nut was launched.

Figure 3.78 Left and right: The design and IP biography of the Toblerone chocolate bar

1908
The milk chocolate combined with honey and almond nougat is protected by trade secret.

TRADE SECRET

1969
Toblerone Dark Chocolate was launched.

1973
Toblerone White Chocolate was launched.

Time magazine listed Toblerone as the third among the most influential chocolate bars of all time.

Toblerone is the third-best seller in duty free shops.

Toblerone chocolate bar has also been dressed in various limited-edition sleeve designs for special days and celebrations such as Christmas, Valentine's Day, and Father's Day.

2000
The packaging featuring the Matterhorn with the "hidden" bear figure was introduced.

2016
The new design with increased gap between the peaks in two of its bars to reduce the weight of the bars, was introduced.

Design Biography

IP Biography

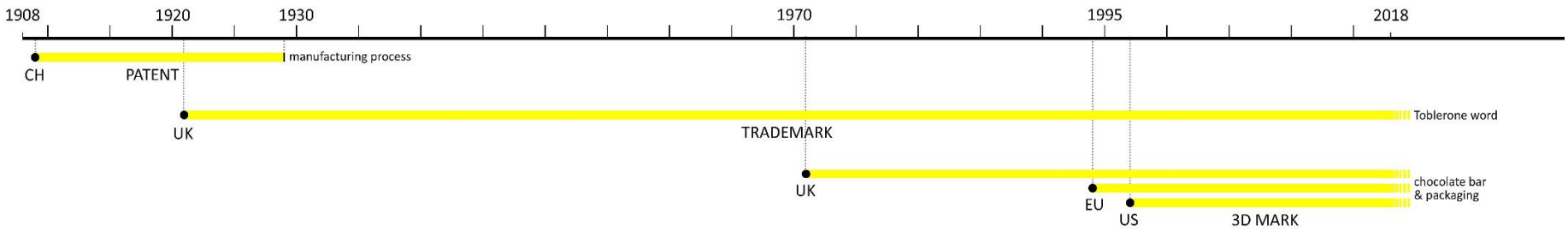


Figure 3.79 IP history of the Toblerone chocolate bar

Patent: 46708

Trademark: UK00000415012

3D Mark: UK00000981938, 615994, 2078468

COCA-COLA CONTOUR BOTTLE

Iconic Product Designs

COCA-COLA CONTOUR BOTTLE

Packaging Design

1886
Coca Cola was invented by Doctor John Pemberton in Atlanta, Georgia in the USA.

1906
Amber-coloured bottles were used.

1915
Coca-Cola contour bottle first prototype

1916
Coca-Cola contour bottle (Hobble-skirt) was designed by Alexander Samuelson, who was employed for the Root Glass Company.

1923
"Christmas Bottle" was designed by changing the contour shape.

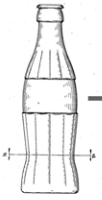
DESIGN

1937
A design patent was granted 105529, U.S.A..

1950
The Coca Cola contour bottle was appeared on the cover of TIME magazine/

1977
The second three-dimensional trademark for contour shape itself, without any words written or embossed on it, was granted 1057884, U.S.A.

3D MARK



2005
Magnificient5 (M5) which was comprised of five aluminium printed bottles created by design studios from five continents was introduced.

2018
The Coca-Cola contour bottle still retains the silhouette of the contour bottle

Figure 3.80 Left and right: The design and IP biography of the Coca-Cola contour bottle

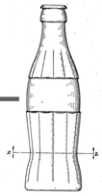
1886
It was protected by trade secret.

TRADE SECRET

1899
It was first bottled with a straight-sided Hutchinson bottles in Chattanooga, Tennessee.

1915
A design patent for first contour bottle was granted 48160, U.S.A.

DESIGN



1923
A design patent for the Christmas Bottle was granted 63657, U.S.A.

DESIGN

Images of the contour bottle were present on Coca-Cola's branded paper cups and cans.

The contour bottle has also appeared in art, in numerous movies and exhibitions as a part of everyday lifestyle.

1937
A new design by E.Kelly was introduced.

1960
The first three-dimensional trademark for the contour bottle with the word "Coca Cola" written on it was granted 696147, U.S.A.

3D MARK

1993
The small PET bottle with classic contour design was introduced.

2008
The Anglo-American Turner Duckworth agency designed Coca-Cola aluminium bottle with classic contour design.

Design Biography

IP Biography

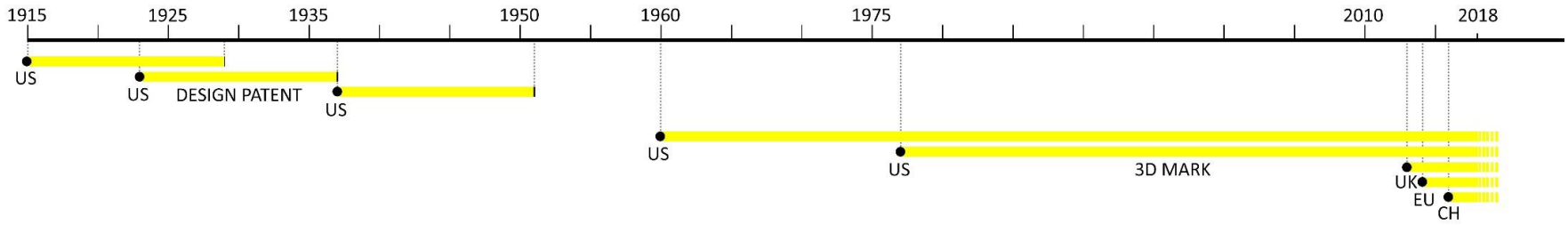


Figure 3.81 IP history of the Coca-Cola contour bottle

Design Patent: 48160, 63657, 105529

3D Mark: 696147,1057884

BARCELONA CHAIR

Iconic Product Designs

BARCELONA CHAIR

Furniture Design

1929
The Barcelona chair was designed by Mies van der Rohe and Lilly Reich, for German Pavilion at the Barcelona International Exhibition.

1953
Knoll produced the replica of original Barcelona chair presented as a gift to at the Museum of Modern Art in New York.

3D MARK

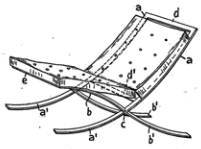
2004
A three-dimensional trademark for a chair with a metal frame and leather cushions was granted 2893025, U.S.A..

2018
Today, Barcelona chair is mostly appeared in lobbies of office buildings.

Figure 3.82 Left and right: The design and IP biography of the Barcelona chair

1929
The design of the Barcelona chair is protected by copyright.

COPY-RIGHT



1929
A patent for a chair made of metal rails linked crosswise as supporting elements was granted 486722, Germany.

PATENT

Most distinctive characteristics of Barcelona chair are a scissor-shaped metal frame and leather cushions.

The frame is now available in chrome and stainless steel and cushions are available in different colours and leather types.

It was never intended to mass production and required hand labour.

It was manufactured by Berliner Metallgewerde Joseph Müller, by Bamberg Metallwerkstatten and by Knoll International.

1977
It was honoured with the Museum of Modern Art Award.

2005
A three-dimensional trademark was granted 30504503, Germany.

3D MARK

Design Biography

IP Biography

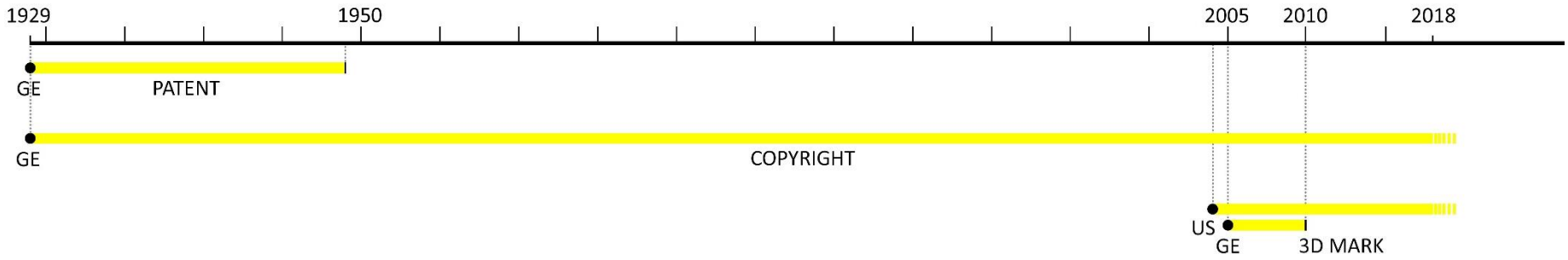


Figure 3.83 IP history of the Barcelona chair

Patent: 486722

3D Mark: 2893025, 30504503

ZIPPO LIGHTER

Iconic Product Designs

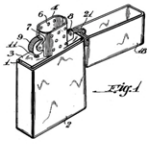
ZIPPO LIGHTER

Lighter Design

1932
Zippo Manufacturing Company was founded by George Grant Blaisdell at the Bradford Country Club, Pennsylvania.

PATENT

1936
A patent for a pocket lighter having utilitarian features was granted 2032695, U.S.A.



1947
Town and Country designs were introduced.

1950
Lighters with leather cover and sterling silver lighters were launched.

1956
Slim model designed for especially women was introduced.

2002
A new product category with the MPL (Multi-Purpose Lighter) to light candles, grills, and fireplaces was launched.

DESIGN

2007
A community design for the appearance of the lighter was granted 000827472-0001, EU.

Figure 3.84 Left and right: The design and IP biography of the Zippo lighter

1933
Blaisdell designed Zippo lighter.

1939
Zippo dedicated the manufacturing to the U.S. military during World War II.

1947
Blaisdell designed a car looked like a Zippo lighter.

1950
A patent for a flint-receiving tube component was granted 2517191, U.S.A.

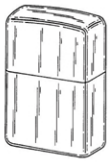
PATENT

Most distinctive characteristics of Zippo lighter are slightly rounded edges and corners, and a curvature in the shape of a slight arc in the top of the lighter.

30% of Zippo's customers was collectors and most of buyers bought it as a gift.

The company have been added new products such as pocket knives, pocket tape measure, pen sets, and pocket flashlight.

1997
The Zippo/Case Museum was opened in Bradford, Pennsylvania.



2002
A three-dimensional trademark for having slightly rounded edges and corners, and a curvature in the shape of a slight arc in the top of the lighter, was granted 2606241, U.S.A

3D MARK

Design Biography

IP Biography

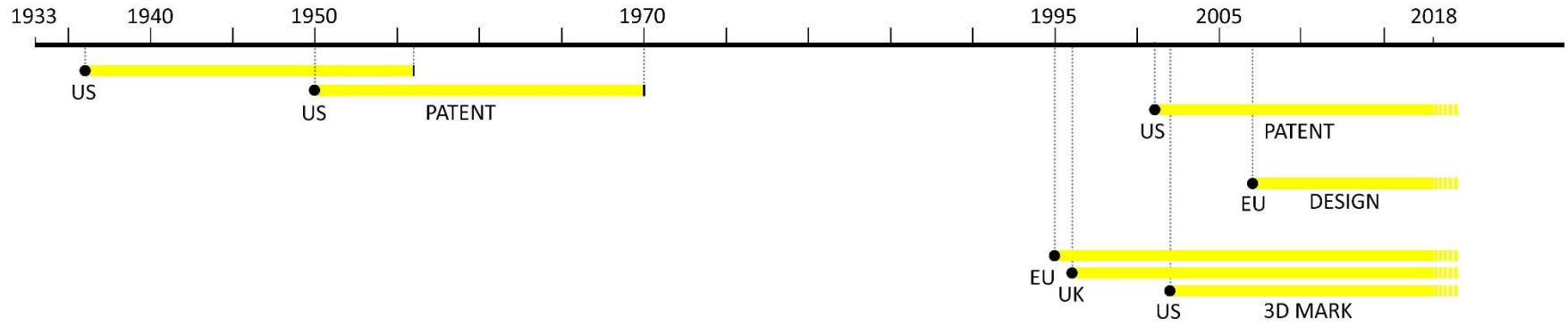


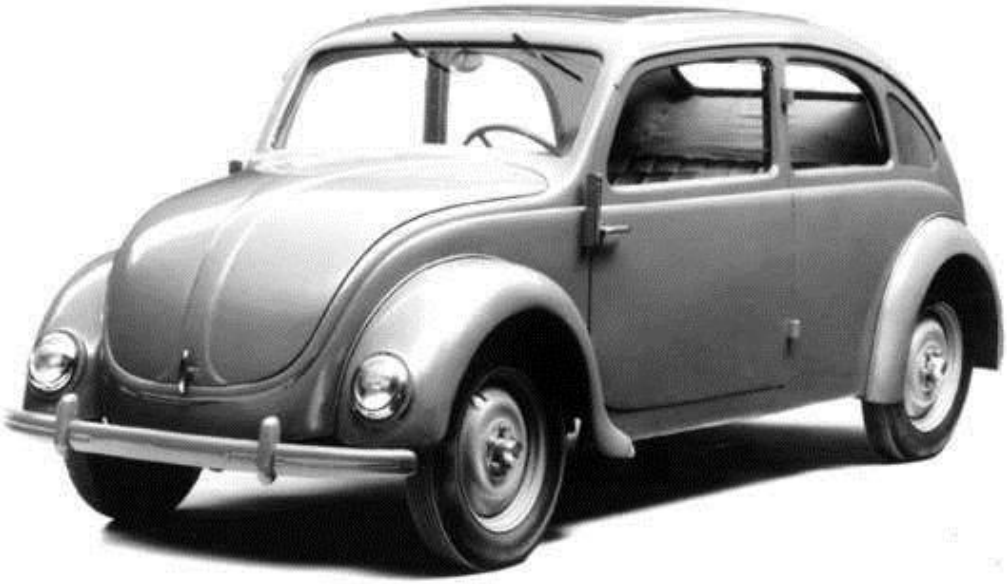
Figure 3.85 IP history of the Zippo lighter

Patent: 2032695, 2517191, 6247920

Design: 000827472-0001

3D Mark: 000137117, UK000002006491, 2606241

VOLKSWAGEN BEETLE AUTOMOBILE



Iconic Product Designs

VOLKSWAGEN BEETLE

Automobile Design

1933
Emily Komenda designed the Volkswagen Beetle.

1938
VW38 Saloon model and VW38 Cabriolet model were introduced.

PATENT

1944
A patent for the invention related to a vehicle body and to such a body formed of artificial material was granted 2344092, U.S.A.

1953
The convertible Beetle was introduced.

1973
The 1303 model was introduced (Super Beetles).

DESIGN

1994
The design of the new Beetle "Concept I" was granted by design registration DM/030041, EU.

DESIGN

1996
The design of the first generation of the new Beetle was granted by design registration DM/037400, EU.

DESIGN

2003
The design of new Beetle was granted by community design registration 000111596-0001, EU.

2016
The Beetle Dune coupe and convertible were launched.

Figure 3.86 Left and right: The design and IP biography of the Volkswagen Beetle

1935
The first Beetle prototype “Type 32 Model” was completed.

1939
Production was switched from civilian vehicles to military vehicles during World War II.

1949
A new model named export model for foreign markets was introduced.

1971
The 1302 model was introduced (Super Beetles).

1994
The new Beetle concept known as “Concept I” which was launched at the Detroit Motor Show.

The most significant factor in the popularity of the Volkswagen Beetle and one of the best-selling car was advertising.

Volkswagen Beetle which is the best-selling car of all time that revolutionised the automotive sector invaded into the pop culture.

There are some products which are licenced by Volkswagen Company.

2000
Configuration of the new Beetle was registered as a three-dimensional trademark 2409675, U.S.A.

3D MARK

2013
The droptop Beetle was launched with the new body style.

Design Biography

IP Biography

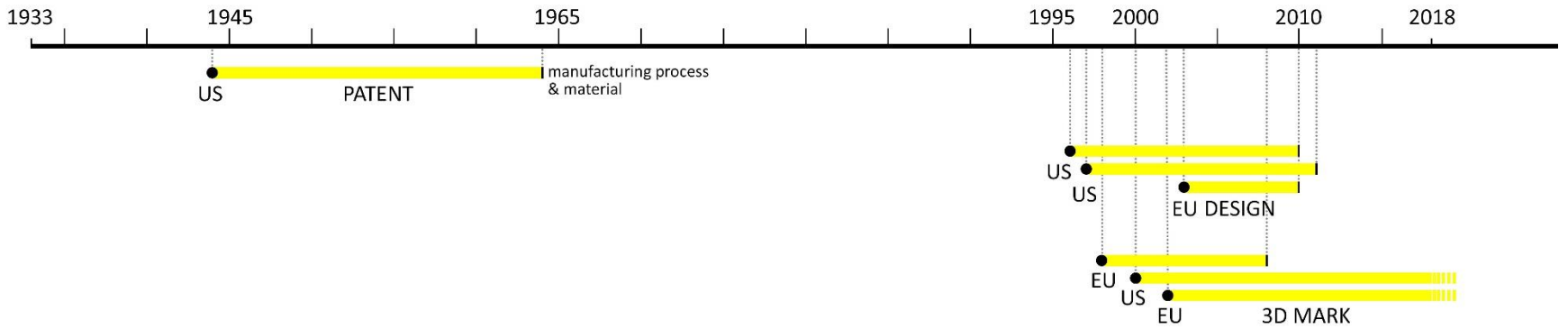


Figure 3.87 IP history of the Volkswagen Beetle automobile

Patent: 2344092

Design: D367440, D385828, 000111596-0001

3D Mark: 699241, 2409675, 002069342

HONDA SUPER CUB MOTORCYCLE

Iconic Product Designs

HONDA SUPER CUB

Motorcycle Design

1948
The Honda Motor Car Company was launched by Soichiro Honda in Japan.

1960
C102 model was introduced

1963
Honda began to work with Grey Advertising Inc. with the slogan "You meet the nicest people on a Honda".

1998
Storage capacity was increased on the C100 BIZ model.

DESIGN

2009
Super Cub were granted by design registration JP,1377892,S , Japan.

2009
The Love Cub 50 Project including Super Cubs were exhibited at the Mori Arts Center Gallery.

3D MARK

2014
A there-dimensional trade-mark for the shape of the Super Cub was granted 5674666, Japan

2018
The EV-Cubs electric motor was introduced at Tokyo Motor Show.

Figure 3.88 Left and right: The design and IP biography of the Honda Super Cub

1958
The Super Cub 50 was designed by Soichiro Honda and Takeo Fujisawa.

1962
Super Cub was called CA100 and CA102.

1981
CT110 known as “Hunter Cub” was designed for touring and suburban riding.

2003
Wave125 which was widely popular especially in Thailand was designed.

2009
The EV-Cubs electric motor which was firstly conceptualized.

2011
Super Cub were granted by design registration JP,1425547,S, Japan.

2015
Super Cub concept was reproduced and exhibited at Tokyo Motor Show.

Honda Super Cub was friendly for all riders even women wearing skirts through a step through frame.

It is now dominant in the automotive manufacturing all over the world.

It has become a big part of everyday life and culture in Japan and rose to cult status in Asian countries.

It was also released in Vietnam during the 1960s in the middle of the Vietnam War.

DESIGN

Design Biography

IP Biography

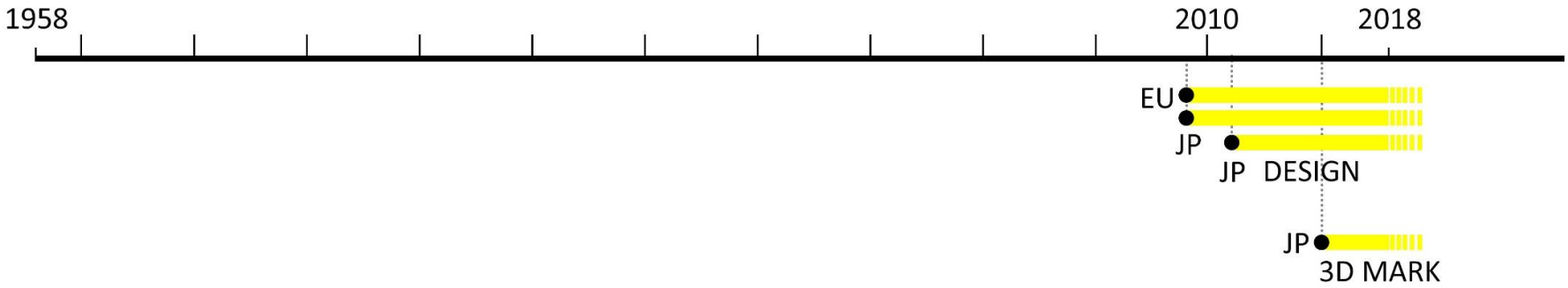


Figure 3.89 IP history of the Honda Super Cub motorcycle

Design: 001580762-0001, JP,1425547,S

3D Mark: 5674666

STOKKE TRIPP TRAPP CHAIR

Iconic Product Designs

TRIPP TRAPP CHAIR

Furniture Design

1972
The Tripp Trapp chair was invented by Peter Opsvik and commercialized by Stokke AS.

COPY-RIGHT

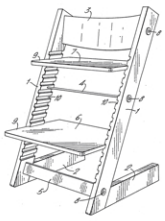
1972
The design of Tripp Trapp chair are protected by copyright.

3D MARK

2001
A three-dimensional trademark was granted 767786, Denmark.

2018
With a %90 market share in Norway, Stokke has sold more than three million Tripp Trapp chairs worldwide.

Figure 3.90 Left and right: The design and IP biography of the Stokke Tripp Trapp chair



1972
A patent for the feature being used from infancy to adulthood by re-positioning the plates was granted in many countries.
4109961, U.S.A.

PATENT

1998
A Benelux trademark for the shape of the Tripp Trapp chair was granted.

3D MARK

Most distinctive characteristics of the Tripp Trapp chair is adjustable L shape which provides to use from infancy to adulthood .

2017
It was granted 'Best Norwegian Design from the last 100 years' by Aftenposten and the Norwegian Design and Architecture Center.

Design Biography

IP Biography

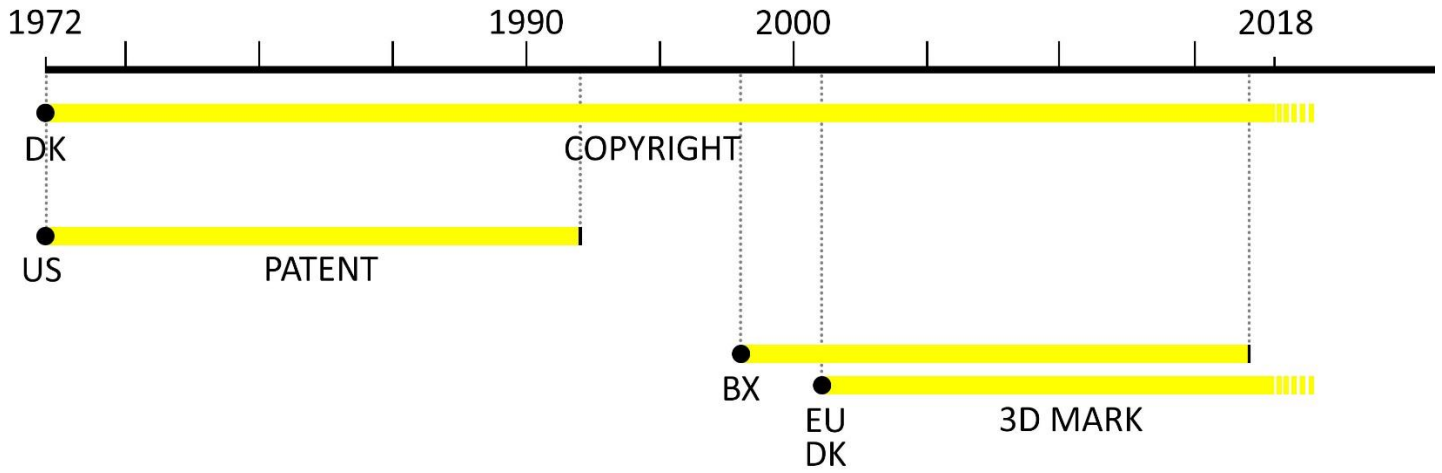


Figure 3.91 IP history of the Stokke Tripp Trapp chair

Patent: 4109961

3D Mark: 0639972, 767786

CROCS SHOE

Iconic Product Designs

CROCS SHOE

Footwear Design

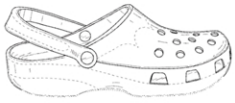
1999
Crocs Inc. was founded in
Niwot, Colorado, United States.

TRADE SECRET

Croslite material is
protected by trade secret.

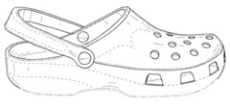
DESIGN

2006
First design patent
was granted
517789, U.S.A.



3D MARK

2017
A three-dimensional
trademark for the shape
of Crocs shoe was granted
5149328, U.S.A.



2017
Crocs shoe has sold
in more than 90
countries around
the world.

Figure 3.92 Left and right: The design and IP biography of the Crocs shoe

2002
Crocs shoe was first introduced at the Fort Lauderdale Boat Show, U.S.

2006
A patent for manufacturing process of breathable footwear pieces was granted 6993858, U.S.A.

PATENT

2016
Christopher Kane designed marble-print, jewel studded Crocs.

2017
Demna Gvasalia designed platform Croc shoes for Balenciaga.

Most distinctive characteristics of Crocs shoe are large ventilation holes, material and bold colours.

Crocs shoe is mostly made of Croslite material; but, leather, canvas or other materials can be added.

Crocs shoe is lightweight, odor-resistant, comfortable, shock absorbing, antimicrobial and non-marking qualities.

The company also started to sell other accessory products like caps, shirts, shorts, hats, socks and backpacks.

The silhouette of the Crocs shoe on TV, digital and social media.

Design Biography

IP Biography

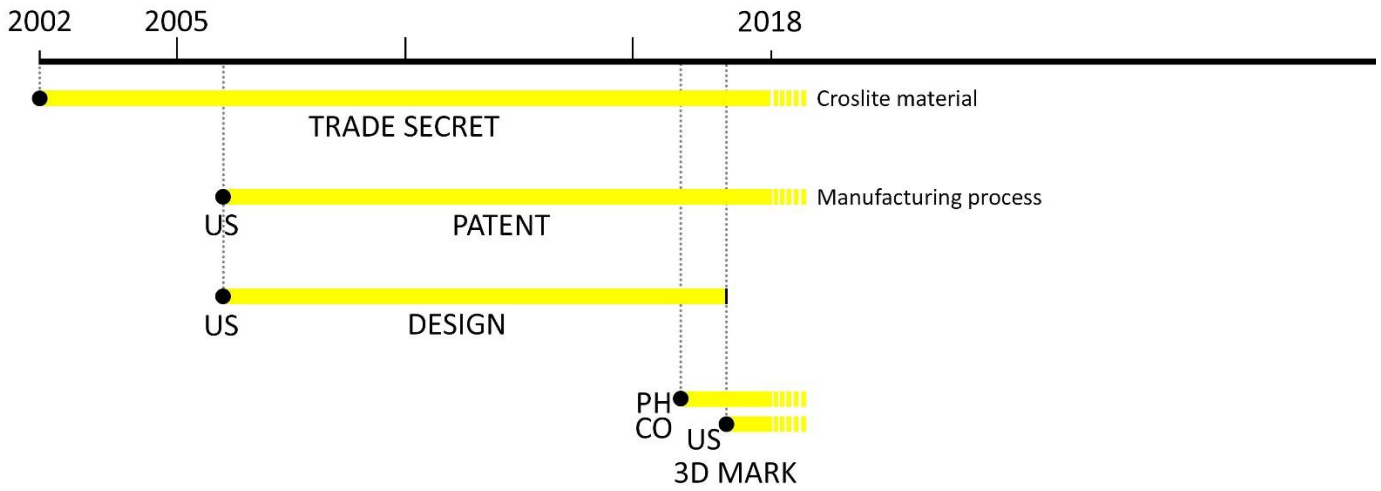


Figure 3.93 IP history of the Crocs shoe

Patent: 6993858

Design: D517789

3D Mark: 534245, 4-2015-505727, 5149328

3.3.1.2 Iconic Buildings Protected by Three-Dimensional Marks

3.3.1.2.1 Taj Mahal Palace Hotel Building

Design Biography of the Taj Mahal Palace Hotel Building

The Taj Mahal Palace is a historic luxury hotel in the Colaba district of Mumbai, India. It is located near the Gateway of India with a view of Mumbai Harbour and THE Arabean Sea (Figure 3.94). The editor of The Times of India realized the need for a hotel worthy of Bombay (now known as Mumbai) and asked Jamsedji Nusserwanji Tata to build one (Allen, 2008). The Taj Mahal Palace Hotel was designed by D.N. Mirza and Sitaram Khanderao Vaidya and constructed by the Taj Hotels Resorts and Palaces of the Tata Group. It opened in 1903 (Design Build Network, n.d.).

Figure 3.94 The Taj Mahal Palace Hotel on left, the Tower in the middle and the Gateway of the India at right (URL 64)

The hotel consists of two buildings; the Taj Mahal Palace and a tower, which have different architectural styles because they were built at different times (Sinha, n.d.). The Tower block was designed by architect Melton Bekker and Swiss designer Dale Keller in the 1970s (Design Build Network, n.d.). The building contains 22 floors, 560 rooms, 44 suits, five conference rooms and 11 restaurants.

The design was inspired by European and Islamic style architecture (Design Build Network, n.d.) (Figure 3.95). It has distinctive domes and pointed arches, which were prominent in 16th century Islamic architecture (Design Build Network, n.d.) (Figure 3.96). The interior is a mix of Florentine, Oriental and Moorish styles and includes onyx columns, cantilever stairways, and Indian furnishings and art (Craven, 2017a) (Figure 3.97). The entrance of the hotel faces the city and the rear faces the harbour

(Sinha, n.d.). The main structure of the building is made of yellow basalt and reinforced concrete while the domes are made of imported steel of the same type used in the Eiffel Tower (Design Build Network, n.d.). Between 2008 and 2010, the building was under reconstruction and renovation (Design Build Network, n.d.).

Figure 3.95 The exterior design of the building (URL 65)

Figure 3.96 The distinctive red domes of the building (URL 66)

Figure 3.97 The interior design of the hotel (URL 67)

The hotel was the first in India to operate a steam elevator, American fans, and a Turkish bath (Sinha, n.d.). The hotel offers popular entertainment options such as live classical music, opera, and dance performances (Historic Hotels of the World - Then & Now, n.d.). It has hosted The Beatles, Brad Pitt, Angelina Jolie, Barack Obama, and Bill Clinton (Sinha, n.d.).

The hotel was used as a 600-bed hospital during World War I (Sinha, n.d.). When India gained its independence in 1947, the building hosted the first speech of the independent India (Historic Hotels of the World - Then & Now, n.d.). As an important symbol of India, the building was targeted by a terrorist attack on 26 November 2008, killing 167 people (Sinha, n.d.).

The Taj Mahal Palace Hotel is considered a part of Mumbai's history and skyline, and a global symbol of Mumbai and Indian hospitability (AD Insider, 2017).

Intellectual Property Biography of the Taj Mahal Palace Hotel Building

The Taj Mahal Palace Hotel has copyright protection and was granted an Indian three-dimensional mark for its distinctive design including red domes and pointed arches in 2017 (Figure 3.98).[39] The Taj Mahal Palace Hotel which is 114 years old is the first architectural design to be trademarked in India (AD Insider, 2017).

Figure 3.98 Three-dimensional trademark of the Taj Mahal Palace Hotel Building

[39] Indian Trademark Reg. No. 3,386,351

3.3.1.2.2 Chrysler Building

Design Biography of the Chrysler Building

William H. Reynolds, a real estate developer, commissioned the architect William Van Alen to design an office tower in 1927 (Nash & McGrath, 2010). Reynolds sold the lease to Walter P. Chrysler, the owner of the American automotive company, in 1928 (Ranogajec, n.d.). The building was sold in 1953 and currently belongs to Tishman Speyer Properties (Adler, 2000).

Both Reynolds and Chrysler insisted on a tall, glamorous, and unique building (Ranogajec, n.d.). William Van Alen designed the skyscraper project and sold it to Walter P. Chrysler for $2 million in 1928 (Lee, 2012) (Figure 3.99). Although it was designed to be the New York headquarters of the Chrysler Corporation, Walter P. Chrysler paid for it himself (Architectuul, n.d.a). Construction began in 1928 and was completed in 1930 (Ranogajec, n.d.).

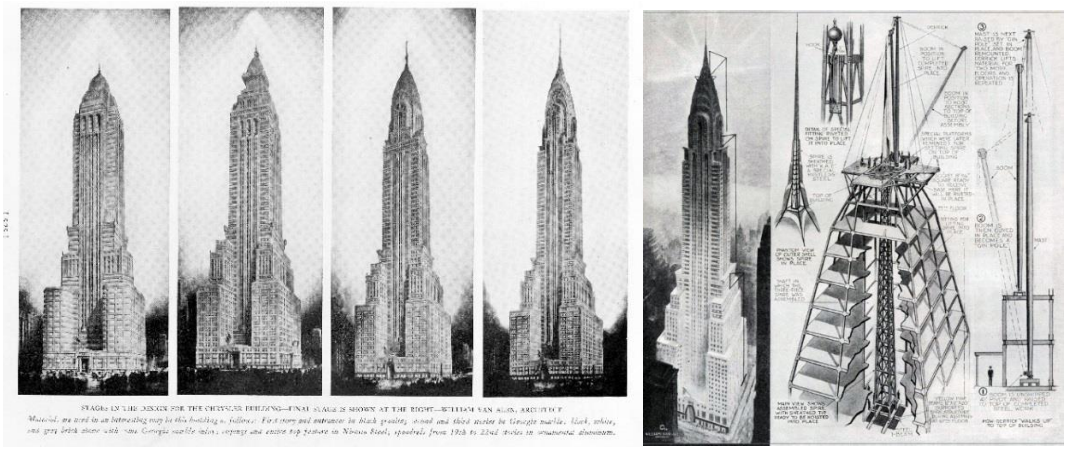


Figure 3.99 Stages in the design of the Chrysler Building (URL 68)

The Chrysler Building is located at Lexington Avenue on 42nd street, in New York, the United States (Figure 3.100). It was the headquarter of the Chrysler Corporation from the 1930s to the 1950s. (Architectuul, n.d.a) It was the world's tallest building at the height of 319.5 meters (1048 feet) until the Empire States building was completed in 1931 (Ranogajec, n.d.). It was the first man-made structure to stand taller than 305 meters (1.000 feet) and surpassed the Eiffel Tower which had been the world's tallest since its completion (Architectuul, n.d.a) (Figure 3.101).

Figure 3.100 The view of the Chrysler Building on the New York skyline (URL 69)

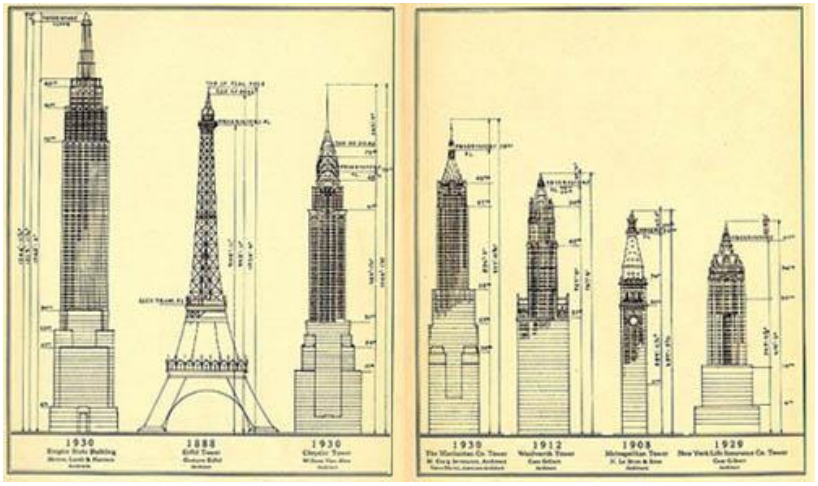


Figure 3.101 Height comparison of the tall building in the 1920s (URL 70)

Chrysler Building contains 3,862 windows and rises 77 floors including a lobby and entrances from three side of the building (Sveiven, 2010) (Figure 3.102). It has a 38-meter (125 feet) spire that gleams like an enormous jewel. It has a steel frame, with masonry, and metal cladding. The top of the building contains Walter P. Chrysler's executive office, an observation deck, and the legendary Cloud Club (Sveiven, 2010).

Figure 3.102 The details inside of the building (URL 71)

The exterior of the building is decorated with geometric forms and black and white stripes drawn horizontally between floors (Figure 3.103). The building is decorated with red Moroccan marble walls, sienna yellow floor, onyx, blue marble, and steel. The ceiling murals were painted by artist Edward Trumbull to represent progress, transport, and energy (Nash & McGrath, 2010) (Figure 3.104).

Figure 3.103 The exterior decoration of the building (URL 72)

Figure 3.104 The decoration of the interior and the painting by Edward Trumbull (URL 73)

The exterior of the building is incorporated with the mechanism of the modern age (Adler, 2000). There are eight steel gargoyles on the corners of the 61st floor, designed by Chesley Bonestell. They represent eagles that overlook the city like the radiator and hood of the Plymouth automobile made by Chrysler Company (Designing Buildings Wiki, 2016) (Figure 3.105).

Figure 3.105 Steel gargoyles on the building (URL 74)

The Chrysler Building is one of the aesthetically strongest office buildings, its style distinct against its surroundings (Sveiven, 2010). The Chrysler Building is a leading example of Art Deco style and is hailed as modern, urbane and luxurious (Ranogajec, n.d.). It is a symbol of urban modernity, of New York's business dynamism, and of the vibrant nightlife of the world's newest metropolis (Ranogajec, n.d.). It summarizes the Machine Age in the 1920s. (Sveiven, 2010).

The architectural critic Kenneth Murchison said that the Chrysler Building represents ‘our modern life, its changing conditions forces with more accuracy and clearness than almost anything else in the way of an office building that has lately burst upon the startled vision of the classicists and the columnists.’ (Kingston, 2017). It was declared a National Historic Landmark in 1976 and a New York City Landmark in 1978 (n.d., 2016c). In a 2005 survey of one hundred architects, engineers, and historians conducted by New York’s Skyscraper Museum, it was chosen as the favourite tower in New York (Maher, 2016). It was ranked ninth on the List of America's Favourite Architecture by the American Institute of Architects in 2007 (Sveiven, 2010).

The Chrysler Building has appeared on tablecloths, stickers, backpacks and other goods. It has been featured in several movies and television commercials, including Godzilla, Armageddon, Deep Impact, Fantastic Four: Rise of the Silver Surfer, Sex and the City and Spider-Man (Adler, 2000) (Figure 3.106). Its distinctive shape has inspired skyscrapers such as Liberty Place in Philadelphia (Wikiarquitectura, n.d.a) (Figure 3.107). The Chrysler Building is still used as an office building by large investment and property companies, and it is one of the most recognisable buildings today.

Figure 3.106 ‘Armageddon’ movie in 1997 (URL 75)

Figure 3.107 Liberty Place in Philadelphia (URL 76)

Intellectual Property Biography of the Chrysler Building

Since the Chrysler Building is a symbol of the urban modernity, the Machine Age, and the spirit of an automobile company, the owner of the building is interested in controlling the use of the image and symbolic value of a landmark building as well as commercial success (Christ, 2002). Therefore, the Art Deco spire of the Chrysler Building was registered as a three-dimensional trademark in 1979 and the entire building in 2016 for more than 400 goods and services in the United States (Figure 3.108).[40]

[40] U.S. Trademark Reg. No. 1,126,888 and 5,034,166

Figure 3.108 Three-dimensional marks of the Chrysler Building

The Chrysler Building is protected against unauthorised uses of the building design. Once, a company called Fishs Eddy began selling dishes depicting the New York skyline, including drawings of the Chrysler Building (Figure 3.109). Tishman Speyer Properties and the Travelers Group which own the building, asked to stop selling the dishes, then sued, complaining that Fishs Eddy was taking the advantage of both the landmark image and getting free national advertising and publicity (Christ, 2002) Fishs Eddy argued that the dishes did not represent the Chrysler Building, they only represented the New York skyline (Dunlap, 1998). However, Fishs Eddy continued to use the Chrysler Building on its dishes. The owners of the Chrysler Building also brought a lawsuit against New York- New York Hotel and Casino which used a mini replica of the building using drawings (Figure 3.110). Thirdly, the owner of the building sued a photographer selling images of the Chrysler Building (Alpern, 2002).

Figure 3.109 Dishes by Fish's Eddy (URL 77)

Figure 3.110 New York- New York Hotel and Casino in Las Vegas (URL 78)

3.3.1.2.3 Empire State Building

Design Biography of the Empire State Building

John Jakob Raskob, the head of the General Motors, Coleman and Pierre du Pont, Louis G. Kaufman and Ellis P. Earle formed Empire State, Inc. in 1929 (CNN, 2017). Raskop commissioned architectural firm Shreve, Lamb and Harmon Associates to design a building completed by May 1, 1931 (Berman, 2003) (Figure 3.111).

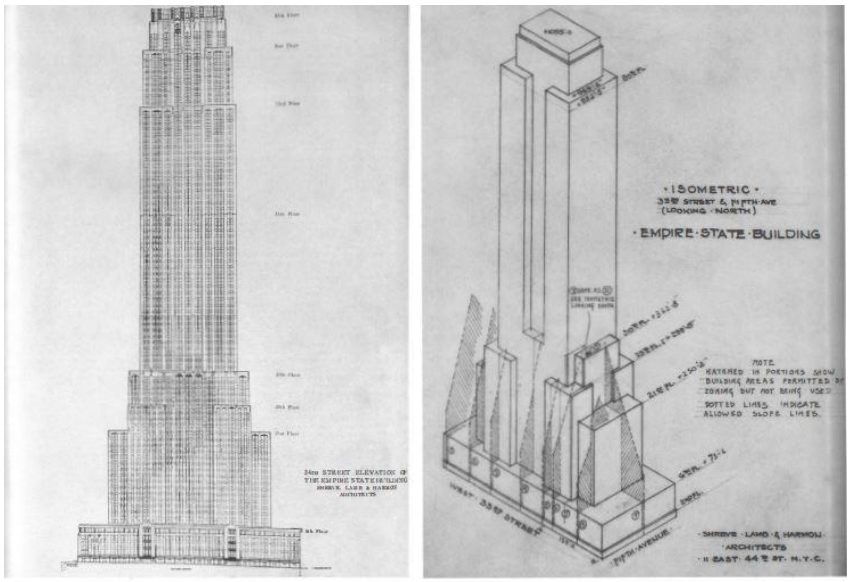


Figure 3.111 The drawings of the building by architects Shreve, Lamb and Harmon Associates (Berman, 2003)

The Empire State Building is in Midtown Manhattan, New York City, at the intersection of Fifth Avenue and West 34th Street. It sits on the site once occupied by the Waldorf-Astoria Hotel, which opened in 1897 and became a symbol of luxury in the United States (Reis, 2009). It was demolished, and construction of the Empire State Building began in 1930 (Reis, 2009) (Figure 3.112). The building was opened to the public on May 1, 1931. Because of the Great Depression, it was not fully rented initially; and was nicknamed the 'Empty State Building' (Mackay, 1987) (Figure 3.113). Despite its lack of tenants, it became a center of tourist attraction.

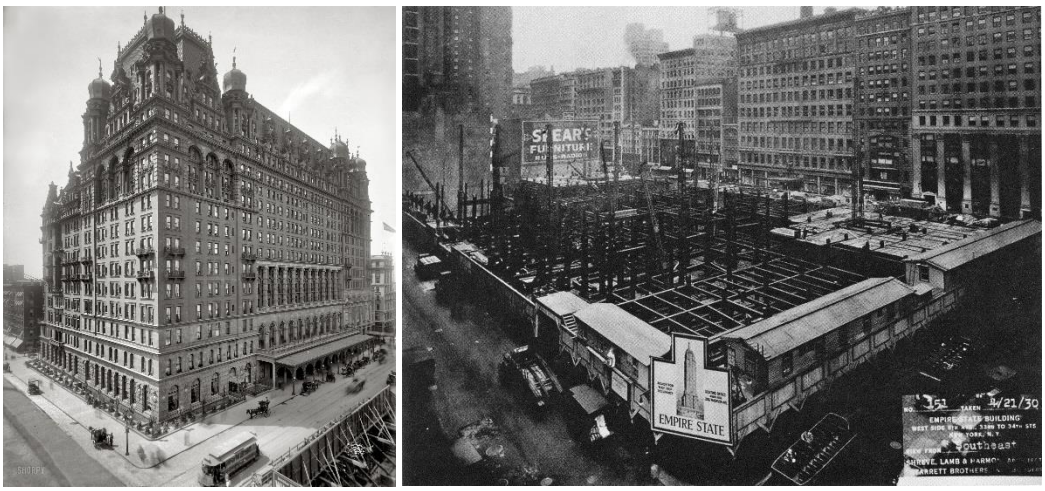


Figure 3.112 From left to right: The Waldorf-Astoria Hotel and the beginning of the Empire State Building construction (URL 79)

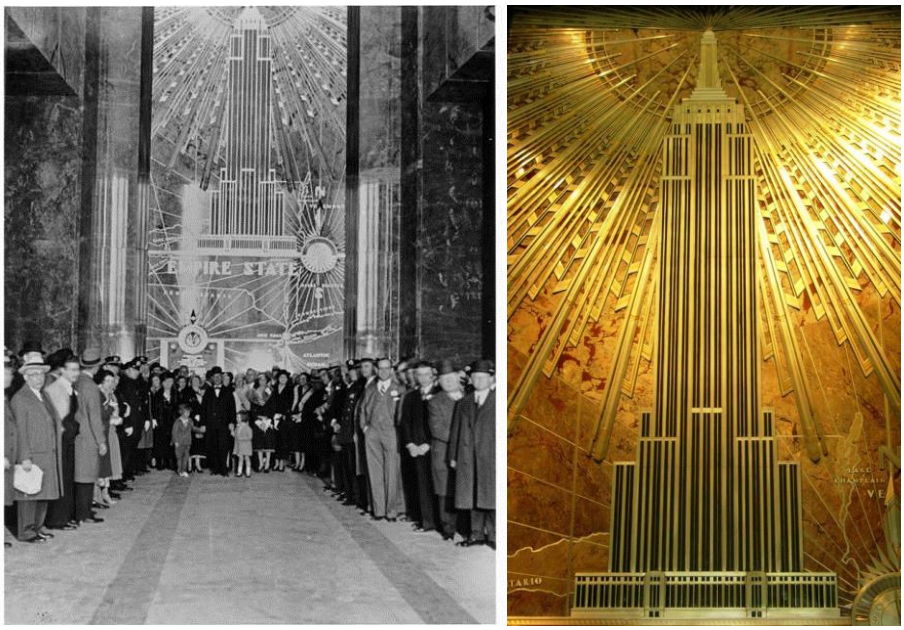


Figure 3.113 The opening ceremony of the Empire State Building at its lobby (URL 80)

The design of the building was inspired by the phrase 'Form follows function' in the Art Deco style (Reis, 2009). The design is created by light and shadow rather than architectural ornamentation (Berman, 2003) (Figure 3.114).

Figure 3.114 The view of the Empire State Building (URL 81)

It is 443,2 meters (1,453 feet) high with 103 stories, which makes it the first building to have more than 100 floors (Graham, 2015). It has 73 elevators and over 6.500 windows. The exterior is covered in gleaming nickel aluminium and limestone (Douglas, 1996). There is both an outdoor and indoor observation deck on the 86th

floor. The building's water delivery system was an innovation - its water tanks were placed inside the building instead of on the roof like other skyscrapers (Penafiel, 2006).

The structural elements of the building were designed as modular pieces and the whole structure was 'mass-produced' like a Ford's automobile (Berman, 2003). This is why it came in at $3 million less than estimated cost (Douglas, 1996). TIME magazine later reported that the building had become one of the most profitable buildings (Reis, 2009). It was a modern demonstration of the power of industrial technology.

It was the world's tallest building when it was constructed. However, it dropped to second place when the Twin Towers of the World Trade Center are completed in 1972 and then to third place when the Sears Tower in Chicago was completed in 1973 (Tauranac, 2014). Although it was not the world's tallest building, it was still the world's most famous building (Figure 3.115).

Figure 3.115 The Empire State Building on the New York skyline with Chrysler Building at right (URL 82)

It was designated as a New York City landmark in 1981, listed on the State and National Register of Historic Places in 1982; and, recognised by the National Parks Service as a National Historic Landmark in 1986 (Tauranac, 2014). It has special historical, cultural, and aesthetic value, and is an important part of the city's historical and architectural heritage (Tauranac, 2014).

It was awarded gold medal for ‘architecturally excellent design from top to bottom’ by the Fifth Avenue Association. In addition, the American Society of Civil Engineers recognized it as one of the seven greatest engineering achievements in America’s history in 1955 (Tauranac, 2014). It was ranked number one on the list of America’s Favourite Architecture by the American Institute of Architects in 2007 (Empire State Building, n.d,).

A B-25 airplane crashed to the seventy-ninth floor of the Empire State Building in 1945 killing 14 people (Reis, 2009). The Empire State Building is a significant part of pop culture. The building has featured in many movies; the most famous being 1933’s ‘King Kong’ (Tauranac, 2014) (Figure 3.116).

Figure 3.116 King Kong movie in 1933 (URL 83)

The Empire State Building is described as an American cultural icon (Architectuul, n.d.b). The author Louis Philippes said that ‘It is not just a landmark. It is not just a relie on the past. It is not just an exercise in nostalgia. No. It is still at the center of New York.’ (Tauranac, 2014). The building currently owned by Peter L. and Anthony E. Malkin is still the best-known symbol of New York’s skyline and history (Figure 3.117).

Figure 3.117 The building with special lighting design as a symbol of New York's skyline (URL 84)

Intellectual Property Biography of the Empire State Building

ESRT Empire State Building, L.L.C., the corporate owner of the building, holds the U.S. trademark registrations for 'Empire State Building' and 'The World's Most Famous Office Building' as word marks, granted in 2000 and in 2009 respectively.[41] The building has acquired distinctiveness; therefore, ESRT, Empire State Building, L.L.C. has also obtained three-dimensional marks in the United States in 2001 with respect to 'entertainment services, namely providing observation decks in a skyscraper for purposes of sightseeing' and 'real estate services, namely management and leasing of real estate'.[42] Three-dimensional mark consists the shape of the exterior of the skyscraper with a pointed, spindled top (Figure 3.118). The building was also registered as three-dimensional trademark by EUIPO in 2017.[43] The two-dimensional depiction of the building is also registered as figurative trademark by the USPTO (Figure 3.118).[44]

[41] U.S. Trademark Reg. No. 2,411,972, 3,610,613
[42] U.S. Trademark Reg. No. 2,430,828
[43] EU Trademark App. No. 015817075
[44] U.S. Trademark Reg. No. 4,775,666

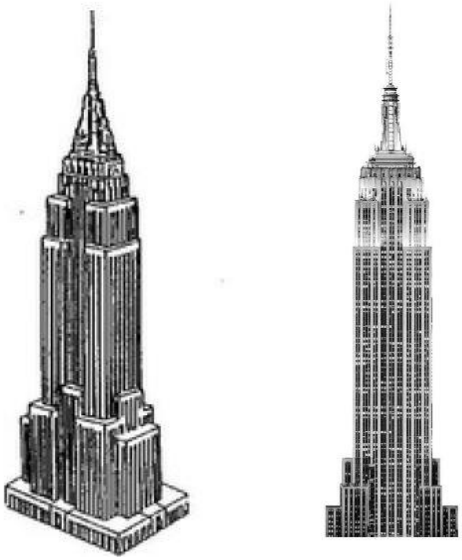


Figure 3.118 From left to right: Three-dimensional trademark and figurative trademark of the building

A recent threat to the Empire State Building's trademarks is an application filed for a logo by NYC Beer. The logo incorporates a representation of the Empire State building. ESRT opposed the application, claiming 'dilution by blurring' which means that 'an association arising from the similarity between a mark and a famous mark'. (ESRT Empire State Building, L.L.C. v. Michael Liang, 2014) (Figure 3.119). The phrase 'Empire State Building' and the building's design are registered trademark. There is a gift shop selling beverages, wine and champagne in the building. The Trademark Trial and Appeal Board rejected the NYC Beer logo because of the finding of dilution (Weller, 2016).

Figure 3.119 The logo of NYC Beer (URL 85)

3.3.1.2.4 Transamerica Pyramid Building

Design Biography of the Transamerica Pyramid Building

Amadeo Giannini founded the Bank of Italy in San Francisco, California in 1904. The bank of Italy merged with the Bank of America in the 1920s, forming the AEGON USA Inc., the third-largest international insurance organization acquired Transamerica in 1999 and still holds it (Aegon, n.d.).

Transamerica Pyramid is located on 600 Montgomery Street in San Francisco, California, United States. It includes Redwood Park, located among the skyscrapers of the financial district (Figure 3.120). It used to serve as Transamerica Corporation's headquarters (Aegon, n.d.). Construction on the Transamerica Pyramid began in 1969 and finished in 1972 (Figure 3.121). Although the Telegraph Hill Dwellers Association, the San Francisco Planning and Urban Research Association and the American Institute of Architects came out against the building, it was completed. The Chronicle Newspaper's architecture critic, Allan Temko, claimed that the building was created by 'special interests with plutocratic arrogance.' He said that 'the building would even be wrong for Los Angeles, where it was hatched, or Las Vegas, where it belongs, or in Dallas, where buildings vie for attention. It certainly does not belong in San Francisco, which is sensitive and easily hurt.' (Niekerken, 2016).

Figure 3.120 The view of Redwood Park at east side of Transamerica Pyramid Building (URL 86)

Figure 3.121 The construction of the Transamerica Pyramid (URL 87)

The silhouette of the Transamerica Pyramid was a beacon in San Francisco skyline in 1972 (Figure 3.122). It was the most imposing building of the skylines in the Super-High Period of Architecture (1965-1980). It is still one of the most easily remembered buildings with its unusual shape (Sev, 2009). The 260-meter Transamerica Pyramid Building was the tallest structure in the city, with a height of 260 meter until the Salesforce Tower (326 meter, completed in 2017) was built.

Figure 3.122 The view of the Transamerica Pyramid (URL 88)

In 1968, Transamerica president John R. Becket had the radical idea that financial security should be available to everyone like sunlight. He also wanted to allow more natural light on the street below like trees in a city park. The architectural firm William Pereira & Associates, which had also designed the Fairmont Hotel Annex tower that was a high point. The shape was presented as ideal for an environmentally sensitive planning and being a stylistic (Figure 3.123). The Pyramid shape allows easy airflow and ample sunlight, and permits the tower to be much taller than other buildings. However, the pyramid shape also imposes limitations on the size of the upper floors.

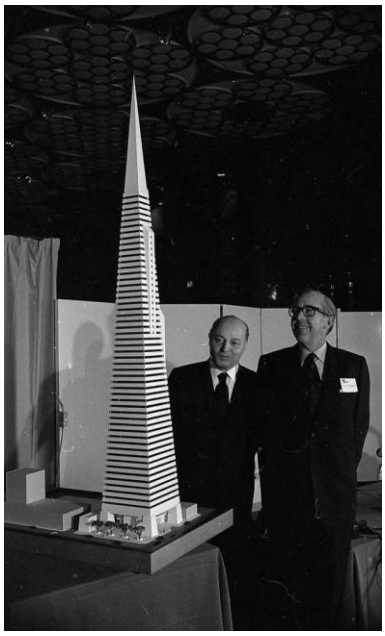


Figure 3.123 The first model of the Transamerica Pyramid design in 1969 (URL 89)

The pyramid comprises 48 floors, 15 passenger elevators, three freight elevators, and 3,678 windows. The two wings that accommodate the elevator and stairwell shafts flank the building. The largest floor covers more than 1950 square-meters, but the top floor covers only a 185 square-meters. It has the decorative 64-meter aluminium spire with at the top.

During the 7.1 magnitude Bay Area earthquake in 1989, the building was undamaged since it has unique earthquake resistant structural design (Wikiarquitectura, n.d.c). A broad base increases the stability of the building and a network of diagonal beams at the base supports the building against both the horizontal and vertical forces (Figure 3.124). In construction of the pyramid, concrete, steel beams and glass were used. The building is covered in crushed white quartz giving the its pure white colour (Transamerica Pyramid Center, n.d.) (Figure 3.125).

Figure 3.124 Transamerica Pyramid as viewed from the top, the bottom and the front perspectives (URL 90)

Figure 3.125 Transamerica Pyramid with illuminated spire and crown jewel beacon (URL 91)

It was awarded with a LEED Gold Certification in 2009 and LEED Platinum Certification in 2011, by U.S. Green Building Council for practices in environmental sustainability. It generates 70 percent of its own electricity, and recycles 70 percent of its waste products. (Transamerica Pyramid Center, 2009).

The Transamerica Pyramid is the defining feature of the San Francisco skyline and a symbol of the city that has permeated pop culture (Figure 3.126). The building has appeared in several movies, the best-known one being 'Invasion of the Body Snatchers' in which it becomes a visual item (King, 2016) (Figure 3.127).

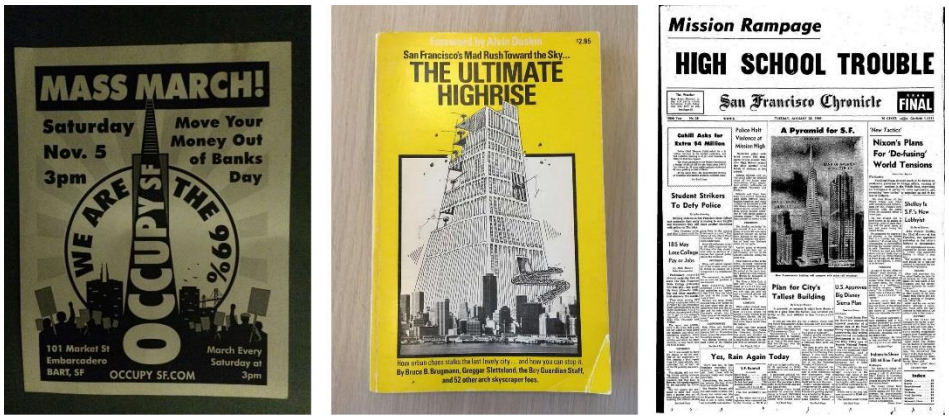


Figure 3.126 Publications including the visuals of Transamerica Pyramid (URL 92)

Figure 3.127 The building on Invasion of the Body Snatchers (URL 93)

Intellectual Property Biography of the Transamerica Pyramid Building

The two-dimensional shape of the building and the word 'Transamerica' were registered as U.S. trademark in 1991 (Figure 3.128).[45] The design of the building is subjected to copyright protection. The Transamerica Pyramid Building was registered as a three-dimensional trademark in the U.S. in 1994 and in the European Countries in 2000 (Figure 3.129).[46]

TRANSAMERICA®

Figure 3.128 Image with the shape of the building and the word on the trademark application

[45] U.S. Trademark Reg. No. 1,635,681
[46] U.S. Trademark Reg. No. 1,857,878; EU Trademark App. No. 000715524

Figure 3.129 Three-dimensional trademark of the Transamerica Pyramid

The Transamerica Pyramid Building is still strongly associated with the Transamerica Corporation, even it does not serve as Transamerica Corporation headquarters any longer (Binder, 2006). Today, Transamerica Pyramid and the logo are identifiers of the product within the company.

3.3.1.2.5 Sydney Opera House Building

Design Biography of the Sydney Opera House Building

The New South Wales Government called an international competition to design a national opera house for Sydney's Bennelong Point, Australia in 1956 (Perez, 2010). Danish architect Jørn Utzon won the competition with an iconic design that stood from among more than 200 entries submitted from all over the world in 1957 (Figure 3.130). Through designing a curved building, his chosen form was significantly different with the rectangular shapes of the modernist architecture (Sydney Opera House, n.d.).

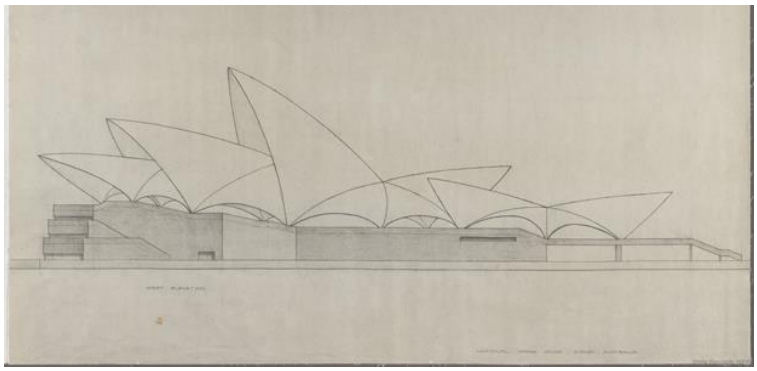


Figure 3.130 The competition winning design which was more organic (URL 94)

Jørn Utzon defined the concept explaining that ‘Many people insist in saying that my design has been inspired by the sales of the boats or sea shells. That however is not true. My design is like an orange. If you peel an orange, you’ll get these segments with shapes very much like what you see here.’ (Wikiarquitectura, n.d.b) (Figure 3.131). He continued that ‘It is like a musical instrument which needs a little maintenance and fine tuning from time to time.’ (Sydney Opera House, n.d.).

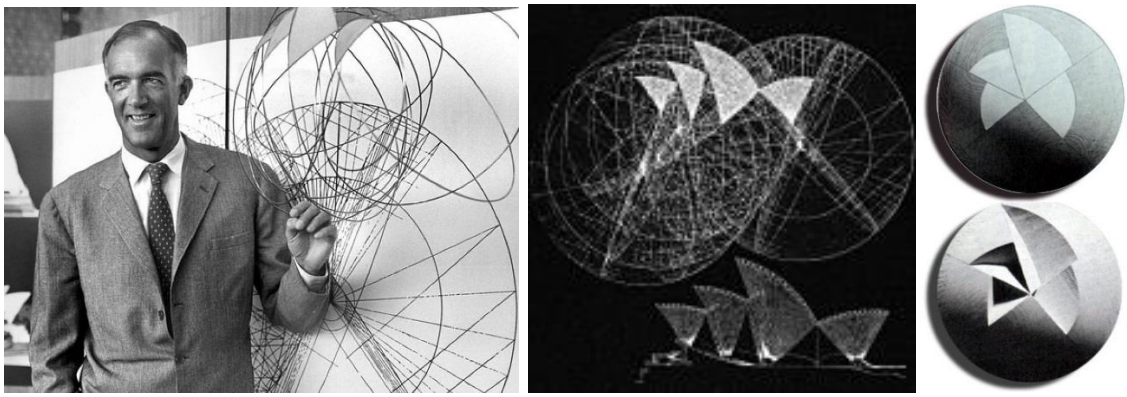


Figure 3.131 The inspirations for the building design (URL 95)

Australian art critic Robert Hughes defined his own design as ‘nothing more than a magnificent doodle’. (Murray, 2013). In addition, American architect Louis Kahn expressed that ‘The sun did not know how beautiful its light was, until it was reflected off this building.’ (Opera House, 2002).

The Opera House site was previously occupied by the Fort Macquarie Tram Depot. After it was demolished in 1959, the engineering firm Ove Arup & Partners began

constructing the Opera House (Murray, 2013) (Figure 3.132). The construction cost 102 million Australian dollars (Perez, 2010). The construction proceeded in three stages; building the upper podium, the construction of the outer shells and the interior design (Architectuul, n.d.c). It is one of the earliest uses of the computer in structural analysis (Architectuul, n.d.c).

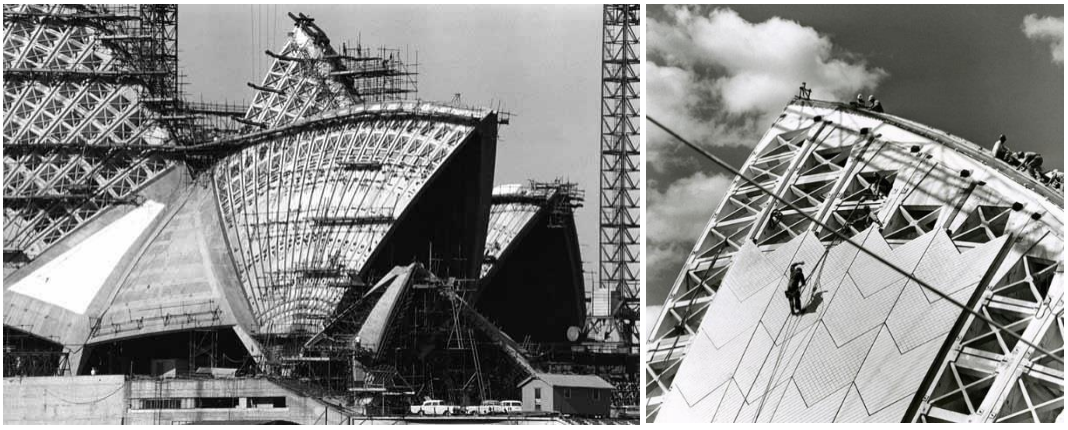


Figure 3.132 The construction process of the building (URL 96)

The government stopped issuing payments to Utzon due to rising cost and construction delay. Utzon resigned the project and three Australian architects, Peter Hall, DS Littlmore, and Lionel Todd were assigned to the project in 1966 (Perez, 2010). The Opera House was opened by Queen Elizabeth in 1973 (Figure 3.133). Utzon was not invited to the opening, and his name was not mentioned (Arbuckle, 2015). Utzon was again invited to work on the building's interior in 1999 (Independent, 2008).

Figure 3.133 The Sydney Opera House Building from different views (URL 97)

The building is 183 meters long and 120 meters wide (Wikiarquitectura, n.d.b). It is comprised of two main elements; a solid base and its organically shaped roofs. The solid base is made of precast rib segments and a concrete pedestal (Craven, 2017b). The roofs are made of triangular shells covered with glazed white ceramic tiles made in Sweden (Figure 3.134). The building includes a concert hall, theatre, drama theatre, playhouse, studio and the Utzon Room-The Reception Hall. (Craven, 2017b) (Figure 3.135).

Figure 3.134 The view from the entrance of the building (URL 98)

Figure 3.135 The view inside of the building and the concert hall (URL 99)

It is described as a monument of technology, society and the world during the 20th century (Perez, 2010). Its distinctive silhouette has become a world-recognised symbol of Australia, used in several tourism advertising campaigns; and part of the 2000 Sydney Olimpics (Lees-Maffei, 2014).

Utzon received many honours including the Gold Medal Awards from the Royal Australian Institute of Architects in 1973 and the Royal Institute of British Architects in 1978 (Independent, 2008). In addition, he received the Pritzker Architecture Prize, a top honor for architecture, in 2003 (Arbuckle, 2015). The Sydney Opera House was inscribed on the UNESCO World Heritage List in 2007 (Lees-Maffei, 2014).

Today, it is the busiest performing arts center in the world, hosting thousands of events and attracting a few million visitors (Craven, 2017b).

Intellectual Property Biography of the Sydney Opera House Building

The Sydney Opera House Trust has already registered more than 40 trademarks related to the Sydney Opera House including a logo and an image which is a two dimensional rendering of the building.[47] In addition, the shape of the Sydney Opera House was registered as three-dimensional trademark in Australia in 2014 (Figure 3.136).[48]

[47] AU Trademark Reg. No. 488685, 1252374
[48] AU Trademark Reg. No. 1577707

The legal firm King &Wood Malesons which filed the trademark application for the Sydney Opera House, said that the registration has helped to stop unauthorised commercial uses of the building particularly in relation to souvenirs. The registration is also useful in forming partnerships with other companies (Pash, 2014). The Sydney Opera House has a number of licence agreements with businesses, including Lego, Mattel and Pandora, to produce licenced products. Such partnerships can be lucrative – the Lego replica of the Sydney Opera House sells for $399 (Pash, 2014) (Figure 3.137).

Figure 3.136 Three-dimensional trademark of the Sydney Opera House

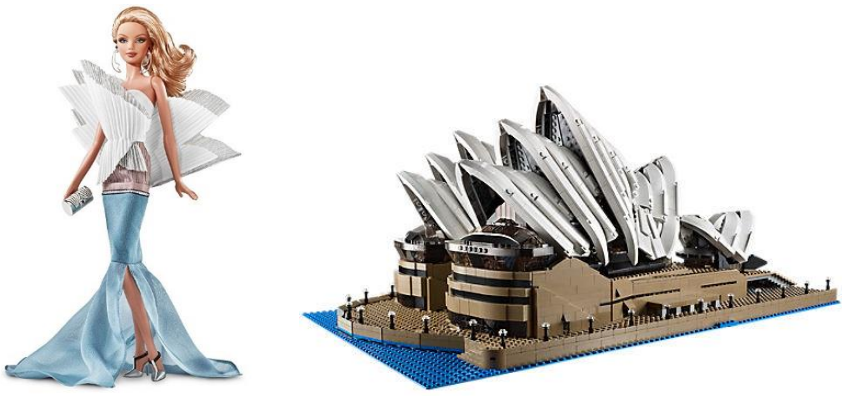


Figure 3.137 Barbie inspired by and Lego replica of the Sydney Opera House (URL 100)

3.3.1.2.6 Rock and Roll Hall of Fame Building

Design Biography of the Rock and Roll Hall of Fame Building

The Rock and Roll Hall of Fame Foundation was founded in 1983 (Danilov, 1997). The magazine publisher Jann Wenner and music executive Ahmet Ertegun of the Rock and Roll Hall of Fame Foundation had asked Ieoh Ming Pei, who redesigned the Louvre museum, to design a building which would house not only their organisation but also a museum of the history of rock and roll (Slavicek & Pei, 2010). Cleveland, Ohio, where disc jockey Alan Freed introduced the term 'rock 'n' roll' in the early 1950s, was chosen as the site for the museum (Slavicek & Pei, 2010).

I. M. Pei aimed to capture rock's rebellious spirit and explosive energy on the design of Rock and Roll Hall of Fame (Slavicek & Pei, 2010). The design is composed of geometric shapes and solid and transparent materials (Rock and Roll Hall of Fame, 1997) (Figure 3.138).

Figure 3.138 The views of Rock and Roll Hall of Fame Building (URL 101)

Architectural critic Robert Campbell said the building 'seem(s) to blast outward…like a fleet of spaceships' (Slavicek & Pei, 2010). Another architectural critic Carter Wiseman said that 'It looks like a Pei building, but it does not feel like one' (Slavicek & Pei, 2010). Pei said that 'it was my intention to echo the energy of rock and roll. I have consciously used an architectural vocabulary that is bold and new, and I hope the building will become a dramatic landmark for the city of Cleveland and for fans of rock and roll around the world.' (Wright, n.d.).

The building was structurally engineered by Leslie E. Robertson Associates and its construction cost $92 million (Rock and Roll Hall of Fame, 1997). It was officially opened with an 'all-star concert' featuring Bruce Springsteen, Chuck Berry, and Bob Dylan in 1995 (Goldsmith, 1997).

The building is located on the shores of Lake Erie in Cleveland, Ohio. The building houses exhibition space, administrative offices, a radio broadcasting studio, two theatres, a bookshop, and a cafe (Wright, n.d.). (Figure 3.139).

Figure 3.139 Interior of Rock and Roll Hall of Fame (URL 102)

The building's facade is composed of two triangular glasses which are supported by a metal grid system. The rear of the building extends out over the lake (Wright, n.d.). There is a 175-seat auditorium over Lake Erie on one side of the glass atrium and a circular drum located on a concrete column rising from the water on the other side (Slavicek & Pei, 2010). The glass walls surround an atrium with open balconies,

bridges, stairs and elevators (Wright, n.d.). The structure except for glass atrium is covered by gleaming white metal panels (Slavicek & Pei, 2010).

There are seven levels in the building. The first one is the museum's main gallery which includes exhibits on the history of the rock and roll and on cities having an impact on rock and roll such as Memphis and Detroit. The first floor includes a cafe and a stage for special performances. The top two floors are used for temporary special exhibits such as John Lennon and Elvis Presley exhibition. (Wright, n.d.). (Figure 3.140).

Figure 3.140 Special exhibitions at Rock and Roll Hall of Fame and Museum (URL 103)

It was awarded a National Engineering Award of the Excellence and Innovative Design and Excellence in Architecture with Steel by the American Institute of Steel Construction in 1997 and a Merit Award by the Concrete Industry Board in 1997 (LERA Consulting Structural Engineers, n.d.).

The building is an icon of the city that coined the term 'rock and roll'. It is a center of entertainment, education and culture (Pei Cobb Freed & Partners, n.d.).

Intellectual Property Biography of the Rock and Roll Hall of Fame Building

The Rock and Roll Hall of Fame Foundation registered the words 'The Rock and Roll Hall of Fame' as service mark in 1997.[49] Two dimensional depiction of the building was granted by a figurative trademark in the United States in 1997 (Figure 3.141).[50]

[49] U.S. Trademark Reg. No. 2,058,041
[50] U.S. Trademark Reg. No. 2,116,698

Its building design is a unique and inherently distinctive symbol of the freedom, youthful energy, rebellion, and movement of rock and roll music and it was granted as three-dimensional trademark in the United States (Figure 3.142).[51]

Figure 3.141 Figurative trademark for the building

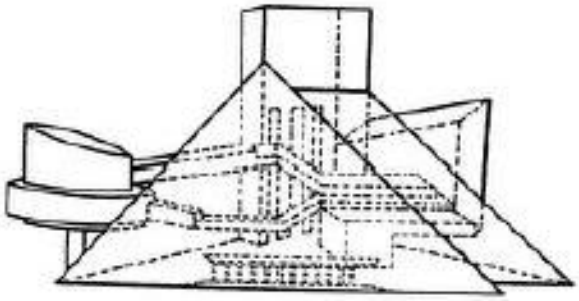


Figure 3.142 Three-dimensional trademark for the building

Charles Gentile Photographer began to sell a photograph of the museum through Gentile Production in 1996. The words 'Rock and Roll Hall of Fame' appeared on the photograph with Gentile's signature. The Rock and Roll Hall of Fame Foundations filed a lawsuit against Gentile Production in the United States claiming trademark infringement, dilution and unfair competition (Rock & Roll Hall of Fame & Museum, Inc. v. Gentile Prod, 1999). At the time, the State of Ohio approved the registration of building design for trademark in 1996 while it was pending in the United States Patent and Trademark Office. The trial court found that a building design can function as a trademark; therefore, there was a likelihood of confusion. On the other hand, the 6th Court concluded that there is no evidence that public recognised the design of the Rock and Roll Hall of Fame as an indicator of source. The public recognises it as a landmark.

[51] U.S. Trademark Reg. No. 2,508,347

Therefore, the court ruled that Gentile Production did not infringe the Rock and Roll Hall of Fame Foundation's trademark.

3.3.1.2.7 Apple's Glass Cube Building

Design Biography of the Apple's Glass Cube Building

Apple' glass cube Fifth Avenue store in New York, opened in 2006. The inventors of the cube are Steve Jobs, Ron Johnson, Karl Backus, Peter Bohlin, Robert Bridger, Benjamin L. Fay, and James O'Callaghan. Steve Jobs paid for the construction and owned the cube (Linshi, 2014).

Designers of the cube wanted to create a 'social space' that would compel people to visit instead of buying online (Consumerist, 2010). American architect Bohlin claimed that 'a well-designed building will enable people to discover things about themselves and their desires. The architecture creates a kind of choreography.' (Consumerist, 2010) (Figure 3.143).

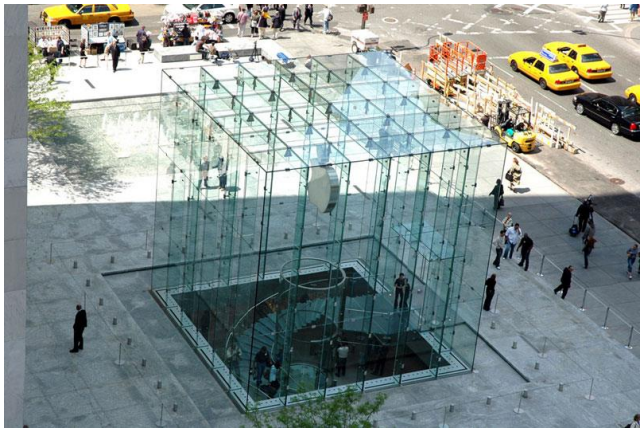


Figure 3.143 Apple's glass cube on Fifth Avenue in New York (URL 104)

The glass cube is located in the middle of the GM Building plaza like the Louvre; however, people called it the Apple Building (Ward, 2014) (Figure 3.144). It is placed beneath a 9.75 meter (32-foot) glass cube (Mullin, 2014). Maximum transparency and lightness dominate the design; the walls and roof are made of glass (Daniel Diskin Legal Blog, 2011). There are glass elevators and glass staircases inside the cube and a white Apple logo in the middle of the cube (Figure 3.145).

Figure 3.144 Apple's glass cube (URL 105)

Figure 3.145 Interior of Apple's glass cube on Fifth Avenue in New York (URL 106)

The cube was recreated for $6.7 million in 2011 for a seamless look using 15 glass panes and 40 fittings instead of the 90 smaller panes of the original design (Moscaritolo, 2014). The glass cube is one of the most recognized Apple's stores (Heath, 2011). It is quite distinctive even at night with the Apple logo shining inside the store (Daniel Diskin Legal Blog, 2011). It described as the world's smallest skyscraper (Ward, 2014). The cube attracted 50.000 visitors a week during its first year (Ward, 2014). The cube is the 5th most photographed landmarks in the city and the 28th worldwide (Consumerist, 2010). American architect Peter Bohlin was awarded the gold medal for his entire body of work by the American Institute of Architects in 2010 (Consumerist, 2010).

Apple was granted a trademark for the distinctive design and layout of the store by EUIPO in 2010 and the USPTO in 2013. The USPTO did reject the Cube twice due to its lack of inherent distinctiveness (Figure 3.146).[52] The registered trademark includes the trade dress of the retail store featuring 'The store features a clear glass storefront surrounded by a paneled facade consisting of large, rectangular horizontal panels over the top of the glass front, and two narrower panels stacked on either side of the storefront.'

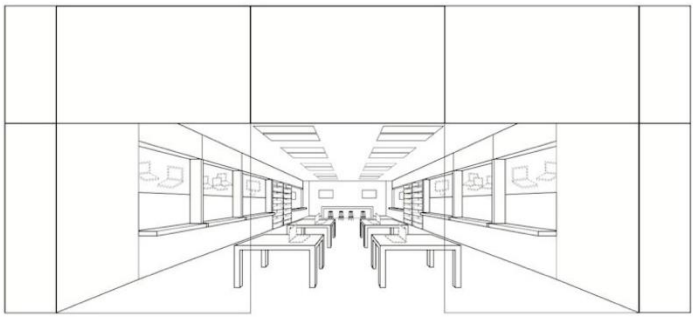


Figure 3.146 The trademark for Apple's retail store

Apple was granted a design patent for an ornamental building design of the iconic cube store based on the new design in 2014 (Figure 3.147).[53] It is not the first store to be patented by Apple. Apple was previously granted a patent for a glass cylinder design with the glowing white Apple logo for its Shanghai store. That patent also covered the type of glass and construction method (Figure 3.148) Apple also had design protection for a glass staircase in the United States in 2003 (Figure 3.147).[54]

[52] EU Trademark Reg. No. 1,060,320; U.S. Trademark Reg. No. 4,277,914
[53] U.S. Design Reg. No. D712,067
[54] U.S. Design Reg. No. D478,999

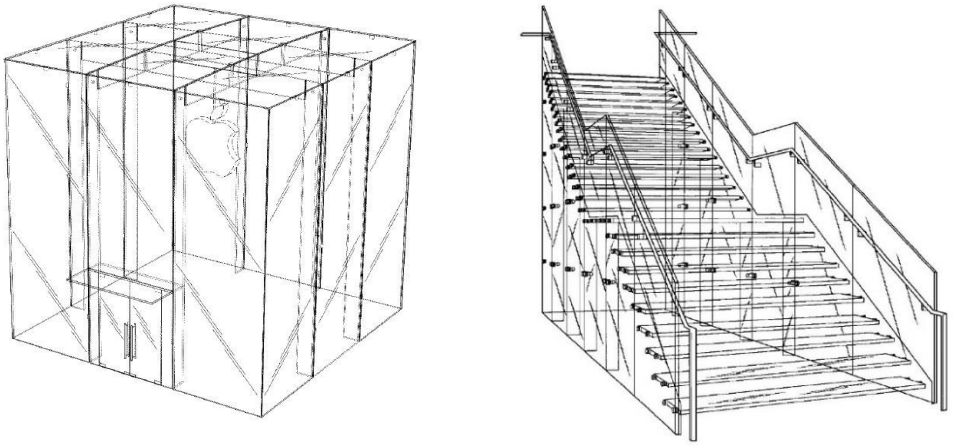


Figure 3.147 From left to right: The design patent for Apple's glass cube and glass staircase

Figure 3.148 The Apple's glass cylinder store in Shanghai (URL 107)

Copies of Apple's iconic store design have opened in several countries. The Chinese government shut down a fake Apple Store in China with design identical to Apple's (Mullin, 2014). Apple was also granted a trademark for 'the distinctive design and layout of a retail store comprised of a cube-shaped building constructed almost exclusively of transparent glass, with transparent glass walls and roof, transparent glass double doors and a transparent glass awning and featuring a pendant of an apple with a bite removed suspended from the ceiling' in 2011 (Figure 3.149).[55] It helped to prevent other stores from replicating Apple's iconic design.

[55] U.S. Trademark Reg. No. 4,021,593

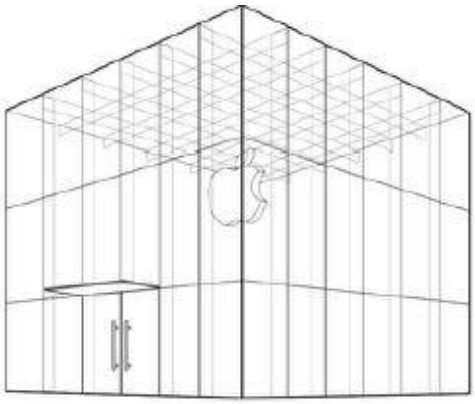


Figure 3.149 Three-dimensional trademark for Apple's glass cube

3.3.1.2.8 Discussion

Tac Mahal Palace Hotel is an iconic building with distinctive domes and pointed arc which was inspired by European and Islamic style architecture. It was the prior to technically new improvements of its era such as operating steam elevator, operating American fans and including Turkish bath. The hotel has national meaning since it was used as hospital during the World War I. The hotel is perceived as a global symbol of Mumbai and Indian hospitability (Figure 3.150). As an IP strategy, the owner of the Taj Mahal Place Hotel approached only copyright protection at the beginning. The owner has recently approached to protect by a three-dimensional trademark for its distinctive design in only India, which is the first building to be granted by a three-dimensional trademark in India (Figure 3.151).

Chrysler Building is an iconic building with a distinguishable style against its surroundings. It was the world's tallest building until the Empire States Building was completed and it was a challenging building of its age which was man-made structure to stand taller than 305 meters (1.000 feet). The building is a symbol of machine age and urban modernity. It is a National Historic Landmark and New York City Landmark. It was the most favourite architecture in the United States; therefore, it has been featured in several movies and television commercials and given inspiration to other architects and designers (Figure 3.152). As an IP strategy, the owner of the building approached to copyright protection first (Figure 3.153). After a while, they had chosen three-dimensional trademark for both the Art Deco spire of the Chrysler Building and the entire building in only the United States.

The Empire State Building which inspired by the Art Deco style is an iconic building. It was the world's tallest building when it was constructed. It is called as a mass-produced building because of its structural elements and it is considered as one of the seven greatest engineering achievements in America's history (Figure 3.154). Therefore, it is a symbol of the power of industrial technology. It was marked as the most favourite architecture in the United States. In addition, it is a landmark having special historical, cultural, and aesthetic value, which makes it become a center of tourist attraction. It is a significant part of pop culture and has featured in a lot of movies. It is still the best-known symbol of New York's skyline and history. As an IP strategy, after the owner of the building approached to copyright protection first, they chose to protect as a word and figurative mark in the United States (Figure 3.155). They applied for three-dimensional marks protection first in the United States and then in European Countries. The three dimensional shape of the building was issued at many infringement cases; but, it was concluded in favor of the owner of the building in almost all cases.

Transamerica Pyramid Building is an iconic building with its unusual shape. It was the tallest structure in the city until the Salesforce Tower was built. It is a symbol of the San Francisco. It has invaded in pop culture and it has been placed in several movies (Figure 3.156). As an IP strategy, the owner of the building approached to copyright protection first (Figure 3.157). After a while, it was continued with figurative trademark registration in the United States and three-dimensional trademark in both the U.S. and in the European Countries.

Sydney Opera House Building comprising of a solid base and organically shaped roofs, is an iconic building. It is described as the monument of technology, society and the world. It is a world-recognised symbol of Australia and it attracts many tourists all over the world (Figure 3.158). It was granted by many honours and inscribed on UNESCO World Heritage List. As for IP strategy, the owner of the building approach to start with copyright protection and continued with figurative trademark protection in Australia (Figure 3.159). Afterwards, they chose to protect by a three-dimensional trademark in Australia to stop unauthorized commercial uses of the building particularly in relation to souvenirs. The owner of the building has a number of licence agreements with different businesses.

Rock and Roll Hall of Fame Building composed of geometric shapes and solid and transparent materials, is an iconic building. It was awarded by many prizes. It reflects the energy of the rock and roll. It hosts special exhibitions and performances (Figure 3.160). As an IP strategy, the owner of the building approached to begin with copyright protection (Figure 3.161). They continued with figurative trademark and three-dimensional trademark protection in the United States.

Apple's Glass Cube Building which the walls and roof made of glass with shining Apple logo inside the store, is an iconic building and described as world's small skyscraper. It contains glass elevators and glass staircases. It was mostly attracted by tourists and it is 5th of the most photographed landmarks in the city and 28th worldwide (Figure 3.162). It was awarded by architecture prizes. As an IP strategy, unlike other IP strategies for iconic buildings, the company approached to protect by three-dimensional trademark and copyright at first because replicas of the building which is exactly same were dramatically increased in some countries (Figure 3.163). After a while, they continued with design patent. Apart from three dimensional shape of the building, they chose to protect the glass staircase by design and the distinctive design and layout of the store by trademark.

Iconic buildings in this category are widely discussed buildings of their eras. They broke rules and left their marks. The design of these iconic buildings emerged from competitions. Iconic building has something inside of it like performance hall, museum, hotel, headquarter and store; in addition, the building itself is a significant place which is worth visiting. Therefore, it becomes a focal area and a landmark of the city. Becoming iconic, other sectors like toy, entertainment and souvenir ogle at these iconic buildings. They are globally recognized.

The owners of such buildings usually prefer to protect their intellectual property interests in a building's appearance through copyright and three-dimensional marks. In some cases, the owners also chose figurative trademark protection. Three-dimensional marks are not commonly used to protect iconic buildings; but, the practice began in the United States and has now spread into India and many other countries.

As shown by the case of the Rock and Roll Hall of Fame, a building will not be granted a trademark for three dimensional shape of a building merely because it is a distinctive landmark. The shape of the building must be viewed as an indicator of a product's source.

Another significant characteristics of three-dimensional trademark for iconic buildings are usually registered in only their home countries, Transamerica Pyramid being the sole exception among cases studies.

TAC MAHAL PALACE HOTEL BUILDING

Iconic Buildings

TAJ MAHAL PALACE HOTEL

Building Design

1903
The Taj Mahal Palace hotel designed by D.N. Mirza and Sitaram Khanderao Vaidya and constructed by the Taj Hotels Resorts and Palaces of the Tata Group, was opened.

1947
When the country gained its independence, the building hosted the first speech of the independent India.

2008
The building was targeted by a terrorist attack killing 167 people.

3D MARK

2017
A three-dimensional trademark for its distinctive design including red dome and pointed arc 3386351, India.

Figure 3.150 Left and right: The design and IP biography of the Taj Mahal Palace Hotel building

1903
The building is protected by copyright.

COPY-RIGHT

1970
The hotel consists of two buildings; the Taj Mahal Palace and a Tower, which was designed by architect Melton Bekker and Swiss designer Dale Keller.

2008-2010
The building was under reconstruction and renovation.

Tac Mahal Palace hotel with 114 years old is the first architectural design to be trademarked in India.

The design was inspired by European and Islamic style architecture and the interior design was inspired by Florentine, Oriental and Moorish styles.

The hotel was used as a hospital with 600 beds during the World War I.

Design Biography

IP Biography

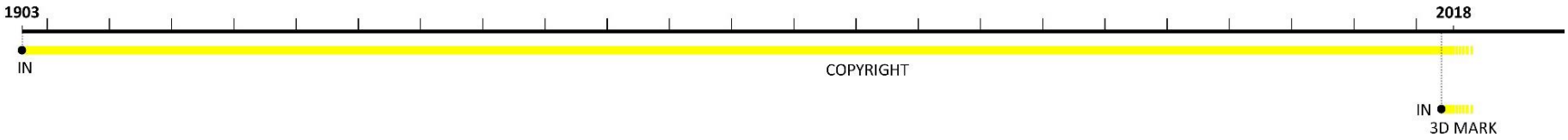


Figure 3.151 IP history of the Taj Mahal Palace Hotel Building

3D Mark: 3386351

CHRYSLER BUILDING

Iconic Buildings

CHRYSLER BUILDING

Building Design

1927
William H. Reynolds, a real estate developer, commissioned the architect William Van Alen to design an office tower.

COPY-RIGHT

The design of the building are protected by copyright.

1930-1950s
The building which representing eagles that overlook the city like the radiator cab of the Plymouth automobile by Chrysler Company was the headquarter of the Chrysler Corporation.

1978
It was declared New York City Landmark.

2005
it was chosen as favourite towers in New York.

3D MARK

2016
A three-dimensional trademark for the entire building was granted 5034166, U.S.A.

Figure 3.152 Left and right: The design and IP biography of the Chrysler building

1928
The building was designed by William Van Alen.

1928-1930
The construction began in 1928 and completed in 1930 .

It is a symbol of urban modernity, of New York's business dyna-mism, and of the vibrant nightlife of the world's newest metropolis.

It was the world's tallest building with the height of 319.5 meters (1048 feet) until the Empire States building was completed in 1931.

1976
It was declared a National Historic Landmark.

1979
A three-dimensional trade-mark for the Art Deco spire of the Chrysler Building was granted

3D MARK

2007
It was ranked ninth on the List of America's Favourite Architecture by the American Institute of Architects.

Design Biography

IP Biography

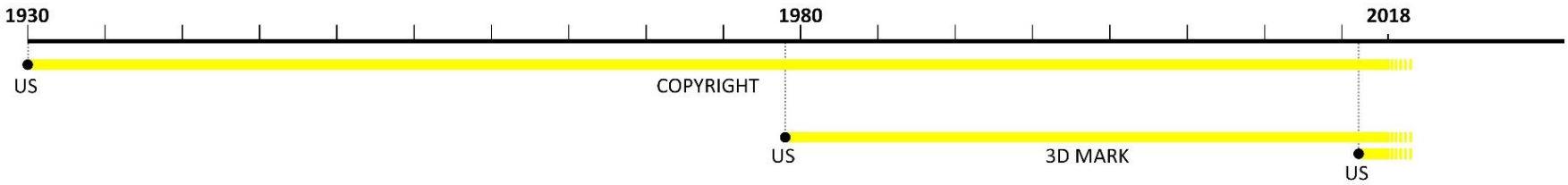


Figure 3.153 IP history of the Chrysler Building

3D Mark: 1126888, 5034166

THE EMPIRE STATE BUILDING

Iconic Buildings

EMPIRE STATE BUILDING

Building Design

1929
Empire STATE Inc was founded.

COPY-RIGHT

1929
The design of the building are protected by copyright.

1930
The construction of the building was begun.

1945
A B-25 airplane crashed to the seventy-ninth floor of the Empire State building and 14 people was killed.

1981
It was designated as New York City landmark.

1986
It was listed on the National Parks Service recognized it as a National Historic Landmark.

2007
It was ranked number one on the list of America's Favourite Architecture by the American Institute of Architects.

3D MARK

2017
A three-dimensional trademark for the building was granted 015817075, EU.

Figure 3.154 Left and right: The design and IP biography of the Empire State building

1929
Architects Shreve, Lamb and Harmon Associates designed the building.

1931
The building was opened.

1955
The American Society of Civil Engineers recognized it as one of the seven greatest engineering achievements in America's history.

1982
It was listed on the State and National Register of Historic Places.

The structural elements of the building were designed to fit each other and the whole structure was "mass-produced" like a Ford's automobile, which shows power of industrial technology.

It was the world's tallest building untill the World Trade Center's Twin Tower was completed in 1972.

The design is created by the light and shadow rather than architectural ornamentation.

2001
A three-dimensional trademark consisting the shape of the exterior of the skyscraper with a pointed, spindled top was granted 2430828, U.S.A.

3D MARK

2015
The two-dimensional depiction of the building were granted by figurative trademark 4775666, U.S.A.

TRADE-MARK

Design Biography

IP Biography

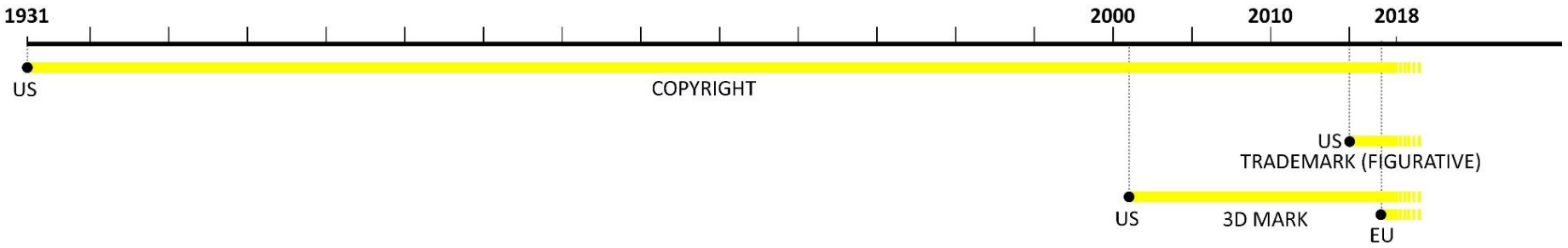


Figure 3.155 IP history of the Empire State Building

Trademark: 4775666

3D Mark: 2430828, 015817075

TRANSAMERICA PYRAMID BUILDING

Iconic Buildings

TRANSAMERICA PYRAMID

Building Design

1904
Amadeo Giannini founded the Bank of Italy in San Francisco, California.

1969-1972
Construction on the Transamerica Pyramid began in 1969 and finished in 1972.

TRADE-MARK

1991
Two-dimensional shape of the building and the word "Transamerica" were granted by figurative trademark. 1635681, U.S.A.

TRANSAMERICA®

2009
It was awarded with LEED Gold Certification by U.S. Green Building Council.

2018
The buildng still strongly associated with the Transamerica Corporation although it doesn't serve as Transamerica Corporation headquarters anymore.

Figure 3.156 Left and right: The design and IP biography of the Transamerica Pyramid building

1928
The bank of Italy merged with the Bank of America, which called Transamerica Corporation.

1968
The architectural firm William Pereira & Associates designed the building.

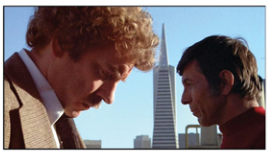
In construction of the pyramid, concrete, steel beams and glass were used.

The design of the building are protected by copyright.

COPY-RIGHT

Transamerica Pyramid building has been the tallest structure in the city, with a height of 260 meter until the Salesforce Tower (326 meter, completed in 2017)

Transamerica Pyramid has permeated pop culture.



1994
A three-dimensional trademark for the Transamerica Pyramid building were granted 1857878, U.S.A.

3D MARK

2011
It was awarded with LEED Platinum Certification.

Design Biography

IP Biography

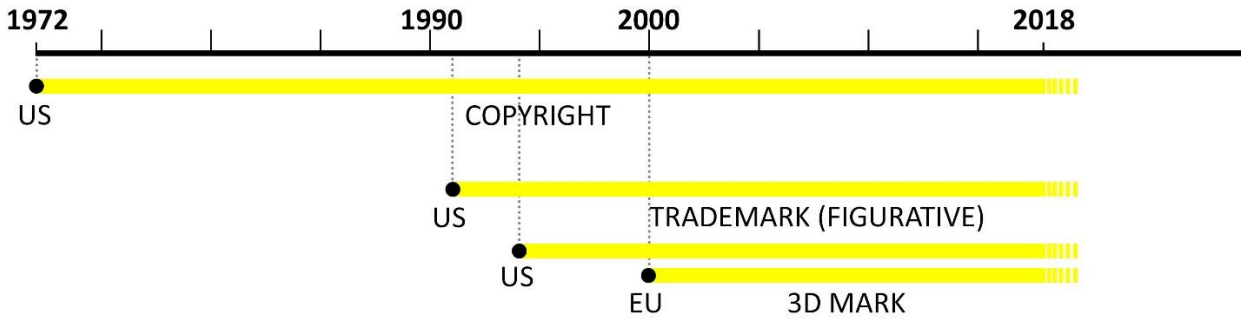


Figure 3.157 IP history of the Transamerica Pyramid Building

Trademark: 1635681

3D Mark: 1857878, 000715524

SYDNEY OPERA HOUSE BUILDING

Iconic Buildings

SYDNEY OPERA HOUSE

Building Design

1957
Danish architect Jørn Utzon won the competition to design a national opera house for Australia, with significantly different approach with the rectangular shapes of the modernist architecture.

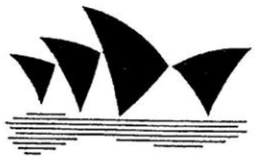
1966
Utzon resigned the project and three Australian architects, Peter Hall, DS Littlmore, and Lionel Todd were assigned to the project.

COPY-RIGHT

1973
The design of the building is protected by copyright.

TRADE-MARK

1988
Sydney Opera House logo was granted by figurative trademark 488685, Australia.

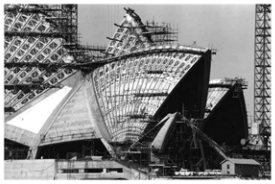


2007
The building was inscribed on UNESCO World Heritage List.

3D MARK

2014
A three-dimensional trademark for the shape of the Sydney Opera House was granted 1577707, Australia.

Figure 3.158 Left and right: The design and IP biography of the Sydney Opera House building



1959
The construction of the Opera House began by the engineering firm Ove Arup & Partners.

1973
The Opera House was opened by Queen Elizabeth.

It is the earliest examples of the uses of the computer in structural analysis.

It is the busiest performing arts center in the world, hosting thousands of events and attracting a few million visitors.

Its silhouette is used on several tourist campaign and it was also a part of the 2000 Sydney Olimpics.

1999
Utzon was again invited to work on the building's interior.

2008
Two dimensional rendering of the building was granted by figurative trademark 1252374, Australia.

TRADE-MARK

Design Biography

IP Biography

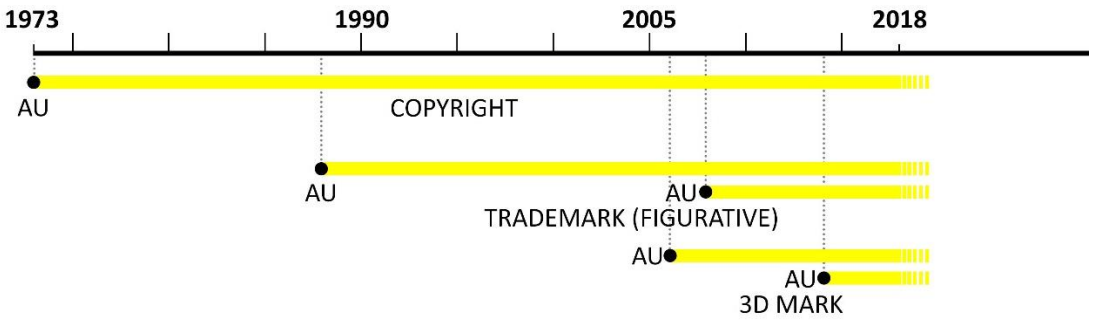


Figure 3.159 IP history of the Sydney Opera House Building

Trademark: 488685, 1252374

3D Mark: 1108803, 1577707

ROCK AND ROLL HALL OF FAME BUILDING

Iconic Buildings

ROCK & ROLL HALL OF FAME

Building Design

1983
The Rock and Roll Hall of Fame Foundation was founded.

COPY-RIGHT

1995
The design of the building are protected by copyright.

TRADE-MARK

1997
A figurative trademark for the two-dimensional shape of the building was granted 2116698, U.S.A.

3D MARK

2001
A three-dimensional trademark for building design which is a unique and inherently distinctive symbol of the freedom, youthful energy, rebellion and movement of rock and roll music, was granted 2508347, U.S.A.

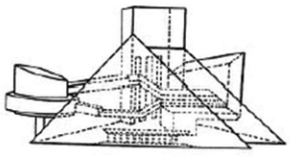


Figure 3.160 Left and right: The design and IP biography of the Rock and Roll Hall of Fame

1995
The building designed by Ieoh Ming Pei was opened.

1997
It was awarded National Engineering Award of the Excellence and Innovative Design and Excellence in Architecture with Steel by American Institute of Steel Construction and Merit Award by the Concrete Industry Board.

The building reflects rock's rebellion spirit and explosive energy.

The building houses exhibition space, administrative offices, a radio broadcasting studio, two theatres, a bookshop, and a cafe.

The design is composed of geometric shapes and solid and transparent materials.

Design Biography

IP Biography

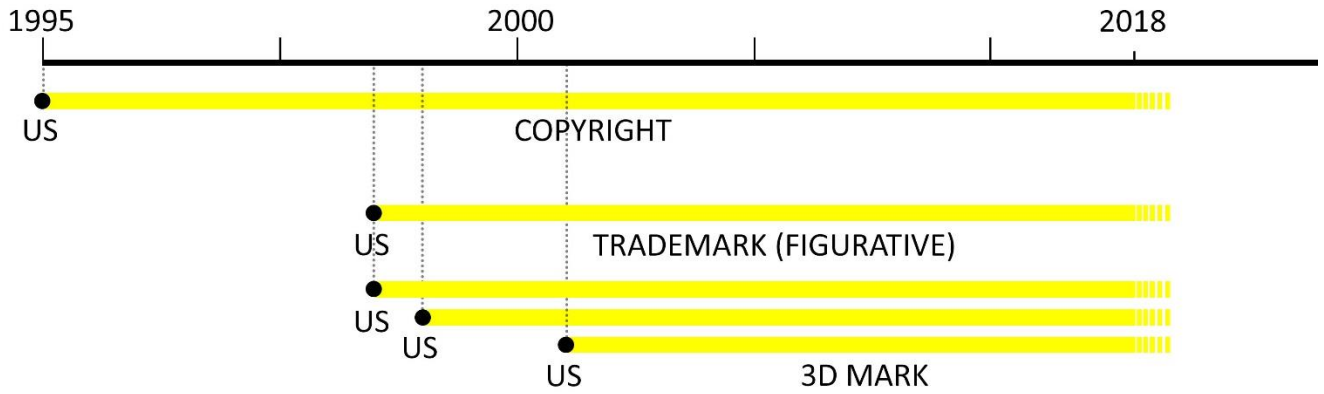


Figure 3.161 IP history of the Rock and Roll Hall of Fame Building

Trademark: 2116698

3D Mark: 2112793, 75456120, 2508347

APPLE'S GLASS CUBE BUILDING

Iconic Buildings

APPLE GLASS CUBE

Building Design

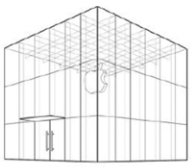
2006
Apple glass cube was invented by Steve Jobs, Ron Johnson, Karl Backus, Peter Bohlin, Robert Bridger, Benjamin L. Fay, and James O'Callaghan.

COPY-RIGHT

The design of the building are protected by copyright.

2010
American architect Peter Bohlin was awarded the gold medal for his entire body of the work by the American Institute of Architects.

2011
A three-dimensional trademark for a cube-shaped building constructed with transparent glass walls and roof, was granted 4021593, U.S.A.



3D MARK

2014
A design patent for an ornamental building design of the new iconic cube store was granted D712067, U.S.A.

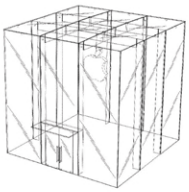
DESIGN

Figure 3.162 Left and right: The design and IP biography of the Apple's glass cube building

2006
Apple glass cube which is Apple's Fifth Avenue store in New York, was opened.

2010
A three-dimensional trade-mark for the distinctive design and layout of the store inside of the glass cube, was granted 1060320, EU.

3D MARK



2011
The cube was recreated for a seamless look using 15 glass panes and 40 fittings instead of 90 smaller panes.

The building aims to create a "social space" that would compel people to visit instead of buying online.

The cube is 5th of the most photographed landmarks in the city and 28th worldwide.

The cube was attracted by 50.000 visitors in its first year.

2013
A three-dimensional trademark for the distinctive design and layout of the store was granted 4277914 , U.S.A.

3D MARK

Design Biography

IP Biography

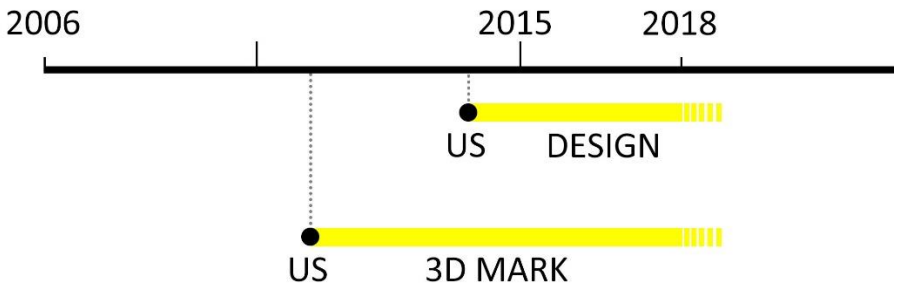


Figure 3.163 IP history of the Apple's Glass Cube Building

Design: D712067

3D Mark: 4021593

3.3.1.3 Iconic Technological Designs Protected by Three-Dimensional Marks

3.3.1.3.1 iPod MP3 Player

Design Biography of the iPod MP3 Player

The portable music industry dates back to the 1950s and the first hand-held and pocket size transistor radios (Doyle, 2011). The Sony Walkman was the first to revolutionize portable music industry. The Walkman, introduced in the 1980s, played cassette tapes (Figure 3.164). At the beginning of the 21st century, the iPod was introduced as the second revolution in portable music player. The success of the iPod was based on two new features: 1) the iPod comes with iTunes, a platform enabling users to buy music from the music industry and 2) the iPod's industrial design. When the first iPod was introduced in 2001 a few months after the iTunes media management software was released, Steve Jobs said that 'iPod is a new category of digital music player that lets people put their music collection in their pocket and listen it wherever they go.' (Bonnington, 2011).

Figure 3.164 Sony Walkman in the 1980s (URL 108)

The most significant feature of the iPod is that it allows you carry a huge volume of music in your pocket (Notomi, 2004). It has become an icon associated with mobility, aesthetics and functionality of sound and touch (Bull, 2011). iPod is a privacy enhancing technology that provides a more bearable environment when traveling alone. It reconfigures and changes the aesthetic experience of everyday life (Bull, 2011).

Figure 3.165 The T3 pocket radio which was designed by Dieter Rams and iPod MP3 player (URL 109)

The first iPod in 2001 had minimalist white design, similar to the T3 pocket radio which was designed by Dieter Rams for Braun in 1958 in terms of colour and flush radial interface (Phaidon Design Classics, 2006c) (Figure 3.165). The iPod featured five buttons on its face; menu, play/pause, next and previous tracks encircled a scroll wheel with a selection button in the center (Bonnington, 2011) (Figure 3.166). Its capacity was up to 1,000 songs. The second version of the iPod in 2002 was almost the same as the first. The key difference was that while the first iPod could only communicate with Mac operating system, the second could also work with Microsoft operating system (Applemuseum, 2017). The iPod's third version in 2003 was slimmer than its predecessors. It replaced the mechanic scroll wheel with a touch wheel, which makes scrolling through a whole collection quick and easy (Figure 3.166). The iPod's fourth version, released in 2004, brought the click wheel which is a touch wheel with button functions. The fifth generations of iPod, introduced in 2005, could play video as well as sound files. The sixth iPod first went on sale in 2007. Named 'iPod Classic' by Steve Jobs, it replaced the already iconic white front with silver and black brushed aluminium (Kastrenakes, 2014).

Figure 3.166 From left to right: The iPod in 2001, The iPod 3rd generation in 2003, The iPod 4th generation in 2004, The iPod Classic in 2007 (URL 110)

The classic iPod spawned a range of related products including the Shuffle, Nano, Mini and Touch, all targeted to meet the needs of different consumer groups. The iPod Mini 1G had same the design elements as 2004's original iPod, but was the first iPod offered in multiple colours (Figure 3.167). The iPod Mini 2G became one of the most popular products on the market when it was launched in 2005. Both Minis were on the market for less than two years (Apple, n.d.a).

Figure 3.167 The iPod Mini 1G in 2004 (URL 111)

The iPod Shuffle was introduced in early 2005 (Figure 3.168). It aimed to offer users cheaper and more minimalist music player. It had no display. The 2006 iPod Shuffle 2G was the smallest MP3 player in the world (Figure 3.168). It can be easily attached to a bag, shirt or pants. The iPod Shuffle 3G of 2009 could read out the names of songs (Figure 3.168). 2010's iPod Shuffle 4G was based on the size of the second-generation iPod Shuffle (Apple, n.d.a) (Figure 3.168).

Figure 3.168 From left to right: The iPod Shuffle in 2005, the iPod Shuffle 2G in 2006, the iPod Shuffle 3G in 2009, the iPod Shuffle 4G in 2010 (URL 112)

The iPod Nano 1G replaced the iPod Minis when it launched in late 2005 (Figure 3.169). Steve Jobs personally demonstrated that because the Nano used flash storage instead a hard drive, it was small enough to fit in the pocket of his Levis. It had a black or white plastic front and shiny metal back. It has been one of the most successful and enduring iPods (Cheng, 2011). The iPod Nano 2G was introduced in 2006 and the iPod Nano 3G which had a different shape was introduced in 2007 (Figure 3.169). The iPod Nano 4G went back to the second generation style Nano when it was introduced in 2008 (Figure 3.169). After introducing the iPod Nano 5G, the iPod nano 6G returned to a square shape for its 2010 launch (Figure 3.169). The iPod Nano 7G in 2012 was the thinnest iPod Nano (Apple, n.d.a) (Figure 3.169). Apple created the iPod Nano Red Special Edition for helping eliminate the prevalence of HIV/AIDS in Africa, 2006 (Apple, 2006).

Figure 3.169 From left to right: The iPod Nano 1G in 2005, the iPod Nano 2G in 2006, the iPod Nano 3G in 2007, the iPod Nano 4G in 2008, the iPod Nano 6G in 2010, the iPod Nano 7G in 2012 (URL 113)

The iPod Touch 1G which was a touchscreen multimedia player without phone capacity, was introduced in 2007 just after the iPhone launch (Figure 3.170). Therefore, it was considered as the bridge between iPhone and iPod. There was the home button on the front, a lock button on the top, and volume buttons on the side like the iPhone (Cheng, 2011). The iPod Touch 2G in 2008, the iPod Touch 3G in 2009, the iPod Touch 4G in 2010, the iPod Touch 5G in 2012, and the iPod Touch 6G in 2015 were introduced (Apple, n.d.a) (Figure 3.170).

Figure 3.170 From left to right: The iPod Touch 1G in 2007, The iPod Touch 2G in 2008, the iPod Touch 5G in 2012 (URL 114)

Alongside the iconic feel of the iPod, the iTunes downloading facility plays a crucial role as a unique selling point (Morris, 2016). Black-silhouetted dancing figures holding white iPods appeared in many advertisements and magazines including Entertainment Weekly, MacWorld, Wired, and Newsweek with taglines such as 'Welcome to The Digital Music Revolution' and '10,000 Songs in Your Pocket.' (Doyle, 2011) (Figure 3.171).

Figure 3.171 iPod advertisement (Doyle, 2011)

Although iPod sales have declined from a peak of 22,7 million sales in 2009, it remains the most popular MP3 player today (Bonnington, 2011).

Intellectual Property Biography of the iPod Mp3 Player

Apple has protected almost every new product through design protection soon after its creation. One day before the first iPod was released to the public, a design patent application was filed for it, and it was registered in the United States in 2003 (Figure 3.172).[56] The ornamental design of the first iPod was granted design registration by EUIPO in 2004.[57] The design of the iPod Classic registered in the United States in 2009 (Figure 3.172).[58] The iPod Nano 1G was granted design registration by EUIPO in 2006 (Figure 3.173).[59] Moreover, the design of the iPod Nano 4G, 6G, and 7G were registered in the United States (Figure 3.173).[60] The iPod Shuffle 3G was also granted design registration in the United States in 2013.[61]

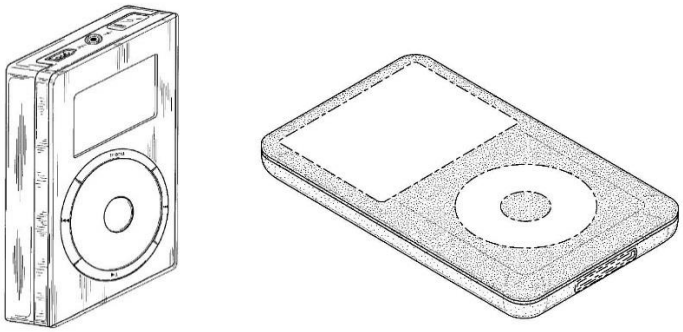


Figure 3.172 From left to right: The design patent for the first iPod and the iPod Classic

[56] U.S. Design No. D469,109
[57] EU Design No. 000269576-0001
[58] U.S. Design No. D598,424
[59] EU Design No. 000465109-0003
[60] U.S. Design No. D626,530, D638,030, D681,056
[61] U.S. Design No. D678,876

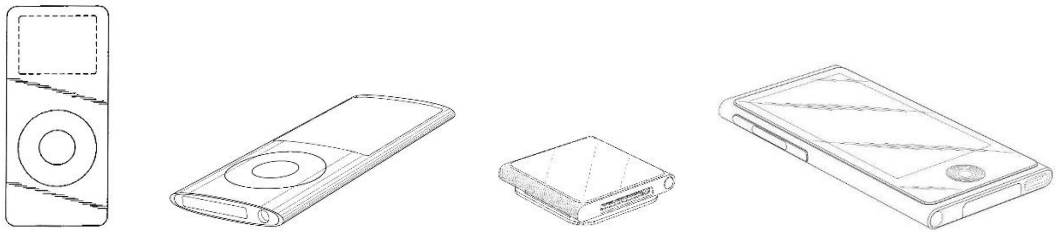


Figure 3.173 From left to right: The design registrations for iPod Nano 1G, 4G, 6G and 7G

The iPod is protected by a number of patent owned by Apple Computer Company and it has licensing agreements with several firms for the production of electronic chips (Teska, 2007). Apple has many patents for the graphical user interface of the iPod, its display, and the multi-touch scroll-wheel. One of the most important of these registrations is the 2008 U.S. patent covering the design of the iPod's user interface.[62] Another is the 2010 U.S. patent granted a patent for an electronic device contained within a very small housing, which Apple filed with reference to its iPod Shuffle 4G 2008.[63]

The iPod Classic, comprising 'a rectangular casing displaying circular and rectangular shapes therein arranged in an aesthetically pleasing manner' was granted a three-dimensional mark in the United States in 2010 (Figure 3.174).[64] It was also registered as three-dimensional mark in Colombia in 2011.[65] In addition to the iPod Classic, the iPod Shuffle 4G designed in 2015 was registered as a three-dimensional mark by WIPO in 2008 and the USPTO in 2010.[66]

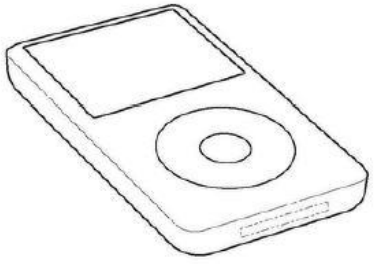


Figure 3.174 The trademark for the shape of the iPod Classic

[62] U.S. Patent No. 7,345,671
[63] U.S. Patent No. 8,368,643
[64] U.S. Trademark Reg. No. 3,855,964
[65] Colombia Trademark Reg. No. 421,414
[66] EU Trademark No. 982,659; U.S. Trademark Reg. No 3,786,590

The iPod's competitors filed a lawsuit claiming that Apple was engaged in anti-competitive behaviour because the iPod would only play music purchased from iTunes, disadvantaging other jukebox software (Luckerson, 2014). Apple claimed that it is a technological improvement to increase security. Therefore, the court found that Apple did not violate anti-trust law, and Apple won $1 billion (Luckerson, 2014).

3.3.1.3.2 iPhone Smartphone

Design Biography of the iPhone Smartphone

Apple introduced the first iPhone in January 2007 (Figure 3.175). Initial iPhone differed from traditional mobile phones in having a large touchscreen, recognisable home button on the front, and a built in integrated rechargeable battery and memory card (West & Mace, 2010).

The iPhone combined three products into one revolutionary product. It integrates a mobile phone, a widescreen iPod with touch controls, and a breakthrough Internet communication device, into one handheld device (Fiell & Fiiell, 2007). The iPhone introduced a new user interface based on a large multi-touch display (Fiell & Fiiell, 2007). The face is made of glass and framed in metal with a chrome finish (Lidwell & Manacsa, 2011). Through the initial user experience of sliding a control to unlock the phone, it begins to interact with the user emotionally

Figure 3.175 First iPhone in 2007 (URL 115)

The first iPhone 3G whose back housing is made of plastic was introduced in 2008 and improved to iPhone 3GS in 2009. The iPhone 4 which is made of glass and a stainless-steel band around the edges was launched in 2010 (Figure 3.176a). The iPhone 4s which was the last iPhone before Steve Jobs' death was introduced in 2011. The iPhone 5 was introduced in 2012 (Figure 3.176b). The front of it is flat and made of glass and the back of it is anodised aluminium. The iPhone 5s and iPhone 5c (Figure 3.176c). which is the cheaper version of iPhone 5 was introduced in 2013. The flat front is made of glass and the back is made of hard-coated polycarbonate and available in five colours. The iPhone 6 Plus which has home button with Touch ID and glass flat front with curved edges was launched in 2014 (Figure 3.176d). It has the display with 13.9 cm (5.5 inches) (diagonal). In the same year, the iPhone 6 which has the display is 11.9 cm (4.7 inches) (diagonal) was introduced. Both the iPhone 6 and iPhone 6 Plus have smooth and continuous surface. The iPhone 6s Plus which has 13.9 cm (5.5 inches) display and the back from anodised aluminium with a laser-etched 'S' and iPhone 6s which is 11.9 cm (4.7 inches) display were introduced in 2015. The iPhone SE which has the back from anodised aluminium with matte chamfered edges and a stainless steel inset logo was introduced in 2016 (Figure 3.176e). The iPhone 7 Plus which has dual 12MP cameras on the back and iPhone 7 (Figure 3.176f). were introduced in 2016. The iPhone 8 Plus and iPhone 8 which have the glass back, and an anodised aluminium band around the frame were launched in 2017. The iPhone X which has a 13.4 square-centimetre all-screen Super Retina display was introduced in 2017 (Figure 3.176g). It has 12 MP wide-angle and telephoto cameras on the back (Apple, n.d.b).

Figure 3.176a iPhone 4 in 2010, 3.176b iPhone 5 in 2012, 3.176c iPhone 5c in 2013, 3.176d iPhone 6 Plus in 2014, 3.176e iPhone SE in 2016, 3.176f iPhone 7 in 2016, 3.176g iPhone X in 2017 (From left to right) (URL 116)

TIME Magazine named the iPhone as the invention of the year in 2007 and Grossman gave five reasons for the selection; 'It is pretty, it is touchy-feely, it will make other phones better, it's not a phone, it is a platform, and it is but the ghost of iPhones yet to

come' (Grossman, 2007). It was described as a breakthrough handheld computer (Mossberg & Boehret, 2007). 'The iPhone is a reconfiguring of the history, design and habits of mobile phone culture and is perceived as a device to navigate, arrange and orchestrate everyday life' (Goggin, 2009). Moreover, American software designer Alan Cooper opines that 'the beauty of the iPhone seamlessly weaves together features and functions with consistent and elegant interactive behaviour.' (Lidwell & Manacsa, 2011).

Although the iPhone is small, easy to use and solid, its cost and durability have been questioned (Morris, 2016). However, when a new model goes on sale, people wait in lines for hours and even days to be the first to buy a new iPhone. It becomes a part of its owner's life.

Intellectual Property Biography of the iPhone Smartphone

Apple has used design patents to protect the shape of iPhone in the United States. The first design patent for the minimalistic face of an iPhone, front speaker slot, and edge-to-edge glass of the front display was granted in 2010 (Figure 3.177).[67] The second design patent covers the appearance of the front of the iPhone, including the bezel and the home button designed in 2009 (Figure 3.178).[68] The layout of Apple's graphical user interface and the layout in the proportions of iOS on an iPhone were granted design patents in 2009 and in 2010 (Figure 3.179).[69] A 2010 design patent in 2010 protects the shape of the iPhone 3GS (Figure 3.180).[70] A design patent for THE iPhone's combination of hardware and software was registered in the United States, in 2013 (Figure 3.181).[71] Outside the United States, some important Apple designs are not eligible for protection in China (Guifang & Fangtao, 2014).

[67] U.S. Design Patent No. D618,677
[68] U.S. Design Patent No. D593,087
[69] U.S. Design Patent No. D604,305, D627,790
[70] U.S. Design Patent No. D615,083
[71] U.S. Design Patent No. D688,660

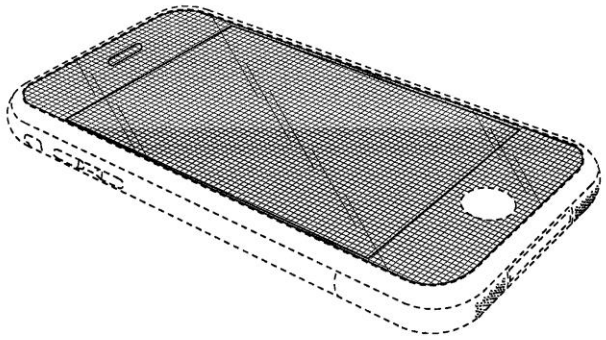


Figure 3.177 The design patent for rounded rectangle shape on the front

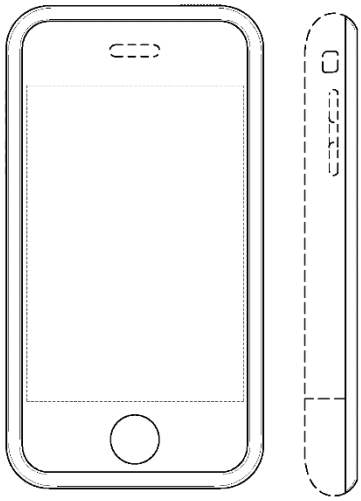


Figure 3.178 The design patent for appearance of the front

Figure 3.179 The design patent for icon layout

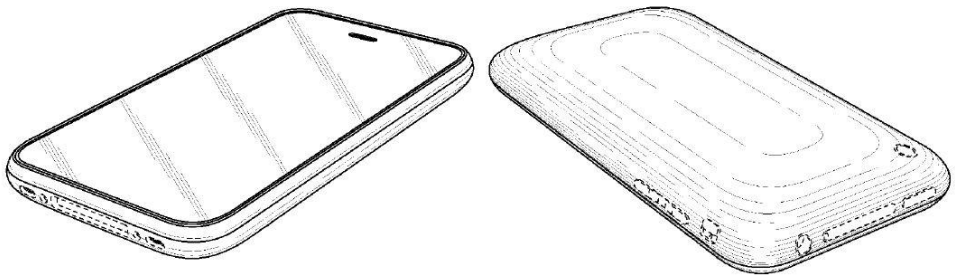


Figure 3.180 The design patent for the shape of the iPhone 3GS

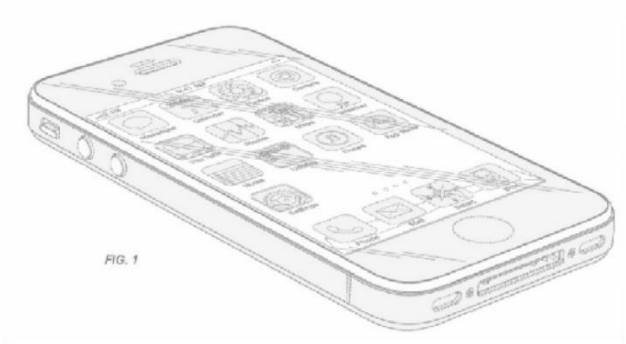


Figure 3.181 The design patent for hardware and software

Apple uses many internal components sourced from third parties including Murato Manufacturing Co Ltd and Qualcomm Incorporated (Hoyle, 2013). These components are covered in Apple has many licensing agreements.

Apple and Samsung patent war kicked off in 2011 and was fought in countries around the world. Apple claimed that Samsung had infringed its utility patents, design patents, and trade dress rights in the U.S. (Saardchom, 2014). At trial, Apple claimed that the appearance of Samsung smartphones had changed immediately after the iPhone was released in 2007 and that Samsung's success came from 'slavish copying' of Apple's product designs (Carani, 2013) (Figure 3.182). The jury in the United States ruled that Samsung had infringed software patents and the look and feel of the iPhone (n.d., 2012b).

Figure 3.182 Samsung's smartphones before and after iPhone (Carani, 2013)

Apple protected the shape of iPhone through trademark registration in the United States in 2008 and the European Union countries in 2011.[72] However, Apple's trademark registration in the European Union countries was cancelled in a few months. Similarly, Apple applied for an extension of the protection of an international trademark registration covering the shape of the iPhone 4, to Australia in 2011 (Figure 3.183). The Hearing Officer claimed to investigate deeply because the trademark may have been registered wrongly in the past due to a lack of distinctiveness. Apple claimed distinguishing features of the trademark; 'It is a three dimensional rectangular shape, the corners of the shape are rounded and the upward facing surface features an oblong at the top and a circle with a concave aspect at the bottom.' The Hearing Officer rejected three distinguishing features and asked for evidence of use. Apple submitted survey evidence which showed the level of recognition of the iPhone 4 shape. The picture showed to the participant in the survey included entire shape of the iPhone 4; but Apple did not seek to register the entire shape of it. Therefore, the Hearing Officer rejected the application for extension of the international registration to Australia. Apple also did not win extensions of the international registration in other countries including Switzerland, China, South Korea, Russia, Singapore and Turkey (Jepson, 2015).

[72] U.S. Trademark Reg. No. 3,475,327

Figure 3.183 The trademark for the shape of the iPhone

3.3.1.3.3 iPad Tablet Computer

Design Biography of the iPad Tablet Computer

The iPad tablet computer was introduced by Apple on January 27, 2010 (Figure 3.184). It is a handheld slate with a touchscreen interface. The idea behind of the iPad is that it is a sheet of paper to take notes; it was first targeted at education (Kahney, 2014).

Apple Chief Executive Steve Jobs introduced the iPad as a 'magical and revolutionary' device which defined a new product category between smartphones and laptops. Jobs predicted the iPad it would be finest device in the world for web-surfing, e-mail, photo-sharing, music, games and e-books (Ojeda-Zapata, 2011). Stringer said that 'It is a breathtakingly simple, beautiful device and easily understandable. You pick it up and use it.' (Kahney, 2014).

Figure 3.184 The first iPad tablet computer (URL 117)

The iPad was first sold in the U.S. on April 3, 2010 and in the UK on May 28, 2010, followed by releases in France, Germany, Italy, Spain, Switzerland, Japan, Canada and

Australia (Williams, 2015). Apple sold 30,000 iPads on the first day of sale and one million iPads within 28 days. For comparison, the iPhone reached the one million milestone in 74 days (Ojeda-Zapata, 2011). The iPad is the most commercially successful tablet in world (Ritchie, 2017). Best Buy reported that laptop sales have decreased by a 50 percent after the iPad was introduced (Ferrell & Hartline, 2015). This happened in spite of the fact that the iPad was priced at about $499 while its competitors such as Google's Nexus 7 and Amazon's Kindle Fire sold for $200 (Ferrell & Hartline, 2015).

The first iPad was available in 16 GB, 32 GB and 64GB models (Trebitowski, Allen & Appelcline, 2011). The second generation of the iPad, which included front and rear cameras and up to 10 hours of battery life, was launched on March 2, 2011, 15 million of the first generation iPads had been sold (Williams, 2015). The third generation including a high-density retina display, a faster chip and a better camera was followed up in 2012 (Kahney, 2014). The fourth generation of the iPad were released in 2012 (Kahney, 2014). iPad mini has a width of 20 cm (7.9-inch) which you can hold in one hand was launched on October 3, 2012 (Figure 3.154). A tech reviewer with the *New York Times*, David Pogue said that 'The Mini gives you all the iPad goodness in a more manageable size.' (Kahney, 2014). In 2013, about a 60 percent of all iPad sales was formed by iPad mini (Kahney, 2014). iPad mini 2, iPad mini 3 with touch ID and iPad mini 4 were also introduced. iPad Air with thinner and lighter design on 2013 and iPad Air 2 were released in 2014. iPad Pro including an advanced screen and a much faster processor was launched in 2015 (Figure 3.185). It works with Apple's Smart Keyboard and Apple Pencil. iPad Pro 12.9, 9.7 and 10.5 are available on the market.

Figure 3.185 From left to right: The design of iPad mini and iPad Pro (URL 118)

The iPad was positioned as an information-consumption device not an information-creation product and today it is positioned as a device useful in all kinds of business, including education and medical services (Ojeda-Zapata, 2011). TIME Magazine named the iPad one of the 'Top Ten Gadgets of 2010' (Aamoth, 2010).

Intellectual Property Biography of the iPad Tablet Computer

The design patent for the basic design of an iPad, including flat front and back surfaces, rounded corners, a thin bezel, an edge-to-edge front glass display, and a generally minimalistic aesthetic was granted to Apple in the United States in 2005 before the iPad was introduced (Figure 3.186).[73] The design patent (D504,889) includes all six side of the tablet and 'oblique' surface shading lines.[74] A design patent for a user interface with a few rows of icons, in the proportions of iOS on an iPad was granted in 2012 (Figure 3.187).[75] Other U.S. design patent applications for the entire appearance of the iPad followed in 2010 and 2011.[76]

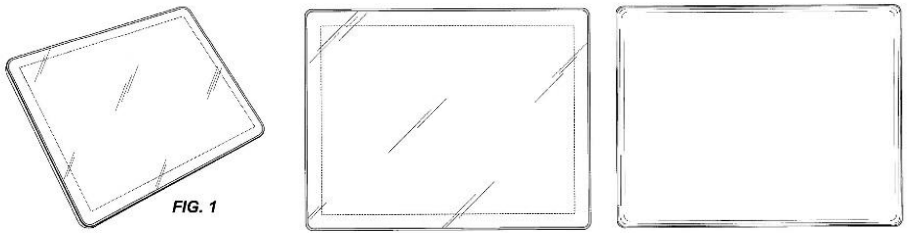


Figure 3.186 The design registration of the iPad

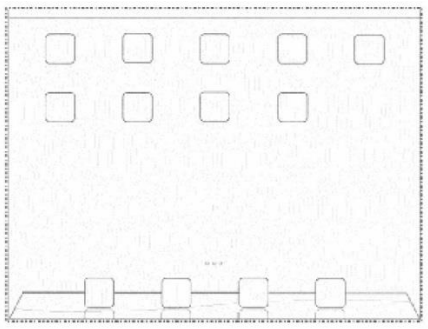


Figure 3.187 The design patent for user interface of the iPad

[73] U.S. Design Patent No. D504,889
[74] U.S. Design Patent No. D615,083
[75] U.S. Design Patent No. D660,864
[76] U.S. Design Patent No. D627,777, D637,596 and D681,632

Although Apple said the iPad defines a new product category, the design was similar to other Apple products, especially in terms of the user interface (Barcena, 2013). Apple claimed that the iPad has a distinctive shape with rounded corners and a large screen with a black border like the iPhone (Barcena, 2013). The shape of the iPad was also registered as trademark in some countries, including Mexico in 2010 and Argentina in 2012.[77]

The iPad sparked more legal battles between Apple and Samsung which are the largest technology companies in the world. Apple claimed that Samsung infringed its utility patents, design patents, trademarks and trade dress rights in the design of Samsung smartphones and tablets. Apple proposed a licensing deal in which Samsung would pay $30 per smartphone and $40 per tablet, but Samsung refused. Apple then filed a lawsuit claiming that Samsung has infringed its utility patents, design patents and trade dress rights in the U.S. in 2011 (Saardchom, 2014). After Apple filed also lawsuits in several countries, Samsung filed counterclaim. Samsung claimed that its Samsung Galaxy 10.1 Tab had not infringed iPad, it used the design features from the prior art, namely the Fiddler tablet released in 1994, which is a rectangle with rounded corners (PNW Startup Lawyer, 2014) (Figure 3.188). In the end, the U.S. court ruled that Samsung had infringed Apple's software patents. The court awarded $1 billion damages to Apple (Saardchom, 2014). The court ruled that there is no infringement of either the Apple and Samsung design patents, however on appeal, Judge Koh claimed that the Samsung Galaxy 10.1 Tab infringed Apple's patents because it is 'virtually indistinguishable' and 'looks virtually identical' to Apple's iPad (Carani, 2013) (Figure 3.189).

[77] Mexican Trademark Reg. No. 1193760; Argentinian Trademark Reg. No. 2550595

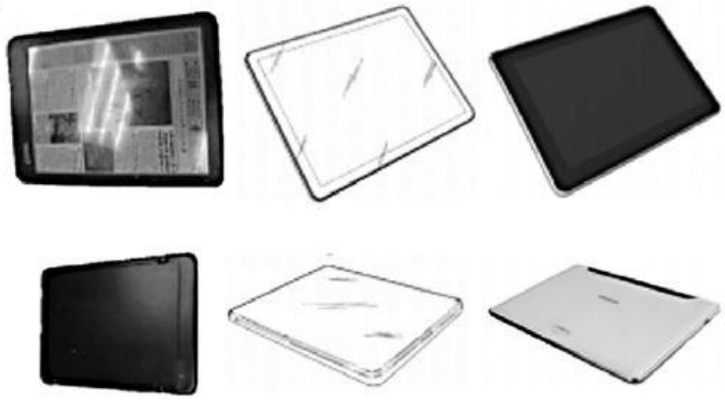


Figure 3.188 The prior art (Fiddler Tablet), iPad and Samsung Galaxy 10.1 Tab (PNW Startup Lawyer, 2014)

Figure 3.189 The iPad and Samsung Galaxy 10.1 Tab (URL 119)

Apple filed a second lawsuit against Samsung in the United States in 2012. In this second case, the jury found that both companies had infringed each other's patents in 2014. Samsung had infringed Apple's slide-to-unlock patent and less-famous quick links patent on the iPhone and iPad. The court awarded $119,625,000 damages to Apple. On the other hand, Apple had infringed one of Samsung's patents and Samsung was awarded $158,400 damages (Saardchom, 2014).

3.3.1.3.4 Discussion

The iPod MP3 player with minimalist white design is an iconic technological design which created a new category of digital music player. It is a symbol of mobility, aesthetics and functionality of sound and touch. It reconfigures and aestheticizes everyday life (Figure 3.190). There is a range of related products which targets

different consumer groups. The company has successfully used the iconic design in the advertisement through including well-known black-silhouetted dancing figures holding white iPods. As an IP strategy, the company sought to obtain design protection for almost every new design in the United States and the European Union countries soon after each design was released (Figure 3.191). Later, Apple chose patent protection for the user interface of the iPod and many licensing agreements. Later still, the company approached three-dimensional marks protection in the United States, the European Union countries and some other countries.

The iPhone smartphone is an iconic technological design having a large touchscreen, recognizable home button on the front, built in integrated rechargeable battery and memory card. It is called revolutionary mobile phone. The design strategy of the company is that almost two products has been introduced in a year (Figure 3.192). As an IP strategy, Apple chose to protect the appearance of its product by first in the United States and the European Union countries (Figure 3.193). The company was granted a three-dimensional mark for the shape of the iconic product one year after the iPhone's release, and won European Union protection a few years later. However, trademark protection in the European Union countries was cancelled for lack of distinctiveness. Apple fought protracted legal battles with Samsung over infringements of Apple's IP rights.

The iPad tablet computer is an iconic technological design which defined a new product category between smartphones and laptops. It is called as magical and revolutionary device (Figure 3.194). Apple began seeking protection of the appearance of the iPad five years before it was introduced (Figure 3.195). The company chose to protect the shape of the iPad as a three-dimensional mark in Mexico and Argentina. Two of its U.S. design patents were cancelled. Apple has always competed with visually identical knock-offs of its products. It manages the problem successfully through its IP strategy.

Iconic technological designs are mostly of the 21st century. They are honoured with important technological awards. They have often introduced latest versions of each product such as first generation iPod, second generation iPod, third generation iPod

and fourth generation iPod. Moreover, they have a wide range of product such as iPod Classic, iPod Nano, iPod Shuffle and iPod Mini.

Currently, Apple prefers to start covering its products with design protection and then applied for three-dimensional mark protection. Apple applied for three-dimensional mark protection seven years after the release of its iPod MP3 player, one year after the release of the iPhone smartphone and one year the release of the iPad tablet computer. It shows that three-dimensional mark protection is preferred in initial stages. It also shows that Apple has gained experience in using three-dimensional mark protection and transformed its IP strategy to take advantage of the protection it offers.

THE IPOD MP3 PLAYER

Iconic Technological Designs

IPOD MP3 PLAYER

Consumer Electronic

2001
Apple introduced the first iPod.

2002
The iPod's second version

2003
The iPod's third version

2004
The iPod's fourth version with the click wheel

2006
The iPod nano 2G

2006
The iPod shuffle 2G which was the smallest mp3 player in the world was introduced.

2007
iPod classic with silver and black brushed aluminium front was introduced.

DESIGN

2008
A design patent for the iPod's user interface was granted 7345671, U.S.A.

DESIGN

2009
A design patent for the iPod classic was granted D598424, U.S.A.

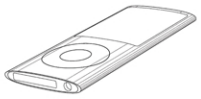
2010
The iPod shuffle 4G / The iPod nano 6G / The iPod touch 4G

3D MARK

2010
A three-dimensional trademark for the iPod Classic was granted 3855964, U.S.A.

DESIGN

2010
A design patent for the iPod nano 4G was granted D626530, U.S.A.



2012
The iPod nano 7G / The iPod touch 5G

2013
A design patent for the iPod nano 7G was granted D681056, U.S.A.

Figure 3.190 Left and right: The design and IP biography of the iPod MP3 player

2001
iTunes media management software was introduced.

2003
A design patent for the iPod was granted D469109, U.S.A.

2004
The iPod mini 1G

2005
The iPod's fifth version / The iPod nano 1G / The iPod shuffle / The iPod mini 2G

2006
A design patent for the iPod nano 1G was granted 000465109-0003, EU.

DESIGN

2006
The iPod nano Red Special Edition for helping eliminate the prevalence of HIV/AIDS in Africa, was introduced.

2007
The iPod touch 1G / The iPod nano 3G

2008
The iPod nano 4G / The iPod touch 2G

2009
The iPod shuffle 3G / The iPod touch 3G / The iPod nano 5G

It is the icon which is connected to mobility, aesthetics and functionality of sound and touch.

It reconfigures and aestheticizes everyday life.

2010
A three-dimensional trademark for the iPod shuffle 4G was granted 3786590, U.S.A.

3D MARK

2010
A patent for the iPod shuffle 4G contained within a very small housing was granted 8368643, U.S.A.

PATENT

2011
A design patent for the iPod nano 6G was granted D638030, U.S.A.

DESIGN

2013
A design patent for the iPod Shuffle 3G was granted D678876, U.S.A.

DESIGN

2015
The iPod touch 6G

Design Biography

IP Biography

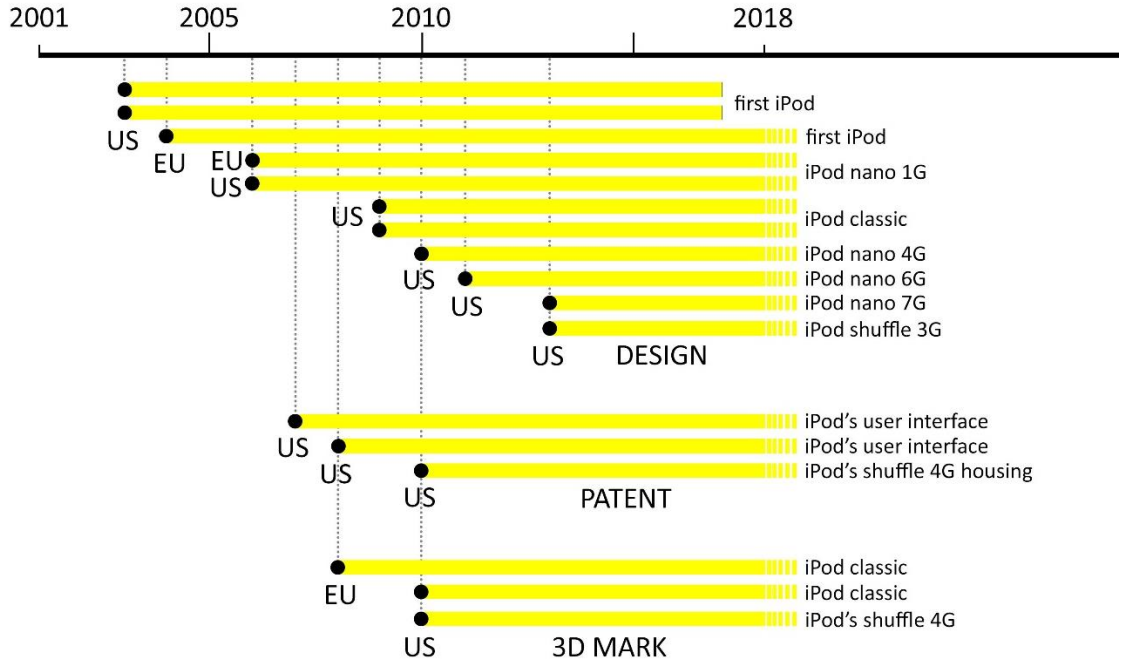


Figure 3.191 IP history of the iPod MP3 player

Design: D469109, D472245, 000269576-0001, 000465109-0003, D516576, D598424, D606967, D626530, 137684/1, D681056

Patent: 7166791, 7345671, 9368643

3D Mark: 982659, 3786590, 3855964

THE IPHONE SMARTPHONE

Iconic Technological Designs

IPHONE SMARTPHONE

Consumer Electronic

2007
Apple introduced the first iPhone.

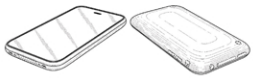
2008
iPhone 3G

DESIGN

2009
A design patent for the layout of Apple's graphical user interface was granted 604305, U.S.A.

DESIGN

2010
A design patent for the shape of the iPhone 3GS was granted 615083, U.S.A.



2011
iPhone 4S

2012
iPhone 5

2014
iPhone 6 and iPhone 6 Plus

2016
iPhone 7 and iPhone 7 Plus (dual cameras)

2017
iPhone X
(Super Retina display and wide-angle and telephoto cameras)

Figure 3.192 Left and right: The design and IP biography of the iPhone smartphone

2008
A three-dimensional trademark for the shape of iPhone was granted 3457218, U.S.A.

3D MARK

2009
iPhone 3GS

2009
A design patent for the design appearance of the front of the iPhone, including the bezel and the home button, was granted. 593087, U.S.A.

DESIGN

2010
iPhone 4

2010
A design patent for the minimalistic face of an iPhone was granted 618677, U.S.A.

DESIGN

2011
A three-dimensional trademark was granted in the EU region.

3D MARK

2013
iPhone 5S and iPhone 5C

2015
iPhone 6S

2016
iPhone SE

2017
iPhone 8 and iPhone 8 Plus

Time Magazine named the iPhone as the invention of the year.

iPhone is called revolutionary mobile phone.

iPhone is reconfiguring of the history, design and habitus of mobile phone culture and is perceived as a device to navigate, arrange and orchestrate everyday life.

The most distinctive charactreictics of iPhone are a large touchscreen, recognizable home button on the front, built in integrated rechargeable battery and memory card.

Design Biography

IP Biography

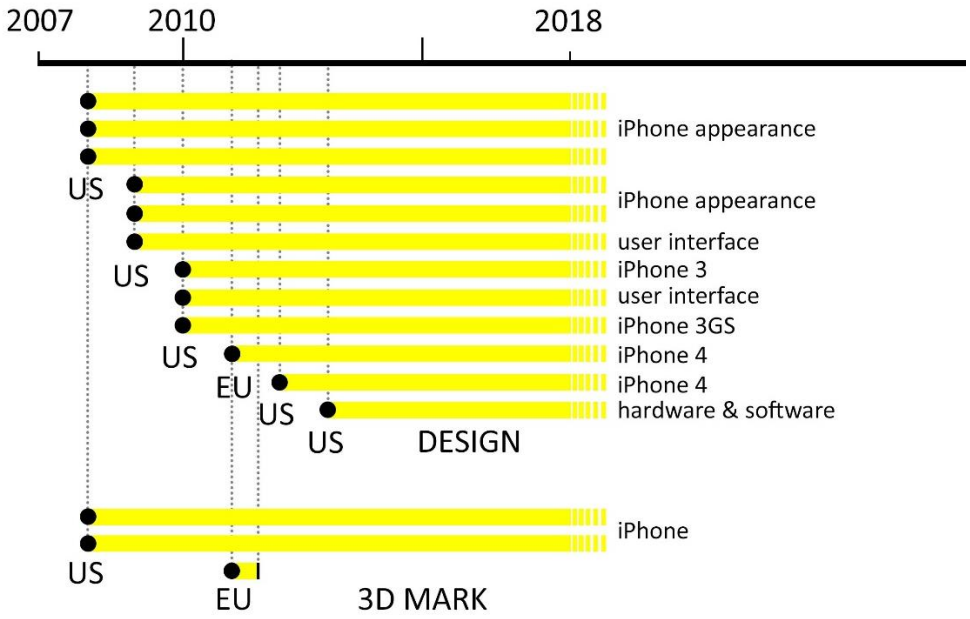


Figure 3.193 IP history of the iPhone smartphone

Design: D558756, D558757, D580387, 593087, 604305, D602016, 618677, 615083, 627790, 201130022660

3D Mark: 3457218, 3475327, 1082664

THE IPAD TABLET COMPUTER

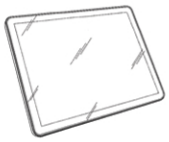
Iconic Technological Designs

IPAD TABLET COMPUTER

Consumer Electronic

DESIGN

2005
A design patent for the basic design of an iPad was granted D504889, U.S.A.



3D MARK

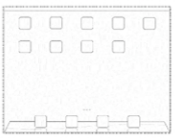
2010
A three-dimensional trademark for iPad was granted 1193760, Mexico.

2012
The fourth generation of the iPad were released.

2012
The third generation including a high-density retina display, a faster chip and a better camera was introduced.

DESIGN

2012
A design patent for a user interface of the iPad was granted D660864, U.S.A.



2014
iPad Air 2 was introduced.

Figure 3.194 Left and right: The design and IP biography of the iPad tablet computer

2010
The iPad tablet computer was introduced by Apple.

2011
The second generation of the iPad including front and rear camera and up to 10 hours of battery life was introduced.

2012
iPad mini which you can hold in one hand was launched.

2012
A three-dimensional trade-mark for iPad was granted 2550595, Argentina.

3D MARK

Steve Jobs introduced as a “magical and revolu-tionary” device which defines a new product category between the smartphones and the laptops.

Time Magazine named iPad as one of the “Top Ten Gadget of 2010”.

2013
iPad Air with thinner and lighter design was introduced.

2015
iPad Pro including an advanced screen and a much faster processor was launched.

Design Biography

IP Biography

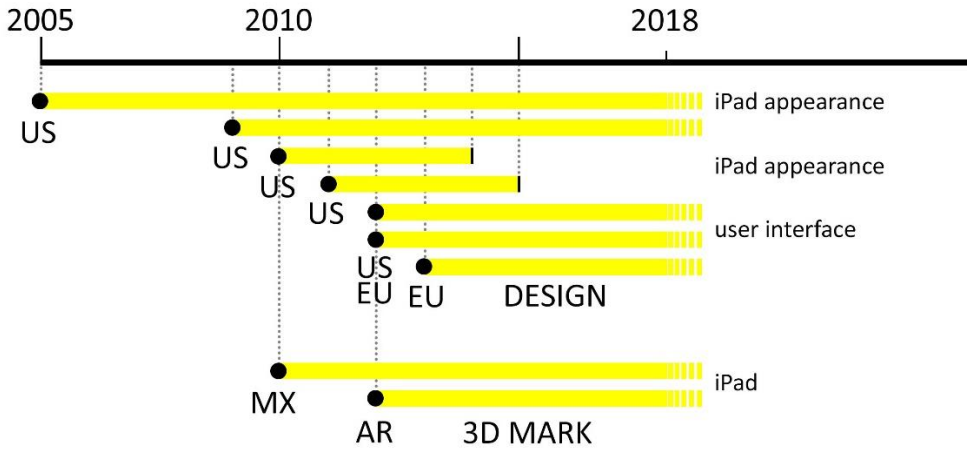


Figure 3.195 IP history of the iPad tablet computer

Design: D504889, D593087, D627777, D637596, D681632, 201130212771.4, 201330040070.6

3D Mark: 1193760, 2550595

CHAPTER 4

CONCLUSION

4.1 Revisiting research questions

The aim of this study is to examine three-dimensional marks in relation to other types of intellectual property protection through a historical perspective, and to identify and diversify IP protection strategies for three dimensional shapes. This study is conducted by case studies comprised of three main stages. The first stage is literature review and intellectual property database search for three-dimensional marks. The second stage is an extended literature review and a detailed intellectual property database search which aims to investigate design history and intellectual property protection history of three dimensional shapes. The final stage is the analysis which aims to categorize three dimensional shapes which are protected as three-dimensional marks and to investigate design history and intellectual property protection history of three dimensional shapes by building an explanation supported by visual case studies.

This chapter will be explained with the answers given to the following research questions:

- What is the current state of three-dimensional marks from an international legal perspective?
    - How are three-dimensional marks defined and categorized?

    - What are the well-known examples of three-dimensional marks from various sectors?
- What is the strategical and chronological relationship between three-dimensional mark protection and other types of intellectual property protection for various three dimensional shapes from various sectors?
- What are the key considerations for identifying and diversifying intellectual property protection strategies for three dimensional shapes?

What is the current state of three-dimensional marks from an international legal perspective?

Three-dimensional marks are defined as non-traditional trademarks by many jurisdictions. A three-dimensional mark is defined that 'the mark is 'three dimensional' and constitutes 'product design' or 'configuration' of the goods themselves or product 'packaging' or a 'container' in which the goods are sold, or that the trade dress is for services (USPTO, TMEP, 2017, Art. 1202.02(c)(ii)). Similarly, the Article 3(3)(c) EUTMIR defined a shape mark is a trade mark consisting of, or extending to, a three dimensional shape, including containers, packaging, the product itself or their appearance.

Three-dimensional marks can be grouped into three categories; shapes unrelated to the goods and services themselves, shapes that consist of the shape of the goods themselves or part of the goods, and the shape of packaging or containers. According to the Article 3(1)(e) EUTMR, the following shapes cannot be registered: signs which consist exclusively of; the shape which results from the nature of the goods themselves, the shape of goods which is necessary to obtain a technical result, and the shape which gives substantial value to the goods.

The well-known examples of three-dimensional marks from various sectors are three-pointed star emblem of Mercedes-Benz vehicles, the triangular prism shape of Toblerone chocolate bar, the rounded body shape of Clipper lighter, and the 'hobble-skirt' contour design of Coca-Cola bottle.

What is the strategical and chronological relationship between three-dimensional mark protection and other types of intellectual property protection for various three dimensional shapes from various sectors?

Three-dimensional mark protection has mostly used in last stage of IP strategies when other types of IP protection lapsed or cancelled because three-dimensional mark protection is not much common. In the category of iconic product designs, it is the last type of IP protection to be approached many years later the product was introduced as shown by visual graphs; 86 years for Toblerone chocolate bar, 45 years for Coca-Cola contour bottle, 75 years for Barcelona chair, 62 years for Zippo lighter, 65 years for Volkswagen Beetle automobile, 57 years for Honda Super Cub motorcycle, 26 years for Stokke Tripp Trapp chair and 14 years for Crocs shoes (Figure 4.1).

In the category of iconic buildings apart from Apple Glass Cube Building, three-dimensional mark protection is also the last type of IP protection to be approached many years later the building was completed as shown by visual graphs; 114 years for Tac Mahal Palace Hotel Building, 49 years for Chrysler Building, 70 years for Empire State building, 22 years for Transamerica Pyramid Building, 33 years for Sydney Opera House Building, and two years for Rock and Roll Hall of Fame Building (Figure 4.2). Three-dimensional mark protection is the first type of IP strategy for Apple Glass Cube Building before design protection.

In the category of iconic technological designs, it is the second type of IP protection to be approached a few years later the device was introduced as shown by visual graphs; seven years for iPod MP3 player and one year for iPhone smartphone, and the first type for iPad tablet computer (Figure 4.3). According to three figures, the duration of approaching three-dimensional mark as an IP strategy by companies has been decreased regularly. They also demonstrate that three-dimensional mark protection has been used proactively since the 2000s by mostly consumer electronics industry.

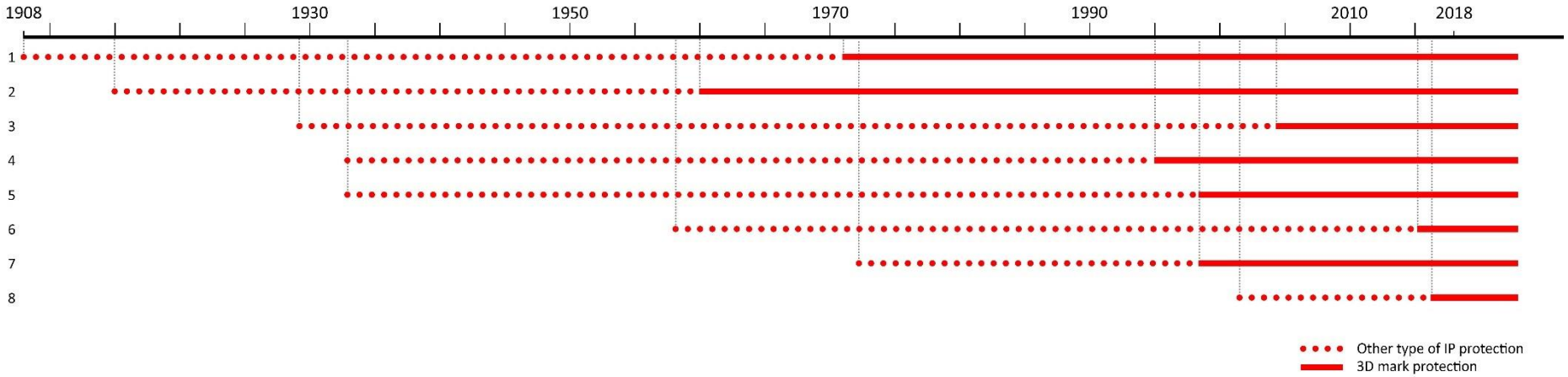


Figure 4.1 The historical analyses of three-dimensional mark protection at the category of iconic product designs

1. Toblerone chocolate bar
2. Coca-Cola contour bottle
3. Barcelona chair
4. Zippo lighter
5. Volkswagen Beetle automobile
6. Honda Super Cub motorcycle
7. Stokke Tripp Trapp chair
8. Crocs shoe

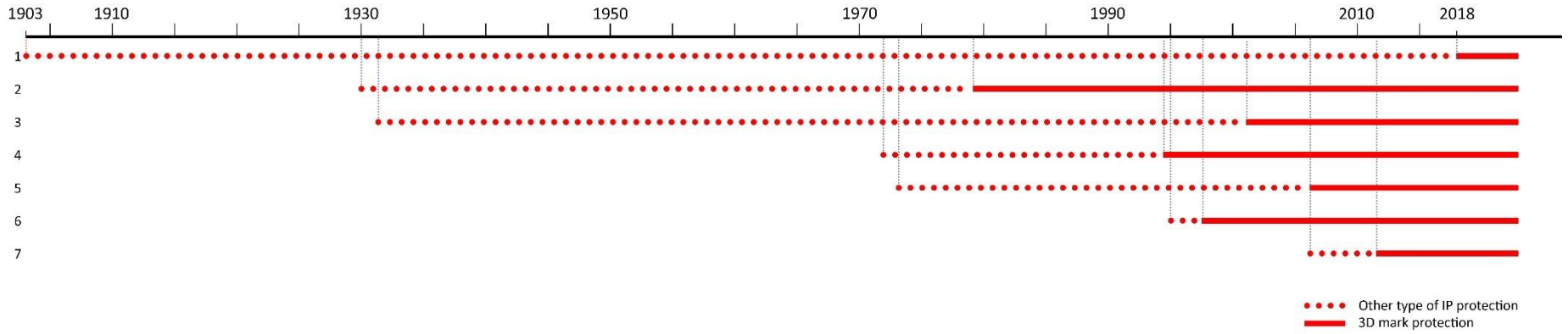


Figure 4.2 The historical analyses of three-dimensional mark protection at the category of iconic buildings

1. Taj Mahal Palace Hotel Building
2. Chrysler Building
3. Empire State Building
4. Transamerica Pyramid Building
5. Sydney Opera House Building
6. Rock and Roll Hall of Fame Building
7. Apple's Glass Cube Building

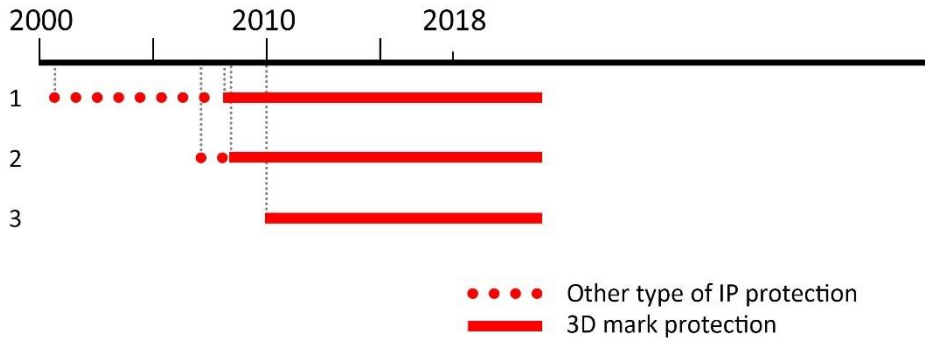


Figure 4.3 The historical analyses of three-dimensional mark protection at the category of iconic technological designs

1. iPod MP3 Player
2. iPhone smartphone
3. iPad tablet computer

The chronological relationship between three-dimensional mark protection and other types of intellectual property protection, shows that three-dimensional marks have become known recently and begun to be used strategically by companies from various sectors.

In the category of iconic product designs, when patent or design lapsed, either a period without any type of IP protection is started as exemplified; Toblerone chocolate bar, Coca-Cola contour bottle, Zippo lighter and Volkswagen Beetle automobile, or the product is only protected by copyright as shown in visual graphs of Barcelona chair and Stokke Tripp Trapp chair. Both situations are insufficient to prevent infringements of the iconic designs by third parties and provoke the company to be granted three-dimensional mark in order to maintain exclusive right of the iconic product designs. In the case of Honda Super Cub, it had not protected for many years and when the company decided to protect the iconic designs, it was too late for patent and design protection. Therefore, the only way to protect by three-dimensional mark since it gained acquired distinctiveness. In the case of Crocs shoe, design was cancelled because it was not novel, three-dimensional mark protection was the only way left.

In the category of iconic buildings, since copyright protection and figurative trademark protection for a building was insufficient way of intellectual property protection, three-dimensional mark protection was strategically preferred as exemplified by Tac Mahal Palace Hotel Building, Chrysler Building, Empire State Building, Transamerica Pyramid Building, Sydney Opera House Building and Rock and Roll Hall of Fame Building except for Apple Glass Cube Building. In the case of Apple Glass Cube Building, three-dimensional mark was preferred first.

In the category of iconic technological designs, three-dimensional mark protection was strategically and proactively preferred with design protection at the beginning as exemplified by iPod MP3 player, iPhone smartphone and iPad tablet computer because their recognition of IP protection strategy proactively is much more than other categories.

What are the key considerations for identifying and diversifying intellectual property protection strategies for three dimensional shapes?

Table 4.1 summarizes the key considerations for identifying and diversifying intellectual property protection strategies for three dimensional shapes from various sectors together with the characteristics and the findings of the study.

Table 4.1 The key considerations for identifying and diversifying intellectual property protection strategies for three dimensional shapes

	Sectors	Examples from Case Studies	Characteristics	Considerations & Issues for Developing IP Strategy Proactively
ICONIC PRODUCT DESIGNS	Packaging, Furniture, Footwear, Automobile	-Toblerone chocolate bar -Coca-Cola contour bottle -Barcelona chair -Zippo lighter -Volkswagen Beetle automotive -Honda Super Cub motorcycle -Tripp Trapp chair Crocs shoe	-Globally diffused -Globally recognized -Distinctive shape -Being part of an everday life and culture -Appeared in movies and magazines -Having been exhibitted -Awarded by prizes -Having strong market place -Using advertisement effectively	-Three-dimensional trademark protection ought to be obtained at the beginning if the shape is inherently distinctive. -If the shape is not distinctive, three-dimensional trademark protection ought to be obtained when the shape gains acquired distinctiveness. -Obtaining three-dimensional trademarks in the packaging industry ought to be challenging. -Three-dimensional trademark protection ought to be powerful way of IP protection as well as copyright protection in furniture industry.

Table 4.1-Continued The key considerations for identifying and diversifying intellectual property protection strategies for three dimensional shapes

ICONIC BUILDINGS	**Architecture**	-Taj Mahal Palace Hotel Building -Chrysler Building -Empire State Building -Transamerica Pyramid Building -Sydney Opera House Building -Rock and Roll Hall of Fame and Museum Building -Apple's Glass Cube Building	-Landmark -National symbol -Distinctive shape -Focal area -Touristic place -Competition winners -Awarded by prizes -Technically breaking the rules of its age -Challenging building -Being a part of pop culture -Appeared in movies and magazines	-Three-dimensional trademark protection ought to be obtained at the beginning if the shape is inherently distinctive. -Three-dimensional trademark protection ought to be powerful way of IP protection in condition using with copyright protection. -Three-dimensional trademark protection ought to provide right holders of architectural icon to become a partner with another company in toy, entertainment or souvenir industry.

Table 4.1-Continued The key considerations for identifying and diversifying intellectual property protection strategies for three dimensional shapes

ICONIC TECHNOLOGICAL DESIGNS	**Consumer Electronics**	-iPod MP3 player -iPhone smartphone -iPad tablet computer	-Breakthrough -Revolutionary -Category definer -Reconfiguring everyday life -A wide range of products	-Three-dimensional trademark protection ought to be obtained at the beginning if the shape is inherently distinctive. -Three-dimensional trademark protection ought be obtained for the core product. -Obtaining a three-dimensional trademark for each new designs ought to be challenging.

In the first category, if three dimensional shape of the iconic product design is inherently distinctive, three-dimensional mark protection ought to be obtained at the beginning in order to prevent the distinctive three dimensional shape of the design to become generic. On the other hand, if the shape is not distinctive, three-dimensional mark protection ought to be obtained when the shape gains acquired distinctiveness through being marketed extensively and the use of advertising as exemplified by Zippo lighter and Honda Super Cub motorcycle. Iconic product designs in the packaging industry as exemplified by Coca-Cola contour bottle ought to be hardly granted by three-dimensional mark; however, because they are mostly considered as the shape which results from the nature of the goods themselves and the shape which necessary to obtain a technical result. Iconic product designs in the furniture industry such as Stokke Tripp Trapp chair and Barcelona chair, are mostly protected by copyright law only which can cause many infringement cases as exemplified by; thus, three-dimensional mark protection ought to be a powerful way of IP protection in the furniture industry.

In the category of iconic buildings, three-dimensional mark protection ought to be obtained at the beginning because iconic buildings which are landmark has unusual shape as exemplified the pyramid shape of the Transamerica Pyramid Building. However, being a landmark is not enough to be granted a three-dimensional mark, the shape must be recognized as a source identifier as exemplified by the Rock and Roll Hall of Fame case. As shown in almost each iconic building case above, because copyright protection prevents third parties from only three-dimensional reproduction of a building, three-dimensional mark protection ought to be a powerful way of IP protection. As shown in Sydney Opera House Building, three-dimensional mark protection ought to provide right holders of iconic building to become a partner with another company in toy, entertainment or souvenir industry.

In the category of iconic technological designs, three-dimensional mark protection ought to be obtained at the beginning because the iconic technological designs are breakthrough, revolutionary and category definer. In this category, new designs of the core product with small change in the three-dimensional shape of it, are introduced with new technical specification periodically; therefore, obtaining three-dimensional trademark for each new designs ought to be challenging. In this situation, design

protection can be more suitable for new designs of the core product. In this category, there is also a wide range of a product such as iPod Classic, iPod Mini, iPod Shuffle and iPod Nano, therefore; three-dimensional mark protection ought to be obtained if the range of product differs in itself.

The similarity of these categories is that if the three dimensional shape of an iconic product or building, three-dimensional mark protection ought to be obtained at the beginning in order to prevent the distinctive three dimensional shape of the design to become generic.

One of the most important differences between these categories is that while iconic product designs and iconic buildings have a longer history, iconic technological designs do not. Despite this, iconic technological designs are differed from other categories with having a number of design, patent and three-dimensional mark; therefore; the intensity of their visual graphs is much more than others.

Limitations of the study are as follows:

- During searching the intellectual property databases, it was realized that three-dimensional marks are in the category of figurative or combined trademark since separate category for three-dimensional marks was not defined in some national jurisdictions. The researcher had to search on figurative and combined trademark as well as three-dimensional mark and choose three-dimensional marks among them. Therefore, it was challenging to reach all three-dimensional mark registrations.
- This study was based on secondary sources such as literature, legal sources and databases without contacting the right holders of these three-dimensional marks due to time limitations. If it were conducted through interviews with the right holders, the results would differ.

4.2 Further Research

While investigating three-dimensional mark protection and identifying and diversifying strategies for the protection of three dimensional shapes, interviews with the right holders of these three-dimensional marks can be conducted for making connection between the corporate story and the intellectual property protection strategy.

In addition, more visual case studies including different examples from various sectors can be conducted for developing a comprehensive framework which assist businesses to protect their intellectual property assets. The relationship between three-dimensional marks and well-known marks can be explored. Three-dimensional mark protection for miniature cities such as Las Vegas can be also investigated.

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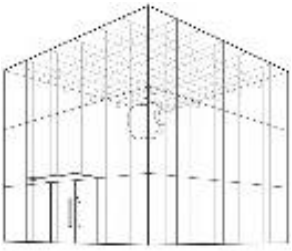
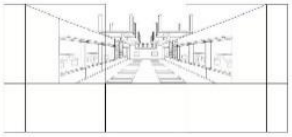
- Knoll, Inc. v. Moderno, Inc. et al, No. 1:2011cv00488 - Document 97 (S.D.N.Y. 2012)
- Crocs v. International Trade Commission Case No. 08-1596 (Fed. Cir. 2010)
- ESRT Empire State Building, L.L.C. v. Michael Liang Case No. 91204122 (2015)
- Hauck GmbH v. Stokke A/S Case C-205/13 (2014)
- Henkel KgaA v. Detsches Patent- und Markenamt C-218-01 (2004)
- Lego Juris A/S v. OHIM and Mega Brands, Inc. (CJEU (Grand Chamber); C 48/09; (2010)
- Rock & Roll Hall of Fame & Museum, Inc. v. Gentile Prod., 71 F. Supp. 2d 755 (N.D. Ohio 1999)
- Volkswagen Ag, et all., v. Dorling Kindersley Publishing, Inc., Case No. 05-72654 (2009)
- Volkswagenwerk Ag v. Hoffman, 489 F. Supp. 678 (D.S.C. 1980)

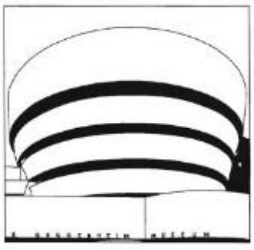
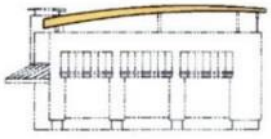
- Volkswagenwerk Aktiengesellschaft v. Rickard 175 U.S.P.Q. 563, 564, 492 F.2d 474 (5th Cir. 1974)
- VOLKSWAGENWERK, AG v. Smith, 471 F. Supp. 385 (D.N.M. 1979)

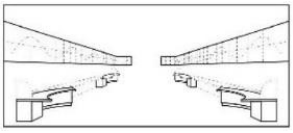
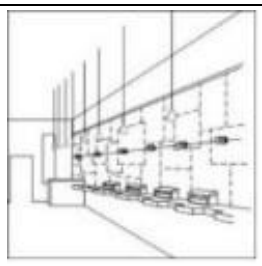
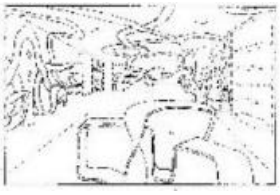
APPENDIX A

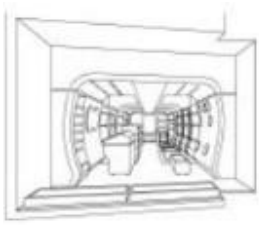
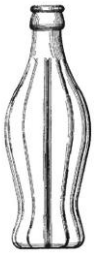
THE ENTIRE LIST OF PRODUCTS AND ARCHITECTURAL BUILDINGS WHICH ARE IDENTIFIED

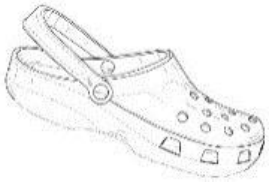
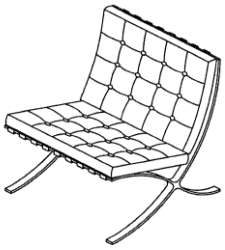
Table A.1 The entire list of products and architectural buildings which are identified

THREE-DIMENSIONAL MARK	YEAR & COUNTRY	VISUAL REPRESENTATION
1. Apple Glass Cube Building	2011 - the United States	
2. Apple Retail Store	2010 - the European Union	
3. Chrysler Building	1979 - the United States	
4. Space Needle Building	2003 - the United States	

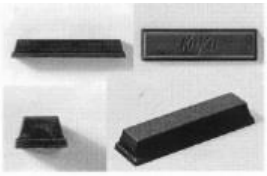
5. Transamerica Pyramid Building	1994 - the United States	
6. Rock and Roll Hall of Fame Building	1997- the United States	
7. Taj Mahal Palace Hotel Building	2017 - India	
8. Empire States Building	2000 - the United States	
9. Sydney Opera House Building	2006 - Australia	
10. Guggenheim Museum Building	2008 - the United States	
11. McDonald's Yellow Arc	2007 - the United States	

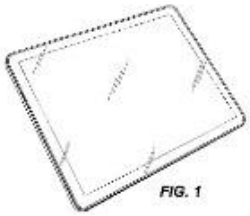
12. 30 St Mary Axe Building	2011 – the United Kingdom	
13. University of Pittsburgh Building	1992 - the United States	
14. The Channel Garden	2005 - the United States	
15. Duke University Building	1992 - the United States	
16. Microsoft Store	2011 - the United States	
17. Floyd's 99 Holdings Building	2008 - the United States	
18. Stuart Weitzman Store	2010 - the United States	

19. Flight 001 Holdings Store	2008 - the United States	
20. Mars Store	2012 - the United States	
21. Al Johnson's Swedish Restaurant	1996 - the United States	
22. BP Store	1995 - the United Kingdom	
23. Coca-Cola Contour Bottle	1960 - the United States	
24. Clipper Lighter	1996- Spain	
25. Toblerone Chocolate Bar	1994 - the United Kingdom	

26. Haig Dimple Pinch Bottle	1955- the United States	
27. Volkswagen Beetle Automobile	1998 - the European Union	
28. Honda Super Cub Motorcycle	2014 - Japan	
29. Crocs Shoe	2016 - Columbia	
30. Stokke Tripp Trapp Chair	1998 - Benelux	
31. Barcelona Chair	2004 - the United States	
32. Eames Lounge and Ottoman	2003 - the United States	

33. Navy Chair	2001 - the United States	
34. Honeywell Thermostat	1990 - the United States	
35. Zippo Lighter	1996 - the European Union	
36. Perrier Bottle	1997 – The United Kingdom	
37. Absolute Bootle	1992 - Sweden	
38. Hermes Birkin Bag	2002 - Switzerland	
39. Tiffany Box	2005 - the European Union	

40. Ferrero Chocolate	2001 - Germany	
41. Bueno Chocolate Bar	2002 - Germany	
42. Nutella Can	1999 - Mexico	
43. Hershey Teardrop Chocolate	1996 - the United States	
44. Kitkat Four Finger Chocolate Bar	2002 - the European Union	
45. Land Rover Automobile	2015 - the European Union	
46. London Taxi	2000 - the European Union	

47. Chanel No.5 Perfume Bottle	2000 - the United States	
48. Le Corbusier Chair	2013 - the United States	
49. iPhone Smartphone	2008 - the United States	
50. iPod MP3 Player	2008 – the European Union	
51. iPad Tablet computer	2010 - Mexico	
52. Dyson Air Purifier	2015 - the United States	
53. Macintosh Computer	2000 - the United States