SYRACUSE SCIENCE AND TECHNOLOGY LAW REPORTER Golf Club Technology: Intellectual Property and the Counterfeiting Epidemic C. Bradford Jorgensen¹

INTRODUCTION

A game resembling modern golf has been played for more than 500 years.² While the basic form of the game has remained fairly consistent through the centuries, the technology implemented in golf equipment has evolved considerably, especially that relating to golf clubs.³ The first golf club was likely nothing more than a shepherd's crook. Later, craftsmen developed golf clubs carved of wood, filling the back of the club with lead to give it extra weight and stability at impact.⁴ The industrial revolution gave rise to the manufacturing method known as "drop forging," whereby uniform iron clubs were mass produced.⁵ Despite the numerous changes employed in golf clubs more than the centuries, golf club technology developed in the last two decades has absolutely revolutionized the game, allowing players to hit the golf ball straighter and farther than ever before.⁶

Recognizing the economic value of new developments in golf club technology, golf club manufacturers have placed considerable effort into protecting these advances by use of

 4 Id.

⁵ Id.

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² David Nicholls, *The History of the Golf Club, at* http://www.home.aone.net.au/byzantium/golf/ghistory.html (last visited Apr. 17, 2004).

³ See generally id.

⁶ See generally id.

intellectual property law. While this avenue of legal protection has served golf companies well in the United States, much of the world does not provide comparable protection. As a result, the production of foreign counterfeit golf clubs has evolved into a huge illegal industry, causing significant losses to legitimate golf club companies, which, despite spending millions of dollars each year developing and attempting to protect new technology, are losing significant revenues to counterfeit golf club sales.

This note provides a brief history of golf club technology, taking special care to detail the technological developments of the last two decades. Next, this note outlines the basic principles of intellectual property protection as it relates to golf club technology. The challenge that illegal counterfeiting poses to the golf industry is explained and analyzed, including a discussion of the cultural differences between the United States and the Far East that compound the counterfeiting problem. Next, this Note briefly discusses some of the current trends in litigation involving infringement of intellectual property rights. In addition, a brief market analysis of the golf club industry is provided, which highlights revenues and market shares of the industry leaders. Finally, this Note contains a discussion of the lessons revealed by this case study, and provides suggestions for the future introduction of similar technology.

BRIEF HISTORY OF THE GOLF CLUB

Although the origins of the game of golf are considered to be lost in history, it is generally agreed that golf, in its present form, has existed for at least 500 years.⁷ In an Act of Parliament dated March 6, 1457, King James II of Scotland temporarily banned golf, as the sport was viewed to be a distraction from the archery practice necessary to defend the Scottish realm.⁸

⁷ Nicholls, *supra* note 2.

⁸ *Id.*; Don Haaheim, *A Brief History of Golf, at* http://www.tourcanada.com/golfhist.htm (revised Oct. 30, 1996); *see also* AL BARKOW, WIT AND WISDOM OF GOLF 166 (1998).

It has been widely speculated that golf first evolved as Scottish shepherds near St. Andrews, bored with watching over their flocks, became proficient at hitting rounded stones into rabbit holes with their wooden crooks.⁹

Over the last five centuries, golf has changed and advanced dramatically.¹⁰ From its humble beginnings as a game played with crude, hand-made sticks and leather sacks stuffed with feathers, golf has evolved into a highly technology-dependent sport.¹¹ Modern golf club manufacturers employ cutting-edge technology to push the limits of engineering and physics.¹² Today, clubs are designed and tested using specialized computer programs, and are made from exotic materials such as zirconia and titanium.¹³ After auto racing, modern golf is likely the most significantly technology-driven sport.¹⁴ Considering that a relatively small number of people actually participate in auto racing, golf is easily the most technology-driven sport played by a sizable percentage of the population.¹⁵

After the shepherd's crook, the earliest clubheads were carved by skilled craftsmen out of beech, holly, dogwood, or apple tree wood.¹⁶ The clubheads were spliced into shafts of ash or hazel, as these materials were found to give the club more flexibility and whip at impact.¹⁷ In

¹¹ *Id*.

 12 *Id*.

 13 *Id*.

¹⁵ *Id*.

¹⁷ *Id*.

⁹ Haaheim, *supra* note 8.

¹⁰ Nicholls, *supra* note 2.

¹⁴ Edward Willett, *Golf Technology, available at* http://www.edwardwillett.com/Columns/golftech.htm (last visited Dec. 21, 2004).

¹⁶ Haaheim, *supra* note 8.

time, the durability of wooden clubheads was improved by filling the back of the head with lead and incorporating leather or bone into the face of the club.¹⁸ Witnessing the increased popularity of the sport, ambitious blacksmiths tested their skills by attempting to forge clubheads out of iron.¹⁹ Although their early creations were rather crude and extremely heavy, the improved lofts of iron clubs provided golfers more choices when it came to shorter shots.²⁰ "The advent of drop forging in the late 1800s" allowed factories to mass produce iron clubheads with greater consistency and uniformity.²¹ Drop forging also allowed the overall mass of the clubhead to decrease substantially, thereby enabling golfers to swing faster and strike the ball with greater velocity.²² The decreased weight also provided more feel at impact, allowing skilled golfers to fade and draw the ball with great proficiency.²³

The decades between 1900 and 1930 were marked by many bizarre club innovations, the majority of which proved useless.²⁴ Some of these impractical innovations included hollow

¹⁹ *Id*.

²¹ Nicholls, *supra* note 2; *see also* Kelin Kuhn, *The Basics of Manufacturing Technology, at* http://www.ee.washington.edu/conselec/CE/kuhn/manufact/95x2.htm (last visited Mar. 21, 2005). "Forging is the process of shaping metals by deforming them with a hammer, a press or rollers. Forged parts are characterized by a fibrous crystal structure. In such structures, the strength increases significantly along the lines of the grain boundary flow. Forging is among the oldest of the metal working technologies...Drop forging is the most common of the forging processes. In drop forging, a heated bar of material is forced into a die by a powered hammer. One half of the die is attached to the hammer and the other half to the anvil. In many cases, several different dies will be used for a single part, with the part transferring from die to die as its shape becomes more well defined." *Id*.

¹⁸ Haaheim, *supra* note 8.

²⁰ *Id.*; Nicholls, *supra* note 2.

²² Nicholls, *supra* note 2.

²³ See generally Nicholls, supra note 2; see also Daniel Grimm, Golf Lesson: Fade & Draw, at http://www.golfe.de/english/technique/tipp7/tipp7.html (last visited Mar. 21, 2005). "A fade is a controlled small curve [of the ball flight] from left to right. . . . A draw is a controlled small curve [of the ball flight] from right to left. . . " The use of a fade or draw allows a player to eliminate obstacles or go around blocked views and obstructions. *Id.*

²⁴ Nicholls, *supra* note 2.

faced irons, sand irons with extended scooping flanges and concave faces, clubs with manually adjustable lofts, and clubs with holes drilled in their face.²⁵ Nevertheless, one relatively simple innovation greatly advanced the game. Before 1908, all golf clubs were made with smooth faces.²⁶ Club designers learned that scoring or placing groves on the club's face created more backspin on the ball at impact, allowing the ball to travel farther and land with greater accuracy.²⁷ In addition to the use of grooves on the club's face, steel shafts were introduced around 1925 and became standard by the mid-1930s.²⁸ The steel shafts did not break like the previously used wood shafts and could be produced with more consistency and uniformity.²⁹

Over the last twenty or so years, the world of golf has been increasingly revolutionized by the widespread use of the computer in golf club design, testing, and manufacturing.³⁰ The most influential and revolutionizing modern technological advancements in golf club design are discussed in detail in the next section.

MODERN TECHNOLOGICAL ADVANCEMENTS IN GOLF CLUB DESIGN

The widespread implementation of steel shafts in the late 1920s led to more uniform and consistent golf equipment.³¹ Around the same time, the United States Golf Association (USGA), the governing body for golf in the United States, became increasingly involved in regulating

²⁶ Id.

²⁷ Id.

²⁸ Id.

²⁹ Id.

³⁰ See id.

³¹ *Id*.

²⁵ Nicholls, *supra* note 2.

technological advancements in golf club design.³² With the goal of creating uniformity of golf equipment and preserving a level playing field, the USGA establishes rigid guidelines for, among other things, clubhead weight, dimensions, and thickness.³³ If the USGA determines that a club does not meet the established standards, the club is labeled "non-conforming" and may not be used in any USGA sanctioned events or tournaments.³⁴ While the USGA's standards have changed with the introduction of new technology, it is apparent that in most cases the technology pushes far ahead of the current regulations, placing stress on the USGA to amend its regulations to accommodate the new technology.³⁵ Nevertheless, for a variety of reasons, the USGA is often unwilling to alter its standards to endorse club designs implementing the newest technologies.³⁶ The remainder of this section discusses the modern technologies, endorsed by the USGA, which have most significantly revolutionized the golf club and forever changed the sport. While these golf club innovations have been endorsed by the USGA, the USGA still places limitations and restrictions on the degree of their implementation.³⁷

To fully understand how much golf clubs have changed over the last two decades, one need look no further than the Senior Professional Golf Association (Senior PGA), which is

³³ *Id*.

³⁴ See U.S. Golf Association, Playing the Game: Equipment Primer, at

³⁶ Id.

³⁷ See id.

³² Nicholls, *supra* note 2.

http://www.usga.org/playing/clubs_and_balls/driver/non-conforming_driver_index.html (last visited April 17, 2006); Scott Wickard, *Choosing Your Clubs, at* http://www.wickedsticks.com/nonconforming.htm (last visited April 17, 2006).

³⁵ See generally Nicholls, supra note 2.

comprised of players no younger than 50-years-old.³⁸ Logic would suggest that as a player gets older and loses muscle mass and flexibility, he would not be able to swing the club as fast, and, as a result, would not hit the golf ball as far as he could when in his physical prime.³⁹ Until the mid-1980s this logic held true. However, with the implementation of a series of technological breakthroughs in golf club design, this has not been the case.⁴⁰ In fact, the average driving distance of players on the Senior PGA tour has steadily increased over the last fifteen or so years.⁴¹ A few years ago, the leading distance driver on the Senior PGA tour, Jim Dent, actually averaged greater distance on his drives than he did when he was younger and was the leading distance driver on the regular PGA tour.⁴² Both Jack Nicklaus and Raymond Floyd, two of the longer distance players when playing on the regular PGA tour, assert that they consistently drive the ball greater distances now than they did twenty years ago while in their prime.⁴³ For the majority of older golfers, modern golf club technology has in a very real way turned back the clock, allowing them to maintain or better their performance despite deteriorating physical condition.⁴⁴

The most common technologies implemented in golf club design during the last two decades, which have significantly revolutionized the game, have been geared toward increasing

⁴¹ *Id*.

⁴² *Id*.

 43 *Id*.

³⁸ Jeff Jackson, *Golf Club Technology: Where Have All the Standards Gone?*, *at*, http://www.customclubsoffrederick.com/clubtech.htm (last modified Sept. 26, 2005).

³⁹ Id.

⁴⁰ See generally Jackson, *supra* note 38.

⁴⁴ Jeff Jackson, *A Look at How Club Head Technology Offers Improved Performance, available at* http://golfclubscience.com/en-us/dept_11.html (last visited Oct. 24, 2005).

clubhead playability characteristics. The most innovative trends have been (1) perimeter weighting, and (2) oversize clubhead design.⁴⁵ Both of these innovations were facilitated by the golf industry's complete adoption of Computer Aided Design (CAD) as the primary tool used in the design and testing stages of golf club production.⁴⁶ The widespread use of CAD in the golf industry occurred in the mid- to late-1980s.⁴⁷

The idea of placing the majority of the clubhead's mass around the perimeter of the club face (perimeter weighting) was first devised by Karsten Solheim, founder of Ping Golf Company, in the 1960s.⁴⁸ Solheim drilled cavities into the back of his forged blade clubheads and found that by positioning the greater portion of the club's mass toward the outside of the club face, the club was better balanced and did not twist as much at impact, resulting in a straighter ball trajectory and a club more forgiving of miss-hits.⁴⁹ Solheim's idea of perimeter weighting was sheer genius from a clubhead stabilization and engineering standpoint, but in the 1960s, it was simply not practical from a manufacturing standpoint.⁵⁰ Until the mid-1970s all iron clubheads were made by drop forging (as discussed above), meaning that all irons were blades.⁵¹ Perimeter weighting technology simply could not be implemented as long as club

⁵⁰ Jackson, *supra* note 44.

⁴⁵ Jackson, *supra* note 44.

⁴⁶ Nicholls, *supra* note 2.

⁴⁷ *Id*.

⁴⁸ Jackson, *supra* note 44; *See infra* note 190. The four major companies accounting for the largest portion of golf industry revenues are Acushnet Company (14.2%), Callaway Golf Company (11.5%), TaylorMade-Adidas Golf (11.3%), and Karsten Manufacturing Corporation (2.3%).

⁴⁹ *Id.*; *see also* Jackson, *supra* note 38. "Miss-hits" occur when the ball makes contact outside the exact center of the clubface, resulting in irregular ball spin and flight. *Id.*

⁵¹ *Id.*; *See* Nicholls, *supra* note 2; *see also* Learn About Golf, *Modern Improvements, available at* http://www.learnaboutgolf.com/equipment/iron.html (last visited Oct. 24, 2005). "A blade iron offers a smaller hitting surface and a thin top-line [portion of the clubhead viewed at address]. It also has more mass behind the

manufacturers used drop forging as the sole method of clubhead production. In the late 1970s, as manufacturing technology improved, clubhead manufacturers learned how to manufacture golf

clubs by use of investment casting.⁵² Acceptance of investment casting as a viable production method ended the period of widespread use of forged blade clubheads and allowed clubheads to be cast in such a fashion as to allocate the bulk of the clubhead's weight around the perimeter of the clubface.⁵³ General use of investment casting in the early to mid-1980s signaled the dawn of the modern oversize cavityback irons, which implement Solheim's perimeter weighting technology.⁵⁴

Implementation of perimeter-weighting technology



Figure 1 This diagram illustrates the basic theory behind perimeter-weighting technology. Hammer A, with a greater allocation of the total mass to the perimeter, represents the cavityback club design which employs perimeter-weighting technology. Hammer B represents the weight distribution of the classic forged blade clubhead. Hammer A would drive a nail better than Hammer B despite the fact each has the same mass. (Jackson, *supra* note 44.)

middle of the clubhead, sometimes called a 'muscle-back,' that gives a very soft feeling when hit properly." *Id.* While the "feel" is superior with a blade iron, it is generally more difficult to hit a good golf shot with a blade. *Id.*

⁵³ Jackson, *supra* note 44.

⁵² Jackson, *supra* note 44; Overview of Golf Clubs, *Irons: Casting Versus Forging, available at* http://www.golfjoy.com/golf_physics/overview.asp (last visited Oct. 24, 2005); *see also* Kuhn, *supra* note 16. "Investment casting is especially well suited for tiny intricate parts. The basic idea is to create an expendable mold from wax or plastic. The expendable mold is then coated with a refractory material to form the casting mold . . . Skilled model makers create metal dies containing the primary patterns. Wax or plastic is then injected into these dies to create the wax pattern. Typically, the wax pattern contains many patterns gated together by sprues and risers. The wax pattern is then covered with a refractory material. This could be done by dipping the pattern into a ceramic slurry -- or covering the pattern with some refractory molding material. The mold is then baked and the wax or plastic allowed to drain or vaporize out. Molten metal is then poured into the mold. Unlike the previous casting operations, getting the metal out of the mold is more difficult in investment casting. Since the mold material is typically refractory -- it is often difficult to remove. Chemicals, pressurized water and sand blasting are all used to remove molds." *Id*.

⁵⁴ *Id.*; *see also* Learn About Golf, *supra* note 51. "[A] cavity-back or perimeter-weighted club has more weight around the outside edges of the clubhead to produce a larger sweetspot. The easiest-hitting irons of all generally have a large cavity-back, thick top-line, and oversize clubface." *Id.*

not only reduced clubhead twisting on miss-hits, allowing for generally straighter ball trajectory, but it also resulted in a generally higher ball trajectory.⁵⁵ Use of perimeter-weighting technology allocated a greater portion of the clubhead's mass to the perimeter of the club face and also forced a higher portion of the mass to the sole of the club.⁵⁶ It was quickly discovered that by allocating a greater portion of the mass to the clubhead's sole, the cavity-back clubhead has a much lower center of gravity than the traditional forged blade clubhead.⁵⁷ This meant that a golf ball struck with a cavity-back clubhead generally flew much higher than if hit with a forged blade clubhead.⁵⁸ Recognizing that implementation of perimeter weighting technology caused a much higher ball trajectory, club designers decided to reduce the lofts of the cavity-back iron clubheads, thinking that decreasing the lofts would counter the higher ball flight.⁵⁹

Before the introduction of the perimeter weighted cavity-back iron, a five iron

traditionally was designed with a loft at or near thirty-two degrees.⁶⁰ In the 1980s, shortly after the introduction of the perimeter-weighted cavity-back iron, golf club designers began reducing the loft angle of a five iron to around twenty-eight degrees, hoping to counter the higher ball

⁵⁵ Jackson, *supra* note 44; Fairway Woods, *An Overview of Fairway Woods, available at* http://www.swingweight.com/fairway_wood_designations.htm (last visited Oct. 28, 2005).

⁵⁶ Id.

⁵⁷ *Id.*; Jeff Jackson, *The Golf Club Industry: Design, Construction & Promotion, available at* http://www.swingweight.com/undercut_cavities.htm (last visited Oct. 28, 2005).

⁵⁸ See Jackson, supra note 44.

⁵⁹ Jackson, *supra* note 44; Jeff Jackson, *Equipment Facts and Fallacies, available at* http://www.golfinsite.net/facts_and_fallacies.htm (last visited Dec. 21, 2004); Golf Technology, *The Club Head*, *available at* http://www.learnaboutgolf.com/educational/technology/head.html (last visited Dec. 21, 2004).

⁶⁰ Jackson, *supra* note 44; *see also* Golf Stars Online, *Understanding Loft, available at* http://www.golfstarsonline.com/golfclubs/loft.htm (last visited Oct. 24, 2005). "Loft is the angle of the face of the club when compared to vertical. A clubface with a loft of 0 degrees would be perpendicular to the ground, a clubface with a loft of 89 degrees would be almost parallel to the ground. All things being equal, the greater the loft of the club, the higher the trajectory of the ball it hits." *Id.*

trajectory resulting from the low center of gravity of the cavity-back club design.⁶¹ Only a few years ago, the five iron loft was again reduced to about twenty-six degrees.⁶² Reducing the loft angle proved to counter the lower center of gravity and generally lowered the ball trajectory.⁶³ Similar reduction of the loft angle was implemented with all clubs in the set.⁶⁴ It was found that golf balls struck with clubs with a lower loft angle flew at lower trajectories and generally rolled much farther after first contact with the ground.⁶⁵ By 1990, it became apparent to club designers that perimeter-weighted cavity-back irons not only were more forgiving of miss-hits (they generally produced straighter shots), but also, as a result of the reduced lofts, allowed golfers to hit the ball significantly farther than ever before.⁶⁶ The result was that just about any golfer who replaced clubs made in the 1970s with clubs made in the mid- to late-1980s was able to hit the ball longer and straighter due to perimeter-weighting technology.⁶⁷

⁶² Id.

⁶³ See generally id.

⁶⁴ Id.

⁶⁵ Id.

⁶¹ Golf Stars Online, *supra* note 60; Comparative Club Specs., *Loft Standards: Traditional, Modern, and 2000+*, *available at* http://www.swingweight.com/old_&_new_specs.htm (last visited Dec. 27, 2004).

⁶⁶ See generally id.; see also Jackson, supra note 57.

⁶⁷ Jackson, *supra* note 38.

Despite the fact that perimeter-weighting technology and reduced lofts allowed the majority of golfers to hit the ball straighter and farther than before, some golfers struggled with the reduced loft angles and found it difficult to make consistent contact with the sweet-spot of the club's face.⁶⁸ The sweet-spot is the portion of the club's face where, when impacting the ball, the club is perfectly balanced and will produce the best ball flight.⁶⁹ See Figure 2.⁷⁰ Club manufacturers recognized this problem and set out to design clubheads with a larger sweet-spot, thereby providing even greater opportunity for the average golfer to produce a solid golf shot.⁷¹

Golf club designers acknowledged the need for a larger sweet-spot, but the golf industry initially struggled to figure out how to make the clubhead larger (thereby increasing the sweet-spot) without violating the USGA's strict regulations regarding clubhead weight.⁷² The early 1990s ushered in the discovery of many exotic materials which were quickly used to solve this problem.⁷³ One of these materials was



Figure 2

The sweet-spot is the portion of the club's face where, when impacting the ball, the club is perfectly balanced and will produce the best ball flight. Willett, *supra* note 14.

see also Learn About Golf, supra note 51.

⁶⁸ See generally Jackson, supra note 38.

⁶⁹ Willett, *supra* note 14.

⁷⁰ *Id.*; *see also* Learn About Golf, *supra* note 51.

⁷¹ Jackson, *supra* note 38.

⁷² Willett, *supra* note 14; Jackson, *supra* note 38; *see also* Jackson, *supra* note 44.

⁷³ *Id.*; Science and the Golf Club, *Big Technology Stands Behind New Drivers, at http://halife.com/news/sports/mardrivers.html (last visited Dec. 24, 2004).*

titanium.⁷⁴ Titanium rapidly became the material of choice for constructing drivers (woods) because it is both strong and light.⁷⁵ It is so light that designers could make clubheads larger than ever while still adhering to the USGA's weight specifications.⁷⁶ Because titanium is about 40% lighter and stronger than steel, designers

were able to increase the size of drivers from about 150 cubic centimeters in 1990 to more than 460 cubic centimeters today, which created an overwhelmingly larger sweet-spot and a more forgiving club.⁷⁷ In addition to being larger, titanium clubheads can be made lighter than steel clubheads, allowing the club's shaft to be lengthened from about forty-three inches in 1990 to more than forty-five inches today.⁷⁸



Figure 3 The discovery of exotic materials, such as Titanium, has allowed golf club manufacturers to create clubheads that are larger and stronger than ever. The larger the clubhead, the larger the sweet-spot. The larger the sweet-spot, the easier it is to achieve maximum ball flight. *See* Jackson, *supra* note 44.

See Figure 3. The longer shaft and lighter clubhead result in the golf ball being struck with greater velocity and power.⁷⁹ These technological advancements in clubhead design have revolutionized the sport, making the game easier and more enjoyable for everyone.

⁷⁶ Id.

⁷⁸ *Id.*; Comparative Club Specs., *Golf Club Lengths Through the Years, at* http://www.swingweight.com/comparative_lengths.htm (last visited Dec. 27, 2004).

⁷⁴ Science and the Golf Club, *supra* note 43.

⁷⁵ Willett, *Supra* note 14; *see generally* Jeff Jackson, *Rockwell Hardness Scale: The Industry Reference Standard, at* http://www.swingweight.com/rockwell_scale.htm (last visited Dec. 27, 2004).

⁷⁷ Jackson, *supra* note 44; *see also* Learn About Golf, *supra* note 51.

⁷⁹ Jackson, *supra* note 44.

LEGAL REMEDIES USED BY GOLF CLUB MANUFACTURERS TO PROTECT INTELLECTUAL PROPERTY RIGHTS

While the golf club technology discussed above allows golfers more success on the course, it also created a multi-billion dollar a year industry for golf club manufacturers.⁸⁰ This overwhelming potential for financial gain has proven an irresistible temptation for counterfeiters who, by producing and distributing illegal copies of the most popular golf clubs, capitalize on the modern technological advancements in golf club design without the expense of research and development or marketing.⁸¹

There is no doubt that technology is a valuable asset, especially in the area of golf club design and production. Protecting intellectual property assets has quickly become a major part of every golf companies' business.⁸² Each year, Callaway Golf Company spends about \$35 million on the research and development of new golf club technology.⁸³ To protect the fruits of this investment, Callaway annually spends at least an additional \$4 million to protect its copyrights, and more than twice that amount to protect its patent rights.⁸⁴ With the soaring costs of design, materials, testing, and marketing, golf club manufacturers cannot afford to be negligent in protecting their technology.⁸⁵

⁸¹ See Jeff Jackson, *Patents, Trademarks, and Clubmakers, at* http://www.golfclubscience.com/TechnicalGolf/PatentsTrademarksAndClubmakers.htm (last visited Feb. 6. 2006).

⁸⁰ Golf-Club Manufacturers Declare War on Knockoffs, THE TORONTO STAR, June 9, 1996, at D5.

⁸² Mike Freeman, *Callaway Golf Seizes Large Haul of Look-Alike Club Heads, Gear*, THE SAN DIEGO UNION-TRIBUNE, May 25, 2002, at C1; *see* Florian Gimbel, *Golf Copycats Land in the Rough: U.S. Golf Equipment Makers, Backed by the Chinese Authorities, are Cracking Down on Illegal Brand Piracy*, THE FINANCIAL TIMES LIMITED (London, England), Aug. 18, 2004, at 8.

⁸³ Freeman, *supra* note 83.

⁸⁴ Kimberly Sanchez, *Callaway Golf Wins Order Blocking Alleged Counterfeits*, THE LOS ANGELES TIMES, Dec. 31, 1996, at D2.

⁸⁵ See Jackson, supra note 82.

The primary legal avenues used by club manufacturers to protect intellectual property assets are patents and trademarks.⁸⁶ Patents, which are granted by the U.S. Patent and Trademark Office (USPTO), are issued to golf club manufacturers if the USPTO determines that the manufacturer has implemented some sort of unique design or novel feature in its golf club.⁸⁷ Patents last up to twenty years and usually expire no sooner than ten years after being issued.⁸⁸ In other words, once issued, the patentee has "specific rights to all matters concerning the patented characteristics," with the result that the patentee may compel a competing company to discontinue sale and production of golf clubs that infringe on its patent.⁸⁹ In addition, the patentee also has the right to license the patent to another company via a negotiated license agreement.⁹⁰ Here, if the licensor (patentee) feels that the licensee violates the licensing agreement, the licensor may revoke the license.⁹¹

In the golf club industry, there are generally two types of patents applicable to golf clubs: design patents and utility patents.⁹² Design patents are patents that grant to the patentee rights to the "exact shape for the clubhead," including any combination of unique features.⁹³ An example of a design patent is Patent No. 353,644, assigned to Cobra Golf Company.⁹⁴ This patent

- ⁸⁷ Id.
- ⁸⁸ See id.
- ⁸⁹ See id.
- ⁹⁰ Id.
- ⁹¹ See id.
- ⁹² Id.
- ⁹³ Id.

⁸⁶ See Jackson, supra note 82.

⁹⁴ U.S. Patent No. D353,644 (issued Dec. 20, 1994); see also Jackson, supra note 82.

protects the ornamental design of Cobra's King Cobra irons.⁹⁵ The patent provides that only Cobra, or a company licensed by Cobra, has the right to reproduce the ornamental clubhead design for a period of fourteen years from the date of the patent's issuance.⁹⁶ Other golf club manufacturers have received design patents for the specific weight distribution and spacing of the cavity on the back of the clubhead.⁹⁷ As apparent, design patents protect the exact shape of the clubhead, which may include any combination of unique design features the clubhead might employ.⁹⁸

The second type of patent applicable to golf clubs is the utility patent.⁹⁹ Rather than concerning the entire clubhead, as with design patents, utility patents involve very specific playability features implemented into the clubhead.¹⁰⁰ For example, Cobra Golf Company, in addition to having a design patent for its King Cobra irons, also has a utility patent concerning the same irons.¹⁰¹ The utility patent, Patent No. 5,375,840, is for the "incremental face angle" that Cobra employs throughout the King Cobra set of irons.¹⁰² Cobra's utility patent provides Cobra, or a licensee, the sole right to produce clubheads which implement these specific face angles.¹⁰³

⁹⁸ Id..

⁹⁹ Id.

¹⁰¹ *Id*.

⁹⁵ Jackson, *supra* note 82.

⁹⁶ Id.

 $^{^{97}}$ *Id.* As an example, the golf club manufacturer Tommy Armour has received design patents for the specific weight distribution and spacing of the cavity on the back of its 845 and 855 iron models. *Id.*

 $^{^{100}}$ *Id.* The face angle is considered a "playability" feature, which is a feature directly concerning the performance of the golf club. *Id.*

¹⁰² See id.; U.S. Patent No. 5,375,840 (issued Dec. 27, 1994).

¹⁰³ See generally Jackson, supra note 82.

In addition to patents, golf club manufacturers also rely heavily upon trademarks to protect their property rights.¹⁰⁴ In the golf industry, certain company names carry a great deal of prestige, indicating to the consumer a high level of quality and craftsmanship.¹⁰⁵ These companies protect their good names by the use of such registered trademarks as Callaway, Cobra, Nike, Titleist, and TaylorMade.¹⁰⁶ A registered trademark allows only the registrant to use the exact name, or a substantially similar name, on its products.¹⁰⁷ It is important to note that trademark law can protect not only the company name engraved on the golf club, but also the name of the specific club and the lettering styles used.¹⁰⁸ These additional effects are called trade dress.¹⁰⁹ Trade dress is the overall appearance of a product, including its packaging.¹¹⁰ An example of this would be the unique lettering style Callaway uses on its clubs, or its use of the club name Big Bertha.¹¹¹ These things are considered trade dress and would be covered under Callaway Golf Company's registered trademark.¹¹²

It is true that the use of patents and trademarks provide legitimate club manufacturers powerful legal protection in the United States. However, anyone who has traveled abroad knows that patents and trademarks issued by the U. S. government provide very little, if any, protection

¹⁰⁸ Id.

¹¹¹ *Id*.

¹¹² Id.

¹⁰⁴ See generally Jackson, supra note 82.

¹⁰⁵ See generally id.

¹⁰⁶ See id.

¹⁰⁷ *Id*..

¹⁰⁹ Id.; see also Jeff Lambert, Avoiding the Rough: A Two-Case Analysis and Perspective on Defining the Boundaries of Trade Dress Protection for Golf Equipment, 5 SPORTS LAW J. 61 (1998).

¹¹⁰ Jackson, *supra* note 82; *see also* Lambert, *supra* note 110.

against acts performed outside this country's borders.¹¹³ Quite simply, if counterfeiting is not prohibited by foreign law, counterfeiting performed on foreign soil is not illegal. The following section outlines the adverse effect counterfeiting has on the golf industry.

UNDERSTANDING COUNTERFEITING AND THE INTELLECTUAL PROPERTY CHALLENGES IT PRESENTS

While counterfeiting severely hurts the golf club industry, it is not exclusively a golf industry problem.¹¹⁴ Counterfeiting has become prevalent in nearly all product-centered industries.¹¹⁵ In 2003, the Federal Bureau of Investigation and the International Chamber of Commerce estimated that global counterfeiting of consumer goods accounted for roughly 9% of total world trade, equaling about \$500 billion per year.¹¹⁶ Although mind numbing, these figures are predicted to double by 2005.¹¹⁷ The fact that the U. S. Bureau of Customs and Border Protection confiscated about \$100 million in counterfeit products in 2002, compared with \$57 million worth of counterfeit products in 2001, illustrates the increasing prevalence of counterfeited goods in the international community.¹¹⁸ It is estimated that up to 78% of

¹¹³ See generally Larry Dorman, Callaway Golf Prevails in Patent Infringement Lawsuit, available at http://www.golftransactions.com/legal/callaway032702.html (Mar. 26, 2002).

¹¹⁴ See Timothy Maier, Counterfeit Goods Pose Real Threat, INSIGHT ON NEWS, Nov. 11, 2003, at 22.

¹¹⁵ *Id.*; see also Matthew Benjamin, A World of Fakes: Counterfeit Goods Threaten Firms, Consumers, and National Security, U.S. NEWS & WORLD REP., July 14, 2003, at 47.

¹¹⁶ Maier, *supra* note 115; *see also id.* In this particular article, counterfeiting sales are estimated to reach \$375 billion in 2003, accounting for up to eight percent of world trade. *Id.*

¹¹⁷ Maier, *supra* note 115. In addition to illustrating the increasing prevalence of counterfeiting in the global community, this article also asserts that revenue developed by the sale of counterfeited goods is often used to fund criminal organizations and international terrorist cells. This article suggests that counterfeiting represents not only an economic plague to legitimate industry, but is also the likely financial source for terrorist groups, essentially asserting that counterfeiting directly serves as a compromise to our national security. *Id.*

¹¹⁸ Benjamin, *supra* note 116.

counterfeited products are manufactured in China, Taiwan, and Hong Kong.¹¹⁹ The International Anti-Counterfeiting Coalition asserts that "counterfeiting results in more than \$200 billion a year in lost jobs, taxes and sales."¹²⁰ It is no wonder that each Fortune 500 company, on average, spends between \$2 million to \$4 million a year to thwart counterfeiters.¹²¹

In 2003, the Callaway Golf Company set the high-water mark for the successful pursuit of infringers of its registered trademarks and patent rights.¹²² By working with a wide range of domestic and international law enforcement agencies, Callaway recovered nearly 40,000 counterfeit golf clubs and accessories, and more than \$1 million from businesses infringing on Callaway's intellectual property rights.¹²³

Although Callaway's efforts are impressive, the company recovered merely a drop of water from the sea of profits lost to illegal golf club sales. While figures vary slightly, sales of legitimate golf clubs and components amount to between \$2 billion to \$2.5 billion annually; however, sales of illegitimate or infringing golf clubs and components are estimated at more than \$4 billion annually.¹²⁴ In recent years, golf clubs have been considered to be the fourth most

¹²³ *Id*.

¹¹⁹ Benjamin, *supra* note 116.

¹²⁰ Maier, *supra* note 115.

¹²¹ *Id*.

¹²² VNU eMedia Inc., *Short News...1/26/04, at* http://www.sportinggoodsbusiness.com/sportinggoodsbusiness/search/article_display.jsp?vnu_content_id=2076821 (last visited Jan. 26, 2004).

¹²⁴ See Conor Dougherty, Double Bogey; Sales of Fake and Knockoff Golf Clubs Online are Booming, SAN DIEGO UNION-TRIB., July 4, 2003, at C1; Dennis Blank, Counterfeiters Competing for Golf Equipment Market, N.Y. TIMES, Mar. 6, 1999, at C2; Dennis Blank, Taking a Swing at Phony Clubs, BUSINESS WEEK, Feb. 22, 1999, at 8; Dan Weikel, 13,500 Counterfeit Golf Clubs, Parts Seized, L.A. TIMES, Feb. 4, 1999, at B3; Phony Clubs Tee Off Makers; Copycat Drivers, Irons and Putters are Making a Real Dent in the \$2.2 Billion Golf Club Market, ORLANDO SENTINEL (Florida), Feb. 16, 1997, at H10.

counterfeited product, ranking behind video games, clothing, and watches.¹²⁵ Clubs like the TaylorMade's Burner Bubble, the Callaway Big Bertha, and the Cobra King Cobra are some of the most recognized and popular golf clubs in the sport, and as a result, they are also some of the most frequently copied.¹²⁶

The golf industry has generally accepted the term "clone" to refer to any club that looks like another, more popular, golf club.¹²⁷ The term was originally used to refer only to true copycat clubs that attempted to replicate everything about the legitimate, patented club, including shape, color, name, lettering, and markings.¹²⁸ True clones violate most aspects of the copied club company's intellectual property rights for the club that is copied.¹²⁹ The majority of all golf clubs, legitimate or clone, are manufactured in Asia, an area recognized by the golf industry as possessing the desired blend of advanced manufacturing technology and skilled cheap labor.¹³⁰ Despite the practical advantages of manufacturing in Asia, the people of the Far East have a significantly more tolerant cultural view of infringing intellectual property rights than those in the United States.¹³¹ This cultural belief contributes to the counterfeiting problem.¹³² Generally, the people of the East have strongly disapproved of the Western belief that individualism and

¹³² Id..

¹²⁵ See Phony Clubs Tee Off Makers..., supra note 125.

¹²⁶ Ron Sirak, Big Names Club Together to Fight Fraud, DAILY TELEGRAPH (Sidney, Australia), Jan. 1, 1997, at 61.

¹²⁷ Jeff Jackson, Understanding Clones: Popular Style, Look-Alikes, Knock-Offs and Counterfeits, available at http://web.archive.org/web/20041123092400/http://www.swingweight.com/clones.htm (last visited Feb. 17, 2006).

 $^{^{128}}$ Id.

¹²⁹ Dougherty, *supra* note 125.

¹³⁰ Jackson, *supra* note 128; *see also* Benjamin, *supra* note 118.

¹³¹ Jackson, *supra* note 128.

originality are of key social importance and value.¹³³ In the United States, designers in any industry are reluctant to recognize the influence of other designers or products.¹³⁴ This is not the case in the East, which seems to place the greatest social value in locating the most successful products and imitating them as best possible.¹³⁵ In the Far East, the more apparent the imitation of outside sources, the greater the social value placed on the new product.¹³⁶

While precise clones do exist, many counterfeiters are placing considerable effort into producing golf clubs that, with the exception of a few minor alterations, look very much like the legally protected originals in an effort to avoid infringing a golf club company's patent and trademark rights.¹³⁷ Counterfeiters, thus, blur the "line between pardonable look-alike and illicit forgery."¹³⁸ If the alterations are significant enough to avoid infringing on the legitimate golf club company's patents, the copier escapes liability.¹³⁹ Nevertheless, the fact that some clones are legal does not mean that they are good products as most clones are of a lower quality and workmanship.¹⁴⁰

¹³⁵ *Id*.

¹³⁶ Id.

¹³⁹ See id.

¹³³ Jackson, *supra* note 128.

¹³⁴ See generally id.

¹³⁷ See generally id.

¹³⁸ Phony Clubs Tee Off Makers..., supra note 125; see also Jackson, supra note 123; John Meyer, Counterfeits Profitable, Illegal, ROCKY MTN. NEWS (Denver, Colorado), July 26, 1996, at C17.

¹⁴⁰ Jackson, *supra* note 128.

There are three types of clones: popular-style clubs, look-alike clubs, and knock-off or copycat clubs.¹⁴¹ Technically speaking, popular-style clubs are not really clones, they are simply golf clubs that are patterned "in the same style as" the most popular and successful clubs on the

market.¹⁴² The significant difference between popularstyle clubs and clone clubs is that popular-style club manufacturers make a goodfaith effort to establish their own unique version of a popular club.¹⁴³ In contrast,





The club on the left, the Peerless Legend, is patterned after the club on the right, the Callaway Big Bertha. Because no attempt has been made to copy the distinctive graphic design of the Big Bertha, this popular-style club is just that, a popular-style club, and not an illegal Big Bertha clone. Jackson, *supra* note 128.

clone club manufacturers simply attempt to make an exact copy of the popular club.¹⁴⁴ The goal of companies producing popular-style clubs is to use successful club styles, but to do "as little as . . . possible to remind buyers that the club in question was actually inspired by another product."¹⁴⁵ An example of a popular-style club is the high-priced Scotty Cameron putters from Titleist.¹⁴⁶ The basic design of this putter was initially patterned after the successful Ping putters manufactured by Karsten Manufacturing Corporation.¹⁴⁷ Ironically, Titleist was so successful in

 142 *Id*.

¹⁴³ *Id*.

- ¹⁴⁴ Id.
- ¹⁴⁵ Id.

¹⁴⁶ Id.

¹⁴⁷ *Id*.

¹⁴¹ Jackson, *supra* note 128.

establishing the identity of the Scotty Cameron popular-style putter that Ping is actually patterning its newest putters after the Scotty Cameron putters instead of after its own putters.¹⁴⁸

With popular-style clubs, the manufacturer takes special efforts not to remind the consumer of the inspiration behind the club.¹⁴⁹ This is not the case with look-alike clubs, where the look-alike manufacturer's primary goal is to remind the consumer of the popular club that it resembles.¹⁵⁰ While look-alike clubs closely imitate more popular golf clubs, they do not mimic the original manufacturer's identity and specific club characteristics.¹⁵¹ This means that when a consumer inspects a look-alike club, he is reminded of the more popular club.¹⁵² However, he is also immediately aware that the club originates from a different company.¹⁵³

Where the distinction between a legitimate original golf club and an illegal knock-off has become increasingly hard to distinguish as counterfeiters have developed more advanced copying technology, the distinctions between a legal look-alike golf club and an illegal knock-off is usually fairly obvious.¹⁵⁴ Generally speaking, a legal look-alike golf club becomes an illegal copy when it imitates everything about the popular club after which it is patterned.¹⁵⁵ It goes without explanation that the illegitimate companies that produce illegal counterfeits never make

- ¹⁴⁹ Id.
- ¹⁵⁰ *Id*.
- ¹⁵¹ *Id*.
- ¹⁵² *Id*.

¹⁵³ *Id*.

¹⁴⁸ Jackson, *supra* note 128.

¹⁵⁴ Jackson, *supra* note 128; *see also Phony Clubs Tee Off Makers..., supra* note 125; Dougherty, *supra* note 125.
¹⁵⁵ Jackson, *supra* note 128.

any reference to themselves on the club's design.¹⁵⁶ Unlike a look-alike golf club, the lay consumer cannot usually inspect a knock-off and immediately know that it is a fake.¹⁵⁷ With illegal knock-offs, if the logo and lettering are not exactly mimicked, they are mimicked in such

a fashion as to very closely resemble the original.¹⁵⁸ For example, Figure 5 shows a knock-off club that very closely mimics a legitimate club. This is actually a relatively easy case as the name and lettering were not mimicked exactly. The AR45

club is the knock-off golf club, and the Armour 845 is the original.¹⁵⁹

The subtle distinctions made by knockoff/copycat club manufacturers have been the source of much litigation as legitimate golf club



Figure 5 The club on the left, AR45, is a knock-off golf club that very closely mimics a legitimate club, the Armour 845 on the right. This is a relatively easy case because the name and lettering were not exactly mimicked. Jackson, *supra* note 128.

companies have attempted to preserve their intellectual property rights. The following section outlines some of the general trends of this type of litigation.

TRENDS IN LITIGATION CONCERNING ENFORCEMENT OF GOLF CLUB MANUFACTURERS' INTELLECTUAL PROPERTY RIGHTS

The general attitude of the legitimate golf club manufacturing industry toward intellectual property infringement is adequately summarized by Steve McCracken, senior vice president and

¹⁵⁸ Id.

¹⁵⁹ Id.

¹⁵⁶ Jackson, *supra* note 128.

¹⁵⁷ Id.

chief legal officer at Callaway Golf Company.¹⁶⁰ Said McCracken: "We respect others' patent rights. On the other hand, we expect others to respect our patents, and we will continue to pursue those who sell infringing products."¹⁶¹ In order to pursue those who sell infringing golf clubs, most, if not all, legitimate golf club companies employ an in-house team of experts whose job it is to identify counterfeiting schemes and to make every effort to impede the illegal action.¹⁶² Callaway designated Stu Herrington, a retired Army intelligence officer, as chief security director.¹⁶³ Herrington has assembled an able team which travels around the world purchasing patent-infringing golf clubs and coordinating raids with local law enforcement, aimed at seizing counterfeit clubs.¹⁶⁴ In addition to this, Herrington and his team continually monitor the internet in an effort to find low-level distributors of counterfeit golf clubs.¹⁶⁵ The Callaway team was influential in working with online auctioneer eBay to establish the Verify Rights of Owners (VeRO) program.¹⁶⁶ The VeRO program permits intellectual property owners, such as Callaway, to report auction items that are believed to infringe on the trademark or patent rights of the company.¹⁶⁷ Once the company reports the infringing item to eBay, the online auctioneer

¹⁶⁰ Dorman, *supra* note 114.

¹⁶¹ *Id*.

¹⁶² See generally Dougherty, supra note 125.

¹⁶³ *Id.*; Don Yaeger & E.M. Swift, *Pssst... Wanna Buy Some Clubs?*, TIME MAG., July 21, 2003, at 30; Mike Freeman, *Club Cop for Callaway; Ex-Spy Catcher Polices the World of Look-Alikes*, THE SAN DIEGO UNION-TRIBUNE, Feb. 19, 2000, at C1.

¹⁶⁴ Dougherty, *supra* note 125; *see generally Follow-Through; Golf Club Counterfeiters Arrested and Convicted*, GOLF DIGEST MAGAZINE, Aug. 1, 1999, at No. 8 (Vol. 50); Yaeger, *supra* note 157; Rick Fraser, *Counterfeit Golf Clubs a Real Pain for Firms, Millions Spent Trying to Stop Flood of Rip-offs*, THE TORONTO STAR, April 15, 1996, at D6; *see also* Freeman, *supra* note 157.

¹⁶⁵ Callaway Golf Stops Internet Seller of Counterfeit Golf Clubs, INTELL. PROP. TODAY, July 17, 2000, at 33.

¹⁶⁶ See generally id.; Dougherty, supra note 125.

¹⁶⁷ Dougherty, *supra* note 125.

removes the disputed item within hours.¹⁶⁸ Callaway was responsible for removing more than 600 allegedly counterfeit auction items in 2002, and sixty auction items during the first six weeks of 2003.¹⁶⁹

When low-level distributors of knock-off golf clubs are apprehended, they are usually treated much the same as low-level drug dealers.¹⁷⁰ The distributor is given the opportunity to reveal the supplier of the illegal knock-offs in exchange for a lesser punishment.¹⁷¹ The practice of the legitimate golf industry is to "go after the little guy to get to the big fish."¹⁷² In most instances the biggest fish are the foundries in Asia that are producing the counterfeit clubs.¹⁷³ However, because of tolerant intellectual property laws in the Far East, those operating the foundries and charged with infringing intellectual property rights are usually only forced to pay a small fine.¹⁷⁴ The penalty is considered part of the standard cost of running a counterfeiting business in those countries.¹⁷⁵ Recognizing the futility of going directly to the source, most golf manufacturers are usually more than happy to apprehend the middle- and upper-level distributors operating in the United States.¹⁷⁶

¹⁷⁴ *Id*.

¹⁷⁵ Id.

¹⁷⁶ Id.

¹⁶⁸ Dougherty, *supra* note 125.

¹⁶⁹ Yaeger, *supra* note 163.

¹⁷⁰ See generally eBay Seller Pleads Guilty in Counterfeit Golf Clubs Criminal Prosecution, SPORTING GOODS BUS. MAG., Oct. 1, 2003, available at http://www.sportinggoodsbusiness.com (last visited Dec. 26, 2004).

¹⁷¹ See id.; see also Phony Clubs Tee Off Makers; Copycat Drivers, Irons and Putters are Making a Real Dent in the \$2.2 Billion Golf Club Market, supra note 121.

¹⁷² Phony Clubs Tee Off Makers..., supra note 125.

¹⁷³ See generally Yeager & Swift, supra note 163; see also Blank, supra note 121.

In cases where middle- and upper-level distributors are apprehended, and legal charges are levied, the resulting litigation usually ends in a settlement agreement in which the defendant agrees to pay the plaintiff monetary damages for infringement of intellectual property rights and agrees to surrender any remaining inventory.¹⁷⁷ Litigation or settlement agreements do not provide an end-all solution as the litigation does not deal with the source of the counterfeiting problem.¹⁷⁸ Nevertheless, legitimate golf club companies view this type of litigation as an opportunity to send a message to the general public that counterfeiters will be pursued and brought to justice, in addition to providing them an opportunity to recuperate some of the profits lost to counterfeiters.¹⁷⁹

In the case where a settlement agreement is rejected or not offered, formal litigation flowing from an infringement claim tends to focus primarily on the issue of whether or not the knock-off club is "substantially different" from the original club.¹⁸⁰ The knock-off is considered to be substantially different, and non-infringing, if it is determined that the average consumer would be able to distinguish between the legitimate and the copycat without confusion.¹⁸¹ Where the court finds infringement of intellectual property rights, judgment is entered for the legitimate golf club company, and a court order is usually issued whereby continued production

¹⁷⁹ Id.

¹⁷⁷ See Follow-Through..., supra note 166; see also Callaway Golf Gets Permanent Injunction vs. Counterfeit Putters, SPORTING GOODS BUS. MAG., June 29, 2004, available at http://www.sportinggoodsbusiness.com (last visited Dec. 27, 2004); see generally Conor Dougherty, Group that Sold Knockoff Golf Clubs Settles with Callaway, THE SAN DIEGO UNION-TRIBUNE, Aug. 1, 2003, at C3.

¹⁷⁸ See Callaway Golf Wins Court Victory Against Counterfeit and Copy Golf Clubs, INTELL. PROP. TODAY, Nov. 7, 1997, at 16; see also Tim Gray, Big Bertha Aims to Squash Poor Cousin, THE ST. PETERSBURG TIMES (Florida), June 30, 1995, at E1.

¹⁸⁰ See generally Winn Inc. v. Eaton Co., 272 F. Supp. 2d 968 (C.D. Cal. 2003).

¹⁸¹ See generally Champions Golf Club, Inc. v. Champions Golf Club, Inc., 78 F.3d 1111 (6th Cir. 1996).

of the infringing knock-off club is enjoined, and the defendant is compelled to pay monetary damages to the legitimate golf club company.¹⁸²

THE GOLF CLUB INDUSTRY: A BRIEF MARKET ANALYSIS

Since the mid- to late-1980s, golf club technology has advanced to such a level that the game is considerably easier and more enjoyable for everyone. It is not surprising that during the same period of time, the overall popularity of the sport has experienced an overwhelming increase. During the last five years, the steady increase in golf's popularity has resulted in an annual growth rate of between 5% to 15% in various parts of the world.¹⁸³ The geographic region experiencing the greatest increase in sales of golf-related equipment is the Far East, specifically China, where total sales are predicted to grow at least 25% annually for the next five years and beyond.¹⁸⁴ The latest figures indicate that the entire golf industry, which includes clubs, balls, foot wear, bags, and all other accessories, exceeds \$7 billion in total annual sales.¹⁸⁵ Roughly \$4 billion (of the total \$7 billion golf industry) is attributed to the sale of golf clubs alone.¹⁸⁶

The four major companies accounting for the largest portion of golf industry revenues are Acushnet Company (14.2%), Callaway Golf Company (11.5%), TaylorMade-Adidas Golf (11.3%), and Karsten Manufacturing Corporation (2.3%).¹⁸⁷

¹⁸⁴ *Id*.

¹⁸⁵ Id.

¹⁸⁶ Id.

¹⁸² See generally Callaway Golf Co. v. Golf Clean, Inc., 915 F. Supp. 1206 (M.D. Fla. 1995).

¹⁸³ Research and Markets, *Opportunities in the Global Club Market 2004-2010*, (Jan. 2004), *available at* http://www.researchandmarkets.com/reportinfo.asp?report_id=227053&t=e&cat_id=14.

¹⁸⁷ Yahoo! Finance, *Acushnet Company, available at* http://biz.yahoo.com/ic/104/104294.html (last visited Feb. 6, 2006); Yahoo! Financial, *Callaway Golf Company, available at* http://biz.yahoo.com/ic/15/15521.html (last visited Feb. 6, 2006); Yahoo! Finance, *TaylorMade-Adidias Golf, available at* http://biz.yahoo.com/ic/55/55516.html (last

When it comes to golfing accessories, the Acushnet Company is the market leader.¹⁸⁸ The Acushnet Company developed and markets successful brands such as Titleist, Foot Joy, Pinnacle, and Cobra Golf Clubs.¹⁸⁹ The Callaway Golf Company dominates the actual golf club market.¹⁹⁰ The Callaway Golf Company developed and markets Callaway Golf Clubs, Odyssey Putters, Top-Flite, Ben Hogan, and Strata.¹⁹¹ The Callaway Big Bertha series of drivers consistently ranks among the most popular clubs on the market.¹⁹² Behind the Callaway Golf Company, TaylorMade-Adidas Golf ranks second in the sale of golf clubs.¹⁹³ TaylorMade was founded by Gary Adams in 1979 after he discovered that golf balls struck by drivers made of metal flew greater distances than when hit by traditional drivers made of wood.¹⁹⁴ TaylorMade-Adidas Golf developed and markets such brands as TaylorMade Golf Clubs, Rossa Putters, Distance Plus, Maxfli, and TP Tour.¹⁹⁵ TaylorMade and Adidas merged in 1998.¹⁹⁶ Karsten Manufacturing Corporation developed and markets the popular Ping irons, which are supposedly named after the sound the club makes when it strikes the golf ball.¹⁹⁷ One of the older golf

¹⁸⁹ *Id*.

¹⁹¹ *Id*.

¹⁹² *Id*.

¹⁹³ Yahoo! Finance, *Taylor Made-Adidas, supra* note 189.

¹⁹⁴ *Id*.

¹⁹⁵ Id.

¹⁹⁶ Id.

visited December 28, 2004); Yahoo! Finance, *Karsten Manufacturing Corporation, available at* http://biz.yahoo.com/ic/46/46982.html (last visited Feb. 6, 2006).

¹⁸⁸ Yahoo! Finance, Acushnet, supra note 189.

¹⁹⁰ Yahoo! Finance, *Callaway, supra* note 189.

¹⁹⁷ Yahoo! Finance, *Karsten, supa* note 189.

companies, Karsten Manufacturing was founded in 1959 after Karsten Solheim designed a revolutionary putter in his garage.¹⁹⁸

While the golf equipment industry is competitive, the golf club industry is ultracompetitive. Nevertheless, it is important to note that the largest companies in the industry consume less than half of the total industry revenues. Many smaller companies thrive by producing legal popular-style or look-alike clubs, and selling them to consumers who yearn to swing the Big Bertha but can't afford to spend \$500 or \$600 for a driver or more than \$1,000 for a set of irons. By producing legal popular-style golf clubs, smaller companies are finding success because they are able to: (1) tap into the consumer craze associated with the most popular clubs, (2) minimize expenditure on research and development of new technologies, and (3) leave the marketing (and marketing expenditures) to the big companies. This formula has resulted in modest success in a very stiff golf club market.

LOOKING FORWARD, A DISCUSSION OF LESSONS REVEALED

The information presented in this note warrants further discussion of two topics that are of utmost importance to companies currently involved in the golf club industry, and to companies thinking of entering the market, or a similar market, in the future. The first topic of discussion involves a deeper understanding of the benefits and risks of manufacturing products in the Far East. The second topic of discussion explores the need to firm up the confusingly similar and substantially similar tests for determining infringement of intellectual property rights.¹⁹⁹

¹⁹⁸ Yahoo! Finance, *Karsten, supa* note 189. Interestingly, Karsten Manufacturing Corporation also supplies parts for patriot missiles and helicopters. *Id.*

¹⁹⁹ Yeager & Swift, supra note 163.

As previously discussed, the Far East, particularly China, offers golf club companies the unprecedented blend of cheap, skilled labor and high-level technological expertise, which creates a manufacturing environment that yields products of consistently high quality at the lowest financial cost.²⁰⁰ Despite the apparent benefits of manufacturing products in the Far East, there are also some countervailing risks associated with the region, the greatest of which is the financial loss resulting from illegal counterfeiting.²⁰¹ While the abundance of cheap, skilled labor is undoubtedly a benefit of doing business in Asia, it is also at the root of the counterfeiting problem, thereby presenting legitimate golf companies with a double-edged sword.²⁰² Laborers in China typically work every day of the week for about twelve hours each day, and are usually only paid about \$100 a month.²⁰³ When these laborers, who have access to the copper molds necessary to produce the newest golf clubs, are confronted by counterfeiters willing to pay upwards of \$10,000 for a copper mold of a brand-name club, the laborers more often than not succumb to the temptation presented to them.²⁰⁴ This is especially true considering the region's relatively tolerant approach to enforcing intellectual property rights, where the worst punishment is the levying of a modest fine.²⁰⁵ From the laborers' point of view, there is everything to gain and very little to lose. However, legitimate golf companies have likely invested millions of

²⁰⁰ See Yeager & Swift, supra note 163; see also Benjamin, supra note 116.

²⁰¹ See Yeager & Swift, supra note 163.

²⁰² Gimbel, *supra* note 83.

²⁰³ Yeager & Swift, *supra* note 163.

 $^{^{204}}$ Id.

²⁰⁵ Id.

dollars and years of effort to develop the technology embodied in the copper molds, yet they have little or no recourse to protect their rights in such situations.²⁰⁶

Stu Herrington, Callaway's head of security and investigations asserts that, "[c]ounterfeiters are 'equal opportunity copycats', from whom no good brand is safe," which "makes counterfeiting an industry problem, not just one company's curse."²⁰⁷ Despite the fact that five of the six largest golf club producers have most of their production and suppliers in China, there is very little cooperation among legitimate golf club companies to fight the problem.²⁰⁸ This is especially surprising considering the fact that all of these companies are, to a great degree, dealing with the same dilemma.

So why then, with the overwhelming risk of intellectual property theft, do legitimate golf companies continue to produce their golf clubs in the Far East? For the most part, the answer is that there is simply no other viable alternative.²⁰⁹ Barney Adams, founder of Adams Golf Company said, "[i]f we didn't [manufacture in China], your \$400 driver would cost \$1,000."²¹⁰ Because golf club production is still very labor intensive, legitimate golf companies are willing to take the risk of doing business in the Far East, and are resigned to an ongoing struggle with counterfeits.²¹¹ Thus, the majority of legitimate industry considers the profits lost to illegal

 210 *Id*.

²¹¹ See id.

²⁰⁶ See Yeager & Swift, supra note 163.

²⁰⁷ Gimbel, *supra* note 83.

 $^{^{208}}$ *Id*.

²⁰⁹ See generally Yeager & Swift, supra note 163.

counterfeiting as part of the unavoidable cost of doing business in Asia.²¹² Adams further explained,

[w]hen it finally dawned on me what the culture was over there... I realized we were never going to win this war. ... One of the fallacies about golf is that we're an industry. We're so busy trying to cut one another's throats, we don't cooperate. Callaway wouldn't dream of working with TaylorMade. If we pooled our knowledge and resources, we'd have a lot better chance of fighting counterfeiting.²¹³

All signs indicate that illegal counterfeiting has a firm grasp around the golf industry's neck, and without a unified front, the plague will continue to inflict havoc on industry revenues.

While Barney Adams' decision to simply throw up his hands and live with the losses is prevalent among many of the major golf club manufacturers, some are seriously entertaining the idea of pulling out of China and moving production to Mexico.²¹⁴ However, relocating production to Mexico is unlikely because, while Mexico has an abundance of cheap labor, it generally lacks the technological advancements necessary to produce golf clubs of consistently high quality.²¹⁵ The end result is a catch twenty-two. If the legitimate golf company moves production to the United States, it would likely reduce the risk of counterfeiting; however, the cost of producing golf clubs would be so high, the average consumer could not afford them. If the legitimate golf company continues to produce its golf clubs in the Far East, the production costs stay low. The probability that the clubs will be counterfeited, however, is near certain. It seems that the financial risks posed by illegal counterfeiting must simply be assumed and minimized as much as possible.

²¹² Yeager & Swift, *supra* note 163.

 $^{^{213}}$ Id.

 $^{^{214}}$ *Id*.

²¹⁵ See id.

The second topic warranting further discussion is the need to firm up the legal tests for determining infringement of intellectual property rights. With the advancement of counterfeiting technology, it is increasingly difficult to distinguish between a "pardonable look-alike and illicit forgery."²¹⁶ To best protect their rights, most legitimate golf club companies attempt to leave nothing to chance by patenting every subtle nuance of their club's design.²¹⁷

It is reasonable to assume that the most blatant and bold counterfeiters will continue to illegally infringe on patent and trademark rights regardless of what the legal test for infringement is. However, if the infringement test is more clearly defined, those attempting to make legal look-alike designs might better know when they are infringing on intellectual property rights, so as to avoid litigation. The production and sale of look-alike clubs is legal as long as the look-alike club does not mimic the legitimate golf club company's identity and the specific characteristics of the original club.²¹⁸ The goal of the look-alike club manufacturer is to create a club that reminds the consumer of the successful club that it is similar to, without confusing them as to which club is the original.²¹⁹ While look-alike clubs closely resemble more popular golf clubs, they do not exactly mimic the original manufacturer's identity and specific club characteristics.²²⁰ This means that when a consumer inspects a look-alike club, he is reminded of the more popular club, however he also "immediately knows that the club before him originates from another company."²²¹

²¹⁶ Phony Clubs Tee Off Makers..., supra note 125.

²¹⁷ See id.

²¹⁸ Jackson, *supra* note 128.

²¹⁹ Id.

²²⁰ See id.

²²¹ Jackson, *supra* note 128.

In questioning an intellectual property rights infringement claim, courts use the confusingly similar test to determine if there is trademark infringement, and the substantially similar test to determine if there is design patent infringement.²²² This means that if a look-alike club is found to be confusingly similar to the original club, the look-alike club manufacturer has infringed on the trademarked company's rights, and the look-alike club is illegal.²²³ Likewise, if the court finds that the look-alike club is substantially similar to the original, the look-alike club is illegal as it infringes on the legitimate golf club company's design patent rights in the original club.²²⁴ The problem with these tests is that confusingly similar and substantially similar are vague and are implemented in a highly subjective manner.

Manufacturers of look-alike clubs, desiring to produce a legal golf club, understand the current legal standard to generally mean that "[a]ll you have to do is make a few changes to keep anyone from suing you."²²⁵ However, making a few changes has typically not been found to avoid litigation. If anything, it has led to an overall increase in litigation. If the tests for what constitutes infringement were more clear, manufacturers of look-alike golf clubs might better know where they stand with regard to infringement of the legitimate golf club company's intellectual property rights. Clarifying the tests would likely result in less litigation as look-alike club manufacturers would be forced to make their golf clubs less similar to the originals, otherwise they risk falling into a clearly designated zone of infringement. With the current tests, the zone of infringement is fuzzy, effectively inviting counterfeiters to see how close they can

²²² Yeager & Swift, *supra* note 163.

²²³ See generally id.

²²⁴ See generally id.

²²⁵ Id.

get to the line without crossing it. With less similar clubs, the legitimate golf club companies would retain their original consumer markets and worry about only those blatant counterfeiters whose products are intended to completely mimic the originals.²²⁶

Firming up the legal tests that determine the presence of intellectual property rights infringement would likely force look-alike clubs to be less similar to the originals. However, this is not necessarily a bad thing. The market for the name-brand golf clubs has undoubtedly increased with the implementation of modern golf club innovations. However, where most golfers desire to swing the latest \$1,200 Callaway irons, not all can afford to spend so much on golf clubs.²²⁷ For this reason, even though look-alikes would look less similar to the name-brand patterns (assuming the tests for infringement are clarified), a market would nevertheless exist for the cheaper, legal look-alike golf clubs.²²⁸ Legitimate golf club manufacturers and golf experts assert that the quality of look-alikes is inferior to that of the original, high-priced, golf clubs.²²⁹ In the automobile industry, a 1981 Ford Pinto is of lesser quality than the new M-5 BMW, yet both will likely move their owner from point A to point B.²³⁰ The same is true of golf clubs. The Big Banger may not be as coveted as the Big Bertha, nevertheless both clubs will likely meet the varying needs of their respective owners. Without reasonably priced legal look-alike golf clubs, many budget-minded golfers would likely be driven from a sport they have grown to love. The bottom-line is that "the golf ball doesn't care whose name is on the club."²³¹

²²⁶ See generally Blank, supra note 125.

²²⁷ Meyer, *supra* note 139.

²²⁸ See generally Freeman, supra note 163.

²²⁹ Phony Clubs Tee Off Makers..., supra note 125.

²³⁰ Id.

²³¹ Fraser, *supra* note 166.

CONCLUSION

Modern advances in golf club technology have made the game easier for the average player, sparking a huge surge in the popularity of the sport. Recent clubhead innovations allow most players to hit the ball straighter and farther than ever before. As a result of surging popularity, the golf club manufacturing industry has become a highly lucrative business. Despite the use of intellectual property protections, legitimate club manufacturers lose substantial revenues to the sale of counterfeit golf clubs. While U.S. patents and trademarks are effective tools for protecting intellectual property assets in the United States, they are pretty much useless in the Far East, where the majority of legitimate and counterfeit golf clubs are produced. Counterfeiting poses a huge problem, which cannot easily be remedied. While the Far East provides substantially less intellectual property protection, is a unique area that is rich in skilled and cheap labor. Relocating manufacturing plants to countries that provide greater intellectual property protection may reduce the counterfeiting problem, however the cost of golf club production would increase substantially due to a more expensive labor force. The counterfeiting problem places legitimate golf club manufacturers in a tough "catch-22" situation, which does not have an easy solution.