

THE GUTTY REPLACES THE FEATHERY

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THE FIRST gutta percha ball is believed to have been made in 1845 by the Rev. Dr. Robert Adams Paterson from the gutta percha which had been used as packing around a black marble statue of Vishnu which had been sent from India. The statue is now at St. Andrews University, in St. Andrews, Scotland.

The earliest balls were produced under the name "Paterson's Patent." They were brown in color and were made with the hand by rolling the gutta percha on a flat board. They had smooth surfaces, lined to simulate the seaming of the feather balls which they replaced and ducked quickly in flight until they had been marked and cut in play.

Thus they were not introduced into the game generally until 1848, by which time the makers had learned to apply effective permanent markings to the surface so that they would fly properly. The gutta remained the standard ball until 1901-1902, when the present rubber ball replaced it.

The introduction of the gutta ball occasioned one of the great rejuvenations in the history of the game. Its lower cost, longer life, improved flight, truer run on the greens and the fact that it did not fall apart in the rain attracted an enormous number of new players, and the feathery was quickly abandoned despite the best propaganda efforts of its makers to protect their livelihood.

The influx of new players, in turn, forced the conversion of the Old Course at St. Andrews to a full eighteen holes. Until the gutta ball was developed, golfers played "out" along what is now known as the left-hand course, until they reached the End Hole. There they turned around

and played "in" to the same holes. If two groups approached a green simultaneously, preference was given to those playing "out." However, as golfers multiplied with the advent of the gutta ball, the links proved too narrow to accommodate them, and about 1857 it was widened sufficiently to turn the greens into double ones so that eighteen holes could be cut instead of nine.

Gutta balls were generally as large as, if not larger than, the modern United States ball of diameter not less than 1.68 inches. They were marked 26, 26½, 27, 27½, 28, 28½ or 29 to designate their weight. These numbers probably referred to pennyweights in the troy weight scale. In this scale, 20 pennyweights equals an ounce.

Gutta balls were far easier to make than featheries, since they consisted solely of the single lump of gutta percha, properly molded. Gutta percha is a concrete juice produced by various trees and has the property of becoming soft and impressible at the temperature of boiling water and of retaining its shape when cooled. It is not affected by water except at boiling temperature.

How They Were Made

Gutta percha was procured from overseas in long, round rods about an inch and one-half in diameter. Sufficient gutta percha was cut from this rod, with the aid of a gauge, to make a ball of the desired size and weight. This piece was softened in hot water. At first it was shaped and rolled by hand and nicked with the thin end of a hammer. Later iron molds, or ball presses, were introduced, first with plain molding surfaces and subsequently with indented surfaces to create markings on the ball. When first painted, gutta balls were given several coats, until it was noticed that this tended to fill the indentations of the mark-

**From an exhibit of the development of clubs and balls in "Golf House."*

ings. The number of coats was then reduced to two. It became customary, after applying the first coat, to let the balls season on racks for weeks before finishing them off.

The best-known balls were the hand-marked private brands of the clubmakers, such as the Aucterlonies, Old Tom Morris and Robert Forgan, and the bramble and patent brands, such as the Eureka, Melfort, White Melfort (of white gutta percha), White Brand, Henley, O.K., Ocobo, Silver-town No. 4, A.1, Clan, Thornton, Park's Special and Agrippa. The Agrippa, with bramble marking, became a great favorite. The A.1 floated, but all guttas did not.

In the earlier part of this period, there was a rival to the gutta ball, commonly called the putty ball to distinguish it from the "guttie." It was named the Eclipse and was made of undisclosed ingredients, possibly including India rubber and cork fillings. It had a shorter carry but longer run and better wearing qualities.

Effect on Clubs

The gutta percha ball was harder than the feather ball and put a considerable strain on the slender clubs with which feather balls had been stroked. Thus wooden heads gradually became shorter and squatter in shape. Hard thorn was discarded for the softer apple, pear and beech in the heads, and leather insets appeared in the faces. Hickory, which for golf originally came from Russia and later from Tennessee, replaced ash in the making of shafts.

Iron clubs increased in both number and variety and became vastly more refined. The superlative play of Young Tom Morris, of St. Andrews, who died in 1875 at the age of 24 after winning four British Open Championships, is credited with pop-

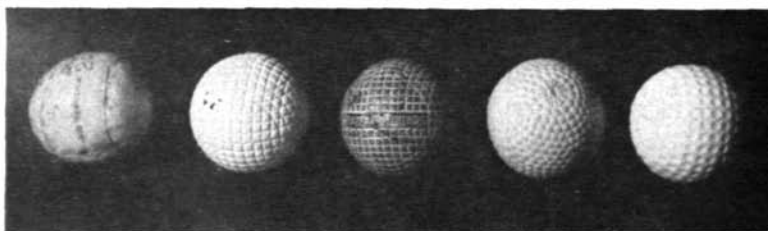
ularizing the iron clubs he used so deftly.

A full range of clubs at the zenith of the gutta ball period consisted of seven woods (driver, bulger driver, long spoon, brassie, middle spoon, short spoon and putter) and six irons (cleek, mid-iron, lofting iron, mashie, niblick and cleek putter). From these the golfer usually selected about eight. The range of clubs which Willie Park, Jr., had in winning the British Open Championships of 1887 and 1889 was bulger driver, straight-faced driver, spoon, brassie niblick, wooden putter, cleek, iron, mashie, iron niblick and Parks Patent putter.

The increase in the number of clubs brought about another innovation in the early Nineties, that of a simple sailcloth bag in which to carry them.

The introduction of the gutta ball did not change the club-makers; it simply required them to develop new designs and materials. Douglas McEwan lived until 1896 and bridged both periods of the feathery and the gutta. His son Peter in his turn became a club-maker, and was followed by his four sons, who constituted the fifth generation of club-making McEwans. James Wilson, who had made clubs for the feather ball under Hugh Philp, set up his own shop at St. Andrews in 1852, and Philp then took in his nephew, Robert Forgan. Forgan and his son Thomas continued the business under their own name after Philp's death and achieved their own fame.

Robert Forgan was the first to appreciate the merit of hickory shafts after bolts of the wood had come up the Clyde to Glasgow for conversion to handles for



Golf ball evolution (left to right): a feather ball (its leather cover holds a silk hatful of down), a gutta percha ball, a rubber-core ball, a pneumatic ball (filled with compressed air) and a modern ball. All these are displayed in "Golf House."

pick, shovel, rake, hoe and ax. Thomas Forgan produced the bulger driver and the ebony putter. Old Tom Morris, the Andersons and the Auchterlonies were other noted club-makers at St. Andrews, and there were Ben Sayers at North Berwick, Willie Park of Musselburgh, the Simpsons of Carnoustie and many more.

In March, 1891, Willie Dunn, son of Willie of the famed Dunn twins of Scotland, arrived in the United States to lay out the course at Southampton, N. Y., for the Shinnecock Hills Golf Club, and he remained to make clubs here.

The trade itself was little changed. Wooden heads were cut out of a block, filed, spoke-shaved, chiseled, gouged, leaded, boned, glass-papered, sometimes stained and treated with a hare's foot dipped in a mixture of oil and varnish. Where the club-heads used by Allan Robertson were only five-sixteenths of an inch deep, the depth gradually increased to one inch and, for a time, two inches.

Iron heads were hand-forged from a bar of mild iron, heated, hammered, tempered, emery-wheeled and polished, and the socket was pierced for the rivet and nicked. Hickory shafts were seasoned, then cut, filed, planed, scraped and glass-papered down to the required length, shape and degree of whippiness, which was the real art. Shafts for wooden heads were finished in a splice, glued onto the heads and whipped with tarred twine. Shafts for irons were finished with a prong to fit into the socket and held for the iron cross-rivet.

Strips of untanned leather, shaped with a chisel, were nailed to the top of the shafts, wound on spirally over a cloth foundation similarly applied, rolled tight between two polished boards and nailed at the bottom. Both ends of the grip were bound with tarred twine, and the whole grip was then varnished.

Caliber of play improved greatly with the advent of the gutta ball. Allan Robertson, when finally won over to it, shattered all precedent by scoring a 79 at St. Andrews in 1858, and this record stood until Young Tom Morris made a 77 in 1869.

The British Open Championship was

MUSEUM PIECE



This wall piece was prepared by J. Victor East, of Chicago, for the Museum in "Golf House." It traces the evolution of the grip from the earliest wrappings to the most modern.

instituted at Prestwick, Scotland, in 1860 and was played there through 1872. Willie Park, Sr., won the first Open with a score of 174 for 36 holes, and Young Tom Morris retired the belt, emblematic of the Championship, by winning his third successive Championship, with a score of 149, in 1870.

The first known golf in the United States was played with gutta balls, and the USGA Amateur, Open and Women's Championships originated in 1895, three years before the invention of the rubber ball.