Where Did You Get Those Dimples?

The lopsided beginning of the golf ball

BY LISA DE NIKE

What's round, dimpled, white and wildly aerodynamic, but in its infancy was a homely, lumpy leather sphere stuffed with chicken feathers?

The golf ball, that's what.

Historians assert that the very earliest golf balls date back to the mid-15th century, when sportsmen in Holland and Scotland used primitive clubs to whack at hard little clunkers carved from beech or elm wood. Records tell us, in fact, that the Dutch shipped those early balls by the barrel-load across the North Sea to sportsmen in Scotland, which would become the country best known for golf.

It took at least a hundred years for the Scots, fed up with the wooden balls' lack of flight capability, to invent the feather golf ball, or "featherie." Featheries were made by packing a top hat's worth of wet goose down or chicken feathers into moistened cowhide or horsehide casings, which shrunk and hardened as they dried. The resulting slightly lopsided orb was hammered to make it as spherical as possible, and then coated with several layers of paint.

That imperfect and costly orb was used for about 300 years, until the Rev. Adam Paterson of St. Andrews, Scotland, came up with a better idea in 1848: a ball fashioned from a rubbery substance made from the dried juice of the Gutta tree. These so-called "gutta" balls were fashioned by rolling sheets of the softened material on a board to create an orb and they had the advantage of being easily repaired and reshaped. Gutties were deliberately imprinted with various patterns, because it had been discovered long before that an imperfect ball had a truer flight than did a more perfect one. The new ball's main drawback was that it tended to break apart in midair, which forced a rule change: players were allowed to play a fresh ball when an old one disintegrated.

As enthusiasm for the sport grew, so did interest in improved equipment. So few were surprised when, in 1901, a new ball—this one with a rubber core, invented by an employee of the Ohio-based Goodrich Tyre and Rubber Co. —made its British debut.

The inventor, Coburn Haskell, figured that wrapping elastic thread tightly around a rubber core and *then* encasing it in a sheet of patterned gutta would make for a very aerodynamic ball, and he was correct! The new ball was made famous when, in 1902, Sandy Herd used it on the Royal Liverpool course to play four rounds in a score of 307 to beat greats James Braid and Harry Vardon by a single shot.

"Dimples" were added around 1908 for improved aerodynamics. Physicists and engineers tell us that the balls with dimples travel longer distances than their smooth counterparts for two reasons: one, because the uneven surface increases air turbulence in the layer of air directly around the ball, pushing it farther and faster and two, the dimples reduce "drag."

By 1920, both the United States Golf Association (USGA) and the Royal & Ancient, St. Andrews (R & A) began standardizing the sport and its equipment. In 1931, the USGA introduced a slightly larger ball that could weigh no more than 1.62 ounces and have a diameter of no less than 1.68 inches. After claims that the bigger ball was the reason for American golf dominance, the R & A made the ball compulsory for the Open Championship in 1974 and has since outlawed smaller balls altogether.

Today, fans of the links can choose from a dozen types of golf balls in prices ranging from $5 a ball to $10 for a dozen balls.

The most common ball on the course is comprised of two pieces: a solid inner core and a hard cover. But increasing numbers of players are using multi-layered balls, made of a core, middle and top layer. And finally, there is a growing assortment of technologically advanced four-layer balls with liquid cores.

Quite an improvement over wet feathers stuffed into an cowhide sphere.