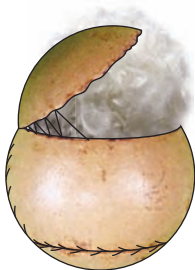


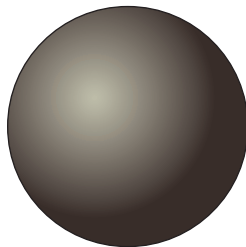


HISTORY OF GOLF BALLS



FEATHERIE

Around 1618, cheap wooden golf balls were replaced by extremely expensive leather-covered balls stuffed with feathers. A top-hat full of feathers were boiled and crammed inside a wet leather casing. As the stitched leather cover dried, it shrank and hardened around its contents. The featherie was formed into a round shape and covered in several coats of paint. The ball lasted no more than a couple of rounds, less if it became wet. A featherie maker could produce no more than four a day and the objects were only available to the wealthy.



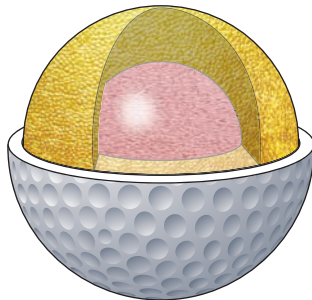
GUTTIE

The Rev. Dr. Robert Adams was credited for heating some gutta-percha packaging material in 1848 and shaping it into a ball. Gutta-percha is the hardened rubbery sap of the sapodilla tree found in Malaysia. The popularity of golf expanded beyond the wealthy classes since the guttie was so much cheaper to produce than the featherie and was more durable.



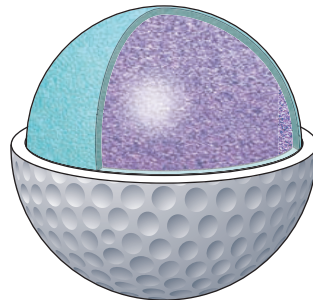
HAMMERED GUTTIE

It was quickly discovered that a scuffed guttie flew farther than a smooth ball although the basic principles of aerodynamics weren't fully understood at the time. Even patterns were hammered into the ball and by 1890 the Bramble golf ball was made in a mould with raised bumps on its surface.



RUBBER CORE

Coburn Haskell of Cleveland and Bertram Work of the B. F. Goodrich Company in Akron, Ohio developed the modern golf ball in 1908 with a long rubber thread wrapped around a solid rubber core. The gutta-percha cover was eventually replaced by a soft balata. William Taylor, a successful English businessman, came up with the idea of adding dimples to the golf ball that reduced the aerodynamic drag and provided lift allowing golf balls to travel farther. By 1932, the United States Golf Association regulated the size of a golf ball at 1.68 inches (4.27 centimetres) in diameter and weighing 1.62 ounces (45.9 grams), a standard that remains today. The solid core was replaced by a liquid core.



MULTI-PIECE

Today's golf balls are made in either two, three or four pieces. A two-piece ball has a solid core covered by synthetic materials like surlyn or urethane blends. A three-piece has a soft membrane between the core and the cover and allows better control and more spin. The four-piece ball has a dual-core. Some solid cores contain titanium powder to impart additional energy on impact with the golf club. The more complex the construction, the higher the cost.