

Uniroyal, employing one of the top aerospace scientists in the United States, has developed a top-grade regulation golf ball with a new cover design, which is claimed to average over six yards farther than any other regulation ball on the market, according to the company.

The new ball, called the **Royal + 6**, contains a tough cover made of DuPont Surlyn and features a new center for which a patent is pending. "The key to the added distance and accuracy of the + 6," says Dr. John Nicolaides, professor of aerospace at the University of Notre Dame, which conducted the study for Uniroyal, "is the hexagonal dimples irregularly placed on the cover. The hexagonal dimple configuration decreases wind resistance and gives the ball more lift causing it to sail farther."

Dr. Frank Martin, director of research and development for Uniroyal golf products, says that Notre Dame was selected because of its expertise in aerodynamics and because Uniroyal wanted an independent organization to bear out their claims.

Nicolaides, an avid golfer, once launched five satellites from one rocket for the U.S. Navy. "Golf ball designs of the late 1800s and early 1900s were researched to determine what happens to a golf ball in flight after it is hit," Nicolaides says. Using Notre Dame's subsonic wind tunnel to generate initial velocity

A NEW LOOK IN DIMPLES

Uniroyal, employing research in aerodynamic principles, has introduced a regulation golf ball with hexagonal dimples

speeds of 250 feet a second (174 miles per hour), the maximum allowable under United States Golf Assn. specifications, Notre Dame recreated the speed and spin of the golf ball after it left the club face. They were thus able to determine the forces lifting and dragging on the ball during each point on a given flight.

According to Dick Kurrasch, national commodity manager of the Royal Golf Ball and Equipment Company, the new + 6 will be introduced in Atlanta, San Diego, Houston and Tampa as test markets this month to determine public acceptance of the new ball. Plans call

for national marketing of the + 6 in the spring of 1972. A complete advertising campaign featuring television and print media will also be inaugurated.

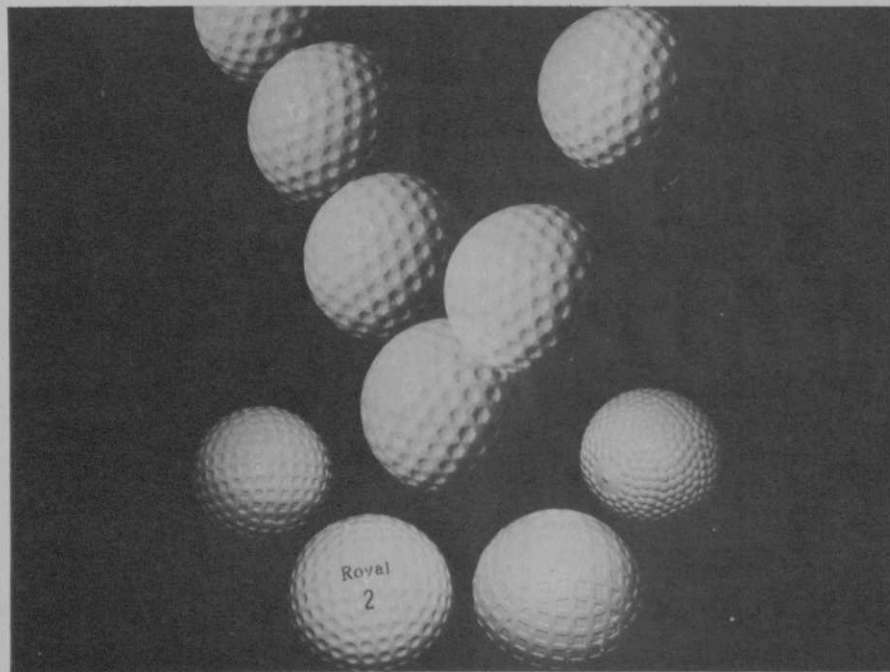


Close-up of the hexagonal dimples on a Royal + 6.

"The project was begun in 1968 in an effort to reverse Royal's failure to make headway in the top brand golf ball market," Kurrasch says. "We wanted a completely new product, but it had to be noticeably longer than the best ball on the market. We also wanted an independent organization to substantiate our findings," Kurrasch says. An estimated half a million dollars went into developing the + 6 says Kurrasch.

After a Notre Dame computer and wind tunnel aided in understanding the aerodynamic principles of a golf ball in flight, the next step was to test the new ball under actual hitting conditions. For this experiment, a bazooka-like launching device which simulates an actual golf drive was developed.

"This device is extremely precise," Nicolaides says, "and produces the same angle of flight, velocity and underspin as an average golf drive. Tests conducted using this device show the new Royal + 6 flies 6.3 yards farther than any other golf ball," Nicolaides claims. "The + 6 has 252 hexagonal, irregularly positioned dimples, as opposed to the normal 336 regularly positioned round dimples," he says. "In reviewing the history of golf balls we found that the gutta percha smooth ball flew beautifully the first part of the flight, but dove to the ground at the end. This was because of a sudden loss of lift. Golfers noticed after they dented the ball that it flew farther. This is because of increased lift," Nicolaides says. Over 50 different golf balls and cover designs were studied by Uniroyal before the selection of the hexagonal dimples. □



Designs from the past with the new Royal + 6 are (left to right): staggered block design; standard-dimpled Royal ball; mesh design, and the bramble ball.