A CRITICAL EXAMINATION OF SOME CONCEPTS IN RUBBER CHEMISTRY

By Dr. Thomas Midgley, Jr.

MIDGLEY FOUNDATION, THE OHIO STATE UNIVERSITY

VULCANIZATION

It is now over one hundred years since Goodyear discovered vulcanization. Broadly speaking, vulcanization is a process whereby a semi-useless vegetal product is converted into the most amazingly versatile raw material the world of industry has ever known. Need I recite your daily contacts with it? For example, when you take a shower bath, your faucet valve is faced with rubber, the curtain is rubberized cloth, the mat that keeps you from slipping is rubber, and the imitation sponge you use is Vulcanized rubber in still another form. And when you play, golf balls, tennis balls, footballs and baseballs all depend on vulcanized rubber for liveliness. Notice that I didn't mention tires. They are almost too sacred to talk about these days. And yet after a century, rubber chemists are in less agreement on the nature of the chemistry of vulcanization than Goodyear's neighbors were that he was crazy. Nor has a Hall of Fame jury yet been selected with brains enough to honor Goodyear's memory as it deserves. It is all most astounding; but also is vulcanization.

If one wished to manufacture some rubber article,