

1800-1850

ETATS-UNIS D'AMÉRIQUE

04-SAVOIR
SCIENCE
INVENTER

02-ESPACE
MATIÈRE

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Charles Goodyear

Charles Goodyear (1800–1860) was an American inventor whose name remains closely associated with one of the most important discoveries in the history of materials: the vulcanization of rubber. By the early 19th century, natural rubber had already attracted the interest of industrialists, but its use remained limited. Indeed, it became sticky and soft when exposed to heat, while it hardened and cracked in cold weather. These flaws prevented its widespread use. Convinced of the material’s potential, Goodyear devoted many years to experimenting with different methods to improve its properties. After numerous failures and significant financial difficulties, he discovered in 1839 that by heating rubber in the presence of sulfur, it was possible to make it much more stable, elastic, and durable. This process was subsequently named “vulcanization,” in reference to Vulcan, the Roman god of fire and the forge. This invention profoundly transformed modern industry. Thanks to vulcanization, rubber could be used in the manufacture of tires, gaskets, drive belts, electrical cables, and many everyday objects. It thus paved the way for the development of modern transportation and numerous industrial innovations. Paradoxically, despite the importance of his discovery, Charles Goodyear never achieved true financial prosperity. He spent much of his life in debt and died before he could see the full extent of his invention's industrial success.