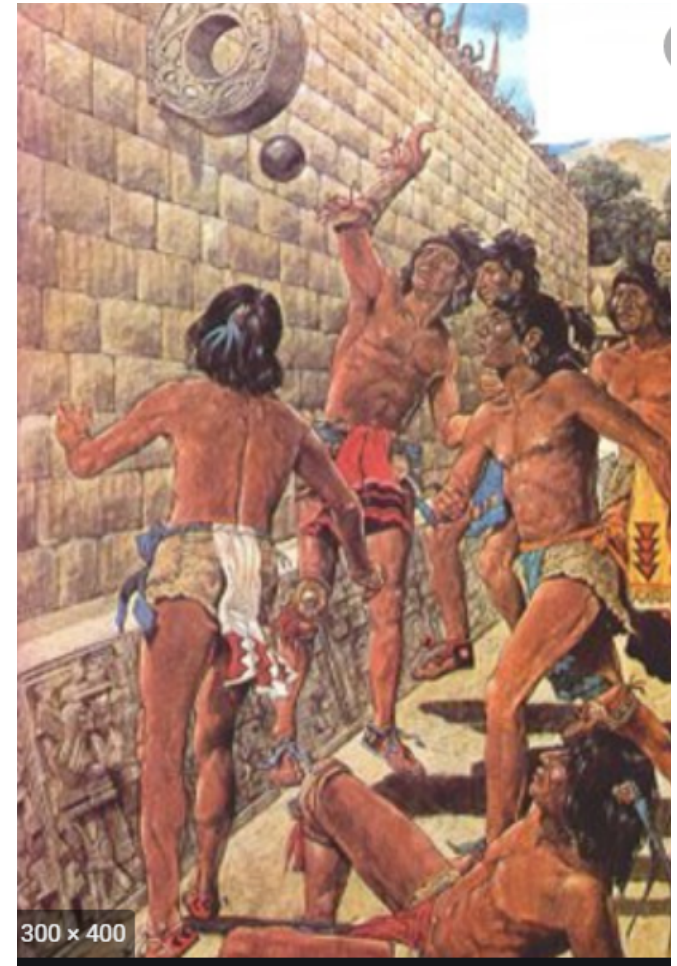


History of Rubber

The first use of rubber was by the indigenous cultures of Mesomerica. The earliest archeological evidence of the use of natural latex from the Hevea tree comes from the Olmec (the first Meso-American civilization) culture, in which rubber was first used for making balls for the Mesoamerican ballgame .



Rubber was later used by the Maya and Aztec cultures – in addition to making balls Aztecs used rubber for other purposes such as making containers and to make textiles waterproof by impregnating them with the latex sap

In 1876, Henry Wickham smuggled 70,000 Amazonian rubber tree seeds from Brazil and delivered them to Kew Gardens, England. Only 2400 of these germinated. Seedlings were then sent to India, British Ceylon, Indonesia, Singapore, and British Malaya.

Charles Marie de La Condamine is credited (itibarlı) with introducing samples of rubber to the Académie Royale des Sciences of France in 1736.

In 1751, he presented a paper by François Fresneau to the Académie (published in 1755) that described many of rubber's properties. This has been referred to as the first scientific paper on rubber. In England, Joseph Priestley, in 1770, observed that a piece of the material was extremely good for rubbing off pencil marks on paper, hence the name "rubber".

By 1944 a total of 50 factories were manufacturing it.

It slowly made its way around England. In 1764 François Fresnau discovered that turpentine was a rubber solvent. Giovanni Fabbroni is credited with the discovery of naphtha as a rubber solvent in 1779.

South America remained the main source of latex rubber used during much of the 19th century

The rubber trade was heavily controlled by business interests but no laws expressly prohibited the export of seeds or plants.

Worldwide natural rubber supplies were limited and by mid-1942 most of the rubber-producing regions were under Japanese control.

In 1909, a team headed by Fritz Hofmann, working at the Bayer laboratory in Elberfeld, Germany, succeeded at polymerizing isoprene, thereby creating the first synthetic rubber. The first rubber polymer synthesized from butadiene was created by Sergei Vasiljevich Lebedev in 1910.

In Singapore and Malaya, commercial production was heavily promoted by Sir Henry Nicholas Ridley, who served as the first Scientific Director of the Singapore Botanic Gardens from 1888 to 1911. He distributed rubber seeds to many planters and developed the first technique for tapping trees for latex without causing serious harm to the tree.

Charles Good year developed vulcanization in 1839, although Mesoamericans used stabilized rubber for balls and other objects as early as 1600 BC (MÖ).

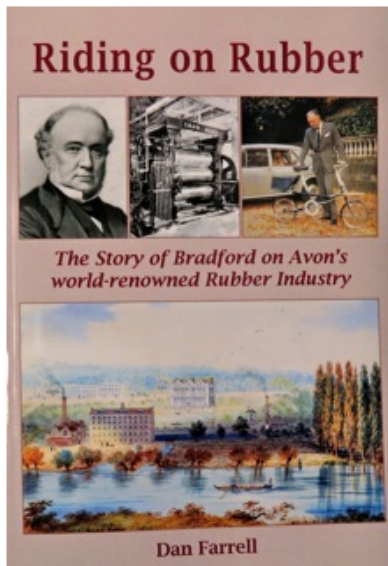
The use of rubber in car tires in particular consumed a significant amount of rubber. Gloves and toy balloons were large consumers of rubber, although the type of rubber used is concentrated latex. Significant tonnage of rubber was used as adhesives in many manufacturing industries and products, although the two most noticeable were the paper and the carpet industries. Rubber was commonly used to make rubber bands and pencil erasers.

Practical synthetic rubber grew out of studies published in 1930 written independently by American Wallace Carothers

Rubber yarns were used in foundation garments While rubber is still used in textile manufacturing, its low tenacity limits its use in lightweight garments because latex lacks resistance to oxidizing agents and is damaged by aging, sunlight, oil and perspiration. The textile industry turned to neoprene, a type of synthetic rubber, as well as another more commonly used elastomer fiber, spandex, because of their superiority to rubber in both strength and durability.



Rubber Gatherers in Cameroon. Inspectors check the latex collected by native laborers in 1941 in Cameroon. Although the African rubber boom ended in about 1913, rubber production continued in Africa into the later decades of the twentieth century.



"Riding on rubber" - a history of the Bradford rubber industry, published by Bradford on Avon Museum and Ex Libris Press

In 1935, German chemists synthesized the first of a series of synthetic rubbers known as "Buna rubbers".

After the war, California Institute of Technology (Caltech) researchers began to investigate the use of synthetic rubbers instead of asphalt as the fuel in the mixture.

Nineteenth-century inventions, such as the pneumatic bicycle tire, and growing industrial uses of rubber products (tubing, hoses, springs, washers, and diaphragms) created a worldwide demand for rubber. During boom years, rubber was the most sought-after export commodity and the greatest income earner for many African states.

The African rubber boom lasted from 1890 to 1913 with significant economic, social, and political consequences for many African states. Exploitation and hardship became standard for Africans in the colonies that produced rubber. However, the most devastating impact wrought by the demand for rubber occurred in the Congo Free State, the personal colony of King Leopold II of Belgium (1865-1909).

Uncured rubber is used for cements; for adhesive, insulating, and friction tapes; and for crepe rubber used in insulating blankets and footwear. **Vulcanized rubber** has many more applications.

Resistance to abrasion makes softer kinds of rubber valuable for the treads of vehicle tires and conveyor belts, and makes hard rubber valuable for pump housings and piping used in the handling of abrasive sludge.