
Chapter I.

History of Rubber



1893 styles of rubber footwear

HISTORY OF RUBBER

Rubber, what is it? The name rubber was given to a mass of Caoutchouc* in 1700 A.D. by Joseph Priestly, an English clergyman, because it would rub out pencil marks. In a strict sense rubber refers to a vegetable hydrocarbon of the chemical form $(C_5 H_8)_n$ and for practical purposes it may be defined as a material that is capable of being stretched or distorted to a considerable extent, then retracting quickly to nearly its original dimension upon release of tension. Technically, this quality is more correctly covered by the word "Elastomer".

Rubber as it first appeared on the scene was used by the Maya Indians in South America. Cuts were made in rubber trees and the oozing latex was collected. The Indians would immerse their feet into the latex and upon removing them found a thin coating covering them. This process was repeated several times until the coating was thick enough to be used as a protective and waterproof boot and the Indians could cross the roughest terrain without damage to their feet. These same Indians, being athletic in nature, had developed a game that was made possible by the use of a ball formed from the tree latex. The ball was elastic and bounced very well.

In 1870, with dire threat to his life, Sir Henry Wickham took seedlings of the rubber trees from Brazil to London from where they were transferred and set up in plantations in Malaya. The seedlings flourished as did the tree rubber industry in Malaya.

This interesting same tree latex was later used to coat cloth or other forms of material and then dried to give waterproof clothing or elastic and waterproof containers. These products at first proved to be very poor due to the lack of resistance to heat, becoming soft and tacky, or when cold, becoming hard and brittle. Due to such a poor temperature span the articles were practically useless. Many investigators were experimenting with methods to overcome these inherent problems, but it was Charles Goodyear's breakthrough in 1839 that isolated major obstacles when he performed the first successful vulcanization of rubber. Later in 1841 he produced a few yards of rubber-coated cloth heated in an iron trough. By the year 1850 several stable rubber companies were in existence and now rubber is one of our major industries.

* Caoutchouc is the French derivation of the Maya Indians' name of Cachuc which means "weeping wood".

TREE RUBBER PROGRESSION

SEEDLING TO FINISHED SHEET

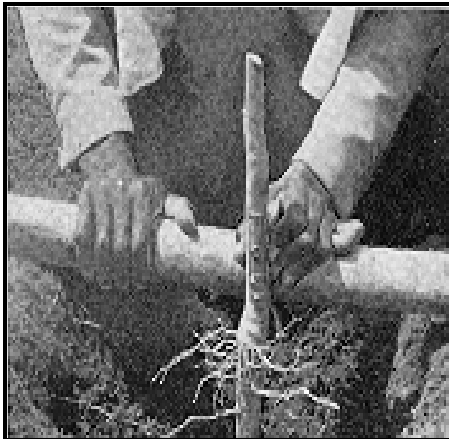
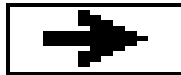
BALED AND SHIPPED



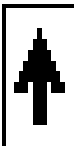
Bud-grafting Hevea Rubber



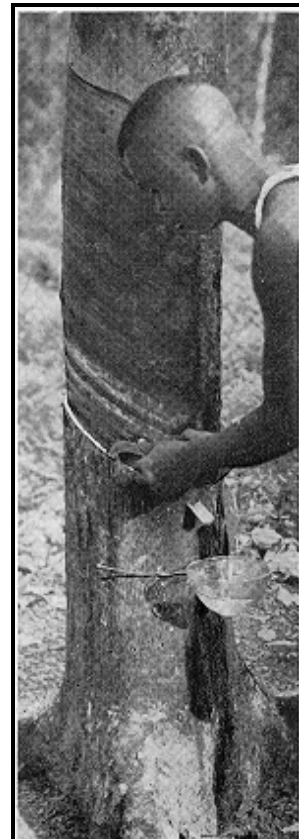
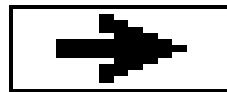
Young Bud-grafted Rubber Tree



Planting Bud-Grafted Stump

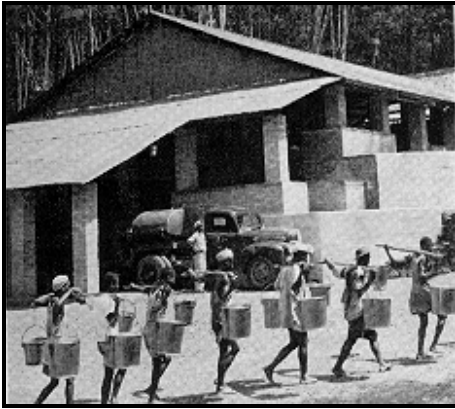


Tapping a Rubber Tree



Continued Tree Rubber Progression

Latex is Transported by Trappers to Collecting Station.



Milling Coagulum to Remove Water and Form Into Crepe Sheet.



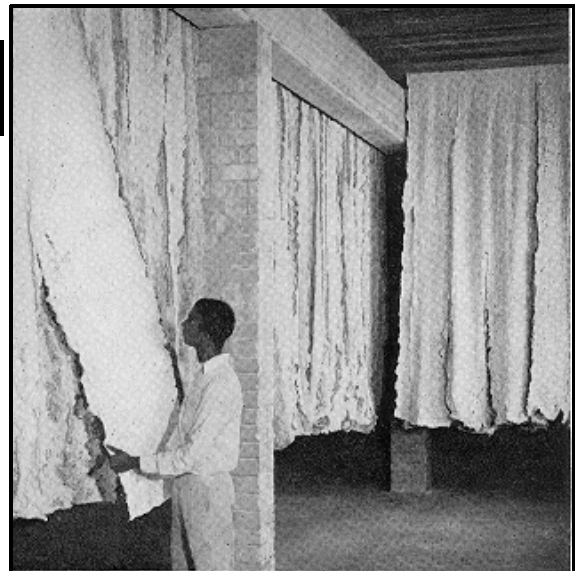
Tank Trailers Deliver Collected Latex to Central Processing Plant.



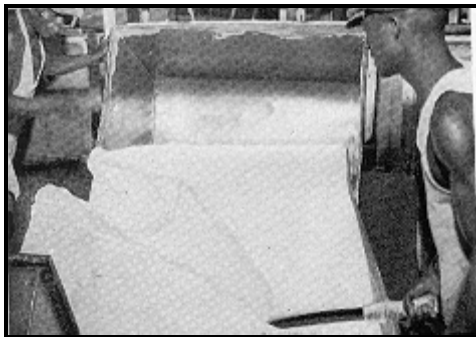
Sheeted Crepe is Run on Reels and Cut in Uniform Lengths for Drying.



Drying is Done in Hot Air Under Controlled Conditions.

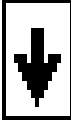


Coagulated Latex is Cut for Washing and Sheet Formation.

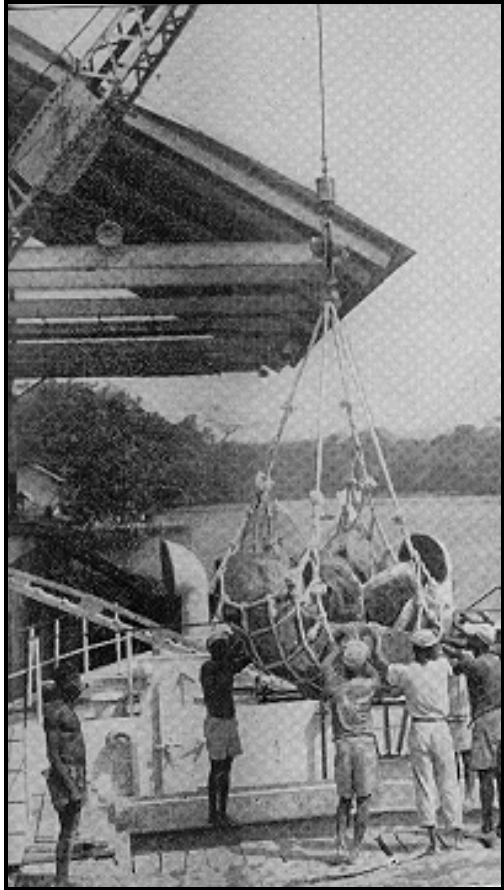
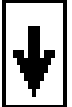


Continued Tree Rubber Progression

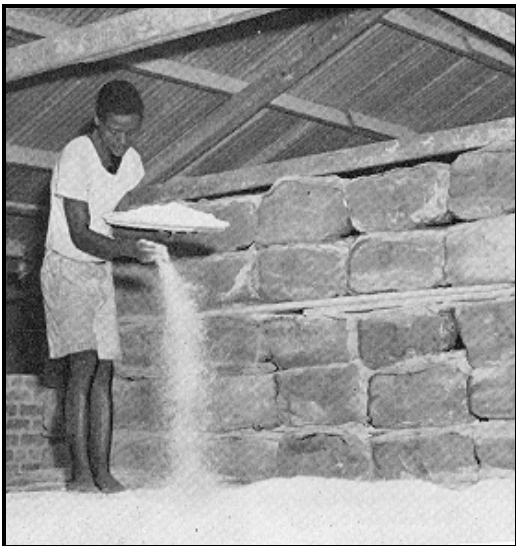
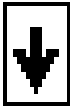
Dried Sheets of Crepe Rubber are Pressed into Bales.



Loading Rubber Bales on Shuttle Craft for Shipment to Seaport.



Bales are Dusted to Prevent Sticking in Storage.



There are no problems. There are only opportunities. It is our function to seek out the opportunities and take full advantage of them. A game of Golf imitates Life. Each shot, hole, green, and the weather present an abundance of opportunities. To be successful at Golf or Life all opportunities must be tested and dealt with in a most forthright manner.

Monroe Mirsky