

Caoutchouc

BY GEORGE B. BRINGMANN

Caoutchouc, better known as rubber, is not a modern discovery. Columbus found the Quisquean Indians playing beach games with balls of the stuff when he landed on what is now Haiti, but the white man did nothing about this New World product for two hundred fifty years. Then, in 1735, Lacondamine, heading a French expedition into Ecuador, sent samples of caoutchouc to the French Academy of Sciences for study. The savants duly noted its remarkable qualities, but caoutchouc remained a "natural curiosity." Priestly, the 18th century scientist, was the first to dub caoutchouc "rubber", after observing its effectiveness in erasing pencil marks from paper. This was the first commercial use of rubber. In the year 1820 Charles Macintosh enlarged the possibilities of the product by developing it as a waterproofing agent for fabrics. In 1840, Goodyear, originator of the vulcanization process, started rubber on its way to the important role it plays in modern industry. Today it is estimated that some 25,000 articles are made of rubber.

Production of the commodity started in the western world. The Brazilian jungles and tropical forests abounded with a variety of trees yielding latex, from which rubber is produced. In the early years of the present century rubber was the second most important product and export of Brazil, exceeded only by coffee, and her para rubber was adjudged the finest in the world.

Of late years Brazil's proportion of world production has declined. In 1909 Brazil produced 40% of the world total; in 1922, 5%; in 1940, 1.3%. Latin America, of which Brazil is an important part, in 1909-13 produced a yearly average of 21,000 tons of rubber; in 1930, 8,800 tons. Between 1909 and 1930 Asiatic production of rubberumped from 7,900 tons to 411,100 tons. Brazil's production fell from an annual average of 19,250 tons in 1909-13 to 7,050 in

1930, while Ceylon production climbed from 250 tons to 41,350 tons.

In 1931 the government of Brazil took steps to promote the industry. Since then production has been:

1931..12,623	1936..13,240
1932.. 6,220	1937..14,793
1933.. 9,453	1938..14,290
1934..11,150	1939..15,070
1935..12,370	1940..17,480

This shows a slow but steady increase in total tonnage, but by no means does it represent a corresponding increase in Brazil's proportionate contribution to world production. The Brazilian Institute of Geography and Statistics in its 1938 report estimates that the potential rubber production capacity of Brazil is 600,000 tons annually, basing this estimate upon the stand of latex trees at that time.

The contrast between Brazilian and Asiatic rubber production and the steady decline of Brazil's proportionate contribution to world production is the result of the inability of Brazilian producer to meet the competitive price of the Asiatic producers of the commodity. The latter, the huge British-Dutch, could undersell. One of the advantages in production costs the cartel enjoyed was the low wage scale paid to its workers. By this we do not imply that cheap labor is more efficient than highly paid labor. The facts are:: The cartel started to produce rubber where the margin of production already had been extended to the subsistence level. The productive sites of the cartel were peopled with workers who had no alternative to working for the cartel at low wages except starving.

In Brazil it was difficult to get collectors of rubber latex from the outside world because of the unsettled conditions of the rubber country. danger, unhealthful conditions, etc. The only large group willing to gather latex were the Indian natives of the Amazon valley. These Indians would not work in rubber production

unless they were paid as much or more than they could make from hunting, fishing and the agricultural generosities of nature. That wage was relatively higher than the wage of the Asiatic, since the Amazon Indians were under no compulsion to choose between rubber producing or starving.

It will be seen that there is no argument here on the efficiency of slave labor versus free labor, for free labor did not enter into the competition on a commercial, modern productive-method scale. More relevant is the greater freedom of the Amazon Indian over the Asiatic in the economic means he could choose to satisfy desires. Since human beings seek to satisfy their desires with the least effort, the Amazon Indian did out-produce his Malay or Asiatic cousin—not in rubber (he desired not to work at that) but in wealth generally. Perhaps he planned gold dust, which is not too scarce up the far reaches of the Amazon, is worth its weight in salt, this commodity being the ultimate of an Amazon Indian's desire of the palate.

It may be pertinent to ask: Could the cartel have discouraged the expansion of Brazilian rubber production if the laborers employed by the cartel had had access to the bounties of nature similar to that enjoyed by the Indians of the Amazon? This writer thinks not. Had the Asiatic laborers had this opportunity to maintain themselves independent of the cartel, the wages necessary to induce them to produce rubber would have been greater.

This raises another point: Would that hypothetical increase in the wage cost of the cartel have resulted in a higher price for the raw rubber? Probably not. Cartels and monopolies deal with products of labor and are in a position similar to those speculating in products of labor. The latter must consider the price ceiling beyond which they may not go without attracting competition. In short,

speculation draws forth additional supplies. The price fixed by the cartel was determined by the cost of producing either natural rubber elsewhere or synthetic rubber. Even if the laborers for the cartel had received high wages, the ceiling price beyond which lay encouragement for other producers would have remained the same.

There is, of course, no proof that the jungles of Brazil or the rest of Latin America would have been utilized more extensively for rubber production had the cartel been obliged to pay higher wages as a result of free opportunity being open to Asiatic workers, or that owners of capital would have invested in facilities for the processing of rubber in the Western Hemisphere. However, it would seem that if producers were obliged to pay labor all it produces, the outcome of a struggle for domination of any market would depend solely upon the efficient use of capital, and natural conditions peculiar to the product itself. As to efficient processing methods, there is no reason to believe that these could not be employed with equal readiness on any other continent. Which, perhaps, brings us to the crux of the matter. Under the conditions outlined, cost of production would be determined largely by natural conditions. South American rubber is hard to get at. The latex tree country lies inland up the Amazon valley, far from salt water ports. Asiatic rubber, on the other hand, is grown within easy distance of good harbors. Brazilian rubber, once aboard ship, is, of course, nearer United States, the greatest rubber market in the world. Whether the differences in fright costs would cancel the ease of access to source of supply ought to be easily determined. The differences geographic, climatic or miscellaneous, can be expressed in one word—rent. Rent difference is over the other.

The assertion, then, that the cartel enjoyed low cost labor seems reasonable. When wages are low, particularly if they are at subsistence level, then rent must be high. The cartel was able to undersell the

Brazilian producers because, in addition to the interest on its capital investments, it was collecting rent natural and also rent speculative extracted from wages—else wages would have been higher.

It is obvious that had the cartel been competing on an equitable basis with Brazilian producers the price of rubber could not have been arbitrarily set by the cartel, as was the case prior to June 1941, at which time the United States Rubber Reserve Company set a 22.5 cents per pound figure.

From the points made it seems reasonable to believe that Brazil would have continued to produce rubber on a scale proportionate to her capacity, had it not been for the unfair competition of the cartel. And the cartel was able to establish such a monopoly and gain such a stranglehold on the rubber trade of the world only as a result of antiquated and unsocial land laws. These laws protected the cartel in the exercise of unjust privilege and enabled it to deny equity to the workers of the rubber producing countries of Asia.

But this is no time for recriminations or regrets. Brazil might have been an important supplier of rubber at this time. She is not. She is a potential source of great future supplies. For the present we shall have to avail ourselves of other though more expensive sources of rubber. This the United States Government has undertaken.

When the shortage in rubber was foreseen, Congress was urged by the Administration to appropriate funds for the leasing of 75,000 acres of land suitable for the growing of the guayule shrub, also a source of rubber. This shrub reaches maturity a little earlier than do rubber trees but yields just once inasmuch as the shrub is harvested. A rubber tree

takes five or six years or must be at least eighteen inches in circumference before it gives an appreciable amount of latex. Latex runs slowly. We democracies haven't the time to wait. But there are other sources from which we can get the much needed supply. These are the synthetic rubbers, ranging in cost from 30 cents to 75 cents a pound. They are Thiokol (Dow Chemical), Neoprene (Du Pont), Ameripol (Goodrich-Philips Petroleum), Chemigum (Goodyear), Buna N, Butyl (Standard Oil of New Jersey) and Buna (U.S. Rubber, Firestone, and Shell). Undoubtedly the best will be used. Since the appropriation for guayule culture land was voted, the Standard Oil Company of New Jersey and the government have entered into a consent decree that makes available for the duration on a royalty free basis a score of patents relating to synthetic gasoline and synthetic rubber. Both cost more than the natural product. But we are at war. We have the means and we must use them.

With the pressure of war needs, developers of synthetic rubber will improve processing methods and reduce cost, perhaps to a point approximating that of the natural product. It is not unlikely that the processors of these synthetics will ask for a protected market, particularly if the cost of production has not been brought below the cost of producing natural rubber, and/or if the processors have made large investments in plant. Once behind a tariff wall on natural rubber, the makers of synthetic rubber (so far as the United States is concerned) will be in a position similar to that enjoyed by the British-Dutch cartel. The danger foreseen should be avoided.

Having wasted the substance (latex rubber) in the jungles of the world, let the democracies not squander the talents to develop synthetic rubber in a deluge of post-war dissipation in the forms of monopolies and privileges, in matters of natural materials necessary to produce synthetics, in patents allowing control of processes of production.

