

Canada's Rubber Industry

**Fifty million dollars invested in the Canadian Rubber Industry—
Work in the Rubber Factory is healthy and there is employment for all working members of the family.**

According to Mr. A. D. Thornton, Director of the Canadian Consolidated Rubber Co., more than \$50,000,000 capital is invested in the rubber industry in Canada, with an annual consumption of crude rubber amounting to 20,000,000 lbs. Twenty-six factories employ directly 15,000 men and women, most of whom are skilled operators, while wages paid are high and fully commensurate. The work is healthy and frequently one finds all the members of the family at work in one factory.

Discovery of Crude Rubber.

Now the first to discover that crude rubber might be useful to humankind was, history tells us, a native of the South American tropics. Finding it flowing from the wound in a tree and growing firmer in the sun and that it was liquid proof, he applied it to wounds, coating the sore spots with fresh milk with pleasing results. Columbus, on his second voyage, found the Haitians playing with balls made of this substance, while a Spanish adventurer, named Torquemada, four hundred years ago, noted that the Indians in Mexico employed it to make their cloaks waterproof.

Towards the end of the eighteenth century, a further discovery proved that it would remove pencil marks from paper, and consequently a demand for it from artists and painters arose in Europe. About 1820, seventy-five cents was charged for a piece about half an inch long. Charles Macintosh, a canny Scotsman, was the first to put rubber to the use which the Indians had made of it, and the first to give us waterproof macintoshes, called so after himself. Then came a simultaneous discovery by Thomas Hancock, an Englishman, and Charles Goodyear, an American, working at the same time on the same scheme in different countries, that if melted sulphur were added to the crude product, it would vulcanize, and today, as a result, we have countless uses—tires, shoes, insulated wires, clothing, mechanical goods, etc., to which rubber of this character is put. In this connection, Mr. Thornton says: "Sulphur is to rubber what yeast is to bread; it is mixed in small proportion with the crude rubber, then the two are vulcanized and baked together. Elastic rubber, such as is known, is the result." He then continues:—

The Production of Crude Rubber.

"Ninety per cent of the rubber consumed in Canada is obtained from plantations within the Empire. While South and Central America are large producers of gum, still it is Ceylon, the Malay States and the Straits Settlements that Canadian manufacturers look to for their supply. Had it not been for the foresight and patience of the British Government and British capitalists in furthering production of crude rubber, the industry would have suffered severely; in fact, not nearly enough rubber would have been found to produce the present consumption of auto tires alone. Rubber from South and Central America is obtained from the trees of the forest; that from the middle East is from the plantations."

The cultivation of rubber trees in plantations as apart from their natural wild growth is due to an Englishman, Captain Wickham, who, in 1876, brought rubber seed from a trip to the Amazon Valley; these he handed over to Kew Gardens near London, where, with infinite care,

conditions were discovered under which the baby plant would live. Of the British Dominions, Ceylon had a climate nearest to that of the Amazon, and it was there that the first known rubber tree to bloom outside of Brazil, was brought to bearing. Then Western Asia was found adaptable to the plant, and later, the Straits Settlements, Malay, Central America, etc. In the last twenty years, the export of plantation rubber has jumped from 4 to 140,000 tons—more than 30,000 times as great as it was.

Method of Coloring.

Dealing with the ways and methods of production of the many colored rubber articles so commonly seen now-a-days, Mr. Thornton says:

"For coloring purposes, many kinds of pigment and dyes are used. Red rubber goods are colored with vermilion, antimony salts and iron oxides. Zinc oxide is used to obtain the white, and Chromium salts the green. Oxide of lead is used in large quantities because of its particular ability to make rubber tougher and more dense. Up-to-date rubber factories have extensive chemical and physical laboratories, which are not excelled by those of any other industry."

"A thorough and comprehensive knowledge of all textiles must be exhibited by the chemists and technical men of the rubber manufacturing companies. The use of chemicals is a very close study. The slightest variation of the purity and fineness of material in question may cause extensive and serious damage. Thus the rubber manufacturer in Canada is a large supporter of

other industries in Canada. Cotton mills, chemical, coal mines, electricity, all find an outlet for their production here. Cotton is very largely used in the industry."

"The first winter of the War found our men up to their knees in water in the trenches; Canada made hundreds of thousands of rubber trench boots which fitted up to the body of the wearer so the second winter of the war found our men well protected from the cold and wet; extensively used in railways for air brake, hose steam, hose conveyors, rubber flooring, etc."

"The rapid progress of electricity of later years would have been almost impossible were it not for the great aid afforded by the liberal use of rubber. It is also used in all parts of telephone instruments and wires."

Leather Being Replaced.

"Rubber has replaced leather to an unprecedented extent. The scarce and high price of leather has been the reason for demonstrating that it can, in almost every case, be replaced by rubber. Soles and heels are now manufactured by the million. Belting for the transmission of power, book binding, auto tops and seats are all looking to the rubber manufacturer for their source of supply. From the forests of South America and the plantations of the middle East, we find a line direct to the rubber factories of Canada. The sulphur mines, zinc and lead mines, the chalk cliffs and the cotton fields, all are called upon to yield their best, so that Canadians may have their supply of rubber goods. Take a look at an auto tire, then try and realize that its production has created an immense demand on the banker, scientist, engineer, miner, chemist, skilled mechanic, salesman, hosts of labor, men and women, railways, steamships, scientific planters wild men of the forest, etc. . . . then you may begin to grasp the immensity of the rubber business as it is to-day."

According to Government figures of 1918, \$9,003,666 was paid out in salaries and wages; the cost of materials was \$23,565,503, and the value of products \$49,543,811.

A New Field for Insurance

The city of New York recently insured for \$30,000 the life of a sculptor who was designing a public fountain. The city officials knew that if this sculptor died before completing his work they would be put to considerable expense to have it finished by another sculptor.

A board of education near Detroit, Mich., has insured for \$50,000 the life of a contractor who is building a new public school for them. A number of the board stated that the insurance was taken to protect the board if the contractor died while doing the work and that it might not be possible to obtain another contract who would

complete the school on the cost-plus plan of the present contractor, in which case the cost of the school would be increased.

Here is a good form of business insurance to go after. Now-a-days, with fluctuating costs, the death of a man at the head of contract work of any kind is liable to mean added expense and a new contract to those having the work done. Millions of dollars' worth of construction work of all kinds will depend for its prompt and economical completion upon the continued specialized working ability of a few persons. If they die, the cost of the work will be multiplied.

Halifax, N.S.—Twenty-five million feet of lumber, in round figures, bought by British buyers during the past two weeks, is stored at various points along the railway lines of this province, and cannot be shipped overseas owing to the great scarcity of bottoms. This lumber will shortly be gathered in Halifax and stored here until vessels can be secured to carry it to Britain.

Halifax, N.S.—Vessels for the Canadian Navy, including a modern oil burning cruiser, will arrive here from England towards the end of September. Three ships of the Canadian Mercantile Marine are having passenger accommodation installed and will be put on the route to British Honduras.

Halifax, N.S.—Since Confederation the Federal Government of Nova Scotia has received \$17,250,000 in royalties from mines, and revenue from theatres in the past three years has increased 300 per cent.

A considerable number of returned soldiers are finding their way into the teaching profession through the assistance of the Department of Education. During the first half of the year out of a total of 253 graduating teachers of both sexes, 74 or approximately 30 per cent were returned men. That this is a heavy percentage is indicated by the fact that of the certificates granted in 1919 only 36.5 per cent were to males.