

India Rubber and Where it Comes From.

The following description of the India rubber tree, and of the manufacture of India rubber was written by Col. A. R. Porcia Labra, an enterprising merchant of the Rio Purus, and also a member of the house of deputies of the province of Amazonas, who has published it in pamphlet form and was condensed by a correspondent of the Boston Journal, from which paper we copy it:

The "Serinqueria" is a tall, perpendicular tree with little foliage, growing and thriving on low land in a dense forest of perpetual verdure. It attains a height of from 20 to 40 metres and a diameter of about one metre, but generally less. The leaf at a distance looks like that of the "Moniva" on account of its length, division and colour. It falls during the month of September, the summer season, but after 15 days the tree is clothed with new foliage. The seed is very similar to that of the "Mamona," but is smaller and contains oil of the same nature. The sap of the tree is as white as, and of about the consistency of, very rich milk or very poor cream, and from this is prepared (by and of the smoke of burning "docoos," dried palm nut an elastic substance well known throughout Europe and America as "India rubber," but called here "Borracha" (a leathern bottle) on account of the form it takes as prepared for market.) An infinity of uses and application for this material and the products of its manufacture gives a rich and valuable return to the producer, and a constantly increasing demand and to sustain these high prices ruling in the principal markets of Europe and America as well as at Para. Its extraction and preparation may be considered even to-day a new industry, as well as an inexhaustible source of wealth. The rivers Madeira, Juvua Xingua and Purus, as well as other affluents of the Amazon, have been already explored and worked to advantage. The Purus, to the distance of 800 leagues, with its many lakes and tributaries, produces this tree abundantly, and its forests have already been explored for the distance of 900 miles. Each labourer, man or woman, no matter which, can collect daily from 11 to 13 pounds of fine rubber, worth 62 cents per pound, and there are some who extract from 17 to 22 pounds. The average production is about 100 pounds to each person, but there are men who have made double that amount during the season. The danger of destruction to this fountain of wealth exists in the ignorance and recklessness of the workmen, who often kill the tree by careless and neglectful tapping. Their employers take no pains to prevent this, as they pay nothing for the land or the trees.

At the beginning of the summer the labourers commence to locate themselves among the seringas. Here on the Purus this period is from the last of April until January, but the best time is from May until September, when the tree sheds its leaves. After the new foliage starts, the milk contains much water, and the rubber, in relation to the quantity of milk, is diminished two-thirds of its ordinary weight. In preparation for, and to facilitate, the collection of the milk the labourers make through the woods a path called "estrada," or a street, to the foot of each seringa tree, until they reach 80 to 120 trees, clearing away all bushes and other obstructions around each. This is done with a large American knife, but a bush scythe would be better. Having completed this work the laborer places at the foot of each tree the little cups for collecting the milk called "tigelinhas" distributing usually from three to eight to each tree, according to its size, until 500 to 700 "tigelinhas" have been disposed of. He then makes six or more slashes in the bark with a large knife so that the sap will flow. Some waste several days in this preparation, which being completed in the following morning very early they commence the extraction and collection of the milk. Between the hours of five and six the workman goes out on his path with a machete, (a very large knife) a mass of damp and plastic clay of the consistency of putty, and a vessel or bucket in which to collect and convey the milk to the smoker. Passing round the tree he makes with his knife oblique and downward slashes from the corners of the horizontal ones made before, like the letter V, to lead the sap into the cup, which he fixes at the point of junction with a little of his wet clay, continuing the same operations with each tree on his path until he reaches the last. He then immediately and very quickly returns to the first, where, with his bucket on his arm he proceeds to empty into it the "tigelinhas" which are

filled with milk, leaving them at the foot of the tree or hanging to a neighbouring one, until he has collected the milk from all the trees, having done this he conveys it in haste to the smoker, who converts it into rubber and then empties his bucket into a large zinc or earthen basin.

In a large earthen pot without a bottom is kindled with the nut of the palm tree a fire, which makes a dense smoke that ascends through the neck of the pot. The smoker has a wooden mold with a long handle, shaped like a paddle, over which he pours with a gourd a quantity of milk and then passes it over the smoke, which it rapidly hardens, leaving on the mold a filament the thickness of a sheet of paper. He continues to repeat this process until he has used up all the milk in the basin, which takes about two hours, more or less, according to the quantity. The next day he makes a cut round the blade of the paddle by which he withdraws it, putting the rubber in the sun to dry. When it is well smoked it is of a dull yellow color, and when badly smoked a dirty white. Nevertheless, in the course of time both become black. Through remaining too long in the smoke, or through the negligence or want of activity of the smoker, the milk coagulates before it is thoroughly smoked, and this causes the difference in the quality in the rubber as classified, "fina, entre fina, and sernamby." The "fina" is made from the milk in perfect condition, the "entre fina" when it is saturated and begins to coagulate, and the "sernamby" when the milk coagulates naturally, or there has fallen into it some extraneous substances, such as water, bark and pieces of rubber, or on account of the uncleanness of the vessels in which it is collected. All the milk that remains in the cups after emptying, or that runs down the sides of the trees, coagulates and makes "sernamby" only two-thirds the value of "fina." This work is repeated day after day, the gashes that are made in the trees at the distance of one decimetre from the ground are repeated one over the other, as high as a man can reach, and the cups are raised successively round the trees and each change is called by the workmen, "reacao." This is usually the work of one week. The paths or estradas, will not last over three months of steady working; therefore it is necessary for the rubber gatherer to prepare two for the season. Some make four. Here on the Purus, of which I have been specially speaking, they always use two or more.

A Horse's Revenge.

Horses are not usually vindictive or revengeful, but leave their wrongs to be redressed by the Society for the Protection of Animals. Occasionally, however, they take upon themselves to punish those who ill-treat them, as is shown by the following incident, which was witnessed lately in the streets of Paris: A carter driving a heavily-laden vehicle through a narrow street contrived, through his own awkwardness, to entangle the animal's legs in the shafts of the cart. Instead of endeavouring to liberate his horse he commenced striking it brutally on the nose and head, and continued doing so during some minutes, notwithstanding the indignant remonstrances of the lookers-on. At first the poor beast bore patiently these unmerited blows, but after a while, maddened by the pain it suffered it retaliated by seizing the man's right arm between its teeth, lacerating the flesh and breaking the bone in three different places. The spectators who interfered at this juncture and tried to force the animal to let go its hold were not touched by the horse, but it resolutely refused for some time to relax its grip upon the carter's arm, and when at length the man was removed to a little distance it endeavoured perseveringly to get at him again. The injuries received were so serious as to necessitate the immediate amputation of the lacerated limb, and the patient lies at the hospital in a critical condition. Wanton ill-usage of animals is, however, so cowardly an offense that one can hardly feel much sympathy for the sufferer.

GARIBOLDI left his peaceful home, notwithstanding his severe prostration, and went to Milan receiving an extraordinary ovation there, in order to gratify his wife, who was determined to have him appear with her in the town where she was formerly a humble peasant woman.

A WOMAN accidentally went to church with two bonnets on her head—one stuck inside the other—and the other women in the congregation almost died of envy. They thought it was a new kind of bonnet, and too sweet for anything.

Sawdust as Bedding.

A correspondent of the *American Agriculturist* writes: We have tried for two years dry sawdust in the cow's stable, and on the whole like it better than any bedding we have ever tried. It makes a more comfortable bed, completely absorbs the urine, and the cow is kept clean with less labour than when any other is used. The objection to salt-marsh sods, dried, or to headlands and dry mud is, that they soil the cow and make it necessary to wash the bag before milking. Straw, of all sorts, soon becomes foul, and without more care than the average hired man is likely to bestow, soils the cow's bag also. Dry sawdust is clean, and makes a soft, spongy bed, and is an excellent absorbent. The bag is kept clean with the aid of a coarse brush without washing. A charge of 15 bushels in a common box-stall, or cow stable will last a month, if the manure, dropped upon the surface is removed daily. The porous nature of the material admits of perfect drainage, and of rapid evaporation of the liquid part of the manure. The sawdust is not so perfect an absorbent of ammonia as much, but it is much better than straw, that needs to be drenched daily in the sun and wind to keep it in comfortable condition for the animals. In the vicinity of saw and shingle mills, and of the ship yards, the sawdust accumulates rapidly, and it is a troublesome waste that mill owners are glad to get rid of. It can be had for the carting. But even where it is sold at one or two cents a bushel, a common price, it makes a very cheap and substantial bedding. The saturated sawdust makes an excellent manure, and is so fine that it can be used to advantage in drills. It is valuable to loosen compact clay soils, and will help to maintain moisture on thin sandy and gravelly soils. There is a choice in the variety of sawdust for manure, but not much for bedding. The hardwoods make a much better fertilizer than the resinous timber. To keep a milch cow in clean, comfortable condition, we have not found its equal.

A Profitable Traffic.

(From the London Telegraph.)

An entirely new branch of industrial business in connection with the still thriving trade in relics of canonized ecclesiastical notabilities has recently been developed by the monks of Mount Athos, who annually dispatch a large number of reverend travellers in this particular class of commodity to the Russian Government of Orenburg. A lively and chronic demand for relics appears to obtain among the inhabitants of this province, and a latest expedient for keeping up the necessary supply adopted by the priestly purveyors does infinite credit to their ingenuity. Having provided themselves before starting on their rounds with a few good solid bones of departed saints, duly authenticated by some exalted episcopal or monastic authority, they proceed to saw up this stock into extremely thin slices. Each slice is then framed and glazed, in the manner of a miniature portrait, and either exhibited to the credulous peasantry for a moderate fee, or parted with altogether at a heavy figure to some devout capitalist whose means permit him to become the absolute possessor of so precious an object. About six weeks ago a party of these sagacious Sawbones set up a booth in the portico of Orsk Cathedral, and have since done uncommonly well, according to the *Cologne Gazette*, in framed fragments of wonder-working tibia and femora, once doubtless used for locomotive purposes by saints and martyrs of indisputable merit. But the astute relic-retailers, in view of the hardness of the times just now in Russia, have supplemented their special trade by large dealings in blessed balsams, sanctified salves, and miraculous mixtures, which are eagerly bought up at top prices by infirm and sickly believers. It is estimated that within the last six years the monks of Mount Athos have realized 2,000,000 roubles—about £300,000—clear profit, by their sales in Russia alone.

A LADY in the New Haven Hospital, who had been taking morphia in order to get sleep, for many nights was given a bottle labelled "sleeping drops," but filled only with water. She complained that the medicine was rather strong and braced her head, and after the dose was reduced slept comfortably every night for a month.

PRINCE RUDOLF of Austria, after an old family custom, has sent flowers to the Princess Stephanie every morning since their betrothal, no matter where she may have been staying or travelling.

FACTS AND INCIDENTS.

It was calculated in England some time ago that not one book in 1,840 goes through a second edition, and not one in many thousands a third.

THE Government of Italy pays only \$12,000,000 yearly for pensions, despite two or three wars and revolutions and the pensioning of civil officials.

MRS. YOAKAM, of Coos River, Oregon, carries on a farm with the help of one hired man, and she and her daughter last season ad down sixteen hundred pounds of butter.

THE three Roman Catholic churches of Toronto have gone into the risky business of conducting savings banks. These are small institutions, however, and are intended to encourage little hoards. The banks are open only on Saturday evenings, and the total amount on deposit is about \$15,000.

A GERMAN named Rubner has been making some interesting experiments to determine what proportions of the several ingredients of various foods are absorbed in the body. It was found that with carrots and potatoes no less than 39 per cent, passed through the body, leaving 61 per cent. to be retained. It was proved that far more of flesh is retained than of any other food.

THE public receipts of the Japanese empire for the year ending June 30, 1890, were about \$55,000,000. The expenditure was equal to the income. The public debt is \$250,000,000, but very nearly four-fifths of it partakes of the character of terminable annuities. The interest and the debt average 6 per cent., whereas the ordinary rates of interest in Japan range from 4 per cent. to 9 per cent., and the Chinese government had to pay 8 per cent. on its last loan.

SIR E. J. REED, Naval Constructor, writes that the *Livadia*, 335 by 153, at her very first trials, and under some temporary disadvantages, attained a speed of nearly sixteen knots an hour. On her way to Spain the weather showed signs of becoming very rough soon after they left Brest, but the Grand Duke Constantine, Lord High Admiral of Russia, refused to put back considering the opportunity an excellent one for testing the vessel. "We consequently steamed away into the very teeth of the Bay of Biscay gale, which gradually grew angrier, and the following morning blew at its wildest. Her steadiness was most remarkable. The confidence of the Duke, in refusing to turn back, was justified, and both Admiral Sir Houston Stewart, the Comptroller of the Navy, who was on board and myself are indebted to his Royal Highness for a most instructive sea experience." The damage done to her was by wreckage.

Ireland is still Ireland, and the social storm still pipes higher and higher. In spite of all that is said, those who live will see that the union will not be repealed, and that landlords will not be abolished. Peace will be brought back, if force is necessary, with the strong hand, and there will be very thorough changes in the land laws, and something like equity and reasonableness brought to hold sway in the relations of landlord and tenant. And whether or not the House of Lords throw out such remedial measures they are bound to pass, and the more they are opposed the more thorough and far-reaching they will eventually be made. Aye, and the changes won't be confined to Ireland. The land question booms largely up in England and Scotland also, and before all the play is played out there will be changes effected which will fill some with horror, but a great many more with gladness and gratitude. A man that lets out the use of a certain raw material called land, has a right to his rent and to the land back again, but not to all the improvements the tenant has made on it by his skill and capital. These in justice belong to the man who put them there, and the way landlords have for generations coolly taken possession of them, as if it were all right, is just as disgusting as it is monstrous. In fact, the relations between landlord and tenant even in Canada, need a good deal of straightening up, for they are generally of a very jagged description—all being in favour of the stronger party. What sense is there in all that power of summarily seizing all that may be on the premises for rent? Why should the landlord have precedence over every other creditor? Indeed a good many other "why's" might be put in this connection not easily answered, except that the landlords have had the greatest say in making the law, and have generally taken good care of themselves and their class interests.