

WOOD USED FOR TEA BOXES IN INDIA.

Anent the above subject we extract the following from a memorandum by Dr. George Watt, who is on special duty with the revenue and agricultural department of the Government of India:

My views on the subject of woods suitable for tea boxes (which I hope to fully express in the dictionary of the Economic Products of India, now under preparation) are at variance with the popular outcry against our Indian timbers, as injuring the Indian teas. I may therefore be pardoned the liberty of briefly indicating the results of a few personal experiments.

I had the opportunity during the Calcutta International Exhibition of inspecting some 200 tea-box woods from all parts of India. Mr. Manson, the forest officer in charge of these collections, performed, along with me, a large series of Experiments. With four slabs of wood, between each pair of which a sheet of new lead was fastened, we tested the supposed action of the wood. One pair was unseasoned wood, the other the same wood only seasoned. After damping the pairs, they were set aside for a time under circumstances intended to simulate the effects of the hold of a ship. In many cases, such as the silk cotton tree (*Simul*) the wood was completely rotten; in others firmly attached to the lead through the growth of a fungus from the decomposition of the wood. Others, such as *toon* wood, seemed perfectly unaffected. In no instance was the lead found to be in over so slight a degree chemically acted upon. These experiments I repeated once or twice after the close of the exhibition, but failed utterly to discover any wood which seemed to possess the least chemical action upon lead.

That the wood is not the cause of the action seems further indicated by the fact that in China, as in India, a large number of woods are used, and that there does not seem the slightest evidence, neither in India nor in China, that any of these woods has as yet been shown by experience to corrode the lead. If the question were merely one of flavor imparted to the tea, one would expect the pine wood used in China to stand first in this respect; but what is complained of is the chemical decomposition of the lead lining, and the cause of this might readily enough be determined by chemical analysis of the tea so destroyed, compared with a chemical examination of the fresh wood used for the boxes, and chemical experiments with various actions upon the lead of the compounds formed from the fermentation of tea. The presence of any active principle among the tea which belonged to the wood would prove my explanation to be incorrect; while the establishment definitely of the peculiar compounds from tea which possess the corroding power would lay the foundation of a complete solution of the difficulty. The preparation of tea upon a scientific seems a not very distant future.—*English Ex.*

DRY KILNS.

The following description of Messrs. Rathbun & Co.'s dry kilns is given by the *Deseronto Tribune*:

One of the greatest improvements made by "The Rathbun Company" during the past few months, has been the erection of three of the celebrated "Chicago Lumber Kilns." They have been constructed in the most thorough manner, every detail being carefully looked to, and the result is that they now have the most complete structures for the purpose ever erected in Canada or the United States. They are located upon the factory yard, at the west end of the village, and the large draft chimneys, seventy-five feet high, capped with handsome iron roofs, can be seen for a long distance, from all directions, and are a very prominent object when approaching from the bay, and the source of many inquiries from visitors as to what they are, and their purpose.

The constantly increasing demand for dry lumber induced "The Rathbun Company" to make these improvements, and now that they are completed, and working, it will enable them to supply large quantities of perfectly dry flooring, siding, &c., &c., besides increasing the manufacture of doors, mouldings, and other saw factory products. Each kiln is eighteen

feet wide by seventy feet long, and will hold forty thousand feet B. M. of lumber. The heat is generated by superheated steam, which circulates through about one mile of one inch iron pipe, and by a system of draft doors and dampers, the temperature can be regulated as required from 150° to 200° Fahrenheit. To prevent checking of lumber, or drying too fast on the outside, which has been a serious objection to former kilns, there are numerous small jets of steam introduced directly into the lumber chamber, which serve to keep the air moist, and the surface of the lumber in such a condition as to dry it much more perfectly than by any former method.

In connection with the kilns, and separated from them by the firewood, is a fine brick building, size twenty by fifty feet, containing two boilers, with superheaters, set with "The Jarvis Furnace," so constructed as to burn wet refuse, sawdust wood, etc., just as it comes from the saw mill, and with a most complete arrangement for dumping the fuel directly from the mill cars to the furnace doors. These boilers not only supply steam for the dry kilns, but also heat the entire ash and saw factory, the steam being conducted to it through a two inch iron pipe a distance of two hundred and fifty feet. There is also in the boiler house a powerful steam pump, with hose constantly attached for use in case of fire, which can at any time be started at short notice, and will prove a great fire protection for that end of the village. The whole is connected with the main line of "The Bay of Quinte Railway," by a complete system of tracks, that enables the lumber and fuel to be easily, quickly, and cheaply handled, and does away with labor of several horses and carts. We understand that there are other improvements projected, which will put this important branch of "The Rathbun Company's" business, in a position second to none, but as winter is now upon us, we presume nothing further will be done until another season opens. Such improvements are a benefit and a credit to the place, and are a substantial proof of the enterprise of "The Rathbun Company."

LUMBER CHUTES ON THE CALIFORNIA COAST.

In the *Milling and Scientific Press* of November 1, published at San Francisco, is a lengthy article, with illustration, on a novel method of loading lumber adopted at various points along the coast. The following is a condensation of the article:

The shore line of the west coast of the United States has very few good harbors. Between San Francisco and the Straits of Fuca, some 700 miles, there is really not a single harbor which is always accessible during gales. There are a number of open roadsteads, giving partial shelter from the summer Northwest winds, and several bar harbors, all of which are dangerous of access and utterly impracticable in heavy or even moderately bad weather.

For nearly the whole length of the northern coast, the immense forests, extending back for miles from the shore furnish employment for labor and investment for capital. At every available point for shipment stands a saw mill, turning trees into lumber which is sent here by sea and thence distributed. Every little river has its fisheries and canneries, and all the valleys and bottom lands their agricultural population.

The produce is mainly shipped by sea and under the peculiar existing conditions the people have had to devise means to overcome the natural disadvantages of the coast line. From these necessities has grown up the "chute system," of loading and discharging vessels.

Most of these chutes are on the coast north of San Francisco, although there are a few on the south coast also. They consist of a long incline of wood in the form of a shallow trough, extending from a headland of a shipping point, or from a high wharf or pier, out to a point where water is deep enough to allow vessels to come under and load, and are suspended from shears resting on the headland and piers. Of course, no average can be given of their length, size, cost of construction, or length of shears. These items all depend on the location and conformation of the coast. In some cases they are 60 feet long, as when used from a wharf or

pier, and in others 600 feet or more. The length depends entirely upon the vertical height from sea level, to the point from which the lumber is started. There must be inclination enough for lumber to slide by its own weight, and yet not so much that its impetus would be too great. Nor part of the structure ever touches the vessel, except by accident, but the whole thing is suspended from the various shears of supports, and the outer end or apron is raised or lowered to suit the stage of the tide, height of vessel, and weight of lumber, according as it is light or heavy. In stormy weather they are, of course, hoisted high in the shears.

The engraving which accompanied this article in the San Francisco paper was made from a photograph of Rockport chute, Mendocino county, formerly known as Cottanouve, a landing only considered available for six months in the year, and by no means the best on the coast at any time. An isolated rock off the beach, which was so precipitous and pointed as to have a foothold at its pinnacle for only one man to work at first, has been cut down until it presents a surface available for storing over 200,000 feet of lumber. From this rock to another nearer shore has been stretched a wire suspension bridge, costing over \$13,000, and the horse cars bringing lumber from the mill come on trestle work the bridge, and cross it to the other rock. The chute comes down from the outer rock, where the lumber is piled. There are guys, stays and braces to steady the chute, and regulate the inclination as well.

There is no other part of the world where this chute system is in vogue. They are built on all sorts of places along the coast. The extreme edge of a headland or point is often selected on account of depth of water. The ocean surf is constantly rolling in, and even behind many of the small points or headlands there is a heavy swell. In many places the insurance men refuse to take risks on the vessels on account of the danger of loss.—*Northwestern Lumberman.*

REDWOOD.

In a recent interview with the representative of the California Redwood Company, who is now in this country, we gleaned some remarkable details about this new and interesting wood. The trees, especially those of a large size and toward the butts, are like the fir and pines ring or cup and star shaken; but, as the secretory matter which forms the heartwood is devoid of resin, the faults, shakes, or fractures are clear and open. In this detail they form a strong contrast to the pitch pine, or southern pine, in which these shakes are the lodgment of large quantities of resin. Again, the wood cut from the butts is specifically heavier than that from the upper part, and when thrown into the water will sometimes sink at the butts and lift clear out of the water at the tops. This remarkable phenomenon appears to be owing to the saturation from the ground by water, for the butts upon being cut and dried resemble the wood of the upper part in every respect.

The durability of this wood seems remarkable, proof of which is found in fallen trees in the wood being grown over, and spanned or grasped by other and large trees. In walking upon these

prostrate logs, the bark and sapwood is so rotten that the feet sink in it like walking on snow; but the heartwood is found to be perfectly sound. These logs from being saturated with water, by contact with the ground, will not float in the water. The wood of these long-fallen trees is equally as good as that of the standing ones, but somewhat more dark in color. In dealing with these logs they cross-cut them in lengths, and elevate them above the ground to dry; in two or three years they will be sufficiently dry to float.

The pine (Oregon pine) and the spruce are common in these redwood forests, but the fallen trees of these woods rapidly rot, and are consequently worthless for commercial purposes.

These redwood trees, although evergreen, resembling our yews, admit of an undergrowth, through which it is impossible with an axe to force a way. This is curious, for our yews groves admit of no undergrowth, not even a blade of grass. This fact in connection with these redwood trees is no doubt traceable to the enormous height of the foliage above the ground, it admits of an atmosphere, although to large extent devoid of light, in which an undergrowth can exist. The atmosphere of these woods is cold and damp when the outer air, exposed to the sun, is hot and dry.

This redwood, from its non-resinous character, is unsuitable for burning. In the standing tree this is so marked that forest fires are unknown.—*Timber Trades Journal.*

DECEPTIVE CIGAR BOXES.

A little package of cigar box lumber, says an exchange, comes to us from the Phoenix Lumber Company, Milwaukee, that in some respects is of considerable interest. One piece is Spanish cedar veneered on poplar, and another most men would say was cedar, providing they saw but one side of it. Turned over, and it is plainly basswood. This imitation of cedar is a patent process, we understand. Many a smoker is not so expert that he can judge of a cigar on its merits, but depends much on the appearance of the box out of which it is taken. If he thinks the box is cedar, he takes it for granted that the cigar is not a bad one. Here is where he is liable to be deceived, and in this regard an imitation cedar box acts as a deceptive agent. What he takes for a Spanish cedar box may be pure basswood.

It is stated that the saw mill building at the New Orleans, La., exposition has been completed. It is 600 feet long, and 40 saw mills are located in the building. If the arrangements for securing a reasonable supply of logs are such as were promised there will be an opportunity for a competitive display of saw mills and accessory machinery and appliances such as has never before been afforded.

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Dr. Pierce's Favorite Prescription is the best restorative tonic for physical frailty in women or female weakness or derangements. By druggists. Price reduced to one dollar.

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Nov. 1st, 1883 and 1884, and also the Consumption for the month of Oct. 1883 and 1884:—

	Stock, Nov. 1st, 1884.	Stock, Nov. 1st, 1883.	Consumption for the month of Oct., 1883.	Consumption for the month of Oct., 1884.
Quebec Square Pine.....	345,000 ft.	400,000 ft.	253,000 ft.	348,000 ft.
Waney Board.....	520,000 "	301,000 "		
St. John Pine.....	35,000 "	59,000 "	30,000 "	34,000 "
Other Ports Pine.....	70,000 "	30,000 "	0,000 "	8,000 "
Red Pine.....	68,000 "	61,000 "	2,000 "	3,000 "
Pitch Pine, Sawn.....	648,000 "	309,000 "	58,000 "	100,000 "
Planks.....	432,000 "	475,000 "	123,000 "	204,000 "
Dantid, &c., Fir.....	65,000 "	68,000 "	18,000 "	4,000 "
Sweden and Norway Fir.....	90,000 "	113,000 "	40,000 "	38,000 "
Oak, Canadian and American.....	70,000 "	69,000 "	47,000 "	10,000 "
Planks.....	262,000 "	312,000 "	82,000 "	129,000 "
" Baltic.....	182,000 "	179,000 "	67,000 "	81,000 "
Elm.....	9,000 "	21,000 "	0,000 "	0,000 "
Ash.....	30,000 "	25,000 "	12,000 "	20,000 "
Birch.....	30,000 "	25,000 "	14,000 "	7,000 "
East India Teak.....	78,000 "	162,000 "	60,000 "	67,000 "
Greenheart.....	28,000 "	39,000 "	55,000 "	9,000 "
N. B. & N. S. Spruce Deals.....	31,000 "	109,000 "	5,000 "	8,000 "
" Pine.....	31,897 stds.	23,204 stds.	9,315 stds.	9,482 stds.
Quebec Pine & Spruce Deals.....	1,100 "	1,005 "		
Baltic Red Deals, &c.....	10,269 "	8,848 "	2,633 "	3,361 "
" prepared Flooring.....	3,701 "	5,897 "	857 "	1,659 "
" "	40 "	291 "	27 "	31 "
" "	2,975 "	3,651 "	894 "	716 "