

Real Estate Exchange

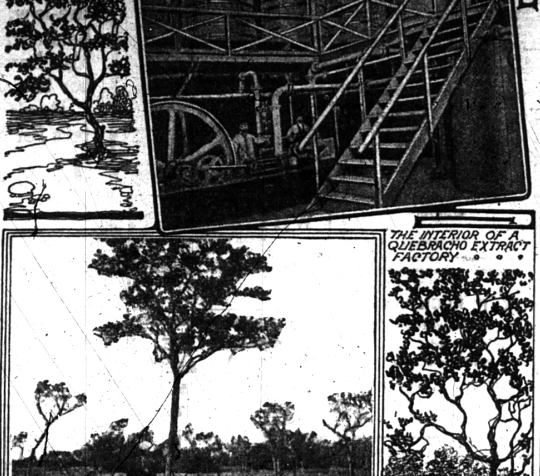
OF WEINBERG & MITCHELL
Exchange Bank Birmingham Michigan

The following is a partial list of Farms, City and Village Lots and Real Estate generally which we have for sale. As our list is constantly changing we request that parties who write us if they do not see what they want in this list.

- 380** Farm of 200 acres in Troy of good soil and well watered. Price \$10,000.00.
- 381** Well situated 100 acre farm in Troy. Price \$5,000.00.
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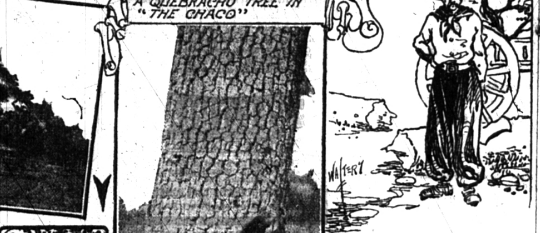
WO of the greatest industries in the world are railway building and the preparation of sleepers and sleepers in which the pines are the essential and costly factors; for the latter nothing can take the place of a good vegetable extract which is the tanning substance of the trade. Sleepers can be made of glass and metal but neither can give the satisfaction of those made of wood. The oak and the hemlock have for ages supplied tannin by which leather is cured; in fact, the very reason for its derivation is related to the oak, by which the tree was called in old Breton language. Railway sleepers have been made from the oak, but the expense grows higher year by year. No wonder, therefore, that the earth is scoured for trees to furnish either the one or the other of the substances, and no wonder also that manufacturers and exporters battled with delight the announcement a few years ago of the availability for both purposes of the South American tree called "Quebracho".

Quebracho is a contraction of the colloquial Spanish and Portuguese term quebracho, originally applied to many trees in Latin America. It means "ax breaker," and the character is implied in this meaning. The wood is hard, fine grained and tough and has been used by the natives for ages in their primitive construction work. Of recent years, however, quebracho is restricted in the arts and industries to a particular tree found only in South America, and even here only within broad limits of the drainage basin of the River Parana. In Cuba there is a "quebracho," so-called locally, which is a member of the Casahuate family. In Chile a quebracho is rather of the Casala family, and probably in other parts of Latin America the name is indiscriminately given to any hard wood that has the metal of the native's ax. No such indefinite use of the word, however, can be permitted today, because the tree of



A QUEBRACHO TREE IN THE CHACO

A SAWMILL BETWEEN "THE CHACO" AND CIVILIZATION



THE BANK OF THE QUEBRACHO TREE

the South American Chaco has become so commercially important that it must be understood to signify only that one tree and nothing else.

The genuine quebracho tree is found in Brazil, Paraguay, and the Argentine Republic. There are two important varieties which have been distinguished, although it has no great significance botanically or value commercially. Locally and in the trade the names given are Quebracho Colorado (red) and Quebracho Blanco (white). Quebracho Colorado has the scientific designation of *Loxopterygium forestii*, and belongs to the order of Anacardiaceae. This is the tree which has been used for both the sleepers and the better quality of tanning extract are derived. The other, Quebracho Blanco, is neither so straight nor so serviceable as the red variety, but it has a definite commercial value, as it furnishes some tanning extract and the logs can be used for fence posts and axles. From it is taken also a very expensive and valuable oil. In fact, as a plant it was studied for this purpose long before its other advantages were exploited. The scientific name is *Alseodermis quebracho*.

Stairways made with sleepers lay their rails. In some instances wooden ones are imported at great expense, or substitutes thereof are used if climate is particularly severe. As a rule, however, it is preferred to make sleepers from native timber whenever procurable. This was the case in the Argentine Republic when railway building was first begun, and no more fitting wood could be discovered than that recommended by the natives, both by its strength and by the experience of those who had used it. The quebracho has been by far the most serviceable for sleepers on South American railways, and its reputation grew so steadily that for many miles of European railways are supported by sleepers brought from the River Parana. In one respect quebracho resembles rather mahogany than oak or pine. The trees do not grow in clumps or groves, but are scattered here and there and the logs are of various sizes, from four to five or six feet in diameter, and in cross section they are oval or V-shaped, mass of branches and leaves. The white quebracho is somewhat smaller than the red, and begins to branch lower than each other. The leaves are oval, or lance shaped, smooth, somewhat shining and leathery; they do not fall completely in the winter, but cling to the branches in company with the fruit. The tree grows to thirty feet on a sandy soil, where the timber is of no great value, but where abundant water is available for roots, either by down or sufficient rain, it is neither a mountain nor river growth, but lives best in the sub-tropical stretches between water courses. At present the age of the tree is measured by hundreds of years, it is well enough established that at ten years from planting the tree makes a fine specimen for posts. The future promises, therefore, an opportunity for the actual cultivation of quebracho, because, although large intrusions have been made into the supposedly inextinguishable forest of the Chaco, it is not too late to restrict the cutting of the tree, or even to adopt modern forestry methods of planting and conserving for the supply of commerce. In fact, the Argentine Republic has already passed suitable laws in this direction, and it is more than probable that under the wise administration of that government there will be

developed an arboricultural industry to proceed hand in hand with the preparation of quebracho posts for fences and construction work, sleepers for railways, and of tanning extract, the three industries for which this unique tree is at present utilized. "Rotinas" is the Spanish word commonly employed in the trade for the rough and untrimmed logs (which the wood men), from which only the bark has been removed. They are still supplied, and better carts or wagons become growth not great enough for other purposes than posts, beams, cabinet pillars, or cart axles. When the logs were then made fast to the body of the cart, the primitive methods adopted by the natives for transport, carry one load before the days of steam and machinery. A popular way of loading the logs was to lay them on the ground on ropes, then the animals were unharnessed and the cart was tilted bodily upside down over the logs. The logs were then made fast to the body of the cart, after which maneuver it was brought back to its normal position. Of course only two-wheeled carts were used, and as soon as modern methods were introduced, and better carts or wagons became known, these primitive and cumbersome habits disappeared, although in the far interior even to this day rollers are made to market in this manner. "Durmitientes," according to the Spanish or sleepers. In the English idiom, are probably the most important product of the quebracho of the Argentine Republic.

The industry of making sleepers has assumed huge proportions. The difficulties of former days have been largely overcome by the introduction of modern machinery, especially saws, and some of the mills many miles distant from any main railway are equipped and organized in a manner which would reflect credit on any similar plant in the United States. Special saws are needed to penetrate the wood, but they are furnished from the factories of England, France, and America. This mill business is carried on by many companies, although the tendency is to concentrate the management into fewer but larger organizations. One company owns a tract of land about 20,000 acres, and is proposed to cut timber, fashion it into logs and sleepers, prepare tanning extract, and utilize every other resource which the tract affords. Another company can turn out 20,000 to 30,000 sleepers a week. This number, however, can by no means meet the steady demand for railway building which is characteristic of this portion of South America. Sleepers are laid at about an interval of two feet from center to center. Assuming, therefore, only 2,000 sleepers per every mile, it will be seen that 20,000 are enough for only ten miles. A year's supply at this capacity will consequently build only 750 miles of railway. But the Argentine Republic, Uruguay, Chile and Bolivia, all contiguous to the Chaco, are constructing more than this mileage, so that it is easy to see why sleepers turned out from modern mills can at once find a local market. These sleepers are now finished at the mill, and the mill is situated at the spot in the forest itself most convenient for carrying on the process. Quebracho extract prepared for tanning sleepers

and hides into leather is, however, the most serviceable product of the tree. The quebracho companies are adjusting their plants so as to utilize the wood, either in its entire output, or in that portion not reserved for posts and sleepers, for this extract. In Paraguay and areas in the Chaco remote from good roads, so that the cost of supplying timber is excessive, every part of the wood is turned into extract, because the demand is usually in advance of the supply, and it is therefore more profitable to manufacture the more concentrated article, which can be easier and more economically carried to market.

One feature of quebracho, in which it is superior to other sources of supply, is that the bark, the sawwood, and the whole of the central part of the tree produce the extract in considerable quantities. The bark contains 6 to 8 per cent of tannin, the sap 2 to 5 per cent, and the heart 20 to 25 per cent. As the heart represents two-thirds and often three-fourths of the total quantity of wood, the amount of tannin in the quebracho Colorado is seen to be considerable. It is merely a chemical question whether this tanning material is equal or inferior to that from the oak, but later methods of preparation point to a full justification of the claim that the leather from quebracho extract makes up to that resulting from any other tanning substance. So serviceable is it, however, that since its discovery, the tanning industry of the Argentine Republic has made noticeable advance, because, with both hides and extract as great natural products of the country, the leather industry is making every effort to foster the leather industry within its own borders.

"Quebracho extract," as it is called in the trade is easily manufactured, when the machinery is once installed. All the wood is passed through a machine that cuts it into shavings or the smallest possible chips. It is then collected into iron mesh kettles, in which it is treated by various processes until all the tannin is removed; after this the fluid preparation is reduced by evaporation to a thick, jelly-like mass, which is poured into sacks, where it is finally dried into the substance sold in commerce.

The difficulty of gathering the raw material far outweighs the preparation of the finished article, especially as the extract is no longer to be considered a by-product, but is coming to have more importance and value than posts and sleepers. In Paraguay particularly, where all the wood is utilized for a thick, jelly-like mass, which is poured into sacks, where it is finally dried into the substance sold in commerce.

The Grocer's Wife—Ach: no, my child, we cannot do it because so in this native Indians have been proven themselves very good for the work, as they are thoroughly acclimated, understand the wilderness, and can withstand the plagues of insects which man has no right to inflict for the foreigner; and exposure for nights as well as days is unavoidable, because the cutting stations are usually remote from any settlement.

MATERIAL FOR A BOOMERANG

Delicious is Excellent Because of Lightness, Hard to Break and Can Be Properly Curved.

The material of which the boomerang is made is a feature which should be considered. It can be fashioned to suit or hickory, but can also be cut or stamped out of celluloid and hard wood. Boomerangs are now being made in two or three American cities.

writes Day Allen Willey, in St. Nicholas. Several expert throwers in this country, however, have fashioned their own boomerangs not only of celluloid, but of heavy cardboard. If the cardboard does not get wet, it makes a very serviceable material. Celluloid is excellent for the purpose, because it is light, very hard to break and can be worked into the peculiar curve which is so necessary to give the boomerang its force and direction.

Mountain of Death.

An expedition party recently ascended Mount Taifu, one of the loftiest in Formosa, 12,000 feet above the sea level.

The party reached an aboriginal village (the Puma tribe) half way up the mountain, they employed 21 aborigines to accompany them and continued the ascent. This mountain

is believed by the aborigines to be a mountain of death, and nobody has dared to ascend it before. The aborigines live in great fear, warned the party not to break branches of trees nor make loud noises nor throw stones, and finally they refused to proceed further. In spite of this the party proceeded and reached the summit at last. Seeing this, the aborigines were quite surprised at the bravery of the Japanese. The mountain is reported to abound in valuable trees.