

THE COLUMBIAN EXPOSITION—FORESTRY EXHIBITS.

The Forestry building, notwithstanding its bad location in the so-called "back yard" of the Exposition, was constantly filled with visitors who were anxious to see the curious and instructive exhibits. In no other building in the grounds, save, perhaps, the Anthropological building, could so much be learned in a single visit. The collectors were, in many cases, enthusiastic amateurs who spent months in preparing the exhibits. We illustrate herewith some of the curious things in the line of forestry. We can trace the life history of trees and elucidate the systematic workings of nature in regard to them; we can explain what has been learned by patient investigation in regard to natural forces as exhibited in the plant world, but we are occasionally startled by a wild freak of nature and we are left in wondering admiration of the subtle and almost incomprehensible power which has produced the abnormal. An example of this was shown by the curious natural graft which we illustrate in Fig. 1. The

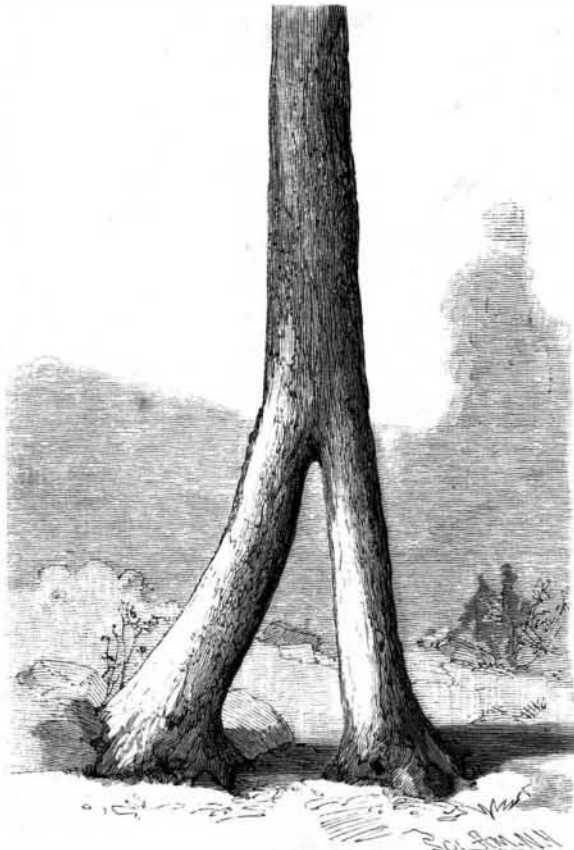


Fig. 1.—CURIOUS CASE OF NATURAL GRAFT.

two trees are a white pine and a rock or sugar maple. The crotch formed by the graft was three and one-half feet long, and the total piece exhibited was, perhaps, six or seven feet long. The union of two such trees, when accomplished in a natural way, presents an interesting field for speculation. How were the trees denuded of their bark when they were young saplings, so as to allow of grafting? Deer or other animals may have scraped or eaten off the tender bark, or the saplings may have been scraped by a falling tree. Possibly the young trees were blazed in making a forest path, but this is hardly likely to have been the case, as young trees are rarely selected to blaze. However the bark may have been removed, it is probable that they were brought together during a storm in the spring time, when the sap was running. This specimen came from Wisconsin, as did the two following, and the bugle illustrated in Fig. 6. All were collected by Mr. H. A. Batchellen, who gathered many of the specimens on exhibition, in winter, with the aid of snow shoes. Fig. 2 shows another natural graft of two white pine trees which is even more extraordinary than the last. The white pine is a hardy tree and accommodates itself to almost all kinds of soils, but at the same time it is very susceptible to influences which retard or warp its growth when it is young. This is shown by the curious growth illustrated in Fig. 2, which is also a piece of a white pine tree. The specimen resembles the gnarled and twisted stone pines which add so much to the charm of the scenery on the Italian shore of the Adriatic.

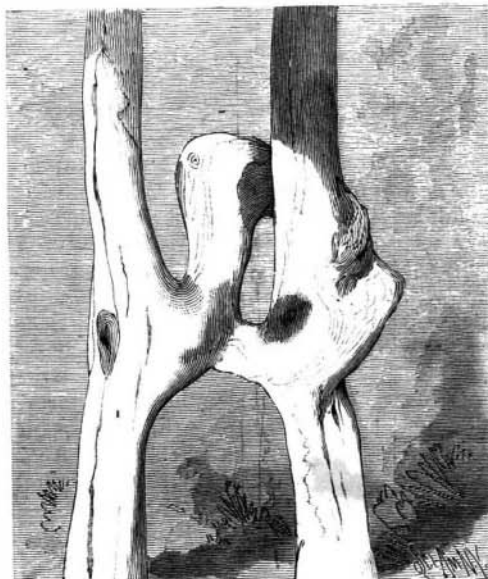


Fig. 2.—A VEGETABLE BOW KNOT.

Fig. 4 shows deer horns embedded in wood, the trees being burr oak and whitewood. It is no uncommon thing to find in the great deer parks of England the antlers of deer, and even a foot which was caught in the branches and torn off through fright and pain. The antlers embedded in the wood can probably be accounted for in this way, the wood growing around them.

At the bottom of Fig. 4 will be seen an iron ring embedded in the wood. Some one hung the ring on the limb of a hickory tree and the tree grew over it, covering it until it was again exposed to view by the woodman's ax. These specimens were all from the Michigan exhibit.

Fig. 3 shows a similar curious growth of a tree around a horseshoe. The horseshoe was hung on a small branch and was gradually embedded in the heart of the tree. This interesting specimen was shown by Mr. B. B. Brabham, of York County, Nebraska.

The woodsmen of the great Northwest find time hang heavy on their hands when their arduous labor is finished, so that they frequently spend their odd hours in fashioning some odd little trinket out of wood. The birch bark bugle, which we illustrate in Fig. 6, was really used as a dinner horn in a Wisconsin logging camp. The bell portion of the trumpet was composed of three pieces, which were shaped and joined after the fashion of the gores to a balloon. The portion of the instrument thus constructed was afterward covered with narrow strips of birch bark wound around and around, forming a smooth covering. The turn was made entirely of the strips of bark. This bugle does not call for any particular skill, and it would make an interesting occupation for young people to make them during the summer vacation in the country.

Fig. 5 shows a novel method of cutting clapboards which was exhibited by the Trout Creek Lumber Company, of Trout Creek, Michigan. For this exhibit they received a premium. This method, called quarter sawing, has marked advantages, the sawing being very economical and the grain is the same in each clapboard. The loss on account of cracks is minimized. In large trees two or more layers of clapboards are cut out. The log shown in our illustration was about sixteen inches in diameter.

Motormen.

Within the last few years a large number of men have found employment in running electric street cars. Members of this body have been given the name of motormen, and in some parts of the country they are known as motorneers. The motormen were, at first, recruited from the ranks of the horse car drivers, but the demand for them has been so great that men knowing nothing about street car work have, after a little practice, been placed on the front platform of an electric car. Street car companies have, as a rule, selected for this position men who possess intelligence and are not easily confused. The position of a motorman in a crowded city is not an enviable one. He has a great deal of responsibility resting upon him and is in a position to receive much blame and but little commendation.

There has been much discussion among street railroad engineers as to the advisability of giving the conductors and motormen instructions about the electrical mechanism which propels their cars. Some companies hold that a simple knowledge of the method of operating the switches, rheostat handle and break is sufficient, and that by keeping the operator in ignorance of the electrical principles involved, a proper respect for, and dread of, the system would be installed in his mind, and thus cause him to keep strictly to the running rules and not make any experiments on his own account. In case of trouble with the motor or connections the car has to be delayed till the arrival of an inspector. It is hardly necessary to say that the policy is not a good one, either to the company or to

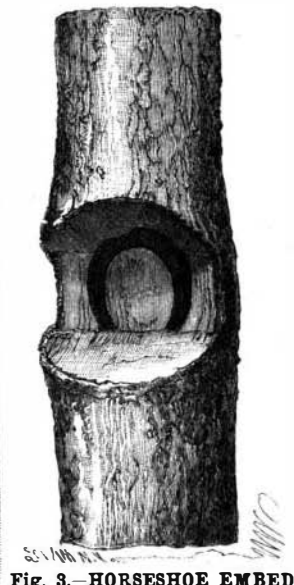


Fig. 3.—HORSESHOE EMBEDDED IN A TREE.

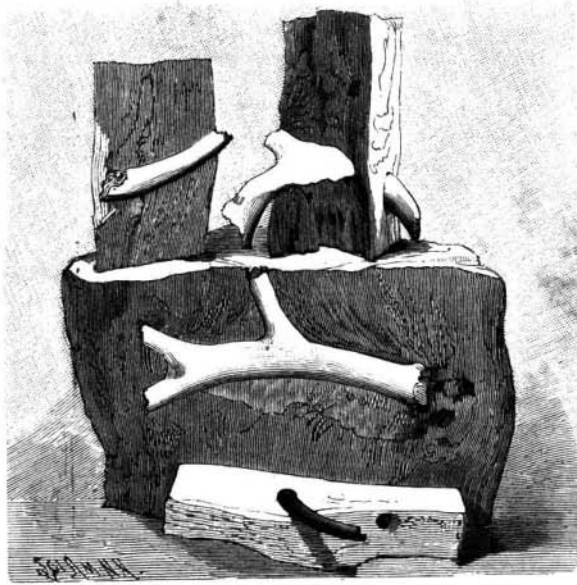


Fig. 4.—ANTLERS EMBEDDED IN TRUNK OF A TREE.

its employees. An ignorant man handling electrical apparatus is very much more likely to cause damage than a man well informed on the subject, although the latter may make a few experiments. If the experiments are made by one not conversant with electrical principles, the results are usually disastrous. The writer knows of a case where a man who, having in charge the running of several motors, wished to see what would be the effect of placing a short copper wire across the terminals of a 250 volt switch. He found out. He does not do it now. The practice of most railroad companies is to instruct their car employes in elementary electric principles, so that they are able to remedy any of the minor troubles occurring *en route*. In case of any serious defect the car is sent to the repair shop. If possible the motorman should be instructed in the "whys" as well as the "hows" of the machinery under his control. Being thus equipped, he will be a more efficient motorman and will be better fitted to cope with any emergency.—*Electrical Age*.

The Coin-in-the-Slot Telephone.

The Chicago Telephone Company, so the *Western Electrician* says, has just placed in several of its public pay stations instruments provided with a slot arrangement which may prove of considerable value to the company, by putting a stop, in a great measure, to the dead-heading at public stations which has been the source of much annoyance to the telephones in general. The idea is not a new one, but it is regarded

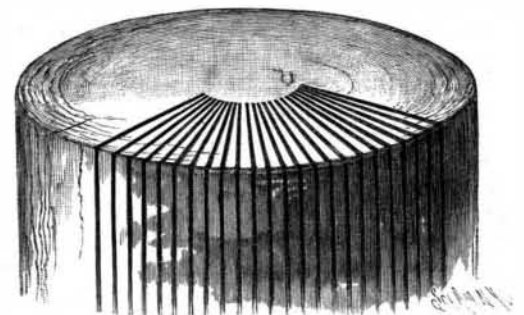


Fig. 5.—METHOD OF CUTTING CLAPBOARDS—NO WASTE.

with displeasure by those who have been accustomed to use telephones without paying for the service. The battery box is much larger than is ordinarily the case. On the top are five slots, respectively large enough to admit a silver dollar, half, quarter, dime and nickel. Each slot has a chute running directly to a bell inside the box. From the top of this box there is a transmitter to carry the sound of the five bells to the transmitter through which the user of the telephone talks. The bells differ in tone, and with a little practice the operator at the exchange can readily distinguish the

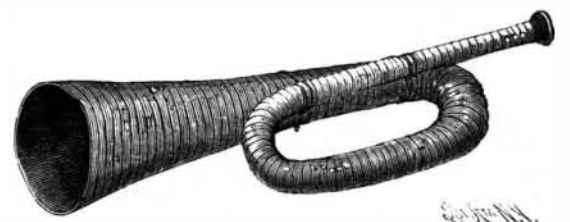


Fig. 6.—BIRCH BARK HORN.

sound of each. Each instrument is equipped with a metallic circuit and long distance transmitter, so that calls for any station that the telephone reaches can be made. These instruments have been in operation in New York and Boston for some time, and are said to have filled the requirements made upon them with a good degree of satisfaction.

A PHYSICIAN who got rid of some of his steel instruments and bought others made of aluminum says that

he is sorry that he changed. The aluminum probes, sounds, tongue depressors, and that sort of thing do not oxidize, to be sure, but he finds that they are deficient in elasticity, and stay bent after pressure. He declares, moreover, that he likes to feel as if he had a hold on something when he uses an instrument, and aluminum is so light that it makes him feel as if he could put no trust in it.