

logs in June and July the logs can be peeled very easily. The main body of the house consists of a good foundation of stone, and upon this 2x8, and at proper intervals we stand 6x6. These run from five to seven feet apart. The logs are then cut to fit these openings very tightly, and the result is really a filling of log; earth and plaster on the inside from ceiling to floor, and we are never troubled with settling of the logs.

There are more farm improvements in our county than I saw in the 1,500 miles which I went over this month.

"I wish I had known, Mr. President, expected that I was to open this topic. I thank you for this opportunity. We are greatly interested in the forest preserve and the stopping of ruthless destruction of timber. The principal objection I have to their use of this timber in the manner that they do is the waste following of what we might term first-class saw material. They are not working up the refuse into timber. A large per cent could be used for that, and I think the rest should be used for firewood, and the tops and brush should not be left; and I see no righteousness in one man, because he has the means to do it, being permitted to cut more than his share of timber, while his neighbor may not be permitted to use it. I think the government policy of restriction is just what we have needed for many years. We had one paper that dared raise its voice against that policy and it was extremely obnoxious. When these reserves were first created it was as much as a man's life was worth to endorse it. They carried the impression that the government's policy was to permit no timber to be cut, to permit no prospecting to go on, and to make a sealed book of those mountains of timber. That feeling, I am happy to say, is disappearing very rapidly, and our best people are heartily in sympathy with the work, and they find there is no bar to the use of timber for mining, or taking ripe timber, or for using the mountains for any purpose except grazing sheep."

DR. GEORGE L. MILLER: "I wanted the privilege of making a remark or two in respect to our forest here, as I understand the scope of this discussion includes tree planting on these plains. I would like Mr. Morton's attention to the point I make because I am going to take from his paper. It is in reference to what Mr. Brown, whom I had the pleasure of meeting this spring, a very strong man, had to say about the Black Locust. Now, perhaps, the president of this convention can put me right, if I am wrong in supposing that this Black Locust was the same as the locust that we, in the early white settlements in this part of the world, planted as a shade tree. [Mr. Morton assents]. Our friend Brown advocates the Black Locust here as a timber which would be most valuable, and I agree with him; but I had some

experience with it, because it was the first planted as a shade tree in this community, and we lost every one of them through the invasion of the borer. I simply rise to make that statement, and want it to go into the proceedings of this meeting. Mr. Brown is an authority. I do not say that this is a tree which should not be planted, but I do say that gentlemen interested should ascertain pretty clearly, if they are going to take up such questions, as to whether the Black Locust should be considered.

"If the experience of others conforms with my own I would not plant it. I never would touch it since. I have planted the Honey Locust, which I regard as the great tree for posts, and it stands like granite and, fortunately, grows either as hedge or separate tree. It does not grow so rapidly, but it makes better timber for that reason. I have cultivated it in a hedge. As a timber texture the Honey Locust is equal to anything.

"I was, perhaps, the pioneer of testing the Catalpa, that is, the *Speciosa*. It was planted by Robert Douglas in a small plantation out here, and was said to be the most desirable of woods. I have had some experience and I have seen them grown in a small way without cultivation. A young Catalpa tree, and perhaps this is true of every other tree, is not durable for posts or for ties. I would draw the line at the tie size or the post size, owing to the fact that the sap part of this wood is so large a part of the whole."

MR. HENRY MICHELSEN: "In regard to what Dr. Miller said concerning the durability of the Catalpa tree, Secretary Morton and myself both thought that the durability of the timber is very much affected by the time of its being cut. Now I hold this, that all timber of any kind should be cut at the time when the sap is out of the tree—in other words, in the months of late summer and fall. I base my assertion on this, that the worms and borers that attack dead timber are apt to prefer timber that has been cut at the time when the sap is rising. I explain it in this way: that the sap when it rises in the tree has a good deal of saccharine matter in it. This matter is sought after by the worms, and the destruction is much greater in timber that has been cut just at that particular season than later on. I think better results would come by having the timber cut in the early fall than in the early spring."

MR. ADAMS: "There is one thing that always struck me when I was down South in Maryland and Virginia, that they always said that a Chestnut, if cut in summer, lasted twice as long as if cut in winter. If it was cut when in full leaf it lasted twice as long as at any other time. I believe, as far as my experience goes, most trees last better when cut in full leaf. I think the timber is more durable and will be better

cured. This would be my experience. I have used a good deal of Oak that was cut in spring, but it was peeled for curing purposes and it lasted for years and years, but it was perfectly cured. I know if you cut the Juglans, especially the Hickory and Pignut, in spring the chances are that you will have them full of borers before the fall of the year. I think that some varieties of trees might preferably be cut in fall, but most when cut in full leaf before the sap begins to return, will give the best results. I think that if cut in either early winter or in full leaf the timber would be more durable."

MR. STEPHENS: "When the Honey Locust is cut in the spring of the year the borers cut it up in a short time."

PROFESSOR BRUNER: "The insect that attacks the Black Locust is the same that attacks the Pignut and Hickory in this part of the country, and he simply transferred his attention to the Black Locust. I am afraid that if we get to planting the Black Locust again the borer would put in his appearance just as much as he did before. Really, no insect attacks a tree when it is in good health, and the Locust had for some other reason become sickened and then the insect transferred his attention to it. The wood of the Hickory and the Locust is very much the same as far as texture is concerned. The insect attacks trees that are more or less diseased, owing, perhaps, to some sort of a fermentation of the sap, and the insect likes it. The insect lays its eggs in the bark or trunk, but when the tree is healthy the wound closes up and the egg never hatches; when the tree is not strong the egg hatches before the wound has been healed, and the insect begins to start around the tree and cuts off the flow of sap."

MR. EMORY: "I want to make a motion. I am chairman of a committee that was appointed by the Irrigation Congress with reference to the amalgamation of the Forestry Association and Irrigation Congress, and I come to you asking for the appointment of a similar committee on your part. Our committee consists of Mr. Newell, Mr. Michelsen and myself from the Irrigation Congress to urge upon this body the desirability and importance of merging these two institutions into one and the same association. We believe, for example, that had this association been called to meet in Cheyenne and the proper time having been given to the consideration of the forestry problem it would have been much better for all parties concerned. We find it difficult to get enough attendance to secure reductions in railway fare. This is an important consideration that would be gained by such a union, and one which is to my mind very important. You cannot talk about the growth of timber without water, nor conservation of water without saving our timber. Now it does