

the pumps clogged, and the gearing broke, but now all goes on smoothly—save an occasional strike among the workmen—and the work proceeds nearly as fast as it would above ground. The miners dig out the clay, making a cylindrical hole of about six feet and a half in diameter, loading the clay on little cars, which are then run on a tramway to the shaft and thence elevated to the open air. They are followed at a distance of a few feet by the masons who lay the bricks in two courses, packing them into the clay round the lower half of the arch, and filling in with cement on the upper half. The whole is thus made compact, and capable of resisting any pressure short of one of those general upheavals which in times past have revolutionized the surface of our globe. The whole thing is solid as the rock itself, and there seems no reason to apprehend a collapse either outward or inward. If the work should be finished without accident, it would seem that there is no chance for future displacement.

"The work is now proceeding at the rate of about ten lineal feet per day of twenty-four hours, the men being worked in three gangs, each of which takes an eight hours shift; so that the job is prosecuted night and day. Nearly half a mile will have been finished by the first of May, at which time the now finished crib will be taken out to its destination—two miles from shore—and sunk; the work will then proceed from both ends, and the whole tunnel be finished by the end of 1866.

"We need not further describe the work; it has previously been fully dealt with in our columns. We need only say that it is being done to the complete satisfaction of the Board of Public Works, the members of which continually supervise the matter. Yet a little while, and we shall have pure water in Chicago, uncontaminated by the filth which is continually poured into the river."

THE GREAT CITY OF GOTHAM.—HOW A HOOSIER SEES IT.—FROM A PRAIRIE POINT OF VIEW.—The *Prairie Farmer* has an interesting Hoosier correspondent, who resides on a prairie six miles from a tree, and who has just been visiting New York: I came to the conclusion that very large fortunes were anything but desirable, even if they should not take to themselves wings. There are but two or three rich men in New York city. Any town of eight hundred inhabitants has that many. Go to New York with your quarter of a million, and you will feel smaller, and be—relatively—poorer, than in Bungtown with twenty thousand. Let your wife and daughters undertake to spread. They find themselves nowhere. They are dressed and jewelled as much below Shoddy's and Petroleum's wives and daughters, as is old Betty who takes in washing, below their "get up" in the Bungtown church. It is no use. There is no such thing as being rich in New York city. If you want no one to notice how poorly you dress, go to New York city. Don't go there to show such dry goods, furs, jewels and diamonds as would make all Bungtown stare, for they will never be noticed. It does me good to go down there, I feel so much more contented when I get home. I believe I can honestly say that it does not make me anxious in the least. Nine-tenths of all their spread is put on for the benefit of other people's eyes. I looked my share. I was thankful when I went to the opera that the ladies were dressed so fine, and whose diamonds sparkled so finely for my gratification. I felt thankful to them for enlivening the Broadway sidewalks. I said, thank you (internally) whenever Shoddy's liveried coachman drove Shoddy's splendid turnout along the street for me to admire. I like fine horses. I like to see fine carriages. I like to see liveried waiters—provided they are not native-born Americans, but niggers or Englishmen. I admire handsome brown stone fronts. I don't want the care of them. I don't want to pay the taxes on them. I don't want to live in them, but when I go down to New York I do like to have them there on the avenues, and some good-fellow to keep them clean. New York is a big thing, (vide A. Lincoln). There is a lot of hard working, scheming, lying, stealing, gambling chaps down there, who keep it in constant repair, and who are constantly adding new attractions for us country jakes. Let us be thankful. As the Mussulman told his son, when he pointed out to him the Parisian dandy, "My son, fear God and keep his commandments, or you may come to look like that!"

Agricultural.

AMERICAN INSTITUTE FARMERS' CLUB.

The subject of pruning was the principal question discussed by the Club today, Jan. 12, and was mainly confined to the propriety of Winter-pruning apple-trees. Dr. Ward contended for the practice, and Wm. S. Carpenter against it. Dr. Ward said that he had nothing against Summer-pruning as regards the tree, but believes it equally healthy to prune in Winter, when labor is not so valuable; and some of the best fruit-culturists concur in this opinion, including Charles Downing. The Doctor has observed that when large limbs are cut away in Summer, the sap flows and scalds the adjoining bark, and causes it to turn black and decay. Such limbs, cut off in Winter, dry up, and if the tree is vigorous it soon heals and is uninjured.

Mr. Carpenter related his experience in pruning an old neglected orchard in Winter, some of them severely, the result of which was that many trees died, and he thought it one of the very worst practices to prune close in Winter. The true way, however, is to keep the young trees in such a condition that they will never need severe cutting at any time. His best success has been to prune while the trees were in fruit. It is then almost impossible to kill a tree by mutilation. This is proved by trees breaking down while overloaded with fruit.

Solon Robison gave some of his experience in pruning, and has come to the conclusion that the best way for us is to recommend all who have old orchards that need pruning, to do it whenever they have time—that trees are just as liable to die from severe pruning at one season as another.

Mr. T. Holt who has had experience in Connecticut, New York and New Jersey, thought there were just fifty-two days in the year when pruning should not be done—that is the first day of each week. But an old unthrifty orchard should not be pruned severely and expected to make new growth, without giving it something to assist growth. A tree that is not growing thriftily cannot be expected to heal over wounds. If I could choose my time I would select it just when the leaf is starting. Perhaps the best months are February, June and July. The trees that are pruned heavily for grafting, had better be done early than late. If I was pruning an old orchard heavily, in Winter, I would leave long spears and cut them off in June. On unthrifty trees the ends heal and sprouts grow.

Dr. Ward: It is a nice question to determine when to prune and how much to prune—how much an old tree can bear. I am satisfied that February and March are good months to prune, though I have been successful in August, when trees wanted but little pruning. I should object to the recommendation to prune to spears to be subsequently cut away. I prefer to cut close to the trunk at first, with sharp tools.

Mr. Ely said that he had always pruned in Winter, with success.

Another gentleman said that he considered it about as safe to cut down an old apple-tree as to cut off several large limbs.

Mr. Judd said that he had some large limbs cut without injury, and he moved an apple-tree that was fourteen years old, at a cost of \$7, and it continued its growth, but does not give fruit. Upon the whole he thought the moving did not pay; that it would be better to plant new trees, unless the moving could be prepared for in Autumn and done in Winter, with a ball of frozen earth.

There is another question, "what are the best, or necessary pruning tools and what is the best substance to cover wounds?"

Ward, Robinson, Pardee and others suggested a paint made of cow-droppings and blue clay, as the best as well as cheapest substance that can be used for the purpose of covering wounds made by pruning or in any other way. —[N. Y. Tribune.]

BEEF SUGAR.—The *Chicago Times* reviews at some length the various efforts made in the Western States to produce sugar from beets. Of the most successful experiments the editor says:

During the winter of 1861-62, William H. Osborn, President of the Illinois Central Railway, and William H. Belcher, of the Chicago sugar refinery, imported from Europe several pounds of best seeds of the best sugar-producing varieties, which they distributed gratuitously among the farmers of the Northwest, with a view of encouraging its culture and ascertaining the adaptability

of the soil and climate of the Northwest to its production, and of noting the effect of the peculiarities of the soil of different localities. Mr. Belcher tested the beets grown in different portions of Illinois, Wisconsin and eastern Iowa, and in all instances, obtained the most gratifying results, so that the entire adaptability of the soil and climate of these States to the cultivation of the sugar-producing beet, and the success of every intelligent effort to produce sugar in paying quantities from it, is placed beyond all questions.

Aside from this, there has been one grand experiment in this State, conducted at an expense of \$50,000 of which, however, it is an impossibility to obtain any results from the interested parties. The parties are T. Gennert and brothers, of New York city, who, after having visited Europe and given the matter their personal examination, located at Chatsworth, Livingston Co., Illinois, on the line of the Peoria and Oquawka Railroad, some hundred miles from Chicago. Purchasing at this place twelve hundred acres of land, and erecting a refinery one hundred and fifty feet long and one hundred feet wide, and the main building fifty feet high, supplied with all the appliances for making sugar, these gentlemen prepared to test the matter on a grand scale.

During the fall of 1863 and the spring of 1864, one hundred acres of land were prepared, and planted with seed imported by themselves from Europe. The season was unfavorable, owing to the excessive drouth, and yet the yield of beets was believed to be about fifteen tons per acre. Mr. Belcher, of the Chicago sugar refinery, analyzed some of the beets, and found them to contain twelve and one-half per cent. of crystallizable cane sugar, and three and one-half per cent. of soluble impurities. Estimating that of this twelve and one-half per cent. of crystallizable sugar eight per cent. could be extracted, and that is by no means an improbable estimate—the yield of sugar would be over twenty-five hundred pounds per acre.

The beets were harvested, the juice extracted, the syrup boiled to a certain consistency and sent to the St. Louis refinery for future treatment, and the public are not informed of the cost of raising the beets, or the yield of actual working. But, from the pains taken to conceal the result, there can be no doubt but it is one of eminent success. Estimating that, instead of yielding eight per cent. of the twelve and one-half per cent. of sugar contained, the beets yielded only six and one-half per cent., or but a trifle over one-half of the sugar contained,—and their arrangements must have been very imperfect if they did not succeed in extracting that quantity,—and the yield would be two thousand pounds to the acre, worth five hundred dollars; in other words, the one hundred acres yielded a product worth fifty thousand dollars!

TRANSPLANTING AT NIGHT.—A friend, in whose power of observation, says the *Working Farmer*, we have confidence, and who is an exact experimenter, informs us that last spring and summer he made the following experiment:

He transplanted ten cherry-trees while in blossom, commencing at four o'clock in the afternoon, and transplanting one each hour until one in the morning. Those transplanted during daylight shed their blossoms, producing little or no fruit, while those planted during the darker portions maintained their conditions fully. He did the same with ten dwarf pear trees after the fruit was one-third grown. Those transplanted during the day shed their fruit, those transplanted during the night perfected their crop, and showed no injury from having been removed. With each of these trees he removed some earth with the roots.

A MISTAKE OFTEN MADE.—A mistake not unfrequently made by farmers, is that of undertaking more than their capital will warrant. Profit depends more on thoroughness and quality of cultivation than on the quantity of land put under tillage. If a man has a large capital, can employ a strong force, and has the capacity and industry to direct extensive operations, he can cultivate a large farm, perhaps, to a profit. But if he has only a small capital, and is mainly dependent on his own labor, he should limit his operations accordingly. This error of undertaking too much, often occasions the waste of many good things, the value of which, in the aggregate, would amount to a good profit on the whole capital invested in the farm, if the waste were avoided. For want of means, the farmer is often obliged to sell at low prices, and at unfavorable

times. This, perhaps, leads to a failure, or at least makes life uncomfortable, when the same knowledge and energies on a smaller farm would have obtained complete success.—[*Manual of Agriculture.*]

[CONCLUDED.]

"I THOUGHT I WOULDN'T."

"Then I cleared the table, and put away the things till morning, raked out the fire and got it a going, and took the baby, and placed it in the cradle. I got some cold water and bathed Lucy's hands and face and smoothed down her hair with my hands, (magnetism, you think? well, no matter,) and placed a wet cloth above her forehead. I asked her if she was better. "Yes," she said with a sweet smile, and fairly went to sleeping while she said so. So I got down a book of travels and forgot all about myself for a couple of hours. Then I looked up, and as I saw little Jimmy sleeping so soundly and pleasantly in his crib, where he had kicked himself out at the top of his bed-clothes; and the baby, too, dozing quietly with her thumb in her mouth; and Lucy reposing so refreshingly, with a half smile on her parted lips, the fire burning brightly, and the rain beating against the windows, I was glad I did not speak a cross word to Lucy, and leave her sick and alone with a deranged kitchen, a dull fire, a fretful child and a nursing baby. What a brute I should have been if I had done it."

"Yes, of course," said Tom, rather slowly, for he was just then impressed with an idea that he, with all his good temper, had done it, at a time not very remote. But he regained his composure by saying, well, go on, Dick, this is as interesting as a prize tale."

"I have but little more to say," continued Dick. "I have considered the matter a great deal, and the more I consider upon it, the more I think I won't."

"When old Scoldem is insolent with me, when any one jostles me insultingly, when any tradesman or a fellow craftsman treats me rudely, my first impulse is to pay him in his kind; but when I consider that it will do me no good to do it, I think I won't." When I am annoyed by short comings at home, and am tempted to find fault, I ask myself if Lucy is not a good mother and a loving wife, and if I don't really think she meant to do as she might under the circumstances, and the sharp expression never forms on my lips, because "I think I won't." So when the children are too noisy, or one of them is fretful, I think the noise is often preferable to constrained silence, and that it is better to take the little fevered urchin on one's lap, and take his little fevered hand in yours, and tell him about Gulliver and the Lilliputians, than to cuff his ears and send him outraged and crying to bed. I am glad that I often "think I won't." I feel that I have triumphed when I can say, "I thought I wouldn't."

"Dick," said Tom, "can you give me a scrap of paper?"

His friend examined his wallet and produced a piece.

"Here," said he, "is the back of a letter dropped to-day in the city post-office; it is addressed to me, and a post mark on it too, but as it is marked 'Paid,' I hope that won't hurt it."

"All the better for having your name and date on it," said Tom, who proceeded to the desk, wrote something very carefully on the paper, folded it, and put it away in his pocket-book.

The two friends grew old together in their native city. They both became prosperous in their calling, and were noted for their kindness to their workmen and servants, for amenity to the community at large, and for their domestic happiness. They were distinguished by civil honors, and were made depositories of responsible trusts. They remained fast and intimate friends and it was a source of happiness to them that their children intermarried. Thomas died first. In his last will he made a singular provision.

"Item. I direct that a certain sealed package, bearing my name, shall be delivered to my true and life long friend Richard Felton. It contains a gift which he delivered to me in early life; it has been to me a great source of success, and of domestic happiness. I return it to him now; he does not need it, but will be glad to receive it."

The mysterious package was produced and opened. It contained only a crumpled, worn and somewhat soiled scrap of paper, apparently a piece of post-marked letter, which read as follows:

"July 1, 1806."

RICHARD FELTON,

Cireleton.

"I THOUGHT I WOULDN'T"