

[From the Horticulturist.]

**Hints on the Rearing and Management of Trees.**

Vast sums of money are annually spent in this country on trees; it would be impossible to make a close estimate of the amount, but we cannot be very far out of the way in putting it at a million of dollars. We believe we could show by figures that this is not, as it may appear to many, an immoderate estimate; for more than one quarter of that amount may be set down to Rochester alone.

This gives us some idea of the extent and importance of our arboricultural interest, yet it attracts little attention. The men engaged in rearing and planting trees are not those who make much noise in the world. We have no arboricultural societies to collect information or incite to experiment and observation—no public gardens or arboreta to test theories and modes of culture—the whole matter thus far has been left to individual effort and enterprise; and as both growers and purchasers of trees, usually proceed upon the principles of economy, no great improvement has been made upon old methods; at least, this business has certainly not advanced in the same ratio as some other branches of the useful arts and sciences.

How many of those engaged in the planting and culture of trees, have taken pains to acquire the slightest possible degree of knowledge concerning their structure, the functions of the different parts, and their relative connection and influence upon each other? Not one in five hundred. A man spending a hundred dollars for trees does not consider it worth his while to consult the best books that have been written on the subject—he does not consider that a dollar spent in that way might save him fifty in the management of his plantation.

A few words of oral instruction from some one perhaps as ill-informed as himself, or a few hints which he finds on the cover of a nurseryman's catalogue, supply all the needed information. We are happy to admit exceptions—numerous, too. Books and papers are read and studied; but the few who read and seek information from such sources are, when compared with the number of persons who plant trees, but a drop in the bucket. Frauds of all kinds are perpetrated upon the people thus exposed by ignorance; for there is no pursuit under the sun exempt from dishonest and tricky persons.

It is not surprising that we hear, every year, people complain bitterly of their trees. Some they lose totally the first season; others linger along for years without making any considerable growth, while the cause remains a complete mystery. "They were nice trees, well planted, and every way well cared for." Now there are many reasons for these failures; and if people were as well informed as they should be on this subject—if they possessed a correct knowledge of the essential properties of a tree fit for safe and successful removal, and understood properly what good planting and good treatment consist in—they could readily account for their losses.

We propose now, to offer a few suggestions on these topics—first, in regard to the qualities of trees, and how these are to be secured; and, secondly, on planting and subsequent treatment. We may as well say at the outset, that we are not about to offer either a new theory or practice, but simply to point out certain principles and details of culture and management, well understood and universally approved by experienced, practical tree-growers.

In the first place, a very large number of the trees sent out from the nurseries are not fit to be planted. We must not be understood now as alluding to any nurseries in particular. The fact of our being a nurseryman will not prevent us from expressing our convictions freely; and when we charge malpractice on the trade, we are prepared to shoulder our share of the blame. We intend our remarks to be applied in a general way, however; and we believe all candid nurserymen will admit the truth of what we now say.

It will be generally admitted that hardness is one of the most important qualities of a tree, to fit it for safe removal. How is this to be attained? It is very well known that nearly all purchasers of trees prefer such as are tall and straight, with a smooth, glossy bark, indicating what is called "thriftness." Height is the greatest requisite—in fact, the *sine qua non*—with by far the greater number of purchasers. Now, nurserymen must consult the tastes of their customers, and they are compelled to adopt a system of culture that will produce such trees as they find most saleable. They must either do this or abandon the trade.

To produce these tall, smooth-barked trees, they must manure their ground highly and plant closely. In these dense nursery plantations the light is pretty effectually excluded from all parts of the tree save the top; and as, according to an unalterable law of nature, trees and plants grow towards the light, the tops push upward, and few or no side branches are formed. Those who have not seen this exemplified in the nursery, may have seen it in the forest. If a number of Elms or Maples, for instance, are planted closely in a group, and others separately, on the same sort of soil, we find that those planted close together shoot upward rapidly, forming tall, smooth, naked trunks, with a few branches only at the top; while those standing apart in the open space grow in height slowly, but throw out numerous side branches, the trunk is thick, the bark furrowed, and the trees are so different from the others as to have scarcely a characteristic in common, save the foliage. These tall trees, with few branches, grown in the shade and shelter, have few roots. In a natural state the roots always bear a due proportion to the branches.

We find that a tree standing in an open field, and having a wide-spread head, will have roots extending three or four times the distance that those of much more lofty trees do, growing in a

thick grove or forest. It is on this account that trees left standing when the forests are cut down, seldom survive the shock of the first gale; they are broken or torn up by the roots. Nature beautifully adapts everything to its situation and circumstances. The tree in the depth of the forest is sheltered on all sides, and requires but few roots to resist the force of the wind, or branches to protect its trunk. The tree in the open field, exposed on all sides, requires an ample supply of both. It grows moderately, its trunk is stout; its wood is firm, compact, and hardy; its bark thick; its roots numerous, wide spread, and powerful; its branches ample, evenly disposed, and nicely balanced. There it stands, fitted out completely to meet the requirements of its position.

There is valuable instruction here for us all. Nurserymen know that when their rows of trees are thinned out—say one-half or three-fourths removed—the remainder, instead of pushing upward, as they had done before, begin to throw out numerous branches, the trunk thickens, and the roots spread and strengthen rapidly. One season's growth, under such conditions, gives them such a hold of the ground that it requires three or four times the amount of labor to remove them that it did the year previous, when they stood very close. On this account such trees, although generally regarded as culls, prove most successful when transplanted, and are preferred by experienced planters, even if they be defective in form.

Trees rapidly grown, forced with a rich soil, and drawn up in the shade and shelter of close nursery rows, are as ill-fitted to stand the shock of removal into the open ground, exposed to the full force of the sun and wind, heat and cold, as are the tall and slender trees that have grown up in the heat of the forest. The young trees have the advantage in being more plastic; they suffer and almost die; but the inherent vigor of youth enables them, in many cases, to weather the storm. But even where they survive the shock, it is severely felt, and shows itself in the slow and feeble growth which follows removal.

In gardens and sheltered grounds this difficulty is of less account; but how small a number of all the trees planted enjoy the benefits of shelter!—Seldom any one dreams of nursing and hardening their trees for a period previous to their final planting; and yet, in a multitude of cases, it would be a prudent and profitable course—and so especially with all the more rare, valuable, and delicate trees, shrubs, and plants. Even in England, where the climate is much less rigorous and changeable than ours, such proceeding is recommended and practiced. It is recommended, in planting valuable and delicate evergreen trees, to plant them first in some sort of open boxes that would allow of their removal, once or twice a year, from a more sheltered to a more exposed place, until they would finally become sufficiently hardened to bear the exposure of their permanent situation.

It is quite unnecessary to multiply illustrations showing the advantages which young trees derive from being reared in open situations, sufficiently exposed to admit of the growth of side branches, and acquire what we call hardness. Our nursery trees are in general too close in the rows; we grow three or four times too many on the ground. We are aware that it would add considerably to the cost of the trees, to give them so much more space; but would it not be a saving for purchasers to pay one-third or one-fourth more for them? We very much fear that we shall have no very extensive reform on this head until people become much better informed on the subject of arboriculture—when, instead of looking for the tallest trees in the nursery, they will look for stout, well-rooted trees, that have been well exposed to the sun and air, and thus hardened and fitted to encounter the trials of a removal.

One reason why so few good pyramid-shaped young trees are to be found in the nurseries, is their closeness. Although they are cut back, no stout side branches are produced, because of the want of a full share of light around the lower part of the trees; any shoots that do start out are soon smothered, and the entire growth is thrown into two or three shoots at the top. A good pyramidical tree cannot be produced—we cannot secure the first branches—without a clear space of two or three feet on each side; whereas, they usually stand within a few inches in the nursery rows.

Another advantage in giving trees abundant space, to which we have already alluded is, that it promotes the extension of roots. In fact, whatever favors the extension of branches, also favors the roots; because, they depend so much upon each other as to be co-extensive. But the soil has a powerful influence on the roots. In stiff, clayey soils, trees have bare, forked roots, and few fibres; and that too, when the growth of the tree is good. Such trees do not transplant well. Dry, friable soils are more favorable to the growth of numerous fibrous roots, and trees taken from them transplant more successfully. Culture has a great influence on the roots, too. If the ground be kept continually free and pliable by cultivation around the roots, they become much more fibrous and better for transplanting than if the surface of the ground be permitted to harden into a crust, or to be covered with weeds or grass.

Having the trees thus properly grown in abundant space, dry, friable soils, and clean culture, the next important point is to take them up properly; because, no matter how a tree is grown, if it be badly taken up it is not fit for successful transplanting. Trees are more universally injured—ruined—in this operation than in any other. We believe it is so in all parts of the world, for our trees imported from Europe are about as badly bruised and mangled as any we have ever seen at home.

At the season of transplanting, nurserymen are generally hurried, and have to employ raw, untrained laborers, who know or care as much about the roots as they do about conic sections. A man may stand over them, and yet the roots will be

cut and mangled. It really requires considerable skill and experience, and a great deal of care, to dig trees. Some have long tap-roots that penetrate the ground deeply, while others spread widely near the surface of the ground. The different characters require different modes of proceeding. Some insist that it does a tree no harm to cut off some of its roots; but we hold that the roots should be taken out of the ground without the slightest bruise or mutilation, if possible. The necessity for curtailing the tops would thus be obviated, and there would be some hopes for the trees. We are utterly opposed to the lopping off both roots and branches of trees, and thus converting them into bare poles before planting. The generally commended proceeding of pruning or shortening the tops, is a necessity only because the roots scarcely ever escape injury in some way or other; and as leaves must receive a supply of nutriment through the roots, it is only reasonable that when the roots are reduced the leaves should also be reduced in a corresponding degree.

Then comes packing for transportation. The less the roots of trees are exposed to the air, between the time they are taken from the ground and the time they are planted, the better. This should never be forgotten. If roots be of any value, it can only be when they are sound and fresh. More than nine-tenths of all the trees planted have to be carried a greater or less distance from the nursery, and consequently require packing; and many people, to save a little cost, will run the risk of having their trees ruined. We are satisfied that vast quantities of trees are lost from bad packing and exposure in transportation. It requires considerable skill and care to pack well.

Very few of the European nurserymen can pack for America, as importers well know; and on this account we are always compelled to purchase at higher prices than we might do, in order to secure good packing; for if we were to get trees for nothing, they would be a hard bargain unless well packed. Good packing is equally essential in transporting trees from one part of our country to the other, because we have great delays.

We can get a package almost as soon from Liverpool to New York as we can from New York to Rochester; so that parcels of trees should always be fitted up to go safely twice the distance intended, or twice the time that ought to carry them to their destination. What signifies fifty cents or a dollar per hundred in the cost of securing trees, for carriage, compared with running the risk of losing them or having them so damaged that they will not recover for years. Every man who orders trees should say emphatically, "Pack my trees in the best manner;" and nurserymen should be held responsible for this, as much, at least, as for the quality of the trees.

**DIED:**

In Alpine City, Utah county, Aug. 23, 1856, after a short and severe attack of cholera morbus, Bishop ISAAC HOUTSON.

Br. Houtson was born in New Hampshire, Oct. 5, 1799; was baptized into the Church of Jesus Christ of Latter Day Saints, Oct. 28, 1840, and gathered with the Saints to Nauvoo, Illinois, and was there ordained a high priest. He removed from Nauvoo to Kanesville, Iowa, and was chosen first counselor to the president of High Priests' Quorum in that place.

He removed from there to the valleys of the mountains in 1851, and joined his quorum again at the April conference in G. S. L. City, in 1852.

He was chosen bishop of Alpine City shortly after his removal there, and constantly acted in the faithful performance of his office; being much beloved and esteemed by a large circle of friends and acquaintances; his loss is sorely felt by the inhabitants of his ward.

He was attacked very severely, but bore up under his affliction with great fortitude and composure, and was apparently perfectly sensible until almost the last moment. He fell asleep without any perceptible struggle, and in full faith of a glorious resurrection.—[Com.]

**NOTICE.**

**THE** highest Market Price paid for Wheat, Oats, Sheltered Corn and Barley; also for old Gold and Silver Watches, Chains, &c., at the GENERAL TRADING STORE.

25-3 HENRY J. JARVIS.

**To Cloth Manufacturers.**  
**THE** only CLOTH PRESSING MACHINE in the Territory, to be Sold Cheap for Cash or on Credit.

Also a good Farm, together with dwellings and implements complete, 22 miles north of this city, and several Choice City Lots—all decided bargains for ready pay. Apply at the General Trading Store.

25-3 H. J. JARVIS.

**\$5 REWARD.**  
**STRAYED** or Stolen from Big Cottonwood, on the first of July, one yoke of four year old STEERS, one black and white, short tail, the other a dark red, both branded E. HANKS on the left horn.

The above reward will be given on their delivery, or any information that will lead to their recovery, by Elias Smith, Post Office, or E. LUDINGTON, Big Cottonwood.

25-2

**I HAVE** in my possession the following described cattle:

One two year old dark brindled Heifer, with a little white on her back and belly.

One year old red Heifer, with a dark nose.

One two year old brindled red Heifer, with a small slit in the left ear.

Also, a white Cow, with a light red neck, branded K on the left horn, and I T on the right shoulder, and has a short tail.

The owners of the above cattle will please call and pay the damage, and take them away.

25-3 JAMES GORDEN, Poundkeeper, Big Cottonwood.

**WHEAT, FLOUR, PEAS, BEANS, CORN, Butter, Eggs, Cheese, Store**

Pay and Cash, wanted for Daguerreotype Likenesses, at the old stand, sign of the



**ATTENTION, EMIGRATION!**  
**TWO** Experienced **COLLIERS**, that can cook Coal, can obtain steady employ by applying to  
B. HOP SNOW,  
25-2 Or George Packard, Mantle City.

**RAGS WANTED!**  
**HOLLIS & VERNON** will pay for Linen and Cotton RAGS 5 cents per lb., at the Tinting Office. Bring them on immediately. 25-6

**TEAMS WANTED!**  
**TO** haul **WOOD** out of South Mill Creek Canyon, on shares. I have good pasture for the teams.  
Leave word at Dr. Gilbert Clement's Brush Manufactory.  
25-2 JAMES JACK.

**FOR SALE.**  
**PART** of a City Lot (6 rods front) in Great Salt Lake City, 17th Ward, 2 blocks west of Tabernacle; also a Five Acre Lot, 2 miles south east of the Council House. Will take for pay work cattle, cows, cash, wheat, store goods, &c.  
For particulars call on Thomas Day, 17th Ward, or 25-3m HENRY W. BIGLER, Farallington.

**WILLIAM PAUL & SONS.**  
**ARCHITECTS AND BUILDERS,**  
a little north-west of Mr. John Sharp's, on the bench.  
All kinds of buildings, in the city or settlements, furniture and job work promptly attended to on reasonable terms. All descriptions of building materials of good quality, also valley produce taken in payment, cash not excepted.  
N. B. W. P. sen., flatters himself able to give satisfaction to those who may employ him to draw plans and specifications of buildings, fitting up stores, making out bills of lumber, measuring and valuing buildings, and giving all necessary information in the above branches, etc.  
25-6

**PATRONIZE HOME MANUFACTURE!**  
**JENNINGS & WINDER'S**  
**LIST OF PRICES.**

Strong double sole Stoga Boots	\$6.00
Kip Boots	7.00
Fine Calf Skin B. o's	8.00
Strong double sole Stoga Shoes	3.00
Kip Shoes	3.50
Fine Calf Skin Shoes	4.00
Women's strong Boots	2.75

Best Sole Leather 45 cents per pound;  
Harnes and Saddle Leather 60 cents a pound;  
Good Calf Skins from \$3 to \$5 each;  
Kip Skins from \$5 to \$7 each;  
Best article of Cow Hide from \$6 to \$7.50 per side.  
Friends and Patrons of Home Manufacture—Compare the above prices with the prices of Imported Goods—then call, examine and judge for yourselves.

**ARRIVAL OF GODFREY'S TRAIN,**  
[Expected in a few Days.]

**WITH** a large and complete assortment of the Gracenberg Company's far-famed **FAMILY REMEDIES;**

the increasing demand for which having warranted a considerable increase in this season's purchase.

Also a vast variety of Botanical and other every-day necessities in the medical line; with many of which the Territory has hitherto been but meagrely supplied, and others along the overlooked by general dealers.

W. S. G. has also made a large purchase of

**GLASS, PAINTS, OILS,**

and a selection of CHOICE LIQUORS, WINES and CORDIALS of the first quality for medicinal purposes; with an extensive variety of Perfumery and other goods, useful and fancy, which you must call and see for yourselves.

**The Soda Fountain still flows cool and refreshing as ever.**

**Home Manufacturing and EXCHANGE DEPOT**

**W. EDDINGTON,**

In order to further the interests and object of the Deseret Agricultural and Manufacturing Society, with its numerous Auxiliaries, and obviate the difficulty and inconvenience of persons having to traverse a large portion of the city, before a purchase of several items can be made, designs opening the store next to, and south of Hooper & Williams' establishment, on East Temple street, where all kinds of

**PRODUCE,**  
AND  
**HOME MANUFACTURED GOODS**

will be received for sale and exchange.

The present scarcity of cash, together with the late counsel of the Presidency, and other circumstances, make obvious, to both the manufacturer and consumer, the necessity of contributing to the above object.

A hint to the wise will be sufficient, and further comment unnecessary. Bring along your produce and goods of every description, and practically effect what we have recently talked so much about. 25-3m

**SOAP!**

**THE** undersigned are now engaged in the manufacture of this useful commodity (preparatory to the extensive production of other articles of general consumption), and have now on hand, and of GOOD QUALITY,

**SOAP,**  
**AT 35 CENTS PER BAR;**

which we are willing to exchange for Tallow, Suet, Lard, Butter, Oil, &c., delivered in the City, at the house of W. C. STAINES, or at the Sugar Works.

25-3m W. C. STAINES, J. V. VERNON, WM. FRANCE.

**A CARD.**

DR. FRANCE begs to notify the public that he has, for some time past, discontinued the practice of Medicine, &c.; and hopes in future the brethren will cease applying to him for professional advice, his whole time being now occupied in manufacturing.

He also takes this opportunity of reminding those who are indebted to him, for past services,—that finding it necessary to eat, like other men, in order to sustain life,—the payment of that which is due is indispensable, not only for present subsistence, but also to forward the extensive operation now in progress, and contemplated by the firm of W. C. Staines & Co.—works in which all are, more or less, immediately interested.

Having neither time nor inclination to collect debts, and desiring forthwith to close up all business pertaining to medical practice; those who do not now come forward (whilst means are abundant) will find their names handed over to their bishops, to be dealt with according to the law of Zion.