after the circulating of the sap, cannot be transported or so safely kept as those cut earlier.

Setting the Scions.—In a nursery you may safely graft all the trees that are half an inch in diameter at the surface of the ground. Those of a larger size graft at such a distance above the ground as will give a stump of about three fourths of an inch in diameter.

The best time to graft in an orchard is the second or third year after the trees are transplanted. If they are less than an inch in diameter, at from five to six feet from the ground, cut off the whole top and set the scions in the stump. If they both live cut away one the second year.

In grafting large trees, select the leading and fairest branches, and cut them off where they are from three-fourths of an inch to three inches in diameter. Your tools must be a saw, a pruning knife, and a soft iron wedge about six inches long for opening the cleft in the stump. Saw off the branch where it can be split, and smooth the top with your knife, then split it by laying your knife across the centre and driving it down with the wedge the width of the blade, then withdraw the knife and insert the wedge to open the cleft enough to admit the scions. If the stump or branch is three-fourths of an inch in diameter, always set in two scions, one on each side. If they both live, one may be cut away the second year, but if in the top of a large tree, both might be left.

To prepare the Scion—Cut the lower end in the form of a wedge about three-fourths of an inch in length, and the side to be placed next the centre of the stump to be thinner than the other, in order that the bark of both stump and scion may come in complete contact when the wedge is withdrawn. Cut the wedge of your first scion at the circle where the last year's growth commenced, and at such length as will leave not less than two nor more than three good buds above the top of the stump. Cut the wedge of your next scion at the first good bud above where you cut off the first, in a manner not to injure the bud. The scion will receive nutriment from the stump only at such points where the coats of the bark of the stump and scion come in actual contact. In setting the scion, place the lower point a little within the outer surface of the bark of the stump, which will generrlly bring the minor coats of the bark in contact in three out of four places. If they agree but in one place, the scion will probably live.

Wax for Grafting.—Melt three parts of resin, two of beeswax, and one of tallow, together. Pour this, when melted, into cold water, a pound at a time. Having rubbed your hands with lard, work the wax in them till it is pliable, and when the water is forced out of it, it is ready for use, and will remain on the trees, protecting the stump from the weather, for three years. Use the wax with the fingers (having rubbed them with lard to prevent adhesion) sufficiently warm to spread easily; cover the top of the stump about the thickness of a cent, and the split as far as it extends, somewhat thinner.

The time for grafting depends much upon the season; but the best is when the buds first begin to open. Scions will live set any time after the sap freely circulates, and till the apples are as large as musket balls.

Pruning.—In grafting most trees, the whole top may be safely removed, but it is bad policy to remove the top of a large tree in one year. Young sprouts should all be taken off yearly, especially those near the scions.—*Farmer, and Gardner's Almanac.*

CULTURE OE LUCERNE.

We apprehend that this valuable grass has not received that attention from our farmers that it deserves. The luxuriance and rapidity of its growth, the avidity with which it is eaten by all domestic animals, and the ease with which it is in general cultivated, would seem to point out as one of the best of grasses, especially where soiling is desirable or practicable. In our last *Cultivator*, we gave an account furnished by David Thomas of his success in the culture of this plant, and the following which appeared in the *American Traveller*, is strong additional testimony in its favour.

Mr. Phinney is not the man to waste his money or his land in the culture of valueless plants.

"On a visit to Mr. Phinney's farm in Lexington, Mass., about the middle of June, we saw a piece of lucerne or French clover, as it is often called, which had been cut three times for the purpose of soiling. Soiling is a term applied to the practice of cutting herbage crops green, for feeding live stock; and for this purpose, lucerne is considered admirably adapted. One acre is sufficient for five or six cows, during the soiling season. It is fit for the scythe in congenial soils, about the 10th of May—may be cut every twenty or twenty-five days, and is said to yield from five to eight tons per acre. Mr. Phinney's lucerne was sown in drills, and looked well. A very deep, rich, friable, sandy loam, is the soil in which it grows best. It should be sown early in May, and be subject to frequent and careful culture. Mr. Phinney appeared to be well satisfied with it."—*Albany Cultivator.*

LEICESTERS AND SOUTH DOWNS.—At the meeting of the Smithfield Club in London, in December last, Mr. Hanyard, a noted farmer and stock breeder, made some interesting remarks about sheep. He said the Leicester breed, founded by Bakewell, had been the means of improving every other long wooled breed in the kingdom. He was an extensive breeder of this sort of sheep, and the only fault with them was, they had too much fat meat in proportion to the lean. On this account they had not latterly sold as well in Smithfield market, as the "blackfaced sheep," (the Scotch breeds, South Downs, &c.) For this reason he had last season crossed many of his Leicester ewes with a South Down buck, by which he hoped to get more lean meat in proportion to the fat. He said the world could not produce sheep of such beautiful symmetry as the pure Leicesters," and that it was certain they had "one great recommendation over the South Downs, for a greater weight of meat per acre, could be produced with the Leicesters." We observe that several farmers in England are crossing the Leicesters with the South Downs; but in general they do not breed from the cross—they keep both breeds pure, and kill the cross-breed stock. The object is to suit the quality of the meat to the market.

TO YOUNG MEN.—TRUTH WELL SPOKEN.

It is a sore evil that labor, so essential to health, vigor, and virtue, is generally regarded with aversion. Even those who boast that they live by straight-forward hard work are almost uniformly seeking to escape from their condition. Even the substantial, thrifty farmer, whose life is or might be among the happiest, is apt to train his darling son for a profession or put him in a store. He laudably wishes to put him forward in the world, but he does not think that half the time and expense bestowed in making him an average lawyer or doctor, would suffice to make him an eminently intelligent and scientific farmer—a model and blessing to the whole country. Why will not our thrifty farmers think of this? The world is surfeited with meddling lawyers and doctors—the gorge even of Iowa rises at the prospect of a new batch of either; of tolerable clergymen there is certainly no lack, as the multitude without societies bears witness, and yet here is the oldest, the most essential and noblest of employments, on which the full blaze of science has hardly yet poured, and which is to-day making more rapid strides, and affords a more promising field for intellectual power than any other, comparatively shunned and neglected. Of good, thoroughly educated, at once scientific and practical farmers, there is nowhere a super-abundance. Everywhere there is a need of this class, to introduce new processes and improve old ones, to naturalize and bring to perfection the plants, grains, fruits &c we still import from abroad when we might better produce them at home—to introduce a proper rotation and diversification of crops—to prove and teach how to produce profitably the most grain to the acre—in short to make agriculture the pleasing, attractive, ennobling pursuit it was originally intended to be. There is no broader field of usefulness—no surer road to honorable eminence—The time will come when, of the men of the last generation, Arthur Young will be more widely honored than Napoleon. But while the true farmer should be the most thoroughly educated and best informed man in the country, there are many of our old farmers, even, who will cheerfully spend a thousand dollars to qualify one son for a profession, yet grudge a hundred each to educate the three or four less favored who are to be farmers. There are farmers who cultivate hundreds of acres and never look into a book on agriculture, though they would not countenance a doctor or clergyman who studied no works on medicine or theology. What a world of mistakes and inconsistencies is displayed all around us! * * * *

There are thousands in all our cities who are well employed and in good circumstances; we say, let these continue, if they are content, and feel certain that the world is better in their daily doings. There are other tens of thousands who *must* stay here, as things are; having no means to get elsewhere, no skill in any arts but those peculiar to city life, and a very limited knowledge; these *must* stay, unless something should transpire out of the common course of events. There are other tens of thousands annually arriving from Europe, who, however valuable acquisitions to the country, must contribute to glut the market and depress the price of labor of all kinds in our city—some of these must remain here till they can obtain means and knowledge to go elsewhere. But for young men of our own happier agricultural districts to crowd into the great cities or into villages, in search of clerkships and that like, is madness—inhumanity to the destitute—moral suicide.—While nine tenths of states are a waste wilderness, and all our marts of trade overflow with eager seekers for employment, let all escape from cities who can, and all who have opportunities to labor and live in the country, resolve to stay there.—*Genesee Farmer.*

ALUM AND CHILDREN VS. FIRE.—We commend the following to the attention of parents just now, when we scarcely open a paper but a melancholy statement of "a child burnt," attracts our observation:

"The danger and difficulty can very easily be avoided by the use of alum.

When clothes are washed they should be rinsed out of alum water—the solution should be tolerably strong. If the clothing, which has been newly washed, should require starch, the alum may be put in the starch water.

"Alum should be used on all occasions, it renders the clothing fire proof. All clothing about a house or steamboat made of cotton should be impregnated with alum. For instance, bed and window curtains, &c., such articles generally having much fringing about them.

"This hint if attended to, will prove a perfect safety to clothing from fire."

WATER-PROOF GLUE.—Melt common glue in the smallest possible quantity of water, and add, by drops, linseed oil that has been rendered *drying* by having a small portion of litharge boiled in it, the glue being briskly stirred when the oil is added.

Glue will resist water, to a considerable extent, by being dissolved in skimmed milk.

The addition of a finely levigated chalk, to a solution of common glue in water, strengthens it, and renders it suitable for signs, or other work that is exposed to the weather.

A glue, (or cement) that will hold against fire or water, may be made by mixing and boiling together linseed oil and quicklime. This mixture must be reduced to the consistence of soft putty, and then spread on tin plates and dried in the shade, where it will dry very hard. This may afterwards be melted like common glue, and must be used while hot.—*Am. Mechanic.*