

practised on small trees, and only during the time the sap flows freely, and chiefly during the months of August and September. Select for the buds the ripest young twigs of the present year, and cut off the leaves, leaving the footstalk entire. Having selected a smooth place in the stock, make a perpendicular slit downward, quite through the bark, an inch or a little more in length. Make a cross cut at the top of this slit quite through to the wood, a little slanting downward; next with the ivory haft of the budding knife, raise the bark on both sides from top to bottom, being very careful not to injure in the least the cambium or sap wood. Next and with expedition proceed to take off a bud; this is effected by entering the knife a little more than half an inch below the bud or eye, quite through the bark, and separating the bark from the wood to the same distance above the eye, always leaving a very thin slip of wood of about one-third of the length of the bud, this thin slip of wood occupies the middle section of its length. The bud is to be inserted in the stock to the bottom of the slit, and between the bark and wood; and the top of the bud being squared even with the cross cut, every part except the eye, is firmly bound and covered with strong wet bass string or matting."

DEFORMED ROOTS.—English farmers are much troubled with deformed roots, in their culture of carrots, parsnips, and other root crops. They form what are called fingers and toes, instead of the conical and regular shapes usual in successful root-growing. On a large scale this becomes a serious evil. A great amount of discussion has been had in their papers as to the cause of this difficulty, and the remedy for it. A late writer in the *Agricultural Gazette* states that the difficulty is in the seed-growing, and not in the root culture. His remedy is to cut out the central umbel, in seed-growing, and thus distribute the sap in to the lateral ones, when a healthy seed is produced. In this way, "fingers and toes" never disturb him. In using the seed of the central and large umbels, he always gets the deformed roots.—*Prairie Farmer*.

Communications.

(To the Editor of the Canadian Agriculturist.)

SIR,—In the year 1849 I visited the farm of the late John Delafield Esqr. situated on the North-Eastern border of Seneca Lake, one of the most beautiful and the largest of the Lakes of Western New York. For order and systematic arrangement in the house and in the field, this stood first among the farms of the State.

A set of rules was uniformly shown to laborers before they were indentured, and to which they were required to subscribe. They were somewhat similar to those given by London, and were conspicuously hung up in the cow-house, the stable, and the barn. A tool room, simple as it may seem, is too seldom seen among farm buildings; here it was a reality, and contained a place for every tool and every tool in its place. Each laborer had his own spade and shovel, pitch-fork and scythe, of which he was expected to be proud, because if they were not "his brave

associates" they were at least "the partners of his toil."

A plan of the farm was kept by its proprietor having its field divisions subsidiary to an accurate registration of rotation of crops, whether of four, five, or seven years. The treatment a field had undergone could thus be seen at a glance, its prospective treatment kept before the view, and the success or its opposite, of its experimental path easily noted; for the latter was an important object at the Oaklands and afforded much scope for intellectual enjoyment by the investigation of the results of the application of composts and artificial manures.

Numerous specimens of spear and arrow heads used by the Indian tribes have been turned up by the plough in the locality under notice. But the geological features of the neighbourhood are much more interesting. In the list given below there are a few minerals, some unstratified rocks, and several fossils. These were all collected on the farm, and are now deposited in the museum of the New York State Agricultural Society.

"In crossing a heath" says Paley "suppose I pitched my foot against a stone, and never asked how the stone came to be there; I might possibly answer that for anything I know to the contrary, it had lain there forever: nor would it perhaps be very easy to show the absurdity of this answer." This reasoning the science of geology readily confutes. Many of the specimens enumerated below contain the petrified remains of fossil animals, and these must have lived anterior to the formation of the rocks in which they are found.

Different rock formations present themselves in the County of Seneca. In its northern part we find the Onondaga salt group of New York geologists, deeply covered with alluvium, and corniferous limestone, distinguished from that of Onondaga by the absence of crinoidal columns. The soil covering these rocks is clayey, but in the neighbourhood of the Oaklands is of a more or less loamy character, as it is more or less mixed with the northern drift. It may also be denominated calcareous, from containing lime liberated by the constant disintegration of fragments of the rock.

The Marcellous shale and the Hamilton group occupy a large portion of the County. These contain many fossils and produce a calcareous soil. Next come the Tully limestone, Genesee slate and shales of the Portage group.

The groups of rocks here enumerated belong to the New York system, which is analogous to the Silurian system of Murchison, equivalent to the Transition series of Werner, and anterior to the old red sandstone and carboniferous periods.

The following list is in the order in which the