No: if you desire a good product uniformly, and not merely occasionally, there is no other way but to use the proper means, to wit; the employment of an instrument acting by expansion and contraction *in accordance with a fixed law*, undisturbed by any of the many causes which affect living bodies.

How shall the desired temperature be attained? By heating, of course. But the way of doing this may affect the product. Milk should not be heated by the direct action of fire upon the vessel containing it. If a tub is used, the common method has been by warming the milk in a tin pail or other vessel set into a larger one of water, to which the heat is applied. If this method is adopted the whole milk should be warmed, because if only a portion be heated, and that sufficiently to warm the rest to a proper degree, there is danger that some of the buttery portion will rise as oil and escape with the whey. If a tub must be used, the better way is to introduce a tin pail of hot water into the milk in the tub and gently move it about. By a similar method—namely, by the using of a pail of ice water, the evening's milk may be cooled, when to be kept over night in a wooden cheese tub in warm weather. In this way the proper temperature may be attained, and none of it heated too much. But the best way, by far, is to use improved apparatus, consisting of a double vat, the inner one of tin containing the milk, and the outer one water, which is warmed by a fire of a few chips in the heater below. There are quite a number of these, differing somewhat in construction, several of them being well adapted to the purpose for which they are designed.

The principal advantages presented by the improved apparatus is the saving of labor, and this is a most important item—the reduction being not less than one-half or two-thirds; besides this we have the means of securing a more perfect and uniform system of cooking the curd, by an equal distribution of the heat and perfect control of it. It is managed with ease and at a trifling expense for fuel, only a few chips being necessary. The addition of the tank is a very great convenience, and well worth the cost. It furnishes all the hot water required in the dairy for any and all purposes.

We will suppose the evening's milk to have been strained into the vat as it came in, and cooled to about 65 deg. by pouring cold water into the outer vat. This is considered the most desirable temperature for the milk during the night. If kept much warmer there is danger of too great acidity; if kept much colder, more or less loss or injury ensues to the cheese. If the milk be stirred while cooling, separation and rising of cream to the surface will be greatly checked.

As the morning's milk comes in, it is strained into the vat containing the night's milk; and at the same time stirring in carefully and thoroughly whatever cream may have risen in the meantime. If coloring is used, it is added at this stage of the process. A little fire is then made in the heater and the whole mass of milk is warmed gradually to 88 deg., at which temperature the rennet is to be added.

Horticulture.

FRUIT ON GRAFTS.

To the Editors of Canadian Agriculturist.

In noticing your correspondent's letters of the 24th August and 12th October, I think a very important fact is omitted. The writer does not state that the *Doyenne d'ete Pear* tree he selected his grafts from was in a *bearing* state. An answer to this question would throw a good deal of light on the subject. The whole mystery of the case has probably arisen from the fact that your correspondent has been mistaken in the tree he cut his grafts from. Having lately visited several of the largest nurseries in the State of New York, I embraced the opportunity of bringing the subject before several of the proprietors, and they all concurred in the opinion that there must have been a mistake in the tree the grafts were selected from. One of the gentlemen, a partner in one of the largest Nurseries on this continent, expressed himself very strongly on the subject, and declared before a gentleman who was with me at the time that he would stake the whole of his interest in their establishment that no such freak of nature could take place. The whole mystery of the case probably consists in the fact that your correspondent has been mistaken in the *purity* of his grafts.

Yours respectfully,

December, 1863. POMOLOGIST.

RULES FOR PLANTING TREES.

The season for autumnal planting is now past, but in a few months this important operation may be advantageously performed. Whether autumn or spring planting is to be preferred depends on the species of trees and shrubs, the state of the soil, character of the season, and other conditions of a minor character. The ill success which one often sees in planting fruit and other trees mostly arises from inattention to a few simple but essential conditions. The following practicable rules given by John J. Thomas, a well known American Horticulturist, would, if carefully carried out, prevent much disappointment, and increase both the wealth and beauty of the country:—