

simple lectures to the children—the subject matter of which I procured from another of that gentleman's works. My practice is to take up a page or two of the catechism for one lesson, upon which I examine the class, and endeavour, in so far as I am able, to illustrate the different points in a plain familiar manner. I occasionally, in the beginning of the week, give the pupils a promiscuous question, an answer to which is required to be handed in, in writing, at the end of the week.

"My exercises have been solely theoretical; and, indeed, I could not introduce successfully anything else, as none of my pupils are old enough to engage in manual labour.

"I have every reason to believe that the children appreciate the study,—in proof of which I have been informed by some of their parents that it is no unusual thing, to hear long debates on this subject carried on at home.

"I feel, however, a great want of chemical apparatus and books, and, therefore, I think that where heritors supply the former, they should on no account neglect to furnish the latter.

"In conclusion, allow me to say, that the promoters of a system of agricultural education ought not at first to expect too much of teachers, because for the most part, they are mere tyros in this study, and have many other objects to which they must give their attention. But I have no doubt, that as they become more familiar with chemical science, they will be enabled to impart to their pupils much useful practical knowledge—and without interfering with other branches of study.

"With the assurance that it shall afford me much pleasure to lend my humble aid in advancing the cause, I beg to subscribe myself, Sir, your most obedient servant,

(Signed)

"JAMES MILLER."

The following is a quotation from a letter by the Parish schoolmaster of Fettercairn:

"Having been, from the first movement in this matter, favourable to the introduction of agricultural chemistry into the ordinary schools, from a conviction of the entire practicability of rendering the subject pleasing and intelligible to boys accustomed to intellectual training, I resolved, some time ago, to devote a half hour on the Saturdays for the purpose of instructing the more advanced of my pupils in the elements of this science. I was particularly desirous to impress upon their minds that I had no selfish motives in the matter—that I did not even prescribe tasks, or impose the necessity of getting books,—but that any little trouble or expense on my part was entirely gratuitous, and that the trifling experiments which I performed were to be regarded rather as *amusing premiums* for previous diligence than as any additional labour on them. With this view I read, and endeavoured to explain and illustrate on each occasion, a few of the questions in Professor Johnston's Catechism. I found an increasing eagerness manifested by them for the study; and by the kindness of one of the heritors, Sir John Stuart Forbes, Bart., I was enabled to furnish each of the class with a copy of the Catechism. They now commit to memory a few of the question, rather as a voluntary than a compulsory work. Several of them have performed the experiments at home, and have even anticipated the exercise of the class.

"I am glad to observe that so many landed proprietors take an interest in the diffusion of knowledge on this subject; and I would hence hope, that, in every parish where the teacher is willing to introduce the study of agricultural chemistry,

the heritors may see the expediency of providing such apparatus and materials as may be requisite for carrying it out."

The Committee are of opinion, that it would forward the object entrusted to them, were they to publish the present minute, and also an extract from their last one. They with this view direct these documents to be printed in the form of a circular, and also made public through the medium of the newspaper press, and particularly in those monthly periodicals which are devoted exclusively to topics of agricultural interest; and they will feel obliged, if editors will give to these minutes a place in their columns.

(Signed) WILLIAM LOCKHART, P.

ON FINING MAPLE SUGAR.

The Sweet obtained from the maple tree is undoubtedly the purest known; but from mismanagement in the manufacture of it, it frequently becomes very impure. Its value is lessened while the expense of making it increases. I am sensible that the method which I shall recommend is not altogether a new one, and that it is more by attending to some apparently minute and trivial circumstances in the operation, than to any new plan that my sugar is so good. Much has been written upon, and many useful improvements been made, in that part of the process which relates to tapping the trees and gathering and evaporating the sap, &c., but still if the final operation is not understood, there will be a deficiency in the quality of the sugar. I shall confine myself to that part of the operation which relates to reducing the syrup to sugar, as it is of the first importance. My process is this:—When the syrup is reduced to the consistence of West India molasses, I set it away till it is perfectly cold, and then mix with it the clarifying matter, which is milk or eggs. I prefer eggs to milk, because, when heated the whole of it curdles; whereas milk produces only a small portion of curds. The eggs should be thoroughly beaten, and effectually mixed with the syrup when cold.—The syrup should then be heated till just before it would boil, when the curd rises, bringing with it every impurity, even the coloring matter, or a great portion of it, which it had received from the smoke, kettles, buckets or reservoirs. The boiling should be checked, and the scum carefully removed, when the syrup should be slowly turned into a thick woollen strainer, and left to run through at its leisure. I would remark, that a great proportion of the sugar that is made in our country, is not strained after cleansing. This is an error. If examined in a wine glass, innumerable, minute and almost imperceptible particles of curd, will be seen floating in it, which if not removed, render it liable to burn, and otherwise injure the taste and color of it.

A flannel strainer does this much better than a linen one. It is indeed *indispensable*. As to the quantity of eggs necessary, one pint to a pailful of syrup is amply sufficient, and half as much will do very well. I now put my syrup into another kettle, which has been made perfectly clean and *bright*, when it is placed over a quick but solid fire, and soon rises, but is kept from overflowing by being loaded with a long dipper. When it is sufficiently reduced, (I ascertain this by dropping it, while hot, from the point of a knife, into one inch of cold water—if done, it will not immediately mix with the water, but lie at the bottom in a round flat drop,) it is taken from the fire and the foaming allowed to subside. A thick white scum, which is useable, is removed, and the sugar turned into a