

quality, selling for \$8 per thousand on the stump, and for \$12 per thousand in the log at the mill. In the same year the same firm offered \$18 to \$20 per thousand for white oak loaded on the car at point of shipment. To-day white oak is selling at \$30 per thousand on the stump.

The writer does not hold that the woodlands of Ontario can be brought to an acreage or productive capacity so that the manufacturers could depend on the local supply. Indeed, I believe Ontario must go on importing white oak, hickory, etc., so long as the American market can supply us. However, we hear persistent rumors of a timber famine across the line, and there is a probability that we shall see the day when it will be very hard to obtain our present supply from that source.

The people of Ontario will have to be satisfied with a poorer quality, and will have to get along with poorer species where we are now using more valuable ones.

However, the question that affects the woodland owner in the southern part of Ontario, is that high prices will prevail for certain hardwoods, and frequently very fancy prices may be realized. But someone says that the small wood-lot cannot profitably produce timber sizes, and that its management must be confined to the production of fuel and smaller sizes. This is partially true, but in a selection method of cutting, such as the small owner will likely follow, there is room for a certain percentage of trees of timber size.

"Sandy Fraser" on the Cash System.

To the Editor "The Farmer's Advocate":

Your rare kind letter o' a few days syne has just come tae han', tellin' me that Jean Urquhart is deid, an' that I may again venture to express my openions.

Weel, Mr. Editor, I was glad tae see ye tak up yer pen in defence o' the habit o' payin doon the siller for a' that a mon buys. You an' I will juist agree with that gran' meenister, or whatever he was, Arlenus Ward, when he said that a mon should pay the cash, even if he wad have tae go in debt to dae it. Many's the mon is noo strugglin' on the rocks, tryin to prolong a meeserable existence with a wife an family, who, gin he hadna' gone in debt for a marriage liscense would na hae bin able to hae taken the next wrang step, but haev started tae gae doon the hill he found it was "a' greased for the occasion," to quote frae anither gifted divine. The credit system may be a' richt in the commercial life o' the cities, but its no' a sign o' gude judgment, tae say the least, for a farmer tae be payin' eight per cent. or mair on his notes given tae the machinery men, in these times o' cheap money.

And, noo, Mr. Editor, as I ken ye wad dae me a gude turn gin ye could na help yersel', I am gaen tae pit in a word for ye. It is along the line o' the subject in han', but was na touched on in yer remarks some weeks ago. Yer natural modesty, na doot, kept ye frae mentioning it, but what about a' the farmers o' Canada who are warkin' the credit system tae death in respect to their subscriptions tae "The Farmer's Advocate"?

Noo, ma brither farmers, juist let me tell you that the mon who is responsible for the gettin oot o' a paper like "The Farmer's Advocate" works hard enough tae get up a respectable appetite, and wear oot a gude mony claes. Sae, gin ye willna' pay in yer subscriptions he may be reduced tae poverty, or even marryin', in the forlorn hope that the wife will support him, though I maun confess, its a puir wumman that canna support one editor. But, ony way, ye ken as weel's mysel, that ye hae bin gettin' what's worth mair tae ye than the price o' the paper, so in common decency ye should pay up. Ye will feel mair comfortably, ye will mak' the editor happy, an ye will be stamin' the new year richt, an' wi' a clean page, which ye will na' be daein' gin ye go in debt for yer paper. Due this an then resolve that ye will give up the tobacco an' stop thrashin' yer wife, an' any ither New Year reforms that ye care tae go in for, but dae this first, or I will na' gie a hawbee for a' the resolutions ye can waste time in makin'. Ye remember the auld proverb says, "He pays twice who pays quickly," so let us act accordingly, an' may happen we may save the editor from takin to drink; or, worse, as I mentioned afore.

Weel, Mr. Editor, I must not tak' too much o' yer space, so I will be juist thankin' ye an' wishin' ye an' all my fellow subscribers to yer valuable paper a happy New Year, run on the cash system. I remain, yours as ever,

SANDY FRASER.

A Safe Guide.

Though only being a subscriber to your paper for a short time, I am pleased to say I am more than satisfied, and I am also sorry that I was not a subscriber in the last five years, as I think a young man starting out by himself, as I was five years ago, could not wish for a better adviser than the columns of your valuable paper. I am greatly interested in this gigantic literary society that you are forming, and I would request of you to enroll my name as a member. I see no reason why this society should not be a great success, but I can't also give you, gentlemen, great credit for undertaking so much more work in such a cheerful way, just because it is of interest to your readers.

Lambton Co., Ont.

JAS. DOOLAN.

Every Reason for Wood-lot Exemption.

I am decidedly in favor of the system of wood-lot exemption from taxation in regions where the proportion of forest to field is not at all adequate, and where wood growth is desirable in any public interest. The protection of watersheds, the climatic, hygienic, economic and agronomic needs, would justify it amply. As to the æsthetic, I suppose some will demur, but I am fully convinced that those who make life beautiful should receive ample recognition for it, and how can this be done better than by the growth of trees? Here in Prince Edward Island we have no municipalities outside the towns. I believe we are behind the age in not having them, but the Province is so small that many fear over-government. With them, we could best see to local needs, and exempt what was really worthy of exemption. I have already advocated this wood-lot exemption, and when the co-operative policy of the Central and Local Governments with regard to forestry is announced, I really think something like this will be included. We have a Provincial land tax here. It could be exempted where desirable wood growth was concerned.

A. E. BURKE.

THE DAIRY.

Will Mechanical Milking Decrease the Milk Flow?

Devoutly as we all wish that the milking machine may prove a success, there are those of us unable to divest ourselves of misgivings as to whether mechanical milk extraction may prove a practical success. We hope it may, but the editors of "The Farmer's Advocate" long since took the position that they would believe in the milking machine after they had seen it some years in successful use. Hoping an invention will pan out well is no guarantee that it will do so, and as it is better to be safe than sorry, we propose to take a circumspet view of the matter, and, accordingly, reprint the following article, by Primrose McConnell, B. Sc., which appeared in the English Agricultural Gazette. We sincerely trust Mr. McConnell's conclusions are unwarranted, but he faults the machines on the very score regarding which we were dubious. Our readers, however, may form their own opinions:

"Mechanical milking of cows has been a problem before inventors for the last fifty years, and, as many say the problem has now been solved, the experiences of one who has been through the mill may be interesting to some. There recently has been a boom in the north country in the use of some one or other of these machines. Some have used them two years, some three; some are just beginning to use them, and one known to the writer has been in use about fifteen years—if it is still running.

"About two and a half years ago I had one erected in my shed, and for eighteen months all my cows—from 80 to 100—were milked with the same. I stopped it and took it down about a year ago, and went back to hand milking, and now, after the lapse of another year, when one can take a "judicial" view of matters, I lay my experiences before the readers of the Gazette. My installation, when all the "extras" and spare parts were paid for, cost about £240 for eighty cows, or about £3 per head, though I must explain that in this was included a steam boiler, which was suitable for steaming purposes outside the milking parts, and was used as such. I found that the annual expense of running the thing, at least for the first year, was about £50; the coal for the boiler alone, over and above the proportion usually employed for boiling and steaming, was £30, while the repairs, replacing the rubbers, etc., were another £20, and this did not allow for the tremendous depreciation of the whole plant, which would have to be met in the course of years.

"I started the apparatus, and at the end of two months or so was getting on so well that I invited all my neighbors to come and see it at work one afternoon. About sixty responded to the invitation, and at that time I would almost have given it a testimonial, but thought I would wait to see what happened later on. As a result, the milk yield began to go down, and kept down ever after, and I never got it up again until three months after I stopped machine milking.

"I have for many years kept a milk record, and so know pretty well what my cows are doing individually and collectively, and therefore am able to give actual figures as to the results of machine milking. For the twelve months before I had the machine, but including three months' time of the same, the average yield per head was 612 imperial gallons. For the twelve months during which the machine was in full use the average was 337 gallons per head, and for the twelve months after the machine was dropped the yield was 552 gallons. My usual run is about 650 gallons per head, taking good and bad together, and it would have been about that under ordinary circumstances, but for the effect of the machine for three months before and three months after the twelve months reckoned to it in the above calculations. In other words, the machine will only get from a half to two-thirds of the milk from a cow that hand-milking will do.

"Now a few words as to the conditions under which the experiment was tried, because I may be told that I

did not give it a chance, did not give it sufficient personal supervision, etc., etc. To begin with, my two cowmen were natives of the same county as myself, were keen to make it a success, and it was largely at their instigation that I had the installation set up. One of these men was a born mechanic, who could take any piece of machinery to pieces, repair it, and put it together again. As for myself, I was an engineer in my youth, have a hereditary knowledge of mechanics, and have an outfit of every possible kind of tool in my workshop on the farm that is likely to be of use, and, moreover, I am in the habit of using the same, for I am never happier than when at the bench or the vise. The mechanical part of the milking machine was, therefore, under the control of two of us who were mechanical experts. As to the other cowmen, who helped with the work, stripped out the cows, etc., all were kept on, and they were given to understand they would not lose their jobs, and were otherwise encouraged to help to make the thing a success. As to myself, I was in the cowshed every morning before five o'clock for several months after we started it, and never missed being present a single milking time, and took a share of the work myself. Later on, when results were getting worse, I worked at it again myself for several months. I procured a set from a friend who was working with the apparatus of another maker, and tried this, but it was no better. Then I designed and had made for me a set which combined the good points of two makers' machines, and which was simpler and more efficient than either. I took a row of fourteen cows, which stood in one lot, and experimented with them myself for months. Some of these were special pets of my own, which would allow me to do anything with them, and they chewed their cuds while the suckers were on; but in spite of all, I had the mortification of seeing the yield go down, no matter which machine was tried.

"I have accumulated a vast quantity of figures, analysis, and other results from my eighteen months' trial, which would occupy too much space to detail here, but it is sufficient to say that the milking machine in three varieties has been a disastrous failure with me, and I have got a lot of information in reserve for anyone who thinks the machine is a success.

"There is one point in connection with the physiology of milk secretion which everybody—including myself—seems to have forgotten, but which I have had enforced on my attention at enormous cost. This is the fact that the milk is secreted after the act of milking has begun. There is only a quart or so of milk ready-made in the teats and milk-bag of a cow before milking begins, and the amount and quality of the milk she does yield will depend largely on how she is milked. Now, ordinary milking by hand is a species of massaging which stimulates the flow, and this is wanting in a machine; while if you massage the udder while the machine is on—as I did—you might as well milk by hand, and save the trouble and expense of the machine altogether. The mechanical act of sucking milk out of a cow's teat is very easy of accomplishment, but that is not all that is required in milking. There is the mental state of the cow, the effect of prolonged hand versus machine manipulation on the udder, and so on. In the machine you think it is all right to look at; you see the milk spouting in the glass tubing, and you think how nice and clean and handy it all is, but the enormous labor required to keep the apparatus clean, and the fact that a cow goes dry in seven and a half months, which ought to milk nine and a half, is sufficient to kill the enterprise in this line.

"It is rather a dangerous thing to prophesy as to future inventions, and we do not know what mankind may accomplish in another generation. We have seen marvels brought out, such as the Röntgen rays, radium, the telephone, the marconigraph, and so on, and we may, therefore, yet see a successful milking machine."

The Keeping Quality of Butter.

To the Editor "The Farmer's Advocate":

Regarding article on "Keeping Quality of Butter," signed "Buttermaker," Northumberland Co., Ont., I beg leave to make the following observations:

1. Butter at the creameries, which is kept at a temperature above 40° for any length of time, will deteriorate very rapidly. This, of course, must be avoided where the butter is exported, and which does not, as a rule, reach the consumer in Great Britain until four to six weeks after it has been made. This is entirely different from making butter for customers in Canada who would usually consume the butter inside of two weeks after it is made on the farm. Butter made in June and kept until the following June could not be sold in the best butter markets of Canada. Some people like what is called the "packed butter flavor," and for such this kind of butter is all right, but the great majority of people like the butter as fresh as possible.

2. Regarding the churning of sweet cream, your correspondent has failed to note that when we churn such it is pasteurized or heated to a temperature of 180° to 185°, and afterwards cooled to churning temperature. Such butter possesses better keeping quality than butter made from similar cream ripened in the usual way, or according to the plan as indicated by your correspondent.

We grant that the making of ripened cream butter is a process of fermentation, and that a certain amount of acid must be developed in order to make such butter, but later investigations would lead us to believe that the true butter flavor is obtained without ripening.