

for a change or for their health, and so the farmer is disappointed in his help. The hired man has his troubles too. Some employers seem to forget that there is a limit to human endurance, and try to get all they can out of the man for the short while they are here.

As a remedy for this evil, the farmer has been advised to introduce a system of mixed farming with a rotation of crops. This seems to be the only solution to the problem at present. By bringing roots, corn and pasture crops into his rotation, he would produce a great deal of food material which he could dispose of very profitably to stock at home, and at the same time give him a more uniform demand for labor throughout the year.

C. L. S.

Hudson's Bay Railway the Remedy.

To the Editor "Farmer's Advocate":

In your issue of December 5th, Mr. Jacobs has a very good letter dealing with the car shortage situation so far. I have read lots of discussions on the subject, but none appear to solve the difficulty. Fifteen or sixteen years ago, when Mr. Greenway was stumping the country to get into power, I went twice to Virden, a distance of 24 miles, to hear him. In referring to the proposed Hudson's Bay Railway, he even used such strong language as to say, "It would be the salvation of Manitoba." I believe he was right, but strange to say when he became Premier no successful effort was made to open that line, and at the same time the Red River Valley Railway passed from Government control.

Now Hudson's Bay is nearer Winnipeg than Fort William, and closer to Liverpool than Montreal. Some say it freezes, is not practical, etc., but in Mr. Fisher's report we find that when he was sent by the Government to examine into the feasibility of this route, he found some very strong points in its favor. First, that the bay and the straits never froze, because the tides rose from four to six feet every day, and on the 18th of October, when the prospecting party left, there was no ice to be seen. In the spring, when the icebergs break up and become troublesome, they hinder the St. Lawrence route as much as would probably be experienced by the Hudson's Bay outlet.

By proper management, this route should save us eight to ten cents per bushel. Through it we could directly reach the Old Country market, and avoid all danger of having our grain mixed. It would also stir up greater competition with Ontario and the States, each of whom desire our hard wheat. Have the millers of Minneapolis not already paid \$50,000 to get our choice grain?

The country has lost far more from lack of transportation in two years than would put through the Hudson's Bay Railway. We appear to be a very helpless lot of people, lying, as it were, in a dormant state, when such great opportunities are before us, only awaiting our awakening to become our salvation.

J. M.

Reston, Man.

How to Cure Skins.

If the skin has been already dried, soak it in clean water for twenty-four hours, working it with the hands repeatedly during that time, until it becomes soft. Remove any small pieces of flesh or fat which may have adhered to it.

If the skin is fresh and has not been dried, it need only be washed to remove any dust or dirt. Now prepare the following mixture: Alum, very finely powdered, five pounds; salt, well powdered, two pounds; coarse wheat meal, two pounds. Mix the above in a large stoneware basin or wooden bucket, and add gradually sufficient sour milk or sour buttermilk to bring it to the consistency of cream.

Having previously allowed the soaked skin to drain until most of the moisture has evaporated, lay it on a table with the hair underneath, and taking some of the above mixture, rub it thoroughly into every part of the flesh-side of the skin, using as much force with the hands as possible, so as to drive the mixture into the pores of the skin. Much of the success of the operation depends upon giving the skin as much rubbing and handling as possible. When it will absorb no more, cover it with a layer of the composition about eighth of an inch thick, fold it over with the flesh surfaces together and the hair outside, and lay it aside in a cool place. Next day open out the skin, add more of the mixture, rub thoroughly, fold up as before. Repeat daily for two days more. Now wash the skin thoroughly in clean water, removing all the composition, hang up to drain, and when half dry rub in a fresh supply of the mixture, and repeat the rubbing daily for four or five days, adding more of the mixture when necessary. Now wash thoroughly in clean water, repeatedly changed. Make a strong solution of alum, without salt, and after the skin has drained, lay it out on a flat surface, exposed to the sun if possible. Apply the alum solution to the flesh side and let it dry, working it thoroughly all over. The more the skin is worked the softer it will be.

Gasoline Engines: Their Proper Place.

The value of gasoline engines for threshing and other purposes on the farm, is a question that is engaging the attention of a large number of farmers throughout the country at the present time. Gasoline engines for threshing have a number of good points to recommend them, but like many other things they also have their defects. A gasoline engine requires fewer hands to operate than a steam engine; neither engineer, fireman, nor man and team for hauling water and fuel are needed; yet a man of some experience with gasoline engines must be on hand to run it, but as the engine requires very little attention, he can look after the separator as well. This will be a saving of three men and a team, which is a matter of importance in this country where it is so difficult to obtain sufficient help to handle the crop. The second point in favor of the gasoline engine that I will notice, is its advantage in not being the means of starting so many disastrous fires. In the past twenty years every season a number of machines, as well as a considerable quantity of grain, buildings and other property, have been burned, which would not have been had gasoline engines been used. They can also be used close to the buildings or stacks with little or no danger, and do not require men to rise at four a.m. to get up steam.

These are a few of the advantages, but on the other side their power is usually over-rated. This is not merely my opinion, but also the conclusion of a number of men of experience. A miller, who has a 40-H.-P. gasoline engine in use in his mill, says that he has never been able to take more than 30 or 33 H. P. out of it. A dealer in gasoline engines goes so far as to say if a buyer asks for a 12 or 14 H. P., "I would ship him a 16, and if he wants a 16 then I would forward a 20-H.-P." This overcomes part of the difficulty, but the use of a larger size than has been figured on will call for more fuel than perhaps was estimated, and in this way may partially antagonize the buyer against the use of gasoline engines. When I thought of purchasing a gasoline engine, I was told that I could buy gasoline for from 18 cents to 20 cents per gallon, but when I came to buy found that 25, 28 and even 30 cents (latterly) was nearer the truth. As would naturally be expected, the larger power adds materially to the fuel cost, and for this reason a size sometimes too small is bought. Another drawback is the high price charged for these outfits, double what it ought to be. This is largely caused by middlemen's profits, which I believe are larger than the manufacturers', and I feel it to be an injustice to the farmer to be forced to support such an army.

For a farmer's use the gasoline engine is all right, as he can with the help on the farm thresh his crop as quickly if not faster than he could stack it, but I would not advise any person to purchase a gasoline engine with the intention of starting a regular threshing business, as he will find it rather slow. Whether the manufacturers can so improve them that this difficulty will be overcome, I am not in a position to say; I hope, however, they can. The engine of George Stevenson, the inventor, would make a poor showing alongside of some of the great mogul engines of the present-day, yet George Stevenson gave the idea; brains and enterprise have done the rest. The gasoline engine has proved a success in elevators and for other purposes, and there can be no doubt but that ere long it will prove a valuable power on the farm.

JOHN RENTON.

Southwestern Manitoba.

Trapping Gophers.

A writer in the Drovers' Journal says gophers may be trapped with good success and without the element of danger which is always present where poison is used. Procure a sufficient number of steel traps, and after digging into the mounds which the animal makes, until the subterranean road which the gopher travels when going out and in is found, set the trap in such a manner that the top will be level with the passageway. Then cover with a board the hole which has been dug and place dirt over it until the light is entirely excluded, and the gopher will have no intimation that his affairs have been meddled with. The gopher is compelled to pass through the tunnel he has prepared when pursuing his avocation, and he will get caught the first trip he makes. Care must be taken to have sufficient space above the trap to allow it to close when sprung. A few traps kept set in the gopher hills will soon rid the farm of these undesirable neighbors.

The Ice Supply.

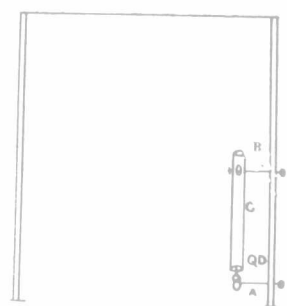
Ice has come to be one of the summer requisites on all well regulated farms. Its value in connection with an efficient refrigerator for keeping fruits, meats and milk is being appreciated more every year. In some parts of Denmark the patrons of dairies are bound by contract to supply themselves with three pounds of ice for every one hundred pounds of milk produced. The time to get in the supply of ice is when ice, weather and roads are in favorable conditions, and as these conditions are not prevalent for any great length of time, it is well to take advantage of the first opportunity offered.

In harvesting ice, it is important to secure it from a pure source. Ice from streams, ponds and lakes that are contaminated by refuse from factories, stables and sewers is not free from injurious bacteria. Freezing does not kill such germs as cause typhoid fever, tuberculosis, cholera, etc.; therefore, if the ice is to be used in drinking water, care should be taken to secure it from a pure water source.

The keeping of ice depends largely upon the care exercised in storing it. See that there is sufficient slope to carry away any water from the bottom of the pile. Put down about eight or ten inches of sawdust for a floor; pack the blocks as closely as possible, filling in the cracks with thin ice chips. Leave about ten inches of space between the ice and the wall for packing material. In summer take the trouble to see that this packing is close and solid. Cover the top of the pile with about ten inches of sawdust or straw, and provide a good circulation of air over the whole. It is always best to handle ice on a cool dry day, so that it will be firmly frozen in the pile.

Dehorning Stanchion.

The accompanying device has proved very satisfactory for holding cattle while dehorning. It is



easily prepared, and can be used upon any number of farms. A and B are irons three-quarter inch thick. They are inserted into a post, A near the ground, and B about two feet above. C is a stout piece of timber. A and C are linked together, B penetrates C, and has a key in the outer end to hold C in place; D is a ring in the floor. The device is used as a stanchion. When the horns have been removed, the key is pulled out of B, C falls outward, and the animal is free. By having a long thread on A and B, the device can be regulated to suit all sizes of animals.

Good Words for Farmers.

Dr. J. G. Schurman, president of Cornell University, in a recent interview said that his own experience led him to sympathize deeply with a farmer's life and work. His father and his ancestors for many generations were farmers. His own family are farmers. He himself was brought up on a farm and he knows the meaning and realities of farm life. He believes the farmers are the backbone of the country, the most conservative class we have, the people of the most solid character. In the cities families go to seed in two or three generations, and the cities would go to destruction but for their continuous recuperation by the coming of young men and women from the farms. The hope of the country and of the cities, therefore, is in the farming population. In the education of the farmers, Dr. Schurman said he was vitally interested. He knows that the organization of agricultural education is more difficult than the organization of engineering education and the mechanic arts. The farmer stands nearer than any other man to nature's source of supply. His business cannot be syndicated. The individual must always play the most important part in it, and Dr. Schurman thought that was one reason why the proper provision for the education of young men and women for farm life is really so difficult.—[Iowa Homestead.

Big Yield of Brome Grass.

The enormous profits to be obtained from growing Brome grass for seed on soil to which it is adapted, may be seen from the returns received by Jas. Coates, Melita, who is credited with threshing 100 bagfuls from 17 acres.